



## New Academic Program Proposal for a Bachelor of Architecture Degree

**Department of Architecture**  
Golisano Institute for Sustainability

April 27, 2018

---

**Table of Contents**

1. Program Description and Purpose	3
2. Program Courses and Schedule	9
3. Faculty	13
4. Financial Resources and Instructional Facilities	15
5. Library Resources	16
6. Admissions and Enrollment	16
7. Academic Support Services	16
8. External Review of Graduate Programs	16
9. Credit for Experience	16
10. Program Assessment and Improvement	17
11. New/Emerging Field and Allied Health Areas	24
12. Transfer to Baccalaureate Programs	24
13. Application for Distant Education Format	24
Appendices	24

## 1. Program Description and Purpose

### a. A brief description of the program as it will appear in the institution's catalog.

The **Bachelor of Architecture (B Arch)** professional degree program is designed to prepare students for the practice of architecture with an emphasis on sustainability. The program strikes a balance between architecture as both an art and as a science by leveraging RIT's expertise in design and sustainability.

Students will learn and practice the skills and methods of architecture from *programming & analysis to project planning & design to project development & documentation*. With an emphasis on data-inspired design, graduates will have the ability to contribute meaningfully to a fully sustainable built environment while being prepared for professional licensure.

### b. List of educational and career outcomes.

#### EDUCATIONAL OUTCOMES

1. Graduates will be able to conduct a pre-design analysis that will result in an architectural program.
2. Graduates will be able to create a successful, data-inspired solution to an architectural problem by satisfying program requirements.
3. Graduates will be able to complete a range of technical analyses (architectural, civil, structural, mechanical, and electrical) to further develop an architectural design.
4. Graduates will be able to integrate all technical aspects of an architectural design.
5. Graduates will be able to demonstrate that they understand state of the art project and office management methods.

#### CAREER OUTCOMES

The primary career outcome of the program is to prepare students for the next steps on the path to licensure, namely experience (internship) and then examination. Upon graduation from the B Arch program, students will be equipped to fill, but not limited to the following positions;

#### Architect

Graduates of the B Arch program at RIT may find primary employment with architectural firms as entry level designers. The choice for graduates is quite broad given that about one half of architectural firms have 5 or less employees while some are multi-national firms that employ thousands. Included in this category are corporate and governmental in-house design departments.

#### Urban Designer

Another potential career outcome for RIT B Arch graduates is in the field of Urban Design with an emphasis on the urban fabric as a model for sustainability.

#### Urban Planner

A related career choice for graduates is in the field of urban planning which lays the infrastructure upon which designers build.

#### Design Consultant

The B Arch program at RIT has an emphasis on sustainability which will enable graduates to specialize as design consultants on sustainable design projects.

#### Product Representative

Graduates from the B Arch program will be equipped to specialize as representatives of companies that supply building materials and products to practicing architects.

### c. Fit with and advancement of the institution's mission, vision, values and reputation.

The B Arch at RIT prepares students for successful careers in a diverse global society, through an education that enhances the most advanced aspects of architectural sustainability. The B Arch program teaches students the multifaceted aspects of sustainability and will train them in problem-solving through research and the application of scientific knowledge. Students will learn to manage and promote the sustainable use of resources in shaping the built environment, from the single building to multi-use urban complexes, from the standpoint of design as well as architecture as a professional business. Subjects that are focused on materials and technology are paired with more humanistic disciplines of art, theory, and writing to produce a well-rounded and robust degree. Students will receive an education that will prepare them to assume meaningful positions in the practice of architecture and will prepare them for post-graduate work should they so choose.

Students use the most advanced computer assisted programs and up to date facilities and laboratories of the Golisano Institute for Sustainability in a climate of interaction and experiential collaboration. About half of all projects involve team work and collaboration – a critical requirement for producing a sustainable built environment. Students will have the opportunity to apply their knowledge and skills in actual working environments through co-op work experience and participation in faculty research. Design projects will foster the solution of real cases, in collaboration with public and private non-profit institutions. At the end of the cycle of study, the students will have an

extensive portfolio of projects and research that will make them ready for rewarding careers.

Given the above vision, the following commentary demonstrates how the program responds to the characteristics and criteria of the Academic Portfolio Blueprint (APB). It should be noted that the APB was linked to the 2004 Strategic Plan. This proposal rather addresses the current Strategic Plan that is discussed in the next section of this document. There is considerable overlap between these documents and while every attempt has been made not to be redundant, it was impossible to avoid completely.

### APB CHARACTERISTICS

#### Scholarship, Research and Creativity

See subsection e. (Curricular features . . .) below.

#### Innovative Teaching and Learning

The design of the B Arch program was based on the innovative curriculum of the M Arch program that is only in its 6<sup>th</sup> year. Lessons learned to date in the M Arch program allowed for even more refinements in the design of the B Arch program.

The feature that distinguishes RIT's approach to architectural education is **integration** in multiple dimensions. Long a weakness in architecture programs across the country, the first level of integration in the program's design is to strongly link the design studios with the technical courses. As attendees of *Cran07* (a conference dedicated to 21<sup>st</sup> Century architectural education) put it:

*"The design studio is about dreaming dreams. Architectural technology is about making dreams come true."*

As a technical institute with a strong design legacy, this charge found in the conference proceedings is at the heart of what RIT is and becomes the parti (the chief organizing thought or decision behind a design) of the Department of Architecture.

The integration is not limited to design and technology however. The technical course sequence is also highly integrated. While other programs offer separate courses in building construction, structures, codes, site engineering, sustainability, financial considerations, and building services, the B Arch program combines these topics such that they appear continuously throughout the entire Building Systems course sequence (ARCH-241, 341, 342, 343, and 344).

A final form of integration is with the profession. The B Arch program will inherit from the current program a very strong affiliation with local and regional practitioners, professional organizations, and non-profit service

organizations. A number of architecture programs are extremely theoretical in nature and purposely avoid collaboration with the profession. The Department of Architecture's approach is the exact opposite.

#### Experiential Learning

As noted in more depth in subsection d. below (Justification and . . .), the very backbone of educational learning in the program is experiential. Students will work on real projects in design studio courses approximately 50% of the time. Additionally, a one-term cooperative work experience is required, and a global experience recommended.

#### International and Global Education

Global education is a key component in learning architecture. The Art History and Architecture History courses early in the program provide the foundation for a global and historic context in which architecture must exist. Projects in the B Arch program will on occasion be located outside the United States. This allows students to more clearly understand that good design is a reflection of the culture in which it is created.

It is likely that a high percentage of students in the M Arch program will continue to be from outside the US. At the same time, we anticipate that the B Arch will predominantly draw from the US. We fully intend to intermingle the students from both programs. There will be some design studios where M Arch students assume a mentorship and leadership role with the B Arch students. Some courses will also be co-listed.

Finally, an international/global experience is a recommended option for students. Building on initiatives already begun in the M Arch program, students will have multiple opportunities to travel abroad. This may range from an intercession (semester break) based experience to a full semester abroad. These opportunities include existing collaborations with Malmo University, and the global architecture programs at SUNY Alfred, SUNY Delhi, and Syracuse University. There has also been interest in establishing an architectural presence at RIT's global campuses in Dubai, Croatia, and Kosovo.

#### Synergy and Interdisciplinarity

Synergy actually begins with recruiting. At career fairs around the country, a common question posed to RIT representatives is if RIT has an architecture program. The top ranked schools of design around the country offer a degree in architecture (Rhode Island School of Design, Parsons School of Design, Pratt Institute, Art Center College of Design, University of Cincinnati). The Vignelli credo is "Design is One:" – from buildings down to the utensils we use to eat while in buildings – all design is interrelated. Even if a student has no plans to matriculate into the

architecture program, the other design disciplines will be enriched and the ability to draw top students enhanced.

This concept was the basis for the design of the B Arch program. The first year utilizes foundation courses also taken by art and design students in the College of Imaging Arts and Sciences. These courses include basic drawing, design, and art history. Architecture students will take these courses thereby producing a mix of students across all design disciplines.

As noted above, co-listing of courses with the M Arch program will be utilized where appropriate. And as noted in subsection f. below (Curricular interconnections . . .), there is a wide-range of minor opportunities for architecture students. We anticipate a strong interest in minors from other programs for a minor in architecture and sustainability.

### Inclusive Excellence

Section 10 of this document, Program Assessment and Improvement, covers this topic. The body that accredits architecture programs, the National Architectural Accrediting Board (NAAB), has as one of its overarching requirements a commitment to diversity and inclusion. The Department of Architecture embraces this requirement, has always met it for the M Arch program, and will bring this success to the B arch program.

## APB CRITERIA

### I. Centrality

See subsection b. (List of educational and career outcomes) directly above.

### II. Marketability

See subsection d. (Justification and documented need . . .) directly below regarding external demand for the program and industry demand for graduates.

The average retention rate for architecture programs in the US is 70%, meaning that 30% drop out before graduation, most of which transfer into other programs. At the same time architecture programs are very difficult to transfer into because relatively few credits from other programs are accepted. It is also fairly infrequent that students suddenly realize they want architecture once matriculated into their selected program. Those who apply seem to know they want architecture when they are in high school. NAAB and RIT Enrollment Management Services data suggests that students transfer out of architecture programs much more frequently than they transfer into them.

One can conclude from this phenomenon that the B Arch program will not negatively impact the enrollment of other programs at RIT, rather it

will likely increase it in some cases. The 30% who leave architecture programs tend to be heavily unbalanced between their design skills and their technical skills when it is a balance that is most needed. When students realize this imbalance, they tend to migrate to their strength, enrolling in more technical or more design oriented majors as the case may be. Given RIT's breadth in both of these areas there would be no reason for these students to leave the institute to find a more suitable career path.

This being the case, internal demand for the program will likely come from the NTID AAS degrees noted in subsection f. (Curricular interconnections . . .) below.

## III. Quality

- a. Use of Current Faculty Expertise. Current faculty members designed the program and will be utilized in its initial implementation; either directly and/or by mentoring new faculty. New faculty will be required as the program unfolds. See subsection g. (Role of faculty . . .) below.
- b. Integration with General Education. General education courses are essential in architectural education. The fact that NAAB requires a minimum of 45 general education credits is evidence of this. If art and design courses are the "foundation" upon which this program is built, then general education courses are the very ground upon which it sits. The two essential elements of general education courses are at the heart of architectural education: *communication* and *critical thinking*. And the perspective domains map extremely well with the knowledge and skills necessary in the field; *ethics*, *art*, *globalism*, *society*, *scientific principles*, *natural science*, and *mathematics*.
- c. Rigorous Academic and Career Preparation. The path to becoming a licensed architect is well orchestrated by the architectural community. Having to meet the requirements established by NAAB will assure academic rigor. The National Council of Architectural Registration Boards (NCARB) is responsible for career development from academic work through to the point of licensing examination. The Department of Architecture has an NCARB "architecture licensing advisor" already on staff to assist students in navigating their career path.
- d. Student and Faculty Scholarship, Research, and Creativity. See subsection e. (Curricular features . . .) below.
- e. Student Centered Learning. See Innovative Teaching and Learning above.

- f. Experiential Learning. See subsection d. (Justification and documentation . . .) below.
- g. Global Awareness. Students are exposed to global issues early on with the study of art and architecture history – both set in a global context. In the design studio, projects are on occasion based in other countries. Given the number of international students in the M Arch program and proposed joint studios, this international connection is enhanced. Students will also be encouraged to take a semester abroad in the third year.
- h. Inter-disciplinary Integration. The foundation year of the program aligns with that in CIAS. A feeder program is found at NTID, and minors provide an excellent opportunity for inter-disciplinary work.
- i. Emerging Disciplines. NA
- j. Evaluation and Improvement Plan. Section 10 of this document addresses this criterion.

#### IV. Financial Viability

See subsection d. (Justification and documentation . . .) directly below.

**d. Justification and documented need for the program and how it contributes to RIT's strategic plan priorities and key result areas. Sources used and evidence collected that a need for the program exists.**

The Division of Enrollment Management and Career Services requested that this program be examined. Their analysis in Appendix B fully illustrates the opportunity they see with this program. Their research indicates a strong and constant interest by high school students for both architecture and sustainability. And given that this is the hallmark of the existing architecture program, i.e. to combine the two disciplines into a sustainable architecture program, they felt that RIT was well positioned to secure a significant number of undergraduate students each year.

The field of architecture is part of the construction industry that historically rises and falls with the general economy. However, the increase in global population dictates that new buildings, and even cities will need to be produced. With sustainability being the driving force in new and adaptive reuse projects, the long-term projection is that the field of architecture will grow at 7% annually. (<https://www.bls.gov/ooh/architecture-and-engineering/architects.htm>)

One might characterize the need for architects over the long term as “steady”, not unlike the need for engineers or business managers. It is a mature profession that will always hold its position in the career marketplace. In good

economic times and bad, quality graduates from quality programs are the ones who obtain jobs most readily. There is every reason to believe that the RIT B Arch program will attain this status. The market's response to RIT's M Arch program graduates has been extremely positive, the placement rate of this 6-year old program is 100%. The external letters of support found in Appendix D speak to the value placed on RIT architecture graduates.

This program would contribute to RIT's strategic plan, *Greatness Through Difference*, in the following ways.

Dimension One: Career Focus and Student Success. The nature of the architectural profession addresses several difference makers (DM) in this dimension. The program certainly has disciplinary depth as it is a professional degree that can lead to licensure. It has always been and continues to be even more interdisciplinary. Architects are the orchestrators of building projects and as such need knowledge and abilities in multiple associated fields – from business to sociology, science to design, and technology to art. This forces the curriculum to connect with many other RIT programs but will also provide students from other programs with the opportunity to connect with the architecture program. It is anticipated that architecture will be a very popular minor. The program will follow the model of the current M Arch program by being experiential. The core of the curriculum is the studio where students will often work on real projects with real clients. Rochester and its environs will be the living laboratory for our students.

Dimension Two: The Student-Centered Research University. Traditional research is a relatively small part of the architectural field, even in academia. Therefore, it is anticipated that the proposed program will contribute very little in research funding. Where this program can contribute however, is in RIT's newly approved *scholarship of engagement*. The next section explains this further. The strategic plan has an internal focus – how great we intend to make RIT. It is less focused on how we will apply this greatness for the greater good. The architecture program would be poised to lead RIT into this rapidly growing area of scholarship.

Dimension Three: Leveraging Difference. It is critical in architecture and especially sustainability to think on a global level. Therefore, a global experience has been planned into the program. But the globalization movement is causing curriculum to respond in other ways. Many of the courses in the program will address global issues by necessity, such as globalization itself (population movements), climate change, sustainability of materials, and population/demographic shifts. Connections with other institutions for cooperative student and faculty

work already in practice in the M Arch program will be incorporated into the B Arch program.

**Dimension Five: Organizational Agility.** As already mentioned, this program, will help break down silos because of its need for connection with multiple other departments. It will enhance the School of Design in the College of Imaging Arts & Sciences. Architecture coordinates, hosts, enhances, and uses the other design fields such as those taught at RIT; interior design, industrial design, graphic design, 3-D digital design, and new media design. RIT would be remiss in not acting on an opportunity to expand this already highly successful school. An architecture program would offer all design students more discovery and collaborative opportunities.

You are invited to review the assessment plan that follows to see just how integrative, interdisciplinary, and creative this program needs to, and will be. As world population continues to grow, population migration increases, and climate change forces humanity into making sobering decisions about how it lives, a new paradigm is needed for the built environment. The architect will play a central role in addressing and even shaping this paradigm. RIT has shown itself to establish new programs with exactly this approach and architecture would be no different.

**e. Curricular features that facilitate and support student and faculty scholarship, research and creativity; and address emerging disciplines.**

The field of architecture offers an exceptional opportunity for faculty and students to be involved in scholarship together while applying their creative skills. Although traditional research is a bona fide option, *scholarship of engagement* is a particularly good fit. This is already in use by the M Arch program because it entails a collaborative process between the researchers and community partners that creates and disseminates knowledge and creative expression with the goal of contributing to the discipline while strengthening the well-being of the community.

As is already being done in the M Arch program, the B Arch design studios (and some technical courses) will be built around real problems and projects. The opportunity to apply, share, and extend RIT's and the Department of Architecture's knowledge base is almost limitless. The Department already has ongoing relationships with the Community Design Center Rochester, the Landmark Society of Western New York, The City of Rochester, and numerous towns and communities such as Henrietta, Lima, Greece, and others. (<http://13wham.com/news/local/rit-architecture-students-help-to-design-low-income-housing>)

**f. Curricular interconnections and integration between this program and other disciplines, programs and colleges at the University.**

1. The program is cross-disciplinary as it will accept courses from the College of Imaging Arts and Sciences and require courses from the Department of Sustainability within the Golisano Institute for Sustainability. Further, electives may be chosen from a wide range of undergraduate offerings throughout RIT to meet individual student needs and interests.
2. Students in other RIT undergraduate programs may take courses with approval from the Bachelor of Architecture program coordinator. All course pre-requisites must be satisfied. A student must have the permission of the home department to apply courses to their undergraduate degree.
3. The Bachelor of Architecture program curriculum has 3 open elective courses, and 3 general education electives equaling 18 credit hours. As such, architecture students will have ample opportunity to register for minors (typically 15 credit hours) offered in other colleges/institutes at RIT. The following is a sampling of minors that are related to the architecture field and may be of professional interest for architecture students:
  - Art History – CIAS
  - Business Administration - COB
  - Construction Management – CAST
  - Structural Design – CAST
  - Archaeological Science – CLA
  - Anthropology and Sociology – CLA
4. Undergraduate students from other colleges/institutes at RIT may be interested in completing a minor in architecture (part of this proposal). While many undergraduate students may have a personal interest in architecture and are welcome to register for the minor, the following is a sampling of programs that might have students interested in architecture as a professional compliment to their primary undergraduate program:
  - Civil Engineering Technology – CAST
  - International Hospitality and Service Management – CAST
  - Interior Design – CIAS
  - Industrial Design – CIAS

Additionally, the following AAS degree programs at NTID are very likely sources of transfer into the B Arch program.

- Computer Aided Drafting Technology
- Civil Technology

**g. Role of faculty in the program's design.**

The three architecture faculty members, with the oversight of the Head of the Department of Architecture took the lead in designing the program with input from collaborating RIT departments and practicing architects. Department faculty members include the following individuals.

Dennis A. Andrejko, FAIA	Head, Department of Architecture
Jules Chiavaroli, AIA	Professor
Giovanna Potesta, PhD, Assoc. AIA	Assistant Professor
Nana Andoh, Assoc. AIA	Assistant Professor

Members of the faculty from collaborating units at RIT include the following individuals.

Gabrielle Gaustad, PhD	Assoc. Professor; Sustainability Department; GIS
Mary Golden, ASID	Interior Design Program Chair; CIAS
Scott Wolcott, PE	Undergraduate Coordinator Civil Engineering Technology Program; CAST
James Yarrington, AIA	Director; Campus Planning, Design & Construction Services
Joyce Hertzson	Professor; Art, Design, Foundation Courses; CIAS
Marissa Tirone	Lecturer; Design; CIAS

**h. Input by external partners.**

The Department of Architecture's advisory group was utilized heavily in the design of the program. They include the following individuals.

Trevor Harrison, AIA	Managing Partner; HBT Architects, Rochester
Kimberly Kraft, AIA	Architect; In.Site: Architecture, Perry, NY
David Matthews, AIA	Managing Partner; DesignOne Architecture and Planning; Rochester
Peter Wehner, AIA	Associate and Senior Project Architect; Passero Associates; Rochester
Ming Hu, AIA	Assistant Professor; University of Maryland School of Architecture, Planning & Preservation

**i. Enrollment projections for Year 1 through Year 5.**

Enrollment Management projects the following enrollment numbers for the first five years. The five-year program projects a steady state of 168 students.

AY	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Totals
2019-20	40	0	0	0	0	40
2020-21	40	35	0	0	0	75
2021-22	40	35	34*	0	0	109
2022-23	40	35	34*	31	0	140
2023-24	40	35	34*	31	28	168

\*Includes 2 transfer students.

**j. Annual retention rate target, graduation rate target, and job placement rate target.**

These data were obtained by combining statistics from Enrollment Management and statistics from the National Architectural Accrediting Board's annual reports.

First year retention	87.64%
Second year retention	94.29%
Third – fifth year retention	82.35%
Graduation rate	66.32%
Job placement rate	90%



## 2. Program Courses and Schedule

Bachelor of Architecture degrees are most commonly earned in 5-year programs that vary in course requirements totaling between 150 and 180 ScH. The **Bachelor of Architecture (B Arch)** degree is not to be confused with BS, BT, or BFA degrees in Architecture or related fields. These degrees are either technical degrees or design degrees but do not teach the full range of skills necessary to become an architect. The B Arch is a professional degree that is reviewed and approved by the Office of Professions within the Department of Education in New York State.

The Department of Architecture is proposing a Bachelor of Architecture degree. The design parti (the chief organizing thought or decision behind a design) of the curriculum is to utilize and build upon a foundation similar to the one found in CIAS, with the structural framework of the existing Master of Architecture program, but with a baccalaureate level “build out.” It is a 5-year, 160 credit hour program.

The accrediting body for architectural degrees, The National Architectural Accrediting Board (NAAB) sets parameters for professional degrees in architecture (see Section 9). In most regards, their requirements are more stringent than RIT’s or the State of New York.

### CO-OP

Although the requirement for Co-op is only one semester, this is listed as a minimum. In the event of an economic downturn we need to guard against holding up degree certifications because of events beyond the student’s control. Furthermore, the trend in architecture is for part-time employment throughout the educational portion of the path to licensure. The fifth year was specifically designed with a lighter load to accommodate this type of work-study arrangement.

### TRAILER COURSES

It is anticipated that if 10-20% of students receive a D, F, or W in a course, then 4-8 students per semester will need to make up the course in order to stay “on-time.” It is the Department’s practice to allow such students to continue into the next course while resolving the issue with the prerequisite course at the same time.

Courses are generally criteria based so it is highly likely that only remedial work will be necessary to meet minimum standards. Thus the use of intercession (semester break) and the summer term can be utilized to complete such work. Trailer courses will be offered as necessary for transcript purposes and on the rare occasion when a student may need to re-take the full version of the course.

Following is a breakdown of required and major courses that are being proposed. Full course outlines may be found in Appendix A.

### CLA COURSES

The College of Liberal Arts was asked to support the 45 ScH general education requirements of the program. This is one case where the requirements of NAAB are greater than those of NY State and RIT which only require 30 ScH. Support for this request was received and may be found in Appendix C.

### CIAS COURSES

The first year of the program is predominantly built upon the foundation year found in the College of Imaging Arts & Sciences. Thus, they were asked to support the program by providing five courses as follows:

FDTN-111 Drawing I  
FDTN-121 2D Design I  
FDTN-131 3D Design I  
ARTH-135 History of Western Art: Ancient to Medieval  
ARTH-136 History of Western Art: Renaissance to Modern

Support for this request was received and may be found in Appendix C. It is important to note however, that due to resource limitations in the college in terms of faculty, this support is contingent upon receiving the requested funding. This amounts to the first two new faculty lines listed in Section 4 below – 1 lecturer and 3 adjunct faculty members.

### COS COURSES

The College of Science was asked to support the program by providing three courses as follows:

ENVS-101 Concepts of Environmental Sciences (required course)  
LAS Perspective Science course  
LAS Perspective Math course

Support for this request was received and may be found in Appendix C.

NEW GIS COURSES

Following is a list of required courses in the proposal. At a future date, should this proposal be approved and implemented, the courses noted will be submitted for approval as perspective courses (P), immersion courses (I), and minor courses (M).

P	ARCH-101 Principles of Architecture
	ARCH-211 Architectural Drawing
M	ARCH-212 3-D Modeling
M	ARCH-213 Digital Communication
I	ARCH-221 History of Architecture I
I	ARCH-222 History of Architecture II
M	ARCH-231 Architectural Studio I
M	ARCH-232 Architectural Studio II
I	ARCH-241 Building Systems: Fundamentals
I	ARCH-261 Measuring Sustainability
I	ARCH-262 Sustainability in Architecture
	ARCH-331 Architectural Studio III
	ARCH-332 Architectural Studio IV
	ARCH-333 Architectural Studio V
	ARCH-334 Architectural Studio VI
	ARCH-341 Building Systems: Site
	ARCH-342 Building Systems: Structure & Envelope
	ARCH-343 Building Systems: Structure & Interior
	ARCH-344 Building Systems: Environmental
	ARCH-431 Architectural Studio: Specialization
	ARCH-471 Professional Practice
	ARCH-499 Architecture Co-op
I	ARCH-551 Theories on Architecture
I	ARCH-552 Urbanism
	ARCH-553 Research Methods

GENERAL EDUCATION FRAMEWORK

The General Education Committee's document, *General Education Curriculum Proposal* of 2010 (updated in 2017), specifies minimum requirements for general education courses. However, the accrediting body for architecture, the National Architectural Accrediting Board (NAAB) has minimum general education requirements that are greater than those required by New York State and RIT. Thus, Table 1a totals are greater than what is shown below.

<b>General Education Framework</b>	<b>BS</b>	<b>BA</b>	<b>AAS</b>	<b>AS</b>	<b>All other baccalaureate degrees (BFA, etc.)</b>
First-Year Writing	3	3	3	3	3
Perspectives	24	24	15	15	15
Immersion	9	9	0	0	9
General Education Electives*	24	54	6	12	3
Minimum Total	60	90	24**	30	30

\* Elective course credits plus other category credits must equal the minimum required.

\*\* NYSED requires 20; RIT framework exceeds the minimum requirement.

Notes on Liberal Arts and Sciences courses:

1. LAS Perspective Science courses are open but those found in physics, and environmental science.
2. LAS Perspective Math course need not be in any specific area. The placement test will determine what math course a student would be recommended to take.

For the following Table 1a. the preferred CIAS courses are listed. Should these courses not be properly funded the courses will be covered as follows:

<b>CIAS Courses</b>	<b>Architecture Course Equivalents</b>
FDTN-111 Drawing I	ARCH-111 Design Drawing
ARTH-135 History of Western Art: Ancient to Medieval	ARCH-121 History of Art I
ARTH-136 History of Western Art: Renaissance to Modern	ARCH-122 History of Art II
FDTN-121 2D Design I	ARCH-131 2-Dimensional Design
FDTN-131 3D Design I	ARCH-132 3-Dimensional Design

**Table 1a: Undergraduate Program Schedule** *Academic calendar type: X Semester* Proposal for a Bachelor of Architecture Degree

Term: Fall 1						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ENVS-101 Con of Environ Sci. (P3 Global)	3	3									
ARCH-101 Principles of Architecture	3		3	X							
FDTN-111 Drawing I	3										
ARTH-135 History of Western Art: Ancient to Medieval	3										
UWRT-150 First Year Writing: Writing Sem.	3	3									
LAS First Year Writing (WI-1)											
<b>Term credit total:</b>	<b>15</b>	<b>6</b>	<b>3</b>								
Term: Fall 2						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-212 3-D Modeling	3		3	X							
ARCH-221 History of Architecture I	3		3	X							
ARCH-231 Architectural Studio I	4		4	X	ARCH-131 & 2						
ARCH-241 Building Systems: Fundamentals	3		3	X							
LAS Perspective (P7 Math)	3	3									
<b>Term credit total:</b>	<b>16</b>	<b>3</b>	<b>13</b>								
Term: Fall 3						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-331 Architectural Studio III	6		6	X	ARCH-232						
ARCH-341 Building Systems: Site	3		3	X	ARCH-241						
ARCH-262 Sustainability in Architecture	3		3	X	ARCH-261						
LAS Perspective (P4 Social)	3	3									
<b>Term credit total:</b>	<b>15</b>	<b>3</b>	<b>12</b>								
Term: Fall 4						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-333 Architectural Studio V	6		6	X	ARCH-332						
ARCH-343 Building Systems: Struct. & Int.	3		3	X	ARCH-342						
LAS-Elective	3	3									
LAS-Immersion 1	3	3									
Open Elective	3										
<b>Term credit total:</b>	<b>18</b>	<b>6</b>	<b>9</b>								
Term: Fall 5						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-431 Architectural Studio: Specialization	4		4	X	Year 5 status						
ARCH-551 Theories on Architecture (WI-3)	3		3	X	Year 4 status						
ARCH-552 Urbanism	3		3	X	Year 4 status						
LAS Elective	3	3									
LAS-Immersion 3	3	3									
<b>Term credit total:</b>	<b>16</b>	<b>6</b>	<b>10</b>								
Term: Spring 1						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
FDTN-121 2D Design I	3										
FDTN-131 3D Design I	3			X							
ARCH-211 Architectural Drawing I	3		3	X							
ARTH-136 History of Western Art: Renaissance	3	3									
LAS Perspective (P2 Artistic)											
LAS Perspective (P6 Scientific Principles)	3	3									
<b>Term credit total:</b>	<b>15</b>	<b>6</b>	<b>3</b>								
Term: Spring 2						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-213 Digital Communication	3		3	X							
ARCH-222 History of Architecture II	3		3	X							
ARCH-232 Architectural Studio II	4		4	X	ARCH-231						
ARCH-261 Measuring Sustainability	3			X	ENVS-101						
LAS Elective	3	3									
<b>Term credit total:</b>	<b>16</b>	<b>3</b>	<b>10</b>								
Term: Spring 3						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-332 Architectural Studio IV	6		6	X	ARCH-331						
ARCH-342 Building Systems: Struct. & Env.	3		3	X	ARCH-341						
LAS Elective (WI-2)	3	3									
LAS Perspective (P1 Ethical)	3	3									
<b>Term credit total:</b>	<b>15</b>	<b>6</b>	<b>9</b>								
Term: Spring 4						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-334 Architectural Studio VI	6		6	X	ARCH-333						
ARCH-344 Building Systems: Environmental	3		3	X	ARCH-343						
LAS Elective	3	3									
LAS Elective	3	3									
LAS-Immersion 2	3	3									
<b>Term credit total:</b>	<b>18</b>	<b>9</b>	<b>9</b>								
Term: Spring 5						Credits per classification					
Course Number & Title	Cr	LAS	Maj	New	Prerequisite(s)						
ARCH-431 Architectural Studio: Specialization	4		4	X	Year 5 status						
ARCH-553 Research Methods	3		3	X	Year 4 status						
ARCH-471 Professional Practice	3		3	X	Year 4 status						
Open Elective	3										
Open Elective	3										
<b>Term credit total:</b>	<b>16</b>	<b>0</b>	<b>10</b>								

Note: A minimum one term, 0 credit hour co-op experience is required (ARCH-399 Co-op Work Experience Architecture).

**Program Totals:**

Credits: 160

Liberal Arts &amp; Sciences: 48

Major: 88

Elective &amp; Other: 24

Cr: = credits

LAS = [Liberal Arts and Sciences](#)

Maj = major requirement

New = new course

Prerequisite(s) = list prerequisite(s) for the noted courses

### 3. Faculty

**Table 2: Full-Time Faculty**

Current full-time faculty will be used to offer courses the first time as the program is launched, however as new faculty are hired they will ultimately carry the program (per the budget model).

Faculty Member Name & Title	Tenure Status	Length of Time at Institution	Percent Time to Program	List All Earned Degrees & Disciplines	Additional Qualifications	Program Courses
Nana-Yaw Andoh Assistant Professor	Untenured	3 years	25%	M Arch & Design Urbanism; University of Notre dame  B Arch; University of Notre Dame		ARCH-231 Architectural Studio I
Dennis A. Andrejko Associate Professor	Tenured	7 years	25%	M Arch; Massachusetts Institute of Technology  B Arch; Arizona State University	Licensed Architect (NY) Licensed Architect Inactive (AZ, CA)	ARCH-101 Principles of Architecture
Jules Chiavaroli Professor	Tenured	40 years	25%	MBA; Rochester Institute of Technology  B Arch; University of Notre Dame	Licensed Architect (NY) NCARB Certified LEED Accredited Professional	ARCH-241 Building Systems: Fundamentals
Giovanna Potesta Assistant Professor	Untenured	3 years	25%	PhD in Architecture & Urban Design; University of Florence  Master in Philosophy; University of Florence	Licensed Architect (Ordine degli Architetti di Firenze)	ARCH-221 History of Architecture I

**Table 3: Part-Time Faculty**

The current pool of adjunct faculty will be utilized as necessary to staff courses. The following are individuals likely to be hired but do not represent an exhaustive list.

James Fugate	Non-TT (TT at NTID)	17 years	25%	M Arch; RIT  BA, Urban Studies & Planning, Univ. of Maryland	Certified Architectural Drafter American Design Drafting Association (ADDA)	ARCH-212 3-D Modeling
Richard Napoli	Non-TT	6 years	25%	B Arch; New York Institute of Technology	Licensed Architect (NY) Over 30 years of experience	ARCH-211 Architectural Drawing I

**Table 4: Faculty to be Hired**

<b>Title/Rank of Position</b>	<b>No. of New Positions</b>	<b>Minimum Qualifications</b> (including degree and discipline area)	<b>F/T or P/T</b>	<b>Percent Time to Program</b>	<b>Expected Course Assignments</b>	<b>Expected Hiring Date</b>
Adjunct	3	Master of Fine Arts <i>Art History</i>	P/T	100	ARTH-135 History of Western Art: Ancient to Medieval, ARTH-136 History of Western Art: Renaissance to Modern	AY 2018-19
Lecturer	1	Master of Fine Arts <i>Studio art</i>	F/T	100	FDTN-111 Drawing I, FDTN-121 2D Design I, FDTN-131 3D Design I	AY 2018-19
Lecturer	1	Master of Architecture or Bachelor of Architecture with license and min. 6 years of experience <i>Basic design and technology foci</i>	F/T	100	ARCH-231 Architectural Studio I, ARCH-232 Architectural Studio II, ARCH-241 Building Systems: Fundamentals, ARCH-212 Digital Communication	AY 2018-19
Assistant Professor	1	Master of Architecture <i>Basic design and history foci</i>	F/T	100	ARCH-221 Architectural History I, ARCH-222 Architectural History II, ARCH-331 Architectural Studio III, ARCH-332 Architectural Studio IV	AY 2019-20
Assistant Professor	1	Master of Architecture <i>Technology and sustainability foci</i>	F/T	100	ARCH-341 Building Systems: Site, ARCH-261 Measuring Sustainability, ARCH-262 Sustainability in Architecture, ARCH-344 Building Systems: Environmental	AY 2020-21
Assistant Professor	1	Master of Architecture <i>Intermediate design and structural foci</i>	F/T	100	ARCH-342 Building Systems Structure & Envelope, ARCH-343 Building Systems Structure & Interiors, ARCH-333 Architectural Studio V, ARCH-334 Architectural Studio VI	AY 2021-22
Assistant Professor	1	Master of Architecture <i>Advanced design and theory foci</i>	F/T	100	ARCH-431 Architectural Studio: Specialization, ARCH-551 Theories on Architecture, ARCH-552 Research Methods	AY 2022-23

### Degrees in Architecture

Higher education is driven by the term “terminal degree,” however this is a meaningless term in the profession of architecture. The important term in architecture is “professional degree” because the purpose of the degree is to provide a pathway to professional licensure. The degree is followed by experience and then examination. As noted earlier, BS, BT, and BFA degrees are not professional degrees and are not assessed by the Office of the Professions in New York State as are professional degrees.

The National Architectural Accrediting Board (NAAB) accredits only professional degrees which consist of the Bachelor of Architecture, Master of Architecture, and Doctor of Architecture degrees. The B Arch is the most expedient licensure pathway, the M Arch allows for specialization, and the D Arch is meant primarily for Deans of Architecture Schools, although this is unnecessary which may be why there is only one D Arch program in the United States. However all three degrees are considered equal because any of them can lead to a professional license.

To become licensed, candidates must prove their abilities in design, construction, and project/office management – a wide range of skills. For an architecture program to be restricted to hiring only M Arch degree holders limits the pool of applicants since 56%<sup>1</sup> of architects have earned a B Arch before becoming licensed. It serves architecture programs much better to hire licensed, experienced practitioners for more technical courses than to hire inexperienced M Arch graduates (43%)<sup>1</sup> who might have little or no practical experience or may not be licensed. M Arch graduates are a better fit for theoretical and higher level design courses. Therefore, a blend of “professional” (terminal), degrees for minimum requirements to teach in the B Arch are a good fit. (1. Statistics from Annual Reports of the National Architectural Accrediting Board)

## 4. Financial Resources and Instructional Facilities

**Table 5: New Resources**

List **new** resources that will be engaged specifically as a result of the new program (e.g., a new faculty position or additional library resources). New resources for a given year should be carried over to the following year, with adjustments for inflation, if they represent a continuing cost. Data in this table come directly from the financial spread sheet supplied by the University contained in Appendix G.

New Expenditures	Year 1	Year 2	Year 3
Personnel Faculty Student Services Coordinator/Administrative Assistant Shop Technician, TA's	\$289,199	\$329,599	\$500,988
Library	\$14,000	\$14,000	\$14,000
Equipment	\$325,000		
Laboratories Space Retrofitting/Remodeling/Outfitting for fabrication shop Student Studio Space	\$672,000		
Supplies & Expenses (Other Than Personal Service)	\$56,151	\$118,120	\$170,181
Capital Expenditures Fabrication shop equipment & furnishings (shelving, lockers, work tables/stools)	\$760,500		
Other: Faculty startup/relocation expenses	\$149,133	\$135,272	\$173,153
<b>Total all</b>	<b>\$2,265,983</b>	<b>\$660,690</b>	<b>\$858,322</b>

## 5. Library Resources

The proposed Bachelor of Architecture degree will have minimal impact on the library's services and collection. RIT Libraries' collection of journals, books, and databases already supports the Master of Architecture program. A modest investment to increase resources is part of this proposal.

## 6. Admissions and Enrollment

As per the enrollment letter from Enrollment Management, "The Office of Undergraduate Admissions will work with the college to determine appropriate academic profile parameters and academic preparation for both entering freshmen and transfer students with final authority for admissions decisions resting in the Office of Undergraduate Admissions. That said, admission to the program will be consistent with criteria set for the School of Design in CIAS including submission and review of a portfolio.

It is anticipated that there will be few exceptions to the admission requirements but should there be any, the Office of Undergraduate Admissions will consult with the Head of the Department and his/her recommendation considered. Ultimately, the Office of Undergraduate Admissions will make all final decisions.

In terms of diversity, architecture schools attract a 55-45 balance between men and women respectively so gender equity should occur naturally. Asian Americans generally enroll at a slightly higher rate (6.3%) than their percentage of the general population (5.6%) and African Americans at a much lower rate (5% to 13% respectively). Thus, attracting African Americans will be the focus of diversity efforts. However, it should be noted that only 2% of the approximately 110,000 architects found in the United States self-identify as African Americans. Several outreach efforts have already been initiated by the M Arch program with the City of Rochester and their School District. These efforts will be much more meaningful and hopefully more productive with a baccalaureate entry point for architecture.

## 7. Academic Support Services

Because the Golisano Institute for Sustainability offers only graduate degrees at this time, faculty themselves provide academic support services. This will not suffice for an undergraduate degree that could have 168 students when at full capacity. Therefore, a professional staff advisor is requested in this proposal.

Additionally, since the program is very closely aligned with the CIAS School of Design and given that the first-year courses are very similar between design majors, collaboration with School of Design Advisors is anticipated for first year students.

## 8. External Review of Graduate Programs

Not applicable.

## 9. Credit for Experience

Not applicable.



## 10. Program Assessment and Improvement

The Bachelor of Architecture is a professional degree and accreditation by the National Architectural Accrediting Board (NAAB) is of primary importance. The process of initial and continuing accreditation is demanding, rigorous, and requires annual attention. However, it provides the perfect opportunity on which to build an assessment plan. NAAB requires the following documentation in achieving and maintaining accreditation:

- Annual Statistical Reports. These reports contain data such as student persistence, graduation rates, and licensing exam pass rates of graduates.
- Interim Progress Reports. A narrative report, accompanied by evidence, submitted after a program receives continuing accreditation demonstrating how it has addressed deficiencies identified in the Visiting Team Report.
- Architecture Program Report. A narrative document that is comprehensive and self-analytical. It is expected to succinctly describe how a program meets each of the conditions for accreditation and is submitted before an accreditation visit.

As one can see, a considerable amount of ongoing assessment is required by NAAB and the following program assessment plan is based on the criteria set by the organization. In their *2014 Conditions for Accreditation* (updated every few years) the requirements are laid out as follows.

### “PART TWO (II): SECTION 1—Student Performance—Educational Realms and Student Performance Criteria

The accredited degree program must demonstrate that each graduate possesses the knowledge and skills defined by the criteria below. The knowledge and skills defined here represent those required to prepare graduates for the path to internship, examination, and licensure and to engage in related fields. The program must provide student work as evidence that its graduates have satisfied each criterion.

The criteria encompass two levels of accomplishment:

**Understanding**—The capacity to classify, compare, summarize, explain, and/or interpret information.

**Ability**—Proficiency in using specific information to accomplish a task, correctly selecting the appropriate information, and accurately applying it to the solution of a specific problem, while also distinguishing the effects of its implementation.

**II.1.1 Student Performance Criteria (SPC):** The NAAB establishes SPC to help accredited degree programs prepare students for the profession while encouraging education practices suited to the individual degree program. The SPC are organized into realms to more easily understand the relationships between each criterion.”

The four realms and their twenty-six (26) student performance criteria (SPCs) are the basis for the assessment plan that follows. The realms become the program goals and the SPCs become the student learning outcomes (SLOs). Since the existing M Arch program has been through numerous visits by NAAB, including initial accreditation, the faculty feel confident that they know how to evaluate and document such assessment of the B Arch program. With one exception, NAAB criteria cannot be met with one assessment method in one course. Five of the six 100-level courses will be assessed by traditional means and do not contribute to satisfying NAAB criteria or program goals since they are foundational courses.

While the proposed assessment method may seem a bit robust (26 data points) and difficult to maintain, this is not the case. As was learned in the M Arch program, there is much more time consumed maintaining separate assessment systems for RIT and NAAB. Combining them into one, while more work initially, would be much easier to maintain and more importantly, a far more useful tool for the program.

The assessment table that follows differs somewhat from the standard RIT format predominantly for the purposes of making this proposal more readable. The first two columns are copied verbatim from the *NAAB Conditions for Accreditation*. They are placed there as a reference, however they are not part of the assessment tool.

The last three columns normally found in the table (**timeline**, **data analysis**, and **use of results**) have been relocated so as to precede the other columns. Hopefully this makes sense since they apply to the entire table. Moving them also allows for wider columns and easier readability.

Other Notes:

1. When multiple courses are listed for benchmarking this allows for assessing at increasing levels of competency, commonly needed in a design discipline.
2. Several student learning outcomes require a distinction between *architectural design* skills and *planning* skills thus two courses are needed for assessment.
3. Grades given for design problems are typically achieved by a weighted average of the grades given by guest critics from the profession.
4. Grades for technical assignments or projects are typically arrived at by taking a percentage of criteria tests passes.

Program Name/College: Bachelor of Architecture, Golisano Institute for Sustainability

Program Contact for Program Assessment: Professor Jules Chiavaroli

<b>Timeline:</b> When and how data are collected, aggregated, and analyzed.	The department will evaluate one or two program goals each year and continue on a cyclical basis. Goal 1 (both a and b) and corresponding SLOs will be reviewed in the first year, goal 2/SLOs in the second year, and goals 3 and 4/SLOs in the third year. Should data warrant it, the Department Head could adjust this sequence.
<b>Data Analysis Key Findings:</b> Who is responsible for and key findings.	Course instructors will be responsible for collecting data at the end of each semester. They will then submit it to the department curriculum committee. The department curriculum committee will analyze and synthesize the data each semester and submit the results to the Department Head.
<b>Use of Results Action Items and Dissemination:</b> How results are used and shared. Recommendations or action items.	The Department faculty will discuss the results at their annual retreat in June and address any issues. They will formulate continuous improvement action items that will be implemented the next academic year.

NAAB Realm A	NAAB Student Performance Criteria	Program Goals	Student Learning Outcomes	Academic Program Profile	Data Source/Measure Curriculum Mapping	Benchmark
<b>Realm A: Critical Thinking and Representation.</b> Graduates from NAAB-accredited programs must be able to build abstract relationships and understand the impact of ideas based on the study and analysis of multiple theoretical, social, political, economic, cultural, and environmental contexts. Graduates must also be able to use a diverse range of skills to think about and convey architectural	<b>A.1 Professional Communication Skills.</b> <i>Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.</i>	<b>Goal 1a.</b> Graduates will be able to use a diverse range of communication skills to convey architectural ideas.	<b>Students will be able to:</b> Describe verbally and illustrate graphically their designs using manual and digital media.	Integrative Literacies	ARCH-211 Architectural Drawing – Final project	85% of students will earn a grade of "C" or better on the final project.
					ARCH-212 3-D Modeling – Final project	
	<b>A.2 Design Thinking Skills.</b> <i>Ability to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.</i>	<b>Goal 1b.</b> Graduates will be able to create designs based on the analysis of multiple contexts by applying abstract relationships and ideas.	<b>Students will be able to:</b> 1) Construct questions 2) Interpret information 3) Integrate diverse points of view 4) Reach well-reasoned conclusions and 5) Test alternative outcomes against design criteria	Critical Thinking Creativity/ Innovative Thinking	ARCH-332 Architectural Studio IV – Design log	85% of students will achieve at least 4 of the 5 outlined SLO criteria in completing a design log.
					ARCH-333 Architectural Studio V – Design log	
	<b>A.3 Investigative Skills.</b> <i>Ability to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.</i>		<b>Students will be able to:</b> Generate a conclusion by 1) Gathering 2) Analyzing 3) Recording and 4) Comparatively interpreting data	Critical Thinking	ARCH-552 Research Methods – Assignment	85% of students will achieve 4 out of 4 outlined SLO criteria on an assignment or research project.
					ARCH-553 Urbanism – Research project	
	<b>A.4 Architectural Design Skills.</b> <i>Ability to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.</i>		<b>Students will be able to:</b> Create a solution to a design problem that satisfies requirements based on 1) Form 2) Ordering systems and 3) Environmental principles	Creativity/ Innovative Thinking	ARCH-231 Architectural Studio I – Project	85% of students will achieve 3 out of 3 outlined SLO criteria on a project.
					ARCH-232 Architectural Studio II – Project	

<p>ideas, including writing, investigating, speaking, drawing, and modeling.</p> <p>Student learning aspirations for this realm include: being broadly educated, valuing lifelong inquisitiveness, communicating graphically in a range of media, assessing evidence, comprehending people, place, and context, and recognizing the disparate needs of client, community, and society.</p>	<p><b>A.5 Ordering Systems.</b> <i>Ability</i> to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.</p>		<p><b>Students will be able to:</b> Create a solution to a design problem that is ordered based on</p> <ol style="list-style-type: none"> <li>1) form and</li> <li>2) natural systems</li> </ol>	Critical Thinking	<p>ARCH-231 Architectural Studio I – Project</p>	85% of students will achieve 2 out of 2 outcomes on a project.
					<p>ARCH-232 Architectural Studio II – Project</p>	
	<p><b>A.6 Use of Precedents.</b> <i>Ability</i> to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.</p>		<p><b>Students will be able to:</b></p> <ol style="list-style-type: none"> <li>1) Select and present a relevant precedent study to a design project</li> <li>2) Distinguish which elements are applicable to their design project and</li> <li>3) Incorporate these elements into their own solution</li> </ol>	Critical Thinking	<p>ARCH-101 Principles of Architecture – Assignment</p>	85% of students will achieve outcome #1 on a given assignment.
					<p>ARCH-332 Architectural Studio IV – Project</p>	85% of students will achieve 3 out of 3 outlined SLO criteria on a given project.
					<p>ARCH-333 Architectural Studio V – Project</p>	
					<p>ARCH-551 Theories on Architecture – Project</p>	
	<p><b>A.7 History and Global Culture.</b> <i>Understanding</i> of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.</p>		<p><b>Students will be able to:</b> Explain (in written or verbal form) how architectural form is the result of a variety of external influences.</p>	Global Interconnect edness	<p>ARCH-221 Architectural History I – Presentation or essay</p>	85% of students will earn a grade of "C" or better on the given presentation or essay.
					<p>ARCH-222 Architectural History II – Presentation or essay</p>	
	<p><b>A.8 Cultural Diversity and Social Equity.</b> <i>Understanding</i> of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.</p>		<p><b>Students will be able to:</b></p> <ol style="list-style-type: none"> <li>1) Describe the characteristics and needs of different cultures and individuals and</li> <li>2) Explain what the responsibility of the architect is to ensure equity of access to sites, buildings, and structures.</li> </ol>	Ethical Reasoning	<p>ARCH-101 Principles of Architecture – Assignment</p>	85% of students will meet outcome #1 on a given assignment.
					<p>ARCH-221 Architectural History I – Assignment</p>	85% of students will achieve 2 out of 2 outlined SLO criteria on a given assignment.
					<p>ARCH-222 Architectural History II – Assignment</p>	

NAAB Realm B	NAAB Student Performance Criteria	Program Goals	Student Learning Outcomes	Academic Program Profile	Data Source/Measure Curriculum Mapping	Benchmark
<b>Realm B: Building Practices, Technical Skills, and Knowledge.</b> Graduates from NAAB-accredited programs must be able to comprehend the technical aspects of design, systems, and materials and be able to apply that comprehension to architectural solutions. In addition, the impact of such decisions on the environment must be well considered.  Student learning aspirations for this realm include: creating building designs with well-integrated systems, comprehending constructability, integrating the principles of environmental stewardship, and conveying technical	<b>B.1 Pre-Design.</b> <i>Ability</i> to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.	<b>Goal 2</b> Graduates will be able to recognize the technical aspects of design, systems, and materials and be able to apply that knowledge to architectural solutions while considering the impact of such decisions on the environment.	<b>Students will be able to:</b> Prepare a comprehensive program for an architectural project.	Critical Thinking	ARCH-331 Architectural Studio III – Assignment	85% of students will earn a grade of "C" or better on a programming assignment.
	ARCH-332 Architectural Studio IV – Assignment					
	ARCH-333 Architectural Studio V – Assignment					
	<b>B.2 Site Design.</b> <i>Ability</i> to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.		<b>Students will be able to:</b> Create a design that responds successfully to a variety of site characteristics.	Creativity/ Innovative Thinking	ARCH-331 Architectural Studio III – Project	85% of students will earn a grade of "C" or better on a given project.
					ARCH-341 Building Systems: Site – Project	
	<b>B.3 Codes and Regulations.</b> <i>Ability</i> to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.		<b>Students will be able to:</b> Apply relevant codes and standards to the design of sites, facilities, and systems.	Integrative Literacies	ARCH-334 Architectural Studio VI – Criteria tests	85% of students will pass 90% of criteria tests.
					ARCH-342 Building Systems: Structure & Envelope – Criteria tests	
					ARCH-343 Building Systems: Structure & Interior – Criteria tests	
	<b>B.4 Technical Documentation:</b> <i>Ability</i> to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.		<b>Students will be able to:</b> For a given architectural design 1) Create technical drawings to industry standards and 2) Prepare outline specifications to industry standards	Critical Thinking Integrative Literacies	ARCH-334 Architectural Studio VI – Criteria tests	85% of students will achieve 2 out of 2 outlined SLO criteria on a given project.
					ARCH-342 Building Systems: Structure & Envelope – Criteria tests	
					ARCH-343 Building Systems: Structure & Interior – Criteria tests	
	<b>B.5 Structural Systems:</b> <i>Ability</i> to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.		<b>Students will be able to:</b> Design (calculate) structural components to withstand gravitational, seismic, and lateral forces.		ARCH-342 Building Systems: Structure & Envelope – Criteria tests	85% of students will pass 90% of criteria tests.
					ARCH-343 Building Systems: Structure & Interior – Criteria tests	

information accurately.	<b>B.6 Environmental Systems:</b> <i>Ability</i> to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.		<b>Students will be able to:</b> Explain the capabilities of various environmental systems and how they might vary by geographic region.	Critical Thinking	ARCH-241 Building Systems: Fundamentals – Criteria tests	85% of students will pass 90% of criteria tests.
					ARCH-344 Building Systems: Environmental – Criteria tests	
					ARCH-262 Sustainability in Architecture – Criteria tests	
	<b>B.7 Building Envelope Systems and Assemblies:</b> <i>Understanding</i> of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.		<b>Students will be able to:</b> Design a building envelope system based on performance, aesthetics, moisture transfer, durability, and energy and material resources.	Critical Thinking Integrative Literacies	ARCH-342 Building Systems: Structure & Envelope – Criteria tests	85% of students will pass 90% of criteria tests.
					ARCH-262 Sustainability in Architecture – Criteria tests	
	<b>B.8 Building Materials and Assemblies:</b> <i>Understanding</i> of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.		<b>Students will be able to:</b> Design interior and exterior building components and assemblies based on their performance, aesthetics, and environmental impact.	Critical Thinking Integrative Literacies	ARCH-342 Building Systems: Structure & Envelope – Criteria tests	85% of students will pass 90% of criteria tests.
					ARCH-343 Building Systems: Structure & Interior – Criteria tests	
	<b>B.9 Building Service Systems:</b> <i>Understanding</i> of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.		<b>Students will be able to:</b> Select appropriate building service systems for a given project.	Critical Thinking Integrative Literacies	ARCH-343 Building Systems: Structure & Interior – Criteria tests	85% of students will pass 90% of criteria tests.
					ARCH-344 Building Systems: Environmental – Criteria tests	
	<b>B.10 Financial Considerations:</b> <i>Understanding</i> of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.		<b>Students will be able to:</b> Apply the fundamentals of building project financing by 1) Describing project financing methods, 2) Calculating feasibility, 3) Estimating construction costs, 4) Describe construction scheduling, and 5) Performing a life-cycle analysis.		ARCH-241 Building Systems: Fundamentals – Assignment	85% of students will meet outcome #1 on a given exam.
					ARCH-332 Architectural Studio IV – Project	85% of students will meet outcome #2 on a given project.
					ARCH-341 Building Systems: Site – Criteria tests	85% of students will meet outcome #3 on criteria tests.
					ARCH-343 Building Systems: Structure & Interior – Criteria tests	

					ARCH-471 Professional Practice – Exam	85% of students will meet outcome #4 on a given exam.
					ARCH-261 Measuring Sustainability – Project	85% of students will meet outcome #5 on a given project.

NAAB Realm C	NAAB Student Performance Criteria	Program Goals	Student Learning Outcomes	Academic Program Profile	Data Source/Measure Curriculum Mapping	Benchmark
<b>Realm C: Integrated Architectural Solutions.</b> Graduates from NAAB-accredited programs must be able to demonstrate that they have the ability to synthesize a wide range of variables into an integrated design solution. Student learning aspirations for this realm include: comprehending the importance of research pursuits to inform the design process, evaluating options and reconciling the implications of design decisions across systems and scales, synthesizing variables from diverse and complex systems into an integrated architectural solution, and responding to environmental stewardship goals across multiple systems for an integrated solution.	<b>C.1 Research:</b> <i>Understanding</i> of the theoretical and applied research methodologies and practices used during the design process.	<b>Goal 3</b> Graduates will be able to synthesize a wide range of variables into an integrated design solution.	<b>Students will be able to:</b> Apply 1) theoretical and 2) applied research methodologies to a design problem.	Critical Thinking	ARCH-332 Architectural Studio IV – Theoretical research project	85% of students will earn a grade of "C" or better on a theoretical research project.
					ARCH-553 Research Methods – Applied research Project	85% of students will earn a grade of "C" or better on an applied research project.
	<b>C.2 Integrated Evaluations and Decision-Making Design Process:</b> <i>Ability</i> to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.		<b>Students will be able to:</b> Devise a decision making assessment tool and utilize it in solving a design problem.	Critical Thinking Integrative Literacies	ARCH-334 Architectural Studio VI – Term project	100% of students earn a "B" or better on the design assessment portion of the term project.
					ARCH-261 Measuring Sustainability – LCA project	85% of students will earn a grade of "C" or better on an LCA project.
	<b>C.3 Integrative Design:</b> <i>Ability</i> to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.		<b>Students will be able to:</b> Create a solution to a design problem that 1) integrates all subsystems (site, structural, and building services) and 2) technically document the design along with the decision making process.	Critical Thinking Integrative Literacies Creativity/Innovative Thinking	ARCH-334 Architectural Studio VI – Term project	100% of students earn a "B" or better on the term project.

NAAB Realm D	NAAB Student Performance Criteria	Program Goals	Student Learning Outcomes	Academic Program Profile	Data Source/Measure Curriculum Mapping	Benchmark
<b>Realm D: Professional Practice.</b> Graduates from NAAB-accredited programs must understand business principles for the practice of architecture, including management, advocacy, and the need to act legally, ethically, and critically for the good of the client, society, and the public. Student learning aspirations for this realm include: comprehending the business of architecture and construction, discerning the valuable roles and key players in related disciplines, and understanding a professional code of ethics, as well as legal and professional responsibilities.	<b>D.1 Stakeholder Roles in Architecture:</b> <i>Understanding</i> of the relationships among key stakeholders in the design process—client, contractor, architect, user groups, local community—and the architect’s role to reconcile stakeholder needs.	<b>Goal 4</b> Graduates will be able to recognize and describe business principles for the practice of architecture.	<b>Students will be able to:</b> Explain the relationship among key stakeholders in the design process and the architect’s role to reconcile stakeholder needs.	Integrative Literacies	ARCH-553 Research Methods – Assignment	85% of students will earn a grade of “C” or better on a given assignment.
					ARCH-471 Professional Practice – Exam	85% of students will earn a grade of “C” or better on a given exam.
	<b>D.2 Project Management:</b> <i>Understanding</i> of the methods for selecting consultants and assembling teams; identifying work plans, project schedules, and time requirements; and recommending project delivery methods.		<b>Students will be able to:</b> 1) Explain the methods for selecting consultants, assembling teams, and identifying work plans & schedules, and 2) Compare project delivery methods.	Integrative Literacies	ARCH-471 Professional Practice – Exam	85% of students will earn a grade of “C” or better on a given exam.
	<b>D.3 Business Practices:</b> <i>Understanding</i> of the basic principles of a firm’s business practices, including financial management and business planning, marketing, organization, and entrepreneurship.		<b>Students will be able to:</b> Explain the basic principles of a firm’s business practices.	Critical Thinking	ARCH-471 Professional Practice – Exam	85% of students will earn a grade of “C” or better on a given exam.
	<b>D.4 Legal Responsibilities:</b> <i>Understanding</i> of the architect’s responsibility to the public and the client as determined by regulations and legal considerations involving the practice of architecture and professional service contracts.		<b>Students will be able to:</b> Explain the architect’s responsibility to the public and the client.	Ethical Reasoning	ARCH-471 Professional Practice – Exam	85% of students will earn a grade of “C” or better on a given exam.
	<b>D.5 Professional Conduct:</b> <i>Understanding</i> of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.		<b>Students will be able to:</b> 1) Describe the ethical issues involved in the exercise of professional judgment and 2) Comprehend and apply the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.	Ethical Reasoning	ARCH-471 Professional Practice – Exam	85% of students will earn a grade of “C” or better on a given exam.
					ARCH-499 Co-op Architecture – Employer evaluation	100% of students receive 3 or higher on employer rating of professional behavior.

**11. New/Emerging Field and Allied Health Areas**

Not applicable.

**12. Transfer to Baccalaureate Programs**

Not applicable.

**13. Application for Distant Education Format**

Not applicable.

**Appendices****Appendix A – New Course Outlines****Appendix B – Enrollment and Market Analysis**

Enrollment Management & Career Services – Ed Lincoln

**Appendix C – Internal Letters of Support**

Sustainability Curriculum Committee – Eric Williams

Architecture Curriculum Committee – Jules Chiavaroli

College of Liberal Arts Dean – Jamie Winebrake

College of Science Dean – Sophia Meggelakis

College of Imaging Arts & Sciences – Robin Cass

Vignelli Center for Design Studies – Roger Remington

Educational Effectiveness Assessment – Laurie Clayton

RIT Librarian – Kari Horowicz

CAST Civil Engineering Tech Program – Maureen Valentine

NTID Access Services – Steve Nelson

NTID Engineering Studies – Dino Laury

NTID Dean & Director

**Appendix D – Program Need and Marketability: Evidence & Letters of Support**

RIT Office of Cooperative Education and Career Services – Maria Richart

Trevor Harrison; HBT Architects, Rochester

Peter Wehner; Passero Associates, Rochester

Dave Bienetti & Mark Maddalina; SWBR Architects, Rochester

Jim Durfee, Bergmann Associates, Rochester

Rona Riodica; HUD

Shawn Basler; Perkins Eastman, NY, NY

Nick Garrison; FxFowle, NY, NY

John G. Waite Associates, PLLC; Albany and NY, NY

**Appendix E – Space Allocation/Renovation Request****Appendix F – Full Faculty CV's**

Nana Andoh

Dennis A. Andrejko

Jules Chiavaroli

Giovanna Potesta

**Appendix G – Cost Model: Revenue/Cost Projections/Expenses**



## **Appendix A – New Course Outlines**

ARCH-101 Principles of Architecture  
ARCH-211 Architectural Drawing I  
ARCH-212 3-D Modeling  
ARCH-213 Digital Communication  
ARCH-221 History of Architecture I  
ARCH-222 History of Architecture II  
ARCH-231 Architectural Studio I  
ARCH-232 Architectural Studio II  
ARCH-241 Building Systems: Fundamentals  
ARCH-261 Measuring Sustainability  
ARCH-262 Sustainability in Architecture  
ARCH-331 Architectural Studio III  
ARCH-332 Architectural Studio IV  
ARCH-333 Architectural Studio V  
ARCH-334 Architectural Studio VI  
ARCH-341 Building Systems: Site  
ARCH-342 Building Systems: Structure & Envelope  
ARCH-343 Building Systems: Structure & Interior  
ARCH-344 Building Systems: Environmental  
ARCH-431 Architectural Studio: Specialization  
ARCH-471 Professional Practice  
ARCH-499 Architecture Co-op  
ARCH-551 Theories on Architecture  
ARCH-552 Urbanism  
ARCH-553 Research Methods

The following courses were approved as a backup should CIAS not be funded to offer the foundation courses requested.

ARCH-111 Design Drawing  
ARCH-121 History of Art I (LAS-P1, P3, or P4)  
ARCH-122 History of Art II (LAS-P1, P3, or P4)  
ARCH-131 2-Dimensional Design  
ARCH-132 3-Dimensional Design

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

GOLISANO INSTITUTE FOR SUSTAINABILITY  
DEPARTMENT OF ARCHITECTURE

---

## GIS-ARCH-101 Principles of Architecture

### 1.0 Course Information

#### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Principles of Architecture
Transcript title (30 Characters)	Principles of Architecture
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	50
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

An introduction to the principles and practices of architectural design and the built environment. Architecture is presented from artistic, theoretical, environmental and technological perspectives. **Class 3, Credit 3 (Fall)**

### 3.0 Goal(s) of the Course

For students to:

- 3.1 Become aware of the various architectural issues and opportunities facing human development and evolution now and into the future.

- 3.2 Understand the social, environmental, artistic and technical elements that comprise the context of the built environment.
- 3.3 Gain an ability to assess and analyze an architectural project from diverse perspectives, points of view and inputs.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-101 Principles of Architecture	Assessment Method(s)
NA	4.1 Describe the elements of an architectural design process and product	Testing
<b>A.6 Use of Precedents</b>	4.2 Explain the importance of the built environment as it applies to everyday life	Assignments, Testing
<b>A.8 Cultural Diversity &amp; Social Equity</b>	4.3 Recognize key factors of architecture in the areas of the environment, social issues, aesthetics and technology	Assignments, Testing
NA	4.4 Analyze principles of architecture in a small-scale project on within the Rochester (or similar) community	Project

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Architecture Overview
- 5.2 The Historical Built Environment
- 5.3 Architecture and Settings
  - Urban to Rural
  - Community and Neighborhoods
  - Building Typologies
- 5.4 Architecture and the Natural Environment
- 5.5 Architecture and People
  - Cultural
  - Social
  - Societal
  - Human Factors and Ergonomics
- 5.6 Architecture and Aesthetics
- 5.7 Architecture and Building Sciences
- 5.8 Architecture and RIT

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Introduction to Architecture, Francis Ching
- 6.2 Experiencing Architecture, Rasmussen
- 6.3 The Language of Space, Bryan Lawson
- 6.4 The Hidden Dimension, Edward T. Hall
- 6.5 Architecture without Architects, Rudolphsky

**7.0 Program outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

7.1 NAAB Student Performance Criteria A.6 Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.

7.2 NAAB Student Performance Criteria A.8 Cultural Diversity and Social Equity: *Understanding* of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.

**8.0 Administrative Information**

**a) Proposal and Approval**

Course proposed by	Dennis A. Andrejko
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<b>X</b>	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<b>X</b>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

	Course title		Mode of Delivery
	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
----------	---------------------

	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs: Gen Ed

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

NA

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

ARCH – 101 – Principles of Architecture is a required introductory course for the Bachelor of Architecture program. It is also being offered as a general education perspective course for other undergraduate programs on campus.

---

# APPENDIX A: GENERAL EDUCATION

---

## Preliminary Notes:

According to NYSED, “The liberal arts and sciences comprise the disciplines of the humanities, natural sciences and mathematics, and social sciences.” Although decisions about the general education status of RIT courses are guided by this categorization and the details provided at the NYSED web site ([click HERE](#)), RIT recognizes that a general education course might not fit neatly into any one of these categories. Course authors from all areas are encouraged to read not only the NYSED web site, but also the mission statement at RIT’s General Education web site ([click HERE](#)).

This appendix is meant to highlight those facets of a course that are directly relevant to its General Education status, and if applicable, to provide course authors with an opportunity to elaborate on aspects of the course that locate it in one or more of the Perspective categories. The course description, course goals, and course learning outcomes (sections 2, 3, and 4 of the course outline) should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT’s General Education Outcomes assessment cycle.

## I. Nature of the Course:

After reviewing the NYSED web site ([click HERE](#)) and the RIT description of general education ([click HERE](#)) describe how this course fits the definition of general education.

Architecture by its very nature is a field of study that more than touches upon, but rather is composed of all the liberal arts.

1. By virtue of architecture being considered one of the fine arts (architecture as sculpture, a representation of the people who designed and built it) it is studied in the context of culture. Architecture has been described as “frozen music”, it is one of the **humanities**.
2. An architectural design must draw upon several of the **natural sciences**; earth science (how this man-made system interacts with natural systems), geology (how the building “plugs into” the landscape), and physics (how the building stands up, processes heat flow, affects light, etc.).
3. **Mathematics** is a fundamental discipline in the field. Geometry in both 2 and 3 dimensions is heavily utilized. A wide variety of calculations are required within the entire process: calculation of structural loads, square footages, costs, heat loads, electrical power, lighting requirements, etc.
4. Perhaps the **social sciences** are most germane to the discipline. Architecture houses, enhances, and celebrates human activity. It must conform to governmental processes (zoning and building codes), meet economic feasibility requirements, and when taken architecture is grouped (as in a city), it profoundly affects human behavior. “*We shape our buildings, and thereafter they shape us.*” Winston Churchill

In this particular course, the emphasis on sustainability is intended to provide a

fundamental and essential foundation for all architectural design thinking and building exploration. It is in this context that a comprehensive and thorough connection to the humanities, social sciences, natural sciences and mathematics become the basis for architectural inquiry, and – as a result – and the anchor for critical and creative design thinking.

## II. General Education Essential Outcomes:

The Academic Senate approved the following proposal at the meeting of 16 April, 2015.

*Communication and critical thinking are essential to the general education of every student at RIT. Going forward, every course designated as general education by GEC will provide learning experiences designed to achieve at least one student learning outcome from each of these domains (Communication and Critical Thinking).*

The approved student learning outcomes are listed below.

### a. Communication

**a.1** Check at least one of the following student learning outcomes:

<b>X</b>	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
<b>X</b>	Express oneself effectively in presentations, either in American English or American Sign language
	Demonstrate comprehension of information and ideas accessed through reading

**a.2** In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

As noted in the “nature of the course” section, principles of architecture touch upon a wide range of the liberal arts. Students must describe, explain, and/or analyze these principles in essays and in presentations to others.

### b. Critical Thinking

**b.1** Check at least one of the following student learning outcomes:

	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
<b>X</b>	Reach sound conclusions based on logical analysis of evidence
	Demonstrate creative and/or innovative approaches to assignments or projects

**b.2** In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

As per learning outcome 4.4, students must analyze architecture from environmental, social, aesthetic, and technological perspectives and then synthesize their findings into an integrated conclusion.

### III. Additional Student Learning Outcomes

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

Table A.1: Student Learning Outcomes	
(Check)	Student Learning Outcomes
X	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
	2. Identify contemporary ethical questions and relevant positions
	3. Examine connections among the world's populations
X	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

Architecture is an art as well as a social and physical science. The analysis noted above in b.2, will include the items checked in Table A.1. because architecture is the artistic expression of the culture that creates it, while serving its intended function and stimulating a variety of human experiences in its users.

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Assessment will be by traditional means. Students will be required to write essays and to make formal presentations to demonstrate their understanding and analysis of art as an expression of various world cultures throughout history.

### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
12/1/17	Artistic	#1	
	Ethical	#2	
	Global	#3	
12/1/17	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	



---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-111 Design Drawing

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Design Drawing
Transcript title (30 Characters)	Design Drawing
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	2	20
Lab		
Studio	4	20
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

An introduction to the visualization of form, thought, and expression through the drawing process using a wide variety of media, tools, techniques, and subjects. **Class 2, Studio 4, Credit 3 (Fall)**

#### 3.0 Goal(s) of the Course

For students to develop:

3.1 The ability to see, analyze, and translate.

- 3.2 A wide range of drawing responses from expressive to precise.
- 3.3 Technical skills with a variety of media.
- 3.4 Conceptual ability.
- 3.5 Visual and verbal vocabulary related to drawing.
- 3.6 The ability to evaluate one's own drawing and the work of others.
- 3.7 The ability to use drawing for ideas, compositional, and preparatory studies.

#### 4.0 Intended course learning outcomes and associated assessment methods

Include as many course-specific outcomes as appropriate, one outcome and assessment method per row. Click [HERE](#) for guidance on developing course learning outcomes and associated assessment techniques.

Course Learning Outcome	Assessment Method
4.1 Demonstrate the ability to understand the basic principles of drawing.	Assignments and critiques
4.2 Demonstrate the development of skills with drawing media with the goal of producing visual images.	
4.3 Demonstrate the awareness of aesthetics.	
4.4 Define and use drawing vocabulary.	
4.5 Create innovative solutions to assignments.	
4.6 Critique one's own work and the work of others.	
4.7 Demonstrate presentation skills.	
4.8 Demonstrate the knowledge of and ability to produce pictorial composition.	
4.9 Create imagined and conceptualized visual information.	

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Visual and aesthetic issues
  - Gesture and proportion: line gesture, scribble gesture, sustained gesture, mass and, line gesture and mass gesture
  - Contour: continuous line, blind contour, organizational line, line weight, emotive line quality, structural line and blurred and multiple lines
  - Shape: ways to create value, value shapes and planes, value reduction and value scale
  - Perspective: One, two, and three-point perspective and aerial perspective
  - Surface, Volume, and Space: Cross contour, hatching, cross hatching, and line interval to create value, texture, categories of light, tonal drawings, value to describe volume and weight, value to describe space and texture
  - Proportion: Scale, unit measure
- 5.2 The principles of design protocols for organization of two-dimensional compositions: unity, harmony, variety, balance and grouping principles, including proximity, repetition, similarity, continuation, and closure.
- 5.3 Methods of organization and their implications for generating activity and content:
  - Open and closed compositions
  - The picture plane
  - The role of the format in terms of its shape and internal forces
  - Focal points and their relationship to emphasis, conditions of contrast, form position, and hierarchy

- Directional movement, rhythm and stasis
- The use and perception of positive and negative space
- Scale

#### 5.4 Subject matter

- Human figure
- Human skeleton
- Human made and natural forms
- Space: As articulated by linear perspective, atmospheric perspective, and value gradation

#### 5.5 Research

- Research and development
- Historical context or antecedents
- Contemporary and cultural context
- Perception
- Meaning, content, and concept
- Exploration and use of library, electronic resources, and personal resources

#### 5.6 Media skills and process

- Material exploration: graphite, conte crayon, charcoal, ink, paint
- Craftsmanship: quality of execution, appropriate choice and use of materials, use of media in relationship to project concept, objectives, and desired outcomes

#### 5.7 Methodology

- Concept Generation and Development: clarification of objectives; ideation (brainstorming, listing); visualization (sketching through drawing, studio or digital collage, and mixed media); synthesis of formal and conceptual issues
- Problem Solving: perceptual skills involved with seeing; analytical skills involved with thinking, understanding, and interpretation of meaning; individual and collaborative interaction
- Critical Skills and Evaluation: Individual, peer, and group critique; verbal and written assessment
- Organizational Skills: prioritization of verbal, visual, and conceptual information; time management skills.

### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Edwards, Betty. Drawing on the Right Side of the Brain. New York, Penguin Putnam, Inc. 2013.
- 6.2 Larmann, Ralph. The Figure Drawing LAB. (<http://drawinglab.evansville.edu>)
- 6.3 Mendelowitz, Daniel. Guide to Drawing. Orlando, Wadsworth Publishing. 2012.
- 6.4 Ching, Francis, D. K. Drawing: A Creative Process. New York, John Wiley & Sons. 1989 (first printing).

### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 This course is a foundation course for the Bachelor of Architecture program and as such, does not satisfy any of the Student Performance Criteria set by the National Architectural Accrediting Board (NAAB). It will be assessed separately from the NAAB based overall program assessment plan.
- 7.2 This course was written to essentially be the same as CIAS-FDTN-111 Drawing specifically to accommodate easy transfer of credit. Thus, students who change

majors after their first year within any of the design fields will not lose time or credit.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

### d) Additional course information (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

### e) Other relevant scheduling information

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

## 9.0 Colleges may add additional information here if necessary

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-121 History of Art I

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	History of Art I
Transcript title (30 Characters)	History of Art I
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	50
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

The history of Western art from pre-history through the middle ages. Form, style, function, and meaning will be studied in social, historical, and cultural context. **Class 3, Credit 3 (Spring)**

#### 3.0 Goal(s) of the Course

For students to:

- 3.1 Understand the form, function, and meaning of art and architecture in their historical contexts.
- 3.2 Understand how objects and images were used in earlier periods, which will add to the student's understanding of how objects and images are used today.
- 3.3 Understand western European and North American history, culture, and societies.
- 3.4 Understand how art and architecture were used to project and enforce ideology.
- 3.5 Develop a language for critical analysis and writing about art and architecture.

#### 4.0 Intended course learning outcomes and associated assessment methods

Include as many course-specific outcomes as appropriate, one outcome and assessment method per row. Click [HERE](#) for guidance on developing course learning outcomes and associated assessment techniques.

Course Learning Outcome	Assessment Method
4.1 Describe how objects and images were produced.	Exams, written assignments, class participation
4.2 Describe why objects and images look the way they do.	
4.3 Describe how objects and images functioned and what they meant in their historical and social contexts.	
4.4 Describe how objects and images were of function of the cultures and societies that produced them.	

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Introduction: art and ideology
- 5.2 Prehistoric art and architecture
- 5.3 Ancient art and architecture
- 5.4 Medieval art and architecture
- 5.5 Cultural and historical perspectives on art and architecture

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Kleiner, Fred S. Gardiner's Art Through the Ages: A Global History. Boston, Thomson/Wadsworth. 2009.

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 This course is a foundation course for the Bachelor of Architecture program and as such, does not satisfy any of the Student Performance Criteria set by the National Architectural Accrediting Board (NAAB). It will be assessed separately from the NAAB based overall program assessment plan.
- 7.2 This course was written to essentially be the same as CIAS-ARTH-135 History of Western Art: Ancient to Medieval specifically to accommodate easy transfer of credit. Thus, students who change majors after their first year within any of the design fields will not lose time or credit.

#### 8.0 Administrative Information

##### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date

Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<input checked="" type="checkbox"/>	General Education	
<input type="checkbox"/>	Writing Intensive	
<input type="checkbox"/>	Honors	

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

**9.0 Colleges may add additional information here if necessary**

---

## APPENDIX A: GENERAL EDUCATION

---

### Preliminary Notes:

According to NYSED, “The liberal arts and sciences comprise the disciplines of the humanities, natural sciences and mathematics, and social sciences.” Although decisions about the general education status of RIT courses are guided by this categorization and the details provided at the NYSED web site ([click HERE](#)), RIT recognizes that a general education course might not fit neatly into any one of these categories. Course authors from all areas are encouraged to read not only the NYSED web site, but also the mission statement at RIT’s General Education web site ([click HERE](#)).

This appendix is meant to highlight those facets of a course that are directly relevant to its General Education status, and if applicable, to provide course authors with an opportunity to elaborate on aspects of the course that locate it in one or more of the Perspective categories. The course description, course goals, and course learning outcomes (sections 2, 3, and 4 of the course outline) should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT’s General Education Outcomes assessment cycle.

### I. Nature of the Course:

After reviewing the NYSED web site ([click HERE](#)) and the RIT description of general education ([click HERE](#)) describe how this course fits the definition of general education.

Architecture by its very nature is a field of study that more than touches upon, but rather is composed of all the liberal arts.

1. By virtue of architecture being considered one of the fine arts (architecture as sculpture, a representation of the people who designed and built it) it is studied in the context of culture. Architecture has been described as “frozen music”, it is one of the **humanities**.
2. An architectural design must draw upon several of the **natural sciences**; earth science (how this man-made system interacts with natural systems), geology (how the building “plugs into” the landscape), and physics (how the building stands up, processes heat flow, affects light, etc.).
3. **Mathematics** is a fundamental discipline in the field. Geometry in both 2 and 3 dimensions is heavily utilized. A wide variety of calculations are required within the entire process: calculation of structural loads, square footages, costs, heat loads, electrical power, lighting requirements, etc.
4. Perhaps the **social sciences** are most germane to the discipline. Architecture houses, enhances, and celebrates human activity. It must conform to governmental processes (zoning and building codes), meet economic feasibility requirements, and when taken architecture is grouped (as in a city), it profoundly affects human behavior. “*We shape our buildings, and thereafter they shape us.*” Winston Churchill



## II. General Education Essential Outcomes:

The Academic Senate approved the following proposal at the meeting of 16 April, 2015.

*Communication and critical thinking are essential to the general education of every student at RIT. Going forward, every course designated as general education by GEC will provide learning experiences designed to achieve at least one student learning outcome from each of these domains (Communication and Critical Thinking).*

The approved student learning outcomes are listed below.

### a. Communication

a.1 Check at least one of the following student learning outcomes:

<b>X</b>	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
<b>X</b>	Express oneself effectively in presentations, either in American English or American Sign language
	Demonstrate comprehension of information and ideas accessed through reading

a.2 In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

This course essentially requires students to translate visual information (art) into written and spoken form. They must critically analyze and then synthesize what they have learned about art and explain it in essays and in presentations to others.

### b. Critical Thinking

b.1 Check at least one of the following student learning outcomes:

	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
	Reach sound conclusions based on logical analysis of evidence
	Demonstrate creative and/or innovative approaches to assignments or projects

b.2 In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

## III. Additional Student Learning Outcomes

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

Table A.1: Student Learning Outcomes	
(Check)	Student Learning Outcomes
<b>X</b>	1. Interpret and evaluate artistic expression considering the cultural context in which it was created

	2. Identify contemporary ethical questions and relevant positions
<b>X</b>	3. Examine connections among the world's populations
	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

As noted above in a.2, outcomes 1 and 3 are at the very heart of this course.

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Assessment will be by traditional means. Students will be required to write essays and to make formal presentations to demonstrate their understanding and analysis of art as an expression of various world cultures throughout history.

#### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
12/1/17	Artistic	#1	
	Ethical	#2	
12/1/17	Global	#3	
12/1/17	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-122 History of Art II

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	History of Art II
Transcript title (30 Characters)	History of Art II
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	50
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

The history of Western art from the Renaissance to the present day. Form, style, function, and meaning will be studied in social, historical, and cultural context. **Class 3, Credit 3 (Spring)**

#### 3.0 Goal(s) of the Course

For students to:

- 3.1 Understand the form, function, and meaning of art and architecture in their historical contexts.
- 3.2 Understand how objects and images were used in earlier periods, which will add to the student's understanding of how objects and images are used today.
- 3.3 Understand western European and North American history, culture, and societies.
- 3.4 Understand how art and architecture were used to project and enforce ideology.
- 3.5 Develop a language for critical analysis and writing about art and architecture.

#### 4.0 Intended course learning outcomes and associated assessment methods

Include as many course-specific outcomes as appropriate, one outcome and assessment method per row. Click [HERE](#) for guidance on developing course learning outcomes and associated assessment techniques.

Course Learning Outcome	Assessment Method
4.1 Describe how objects and images were produced.	Exams, written assignments, class participation
4.2 Describe why objects and images look the way they do.	
4.3 Describe how objects and images functioned and what they meant in their historical and social contexts.	
4.4 Describe how objects and images were of function of the cultures and societies that produced them.	

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Renaissance art and architecture
- 5.2 Baroque art and architecture
- 5.3 Modern art and architecture
- 5.4 Cultural and historical perspectives on art and architecture

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Kleiner, Fred S. Gardiner's Art Through the Ages: A Global History. Boston, Thomson/Wadsworth. 2009.

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 This course is a foundation course for the Bachelor of Architecture program and as such, does not satisfy any of the Student Performance Criteria set by the National Architectural Accrediting Board (NAAB). It will be assessed separately from the NAAB based overall program assessment plan.
- 7.2 This course was written to essentially be the same as CIAS-ARTH-136 History of Western Art: Renaissance to Modern specifically to accommodate easy transfer of credit. Thus, students who change majors after their first year within any of the design fields will not lose time or credit.

#### 8.0 Administrative Information

##### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17

Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<input checked="" type="checkbox"/>	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

**9.0 Colleges may add additional information here if necessary**

---

## APPENDIX A: GENERAL EDUCATION

---

### Preliminary Notes:

According to NYSED, “The liberal arts and sciences comprise the disciplines of the humanities, natural sciences and mathematics, and social sciences.” Although decisions about the general education status of RIT courses are guided by this categorization and the details provided at the NYSED web site ([click HERE](#)), RIT recognizes that a general education course might not fit neatly into any one of these categories. Course authors from all areas are encouraged to read not only the NYSED web site, but also the mission statement at RIT’s General Education web site ([click HERE](#)).

This appendix is meant to highlight those facets of a course that are directly relevant to its General Education status, and if applicable, to provide course authors with an opportunity to elaborate on aspects of the course that locate it in one or more of the Perspective categories. The course description, course goals, and course learning outcomes (sections 2, 3, and 4 of the course outline) should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT’s General Education Outcomes assessment cycle.

### I. Nature of the Course:

After reviewing the NYSED web site ([click HERE](#)) and the RIT description of general education ([click HERE](#)) describe how this course fits the definition of general education.

Architecture by its very nature is a field of study that more than touches upon, but rather is composed of all the liberal arts.

1. By virtue of architecture being considered one of the fine arts (architecture as sculpture, a representation of the people who designed and built it) it is studied in the context of culture. Architecture has been described as “frozen music”, it is one of the **humanities**.
2. An architectural design must draw upon several of the **natural sciences**; earth science (how this man-made system interacts with natural systems), geology (how the building “plugs into” the landscape), and physics (how the building stands up, processes heat flow, affects light, etc.).
3. **Mathematics** is a fundamental discipline in the field. Geometry in both 2 and 3 dimensions is heavily utilized. A wide variety of calculations are required within the entire process: calculation of structural loads, square footages, costs, heat loads, electrical power, lighting requirements, etc.
4. Perhaps the **social sciences** are most germane to the discipline. Architecture houses, enhances, and celebrates human activity. It must conform to governmental processes (zoning and building codes), meet economic feasibility requirements, and when taken architecture is grouped (as in a city), it profoundly affects human behavior. “*We shape our buildings, and thereafter they shape us.*” Winston Churchill

## II. General Education Essential Outcomes:

The Academic Senate approved the following proposal at the meeting of 16 April, 2015.

*Communication and critical thinking are essential to the general education of every student at RIT. Going forward, every course designated as general education by GEC will provide learning experiences designed to achieve at least one student learning outcome from each of these domains (Communication and Critical Thinking).*

The approved student learning outcomes are listed below.

### a. Communication

a.1 Check at least one of the following student learning outcomes:

<b>X</b>	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
<b>X</b>	Express oneself effectively in presentations, either in American English or American Sign language
	Demonstrate comprehension of information and ideas accessed through reading

a.2 In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

This course essentially requires students to translate visual information (art) into written and spoken form. They must critically analyze and then synthesize what they have learned about art and explain it in essays and in presentations to others.

### b. Critical Thinking

b.1 Check at least one of the following student learning outcomes:

	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
	Reach sound conclusions based on logical analysis of evidence
	Demonstrate creative and/or innovative approaches to assignments or projects

b.2 In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

## III. Additional Student Learning Outcomes

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

Table A.1: Student Learning Outcomes	
(Check)	Student Learning Outcomes
<b>X</b>	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
	2. Identify contemporary ethical questions and relevant positions

<b>X</b>	3. Examine connections among the world's populations
	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

As noted above in a.2, outcomes 1 and 3 are at the very heart of this course.

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Assessment will be by traditional means. Students will be required to write essays and to make formal presentations to demonstrate their understanding and analysis of art as an expression of various world cultures throughout history.

#### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
12/1/17	Artistic	#1	
	Ethical	#2	
12/1/17	Global	#3	
12/1/17	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	



---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-131 2-Dimensional Design

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	2-Dimensional Design
Transcript title (30 Characters)	2-Dimensional Design
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	2	20
Lab		
Studio	4	20
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

A structured, cumulative introduction to the basic elements and principles of two-dimensional design organized to create a broad introductory experience. **Class 2, Studio 4, Credit 3 (Fall)**

#### 3.0 Goal(s) of the Course

For students to:

- 3.1 Demonstrate the conception, execution, and critique projects that enhance the understanding and consideration of space, form, process, and interpretation.
- 3.2 Demonstrate the use and manipulation of a wide range of materials (e.g. line, shape, color, patterning, etc.) needed to achieve the desired effects.
- 3.3 Demonstrate the use of specialized vocabulary for understanding and communicating ideas related to two-dimensional design.
- 3.4 Explore historical and contemporary issues on the forefront of fields of art and design.

#### 4.0 Intended course learning outcomes and associated assessment methods

Include as many course-specific outcomes as appropriate, one outcome and assessment method per row.  
Click [HERE](#) for guidance on developing course learning outcomes and associated assessment techniques.

Course Learning Outcome	Assessment Method
4.1 Define elements and principles of two-dimensional design.	Assignments and critiques
4.2 Create successful compositions that utilize the elements and principles of two-dimensional design.	
4.3 Demonstrate the use of appropriate vocabulary in the critique and analysis of two-dimensional compositions.	
4.4 Create innovative solutions to problem solving that include ideation, visualization, and sketching.	
4.5 Demonstrate presentation skills and craftsmanship.	
4.6 Describe the relationship between tools, media, process, skill, and the maker's intent.	
4.7 Demonstrate the use of historical and contemporary references in concept generation.	
4.8 Demonstrate autonomy in self-evaluation and decision making.	
4.9 Demonstrate acute awareness of the aesthetics embedded within the disciplines and the world in which they operate.	

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Visual and aesthetic issues
  - The visual elements of two-dimensional design including their possible qualities, types, and relationships: line, shape, value, and texture
  - The conceptual elements of two-dimension design and their perceptual implications within the picture plane: point, line, plane, volume, and space
- 5.2 The principles of design protocols for organization of two-dimensional compositions: unity, harmony, variety, balance and grouping principles, including proximity, repetition, similarity, continuation, and closure.
- 5.3 Methods of organization and their implications for generating activity and content:
  - Open and closed compositions
  - The picture plane
  - The role of the format in terms of its shape and internal forces
  - Focal points and their relationship to emphasis, conditions of contrast, form position, and hierarchy
  - Directional movement, rhythm and stasis

- The use and perception of positive and negative space
  - Scale
  - Compositional structure and pattern
  - Sequence
- 5.4 Form development and its implications
- Objective and subjective depiction and analysis
  - Abstraction
  - Stylization
  - Invention
- 5.5 Research
- Research and development
  - Historical context or antecedents
  - Contemporary and cultural context
  - Perception
  - Meaning, content, and concept
- 5.6 Media skills and process
- Material exploration: ink, paint, paper, digital application, cloth, and found materials
  - Process exploration: painting, including mixing value and color, drawing, collage, printing, digital applications, and mixed media applications
  - Craftsmanship: quality of execution, appropriate choice and use of materials, use of media in relationship to project concept, objectives, and desired outcomes
- 5.7 Methodology
- Concept Generation and Development: clarification of objectives; ideation (brainstorming, listing); visualization (sketching through drawing, studio or digital collage, and mixed media); synthesis of formal and conceptual issues
  - Problem Solving: perceptual skills involved with seeing; analytical skills involved with thinking, understanding, and interpretation of meaning; individual and collaborative interaction
  - Critical Skills and Evaluation: Individual, peer, and group critique; verbal and written assessment
  - Organizational Skills: prioritization of verbal, visual, and conceptual information; time management skills.

## **6.0 Possible Resources** (should be in an enumerated list or outline format)

- 6.1 Ocvirk, Stinson, Wegg, Bone, and Cayton. Art Fundamentals: Theory and Practice. New York, McGraw-Hill. 2013.
- 6.2 Barrett, Terry. Making Art: Form and Meaning. New York, McGraw-Hill, 2010.
- 6.3 Itten, Johannes. The Elements of Color. New York, John Wiley & Sons. 1970.
- 6.4 Albers, Josef. Interaction of Color. Yale University Press. 2013.

## **7.0 Program outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

- 7.1 This course is a foundation course for the Bachelor of Architecture program and as such, does not satisfy any of the Student Performance Criteria set by the National Architectural Accrediting Board (NAAB). It will be assessed separately from the NAAB based overall program assessment plan.
- 7.2 This course was written to essentially be the same as CIAS-FDTN-121 2D Design specifically to accommodate easy transfer of credit. Thus, students who

change majors after their first year within any of the design fields will not lose time or credit.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

### d) Additional course information (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

### e) Other relevant scheduling information

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

## 9.0 Colleges may add additional information here if necessary

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

GOLISANO INSTITUTE FOR SUSTAINABILITY  
DEPARTMENT OF ARCHITECTURE

---

## GIS-ARCH-132 3-Dimensional Design

### 1.0 Course Information

#### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	3-Dimensional Design
Transcript title (30 Characters)	3-Dimensional Design
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	2	20
Lab		
Studio	4	20
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

A progressive study in terminology, visual principles, exploration, concept generation, process, and techniques of three-dimensional design. **Class 2, Studio 4, Credit 3 (Spring)**

### 3.0 Goal(s) of the Course

For students to:

- 3.1 Demonstrate a basic working understanding of the elements and principles of visual design and their function as the building blocks and guidelines for ordering three-dimensional compositions.
- 3.2 Demonstrate basic skills and methods for exploring, choosing, and applying concept generation, idea fluency, problem solving, research, and questioning to delimit a project's criteria and objectives (divergent and convergent thinking).
- 3.3 Demonstrate basic skills and methods for exploring, choosing, and applying appropriate materials and appropriate physical processes to fulfill a project's criteria and objectives.
- 3.4 Demonstrate basic speaking and critical analysis skills regarding the elements and principles of visual design.

#### 4.0 Intended course learning outcomes and associated assessment methods

Include as many course-specific outcomes as appropriate, one outcome and assessment method per row. Click [HERE](#) for guidance on developing course learning outcomes and associated assessment techniques.

Course Learning Outcome	Assessment Method
4.1 Define elements and principles of three-dimensional design.	Assignments and critiques
4.2 Use elements and principles to create unified 3-D compositions.	
4.3 Analyze and respond critically to 3-D objects.	
4.4 Demonstrate the use of appropriate vocabulary.	
4.5 Demonstrate the formation of creative solutions to problem solving.	
4.6 Incorporate technical information and skills into expression of ideas.	
4.7 Demonstrate presentation skills.	
4.8 Demonstrate craftsmanship and an understanding and an understanding of choice in tools and materials as it relates to the maker's intent and the relevance of process.	
4.9 Demonstrate the use of historical and contemporary references in idea development.	
4.10 Demonstrate independent judgement, self-evaluation, and verbal skills.	
4.11 Demonstrate the development of aesthetic sensitivity and the application of design knowledge as the precedent for upper level course work.	
4.12 Demonstrate the use of drawing as a visual process.	

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Visual and aesthetic issues; especially as related to form and composition involving the third dimension.
  - Elements of design as basic visual signs to communicate or express visual ideas: point, line, plane/shape, form, space, volume, mass, pattern/texture, positive and negative space, value, light, and color.

- Principles of design as guidelines for three-dimensional organization: balance, unity, emphasis, proportion, scale, variety, direction, movement, rhythm, stasis, structure, composition, multiple spatial viewpoints, grouping principles, meaning/content, and emotional associations.
- Methods of organization: formal/symmetrical, bilateral and informal/asymmetrical, semi-formal, implied, and their perception by the viewer.
- Color and light: possible effects on three-dimensional form.
- Philosophies of three-dimensional forms in art and design: research and development, historical context or antecedents, perception, meaning, utilitarian, and non-objective.
- Synthesis: application of cumulative course experiences.

#### 5.2 Media skills and technical concerns

- Materials exposure: wood, plaster, clay, and paper products; with additional materials possibly including wire, plastics, metal products, finishing materials, cloth, mixed media, and found objects.
- Material process exposure: additive, subtractive, and structural systems; with hand and machine-sided processes which might include cutting, scoring, bending, casting, carving, mold-making, gluing, sawing, filing, drilling, coloring, and finishing.
- Concept development process exposure: criteria and objectives clarification and delimiting, concept generation, idea fluency, visual notation (drawing, sketching, writing), and model making.
- Craftsmanship: quality of execution, appropriate choice of materials, and appropriate handling of materials, in regards to the criteria and objectives of the project.

#### 5.3 Methodology

- Problem solving: divergent/conceptual/intuitive and convergent/analytical/objective
- Development: ideation, recombination, appropriate scope of concept, form development, appropriate visual choices, and implementation.
- Critical analysis and evaluation: application/expression of pertinent terminology.
- Organizational skills: prioritization and time management.
- Research skills: library, electronics, first person, and visual notation.

#### 5.4 Content

- Application of cultural, social, and community considerations for creating content for work.

### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 New, Jennifer. Drawing from Life: The Journal as Art. New York, Princeton Architectural Press. 2005.
- 6.2 Nelson, George. How to See: A Guide to Reading Our Man-Made Environment. New York, Little Brown and Company, 2007.

### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 This course is a foundation course for the Bachelor of Architecture program and as such, does not satisfy any of the Student Performance Criteria set by the National Architectural Accrediting Board (NAAB). It will be assessed separately from the NAAB based overall program assessment plan.

7.2 This course was written to essentially be the same as CIAS-FDTN-111 3D Design specifically to accommodate easy transfer of credit. Thus, students who change majors after their first year within any of the design fields will not lose time or credit.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour		
<input type="checkbox"/>	Other (explain briefly):		

### d) Additional course information (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

### e) Other relevant scheduling information

Studio space, plaster room, machine shop

## 9.0 Colleges may add additional information here if necessary



---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-211 Architectural Drawing I

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Drawing I
Transcript title (30 Characters)	Architectural Drawing I
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	2	20
Lab		
Studio	4	20
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Introduction to the range of architectural representation skills necessary to effectively document basic architectural form and space. Skill development will be primarily manual with some digital. **Class 2, Studio 4, Credits 3 (Spring)**

#### 3.0 Goal(s) of the Course

For students to.

- 3.1 Develop the ability to free-hand sketch extemporaneously.
- 3.2 Produce two-dimensional drawings manually and digitally.

3.3 Build three-dimensional models manually and digitally.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-211 Architectural Drawing I	Assessment Method(s)
<b>A.1 Professional Communication Skills.</b> <i>Ability</i> to write and speak effectively and use representational media appropriate for both within the profession and with the general public.	4.1 Select and utilize the appropriate convention, type and graphical method(s) to represent simple architectural designs.	Assignments, Projects
	4.2 Measure, draw, scale, and dimension plans, sections, and elevations to within an architectural or engineering scale's smallest increment.	Assignments, Projects
	4.3 Select and draw appropriate lines in five thicknesses to industry standards to support architectural/ engineering/ construction drawings.	Assignments, Projects
	4.4 Letter drawings consistently, legibly, and to industry accepted standards to support basic architectural/ engineering/ construction drawings.	Assignments, Projects
	4.5 Lay out and execute architectural/ engineering/ construction drawings to industry accepted standards.	Assignments, Projects

#### 5.0 Topics (should be in an enumerated list or outline format)

##### 5.1 Graphic sequence

- Pre-Design Drawings
- Schematic Design Drawings
- Design Development Drawings
- Contract Documents (Working Drawings)

##### 5.2 Accurate graphic representation

- Building components; envelop, openings, structure
- Two-dimensional representation; plans, sections, elevations
- three-dimensional representation; perspectives, axonometrics, isometrics
- Scaling, measurement, and dimensioning

##### 5.3 Line Quality for architectural drawings

- Line types and representation
- Line thicknesses
- Terminators

##### 5.4 Lettering

- Style
- Size and thickness
- Spacing
- Placement

##### 5.5 Layout for architectural drawings

- Sheet format and layout
- Drawing sets
- CAD layering and classes

## 6.0 Possible Resources (should be in an enumerated list or outline format)

### 5.1 Software

- A basic 3-D modeling application such as Google SketchUp®
- A 2-D/3-D computer drafting/modeling program such as Formit360® and/or Revit Architecture®

### 5.2 Texts

- Ching, Francis D. K., *Architectural Graphics*, Wiley, New York: 2015.
- Ramsey, Charles George and Harold Reeve Sleeper, *Architectural Graphic Standards*, Wiley, New York: 2016.
- Chiavaroli, Jules. *AEC Drafting Fundamentals*, West Publishing or iBook

## 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.1: Professional Communication Skills:  
*Ability* to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Prof. Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
--------------------------	--------------	--------------------------	------------------

	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-212 3-D Modeling

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	3-D Modeling
Transcript title (30 Characters)	3-D Modeling
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

This course deepens the study of architectural representation skills necessary to effectively document more complex architectural form and space. Skill development will predominantly be digital. **Class 2, Studio 4, Credit 6 (Spring)**

#### 3.0 Goal(s) of the Course

- 3.1 Introduce students to current 3-D modeling software and the capabilities of each program.
- 3.2 Encourage the use of 3-D modeling software as a design tool to augment hand drafting techniques and design.

3.3 Provide students the capability of presenting designs as “real places” and not abstract project drawings.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-212 3-D Modeling	Assessment Method(s)
<b>A.1 Professional Communication Skills.</b> <i>Ability</i> to write and speak effectively and use representational media appropriate for both within the profession and with the general public.	4.1 Create an architectural 3-D virtual model of a moderate sized building project using industry standard file creation techniques.	Assignments, Projects
	4.2 Create photorealistic renderings from an architectural 3-D virtual model of a moderate sized building project.	Assignments, Projects
	4.3 Create select working drawings from an architectural 3-D virtual model of a moderate sized building project.	Assignments, Projects
	4.4 Publish a set of presentation drawings and a partial set of working drawings from an architectural 3-D virtual model.	Assignments, Projects
	4.5 Create free-hand design and analytical drawings to industry accepted standards.	Assignments, Projects

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Introduction to 3-D modeling
- 5.2 Place Making
- 5.3 Story Boards
- 5.4 Photorealistic Rendering Techniques
- 5.5 Basic Editing

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Texts
  - Ching, Francis D. K. *Building Construction Illustrated*, Wiley, New York: 2014.
  - Ching, Francis, D. K. *Architecture: Form, Space, and Order*, Wiley, New York: 2015.
  - Chiavaroli, *AEC Drafting Fundamentals*, West Publishing or iBook
  - Wallschlaeger, *Basic Visual Concepts and Principles*, McGraw-Hill, 1992
- 6.2 Software
  - A 2-D/3-D computer drafting/modeling program such as AutoCAD® and/or Revit Architecture®
  - A basic 3-D modeling application such as SketchUp® or Formit 360
  - Page layout, illustration, and imaging software such as the Adobe Creative Suite®

**7.0 Program outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

7.1 NAAB Student Performance Criteria A.1: Professional Communication Skills:  
*Ability* to write and speak effectively and use representational media appropriate for both within the profession and with the general public.

**8.0 Administrative Information**

**a) Proposal and Approval**

Course proposed by	Nana-Yaw Andoh
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<b>X</b>	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<b>X</b>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

	Course title		Mode of Delivery
	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the use of a computer lab updated with current 3-D modeling software.

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

ARCH-212 3-D Modeling is a required course for the Bachelor of Architecture program. It is also being offered as a course suitable for a minor in architecture for other undergraduate programs on campus.



---

## APPENDIX A: GENERAL EDUCATION

---

### I. Nature of the Course:

The primary objective of this course is digital visual communication using computer modeling. This artistic/architectural endeavor is considered one of the **humanities** by virtue of architecture being classified as a fine arts due to its physical representation of the built environment.

**Mathematics** will also be a fundamental requirement in this course as it will be the governing rule by which students will have to create and visually communicate their ideas digitally.

### II. General Education Essential Outcomes:

#### a. Communication

**a.1** Check at least one of the following student learning outcomes:

	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
<b>X</b>	Express oneself effectively in presentations, either in American English or American Sign language
	Demonstrate comprehension of information and ideas accessed through reading

**a.2** In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

All finished work in this course will be presented to the class and visiting critics for review and evaluation. Students will be required to express their design intent and will need to do so using American English or American Sign Language with an interpreter.

#### b. Critical Thinking

**b.1** Check at least one of the following student learning outcomes:

	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
	Reach sound conclusions based on logical analysis of evidence
<b>X</b>	Demonstrate creative and/or innovative approaches to assignments or projects

**b.2** In the space below, explain which aspects of this course lend themselves to the

Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

Students will be asked to visually communicate original design ideas using research and precedent studies as a basis for arriving at design solutions.

Students will be individually assessed on design creativity and effectiveness of their visual communication based on the criteria outlined in section 4.0.

### III. Additional Student Learning Outcomes

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

Table A.1: Student Learning Outcomes	
(Check)	Student Learning Outcomes
X	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
	2. Identify contemporary ethical questions and relevant positions
	3. Examine connections among the world's populations
X	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
X	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

As noted, the primary objective of this course is digital visual communication using computer modeling, the basis of which will involve research and precedent studies to inform design solutions.

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Section 4.0 specifically outlines the assessment criteria and methodology for this course.

#### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
	Artistic	#1	
	Ethical	#2	
	Global	#3	
	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

GOLISANO INSTITUTE FOR SUSTAINABILITY  
DEPARTMENT OF ARCHITECTURE

---

## GIS-ARCH-213 Digital Communication

### 1.0 Course Information

#### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Digital Communication
Transcript title (30 Characters)	Digital Communication
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

A skill building course that covers digital graphics and publishing. Content includes typography; graphic design; page layout; image creation, acquisition and adjustment; and file formats. **Class 3, Credit 3 (Spring)**

### 3.0 Goal(s) of the Course

- 3.1 Introduce students to various types of digital techniques.
- 3.2 Introduce students to different software applications and a variety of input and output devices for creating professional level documents.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-213 Digital Communication	Assessment Method(s)
<b>A.1 Professional Communication Skills.</b> <i>Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.</i>	4.1 Create a moderately complex document to industry standards using a page layout application.	Criteria Test
	4.2 Adjust bitmap images to industry standards using a photo editing application.	Criteria Test
	4.3 Create and edit vector graphics to industry standards using a vector graphics application.	Criteria Test
	4.4 Become facile with the editing and combining of various file formats into portable digital documents.	Criteria Test

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Page Layout
- 5.2 Typography
- 5.3 Graphic design
- 5.4 Vector and Raster – Based Applications
- 5.5 Color Systems
- 5.6 File Formats
- 5.7 Professional Production

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Texts
  - Ching, Francis D. K. *Building Construction Illustrated*, Wiley, New York: 2016.
  - Ching, Francis, D. K. *Architecture: Form, Space, and Order*, Wiley, New York: 2014.
  - Chiavaroli, *AEC Drafting Fundamentals*, West Publishing or iBook
  - Wallschlaeger, *Basic Visual Concepts and Principles*, McGraw-Hill, 1992
- 6.2 Software
  - A 2-D/3-D computer drafting/modeling program such as AutoCAD® and/or Revit Architecture®
  - A basic 3-D modeling application such as Google SketchUp®
  - Page layout, illustration, and imaging software such as the Adobe Creative Suite®

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.1: Professional Communication Skills:  
*Ability to write and speak effectively and use representational media appropriate for both within the profession and with the general public.*

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by:	Nana-Yaw Andoh
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<input checked="" type="checkbox"/>	General Education	
<input type="checkbox"/>	Writing Intensive	
<input type="checkbox"/>	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

### d) Additional course information (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

### e) Other relevant scheduling information

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the use of a computer lab updated with current industry standard software.

## **9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

ARCH-213 3-D Digital Communication is a required course for the Bachelor of Architecture program. It is also being offered as a course suitable for a minor in architecture for other undergraduate programs on campus.

---

## APPENDIX A: GENERAL EDUCATION

---

### I. Nature of the Course:

The objective of this course is digital visual communication using a variety of computer software. This artistic endeavor of architectural representation is considered one of the **humanities** by virtue of architecture being classified as a fine arts due to its physical representation of the built environment.

### II. General Education Essential Outcomes:

#### a. Communication

**a.1** Check at least one of the following student learning outcomes:

	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
<b>X</b>	Express oneself effectively in presentations, either in American English or American Sign language
	Demonstrate comprehension of information and ideas accessed through reading

**a.2** In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

All finished work in this course will be presented to the class and visiting critics for review and evaluation. Students will be required to express their design intent and will need to do so using American English or American Sign Language with an interpreter.

#### b. Critical Thinking

**b.1** Check at least one of the following student learning outcomes:

	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
<b>X</b>	Reach sound conclusions based on logical analysis of evidence
<b>X</b>	Demonstrate creative and/or innovative approaches to assignments or projects

**b.2** In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

Students will be asked to visually communicate original design ideas using research and precedent studies as a basis for arriving at design solutions.



Students will be individually assessed on design creativity and effectiveness of their visual communication based on the criteria outlined in section 4.0.

### III. Additional Student Learning Outcomes

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

Table A.1: Student Learning Outcomes	
(Check)	Student Learning Outcomes
<b>X</b>	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
	2. Identify contemporary ethical questions and relevant positions
	3. Examine connections among the world's populations
<b>X</b>	4. Analyze similarities and differences in human experiences and consequent perspectives
<b>X</b>	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
<b>X</b>	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

As noted, the primary objective of this course is digital visual communication using various computer programs, the basis of which will involve research and precedent studies to inform design solutions.

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Section 4.0 specifically outlines the assessment criteria and methodology for this course.

### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
	Artistic	#1	
	Ethical	#2	
	Global	#3	
	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

GOLISANO INSTITUTE FOR SUSTAINABILITY  
DEPARTMENT OF ARCHITECTURE

---

## GIS-ARCH-221 History of Architecture I

### 1.0 Course Information

#### a) Catalog Listing

Course title (100 characters)	History of Architecture I
Transcript title (30 Characters)	History of Architecture I
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

#### b) Terms(s) offered

<b>X</b>	Fall
	Spring
	Summer
	Other
	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

An overview of the history of architectural settlements from early civilization to medieval civilization. Focus is on Western traditions with many references to non-Western. **Class 3, Credit 3 (Fall)**

### 3.0 Goal(s) of the Course

The goal of this course is to develop a student's appreciation for historically significant architecture from Early-civilizations to the Medieval Era, understand the influences that affected form, and to apply these principles to contemporary design problems.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-221 History of Architecture I	Assessment Method(s)
<b>A.7 History and Global Culture</b> <b>A.8: Cultural Diversity and Social Equity</b>	4.1 Identify by name, date, architect, and location – important examples of architecture for a given style.	Testing
	4.2 Identify and explain how various external influences helped create formal characteristics for a given style.	Testing
	4.3 Compare and contrast important examples of architecture within and between styles.	Testing
	4.4 Evaluate important examples of architecture and architectural styles with respect to their ability to satisfy the economic, social, and environmental needs of their time.	Testing, Assignments, Papers

#### 5.0 Topics

##### 5.1. Beginnings of architecture and community

- Shelter
- Building Typologies
- Form of early communities
- Early building technology

##### 5.2 Ancient non-Western architecture

- China and Far East
- Middle Eastern city, state, nations and empires
- India – Indus Valley communities
- North, central and South American cultures

##### 5.3 The Western Classical tradition

- Pre-Greek Mediterranean
- Archaic Greece
- Classical Greece and Hellenistic
- Roman Republic and Empire

##### 5.4 Byzantine architecture

##### 5.5 Mature Far-Eastern architecture, China, Korea, Japan, Southeast Asia

##### 5.6 Western World

- North American cultures
- Mayan architecture and city-states

##### 5.7 Romanesque in Europe

##### 5.8 Gothic

- Beginning and development in France
- Spread and adaptation throughout Europe
- Late Gothic in England and urban Flanders
- Advances in building technology

- European urbanization
- 5.9 Non-Western architecture
- China and distinctive Japanese and Korean forms
  - The rise and spread of Islam and international Islamic architecture
  - India and Mogul style
  - The Americas – North American and Central/South American empires

## 6.0 Possible Resources

6.1 A World History of Architecture; Moffett, Marian; Fazio, Michael; Wodehouse, Lawrence; 608 pp., London, Lawrence King Publishing, 2008.

6.2 Library and Interlibrary resources for supplementary sources

## 7.0 Program outcomes and/or goals supported by this course

- 7.1 NAAB Student Performance Criteria A.7: History and Global Culture:  
Understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.
- 7.2 NAAB Student Performance Criteria A.8: Cultural Diversity and Social Equity:  
Understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Giovanna Potesta, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<b>X</b>	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<b>X</b>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs:
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

ARCH-221 History of Architecture I is a required course for the Bachelor of Architecture program. It is also being offered as a general education immersion course for other undergraduate programs on campus.

---

# APPENDIX A: GENERAL EDUCATION

---

## Preliminary Notes:

According to NYSED, “The liberal arts and sciences comprise the disciplines of the humanities, natural sciences and mathematics, and social sciences.” Although decisions about the general education status of RIT courses are guided by this categorization and the details provided at the NYSED web site ([click HERE](#)), RIT recognizes that a general education course might not fit neatly into any one of these categories. Course authors from all areas are encouraged to read not only the NYSED web site, but also the mission statement at RIT’s General Education web site ([click HERE](#)).

This appendix is meant to highlight those facets of a course that are directly relevant to its General Education status, and if applicable, to provide course authors with an opportunity to elaborate on aspects of the course that locate it in one or more of the Perspective categories. The course description, course goals, and course learning outcomes (sections 2, 3, and 4 of the course outline) should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT’s General Education Outcomes assessment cycle.

## I. Nature of the Course:

This course pertains to the field of Humanities and Social Sciences.

## II. General Education Essential Outcomes:

The Academic Senate approved the following proposal at the meeting of 16 April, 2015.

*Communication and critical thinking are essential to the general education of every student at RIT. Going forward, every course designated as general education by GEC will provide learning experiences designed to achieve at least one student learning outcome from each of these domains (Communication and Critical Thinking).*

The approved student learning outcomes are listed below.

### a. Communication

**a.1** Check at least one of the following student learning outcomes:

X	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
X	Express oneself effectively in presentations, either in American English or American Sign language
X	Demonstrate comprehension of information and ideas accessed through reading

**a.2** In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be

assessed.

Students will be asked to present on assigned topics both verbally and in writing. Their knowledge is based on comprehension of lectures and written texts.

### **b. Critical Thinking**

**b.1** Check at least one of the following student learning outcomes:

	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
X	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
	Reach sound conclusions based on logical analysis of evidence
	Demonstrate creative and/or innovative approaches to assignments or projects

**b.2** In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

Students analyze and confront different views of architectures and different styles through time.

### **III. Additional Student Learning Outcomes**

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

<b>Table A.1: Student Learning Outcomes</b>	
<b>(Check)</b>	<b>Student Learning Outcomes</b>
X	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
	2. Identify contemporary ethical questions and relevant positions
X	3. Examine connections among the world's populations
X	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

Architecture as artistic expression is analyzed and presented in the cultural context in which it is created, in the assignments provided by students. Different styles and times will be compared chronologically and compared to the present situation in terms of social consequences.

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Students achievement are assessed through writing, verbal presentation and tests.

#### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
	Artistic	#1	
	Ethical	#2	
	Global	#3	
	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	



---

# ROCHESTER INSTITUTE OF TECHNOLOGY

GOLISANO INSTITUTE FOR SUSTAINABILITY  
DEPARTMENT OF ARCHITECTURE

---

## GIS-ARCH-222 History of Architecture II

### 1.0 Course Information

#### a) Catalog Listing

Course title (100 characters)	History of Architecture II
Transcript title (30 Characters)	History of Architecture II
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

The History of Architecture from the Renaissance to Modernity with a focus on Western traditions with many references to non-Western. **Class 3, Credit 3 (Fall)**

### 3.0 Goal(s) of the Course

The goal of the course is to develop a student's appreciation for historically significant architecture from the Renaissance forward, understand the influences that affected form, and to apply these principles to contemporary design problems.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-222 History of Architecture II	Assessment Method(s)
<b>A.7 History and Global Culture</b> <b>A.8: Cultural Diversity and Social Equity</b>	4.1 Identify by name, date, architect, and location – important examples of architecture for a given style.	Testing
	4.2 Identify and explain how various external influences helped create formal characteristics for a given style.	Testing
	4.3 Compare and contrast important examples of architecture within and between styles.	Testing
	4.4 Evaluate important examples of architecture and architectural styles with respect to their ability to satisfy the economic, social, and environmental needs of their time.	Testing, Assignments, Papers

#### 5.0 Topics (should be in an enumerated list or outline format)

##### 5.1 The Western Renaissance

- Italian origins
- Italian Renaissance urbanism
- Renaissance dissemination and variations

##### 5.2 Renaissance transition and transformations

- Mannerism
- Baroque and Rococo
- Classic revivals and the beginnings of Romantic vocabulary

##### 5.3 - The European Classical Revival

- France England
- Germany/Austria
- Eastern Europe and Russian Empire

##### 5.4. Non-Western architecture

- Traditional forms and innovation/non-innovation
- Impacts of Western colonialism on traditional non-western design traditions
- Colonial architecture in the North American colonies
- The Romantic Revival and Eclecticism
- England
- France, Germany and Eastern Europe

##### 5.5. The Architecture of Engineering

- Mathematics of structure engineering vs. common practice
- Formal vocabulary of the new engineering
- The revolution in scale
- International urbanization and the emergence of super-cities

## 5.6 Modernism

- European art movements and their impact on architecture
- Art Nouveau
- Arts and Crafts, British Empire and America
- The Vienna Secession

## 5.7- Modernism

- Russian Constructivism
- Bauhaus
- Sullivan, Wright and American contributions
- Mature Modernism and the International Style

## 5.8 Post-modernism

## 5.9 Official taste and popular design

## 6.0 Possible Resources (should be in an enumerated list or outline format)

6.1 A World History of Architecture; Moffett, Marian; Fazio, Michael; Wodehouse, Lawrence; 608 pp., London, Lawrence King Publishing, 2008.

6.2 Library and Interlibrary resources for supplementary sources

## 7.0 Program outcomes and/or goals supported by this course

- 7.1 NAAB Student Performance Criteria A.7: History and Global Culture: Understanding of the parallel and divergent histories of architecture and the cultural norms of a variety of indigenous, vernacular, local, and regional settings in terms of their political, economic, social, ecological, and technological factors.
- 7.2 NAAB Student Performance Criteria A.8: Cultural Diversity and Social Equity: Understanding of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Giovanna Potesta, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<b>X</b>	General Education	No
	Writing Intensive	No

	Honors	No
--	--------	----

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly): Undergraduate version of ARCH-622		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

ARCH-222 History of Architecture II is a required course for the Bachelor of Architecture program. It is also being offered as a general education immersion course for other undergraduate programs on campus.

---

## APPENDIX A: GENERAL EDUCATION

---

### Preliminary Notes:

According to NYSED, “The liberal arts and sciences comprise the disciplines of the humanities, natural sciences and mathematics, and social sciences.” Although decisions about the general education status of RIT courses are guided by this categorization and the details provided at the NYSED web site ([click HERE](#)), RIT recognizes that a general education course might not fit neatly into any one of these categories. Course authors from all areas are encouraged to read not only the NYSED web site, but also the mission statement at RIT’s General Education web site ([click HERE](#)).

This appendix is meant to highlight those facets of a course that are directly relevant to its General Education status, and if applicable, to provide course authors with an opportunity to elaborate on aspects of the course that locate it in one or more of the Perspective categories. The course description, course goals, and course learning outcomes (sections 2, 3, and 4 of the course outline) should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT’s General Education Outcomes assessment cycle.

### I. Nature of the Course:

This course pertains to the field of Humanities and Social Sciences.

### II. General Education Essential Outcomes:

The Academic Senate approved the following proposal at the meeting of 16 April, 2015.

*Communication and critical thinking are essential to the general education of every student at RIT. Going forward, every course designated as general education by GEC will provide learning experiences designed to achieve at least one student learning outcome from each of these domains (Communication and Critical Thinking).*

The approved student learning outcomes are listed below.

#### a. Communication

a.1 Check at least one of the following student learning outcomes:

X	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
X	Express oneself effectively in presentations, either in American English or American Sign language
X	Demonstrate comprehension of information and ideas accessed through reading

**a.2** In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

Students will be asked to present on assigned topics both verbally and in writing. Their knowledge is based on comprehension of lectures and written texts.

## **b. Critical Thinking**

**b.1** Check at least one of the following student learning outcomes:

	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
X	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
	Reach sound conclusions based on logical analysis of evidence
	Demonstrate creative and/or innovative approaches to assignments or projects

**b.2** In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

Students analyze and confront different views of architectures and different styles through time.

## **III. Additional Student Learning Outcomes**

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

<b>Table A.1: Student Learning Outcomes</b>	
(Check)	<b>Student Learning Outcomes</b>
X	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
	2. Identify contemporary ethical questions and relevant positions
X	3. Examine connections among the world's populations
X	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

Architecture as artistic expression is analyzed and presented in the cultural context in which it is created, in the assignments provided by students. Different styles and times will be compared chronologically and compared to the present situation in terms of social consequences

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Students achievement are assessed through writing, verbal presentation and tests.

#### **IV. Perspectives**

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
	Artistic	#1	
	Ethical	#2	
	Global	#3	
	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-231 Architectural Studio I

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Studio I
Transcript title (30 Characters)	Architectural Studio I
Credit hours	4
Prerequisite(s)**	ARCH-131 2-D Design, ARCH-132 3-D Design
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	2.0	
Lab		
Studio	6.0	12
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Exploration of design as a conceptual discipline directed at the analysis, interpretation, synthesis, and transformation of the built environment. (Prerequisites: ARCH-131 2-D Design, ARCH-132 3-D Design I) **Class 2, Studio 6, Credit 4 (Fall)**

#### 3.0 Goal(s) of the Course

- 3.1 Introduce students to the production of basic graphic communication tools (bubble diagram, figure-ground, site diagram) and develop an understanding of how to read/interpret various data sources (topographic maps, etc.)



- 3.2 Cultivate students' visual-based spatial awareness and cognition through observation and documentation of the built environment.
- 3.3 Introduce students to drawing and making (construction) as a mode of seeing and thinking.
- 3.4 Introduce a range of possibilities for the making of both 2-D and 3-D environments.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-231 Architectural Studio I	Assessment Method(s)
<b>A.4 Architectural Design Skills</b> <b>A.5 Ordering Systems</b>	4.1 Describe the nature and role of the primary design elements in a successful design.	Assignments
	4.2 Describe the nature and impact each element of form has on an overall design.	Assignments
	4.3 Utilize primary design elements to create 2-dimensional and 3-dimensional design compositions.	Critiqued Projects
	4.4 Utilize elements of form to create 3-dimensional design compositions that respond to given spatial requirements	Critiqued Projects

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Primary Design Elements
  - Point, line, plane, volume
- 5.2 Form
  - 2-D space; Positive-Negative, Figure-Ground
  - 3-D space; Shape, Size, Color, Texture, Position, Orientation
- 5.3 Form and Space
  - Planes, Linear elements, Closure, Proportion, Scale, Light, View
- 5.4 Composite Sketching
- 5.5 Color Rendering Basics
- 5.6 Photographic Representation Basics
- 5.7 Transfers and Transfer Systems
- 5.8 Documenting Work/ Digital File Management

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Texts
  - Ching, Francis D. K. *Building Construction Illustrated*, Wiley, New York: 2016.
  - Ching, Francis, D. K. *Architecture: Form, Space, and Order*, Wiley, New York: 2014.
- 6.2 Software
  - A 2-D/3-D computer drafting/modeling program such as Formit360® and/or Revit®

- Page layout, illustration, and imaging software such as the Adobe Creative Suite®

**7.0 Program outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.4 Architectural Design Skills: Ability to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.
- 7.2 NAAB Student Performance Criteria A.5 Ordering Systems: Ability to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

**8.0 Administrative Information**

**a) Proposal and Approval**

Course proposed by	Nana-Yaw Andoh & Giovanna Potestà, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
-------------------------------------	---------------------

	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: <b>Bachelor of Architecture</b>
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the use of an integrated manual drawing studio and a computer lab.

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-232 Architectural Studio II

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Studio II
Transcript title (30 Characters)	Architectural Studio II
Credit hours	4
Prerequisite(s)**	ARCH-231 Architectural Studio I
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	2.0	
Lab		
Studio	6.0	12
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Students will analyze and solve basic architectural design problems with a focus on residential design and other wood based structures. (Pre-requisite: ARCH-231 Architectural Studio I) **Class 2, Studio 6, Credit 4 (Spring)**

#### 3.0 Goal(s) of the Course

- 3.1 Begin exploration of contextual sites as a mode for architectural investigation.
- 3.2 Examine, apply, and master primary architecture-based concepts such as site, enclosure, separation, circulation, etc.

- 3.3 Synthesize the historical and material/methods components of co-requisite courses into studio projects.
- 3.4 Examine the connections between the abstract design principles and the physical and visual environments.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-232 Architectural Studio II	Assessment Method(s)
<b>A.4 Architectural Design Skills</b>  <b>A.5 Ordering Systems</b>	4.1 Study and apply residential design philosophy to create single family to multi-family residential building projects.	Assignments, Critiqued Projects
	4.2 Synthesize influences on residential form learned in pre- and co-requisite courses into design projects.	Assignments, Critiqued Projects
	4.3 Create residential designs that respond to their natural and man-made environmental context.	Critiqued Projects
	4.4 Identify and utilize methods of sustainable architectural design.	Assignments, Critiqued Projects
	4.5 Given programmatic requirements, utilize basic design elements to design space and form that responds to client needs.	Critiqued Projects

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Design Organization
  - Spatial relationships and patterns
- 5.2 Circulation
  - Approach, entry, configuration, path, and patterns
- 5.3 Proportion and Scale
  - Historic examples
  - Modern theory
- 5.4 Ordering Principles
  - Axis, symmetry, hierarchy, rhythm, repetition, transformation
- 5.5 Modeling
  - Physical modeling with wood and plastics
  - Computer modeling

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Texts
  - Ching, Francis D. K. *Building Construction Illustrated*, Wiley, New York: 2016.

- Ching, Francis, D. K. *Architecture: Form, Space, and Order*, Wiley, New York: 2014.
- Ramsey, Charles George and Harold Reeve Sleeper, *Architectural Graphic Standards* Wiley, New York: 2016.

## 6.2 Software

- A 2-D/3-D computer drafting/modeling program such as Formit360® and/or Revit®
- Page layout, illustration, and imaging software such as the Adobe Creative Suite®

## 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.4 Architectural Design Skills: Ability to effectively use basic formal, organizational and environmental principles and the capacity of each to inform two- and three-dimensional design.
- 7.2 NAAB Student Performance Criteria A.5 Ordering Systems: Ability to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Nana-Yaw Andoh & Giovanna Potestà, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation

	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: <b>Bachelor of Architecture</b>
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the use of an integrated manual drawing studio and a computer lab.

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

GOLISANO INSTITUTE FOR SUSTAINABILITY  
DEPARTMENT OF ARCHITECTURE

---

## GIS-ARCH-241 Building Systems: Fundamentals

### 1.0 Course Information

#### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Building Systems: Fundamentals
Transcript title (30 Characters)	Building Systems: Fundamentals
Credit hours	3
Prerequisite(s)**	none
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

An overview of the various passive and active architectural and engineering systems that comprise a building project while focusing on wood frame construction. **Class 3, Credit 3 (Fall)**

### 3.0 Goal(s) of the Course

For students to:

- 3.1 Gain a fundamental understanding of the various components of a building project's systems.



- 3.2 Understand how these systems work individually, how they interrelate, and how they affect the overall design configuration.
- 3.3 Learn, in an integrated way, the various ways in which components of a small-scale building project's systems work.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-241 Building Systems: Fundamentals	Assessment Method
<b>B.6 Environmental Systems</b>	4.1 List sections of the CSI Format and explain aspects of the general conditions of construction, and demolition work.	Testing
<b>B.7 Building Envelopes Systems and Assemblies</b>	4.2 Recognize, classify, and compare the major components and assemblies of common floor, wall, and roof systems.	Testing
	4.3 Recognize, classify, and select residential construction materials and methods including light wood framing, concrete and masonry foundations, thermal & moisture protection, openings, and finishes.	Testing
NA	4.4 Explain how land use is controlled with zoning codes and other societal constraints.	Testing
	4.5 Describe and utilize the various soil classifications systems, soil types, and their properties.	Testing
	4.6 Explain the basic forces acting on structural systems and components.	Testing, Assignments
	4.7 Perform basic load and stress/strain calculations.	Testing
	4.8 Design simple continuous and point load foundations.	Testing
	4.9 Select light-wood framing for roofs, ceilings, and floors.	Testing
	4.10 Design simple wood and steel beams/lintels.	Testing
<b>B.6 Environmental Systems</b>	4.11 Explain the conditions that affect human comfort and the underlying thermodynamics.	Testing, Assignments
	4.12 Explain and describe climatological factors and regional characteristics affecting design decision-making.	Testing, Assignments
	4.13 Recognize and describe traditional residential HVAC systems.	Testing

<b>B.9 Building Services Systems</b>	4.14 Explain how public water supply and sanitary waste systems and their various components function.	Testing
	4.15 Recognize and describe public and private water supply and waste systems for residential use.	Testing
	4.16 Recognize and describe electrical supply and distribution systems for residential use.	Testing
	4.17 Explain the purpose and basic components and operation of fire protection, alarm/signaling, and vertical transportation systems.	Testing
	4.18 Classify, compare, summarize, and explain the basic sustainability issues for a building construction project.	Testing
	4.19 Recognize and describe alternative energy systems for residential use.	Testing
<b>B.10 Financial Considerations</b>	4.20 Perform basic cost estimates on a building type/cost per square foot basis, and via the component cost method.	Testing, Projects
NA	4.21 Identify and explain zoning code regulations that affect site and building design.	Testing
	4.22 Apply a model residential building code to a project.	Testing

## 5.0 Topics (should be in an enumerated list or outline format)

### 5.1 Architectural Materials and Methods

- Construction Specification Format
- CSI divisions: general conditions, demolition, concrete, masonry, wood, thermal & moisture protection, openings, finishes
- Floor, wall, and roof systems
- Type V (wood frame) construction materials and methods

### 5.2 Civil/Site Work

- Land use and planning
- Soils
- Topography, grading, drainage, site orientation

### 5.3 Climate and Comfort

- Climatological factors
- Human comfort variables
- Bioclimatic chart
- Psychrometric chart

### 5.4 Structural Systems

- Concepts of statics and strength of materials
- Foundations
- Wood tables
- Simple beams

## 5.5 HVAC Systems

- Basic thermodynamics
- Traditional residential heating, ventilating, and air conditioning systems

## 5.6 Plumbing Systems

- Water supply systems
- Sanitary waste systems (drainage, waste, and venting)
- Public residential services connections
- Private water systems
- Private sanitary sewer systems
- Fixtures

## 5.7 Electrical Systems

- Power systems and types
- Lighting systems
- Residential electrical supply and distribution

## 5.8 Other Systems

- Fire protection systems
- Alarm and signaling systems
- Vertical transportation systems

## 5.9 Sustainability

- Alternative residential energy systems
- Sustainable building materials and construction practices

## 5.10 Construction Cost Controls

- Cost estimating methods

## 5.11 Building and Zoning Codes

## 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Professionals from Industry
- 6.2 RIT faculty from related programs, e.g. engineering, engineering technology
- 6.3 Allen, Exercises in Building Construction, John Wiley and Sons, 2004
- 6.4 Allen, Fundamentals of Building Construction: Materials and Methods, John Wiley and Sons, 2008
- 6.5 Allen, How Buildings Work: The Natural Order of Architecture, Oxford University Press Inc., 2000
- 6.6 American Institute of Architects, Architectural Graphic Standards, John Wiley and Sons, 2016
- 6.7 Ching, Building Construction Illustrated, John Wiley and Sons, 2016
- 6.8 Grodzik, Mechanical and Electrical Equipment for Buildings, John Wiley and Sons, 2015
- 6.9 International Code Council, 2014 International Building Code, ICC, 2014
- 6.10 Parker, Simplified Design of Steel (Wood, Concrete) Structures, John Wiley and Sons, 1997
- 6.11 Reid, Understanding Buildings: A Multidisciplinary Approach, First MIT Press, 2000
- 6.12 Spiegel, Green Building Materials: A Guide to Product Selection and Specification, John Wiley & Sons, Inc., New York, 2010

## 7.0 Program outcomes and/or goals supported by this course

- 7.1 NAAB Student Performance Criteria B.6: Environmental Systems: *Ability* to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment.

This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.

7.2 NAAB Student Performance Criteria B.7: Building Envelope Systems and Assemblies: *Understanding* of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

7.3 NAAB Student Performance Criteria B.10: Financial Considerations: *Understanding* of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<b>X</b>	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<b>X</b>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

	Course title		Mode of Delivery
	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

ARCH-241 Building Systems: Fundamentals is a required course for the Bachelor of Architecture program. It is also being offered as a general education immersion course for other undergraduate programs on campus.

---

# APPENDIX A: GENERAL EDUCATION

---

## Preliminary Notes:

According to NYSED, “The liberal arts and sciences comprise the disciplines of the humanities, natural sciences and mathematics, and social sciences.” Although decisions about the general education status of RIT courses are guided by this categorization and the details provided at the NYSED web site ([click HERE](#)), RIT recognizes that a general education course might not fit neatly into any one of these categories. Course authors from all areas are encouraged to read not only the NYSED web site, but also the mission statement at RIT’s General Education web site ([click HERE](#)).

This appendix is meant to highlight those facets of a course that are directly relevant to its General Education status, and if applicable, to provide course authors with an opportunity to elaborate on aspects of the course that locate it in one or more of the Perspective categories. The course description, course goals, and course learning outcomes (sections 2, 3, and 4 of the course outline) should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT’s General Education Outcomes assessment cycle.

## I. Nature of the Course:

After reviewing the NYSED web site ([click HERE](#)) and the RIT description of general education ([click HERE](#)) describe how this course fits the definition of general education.

## II. General Education Essential Outcomes:

The Academic Senate approved the following proposal at the meeting of 16 April, 2015.

*Communication and critical thinking are essential to the general education of every student at RIT. Going forward, every course designated as general education by GEC will provide learning experiences designed to achieve at least one student learning outcome from each of these domains (Communication and Critical Thinking).*

The approved student learning outcomes are listed below.

### a. Communication

a.1 Check at least one of the following student learning outcomes:

	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
	Express oneself effectively in presentations, either in American English or American Sign language
X	Demonstrate comprehension of information and ideas accessed through reading

**a.2** In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

Being an overview course in building technology the student needs to read and comprehend written communication from a wide variety of sources. This includes technical reports, promotional literature, textbooks, trade publications, building and zoning codes, and professional journals. The student needs to consider the source when processing this information so as to develop the ability to separate fact from exaggeration or data from marketing. The literature read needs to be analyzed and then synthesized into a form that can then inform the design process.

## **b. Critical Thinking**

**b.1** Check at least one of the following student learning outcomes:

X	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
X	Reach sound conclusions based on logical analysis of evidence
X	Demonstrate creative and/or innovative approaches to assignments or projects

**b.2** In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

## **III. Additional Student Learning Outcomes**

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

<b>Table A.1: Student Learning Outcomes</b>	
(Check)	<b>Student Learning Outcomes</b>
	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
	2. Identify contemporary ethical questions and relevant positions
	3. Examine connections among the world's populations
	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

#### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
	Artistic	#1	
	Ethical	#2	
	Global	#3	
	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	



---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-261 Measuring Sustainability

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Measuring Sustainability
Transcript title (30 Characters)	Measuring Sustainability
Credit hours	3
Prerequisite(s)**	ENVS-101 Concepts of Environmental Sciences
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Students assess the impact and interrelations of built environments on the natural environment by utilizing life cycle assessment tools and principles of sustainability. (Prerequisite: ENVS-101 Concepts of Environmental Sciences) **Class 3, Credit 3 (Spring)**

#### 3.0 Goal(s) of the Course

- 3.1 To enhance students' understanding of the interaction between the built environment and environmental/ecological systems.
- 3.2 To introduce students to the analytical tools necessary to quantify material and energy exchanges and the adverse environmental consequences of those.

3.3 To provide the opportunity for students to apply LCA concepts to the architectural design process.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ISUS-212 Measuring Sustainability	Assessment Method
<b>B.10 Financial Considerations</b>	4.1 Explain how industrial ecology serves as a framework for the consideration of environmental and sustainability-related aspects of science and technology.	Testing
	4.2 Apply industrial ecology as a framework for the consideration of environmental and sustainability-related aspects of science and technology	Testing
	4.3 Compile and analyze inventory and environmental impact data for a product or process across its life cycle to demonstrate mastery of life cycle assessment as an essential tool in industrial ecology	Assignment, Project
<b>C.2: Integrated Evaluations and Decision-Making Design Process</b>	4.4 Analyze and discuss sustainable design approaches, benefits, and challenges in a team-based setting.	Project

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Measurement Science for the Built Environment
- 5.2 Environmental and Energy Performance Metrics for the Built Environment
- 5.3 Assessment Tools
- 5.4 Certification Process and Design Guides
  - LEED Certification process and metrics
  - Whole Building Design Guide

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 GreenSource, *Emerald Architecture: Case Studies in Green Building*, USGBC
- 6.2 Brandon, P., *Evaluation of the Built Environment for Sustainability*, Taylor and Francis.
- 6.3 LCA Software
- 6.4 Leadership in Energy and Environmental Design (LEED) Green Building Rating System™, US Green Building Council.
- 6.5 Graedel and Allenby; *Industrial Ecology and Sustainable Engineering*; Prentice Hall, Inc. 2010.

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria B.10: Financial Considerations:  
*Understanding* of the fundamentals of building costs, which must include project

financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.

7.2 NAAB Student Performance Criteria C.2: Integrated Evaluations and Decision-Making Design Process: *Ability* to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Nana-Yaw Andoh
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<input checked="" type="checkbox"/>	General Education	
<input type="checkbox"/>	Writing Intensive	
<input type="checkbox"/>	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):	<input type="checkbox"/>	

### d) Additional course information (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: <b>Bachelor of Architecture</b>

	Program elective course   For which programs:
--	---

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the occasional use of a computer lab with up-to-date software.

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-262

Title of course: **Sustainability in Architecture**

#### 1.0 Course Information

**a) Catalog Listing** (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Sustainability in Architecture
Transcript title (30 Characters)	Sustainability in Architecture
Credit hours	3
Prerequisite(s)**	ARCH-261 Measuring Sustainability
Co-requisite(s)	none

**b) Terms(s) offered** (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

**c) Instructional Modes** (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

**2.0 Course Description** (as it will appear in the bulletin)

The measurement science, performance metrics, assessment tools, and fundamental data critical for the development and implementation of building systems associated with life-cycle operation of buildings. (Pre-requisite: ARCH-261 Measuring Sustainability)

**Class 3, Credit 3 (Fall)**

#### 3.0 Goal(s) of the Course

The goal of this course is to introduce students to prevailing metrics and assessment tools pertaining to the built environment and to support the inclusion of these considerations into the Building Systems courses.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ISUS-212 Sustainability in Architecture	Assessment Method
<b>B.6: Environmental Systems</b>	4.1 Describe the scientific measurement methods used in the evaluation of the built environment.	Testing, Assignments
	4.2 Perform scientific measurements and calculations that relate to the built environment.	Testing, Assignments
	4.3 Describe and utilize the assessment tools used in the evaluation of the built environment.	Testing, Assignments
<b>Criteria B.7: Building Envelope Systems and Assemblies</b>	4.4 Complete select aspects of major green building certification systems.	Projects

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Understanding Sustainability
- 5.2 Introduction to Sustainability Sciences
- 5.3 Assessing Sustainability – Metrics and Indicators
- 5.4 Case Studies

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 McDonough, D. and M. Braungart, *Cradle to Cradle: Remaking the Way We Make Things*, North Point Press.
- 6.2 Williamson, T.J., H. Bennets, and A. Radford, *Understanding Sustainable Architecture*, Spon Press, 2004.
- 6.3 Goerner, S.J., R.G. Dyck, and D. Lagerroos, *The New Science of Sustainability: Building a Foundation for a Great Change*, Triangle Center for Complex Systems, 2008.

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria B.6: Environmental Systems: *Ability* to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.
- 7.2 NAAB Student Performance Criteria B.7: Building Envelope Systems and Assemblies: *Understanding* of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.

#### 8.0 Administrative Information

**a) Proposal and Approval**

Course proposed by	Nana-Yaw Andoh
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<b>X</b>	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<b>X</b>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

	Course title		Mode of Delivery
	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: <b>Bachelor of Architecture</b>
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-331 Architectural Studio III

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Studio III
Transcript title (30 Characters)	Architectural Studio III
Credit hours	6
Prerequisite(s)**	ARCH-232 Architectural Studio II
Co-requisite(s)	ARCH-341 Building Systems: Site

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3.0	
Lab		
Studio	9.0	12
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Investigation of the interconnection between architecture and the site as well as physical, cultural, and regulatory constraints. Basic landscape architecture topics will also be introduced. (Pre-requisite: ARCH-232 Architectural Studio II, Co-requisite: ARCH-341 Building Systems: Site) **Class 3, Studio 9, Credit 6 (Fall)**

#### 3.0 Goal(s) of the Course

- 3.1 To provide students with the opportunity to create designs that fully integrate state of the art site and architectural design principles.



- 3.2 To provide students with the opportunity to expand their understanding of the relationship between the design process and the completed project.
- 3.3 For students to articulate and successfully communicate the design parti as well as the subsequent practical aspects of the design.
- 3.4 For students to successfully anticipate and prioritize user needs throughout the site and building design and articulate the same with professional level communication methods.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-331 Architectural Studio III	Assessment Method
<b>A.2: Design Thinking Skills</b> <b>A.5: Ordering Systems</b>	4.1 Given an architectural program and project site, students will be able to produce a coherent and professionally presented solution that satisfies client needs.	Design project(s) with critiques
<b>B.1: Pre-Design</b>	4.2 Student will be able to analyze site data as a prelude to the design process.	Pre-design project documentation
<b>B.2: Site Design</b>	4.3 Students will be able to apply site design best practices to create workable, economical, and sustainable site solutions.	Design project(s) with critiques
	4.4 Student will be able to create a building design, and/or multiple building layout designs that integrate with site characteristics to produce an integrated site/building solution.	
	4.5 Students will be able to create site designs that satisfy accessibility requirements.	

#### 5.0 Topics (should be in an enumerated list or outline format)

##### 5.1 Site Analysis

- Physical Characteristics (topography, vegetation, views, climate, etc.)
- Functional Characteristics (area traffic, roads, sidewalks, utilities, etc.)
- Social/Psychological Characteristics (historical perspective, population, behavioral, etc.)
- Legal/Political Characteristics (surveys, zoning, codes, etc.)
- Economic (land costs, financing, taxes, utility rates, etc.)

##### 5.2 Site/Building Design

- Building impact on site
- Site impact on Building
- Landscape design

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

##### 6.1 Texts

- Ching, Francis D. K. Building Construction Illustrated, Wiley, New York: 2016.
- Ching, Francis, D. K. Architecture: Form, Space, and Order, Wiley, New York: 2014.
- Pena, William Problem Seeking 4th Edition, Wiley, New York 2001
- Tufte, Edward The Visual Display of Quantitative Information, Graphics Press, New York, 2001
- Simonds, John, Landscape Architecture, Wiley, New York 2013

#### 6.2 Software

- A 2-D/3-D computer drafting/modeling program such as Formit360® and/or Revit®
- A 3-D modeling/rendering/animation program such as AutoDesk 3D Max® or Maya®
- Page layout, illustration, and imaging software such as the Adobe Creative Suite®

### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.2: Design Thinking Skills: *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
- 7.2 NAAB Student Performance Criteria A.5: Ordering Systems: *Ability* to apply the fundamentals of both natural and formal ordering systems and the capacity of each to inform two- and three-dimensional design.
- 7.3 NAAB Student Performance Criteria B.1: Pre-Design: *Ability* to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.
- 7.4 NAAB Student Performance Criteria B.2: Site Design: *Ability* to respond to site characteristics, including urban context and developmental patterning, historical fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.

### 8.0 Administrative Information

#### a) Proposal and Approval

Course proposed by	Nana-Yaw Andoh & Giovanna Potestà, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the use of an integrated manual drawing studio and a computer lab.

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-332 Architectural Studio IV

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Studio IV
Transcript title (30 Characters)	Architectural Studio IV
Credit hours	6
Prerequisite(s)**	ARCH-331 Architectural Studio III
Co-requisite(s)	ARCH-342 Building Systems: Structure & Envelope

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3.0	
Lab		
Studio	9.0	12
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

This studio builds upon and expands the student's design skills through the lens of urban design, and introduces the new dynamic of community leadership and urban planning. (Pre-requisite: ARCH-331 Architectural Studio III; Co-requisite: ARCH-342 Building Systems: Structure & Envelope) **Class 3, Studio 9, Credit 6 (Spring)**

#### 3.0 Goal(s) of the Course

- 3.1 The primary goal for this studio is to interface students with the concept of urbanism in the North American context.

- 3.2 Students may be engaged in projects involving local community groups and organizations. As such, this studio may take on a service-learning component.
- 3.3 Students should be able to articulate the understanding that placing the architectural artifact in the urban context is a component of sustainable architecture.
- 3.4 Understanding the urban fabric as another component of sustainable design.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-332 Architectural Studio IV	Assessment Method
<b>A.2: Design Thinking Skills</b>	4.1 Accurately communicate and document architectural space and form in the urban context.	Projects w/ Critiques
<b>B.1: Pre-Design</b>	4.2 Identify basic urban design systems at an existing site.	Projects w/ Critiques
<b>C.1: Research</b>	4.3 Interact with and manage community resources and communication skills with these constituencies.	Projects w/ Critiques
<b>A.2: Design Thinking Skills</b>	4.4 Create a building design within an existing urban or urban-related context that integrates site and building.	Projects w/ Critiques
<b>A.6: Use of Precedents</b>	4.5 Use precedents to inform effective urban design solutions.	Precedent Studies

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Environmental Research and Documentation
- 5.2 Urbanism
- Theory
  - Case studies

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Software
- A basic 3-D modeling application such as Formit360®
  - A 2-D/3-D computer drafting/modeling program such as Revit®
  - A 3-D modeling/rendering/animation program such as AutoDesk 3D Max® or Maya®
  - Page layout, illustration, and imaging software such as the Adobe Creative Suite®
- 6.2 Rochester Regional Community Design Center
- 6.3 Cities Ten Lines: A New Lens for the Urbanistic Project. Barcelona: Actar D/ Nicolodi Editore, 2006
- 6.4 Rossi, Aldo. The Architecture of the City.

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.2: Design Thinking Skills: *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
- 7.2 NAAB Student Performance Criteria A.6: Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.
- 7.3 NAAB Student Performance Criteria B.1: Pre-Design: *Ability* to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.
- 7.4 NAAB Student Performance Criteria B.10: Financial Considerations: *Understanding* of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.
- 7.5 NAAB Student Performance Criteria C.1: Research: *Understanding* of the theoretical and applied research methodologies and practices used during the design process.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Nana-Yaw Andoh & Giovanna Potestà, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the use of an integrated manual drawing studio and a computer lab.

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-333 Architectural Studio V

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Studio V
Transcript title (30 Characters)	Architectural Studio V
Credit hours	6
Prerequisite(s)**	ARCH-332 Architectural Design IV
Co-requisite(s)	ARCH-343 Building Systems: Structure & Interior

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3.0	
Lab		
Studio	9.0	12
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

This course explores the possibilities of the adaptive reuse of existing buildings and spaces, with implicit exposure to the basics of historic preservation. (Pre-requisite: ARCH-332 Architectural Design IV; Co-requisite: ARCH-343 Building Systems: Structure & Interior) **Class 3, Studio 9, Credit 6 (Fall)**

#### 3.0 Goal(s) of the Course

- 3.1 A primary goal of this studio is for students to be engaged with "actual buildings and spaces" and may involve community related projects. As such, this course may take on a service-learning component.



- 3.2 Students should be able to articulate the understanding that the reuse of materials and space is an integral component of sustainable architecture.
- 3.3 To foster proper and respectful reuse of materials and spaces as an integral component of historic preservation.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-333 Architectural Studio V	Assessment Method
<b>B.1 Pre-Design</b>	4.1 Accurately document and communicate as-built space.	Projects w/ Critiques
<b>A.6 Use of Precedents</b>	4.2 Analyze existing site and building data as a prelude to the design process.	Projects w/ Critiques
<b>A.2 Design Thinking Skills</b>	4.3 Utilize sustainability related analytic software to inform architectural design.	Projects w/ Critiques
	4.4 Master professional-quality presentation skills.	Projects w/ Critiques
<b>A.2 Design Thinking Skills</b>	4.5 Create an adaptive reuse proposal that successfully responds to the client's program and the external design constraints.	Projects w/ Critiques

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Pre-Design Analysis
- Existing conditions
  - Environmental analysis
- 5.2 Site Analysis
- Demographic and social data
  - Identifying “gaps” in the fabric
- 5.3 Historic Preservation

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Texts
- Ching, Francis D. K. Building Construction Illustrated, Wiley, New York: 2016.
  - Ching, Francis, D. K. Architecture: Form, Space, and Order, Wiley, New York: 2014.
  - Pena, William Problem Seeking 4th Edition, Wiley, New York 2001.
  - Tufte, Edward The Visual Display of Quantitative Information, Graphics Press, New York, 2001.
  - Other texts as appropriate for project selected
- 6.2 Software
- A basic 3-D modeling application such as Formit360®
  - A 2-D/3-D computer drafting/modeling program such as Revit®
  - A 3-D modeling/rendering/animation program such as AutoDesk 3D Max® or Maya®

- Page layout, illustration, and imaging software such as the Adobe Creative Suite®

**7.0 Program outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.2: Design Thinking Skills: *Ability* to raise clear and precise questions, use abstract ideas to interpret information, consider diverse points of view, reach well-reasoned conclusions, and test alternative outcomes against relevant criteria and standards.
- 7.1 NAAB Student Performance Criteria A.6: Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.
- 7.1 NAAB Student Performance Criteria B.1: Pre-Design: *Ability* to prepare a comprehensive program for an architectural project that includes an assessment of client and user needs; an inventory of spaces and their requirements; an analysis of site conditions (including existing buildings); a review of the relevant building codes and standards, including relevant sustainability requirements, and an assessment of their implications for the project; and a definition of site selection and design assessment criteria.

**8.0 Administrative Information**

**a) Proposal and Approval**

Course proposed by	Nana-Yaw Andoh & Giovanna Potestà, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
--------------------------	--------------	--------------------------	------------------

	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly): Undergraduate version of ARCH-733		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: <b>Bachelor of Architecture</b>
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

This course will require the use of an integrated manual drawing studio and a computer lab.

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-334 Architectural Studio VI

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Studio VI
Transcript title (30 Characters)	Architectural Studio VI
Credit hours	6
Prerequisite(s)**	ARCH-333 Architectural Studio V
Co-requisite(s)	ARCH-344 Building Systems: Environmental

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3.0	
Lab		
Studio	9.0	12
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

This studio provides the opportunity for students to execute a comprehensive and integrative project from pre-design to schematic design to design development. (Pre-requisite: ARCH-333 Architectural Studio V; Co-requisite: ARCH-344 Building Systems: Environmental) **Class 3, Studio 9, Credit 6 (Spring)**

#### 3.0 Goal(s) of the Course

For students to produce a comprehensive and integrative architectural project that demonstrates the capacity to make design decisions across scales while integrating all major aspects of the design.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-334 Architectural Studio VI	Assessment Method
<b>C.2: Integrated Evaluations and Decision-Making Design Process</b> <b>C.3: Integrative Design</b>	4.1 Given a building program, create a comprehensive schematic design that: <ul style="list-style-type: none"><li>• Responds to the implicit historical/cultural traditions of the project location</li><li>• Responds to the natural features presented by the site</li><li>• Responds to the man-made constraints of zoning, building, and accessibility codes</li><li>• Integrates architectural, civil/site, mechanical/electrical, and structural systems</li><li>• Optimizes, conserves, or reuses natural and built resources while providing a healthy environment for users.</li></ul>	Design project(s) with critiques
	4.2 Apply the principles of natural and formal ordering systems to the design and development of a construction project.	Design project(s) with critiques
<b>B.3 Codes and Regulations</b>	4.3 Gather, assess, record, apply and evaluate relevant information throughout the design process.	Design development documentation to support design decisions
<b>B.4 Technical Documentation</b>	4.4 Produce the following design development drawings: <ul style="list-style-type: none"><li>• Site plan(s) documenting site improvements, grading, water management, utilities, and accessibility.</li><li>• Floor plan(s) documenting code compliance (fire ratings, egress, and accessibility), building envelope design, interior construction, core elements (stairs, elevators, etc.) and schematic plumbing, HVAC, electrical and fire protection systems.</li><li>• Building and wall section(s) documenting building components shown on floor plans where applicable.</li></ul>	Design development drawings to industry standards

	<ul style="list-style-type: none"> <li>• Framing plans documenting structural configuration with calculations for a typical structural bay.</li> </ul>	
--	--	--

## **5.0 Topics** (should be in an enumerated list or outline format)

### 5.1 Pre-Design

- Precedent studies
- Site analyses
- Programming

### 5.2 Schematic Design

- Investigation of design parameters
- Application of ordering system
- Application of historical traditions and global culture
- Application of accessibility
- Incorporation of sustainability principles
- Comprehensive site design

### 5.3 Design Development

- Execution of technical documentation
- Application of life safety principles
- Selection of environmental systems
- Selection of structural systems

## **6.0 Possible Resources** (should be in an enumerated list or outline format)

6.1 A building information modeling program such as ArchiCAD® or Revit®

6.2 AIA; *Architectural Graphic Standards*; Wiley

6.3 Ching; *Building Construction Illustrated*; Wiley

6.4 International Code Council; various building codes

6.5 ADA and ANSI Standards for Accessibility

6.6 Chiavaroli; *AEC Drafting Fundamentals*; West/Delmar

## **7.0 Program outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

7.1 NAAB Student Performance Criteria B.3: Codes and Regulations: *Ability* to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

7.2 NAAB Student Performance Criteria B.4: Technical Documentation: *Ability* to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.

7.3 NAAB Student Performance Criteria C.2: Integrated Evaluations and Decision-Making Design Process: *Ability* to demonstrate the skills associated with making integrated decisions across multiple systems and variables in the completion of a design project. This demonstration includes problem identification, setting evaluative criteria, analyzing solutions, and predicting the effectiveness of implementation.

7.4 NAAB Student Performance Criteria C.3: Integrative Design: *Ability* to make design decisions within a complex architectural project while demonstrating broad integration and consideration of environmental stewardship, technical documentation, accessibility, site conditions, life safety, environmental systems, structural systems, and building envelope systems and assemblies.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Nana-Yaw Andoh & Giovanna Potestà, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<input type="checkbox"/>	General Education	
<input type="checkbox"/>	Writing Intensive	
<input type="checkbox"/>	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

### d) Additional course information (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

### e) Other relevant scheduling information

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

The course will require an integrated manual drawing studio and a computer lab.

## 9.0 Colleges may add additional information here if necessary

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-341 Building Systems: Site

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Building Systems: Site
Transcript title (30 Characters)	Building Systems: Site
Credit hours	3
Prerequisite(s)**	ARCH-241 Building Systems: Fundamentals
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

A study of architectural materials and systems that comprise a building project's site work including civil engineering and landscaping, water management, soils/substructure, and exterior lighting. (Pre-requisite ARCH- 241 Building Systems: Fundamentals) **Class 3, Credit 3 (Fall)**

#### 3.0 Goal(s) of the Course

For students to:

- 3.1 Understand the physical/natural characteristics of a building site and how to manage and utilize them.



- 3.2 Understand the man-made constraints imposed on land use and comply with them.
- 3.3 Understand the implications of and the practices necessary to place a building on a site.
- 3.4 Become familiar with and apply the common materials and construction methods used in site construction with a focus on building sub structure.
- 3.5 Understand water/waste/storm, and electrical systems found on building sites.
- 3.6 Understand and apply energy rating systems as they relate to sustainable sites and water efficiency.
- 3.7 Investigate current innovative architectural solutions that address building sites.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-341 Building Systems: Site	Assessment Method
<b>B.2 Site Design</b>	4.1 Recognize, classify, and select material composition, production methods, assembly methods, and common sizes and shapes for concrete, masonry, and metals.	Testing
<b>B.8 Building Materials &amp; Assemblies</b>	4.2 Create a topographic map based on a site survey and utilize the data for site design.	Criteria Test
	4.3 Recognize and/or describe the characteristics of various soil types and their suitability for construction.	Criteria Test
<b>B.2 Site Design</b>	4.4 Design a simple foundation for a one or two-story building.	Criteria Test
<b>B.9 Building Services Systems</b>	4.5 Describe and/or calculate the effect site material selection has on micro-climate and heat island effect.	Testing
<b>B.9 Building Services Systems</b>	4.6 Describe how storm water is collected on a building site and tied into a community storm water system and/or retained on site.	Testing
<b>B.2 Site Design</b>	4.7 Design a roof and site drainage system and create a site storm water drawing.	Criteria Test
<b>B.9 Building Services Systems</b>	4.8 Describe the basic principles of exterior lighting.	Testing
	4.9 Perform basic lighting calculations for a building site and create a site lighting drawing.	Criteria Test
<b>B.8 Building Materials &amp; Assemblies</b>	4.10 Compare sustainability characteristics for select materials and/or assemblies.	Testing
<b>B.10 Financial Considerations</b>	4.11 Perform a square footage cost analysis for a building and its associated site improvements.	Criteria Test

<b>B.3 Codes &amp; Regulations</b>	4.12 Identify, analyze, and report zoning code regulations that affect site and building design.	Criteria Test
------------------------------------	--	---------------

## **5.0 Topics** (should be in an enumerated list or outline format)

- 5.1 Engineering, Landscaping Materials and Methods
  - Concrete
  - Masonry
  - Metals
- 5.2 Civil/Site Work
  - Surveying and topographic maps
- 5.3 Structural Systems
  - Soils and foundations
- 5.4 HVAC Systems
  - Material solar reflectance and albedo/ heat island effect
- 5.5 Plumbing Systems
  - Storm water systems
  - Retention vs. detention, water quality
- 5.6 Electrical Systems
  - Exterior power and lighting
- 5.7 Sustainability
- 5.8 Construction Cost Controls
- 5.9 Building and Zoning Codes

## **6.0 Possible Resources** (should be in an enumerated list or outline format)

- 6.1 Professionals from Industry
- 6.2 RIT faculty from related programs, e.g. engineering, engineering technology
- 6.3 Allen, Exercises in Building Construction, John Wiley and Sons, 2014
- 6.4 Allen, Fundamentals of Building Construction: Materials and Methods, John Wiley and Sons, 2014
- 6.5 Allen, How Buildings Work: The Natural Order of Architecture, Oxford University Press Inc., 2000
- 6.6 American Institute of Architects, Architectural Graphic Standards, John Wiley and Sons, 2016
- 6.7 Ching, Building Construction Illustrated, John Wiley and Sons, 2016
- 6.8 Grodzik, Mechanical and Electrical Equipment for Buildings, John Wiley and Sons, 2014
- 6.9 International Code Council, 2014 International Building Code, ICC, 2014
- 6.10 Untermann, *Grade Easy*, American Society of Landscape Architects Foundation, 1973
- 6.11 Simonds, *Landscape Architecture*, McGraw Hill, 2014
- 6.12 Spiegel, Green Building Materials: A Guide to Product Selection and Specification, John Wiley & Sons, Inc., New York, 2010
- 6.13 Onouye, *Statics and Strength of Materials for Architecture and Building Construction*, Prentice Hall, 2012
- 6.14 Budhu, *Soil Mechanics and Foundations*, Wiley, 2010

## **7.0 Program outcomes and/or goals supported by this course**

- 7.1 NAAB Student Performance Criteria B.2: Site Design: *Ability to respond to site characteristics, including urban context and developmental patterning, historical*

*fabric, soil, topography, ecology, climate, and building orientation, in the development of a project design.*

7.2 NAAB Student Performance Criteria B.3: Codes and Regulations: *Ability* to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

7.3 NAAB Student Performance Criteria B.8: Building Materials and Assemblies: *Understanding* of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

7.4 NAAB Student Performance Criteria B.9: Building Service Systems: *Understanding* of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

7.5 NAAB Student Performance Criteria B.10: Financial Considerations: *Understanding* of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
--------------------------	--------------	--------------------------	------------------

	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-342 Building Systems: Structure & Envelope

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Building Systems: Structure & Envelope
Transcript title (30 Characters)	Bldg Sys: Structure & Envelope
Credit hours	3
Prerequisite(s)**	ARCH-341 Building Systems: Site
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

A study of building envelopes and structural systems of non-residential buildings and their overall performance. Structural inquiry will cover the field of statics. (Pre-requisite ARCH- 341 Building Systems: Site) **Class 3, Credit 3 (Spring)**

#### 3.0 Goal(s) of the Course

For students to:

- 3.1 Understand how external forces affect a structure and to develop the ability to solve structural problems using the principles of statics.

- 3.2 Understand how natural phenomena affect a building and to develop the ability to design a building envelope to manage such while accommodating human comfort.
- 3.3 Gain a further understanding of water/waste, and electrical power systems as they relate to building interiors.
- 3.4 Understand and apply energy rating systems as they relate to location and transportation, and energy and atmosphere.
- 3.5 Investigate current innovative architectural solutions that address building structure and envelope.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-342 Building Systems: Structures & Envelope	Assessment Method
<b>B.8 Building Materials &amp; Assemblies</b>	4.1 Recognize, classify, and select material composition, production methods, assembly methods, and common sizes and shapes for structural and envelope building materials.	Testing, Projects
<b>B.8 Building Materials &amp; Assemblies</b>	4.2 Recognize and describe how steel frame, site-cast concrete, and precast concrete structural systems and their components work.	Testing
<b>B.8 Building Materials &amp; Assemblies</b>	4.3 Recognize and describe the capabilities of precast concrete and be able to select sizes from manufacturers' literature.	Testing, Projects
<b>B.8 Building Materials &amp; Assemblies</b>	4.4 Compare sustainability characteristics for structural and envelope building materials.	Assignments, Projects
<b>B.10 Financial Considerations</b>	4.5 Perform comparative cost analyses for commercial construction materials and methods.	Projects
<b>B.3 Codes &amp; Regulations</b>	4.6 Identify and apply building code regulations that affect Building Types I, II, & III.	Projects
<b>B.4 Technical Documentation</b> <b>B.7 Building Envelope Systems &amp; Assemblies</b>	4.7 Develop and detail building envelopes that meet all imposed constraints.	Projects
<b>B.3 Codes &amp; Regulations</b>	4.8 Analyze a project by certification standards for location and transportation, and energy and environment.	Projects
<b>B.5 Structural Systems</b>	4.9 Describe the basic loads acting on a building and how the architectural and structural design is a function of them.	Testing

	4.10 Resolve forces so as to determine if a structural body is in equilibrium.	Criteria Tests
	4.11 Analyze multi-member determinate structural bodies as to forces acting on individual members.	Criteria Tests
	4.12 Determine load paths and loading for entire building structures.	Criteria Tests

## 5.0 Topics (should be in an enumerated list or outline format)

### 5.1 Architectural Materials and Methods

- Types I, II & III construction materials and methods
- CSI Divisions: 7 thermal & moisture protection, 8 doors and windows
- Uniformat Groups: B10 Super structure, B20 Exterior Enclosure, B30 Roofing, D20 Plumbing, D50 Electrical
- Roofing systems, cladding systems
- International Building Code Chapters 12 -17
- International Energy Conservation Code
- ComCheck™

### 5.2 Structural Systems

- Structural systems overview
- Statics; forces, equilibrium, and determinacy
- Structural analysis; particles, rigid bodies, trusses, frames, and arches
- Load tracing and lateral stability

### 5.3 Building Services

- Water and waste
- Electricity

### 5.4 Sustainability

- LEED LT & EA

### 5.5 Construction Costs

## 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Professionals from Industry
- 6.2 RIT faculty from related programs, e.g. engineering, engineering technology
- 6.3 Allen, Exercises in Building Construction, John Wiley and Sons, 2016
- 6.4 Allen, Fundamentals of Building Construction: Materials and Methods, John Wiley and Sons, 2016
- 6.5 Allen, How Buildings Work: The Natural Order of Architecture, Oxford University Press Inc., 2000
- 6.6 American Institute of Architects, Architectural Graphic Standards, John Wiley and Sons, 2016
- 6.7 Ching, Building Construction Illustrated, John Wiley and Sons, 2016
- 6.8 Grodzik, Mechanical and Electrical Equipment for Buildings, John Wiley and Sons, 2014
- 6.9 International Code Council, 2014 International Building Code, ICC, 2014
- 6.10 Spiegel, Green Building Materials: A Guide to Product Selection and Specification, John Wiley & Sons, Inc., New York, 2010
- 6.11 Onouye, *Statics and Strength of Materials for Architecture and Building Construction*, Prentice Hall, 2012
- 6.12 Reid, Understanding Buildings: A Multidisciplinary Approach, First MIT Press, 2000

## 7.0 Program outcomes and/or goals supported by this course

- 7.1 NAAB Student Performance Criteria B.3: Codes and Regulations: *Ability* to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.
- 7.2 NAAB Student Performance Criteria B.4: Technical Documentation: *Ability* to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.
- 7.3 NAAB Student Performance Criteria B.5: Structural Systems: *Ability* to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.
- 7.4 NAAB Student Performance Criteria B.7: Building Envelope Systems and Assemblies: *Understanding* of the basic principles involved in the appropriate selection and application of building envelope systems relative to fundamental performance, aesthetics, moisture transfer, durability, and energy and material resources.
- 7.5 NAAB Student Performance Criteria B.8: Building Materials and Assemblies: *Understanding* of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course



<input type="checkbox"/>	Deactivated course
--------------------------	--------------------

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-343 Building Systems: Structure & Interior

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Building Systems: Structure & Interior
Transcript title (30 Characters)	Bldg Sys: Structure & Interior
Credit hours	3
Prerequisite(s)**	ARCH-342 Building Systems: Structure & Envelope
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Interior building components will be studied from subdivision of space to selection of finishes as related to building code regulations. Structural inquiry will continue with strength of materials. (Pre-requisite ARCH- 342 Building Systems: Structure & Envelope) **Class 3, Credit 3 (Fall)**

#### 3.0 Goal(s) of the Course

For students to:

- 3.1 Understand how external forces affect a structure and to develop the ability to solve structural problems using the principles of strength of materials.

- 3.2 Develop the ability to subdivide the interior space of a building while meeting all technical requirements.
- 3.3 Understand and incorporate fire protection, and transportation systems into buildings.
- 3.4 Understand and apply energy rating systems as they relate to materials and resources.
- 3.5 Investigate current innovative architectural solutions that address interior building space.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-343 Building Systems: Structure & Interior	Assessment Method
<b>B.4 Technical Documentation</b> <b>B.8 Building Materials &amp; Assemblies</b> <b>B.9 Building Service Systems</b>	4.1 Recognize, classify, and select material composition, production methods, assembly methods, and common sizes and shapes for interior walls, ceilings, and floors.	Testing, Projects
	4.2 For a given building design, calculate and detail a fire stair.	Projects
	4.3 Select and make accommodations in a building for an elevator.	Projects
	4.4 Recognize, describe the principles of, and make schematic designs for plumbing, mechanical, electrical, and fire protection systems.	Testing, Projects
<b>B.3 Codes &amp; Regulations</b>	4.5 Access and apply the Existing Building Code for a given project.	Projects
	4.6 Access and apply the Building Code for a given project with emphasis on egress.	Projects
	4.7 Identify zoning code regulations that affect site and building design with emphasis on change of use.	Testing
	4.8 Apply accessibility requirements to site and building design.	Projects
<b>B.5 Structural Systems</b>	4.9 Explain select principles related to strength of materials.	Testing
	4.10 Calculate select values related to strength of materials.	Criteria Tests
	4.11 Given a loading condition, analyze or design select structural members.	Criteria Tests
<b>B.3 Codes &amp; Regulations</b>	4.12 Perform a ComCheck analysis for building envelope and lighting.	Projects

## **5.0 Topics** (should be in an enumerated list or outline format)

### **5.1 Architectural Materials and Methods**

- Types I, II & III construction materials and methods
- CSI Divisions: 9 finishes, 10 specialties, 11 equipment, 13 special construction, 14 conveying equipment, 21 fire suppression
- Uniformat Groups: C10 interior construction, C20 stairs, C30 interior finishes, D10 conveying, D40 fire protection
- International Building Code Chapters 7 - 10, 16, 17
- International Existing Building Code
- International Energy Conservation Code
- ComCheck™

### **5.2 Structural Systems**

- Strength of materials
- Cross sectional properties
- Beam design
- Column design
- Connection design

### **5.3 Building Services**

- Fire protection
- Transportation

### **5.4 Sustainability**

- LEED MR

### **5.5 Construction Costs**

- Comparative component costs

## **6.0 Possible Resources** (should be in an enumerated list or outline format)

- 6.1 Professionals from Industry
- 6.2 RIT faculty from related programs, e.g. engineering, engineering technology
- 6.3 Allen, Exercises in Building Construction, John Wiley and Sons, 2016
- 6.4 Allen, Fundamentals of Building Construction: Materials and Methods, John Wiley and Sons, 2016
- 6.5 Allen, How Buildings Work: The Natural Order of Architecture, Oxford University Press Inc., 2000
- 6.6 American Institute of Architects, Architectural Graphic Standards, John Wiley and Sons, 2016
- 6.7 Ching, Building Construction Illustrated, John Wiley and Sons, 2016
- 6.8 Grodzik, Mechanical and Electrical Equipment for Buildings, John Wiley and Sons, 2014
- 6.9 International Code Council, 2014 International Building Code, ICC, 2014
- 6.10 Spiegel, Green Building Materials: A Guide to Product Selection and Specification, John Wiley & Sons, Inc., New York, 2010
- 6.11 Onouye, *Statics and Strength of Materials for Architecture and Building Construction*, Prentice Hall, 2012
- 6.12 Reid, Understanding Buildings: A Multidisciplinary Approach, First MIT Press, 2000

## **7.0 Program outcomes and/or goals supported by this course**

- 7.1 NAAB Student Performance Criteria B.3: Codes and Regulations: *Ability* to design sites, facilities, and systems that are responsive to relevant codes and regulations, and include the principles of life-safety and accessibility standards.

- 7.2 NAAB Student Performance Criteria B.4: Technical Documentation: *Ability* to make technically clear drawings, prepare outline specifications, and construct models illustrating and identifying the assembly of materials, systems, and components appropriate for a building design.
- 7.3 NAAB Student Performance Criteria B.5: Structural Systems: *Ability* to demonstrate the basic principles of structural systems and their ability to withstand gravitational, seismic, and lateral forces, as well as the selection and application of the appropriate structural system.
- 7.4 NAAB Student Performance Criteria B.8: Building Materials and Assemblies: *Understanding* of the basic principles used in the appropriate selection of interior and exterior construction materials, finishes, products, components, and assemblies based on their inherent performance, including environmental impact and reuse.
- 7.5 NAAB Student Performance Criteria B.9: Building Service Systems: *Understanding* of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description

	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-344 Building Systems: Environmental

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Building Systems: Environmental
Transcript title (30 Characters)	Bldg Systems: Environmental
Credit hours	3
Prerequisite(s)**	ARCH-343 Building Systems: Structure & Interior
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

	Fall
<b>X</b>	Spring
	Summer
	Other
	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Building environmental systems, acoustics, and illumination will be studied. Emphasis will be placed on natural illumination and reducing dependence on mechanical means of achieving human comfort. (Pre-requisite ARCH- 343 Building Systems: Structure & Interior) **Class 3, Credit 3 (Spring)**

#### 3.0 Goal(s) of the Course

For students to:

- 3.1 Understand human comfort and the range of passive and active systems available to incorporate into an architectural design.

- 3.2 Develop the ability to recommend environmental systems for specific tasks.
- 3.3 Understand principles of acoustics as they relate to architectural design.
- 3.4 Understand the principles of illumination and apply them so as to enhance energy efficient building design.
- 3.5 Understand and incorporate electrical lighting systems into buildings.
- 3.6 Understand and apply energy rating systems as they relate to indoor environmental quality.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-344 Building Systems: Environmental	Assessment Method
<b>B.6 Environmental Systems</b> <b>B.9 Building Service Systems</b>	4.1 For the systems listed, recognize and be able to explain the operation of such systems and be able to select appropriate components of commercial building for: <ol style="list-style-type: none"> <li>a. Thermal control</li> <li>b. Electrical lighting</li> <li>c. Acoustic systems</li> <li>d. Security systems</li> </ol>	Testing, Projects
<b>B.6 Environmental Systems</b>	4.2 Explain the fundamentals of environmental systems and apply these principles to the design of space in order to achieve human comfort.	Testing, Projects
<b>B.9 Building Service Systems</b>	4.3 Explain the fundamentals of architectural acoustics and apply these principles to the design of space in order to manage sound.	Testing, Projects
	4.4 Explain the fundamentals of architectural lighting and apply these principles to the design of space in order to manage both the quality and quantity of light, including artificial light and daylight.	Testing, Projects
<b>B.6 Environmental Systems</b>	4.5 Calculate or explain building performance criteria of energy certification programs (such as LEED) for indoor environmental quality.	Testing, Projects

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Architectural Materials and Methods
  - Types I, II & III construction materials and methods
  - CSI Divisions: CSI Division: 23 heating, ventilating, and air conditioning, 28 electronic safety and security
  - Uniformat Groups: D30 HVAC, D50 electrical
  - International Energy Conservation Code
  - ComCheck™
- 5.2 Building Services
  - Lighting
  - Acoustics
  - Environmental Systems



- Signal systems
- 5.3 Sustainability
- LEED EQ

**6.0 Possible Resources** (should be in an enumerated list or outline format)

- 6.1 Professionals from Industry
- 6.2 RIT faculty from related programs, e.g. engineering, engineering technology
- 6.3 Allen, How Buildings Work: The Natural Order of Architecture, Oxford University Press Inc., 2000
- 6.4 Ching, Building Construction Illustrated, John Wiley and Sons, 2016
- 6.5 Grodzik, Mechanical and Electrical Equipment for Buildings, John Wiley and Sons, 2016

**7.0 Program outcomes and/or goals supported by this course**

- 7.1 NAAB Student Performance Criteria B.6: Environmental Systems: *Ability* to demonstrate the principles of environmental systems' design, how design criteria can vary by geographic region, and the tools used for performance assessment. This demonstration must include active and passive heating and cooling, solar geometry, daylighting, natural ventilation, indoor air quality, solar systems, lighting systems, and acoustics.
- 7.2 NAAB Student Performance Criteria B.9: Building Service Systems: *Understanding* of the basic principles and appropriate application and performance of building service systems, including lighting, mechanical, plumbing, electrical, communication, vertical transportation, security, and fire protection systems.

**8.0 Administrative Information**

**a) Proposal and Approval**

Course proposed by	Prof. Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
-------------------------------------	------------

<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-431 Architectural Studio: Specialization

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Architectural Studio: Specialization
Transcript title (30 Characters)	Arch Studio: Specialization
Credit hours	4
Prerequisite(s)**	Year 5 status
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	2	12
Lab		
Studio	6	12
Other (Work Experience)		

#### 2.0 Course Description (as it will appear in the bulletin)

A studio course that varies by semester and by the instructor that offers it. The topic will address a specific aspect of architectural design. (Pre-requisite: Fifth year status). **Class 2, Studio 6, Credit 4 (Fall, Spring)**

#### 3.0 Goal(s) of the Course

- 3.1 To provide students with the opportunity to specialize in an area of design interest.
- 3.2 To enable students to prepare for a career in a specialized area.

#### 4.0 Intended course learning outcomes and associated assessment methods

Include as many course-specific outcomes as appropriate, one outcome and assessment method per row. Click [HERE](#) for guidance on developing course learning outcomes and associated assessment techniques.

Course Learning Outcome	Assessment Method
4.1 Respond to a complex architectural problem with an appropriate solution.	Projects with critiques

#### 5.0 Topics (should be in an enumerated list or outline format)

Varies

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

Varies

#### 7.0 Program outcomes and/or goals supported by this course

NA

#### 8.0 Administrative Information

##### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

##### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

##### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

	Schedule Final Exam
<b>X</b>	Repeatable for Credit   How many times: 2
<b>X</b>	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: <b>Bachelor of Architecture</b>
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-471 Professional Practice

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Professional Practice
Transcript title (30 Characters)	Professional Practice
Credit hours	3
Prerequisite(s)**	Year 5 status
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3.0	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

#### 2.0 Course Description (as it will appear in the bulletin)

Students will study the roles of stakeholders involved in architecture within the context of project management and business practices including legal responsibilities, and professional ethics. (Pre-requisite: year 5 status) **Class 3, Credit 3 (Spring)**

#### 3.0 Goal(s) of the Course

The goal of this course will be to introduce students to the key issues facing the architectural/engineering/construction industry today and provide them with the opportunity to explore areas of interest related to current practice in the profession.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-471 Professional Practice	Assessment Method
<b>D.1 Stakeholder Roles in Architecture</b>	4.1 List roles and responsibilities of members of a building project team.	Testing
<b>B.10: Financial Considerations</b>	4.2 Explain the various project delivery methods and list advantages and disadvantages of each.	Testing
<b>D.2 Project Management</b>	4.3 Explain the various stages of project development and the control measures used in each to successfully manage the project.	
	4.4 Identify the various components of management (financial, marketing, operations, personnel, etc.)	
<b>D.3 Business Practices</b>	4.5 Explain the various types of firms, common sizes, and legal organizational formations.	Testing
<b>D.4 Legal Responsibilities</b>	4.6 Explain the professional development requirements of the architectural profession.	Testing
<b>D.5 Professional Conduct</b>	4.7 Given a scenario one might encounter during professional practice, explain an appropriate ethical and legal response by the architect.	Testing

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Roles of the building team
- 5.2 Firm types, sizes, and configurations
- 5.3 Project delivery
- 5.4 Project management
- 5.5 Professional development
- 5.6 Legal and ethical responsibilities

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Professionals from Industry
- 6.2 AIA Rochester
- 6.3 AIA publications
- 6.4 Others to be determined

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria B.10: Financial Considerations:  
*Understanding* of the fundamentals of building costs, which must include project financing methods and feasibility, construction cost estimating, construction scheduling, operational costs, and life-cycle costs.
- 7.2 NAAB Student Performance Criteria D.1: Stakeholder Roles in Architecture:  
*Understanding* of the relationships among key stakeholders in the design

process—client, contractor, architect, user groups, local community—and the architect's role to reconcile stakeholder needs.

7.3 NAAB Student Performance Criteria D.2: Project Management: *Understanding* of the methods for selecting consultants and assembling teams; identifying work plans, project schedules, and time requirements; and recommending project delivery methods.

7.4 NAAB Student Performance Criteria D.3: Business Practices: *Understanding* of the basic principles of a firm's business practices, including financial management and business planning, marketing, organization, and entrepreneurship.

7.5 NAAB Student Performance Criteria D.4: Legal Responsibilities: *Understanding* of the architect's responsibility to the public and the client as determined by regulations and legal considerations involving the practice of architecture and professional service contracts.

7.6 NAAB Student Performance Criteria D.5: Professional Conduct: *Understanding* of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Nana-Yaw Andoh
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description



	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

## GOLISANO INSTITUTE FOR SUSTAINABILITY DEPARTMENT OF ARCHITECTURE

---

### GIS-ARCH-499 Co-op Architecture

#### 1.0 Course Information

##### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Co-op Architecture
Transcript title (30 Characters)	Co-op Architecture
Credit hours	0
Prerequisite(s)**	none
Co-requisite(s)	none

##### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input checked="" type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

##### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom		
Lab		
Studio		
Other (Work Experience)	350	

#### 2.0 Course Description (as it will appear in the bulletin)

This course provides a ten-week (350-hour minimum) work experience in the field.

**Credit 0 (Fall, Spring, Summer)**

#### 3.0 Goal(s) of the Course

- 3.1 Gain work experience in the architecture, engineering, and construction industry or an approved related field.
- 3.2 Provide students with a better understanding of career options, work conditions, and work expectations.
- 3.3 Enable students to better select a career preparation focus for remaining program study.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-499 Co-op Architecture	Assessment Method(s)
<b>D.5 Professional Conduct.</b> <i>Ability</i> to write and speak effectively and use representational media appropriate for both within the profession and with the general public.	4.1 Demonstrate successful job attendance and punctuality.	Supervisor evaluation
	4.2 Self-evaluate work performance in design and technical aspects of the job.	Self-evaluation
	4.3 Demonstrate an understanding of the ethical issues involved in the exercise of professional judgment in architectural design and practice.	Supervisor evaluation
	4.4 Demonstrate an understanding of the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.	Supervisor evaluation

#### 5.0 Topics (should be in an enumerated list or outline format)

NA

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

NA

#### 7.0 Program outcomes and/or goals supported by this course

7.1 NAAB Student Performance Criteria D.5. Professional Conduct: *Understanding* of the ethical issues involved in the exercise of professional judgment in architectural design and practice and understanding the role of the NCARB Rules of Conduct and the AIA Code of Ethics in defining professional conduct.

#### 8.0 Administrative Information

##### a) Proposal and Approval

Course proposed by	Professor Jules Chiavaroli
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

##### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE

PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
	Writing Intensive	
	Honors	

**c) This outline is for a...**

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<input type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

ROCHESTER INSTITUTE OF TECHNOLOGY  
GOLISANO INSTITUTE FOR SUSTAINABILITY

---

## GIS-ARCH-551 Theories on Architecture

### 1.0 Course Information

#### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Theories on Architecture
Transcript title (30 Characters)	Theories on Architecture
Credit hours	3
Prerequisite(s)**	Year 4 status
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

This course reviews the most significant theories on architecture from early treatises to Post-Modernism. Theories will be analyzed, discussed and compared. (Pre-requisite: year 4 status) **Class 3, Credit 3 (Fall)**

### 3.0 Goal(s) of the Course

The goal of this course is to develop in students the ability to critically analyze architecture and express this analysis verbally and in written form so as to aid them in the development of their own design process.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-551 Theories on Architecture	Assessment Method
<b>A.3 Investigative Skills</b>  <b>A.6: Use of Precedents</b>	4.1 Analyze, evaluate, and compare architectural texts on issues of architectural theory.	Reading & Writing Assignments
	4.2 Communicate architectural concepts clearly, concisely, and effectively in writing.	Writing Assignments
	4.3 Communicate architectural concepts clearly, concisely, and effectively using speech.	Presentations
	4.4 Explain at least three contemporary architectural theories.	Written Test
	4.5 Draft, refine, revise, and edit written material until it meets professional standards.	Writing Assignments

#### 5.0 Topics (should be in an enumerated list or outline format)

##### 5.1 Architectural theory vs. architectural practice

- Criticism
- Reading Critically
- Thinking Critically
- Writing Critically
- Speaking Critically

##### 5.2 Architectural theory throughout history

- Contemporary theories
- Modern
- Postmodern
- Traditional
- Postmodern Ecology
  - Late Modern
  - New Modern
  - Structuralism
  - Post-structuralism/Deconstruction

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

6.1 Charles Jencks and Karl Kropf, *Theories and Manifestos of Contemporary Architecture*, Wiley-Academy, 1997

6.2 Le Corbusier, *Toward a New Architecture*, New York: Dover Publications, 1986

6.3 Vitruvius, *The 10 Books of Architecture*, New York: Dover Publications, 1960

6.4 Robert Venturi, *Complexity and Contradiction in Architecture*, New York: MOMA, 1977

6.5 Louis Kahn, *Essential Texts*, New York: W.W.Norton & Company, 2003

6.6. K.Michael Hays, *Architecture | Theory | Since 1968*, Cambridge, MA: the MIT Press, 1998

6.7 K. Michael Hays, *Architecture Theory since 1968*, Columbia Books of Architecture/MIT Press, 1998

- 6.8 Kate Nesbitt, *Theorizing a New Agenda for Architecture. An Anthology of Architectural Theory 1965-1995*, Princeton, NJ: Princeton Architectural Press, 1996
- 6.9 Michael Benedikt, *For an Architecture of Reality*, New York: Lumen Books, 1987
- 6.10 Leo Marx, *The Machine in the Garden*, New York: Oxford University Press, 2000

**7.0 Program outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.3: Investigative Skills: *Ability* to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.
- 7.2 NAAB Student Performance Criteria A.6: Use of Precedents: *Ability* to examine and comprehend the fundamental principles present in relevant precedents and to make informed choices about the incorporation of such principles into architecture and urban design projects.

**8.0 Administrative Information**

**a) Proposal and Approval**

Course proposed by	Giovanna Potesta, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

**b) Special designations for undergraduate courses**

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
	General Education	
<b>X</b>	Writing Intensive	
	Honors	

**c) This outline is for a...**

<b>X</b>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

	Course title		Mode of Delivery
	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

**d) Additional course information** (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)



---

## APPENDIX B: WRITING INTENSIVE

---

### Preliminary Notes:

This appendix is meant to highlight those facets of a course that are directly relevant to its Writing Intensive (WI) status. The course outline, including course goals and course learning outcomes (sections 3 and 4 of the course outline), should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT's Writing Outcomes assessment cycle.

### I. Course Category: *Check one*

First Year Writing	
General Education (WI-GE)	
Program (WI-PR)	X

A course can be both WI-GE and WI-PR.

### II. Nature of the Course:

Criteria that define Writing Intensive courses at RIT can be found at the Institute Writing Committee web site (click [HERE](#)).

#### a. Writing-Related Learning Outcomes

List the writing-related course learning outcomes.

- 4.1 Analyze, evaluate, and compare architectural texts on issues of architectural theory.
- 4.2 Communicate architectural concepts clearly, concisely, and effectively in writing.
- 4.4 Explain at least three contemporary architectural theories.
- 4.5 Draft, refine, revise, and edit written material until it meets professional standards.

#### b. Informal and Formal Writing Assignments

1. Informal writing (commonly described as "writing to learn") is distributed throughout the course as appropriate to its learning outcomes. Use the space below to describe briefly the informal writing assignments in the course and the distribution of those activities throughout the course.

Informal writing includes activities such as free/quick-writing, lab notebooks, response/reading journals, and online discussions. For other examples, (click [HERE](#)).  
(Shift/Enter to continue)

The bachelor of architecture program uses *criteria referenced instruction* techniques in most courses and in this one as well. This methodology provides instruction, the opportunity for students to practice, and finally a criteria test for students to demonstrate their achievement of a given learning outcome.

Learning to write effectively requires ongoing practice. To this end there will be a writing assignment every week. These assignments will be graded, feedback given, and students will have the opportunity to revise their work and re-submit it. At certain milestones such as during mid-term and final exam weeks, students will take a criteria test to a writing challenge to demonstrate their skill development.

The practice writing assignments will be based on various topics presented throughout the course as shown in section 5.0 Topics (e.g. Compare Le Corbusier's design theory vs. Frank Lloyd Wright's). The focus will either be writing about a specific reading, critically analyzing a topic, or adding one's own critical thinking to a reading or ongoing discussion.

2. Formal writing assignments (commonly described as "writing in the discipline") engage students in the work of the discipline/s represented by the course. Use the space below to describe briefly the formal writing assignments taught in the course, and what students will learn by completing the assignment(s).

Formal writing assignments include genres such as a research/project report, case study, and clinical observation. For more examples, (click [HERE](#)). (Shift/Enter to continue)

As noted above, after sufficient practice and feedback, students will then take a criteria test. In the case of writing this will entail composing and writing in a testing or term paper format. In the case of learning outcome 4.2, this would require a student to explain select architectural design theories. At this level students must analyze, evaluate, synthesize, and then effectively posit an argument.

### c. Revision Policy

Students must receive feedback from instructors and have an opportunity to incorporate that feedback into a revision of the written work. Use the space below to describe briefly the kinds of feedback students are provided, and what opportunities students have to improve their writing based on that feedback.

Feedback can be given in many forms, including margin comments, summative end-comments, a 1-on-1 conference, scoring guides, and rubrics. For more information, (click [HERE](#)).

The backbone of the *criteria referenced instructional* method exactly promotes this process through the use of practice assignments. The student receives feedback on the weekly assignments and resubmits up to two additional times. This methodology is stated in learning outcome 4.5; *Draft, refine, revise, and edit written material until it meets professional standards.*

### d. Class Discussion

Class topics include lessons on specific writing strategies. Check which writing strategies are discussed in the course. Use the space below to describe briefly the writing strategies discussed in the course.

In-class lessons of writing strategies can include discussions of revision strategies, genre conventions, copyediting, concision, and clarity. For more information, (click [HERE](#)).

The scientific method is taught as the basic structure for presenting arguments. The approach is at the core of the program. The Chicago writing style is promoted in the program and is introduced in earlier courses. During this course it is formally presented in class and is one of the measures for writing assignments and tests.

**e. Writing Portion of Grade**

At least 20% of the overall course grade must be based on writing assignments. What portion of the course grade is based on the writing students submit?

	<20%
X	20% or more

Use the space below to describe briefly how the writing is evaluated in the course.

The course will evaluate content, i.e. the student's ability to comprehend and process architectural theories and that will be about 50% of the grade. The other half of the grading will be on communicating this comprehension verbally and in writing. There will be a bias towards the writing mode so it is anticipated that writing will account for 25-30% of the final grade.

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

ROCHESTER INSTITUTE OF TECHNOLOGY  
GOLISANO INSTITUTE FOR SUSTAINABILITY

---

## GIS-ARCH-552 Urbanism

### 1.0 Course Information

#### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Urbanism
Transcript title (30 Characters)	Urbanism
Credit hours	3
Prerequisite(s)**	Year 4 status
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input type="checkbox"/>	Fall
<input checked="" type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

An overview of planning principles and systems within diverse geographical and temporal contexts. Students will explore regulatory and cultural factors with a focus on sustainability. (Pre-requisite: year 4 status) **Class 3, Credit 3 (Spring)**

### 3.0 Goal(s) of the Course

To introduce students to the key issues (economic, social, environmental) facing the architectural and planning communities as well as the constituencies that they serve by providing them with real world interaction with all stakeholders in the urban/regional environment.

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-553 Urbanism	Assessment Method
<b>A.8 Cultural Diversity and Social Equity</b>  <b>D.1 Stakeholder Roles in Architecture</b>	4.1 Identify and explain the major influences on present day planning.	Assignments, Projects
	4.2. Gather, analyze, and synthesize planning data from governmental and community agencies.	Assignments, Projects
	4.3 As a member of a design team, create alternative concepts for an urban or regional design problem.	Assignments, Projects
	4.4 Identify and explain the steps involved in the approval process for planning projects.	Testing
	4.5 Apply contemporary planning theory to an urban or regional design problem.	Assignments, Projects

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Introduction and history of planning
- 5.2 The planning process
  - Research and documentation
  - Urban and regional design
  - The approval process
- 5.3 Planning theory

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Community Design Center Rochester
- 6.2 AIA Rochester
- 6.3 Professionals from industry

#### 7.0 Program outcomes and/or goals supported by this course (if applicable, as an enumerated list)

- 7.1 NAAB Student Performance Criteria A.8: Cultural Diversity and Social Equity:  
*Understanding* of the diverse needs, values, behavioral norms, physical abilities, and social and spatial patterns that characterize different cultures and individuals and the responsibility of the architect to ensure equity of access to sites, buildings, and structures.
- 7.2 NAAB Student Performance Criteria D.1: Stakeholder Roles in Architecture:  
*Understanding* of the relationships among key stakeholders in the design process—client, contractor, architect, user groups, local community—and the architect's role to reconcile stakeholder needs.

#### 8.0 Administrative Information

##### a) Proposal and Approval

Course proposed by	Giovanna Potesta, PhD
Effective term	Fall 2019

Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<input checked="" type="checkbox"/>	General Education	
<input type="checkbox"/>	Writing Intensive	
<input type="checkbox"/>	Honors	

### c) This outline is for a...

<input checked="" type="checkbox"/>	New course
<input type="checkbox"/>	Revised course
<input type="checkbox"/>	Deactivated course

If revised course, check all that have changed

<input type="checkbox"/>	Course title	<input type="checkbox"/>	Mode of Delivery
<input type="checkbox"/>	Credit hour	<input type="checkbox"/>	Course Description
<input type="checkbox"/>	Prerequisites	<input type="checkbox"/>	Special Designation
<input type="checkbox"/>	Contact hour	<input type="checkbox"/>	
<input type="checkbox"/>	Other (explain briefly):		

### d) Additional course information (check all that apply)

<input checked="" type="checkbox"/>	Schedule Final Exam
<input type="checkbox"/>	Repeatable for Credit   How many times:
<input type="checkbox"/>	Allow Multiple Enrollments in a Term
<input checked="" type="checkbox"/>	Required course   For which programs: Bachelor of Architecture
<input type="checkbox"/>	Program elective course   For which programs:

### e) Other relevant scheduling information

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

### 9.0 Colleges may add additional information here if necessary

(e.g., information required by accrediting bodies)

ARCH-552 Urbanism is a required course for the Bachelor of Architecture program. It is also being offered as a general education immersion course for other undergraduate programs on campus.

---

# APPENDIX A: GENERAL EDUCATION

---

## Preliminary Notes:

According to NYSED, “The liberal arts and sciences comprise the disciplines of the humanities, natural sciences and mathematics, and social sciences.” Although decisions about the general education status of RIT courses are guided by this categorization and the details provided at the NYSED web site ([click HERE](#)), RIT recognizes that a general education course might not fit neatly into any one of these categories. Course authors from all areas are encouraged to read not only the NYSED web site, but also the mission statement at RIT’s General Education web site ([click HERE](#)).

This appendix is meant to highlight those facets of a course that are directly relevant to its General Education status, and if applicable, to provide course authors with an opportunity to elaborate on aspects of the course that locate it in one or more of the Perspective categories. The course description, course goals, and course learning outcomes (sections 2, 3, and 4 of the course outline) should clearly reflect the content of this appendix.

Information provided here will also be used to identify appropriate courses for inclusion in RIT’s General Education Outcomes assessment cycle.

## I. Nature of the Course:

After reviewing the NYSED web site ([click HERE](#)) and the RIT description of general education ([click HERE](#)) describe how this course fits the definition of general education.

This course is included in the family of Social Sciences.

## II. General Education Essential Outcomes:

The Academic Senate approved the following proposal at the meeting of 16 April, 2015.

*Communication and critical thinking are essential to the general education of every student at RIT. Going forward, every course designated as general education by GEC will provide learning experiences designed to achieve at least one student learning outcome from each of these domains (Communication and Critical Thinking).*

The approved student learning outcomes are listed below.

### a. Communication

a.1 Check at least one of the following student learning outcomes:

X	Express oneself effectively in common college-level written forms using standard American English
	Revise and improve written products
	Express oneself effectively in presentations, either in American English or American Sign language
X	Demonstrate comprehension of information and ideas accessed through reading

**a.2** In the space below, explain which aspects of this course lend themselves to the Communication outcome(s) indicated above, and how student achievement will be assessed.

The students will be assessed through Assignments, Projects, Tests.

**b. Critical Thinking**

**b.1** Check at least one of the following student learning outcomes:

X	Use relevant evidence gathered through accepted scholarly methods and properly acknowledge sources of information
	Analyze or construct arguments considering their premises, assumptions, contexts, and conclusions, and anticipating counterarguments
	Reach sound conclusions based on logical analysis of evidence
X	Demonstrate creative and/or innovative approaches to assignments or projects

**b.2** In the space below, explain which aspects of this course lend themselves to the Critical Thinking outcome(s) indicated above, and how student achievement will be assessed.

The students will be asked to target an urban or planning problem through diverse information: laws, codes, critical thinking, architectural reflections.

The students will show their knowledge and assimilation of scholarly methods through the composition of written assignments and comprehensive projects.

**III. Additional Student Learning Outcomes**

Indicate which (if any) of the following student learning outcomes will be supported by and assessed in this course.

Table A.1: Student Learning Outcomes	
(Check)	Student Learning Outcomes
	1. Interpret and evaluate artistic expression considering the cultural context in which it was created
X	2. Identify contemporary ethical questions and relevant positions
X	3. Examine connections among the world's populations
X	4. Analyze similarities and differences in human experiences and consequent perspectives
	5. Demonstrate knowledge of basic principles and concepts of one of the natural sciences
	6. Apply methods of scientific inquiry and problem solving to contemporary issues or scientific questions
	7. Comprehend and evaluate mathematical or statistical information
	8. Perform college-level mathematical operations or apply statistical techniques

**a. Explanation:** In the space below, explain how this course supports the student learning outcomes indicated above.

The students will be asked to reflect on urban planning as a skill for the optimization of the problems generated by population growth. Diverse theories and perspectives will be examined concerning the reality in US and worldwide.



**b. Assessment:** In the space below, explain how student achievement in the specified student learning outcomes will be assessed.

Students will be assessed on the basis of the results of their performances, as stated in Section 4.0.

#### IV. Perspectives

Indicate which Perspectives (if any) this course is intended to fulfill.

Keep in mind that perspectives courses are meant to be introductory in nature. [Click HERE](#) for descriptions of the General Education Perspectives and their associated student learning outcomes.

Table A.2: Request for Perspective Status			
Date Requested	GE Perspectives	Required Outcomes (see Table A.1)	Date Granted
	Artistic	#1	
	Ethical	#2	
	Global	#3	
	Social	#4	
	Natural Science Inquiry	#5 and #6	
	Scientific Principles	#5 or #6	
	Mathematical	#7 and #8	

---

# ROCHESTER INSTITUTE OF TECHNOLOGY

ROCHESTER INSTITUTE OF TECHNOLOGY  
GOLISANO INSTITUTE FOR SUSTAINABILITY

---

## GIS-ARCH 553 Research Methods

### 1.0 Course Information

#### a) Catalog Listing (click [HERE](#) for credit hour assignment guidance)

Course title (100 characters)	Research Methods
Transcript title (30 Characters)	Research Methods
Credit hours	3
Prerequisite(s)**	Year 4 status
Co-requisite(s)	none

#### b) Terms(s) offered (check at least one)

<input checked="" type="checkbox"/>	Fall
<input type="checkbox"/>	Spring
<input type="checkbox"/>	Summer
<input type="checkbox"/>	Other
<input type="checkbox"/>	Offered biennially

If "Other" is checked, explain:

#### c) Instructional Modes (click [HERE](#) for credit hour assignment guidance)

	Contact hours	Maximum students/section
Classroom	3	20
Lab		
Studio		
Other (specify, i.e. online, workshop seminar, etc.)		

### 2.0 Course Description (as it will appear in the bulletin)

Students will learn and apply research methods that can be applied to architectural problems. Particular attention will be on how research affects the design process. (Prerequisite: year 4 status) **Class 3, Credit 3 (Fall)**

### 3.0 Goal(s) of the Course

- 3.1 To increase exposure to contemporary urban and social issues related to the practice and study of architecture.
- 3.2 To provide the student with the skills necessary to critically examine these

- contemporary issues, their historic context, and identify the relevance of these issues to the practice their chosen profession and specialization.
- 3.3 For students to develop the experience and confidence to discuss sensitive and complex issues in a productive manner in a collegial environment.
  - 3.4 To encouraged research areas of personal and professional interest.
  - 3.5 To gain understanding, and examine issues from a variety of perspective —and not to further a political or ideological perspective.
  - 3.6 To prepare students for their culminating thesis

#### 4.0 Intended course learning outcomes and associated assessment methods

Note: NAAB SPCs are Student Performance Criteria (SPC) as established by the National Architectural Accrediting Board (NAAB) upon which the program assessment plan is built.

NAAB SPCs	Learning Outcomes ARCH-553 Research Methods	Assessment Method
<b>A.3 Investigative Skills</b>	4.1 Gather, assess, record, and comparatively evaluate relevant information on a given subject.	Assignments, Projects
	4.2 Support conclusions based on the process defined above.	Assignments, Projects
<b>C.1 Research</b>	4.3 Explain theoretical and applied research methods and practices.	Testing
	4.4 Explain how the above are applied to the design process.	Testing
	4.5 Execute a basic research project.	Project

#### 5.0 Topics (should be in an enumerated list or outline format)

- 5.1 Approaching a Social Issue
- 5.2 A World Without Us
- 5.3 The Culture of Consumption and the Social Condition
- 5.4 Labor and its Impact on Social Space
- 5.5 Social Structures and Resultant Hegemony
- 5.6 Managing Social Data: Qualitative vs. Quantitative
- 5.7 Analyzing Social Data
- 5.8 The Future Social Condition
- 5.9 Marketing the Urban Sphere
- 5.10 Making a Change: Materials
- 5.11 Making a Change: Conceptual Approach
- 5.12 Making a Change: Alternatives
- 5.13 The Future Urban Condition

#### 6.0 Possible Resources (should be in an enumerated list or outline format)

- 6.1 Lamott, Anne Bird by Bird New York : Anchor Books, 1995.
- 6.2 Klein, Naomi The Shock Doctrine New York : Metropolitan Books/Henry Holt , 2007.
- 6.3 Weisman, Alan World Without Us New York : Thomas Dunne Books/St. Martin's Press, 2007.
- 6.4 Diamond, Jared Collapse Raw Prints 2008.
- 6.5 Klein, Naomi No Logo New York : Picador USA, 2000.
- 6.6.de Botton, Alain Status Anxiety New York : Pantheon Books 2004.

- 6.7 Ehrenreich, Barbara Nickel and Dimed New York : Metropolitan Books, 2001.
- 6.8 Ritzer, George McDonalization of Society Los Angles, Calif. : Pine Forge Press, 2008.
- 6.9 McDonough, William Cradle to Cradle New York : North Point Press, 2002.
- 6.10 McKibben, Bill Deep Economy New York : Times Books, 2007.
- 6.11 Mau, Bruce Massive Change London : Phaidon, 2004.
- 6.12 Smith, Cynthia Design for the Other 90% New York:Cooper-Hewitt, National
- 6.13 Design Museum, Smithsonian Organization, 2007.
- 6.14 Canton, James Extreme Future New York:Dutton, 2006.
- 6.15 Thackara, In the Bubble Cambridge, Mass.:MIT Press, 2005.
- 6.16 Tokar, Brian Earth for Sale Boston, MA:South End Press, 1997.
- 6.17 Brown, Lester Russell Plan B 3.0. New York:W. W. Norton, 2008.
- 6.18 Ellin, Nan Integral Urbanism. New York:Routledge, 2006.
- 6.19 Mitchell, William e-topia. Cambridge, MA:MIT Press, 1999
- 6.20 William Cronon. 1992. Nature's Metropolis: Chicago and the Great West. New York, New York: W.W. Norton.
- 6.21 Jane Addams. 1990 [1910]. Twenty Years at Hull House. Urbana, Illinois: University of Illinois Press.
- 6.22 Rachel Carson. 1962. Silent Spring. New York and Boston: Houghton Mifflin Company.
- 6.23 Kevin Boyle. 2004. Arc of Justice: A Saga of Race, Murder, and Civil Rights in the Jazz Age. New York, New York: Henry Holt and Company.
- 6.24 Kevin Lynch. 1968. The Image of the City. Cambridge, Massachusetts: Technology Press.
- 6.25 Ian McHarg. 1992 [1967]. Design with Nature. New York, New York: John Wiley & Sons.
- 6.26 Jacob Riis. 1890. How the Other Half Lives. New York, New York: Charles Scribner's Sons.
- 6.27 William H. Whyte. 1980. The Social Life of Small Urban Spaces. Washington, D.C.: Conservation Foundation.
- 6.27 Jane Jacobs. 1961. The Death and Life of Great American Cities. New York, New York: Vintage Books.
- 6.28 Florida, Richard. 2002. The Rise of the Creative Class. New York, New York: Basic Books.
- 6.29 Laurel, Brenda (ed.) Design Research: Methods and Perspectives. Cambridge, Mass.: MIT Press. 2003.
- 6.30 Robson, Colin. Real World Research: A Resource For Social Scientists and Practitioner-Researchers. Oxford, UK ; Madden, Mass.: Blackwell Publishers. 2002.
- 6.31 Lidwell, William, Kritina Holden, Jill Butler. Universal Principles of Design. Gloucester, Mass.: Rockport. 2003.
- 6.32 Kilment, Stephen A. Writing for Design Professionals: A Guide to Writing Successful Proposals, Letters, Brochures, Portfolios, Reports, Presentations, and Job Applications for Architects, Engineers, and Interior Designers. New York: W.W. Norton. 1998.
- 6.33 Dissertation Abstracts Online: Dissertations and theses from institutions in the North America and Europe.
- 6.34 ERIC: Journal articles and reports on all aspects of education, including counseling, tests, and measurement, 1966 to present, with the full-text of ERIC Documents (items with ED numbers) from 1996 to present.

- 6.35 Infotrac Onefile: The interdisciplinary nature of industrial design research may require you to search indexes outside the fields of art and architecture. Infotrac is an index that covers a wide variety of disciplines and includes some full-text to five major newspapers, 89 newswires, general interest periodicals and refereed academic journals.
- 6.36 LexisNexis Academic: Access to over 1 billion full-text documents covering a wide variety of subjects. Search for documents in these broad areas: News, Business, Legal Research, Medical, and Reference.
- 6.37 LexisNexis Statistical: Indexing and abstracts to statistical reports from U.S. federal and state governments, or from privately published, international, or intergovernmental sources.
- 6.38 Ergonomics Abstracts Online: Abstracts to articles and books covering ergonomics and human factors, with information on mainstream ergonomics as well as related material from psychology, physiology, biomechanics, job design, human-computer interaction, safety science, human engineering, medicine, occupational health, sport and transport. 1985 to present.
- 6.39 AARP AgeLine: Bibliographic references and original abstracts for materials related to aging and middle age, from an interdisciplinary perspective of psychology, economics, sociology, gerontology, public policy, business, health and health care services, and consumer issues. 1978 to present, updated bi-monthly.
- 6.40 ABI/Inform Global (online & full-text): Covers business and management topics. Includes citations to articles in over 1000 journals in business, management, finance, and economics with articles covering consumer interest topics (Consumer Reports is indexed/full-text is provided). Abstracts coverage is from 1971 to the present. Full- text coverage is from 1991 to the present. Full text available for 500+ journals.
- 6.41 ACM Digital Library: Journals and proceedings from the Association of Computing Machinery. Includes research on interface design and human-technology interaction.
- 6.42 AnthroSource: The premier online resource serving the research, teaching, and professional needs of anthropologists. Developed by the American Anthropological Association (AAA), AnthroSource brings 100 years of anthropological material online.
- 6.43 Art Full Text: Citations back to 1984, with full text as far back as 1997. Subjects include antiques, archaeology, architecture & architectural history, art history, contemporary art, costume, crafts, decorative arts, folk art, graphic arts, industrial design, interior design, landscape architecture, motion pictures, museology, non-western art, painting, photography, pottery, sculpture, television, textiles, video art.
- 6.44 Compendex: The Comprehensive Engineering Index online. Coverage is from 1970 to the present.
- 6.45 CSA Illumina – Arts & Humanities Database Search: CSA Illumina allows searching across the following databases – Art Bibliographies Modern, Avery Index to Architectural Periodicals, Design and Applied Arts Index, and Bibliography of the History of Art. These databases may also be searched individually.

**7.0 Intended outcomes and/or goals supported by this course** (if applicable, as an enumerated list)

7.1 NAAB Student Performance Criteria A.3: Investigative Skills: *Ability* to gather, assess, record, and comparatively evaluate relevant information and performance in order to support conclusions related to a specific project or assignment.

7.2 NAAB Student Performance Criteria C.1: Research: *Understanding* of the theoretical and applied research methodologies and practices used during the design process.

## 8.0 Administrative Information

### a) Proposal and Approval

Course proposed by	Giovanna Potesta, PhD
Effective term	Fall 2019
Required approval	Approval granted date
Academic Unit Curriculum Committee	12/1/17
Department Chair/Director/Head	12/1/17
College Curriculum Committee	NA
College Dean	12/1/17

### b) Special designations for undergraduate courses

The appropriate Appendix (A, B and/or C) must be completed for each designation requested. IF YOU ARE NOT SEEKING SPECIAL COURSE DESIGNATION, DELETE THE ATTACHED APPENDICES BEFORE PROCEEDING WITH REVIEW AND APPROVAL PROCESSES.

Check	Optional Designations	*** Approval date (by GEC, IWC or Honors)
<b>X</b>	General Education	
	Writing Intensive	
	Honors	

### c) This outline is for a...

<b>X</b>	New course
	Revised course
	Deactivated course

If revised course, check all that have changed

	Course title		Mode of Delivery
	Credit hour		Course Description
	Prerequisites		Special Designation
	Contact hour		
	Other (explain briefly):		

### d) Additional course information (check all that apply)

<b>X</b>	Schedule Final Exam
	Repeatable for Credit   How many times:
	Allow Multiple Enrollments in a Term
<b>X</b>	Required course   For which programs: Bachelor of Architecture
	Program elective course   For which programs:

**e) Other relevant scheduling information**

(e.g., special classroom, studio, or lab needs, special scheduling, media requirements)

**9.0 Colleges may add additional information here if necessary**

(e.g., information required by accrediting bodies)

## **Appendix B – Enrollment and Market Analysis**

RIT Enrollment Management & Career Services – Ed Lincoln



**From:** Edward Lincoln ealfad@rit.edu  
**Subject:** RE: BArch proposal - Appendix B information  
**Date:** November 17, 2017 at 2:36 PM  
**To:** J Chiavaroli jjcnct@rit.edu  
**Cc:** James G. Miller (EMCS VP) jgm6527@rit.edu, Nabil Nasr nzneie@rit.edu, Marian Nicoletti mmnadm@rit.edu

---

EL

Jules,

The following information is provided in support of the proposed Bachelor of Architecture program in the Golisano Institute of Sustainability.

In developing a new student enrollment for the proposed program, the following assumptions were utilized:

1. The proposed B. Arch. program will attract new students from both freshman and transfer markets with the majority of new students entering in the fall.
2. The majority of students will come from the Middle Atlantic and New England markets.
3. The Office of Undergraduate Admissions will work with the college to determine appropriate academic profile parameters and academic preparation for both entering freshmen and transfer students with final authority for admission decisions resting in the Office of Undergraduate Admissions. These discussions will include specific guidelines for the submission of a portfolio as a part of the admission process.
4. The Golisano Institute for Sustainability, will work with the Office of Undergraduate Admissions to maintain and enhance RIT's relationships with two-year schools to promote the new program and develop articulation agreements to facilitate the recruitment and enrollment of transfer students into the programs. Flexibility in the application of transfer credits will be critical to enrolling those students.
5. While the proposed program will attract internal transfers from other RIT colleges and the University Exploration program, the requirement for a portfolio will limit the number of internal transfer students. For purposes of these projections, however, only students who are new to RIT are included.
6. The projections are based upon an assessment of the most recent College Board's Student Search Service data using parameters that approximate criteria necessary to qualify for admission to RIT as freshmen. Entering transfer students would generally present a GPA of 3.2 or higher for admission.

Once the program has been fully approved and incorporated into a full marketing cycle, we project that 40 new freshmen and 2 new transfer students will enroll each fall semester.

Please let me know if you have any additional questions.

Sincerely,

Ed Lincoln

Edward A. Lincoln  
Assistant Vice President | Enrollment Management and Career Services  
60 Lomb Memorial Drive | Rochester, NY 14623  
ealfad@rit.edu | 585-475-5502

## **Appendix C – Internal Letters of Support**

Architecture Curriculum Committee –Jules Chiavaroli

Sustainability Curriculum Committee –Eric Williams

COLA Dean – James J. Winebrake

NTID President and Dean – Gerard Buckley

Associate Vice President of Academic Affairs – Stephen Aldersley

NTID Engineering Studies –Dino Lauria

NTID Access Services – Stephen A. Nelson

CAST Civil Engineering Technology Program –Maureen S. Valentine

COS Dean – Sophia Meggelakis

CIAS Acting Dean – Robin Cass

Vignelli Center for Design Studies –R. Roger Remington

Educational Effectiveness Assessment – Laurie Clayton

RIT Librarian – Kari Horowicz

Golisano Institute for Sustainability  
Department of Architecture  
111 Lomb Memorial Drive  
Rochester, NY 14623-5608

Professor Jules Chiavaroli

November 25, 2017

Dear Colleagues,

The Architecture Curriculum Committee was the body charged with writing this proposal. The effort began with a Program Development Committee consisting of a range of internal and external members as noted in the document. They conducted the preliminary research and developed the overall program design. Our committee then executed the writing of the proposal, including the courses, and making all necessary connections.

Needless to say, the committee is unanimously in favor of the proposal. Not only do we believe this to be a viable program in and of itself, but we also believe that the program offers excellent collaborative opportunities. It will provide RIT undergraduate students access to new disciplines, namely architecture and sustainability. We believe that minors in either or both of these fields will be extremely popular.

I would draw your attention to the support letter from FXFowle Architects. In it, Mr. Garrison notes a very important distinction – that the proposed program will foster data driven design. This is a relatively new paradigm for architecture (and other design fields) and one that the current Master of Architecture program embraces. In fact, this is a new criterion required to be met by the National Architectural Accrediting Board (NAAB). In its recent visit to RIT to accredit the existing Master of Architecture program, the accreditation team cited the program with having **met** this criteria **with distinction**.

The committee looks forward to hearing from ICC and the rest of the RIT community on this proposal.

Sincerely and on behalf of the committee,



Jules Chiavaroli, Architecture Curriculum Committee Chair

**Committee Members:**

Nana Andoh, Department of Architecture, GIS  
Giovanna Potesta, Department of Architecture, GIS  
Gabrielle Gaustad, Department of Sustainability, GIS  
Scott Wolcott, Civil Engineering Technology Program, CAST  
Mary Golden, Interior Design Program, CIAS  
Susan Wylie, M. Arch. Student



## Rochester Institute of Technology

---

Golisano Institute for Sustainability  
111 Lomb Memorial Drive  
Rochester, New York 14623-5608  
585-475-7363

Eric Williams  
Associate Professor  
Golisano Institute of Sustainability  
Rochester Institute of Technology (RIT)  
111 Lomb Memorial Drive  
Rochester, NY, 14623  
<http://www.rit.edu/gis/>  
Phone: 585-475-7211  
Email: [exwgis@rit.edu](mailto:exwgis@rit.edu)

April 14, 2017

To Whom It May Concern:

Writing on behalf of the Curriculum Committee for the M.S. and PhD programs in Sustainability, I write to support the proposal for a Bachelor of Architecture undergraduate degree.

First, the proposed degree fits within and extends the mission of the Golisano Institute for Sustainability (GIS). Education is a major part of our mission and thus far we have not offered undergraduate degrees. Given the increasing demand in the architecture world for sustainability, I believe that integration into an architecture program is an appropriate fit.

Second, the proposed Sustainability courses will allow our department to respond to the undergraduate population at RIT. The courses will allow for an immersion in sustainability and could lead to an undergraduate minor for students majoring in programs across campus.

Thirdly, GIS currently occupies a distinct space in the organization of RIT, in many ways treated as a college, but in some ways not. Strengthening RIT's academic portfolio to include a baccalaureate degree will clarify GIS's position as a college.

Sincerely,

A handwritten signature in dark ink that reads "Eric Williams".

Office of the Dean  
College of Liberal Arts  
92 Lomb Memorial Drive  
Rochester, NY 14623

May 1, 2017

Mr. Jules Chiavaroli,  
Professor, Architecture  
Golisano Institute for Sustainability.


Dear Mr. Chiavaroli, *Jules*

As Dean of the College of Liberal Arts, I support the proposal for the Bachelor of Architecture from GIS. Our college is happy to provide seats for students in any of a number of courses that have the RIT LAS Perspectives designation.

The proposed enrollment numbers for this degree program (40 students per year) may necessitate opening new sections of liberal arts courses, and I am pleased to see that the program has identified some resources to help cover these additional teaching demands. With 45 General Education credits proposed for the degree, the College of Liberal Arts offers numerous courses in the humanities and social sciences that could meet prospective students' interests.

We look forward to welcoming the students from the B.Arch. degree program into courses offered by the College of Liberal Arts.

Sincerely,



James J. Winebrake, PhD  
Dean, College of Liberal Arts

March 28, 2017

RE: Bachelor of Architecture proposal

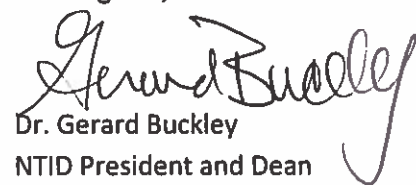
Dear Curriculum Committee,

We are writing to enthusiastically express our fullest support for the Bachelor of Architecture proposal program. We believe the program plans will greatly benefit NTID Deaf and hard of hearing students in the CADT Architecture, Engineering, and Construction programs of the Department of Engineering Studies.


Dr. Laury, chairperson of NTID's Department of Engineering Studies, has indicated numerous times that NTID lacks an articulation agreement with RIT in this particular field. We have reason to believe that a good number of D/Hard of Hearing alumni and current students in the Civil Engineering Technology and/or Interior Design programs would have significantly preferred the Architecture program. If the program proposal is successfully implemented, we would strongly recommend that Dr. Laury and Professor Jules Chiavaroli develop an articulation agreement. Their working relationship would be a significant asset to both the RIT and NTID strategic plans.

We look forward to hearing that this curriculum proposal has been approved and eagerly anticipate collaborating in the near future.

Best regards,



Dr. Gerard Buckley  
NTID President and Dean



Dr. Stephen Aldersley  
NTID Associate Vice President of Academic Affairs



**Rochester Institute of Technology**

National Technical Institute for the Deaf  
Department of Engineering Studies  
Lyndon Baines Johnson Building  
52 Lomb Memorial Drive  
Rochester, NY 14623-5604  
585-475-6782 V/TDD Fax 585 475-6366

March 28, 2017

RE: Bachelor of Architecture proposal from NTID's Department of Engineering Studies

Dear Curriculum reviewers,

I am writing to show my support for the Bachelor of Architecture proposal. Jules Chiavaroli and I worked for the same NTID Department from 1993 to 1996 before NTID phased out the original NTID Engineering Technology programs. I have high respect for Jules' work.

Since the academic year 2007, I became a chairperson for NTID's Department of Engineering Studies; our students from the Computer Aided Drafting Technology (CADT) program that specializes Architecture, Engineering and Construction (A/E/C) skill sets who qualify for the Associate degree and attempt to transfer to RIT were limited. For example, without an articulation agreement, the NTID students often went to College of Applied Science and Technology's (CAST) Civil Engineering Technology or College of Imaging Arts and Sciences (CIAS) Interior design. Many of the deaf and hard of hearing students were enthusiastic about CADT A/E/C, but disappointed that RIT did not have an Architecture program. Thus, it has been demonstrated multiple times that the Architecture program was the preferred program that students and I were seeing. This proposal will contribute significantly to meeting the deaf and hard of hearing students' demands. In addition, I will pursue an articulation agreement with Professor Jules Chiavaroli when deemed appropriate. This will be our department's third articulation agreement, if approved successfully.

I would not hesitate at all to support the proposal that will open another venue for NTID's deaf and hard of hearing students, along with many hearing students. This does include my 14-year-old hearing son; Zachary D. Laury is thrilled to learn about this news.

Best regards,

A handwritten signature in blue ink, appearing to read 'Dino'.

Dino Laury, Ed.D.

Academic Chairperson

NTID Engineering Studies

Department of Access Services  
National Technical Institute for the Deaf  
97 Lomb Memorial Drive  
Rochester, NY 14623  
(585) 475-6455

May 5, 2017

RE: Bachelor of Architecture program proposal

Dear Curriculum Committee,

I am writing to extend the full support of Access Services for the proposed Bachelor of Architecture program. While there are numerous NTID students already studying in related programs, this proposal offers a wonderful new opportunity, along with some new courses which will require access services.

With increasing enrollments in sections of baccalaureate-level courses, and expanded program offerings, DAS continues to see incremental increases in resource requirements that are impossible to quantify. We have been seeing slow, consistent growth over our entire history mapped to the increasing success of NTID-supported students in RIT increasingly diverse majors. This proposal fits comfortably within that trend.

History has demonstrated that increased opportunities for deaf students to undertake studies in new areas, are well worth modest investments for Access Services. The proposed Bachelor of Architecture, especially when articulation with existing NTID programs in Engineering Studies is established with the new degree program, will efficiently expand exciting opportunities for NTID students.

Sincerely,



Stephen A. Nelson  
Director of Operations, NTID Access Services





**Rochester Institute of Technology**

College of Applied Science and Technology  
Civil Engineering Technology, Environmental  
Management & Safety  
78 Lomb Memorial Drive  
Rochester, New York 14623-5604  
585-475-7398  
FAX 585-475-7964

November 22, 2017

Mr. Dennis Andrejko, FAIA  
Head, Department of Architecture  
Golisano Institute for Sustainability

Dear Dennis,

Thank you for the opportunity to collaborate with your department on the development of the new Bachelor of Architecture Degree being proposed by the Golisano Institute of Sustainability. Both civil engineering technology and architecture are involved in the planning and design of structures. Therefore, there are opportunities for students in both programs to benefit from courses developed for this new program. I anticipate that architectural students will be interested in several of the civil engineering technology courses, specifically in the area of structural design and construction management. I would also anticipate civil engineering technology students' interest in the history of architecture courses that will be developed as general education offerings within the new program.

Our department is pleased to support your request. When your degree is approved, we can work together to make selected civil courses available to your students. If the program is wildly successful and the student population increases substantially, we will need to collaborate to identify resources that would allow us to offer additional sections of select courses. We look forward to having another partner on campus to support students interested in the built environment.

Sincerely,

Maureen S. Valentine, PE

Interim Department Chair

Civil Engineering Technology, Environmental Management and Safety Department

27 April 2018

Jules Chiavaroli  
Professor, Architecture  
Goliso Institute for Sustainability

Dear Jules,

This letter serves to state my enthusiastic support and endorsement of the proposed Bachelor of Architecture from the Goliso Institute for Sustainability. The College of Science will provide seats for students in the program consistent with the RIT LAS Perspectives Science and Math program requirements (9 SCH) in the new program.

The proposed enrollment in the program of up to 40 students per year may require the addition of new sections of science and math courses in the College of Science. There are many 100 level and above Science and Math LAS Perspectives courses in the COS to choose from that would suit the needs of undergraduate Architecture students. I am pleased to confirm that 9 SCH's required from the COS is documented in your program proposal and expect that resources consistent with your request will be made available to the COS (approximately .25 FTE for each 11 new students).

We look forward to welcoming students from the Bachelor of Architecture. We anticipate a very positive collaboration as this proposal moves forward and are committed to a successful partnership.

Sincerely,



Sophia Maggelakis, Ph.D.  
Dean, College of Science

**Robin Cass**  
Interim Dean  
College of Imaging Arts & Sciences  
Rochester Institute of Technology  
73 Lomb Memorial Drive  
Rochester, NY 14623

*April 27, 2018*

To Whom it May Concern,

I'd like to offer my conditional support for the proposed BArch degree at RIT. Such program would clearly be a valuable addition to RIT's current degree portfolio. While CIAS welcomes and supports the idea of this new degree offering, we do have some concerns that are detailed below:

## **1. Lecturer line and adjunct funding**

As explained in the full program proposal, the first year of the BArch program incorporates significant elements of the CIAS foundation-year curriculum. We have been asked to support the program by providing the following five courses:

- FDTN-111 Drawing I
- FDTN-121 2D Design I
- FDTN-131 3D Design I
- ARTH-135 History of Western Art: Ancient to Medieval
- ARTH-136 History of Western Art: Renaissance to Modern

Due to the unsustainably high dependence on adjunct faculty and facility-related section size limitations that currently exists in the CIAS foundations areas, our support for this proposal is contingent upon receiving the requested funding for an incremental lecturer line as well as 3 adjuncts.

Also, as all of these courses are required during the first year of the BArch, without this lecture line and adjunct funding PRIOR to the acceptance of any new students, CIAS will not be able to provide these courses.

## **2. Staff Support for Advising and Portfolio Review**

- a. Students that enroll in this program will require intensive advising during their first year of matriculation and this will have a significant impact on the workload of CIAS advisors. Consequently, it is critical that these first-year students are counted towards the CIAS total numbers when the University Advising office determines each college's advisor headcount needs. If this is not possible, CIAS will not be able to offer primary advising support for first-year BArch students.
- b. The Portfolio Review platform (Slide Room) and process that most of the CIAS program utilizes is labor intensive and requires significant staff support prior to faculty review. GIS would need to provide such staff support in coordination with the Admissions Office and BArch faculty reviewers in order to utilize this process alongside CIAS programs.

### **3. Facilities and Individual Bench Spaces**

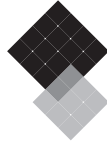
While CIAS will welcome BArch students into our courses whenever possible, due to the pressing needs of current CIAS students and courses, we will not be able to offer BArch students dedicated bench space or storage in Booth or Gannet.

Secondly, in the case that the BArch program is not able to secure funding and space for their own shop facility as planned in their proposal, CIAS will not be able to accommodate added burden on our facilities by upper-level BArch students as the program grows unless sufficient additional resources are provided.

With the caveats outlined above, I offer my support of this proposed degree program on behalf of CIAS.

Best Regards,

Robin



---

**Vignelli Center for Design Studies**  
Rochester Institute of Technology

April 5, 2017

Dear Chairman Andrejko:

---

School of Design  
College of  
Imaging Arts and Sciences

73 Lomb Memorial Drive  
Rochester, New York  
14623-5603

Telephone  
585 475-2658

Fax  
585 475-2750

Professor Jules Chiavaroli has kept be abreast of planning for the proposed B Arch Program in the School of Architecture.

I am writing to lend my complete support for this proposal.

Along with the Vignelli Center for Design Studies and the CIAS School of Design offerings, the presence of architecture makes for a critical set of design complements. Two important goals of the Vignelli Center for Design Studies are education and collaboration. As a Vignelli Center advocate, I feel that it is very important that there be connection between our efforts. For my entire career here, I have felt that RIT's great potential lies in its interdisciplinary potential. Therefore I look forward to the opportunity of collaboration with your new program both for academic and project opportunities. Our new Design Studies program will provide opportunities for elective courses for Architecture students. Further having faculty from Architecture on our Vignelli Center governing board allows for optimum communication toward necessary interactions.

In my past teaching, at other institutions with architecture schools, I have found that the whole school or college with other design offerings strongly benefit from having architecture in its portfolio. In fact several of my finest graphic design students have come through with architecture in their backgrounds.

The potential is great for the addition of this new program and it is my pleasure to support it. Please let me know how I can help.

Sincerely,

ROGER

R. Roger Remington AGI M.Sc. NYADC  
Vignelli Distinguished Professor of Design  
Director, Vignelli Center for Design Studies

**Subject:** Proposed B Arch Assessment Plan: Approved  
**Date:** Wednesday, February 7, 2018 at 5:22:44 PM Eastern Standard Time  
**From:** Laurie Clayton  
**To:** Sylvia Perez-Hardy, Christine Licata  
**CC:** Anne Wahl, J Chiavaroli  
**Attachments:** B Arch Proposal\_Aproved Assessment Plan.docx

Dear Sylvia and Chris,

After consultation and review with Professor Jules Chiavaroli from the Golisano Institute for Sustainability, I've approved the attached assessment plan as part of the B Arch program proposal.

Please let me know if you have any questions.

Thank you,

*Laurie*

Laurie A. Clayton, Ed.D.  
Director, Educational Effectiveness Assessment  
Office of Educational Effectiveness Assessment, Academic Affairs  
**Rochester Institute of Technology**  
2115 Eastman Hall, 12 Lomb Memorial Drive, Rochester, NY 14623  
(585) 475-6284 | [lacpro@rit.edu](mailto:lacpro@rit.edu) | [rit.edu/outcomes](http://rit.edu/outcomes)

April 10, 2017

From:

Kari Horowicz  
Librarian for the College of Imaging Arts and Sciences  
The Wallace Center  
Rochester Institute of Technology

To:

Dennis Andrejko  
Head, Department of Architecture  
Golisano Institute for Sustainability  
Rochester Institute of Technology

The following outlines the potential impact on the library of RIT's **B.A. in Architecture** program by the Golisano Institute for Sustainability.

After reviewing the concept paper along with the submitted benchmark institutions (BA Architecture programs – Syracuse, Cornell, Virginia Poly. Institute, Cal Poly., and USC), I have determined that the proposed **B.A. in Architecture** program will have a **modest/medium impact** on the library's services and collections. While the library supports the current MA Architecture there will be increased demand with the dramatic increase in undergraduate students arriving the first year with the addition of 40 students each year for the first five years. The RIT Libraries' current interdisciplinary collection of journals, books, and databases already supports the MA in Architecture. However, due to the exponential increase in students and the demand already existing on the libraries resources, I recommend a modest/medium budget allotment to support the program.

Our library currently subscribes to a standard core collection of architecture related databases, books and journals produced by professional associations and publishers. Available databases include: Avery Index to Architectural Periodicals, Art Full Text, Arts and Humanities Full Text, Building Green, Material ConneXion, SAGE Premier, along with strong support in databases supporting Engineering, Business, Health and Psychology. With the advent of the MA Architecture program in 2011, titles serving the architecture and sustainability program has grown to over 252,611. The library continues to actively build a print collection of books in architecture, complement by eBook packages. Important eBooks are found in RIT's Ebrary subscription – key publishers in this subscription include Routledge, Birkhauser, Princeton and MIT along with many others. Our library also subscribes to a number of e-book packages through Ebrary, EBSCOHost e-books, EBL, Books24x7, SpringerLink, and others. We also provide on-demand access to certain new e-books through a Patron Driven Access (PDA) system whereby e-book records are loaded into the catalog for patrons to discover. These PDA e-books are purchased only when patrons select and open them. In addition, patrons can request print books through PDA modules in the interlibrary loan system.

Periodical articles, papers from conference proceedings, books, and other information items not owned by The RIT Libraries can usually be obtained on a timely basis through Information Delivery Services (IDS), our interlibrary loan request system, or Connect NY. Connect NY is a unified catalog of 18 (at the time of writing) participating academic libraries in New York State and the collections of the Center for

Research Libraries. Authorized users affiliated with participating libraries can borrow print books in a timely manner from other Connect NY libraries if the books are not owned by their home library or if their library's copy is already checked-out.

Additionally, The RIT Libraries is a member of the Rochester Regional Library Council (RRLC), which provides RIT students and faculty book-borrowing privileges at other Monroe County libraries, including many of the area's academic libraries, through free RRLC Library access cards.

## **OTHER CONSIDERATIONS**

### Future Opportunities

During my evaluation of the aforementioned benchmarked five schools, I identified several databases that are not currently part of RIT's subscriptions, but would directly benefit learning and research in the field of architecture. It is my recommendation that these databases be explored in the future, as they would enhance our collection of resources for this degree, as well as other relevant disciplines.

- Art and Architecture Archive (Proquest)
- Digital Sanborn Maps (Proquest)
- MADCAD
- Urban Studies Abstracts

These databases along with several new journal subscriptions, and new book acquisitions, would be needed to accommodate the information needs of the prospective BA Architecture students.

## **Recommendation**

I recommend a modest/medium budgetary increase of \$14,000 (range of \$12,000-16,000) per year for the 1<sup>st</sup> five years; to support new book and journal titles, or new database subscriptions

Kari Horowicz, M.L.S.  
College of Imaging Arts and Sciences Librarian



## **Appendix D**

### **Program Need and Marketability: Evidence and Letters of Support**

RIT Office of Cooperative Education and Career Services – Maria Richart

HBT Architects, LLP; Rochester, NY – Trevor M. Harrison, AIA

Passero Associates, Engineering Architecture; Rochester, NY – Peter Wehner R. Whener, AIA,  
NCARB, LEED-AP BD+C

SWBR Architects; Rochester, NY – David J. Bienetti, AIA and Mark A. Maddalina, AIA

Bergmann Associates; Rochester, NY – James B. Durfee, AIA

John G. Waite Associates, PLLC; Albany and NY, NY – Shannon E. Brown, AIA

New York City Department of Housing Preservation & Development; NY, NY – Rona Reodica

Perkins Eastman Architects DPC; NY, NY – Shawn Basler, AIA

FXFowle Architects, LLC; NY, NY – Nicholas Garrison, AIA, OAQ, LEED



**Rochester Institute of Technology**

Cooperative Education and Career Services  
Bausch & Lomb Center  
57 Lomb Memorial Drive  
Rochester, NY 14623-5603  
585-475-2301 585-475-6905  
Fax: 585-475-5476  
Home page [www.rit.edu/co-op/careers](http://www.rit.edu/co-op/careers)

November 21, 2017

Dear Professor Chiavaroli:

I am pleased to provide this letter of support for the proposed Bachelor of Architecture degree.

I believe that the overall proposal is well thought out and accurately reflects my assessment of the job market and career prospects for the graduates of this program. I will arrange for the appropriate personnel and related resources of this office to support the career development, experiential learning, and job search interests of Architecture students and graduates. To do so most effectively, it will be vital to have the full support and engagement of program faculty to develop the necessary employer partnerships and help in providing all the relevant career insights and perspectives appropriate to the field.

Currently, in our Master of Architecture Program for the class of 2015 & 2016, we have had 100% full-time employment rate after graduation. For the class of 2017, we are at a 98% full-time employment. This has been achieved with the help of the faculty and staff of the department.

Please feel free to contact me should you have any questions or desire any additional information.

I wish you the best of luck as you move the program proposal forward.

Maria Richart  
Interim Director  
Career Services and Cooperative Education  
Rochester Institute of Technology  
57 Lomb Memorial Drive  
Rochester, NY 14624  
[Maria.Richart@rit.edu](mailto:Maria.Richart@rit.edu)  
585-475-5479



hbt architects  
2 Elton Street  
Rochester, NY 14607  
585.586.0490  
[hbtarchitects.com](http://hbtarchitects.com)

April 5, 2017

Mr. Dennis Andrejko, FAIA  
Department of Architecture  
Rochester Institute of Technology  
190 Lomb Memorial Drive  
Rochester, NY 14623-5603

RE: RIT Undergraduate Architecture Program

Dear Dennis:

As you are aware, our firm has been actively involved in the development and support of the existing graduate architecture program at RIT. We have had the great pleasure of working with your students as co-ops, summer interns and ultimately employees. Each experience has been outstanding and the students we have worked with have all contributed to the success of HBT Architects in unanticipated ways.

Beyond day to day employment practices, RIT students have brought fresh energy and perspectives to the firm. This in turn has contributed to our firm being more engaged in our community through hosting events and activities in our office for such local organizations as the Community Design Center and Rochester Contemporary Art. This involvement, brought on in large part by RIT students has benefited both our firm and our community.

As I look ahead to an increasingly positive future for Rochester and our region, I am excited by the potential for our community to have an undergraduate program in architecture at RIT. It is my understanding that this program will be modeled in the same manner as the graduate program and I am confident that this is the correct approach. I feel that RIT's integration of sustainability and urbanism as the focus of this degree is exactly what our profession needs to help us lead change. Starting this education in the earliest stages of an architect's development will only enhance our profession and our societal impact in the future.

HBT is proud to support your proposal for an undergraduate architecture program and we look forward to be involved in the success of the program and its students.

Warmly,

A handwritten signature in black ink, appearing to read 'Trevor M. Harrison', followed by a horizontal line extending to the right.

Trevor M. Harrison, AIA



April 14, 2017

Professor Jules Chiavaroli  
Rochester Institute of Technology  
Golisano Institute for Sustainability, Department of Architecture  
One Lomb Memorial Drive  
Rochester, NY 14623

**RE: Formation of the Bachelor of Architecture Program**

Dear Jules:

I am writing today to lend my complete support to the formation of an additional program in the study of Architecture at the Rochester Institute of Technology. The Rochester community is greatly enhanced by the strong Universities here in our market, and RIT is certainly the leader in Technology Education.

Passero Associates has employed a constant stream of student interns that are being educated in the current Master's Program. Two of these students once graduated are now full time employees. We find that the quality of their understanding of design, sustainability, and architectural technology makes them ready to be productive members of our design staff.

I can see the value of adding an undergraduate program that achieves a professional degree. The market is such that students look for value in education. The strength of RIT's existing program, parlayed into an undergraduate program will achieve this. Many students know right away that they would like to be a professional Architect, and having the ability to begin within that major will attract many possible candidates. Sustainability is a priority in our field and the established curriculum in this field at RIT will help attract the brightest possible candidates.

Please feel to contact me directly if there is anything more I can do to help in the creation of this program.

Sincerely:

A handwritten signature in black ink that reads 'Peter R. Wehner'. The signature is fluid and cursive, with the first name 'Peter' being more prominent.

Peter R. Wehner, AIA, NCARB, LEED AP BD+C  
Associate and Senior Architect  
Rochester Director, NYS American Institute of Architects



ROCHESTER NY  
387 East Main Street  
Rochester NY 14604  
Voice: 585.232.8300  
SYRACUSE NY  
309 South Franklin Street  
Syracuse NY 13202  
Voice: 315.488.5635  
www.swbr.com

April 14, 2017

Professor Jules Chiavaroli, AIA, NCARB, LEED AP  
Rochester Institute of Technology School of Architecture  
1 Lomb Memorial Drive  
Rochester, NY 14623

Re: RIT Bachelor of Architecture Program Proposal

Dear Professor Chiavaroli:

SWBR is pleased to support RIT's proposal for a new Bachelor of Architecture Program. We highly value RIT's School of Architecture Masters Program and its positive impacts on the design culture in our community. The development of a Bachelor degree program in the Department of Architecture would better serve area high school students looking for a more direct entry into the field. We have an ongoing need for skilled architecture graduates and RIT is already a terrific resource. The Bachelor of Architecture program is a natural extension.

Our firm has a 48-year legacy and a longstanding relationship with RIT. SWBR and RIT align closely in our commitments to sustainability and we value the sustainable design education provided in your architecture program. As you know, SWBR was Architect-of-Record for the LEED-Platinum Golisano Institute for Sustainability (GIS), which uniquely serves as a living laboratory for sustainability for many disciplines at RIT and has become a landmark for the Rochester architectural community. We are delighted that the GIS building is home to the School of Architecture.

SWBR has employed RIT student interns, served on the thesis committee for one of your architectural graduate students and ultimately hired this graduate. His design education and depth on the topic of sustainability made for a great fit within our firm. We are proud to have provided regular sustainability guest lectures in your classes, participated in design critiques, and we look forward to continuing our collaboration as your program expands.

Sincerely,

David J. Bienetti, AIA  
Principal

Mark A. Maddalina, AIA  
Sustainable Design Director

MAM/DJB

cc: Phil Wise

April 9, 2017

Mr. Jules Chiavaroli, Professor of Architecture  
RIT Graduate School of Architecture  
Rochester Institute of Technology  
One Lomb Memorial Drive  
SUS/81-3172  
Rochester, NY 14623-5603

Mr. Chiavaroli,

I am writing in support of RIT's proposed establishment of a Bachelor of Architecture program. I am an Architect, Design Principal and Vice-president at Bergmann Associates, a 400+ person A/E firm headquartered in Rochester, NY. We currently employ 29 RIT graduates with degrees ranging from architecture-related fields to business and civil engineering. The President of our company is a recent graduate of RIT's Saunders Business School. Suffice it to say, that RIT's programs are critical to our growth as a professional design firm.

A few years ago, our firm contributed to the establishment of RIT's Graduate School of Architecture program, both in terms of capital investment (donation) and volunteer counsel. We have continued to follow the program's progress and have been very pleased with our investment. The extension of this initiative to a Bachelors program makes good sense. It has the potential to strengthen the Masters in Architecture program by attracting students at an earlier point in their educational journey.

I have reviewed the Bachelor of Architecture program executive summary. I find it to be particularly responsive to both the needs of our community and our region. The sustainability focus of the program is particularly valuable at a time when both business and cultural endeavors are demanding sophisticated responses to the challenges of environmental quality. Environmental Stewardship, Corporate Sustainability, and Corporate Social Responsibility have become priorities for businesses of all sizes across all markets. Our current and future clients are increasingly demanding sustainable design experience and leadership in key market sectors.

Careers that synthesize art and technology will continue to be in high demand well into the future. The study of architecture is one of the few educational paths that require a command of science, technology and art. There is a critical ongoing need for skilled graduates who can both contribute to the profession and provide this unique kind of leadership.

Some of our brightest recent hires have degrees from RIT. I believe that RIT is in a position, as an institution, to leverage its allied programs in creating a compelling new educational opportunity. I fully support moving forward with the establishment of the proposed Bachelor of Architecture program.

Sincerely,  
BERGMANN ASSOCIATES



James B. Durfee, AIA  
Design Principal/Vice President

May 5, 2017

Mr. Dennis Andrejko  
Architecture Program  
Rochester Institute of Technology  
George Eastman Building  
Rochester, NY 14623

384 Broadway  
Albany, NY 12207  
518.449.5440tel  
518.449.5828fax  
  
64 Fulton Street  
Suite 402  
New York, NY 10038  
212.619.4881tel  
212.619.4882fax

Re. Proposal for a Bachelor in Architecture Degree

John G. Waite, FAIA  
Douglas G. Bucher  
Clay S. Palazzo,  
AIA, LEED AP  
Nancy A. Rankin,  
AIA, LEED AP

Dear Mr. Andrejko:

I strongly support a bachelor in architecture program at Rochester Institute of Technology (RIT). I am currently an associate at John G. Waite Associates Architects (JGWA) where the firm's approach is driven by a fundamental respect for historic buildings and we direct restoration, adaptive reuse and new design for historic properties across the United States.

---

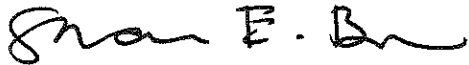
William J. Brandow  
Shannon E. Brown, AIA  
Chelle M. Jenkins  
Matthew K. Scheidt,  
AIA, LEED AP

JGWA has offices in Albany and New York City and, when hiring, we first look for local talent. As a practicing, somewhat local practitioner, I look forward to the development of a program at RIT that will interest talented young architecture students in studying, and maybe eventually working in the upstate region. John G. Waite Associates Architects could be a strong supporter of graduates from a bachelor in architecture program at RIT.

During past years, I have been a guest critic at several of RIT's final reviews for graduate students. At these reviews, the professors and curriculum stress the importance of preservation and adaptive reuse. In my experience, the RIT architecture program encourages preserving our architectural history, revitalizing urban environments while practicing sustainable design. The architectural world will benefit from a bachelor in architecture program that introduces these ideals to undergraduate students. Rochester Institute of

Technology will offer a strong context for such a program to grow.

Regards,

A handwritten signature in black ink, appearing to read "Shannon E. Brown". The signature is fluid and cursive, with the first name "Shannon" written in a larger, more prominent script than the last name "Brown".

Shannon E. Brown, AIA

John G. Waite Associates Architects

384 Broadway

Albany, NY 12207





**Department of  
Housing Preservation  
& Development**

nyc.gov/hpd

Office of Development  
Building & Land  
Development  
Services

March 17, 2017

Dennis Andrejko, FAIA  
Chair, Department of Architecture  
Rochester Institute of Technology  
Golisano Institute for Sustainability  
190 Lomb Memorial Drive  
Rochester, NY, 14623-5608

Dear Mr. Andrejko:

I am writing to express my strong support of RIT's Bachelor of Architecture Degree program. I am delighted to see that RIT is taking the initiative to implement a rigorous architecture program that provides undergraduate students with the opportunity to pursue a bachelor's degree in architecture. The program is an excellent way to address the growing interest in architecture, sustainability, and urbanism at the baccalaureate level.

I have reviewed the Academic Program Proposal and commend the program's focus on sustainability and urbanism, as well as the diverse exposure to the inter-disciplinary aspects of the practice. As a public servant with an architecture and urban planning background, I believe it is important that educational institutions broaden their curriculum to respond to the shifting dynamics of the built environment. For the past ten years, I have worked in the government sector for the City of New York's Department of Housing Preservation and Development (HPD), where our mission is to create or preserve safe, quality, and affordable housing for New Yorkers, and I can attest to the growing demand for talented architects who want to make a difference in urban areas and contribute to sustainable growth in communities.

There is tremendous potential for RIT's program to redefine the architecture profession and produce a cohort of architecture professionals who share the goal of making a positive impact in the built environment by leveraging their education and experience to contribute to public service. The institution's proximity to New York City also provides great opportunities for high school students in the city who want to pursue a degree in architecture, as well as opportunities for collaboration between your program and NYC public service agencies, like HPD, who impact the built environment. I congratulate you and your team on the launch of the Bachelor of Architecture Degree program and welcome future discussions for collaboration.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rona Reodica".

Rona Reodica

*Director of Policy and Operations, HPD Building and Land Development Services*

10 April 2017

Professor Jules Chiavaroli, AIA, NCARB, LEED-AP  
Department of Architecture  
**RIT Rochester Institute of Technology**  
Golisano Institute of Sustainability  
190 Lomb Memorial Drive  
Rochester, NY 14623-5608

**Re: RIT B Arch Program – Letter of Support**

Dear Jules:

It is my pleasure to write this letter of support for the B Arch Program proposal at RIT-Rochester Institute of Technology. I believe this program would be a very good addition to RIT and the Department of Architecture by offering undergraduate students a unique learning environment with a focus on sustainability and interdisciplinary research, which is increasingly important for our profession.

The goals established by RIT for the development of the B Arch Program are not only consistent with what I feel are core skills for students to develop, but also beyond what many institutions can currently offer to undergraduate students who are interested in the field of architecture. As the industry shifts towards sustainable design, the proposed B Arch program at RIT will offer students an enhanced education with sustainability and research as a core hands-on focus. The interdisciplinary design opportunities through the Golisano Institute for Sustainability will provide students a broader understanding of the real-life challenges and opportunities they will face when entering the profession.

The profession of architecture is both art and science, and the balance of this curriculum as outlined in the B Arch Program proposal is well thought out, and uniquely positioned to provide students a balanced education, which is critical when entering the workforce. The existing M Arch program is evidence of this commitment by the Department of Architecture to successfully shape a program with a focus on sustainability and interdisciplinary research.

As an established global firm and employer of many new graduates each year, I am pleased on behalf of Perkins Eastman to offer support for the B Arch Program at RIT. We wish you all the best success with your proposal.

Sincerely,



Shawn Basler, AIA  
Principal and Executive Director

---

New York  
Boston  
Charlotte  
Chicago  
Dallas  
Los Angeles  
Pittsburgh  
San Francisco  
Stamford  
Washington DC  
Toronto  
Shanghai  
Guayaquil  
Mumbai  
Dubai

---

**Perkins Eastman  
Architects DPC**  
115 Fifth Avenue  
New York, New York 10003  
t. 212.353.7200  
[www.perkinseastman.com](http://www.perkinseastman.com)

---

# FXFOWLE

**FXFOWLE ARCHITECTS, LLP** 22 WEST 19 STREET | NEW YORK, NY 10011, USA | T +1.212.627.1700 | WWW.FXFOWLE.COM

18 May 2017

Dennis A. Andrejko, FAIA  
Rochester Institute of Technology  
111 Lomb Memorial Drive  
Rochester, NY 14623

RE: Expression of Support: New Bachelor of Architecture Degree Program at RIT

Dear Mr. Andrejko:

I am the Design Director and a Partner at FXFOWLE Architects. We are an established, award-winning, 150-person architectural, interior design, planning and urban design firm committed to design excellence, social responsibility and sustainability.

I am writing to give my full endorsement of RIT's initiative to offer a new, 5-year Bachelor of Architecture program.

There are many 5-year Bachelor of Architecture programs on offer around the country. I believe RIT's proposed program will stand out in many important and significant ways and will set an important new standard for the education of new architects for our profession.

RIT's program seeks to balance the "science" inherent in making buildings perform optimally (the "how they work"), with the cultural knowledge that is critical to understanding the larger contexts in which they operate artistically, socially, and politically (the "why they are important"). Theory and practice are inseparable elements, good design practice, and RIT will prepare future practitioners appropriately.

There is a specific aspect of this program I find compelling, and that is its accent on synthesis and integration of variables for design that emphasizes sustainability—based on data. The profession has long recognized the value of a more integrative design process that elevates choices that optimize a building's performance to the early stages of the design process. This is quantifiable—things that can be modeled and tested in various combinations to optimize performance—and needs to be made part of the design process itself. It is data based. Unfortunately, old ways die hard. We are too often caught with ways of structuring a project's development that work against this common sense.

RIT's program will educate its students to think and act differently, integrating data into the design process. I believe it will demonstrate alternative strategies that will help to lead the profession to adopt the kind of changes that it simply must embrace. "Data" has enabled breakthroughs of enormous consequence in every part of our lives, but it is underutilized at architecture schools today. This emphasis, together with its balance of practical Co-op work experience, and its proposed Study Abroad Semester, will, I believe, make RIT's program extremely sought-after by both its students, and by future employers such as myself.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicholas Garrison". The signature is fluid and cursive, with a long horizontal stroke at the end.

Nicholas Garrison, AIA, OAQ, LEED  
Partner  
FXFOWLE Architects, LLP

## **Appendix E – Space Allocation/Renovation Request**

## APPENDIX E

### REQUEST FOR ALLOCATION OR RENOVATION OF SPACE

Date: November 1, 2017

☒ Additional Space ☐ Change in Usage or Assignment ☐ New Space Construction ☒ Existing Space Modification

Time frame for request: ☐ Imminent ☐ Immediate 6- 12 months ☒ Intermediate 1-3 yrs ☐ Projected: 4 – 6+ yrs

### REQUESTOR INFORMATION

Division: **ACADEMIC AFFAIRS**

Department: **Architecture**

Submitter's Name: **Dennis A. Andrejko, FAIA** Title: **Head, Department of Architecture**

E-mail: daaarch@rit.edu Phone: 5-4990 Fax: \_\_\_\_\_ RIT Address: Golisano Institute for Sustainability

*If different from submitter*

Contact Person: \_\_\_\_\_ Title: \_\_\_\_\_

Email: \_\_\_\_\_ Phone: \_\_\_\_\_ Address: \_\_\_\_\_ Fax: \_\_\_\_\_

Briefly describe the function of your department:

**The Department of Architecture Master of Architecture program. This request is for the planned Bachelor of Architecture program.**

Current total assignable square footage of your department: appx. 15,000 sq ft.

Number of faculty: Full-time - 6 Part-time - 0 Adjunct - 8

Number of staff: exempt \_\_\_\_\_ non exempt- 1

Number of student workers: Graduate \_\_\_\_\_ Post-Doc \_\_\_\_\_ Co-op \_\_\_\_\_

Will the # of people in this department increase or decrease w/in the next 2 years? Yes ☒ No ☐

If there will be an increase, indicate amount and source of anticipated growth.

**Following the launch and by its 5<sup>th</sup> year, it is anticipated there will be an increase of over 160 students, 6+ faculty, and 3 staff in servicing the needs of the Bachelor of Architecture program.**

If there will be a decrease, identify the number and types of positions.

**Please address the urgency and rationale for this allocation. Include benefits if approved and consequences if not approved.**

**This request for space is for the forthcoming launch of the Bachelor of Architecture program. If additional space is not provided, the new program will be unable to operate.**

## SPACE REQUEST

Sq. ft.: 14,950 # of rooms - 17 Number of occupants per room: varies  
Hours in use/week: varies How long is space needed? Indefinitely

Space will be used for:

Classroom \_\_\_\_\_ Administration \_\_\_\_\_ Storage \_\_\_\_\_ Support Space \_\_\_\_\_ Conference Room \_\_\_\_\_  
Studio (specify type) 5 design studio spaces (10900 sf) Rehearsal Space \_\_\_\_\_ Performance Space \_\_\_\_\_

### Laboratory

Instructional lab: Wet \_\_\_\_\_ Dry \_\_\_\_\_ Computer Lab \_\_\_\_\_

Research lab Wet \_\_\_\_\_ Dry \_\_\_\_\_ Computer Lab \_\_\_\_\_

Other (specify) 1 Shop/fabrication space (2400 sf)

Grant funded: Yes \_\_\_\_\_ No X

If yes, has grant been funded? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, start and end dates of the grant?

If no, when do you anticipate funding? No

Is the space requested part of a new faculty start-up package? Yes \_\_\_\_\_ No X

If yes, who is the faculty member? \_\_\_\_\_

### Offices:

Faculty Office: Full-time-4 TT @ 100 sf each = 500 sf Lecturer 2@100 sf Part-time \_\_\_\_\_ Adjunct \_\_\_\_\_  
Research \_\_\_\_\_ (600 sf Total)

**NOTE: Assignable Adjuncts to share extg. space**

Staff Office (circle one): Exempt Non Exempt - 2 Full-time \_\_\_\_\_ Part-Time \_\_\_\_\_ Temporary \_\_\_\_\_

Other – 3 crit/review spaces @ 300 sf each, totaling 900 sf.

Explain work to be performed in this space: **There are 3 staff space needs: one for the shop (included in the shop footage above; one for advising and student support; and one for administrative support/oversight (senior staff assistant). The two staff offices are 75 sf each, totaling 150 sf.**

Student Office: Grad Student \_\_\_\_\_ Post Doc Student \_\_\_\_\_ Co-op Student \_\_\_\_\_

Other (please specify):

Could new space be shared or serve dual purpose? Yes X No \_\_\_\_\_

(if yes, please give an example of shared/dual usage; if no, give reason)

**Crit/review spaces are a normal and routine space need for professional degree architecture programs; however, this space could be a shared usage (such as conference space, flexible classroom space, etc.**

**In addition, several existing spaces already in use with the Master of Architecture program will also be jointly used by the Bachelor of Architecture program, such as existing crit space, plotting and scanning lab, resource room, classroom/flex space, Sustainable Building Materials lab, etc.**

Is an off-campus location to fill this request possible?

Yes \_\_\_\_\_ No X

(if no, give reason)

Special Requirements for Requested Space: (e.g. HVAC needs. Be specific)

**The shop will need special services such as additional power and water requirements, along with special ventilation, etc.**

**FOR CHANGE IN USAGE OR ASSIGNMENT (with no modifications of space)**

Previous assignee:

Plans for accommodating previous assignee/use (if applicable):

Previous use:

Classroom \_\_\_\_\_

Exempt Staff office \_\_\_\_\_

Conference Room \_\_\_\_\_

Instructional lab \_\_\_\_\_

Faculty office \_\_\_\_\_

Non Exempt Staff Office \_\_\_\_\_

Storage \_\_\_\_\_

Research lab \_\_\_\_\_

Administration \_\_\_\_\_

Grad Student \_\_\_\_\_

Other (specify) \_\_\_\_\_

Wet \_\_\_\_\_ Dry \_\_\_\_\_

Support Space \_\_\_\_\_

Co-op Student \_\_\_\_\_

Proposed new assignee: \_\_\_\_\_ When is the space needed? \_\_\_\_\_

**FOR NEW CONSTRUCTION OR EXISTING SPACE MODIFICATION**

Briefly describe why this new construction or modified is needed.

**These spaces are necessary for the launch of the Bachelor of Architecture program, and can be phased in incrementally.**

Will any existing space be vacated if this request is approved? Yes \_\_\_\_\_ No ☒

If yes, please list rooms that will be vacated:

Do you have funding for space construction/modification? Yes \_\_\_\_\_ No ☒

If yes, what is funding source?

Have you consulted with Campus Planning and Design & Construction Services?

If no, provide reason.

Yes ☒ No \_\_\_\_\_

Have you consulted with Educational Technology Services (if necessary, e.g. classroom, conference room? Yes \_\_\_\_\_ No ☒

Do you have a funding source(s) for the construction or modification? Yes \_\_\_\_\_ No ☒

If yes, identify the funding source(s), the amount of funding, and the time-line for receiving/expending funds.

Have funds been requested through the university budget hearing process for the renovations? Yes \_\_\_\_\_ No ☒

If yes, which fiscal year and what is the status of the request? \_\_\_\_\_



Will there be incremental costs associated with the new space? (e.g. power, maintenance, security, support staff not noted above).

Yes ☒ No ☐ Incremental costs include shop equipment; outfitting services of the shop as necessary, and studio furnishings.

Please attach all concept work produced for this project by Campus Planning & Design or designated outside organization.

Mr. Jim Yarrington in Facilities Design and Management has initiated concept studies for the build out of Bay 3 Studio and the Master of Architecture program. This concept work can be provided by him if necessary.

Please attach written cost estimate for your project plus any other supporting documentation, including documentation from The Wallace Center Support Services for rooms requiring audiovisual support


See proposed program cost model for addition information and specifics. Also, see attached sheet identifying Bachelor of Architecture Space Needs Summary.

### REVIEW AND APPROVAL SIGNATURES

When a request crosses departments, colleges or academic affairs support units, signatures from all affected areas must be secured.

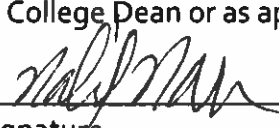
1. Department Chair/Director

  
Signature

  
Title

19 Jan 2018.  
Date

2. College Dean or as appropriate Associate Provost / Assistant Provost

  
Signature

Director  
Title

1-19-18  
Date

#### Note to College Deans/Associate Provost/Assistant Provost:

List and prioritize this request with any other space request from your area currently pending with the Academic Affairs Space Committee or University Space Committee:

N/A

Return this completed form with signatures 1 & 2 to: Sue Provenzano, Eastman 2109

3. Academic Affairs Space Committee Chair

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

4. Provost and Senior Vice President for Academic Affairs

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Signature

Date

5. University Space Committee Chair (if needed)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

6. President (if needed)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Rev. 1/10/2011
----------------

**BACHELOR OF ARCHITECTURE SPACE NEEDS – PER CURRENT BUDGET MODEL****(Over next 5 years – AY 19/20 – AY 23/24)**

Assumes full build-out of Bay 3 Studio per original agreement at launch of M. Arch program in 2011. Bay 3 studio would then accommodate all of M. Arch studio needs freeing up 2,100 sf of space (Studios SLA-1220 and 2200) for the B Arch program.

<b>Year</b>	<b>No. of Students</b>	<b>Unit</b>	<b>Size</b>	<b>Total Area</b>	<b>Notes</b>
1 <sup>st</sup> Year	40	50 sf each	2,000 sf	2,100 sf	Needs fulfilled by reassignment of M. Arch Studio SLA-1220
2 <sup>nd</sup> Year	35	60 sf each	2,100 sf	2,000 sf	Needs fulfilled by reassignment of M. Arch Studio SLA-2200
3 <sup>rd</sup> Year	34	60 sf each	2,000 sf	2,000 sf	Model shows 2000 sf
4 <sup>th</sup> Year	31	80 sf each	2,480 sf	2,400 sf	Model shows 2400 sf
5 <sup>th</sup> Year	28	80 sf each	2,280 sf	2,400 sf	Model shows 2400 sf
Fabrication Shop		1	2,400 sf	2,400 sf	Model shows 2400 sf
Critique Review Space		3	300 sf	900 sf	Model shows 1200 sf
Faculty and Admin Offices		6 1	100 sf 150 sf	750 sf	Model shows 650 sf
<b>TOTAL</b>	<b>168</b>			<b>10,850 sf (new)</b> <b>4,100 sf (reassigned)</b>	Reassignment of existing space occurs at program launch (AY 19/20) and continues thereafter. New space needs begin in Year 3 (AY 21/22) and continues thereafter.

## **Appendix F – Full Faculty CV's**

Nana-Yaw Andoh  
Dennis A. Andrejko  
Jules Chiavaroli  
Giovanna Potesta

ROCHESTER INSTITUTE OF TECHNOLOGY  
190 LOMB MEMORIAL DRIVE  
GOLISANO INSTITUTE FOR SUSTAINABILITY: 81-3178  
ROCHESTER, NEW YORK 14623  
PHONE (585)475-4144 • E-MAIL: [NAAGIS@RIT.EDU](mailto:NAAGIS@RIT.EDU)

CURRICULUM VITAE

# NANA-YAW A. ANDOH

## EDUCATION

---

**MADU** – Master of Architecture and Design Urbanism, 2007  
University of Notre Dame, IN

University of Notre Dame Rome Studies Program, 2006

Thesis: Sustainable waterfront neighborhood in Brooklyn, NY

The thesis addresses the need for American cities to engage their waterfronts in more meaningful ways through the use of sustainable urban planning and development. My project was designed to give people choices. The commonality between these choices is the impact on the environment. We burn less fuel, become more active, lead healthier lives, make better choices, and make ourselves a sustainable species.

**B.Arch** – Bachelor of Architecture, 2000  
University of Notre Dame, IN

University of Notre Dame Rome Studies Program, 1997 - 1998

## RESEARCH INTERESTS (3+)

---

- Sustainable architecture and traditional town planning – making our current urban and suburban growth patterns more efficient, sustainable and pedestrian friendly.
- Research of alternative energy sources (wind, solar, renewable, green roofs, etc) and how we can aesthetically incorporate these solutions into the architectural design process.
- Historic research of African architecture and urbanism and how we can restore this knowledge into contemporary practice.

## TEACHING EXPERIENCE (5)

---

**Rochester Institute of Technology**  
*Assistant Professor*

2015 - Present  
*Rochester, New York*

- Assistant professor of architecture in the Golisano Institute for Sustainability at RIT. Currently responsible for the 3<sup>rd</sup> year studio with an emphasis on Adaptive Reuse.

- Also serving as the coordinator for the first year of the graduate program which includes curriculum planning and academic requirements.

### **SUNY Delhi**

2009 - 2015

*Associate Professor*

*Delhi, New York*

- Professor of architecture within the College of Technology at SUNY Delhi. Responsible for the 3<sup>rd</sup> year design studio and an introduction to architectural graphics class for freshmen.
- The 3<sup>rd</sup> year design studio focuses on a practical and sustainable approach to the design profession, and the freshman graphics class places an emphasis on hand drafting and drawing making the students better prepared for future CAD courses.
- Created the approved curriculum for the first ever Study Abroad Program in Architecture at SUNY Delhi which offers architecture students an opportunity to spend time in Florence, Venice, Vicenza, Siena, and Rome studying the works of renaissance masters and documenting architectural and urban design details for future use, while bringing the history of Architecture to life.

### **University of Notre Dame**

2005 - 2007

*Graduate Assistant*

*Notre Dame, Indiana*

- As part of the professional degree program, I assisted with the design studio classes for the sophomores. It was my responsibility to provide instruction and guidance on the fundamental principles of traditional architecture and the classical language, giving the class a solid foundation for their architectural development.

### **Harcum Junior College**

2004 - 2005

*Adjunct Professor*

*Brynn Mawr, Pennsylvania*

- Part of the design faculty of a prestigious junior college. Taught courses on perspective drawing and rendering for interior design students, and a graphic design course to enhance portfolio presentations for graduating seniors.

### **Northampton Community College**

2003 - 2004

*Adjunct Faculty*

*Bethlehem, Pennsylvania*

- Instructor for the Architectural Graphics course which places an emphasis on introducing first year design students to basic architectural skills and concepts such as hand drawing and graphic presentations.
- The objective of my class is to provide the students with the confidence and ability to graphically express their ideas and design intent in a coherent and architecturally comprehensible format.

---

## PROFESSIONAL EXPERIENCE (5)

### **Andoh Design Studio**

2009-Present

*Principal Designer*

*New York*

- Principal of my practice founded on the basis of providing consulting services to enlightened developers about green buildings and sustainable mixed-use developments.

- Also working on new residential architecture from schematic designs through construction administration in the United States and international locations.
- Occasionally work on small residential and commercial re-modeling and re-construction projects.

**Hart Howerton**

2007 - 2008

*Project Designer*

*New York, New York*

- Part of the design team for a high-end residential golf community in Park City, Utah. This includes the schematic and design development phases of the project.
- Previous roles have included being a part of large urban design project teams for international resort towns, and small architectural teams for construction documentation and construction administration of various projects.
- Specific tasks have included (but not limited to) code research, materials research, developing construction details, drafting construction documents, reviewing and coordinating consultant drawings, and reviewing shop drawing submittals.

**Schoonover and Vanderhoof Architects**

2004 - 2005

*Designer*

*East Stroudsburg, Pennsylvania*

- Responsible for executing designs for high end custom houses from design development through construction documents. Worked with firm principals through project construction phase.

**The Architectural Studio**

2003 - 2004

*Designer*

*Easton - Allentown, Pennsylvania*

- Part of the design development and construction document team for a 16,500 sf cultural museum for the Easton community to primarily exhibit historical steam engines and trains which were influential to the existence of Easton.
- Other project duties included design development, code research, preparation of graphic presentations, and the drafting of construction documents sets.

**Martin A. DeSapio Architects**

2000 - 2003

*Intern Architect*

*Flemington, New Jersey*

- Design and documentation of large scale Church complexes. Responsibilities included master plan designs for Church complexes which required code and ordinance research, graphic presentations using both CAD, Photoshop renderings, and watercolors, and the drafting of final construction document bid sets.

COURSES TAUGHT (11)

---

**RIT**

ARCH 752 – Urban and Regional Planning

ARCH 744 – Integrated Building Systems IV

ARCH 733 – Architectural Design III (Adaptive Reuse)

ARCH 741 – Integrated Building Systems I

ARCH 763 – Sustainable Building Metrics (co-instructor)

ARCH 632 – Architectural Design II

## **SUNY DELHI**

ARCH 125 – Architectural Design Graphics

ARCH 135 – Architectural Design Fundamentals

ARCH 330 – Architectural Design III

ARCH 370 – Architectural Design IV

ARCH 371 – Architectural Theory (Study Abroad Program)

---

## INSTITUTIONAL SERVICE , COMMITTEES, & ACADEMIC BOARDS (14)

### **RIT**

Academic Affairs Committee: 2017

AIAS Faculty Advisor: 2017

Wallace Center Innovative Learning Complex Task Force: 2016

Global Leadership Program Mentor: 2015

Graduate Arch. Program – Admissions & Recruitment Chair: 2015

Graduate Architecture Program – Curriculum Committee: 2015

### **SUNY DELHI**

Sustainability Committee: 2010 – 2015

University Faculty Senator: 2012 – 2015

Career Fair Committee: 2013 – 2015

College Senate: 2010 – 2012

Middle States Review Group: 2012

Art & Sculpture Committee: 2011

### **UNIVERSITY OF NOTRE DAME**

School of Architecture Blue Ribbon Diversity Task Force: 2015 – Present

### **COMMUNITY DESIGN CENTER ROCHESTER**

Board of Directors - 2017

---

## AWARDS, PUBLICATIONS, & PRESENTATIONS (9)

*New Urbanism – A Model for Sustainable Urban Development & Social Equity – Malmö University, Sweden – Fall 2016*

- Lecture at Malmö University in Sweden to discuss a history of planning in the United States and current efforts by the Congress for New Urbanism to return to traditional town planning and its possible positive effects for social equity.

*A Case Study in Accra, Ghana – Proposal for a Road Pricing Scheme in the Central Business District to Reduce Traffic Congestion – Summer 2016*

- A peer-reviewed article for the United Nations Institute for Training and Research (UNITAR) with an emphasis on Sustainable Urban Mobility for Developing Countries.

*The Architectural Impact & Historical Significance of the Renaissance – SUNY Delhi Faculty Presentation – Spring 2015*

- Guest lecture for the SUNY Delhi Architecture program discussing the historical impact and significant contributions of the Renaissance and its continued influence in current practice.



*15<sup>th</sup> International Planning History Society (IPHS) Conference – Sao Paolo, Brazil, Summer 2012*

- Presented a paper on the *Design of a Good City – Creating a 21<sup>st</sup> Century City in Developing Countries (and bringing about Social Reform)*. Presentation used precedents of existing great cities as best practices and laid out a 7 step approach to the design of a good city.

*The Future of the Past: A Conservative Ethic for Architecture, Urbanism, and Historic Preservation*, by Steven W. Semes – W.W. Norton & Co. 2009

- Classical architect and scholar Steven Semes uses my thesis project in his new book as a reference for a sensible urban design approach which respects the history of a place in a modern world.

*State University of New York: Strategic Planning – Diversity and Globalization – Delhi, NY - Fall 2010*

- Presented on the topic of Diversity and Globalization in higher education and the need for more study abroad opportunities for students and faculty within the SUNY system. Presentation also touched on the historical and cultural significance of such opportunities.

*Dean's Award for Design Excellence – Notre Dame, IN – Spring 2007*

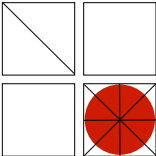
- Selected by the graduate review jurors and the dean, this award goes to overall design excellence in a graduate thesis project.

*John A. Kaneb Graduate Teaching Award – Notre Dame, IN – Spring 2007*

- Nominated by the faculty and the university, the award goes to a graduate student who demonstrates teaching excellence in his/ her field of study.

*Acroterion (Student work published) – 2006-2007*

- A yearly publication produced by the School of Architecture at the University of Notre Dame that demonstrates the best of refinement and design in student work.



## ■ Dennis A. Andrejko, FAIA

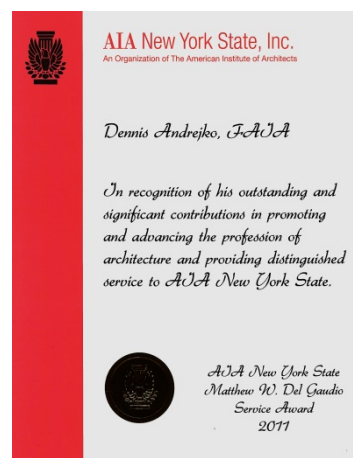
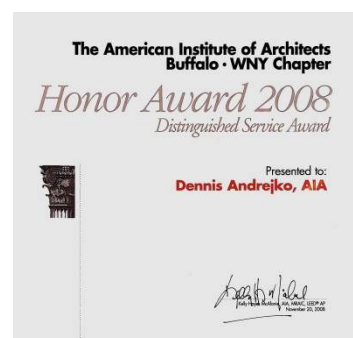
ANDREJKO + ASSOCIATES  
203 Delamere Road  
Williamsville, New York 14221

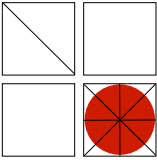
ROCHESTER INSTITUTE OF TECHNOLOGY  
Golisano Institute for Sustainability  
Department of Architecture  
111 Lomb Memorial Drive  
Rochester, NY 14623-5608

[www.rit.edu/architecture](http://www.rit.edu/architecture)

585.475.4990 (O)  
585.475.4880 (F)

[daaarch@rit.edu](mailto:daaarch@rit.edu)





# SIGNIFICANT WORK IN EDUCATION AND PRACTICE

DENNIS A. ANDREJKO, FAIA

ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

## ■ Educational/Professional

### ACADEMIC DEGREES

#### Arizona State University

1975

Bachelor of Architecture, cum laude  
Professional Degree

#### Massachusetts Institute of Technology

1977

Master of Architecture in Advanced Studies

### PROFESSIONAL LICENSES

State of Arizona (inactive)

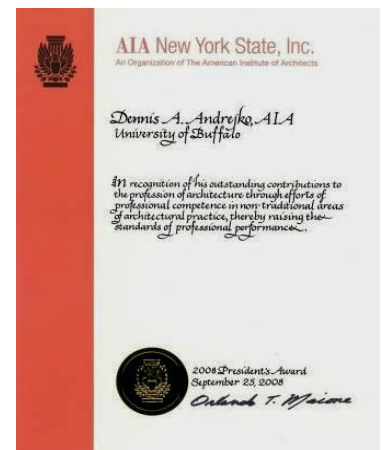
#14547

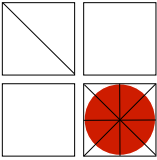
State of California (inactive)

#C 10,208

State of New York

#16767





# SIGNIFICANT WORK IN EDUCATION AND PRACTICE

DENNIS A. ANDREJKO, FAIA

ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

## ■ Academic - Teaching

### ROCHESTER INSTITUTE OF TECHNOLOGY

2011 -

#### Golisano Institute for Sustainability

Associate Professor, Department of Architecture

Head, Department of Architecture

### UNIVERSITY AT BUFFALO – STATE UNIVERSITY OF NEW YORK

1982 - 2011

Associate Professor, Department of Architecture

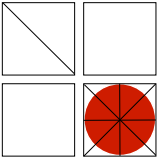
Fall 1982 – Graduate Studio - Passive Solar/Energy Conscious Design  
Spring 1983 – Graduate Studio - Earth Sheltered Design  
Fall 1983 – Graduate Studio - Design & Energy 1983, Railroad Station  
Spring 1984 – Graduate Studio - American Wood Council/ACSA Design  
Competition, "Colorado Country Club"  
Fall 1984 – Graduate Studio - Design & Energy 1984, "Hotel/Theater Complex"  
Spring 1985 – Graduate Studio - American Wood Council/ACSA Design  
Competition. "Institute for Scholarly Studies"  
Fall 1985 – Graduate Studio - Design & Energy 1985, "100 Unit Residential  
Development in Urban Area"  
Spring 1986 – Graduate Studio - Advanced Building Technology  
Fall 1986 – Graduate Studio - 60 Acre Energy Efficient Development  
Spring 1987 – Graduate Studio - American Wood Council/ACSA Design  
Competition "Wood Museum"  
Fall 1987 – Graduate Studio - Winter Living/Cold Regions Architecture  
Spring 1988 – Graduate Studio - Earth Sheltered Design  
Fall 1988 – Graduate Studio - Homeless Housing  
Spring 1989 - Sabbatical  
Fall 1989 and Spring 1990 – 2nd Year Design Studio  
Fall 1996 - Senior Design Studio  
Fall 1999 – Senior Design Studio  
Spring 2000 – Graduate Studio - Cold Regions Environmental Research Center  
Fall 2000 – Senior Design Studio  
Spring 2001 – Graduate Studio - Earth Sheltered Design  
Fall 2001 – Senior Design Studio  
Spring 2002 – Graduate Studio – Sustainability and Energy  
Fall 2002 – Senior Studio  
Fall 2003 – 3 ½ Year Studio – Ecological Literacy  
Spring 2004 – Graduate Studio – Sustainable Housing  
Fall 2004 – 3 ½ Year Studio – Cold Regions Environmental Education Center  
Spring 2005 – Graduate Studio – Cold Regions Energy Research Center  
Fall 2005 – Graduate Studio – Wood and Design  
Spring 2006 – Graduate  
Studio – Pre Cast Concrete and Sustainability  
Fall 2006 – Graduate Studio – Zero Energy Housing  
Spring 2007 – Graduate Studio -Aruba Housing/Tifft Nature  
Fall 2007 – Graduate Studio – Sustainable Commercial Buildings  
Spring 2008 – Senior Comprehensive Studio  
Fall 2008 – Graduate Studio - Carbon Neutral Design Explorations

Environmental Controls I: 1982 to 1996

Introduction to Building Technology: 1995 - 2008

Energy and Shelter: 1983 - 2008

Study and investigation of various energy conscious, passive solar  
and sustainable design strategies



# SIGNIFICANT WORK IN EDUCATION AND PRACTICE

DENNIS A. ANDREJKO, FAIA

ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

## ■ Academic Teaching (con't)

### **MONTEVERDE INSTITUTE, Costa Rica**

Senior Professor. Sustainable Futures Program addressing Costa Rican Development and Eco-tourism.

1996 – 2010

### **ARIZONA STATE UNIVERSITY, Tempe, AZ**

Visiting Assistant Professor, College of Architecture, Department of Planning, Graduate Solar/Architecture program

1981 – 1982

### **UNIVERSIDAD AUTONOMA DE BAJA**

Instructor and advisor for 19 graduate architecture students receiving an architecture degree with an energy emphasis. Thesis advisor, reviewer and juror determining ultimate degree and class ranking.

1981 – 1982



## ■ Academic - Leadership

Head – Department of Architecture  
Golisano Institute for Sustainability  
Rochester Institute of Technology

2011 -

Recruited to lead the new Master of Architecture Program  
focusing on an integrated Sustainability and Design Curriculum

Interim Chairman - Department of Architecture  
School of Architecture and Planning  
University at Buffalo

1997 – 1999

Director of Architecture – Department of Architecture  
School of Architecture and Planning  
University at Buffalo

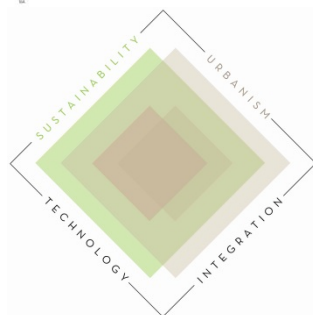
1990 – 1995

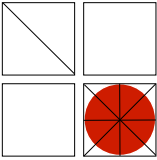
IDP Education Coordinator

2000 – 2010

AIAS Faculty Facilitator

2002 – 2014





# SIGNIFICANT WORK IN EDUCATION AND PRACTICE

DENNIS A. ANDREJKO, FAIA

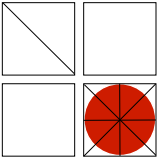
ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

## ■ Academic Student Awards

AIA New York State Student Award/Scholarship	2007 - 2014
Award to Graduate Student Studio Project – NESEA	2007
Zero Energy Housing	
Pella Competition	2007
One Student Design Award (Grand Prize) and One Honorable Mention	
PCI National Design Competition	2006
One Third Place Prize and One Honorable Mention	
Awarded at National Convention	
NESEA Zero Energy House Competition	2006
One Student First Place Award, Two Honorable Mentions	
Aruba International House Design Competition	2007
Sustainable House Design Explorations	
First, Second and Third Place Awards	
Pella Competition	2006
First Place Award	
Design for the 21st Century International Design Competition	2004
3 student design team – top Award among 230 entries (with Professor Beth Tauke)	
Pella Competition	2005
First Place Award	
UB ESI Symposium	2005
Two Student Poster Awards	
NESEA Green Building Design Competition	2004
Two Third Place Awards (tied)	
Pella Competition	2004
Two Awards	
AIAS National Student Thesis Recognition	2003
Design + Energy, ACSA Student Competition	1984
“Hotel/Theater Complex” Design Recognition for two student projects (in publication).	

## ■ Community + Professional Leadership

Vice Chair – ICC International Green Construction Code (IgCC)	2012 - 2014
Public Hearing Code Review Committee	
MEGARON Editorial Board – A Technical Publication for Yildiz	2011 - 2014
Technical university, Faculty of Architecture	
Advisory Board, AIA+2030	2012 – 2014
Invited Jury Member, Precast Concrete Institute's (PCI) National Design Competition	2012
National Academy for Environmental Design (NAED) Advisory Council	2009 – 2012
National Vice-President – American Institute of Architects	2010 – 2012
Oversight of the AIA National Knowledge Portfolio and Chair of the Board Knowledge Committee (BoKnoCo)	
Sustainable Building Technology Committee (SBTC) – for formulation of the International Green Construction Code – IgCC	2009 - 2011
National Director – American Institute of Architects	2006 - 2009
Sustainability (SDiG) Committee Member	
Licensing Committee Member	
Education Practitioner Network Member Liaison	
Cont Education Quality Assurance Panel, Sustainability	
COTE (Committee on the Environment) National Co-chair	2009
SDAT – AIA Sustainable Design Assessment	2005 - 2008
Team Expert Team Member – Northampton, MA	2005
Expert Team Member – Tucson/Pima County	2007
Team Leader – Englishtown, New Jersey	2007
Team Leader – Windsor, California,	2008
Team Expert – Kauai, Hawaii	2008
Team Leader – Indianapolis, Indiana	2009



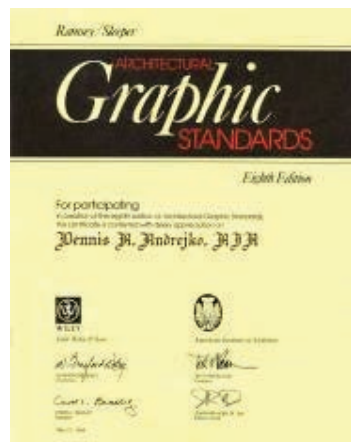
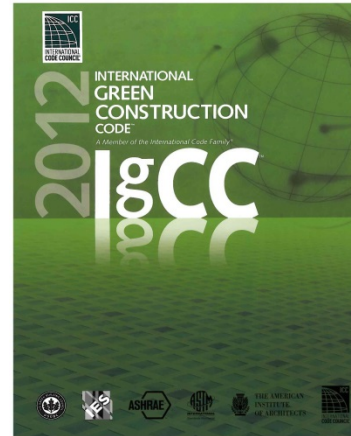
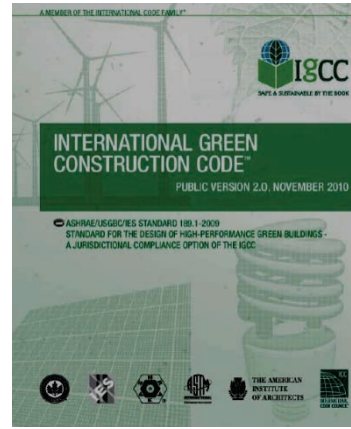
# SIGNIFICANT WORK IN EDUCATION AND PRACTICE

DENNIS A. ANDREJKO, FAIA

ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

## ■ Community + Professional Leadership (con't)

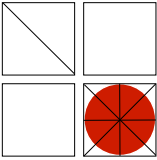
International Design Competition, Abu Dhabi, United Arab Emirates. Masdar Headquarters Building – World's first "Positive energy" Mixed Use Building	2008
Jury Chair – AIA Southern Chapter (NY)	2008
Carbon Neutral Design (CND) Summit	2008
Invited Jury Member– AIA Rochester Design Awards	2008
Invited Jury Member – AIA Education Honor Awards	2008
Technical Review Committee Member, ASES Solar 2008	2008
National Organizing Committee Member	2008
American Solar Energy Society, National Conference, SOLAR 2009 (to be held in Buffalo, NY, May, 2009)	
Passive Program Chair, ASES National Conference, SOLAR 2009 (to be held in Buffalo, NY, May 09)	2008
Pomona Summit on Sustainable Education	2007
State Director AIA New York State	2006
President – AIA Buffalo/WNY Chapter	2002
Vice President/President Elect – AIA Buffalo/WNY AIA Chapter	2000
Director/Board Member – AIA Buffalo/WNY Chapter	1997
Member of National Organizing Committee, 11th National Passive Solar Conference	1986
Invited Jury Member, National Energy Efficient House Design Competition, New Shelter Magazine	1985
Chairman and Board Member, ASES Passive Architecture and Construction Division	1985
Member of National Organizing Committee	1985
Solar '85 and 10th National Passive Solar Conference	
General Chairman, ASES 9th National Passive Solar Conference	1984
Invited Juror, Sustainable Communities Design Charrette	
Minneapolis, Minnesota. Participant schools included University of Minnesota, University of Wisconsin at Milwaukee, and University of Illinois at Chicago Circle	
Executive Board Member, ASES Passive Systems Division	1985
Executive Board Member, ASES Architecture and Construction Division	1985
Technical Program Chairman, ASES 6th National Passive Solar Conference	1981
Technical Reviewer, PASSIVE SOLAR HANDBOOK FOR CALIFORNIA, California Energy Commission	1979
PG&E Suntherm Reviewer	1979
Technical Reviewer, Cycle 5, HUD Solar Demonstration Program	1979
Participant, AIA/RC/DOE Climate and Architecture Workshop	1979
Executive Board Member ASES/SES Solar Radiation Division	1979
Juror, HUD National Passive Solar Design Competition	1979



## ■ Community + Professional Service

Technical Review Committee Member, ASES Solar 2008	2008
Expert Panelist/Technical Reviewer – NSF – Technical Review for SBIR/STTR Phase I: Wind and Solar Architecture and Children Workshop Series	2007
Jointly with University at Buffalo and AIA	2001 - 2008
New York State Junior Miss – State Board Member	2005 - 2010
New York State Junior Miss – State Committee Chair	2006 - 2010
New York State Junior Miss – State Committee Member	2002 - 2010
Design Review Advisory Committee, Erie County Family Courts Building.	1998
Executive Board Member, Court Appointed Specialty Advocates (CASA) Buffalo Region	1997
Selected Member, NAAB Site Visitation Team Membership	1996 - 2001
Associate Editor of Architecture, <u>SOLAR ENERGY JOURNAL</u>	1987 - 1995
Associate Editor of Architecture, <u>PASSIVE SOLAR JOURNAL</u>	1985 - 1988
Technical Reviewer for MECHANICAL AND ELECTRICAL EQUIPMENT FOR BUILDINGS, 7th Edition	1986





# SIGNIFICANT WORK IN EDUCATION AND PRACTICE

DENNIS A. ANDREJKO, FAIA

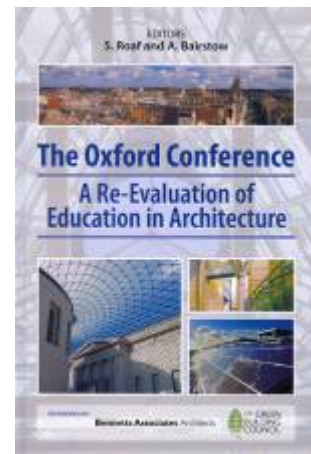
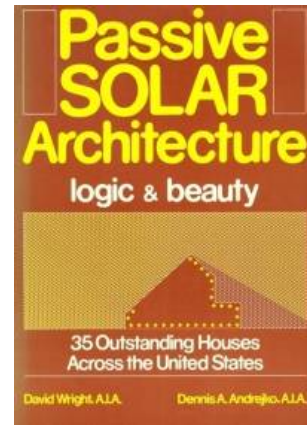
ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

## ■ Community + Professional Service (con't)

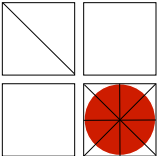
Invited Juror. Final Design review of senior design projects School of Architecture, RPI, December	1982
Reviewer, "Passive Solar Journal"	1984
Technical Review Committee, Technical Advisory Committee Session Chairman (Emerging Architecture) and Panelist (Climate Responsive Design), 7th National Passive Solar Conference	1982
Consultant/Reviewer, University of Minnesota Underground Space Center EARTH SHELTER RESIDENTIAL DESIGN MANUAL	1982
Participant, Honey Springs Charrette	1981
Planning and prototype design for 2200 acre development in San Diego County by Presenting, Inc. Concepts developed by other team members Malcolm Wells, Edward Mazria, Sim Van der Ryn, Peter Calthorpe, Ted Taylor, David Sellers, David Wright and John Todd.	
Technical Analysis for the State of California Department of General Services on Capitol Condo Project	1980

## ■ Community + Professional Presentations

Guest Speaker – Kanazawa Institute of Technology visit of University Diplomats to RIT on Sustainable Architecture Program	2014
Invited Speaker – RIT/Malmo University Symposium – Healthier Communities Through Design, Rochester, NY	2013
Invited Luncheon Keynote - National Institute of Building Sciences (NIBS) BEST 3 Conference – AIA Sustainability Initiatives	2012
Invited Keynote – AIA Custom Residential Design Network (CRAN) – Newport, RI	2012
Invited Speaker – AIA Santa Fe – AIA and the IgCC	2012
AIA New Work Workshop Series (with Peter Arsenault) – Sustainability by Design	2011
Invited Speaker- AIA Nebraska – AIA Sustainability Initiatives and the IgCC	2010
Invited Speaker – AIA NW PA – SustAIAnability 2030	2009
Guest Speaker - AIANYs – AIA Strategic Initiatives	2008
Invited Speaker - AIA Delaware Sustainability Conference	2008
Keynote Speaker - AGC BIM Forum, AIA Strategic Initiatives	2008
Invited Plenary - University of Oxford, Education in Architecture A Re-Evaluation of Education in Architecture	2008
Guest Speaker - AIANYs Convention – SustAIAnability 2030	2007
Keynote Address - BOCES Challenge Seminar Events	2003 - 2008
Invited Participant - Sustainability and Education Roundtable	2007
Invited Keynote - Solar Home Tour Kick – off	2006
Invited Keynote – WNY Sustainable Energy Association Event	2005
Invited Keynote , Conference on the Environment , Sustainable Living	2003
Invited Speaker – WNY Sustainable Energy Association Workshop	2002
Invited Keynote Speaker, CSI Building Products, Erie, PA	1997
Invited Guest Lecturer – University of Oregon	1989
Invited Guest Lecturer – UCLA	1989
Invited Guest Lecturer – Cal Poly Pomona	1989
Invited Speaker, National Electrical Contractors Association, Milwaukee	1989
Speaker - ASES National Solar Conference	1989
Invited Panelist - Roundtable on Societal Costs of Energy, Wash DC	1989
Invited Speaker, Better Building Conference, NESEA, Rochester, NY	1989
Invited Speaker, Smallwood Elementary School, Amherst, NY	1988
Invited Speaker, Rochester Solar Energy Association	1986
Invited Speaker, Forest Elementary School, Amherst, NY	1984
Invited Speaker and Chairperson, ASES National Conference, Mpls, MN	1983
Invited Speaker – Niagara Orleans Coop Ed Services	1982
Invited Speaker - 4 Internationales Sonnen Forum mit Ausstellung Solar '82, by Deutsche Gesellschaft fur Sonnenenergie e.v. (D65), International Congress Center, Berlin	1982







# SIGNIFICANT WORK IN EDUCATION AND PRACTICE

DENNIS A. ANDREJKO, FAIA

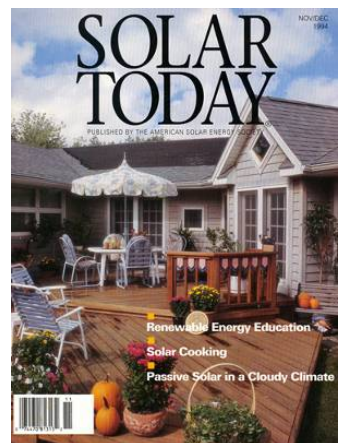
ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

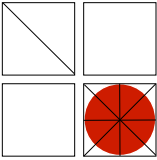
## ■ Community + Professional Presentations (con't)

Invited Instructor, Earth Sheltered Design Workshop, Knoxville, TN Coordinated by "Earth Sheltered Living Magazine"	1982
Invited Speaker and Panelist, 7th National Passive Solar Conference	1982
Invited Keynote Speaker, Amerika Haus Hannover Germany and Evangelische Akademie Loccum. "Architektur und Energie". Lecture tour also included talks at the Amerika Haus, West Berlin, and Heidelberg, West Germany.	1982
Invited Keynote Speaker, Solar Homebuilders Program BPA, Oregon	1981
Invited Speaker, Eastern Oregon Solar Group, Pendleton, Oregon	1981
Invited Keynote Speaker, Foothill Solar Exchange Seminar, June 27-28, 1981.	
Invited Speaker and Chairperson, 5th National Passive Solar Conference, Amherst, MA	1980
Invited Lecturer, Central Valley Chapter AIA, Sacramento, CA	1980
Invited Speaker and Chairperson, Foothill Solar Exchange Symposium	1980
Instructor, Tennessee Valley Authority, Architectural Design Branch Topic: Earth Integrated Design.	1980
Invited Lecturer, Orange County Chapter AIA, Newport Beach, CA	1980
Invited Speaker, Architektur & Energie Seminar, Amerika Haus Berlin, West Germany, 1980.	
Invited Speaker, Chamber of Architects, Hamburg, West Germany	1980
Invited Speaker, 3 Internationalen Sonnenforum by BSE Comple DGS, ISES, VDI. Congress Centrum Hamburg, West Germany	
Invited Speaker, University of Tennessee, Department of Architecture	1980
Instructor, Tennessee Valley Authority, Architectural Design Branch	1980
Coordinator and Instructor, Argonaut Education Series Energy Conservation in Building Design	1980
Invited Keynote Speaker, Foothill Solar Exchange Symposium	1980
Invited Speaker, ASC/AIAS Forum 1979, University of Houston	1979
Invited Lecturer, University of Wisconsin Extension, Department of Engineering & Applied Science,	1979
Invited Speaker, AIA Dinner Meeting, Santa Clara Valley Chapter	1979

## ■ Exhibitions

National Tour of Solar Homes – ASES and NESEA One of several hundred homes selected nationally for one day tour of solar, renewable and energy efficient homes the across US.	1996 - 2006
Passive Solar Forum 1987, Tokyo, Japan Ginga Pocket Park, Tokyo, Japan. Traveling exhibit to Okinawa and Hokkaido, Japan, 1989. Sponsored by Japan Solar Energy Society, Architectural Institute of Japan and Tokyo Gas Company. One of 30 architects involved worldwide.	1987
Aesthetics for the Cold – Halwalls, Buffalo, NY	1986
Winter Cities 86. First International Winter Cities Conference and Exhibition, Edmonton Alberta, Canada. Invited exhibit of Sunspace Condominiums. Crested Butte, Colorado.	1986
Solar 4, An Exhibition of Passive Solar Architecture at Amerika Haus West Berlin, Germany and 10 additional major German Cities during 1982. Combined effort with Hasso Schrek, James Lambeth, Doug Kelbaugh and David Wright	1981





# SIGNIFICANT WORK IN PRACTICE

DENNIS A. ANDREJKO, FAIA

ANDREJKO + ASSOCIATES

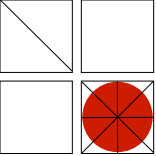
## ■ Professional Practice – Selected Project Listing

### ANDREJKO + ASSOCIATES

1981 – 2014

Lamb Residence - Hermiston, Oregon  
Apple Residence - Maricopa Country, Arizona  
Lambert Residence - Leon Country, Texas  
Rudick Residence - Orchard Park, New York  
Jones Residence - East Amherst, New York  
Marracino Residence - Clarence, New York  
Rudell Residence - Clarence, New York  
Apolostic Christian Church, Syracuse, New York  
(with Anton Harfmann)  
Senior Housing Proposal - Rensselaerville Institute  
(joint venture with Edward Steinfeld Associates)  
Milos Residence/Remodel - East Aurora, New York  
Linsley Residence/Remodel - Snyder, New York  
Mombrea/Valentine Residence - Darien, New York  
Mach Residence - Sheldon, New York  
Reeves Residence/Remodel - Eggertsville, New York  
Radt Residence/Remodel - Williamsville, New York  
Forest City Auto Parts - Buffalo, New York  
Albino Residence/Remodel - Eggertsville, New York  
Myrow Residence/Remodel - Snyder, New York  
Bates Residence - Angola, New York  
Great Arrow Loft - Buffalo, New York  
Mathews Interior - West Seneca, New York  
Wahl Residence - Lancaster, New York  
Berger/Kryzan Residence/Remodel - Eggertsville, NY  
Duch/Hoffman Residence/Remodel - Eggertsville, NY  
Great Arrow Office - Buffalo, New York  
Whiteman Osterman Hanna Law Offices - Liberty Building  
Buffalo, New York  
Weitzsacker Residence/Remodel - Lockport, New York  
Koch Residence - Grand Island, New York  
Andrejko Residence Remodel - Williamsville, New York  
Theophilos Entry Design - Eggertsville, New York  
Dannebrock Residence - Angola, New York  
Engel Residence/Remodel - Eggertsville, New York  
Murzynski Residence - Elma, New York  
Wodenberg Residence/Remodel - Eggertsville, New York  
Cole Residence - Wales, New York  
Stay Loft - Buffalo, New York  
Cappiello Residence, Lockport, New York  
Downie Residence/Remodel, Williamsville, New York  
Mendel/Thayer Residence/Remodel, Snyder, New York  
Vandomelen Residence/Remodel, Snyder, New York  
Herzig Residence/Remodel, Hamburg, New York  
Rosenthal Seigel Muenkel Wolf Law Office Remodel, Buffalo, New York  
Kohrman-Hayes Residence/Remodel, Snyder, New York





## ■ Professional Practice (con't)

Torre Residence/Remodel, Snyder, New York  
Koch Residence, Williamsville, New York  
Matthews Residence, Williamsville, New York  
Karas Residence, Williamsville, New York  
Hicks Residence/Remodel, Angola, New York  
Brothers of Mercy, OT/PT Facilities, Clarence, New York  
Sewell Residence, Bloomfield Hills, Michigan  
Rosen Residence/Remodel, Olean, New York  
Spier Residence/Remodel, Grand Island, New York  
Freedman Residence/Remodel, Williamsville, New York  
Private Vacation Residence Remodel, Thunder Bay, Canada  
Mathews Residence, Lancaster, New York  
Cuenca/Downie Residence/Remodel - Williamsville, New York  
Hicks Residence - Elmira, New York  
Chohan Residence/Remodel - Olean, New York  
Mogavero Residence/Remodel - Eggertsville, New York  
Collins Residence/Remodel  
Collins Summer Home/Remodel  
Dusse Residence/Remodel  
Karas Residence  
Smith Residence/Remodel  
Hicks Residence, Elmira, New York  
Schichtel Residence, Springville, New York  
Engel Residence/Remodel  
Loree Residence/Remodel  
St. Regis Mohawk Tribe Seventh Generation Building Studies  
Bush/McCombe Residence/Remodel  
Scott Smith Residence  
Tell/Landy Residence  
Hodin Residence/Remodel  
Russ Residence/Remodel

### SEAGroup Solar Environmental Architecture Group - Principal

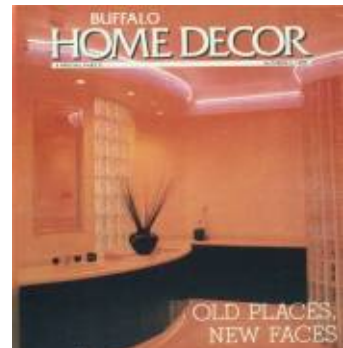
Lead architect or team architect for over 50 projects  
spanning 18 states

### David Wright and Associates – Designer

Lead Designer for over 20 projects

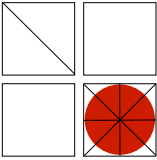


1979 – 1981



1977 – 1979





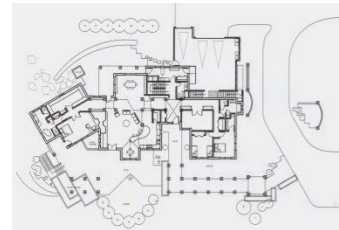
# SIGNIFICANT WORK – AWARDS, HONORS + RECOGNITION

DENNIS A. ANDREJKO, FAIA

ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

## Professional

Jury Chair - Honor Awards, AIANYs	2015
James William Kideney GOLD MEDAL - for lifetime achievement and notable contributions to the profession- AIANYs	2014
Jury Chair – Excelsior Design Awards, AIANYs	2014
Jury Member – AIA New Jersey Annual COTE Design Awards	2011
Invited Roundtable Panelist – US Ambassador Bi-National Green Building Collaboration	2011
Invited Awards Presenter – Architecture Contest, Solar Decathlon, USDOE	2011
Jury Member – Empire State Challenge, AIANY	2011
Matthew W. DelGaudio Award for Distinguished Service – AIANYs	2011
AIA Expert Testimony – NIBS Data Hearing on CBECS	2011
Jury Chair – Research and Scholarship Awards, Virginia Society of Architects	2010
American Institute of Architects, Richard Upjohn Fellowship	2009
Fellowship, American Institute of Architects	2009
President' s Citation – AIA New York State	
Jury Chair – West Virginia AIA Design Awards	2009
President' s Award – AIA New York State	2008
Achievement Award - Pathfinders 2008 – Niagara Frontier Industry Education Council Achievement Award fostering partnerships between education and business	2008
Jury Chair, Southern New York Awards Program	2008
International Jury Member, Abu Dhabi Positive Energy Building Design Competition	2008
EPN Jury, Honor Awards Program, AIA National	2008
Corporate Silver Award – Architecture + Education Program - AIA Buffalo/WNY (w/Kelly Hayes) and University at Buffalo – Coordinator and Participant Alliance for Education, Commitment to Education Award	2007
A Greener Shade of Blue – UB Faculty Expert on Sustainability	2006 - 2008
Distinguished Service Award – New York State Junior Miss/America' s Junior Miss	2007
Hall of Fame Award – New York State Junior Miss/America' s Junior Miss	2005
Outstanding Leadership and Service Award – AIA Buffalo/WNY President	2003
Honorable Mention – Better Homes and Gardens Home Improvement Contest	1994
Progressive Architecture Research Citation, Awards Program technical consultant (with Robert Shibley) for work with Cannon Design on <u>Guidelines for Energy Efficient Building Rehabilitation</u>	1990

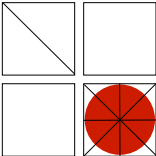


## Academic

MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
Tuition Scholarship	1975
Research Assistantship, Solar Energy	1975 – 1976
ARIZONA STATE UNIVERSITY	
Dean's List	1971 - 1975
Who's Who Among American Colleges and Universities	1975
Citation, City of Ontario, California, Ontario City Hall Design: Resolution Number 7761	1975
Travel Scholarship to Europe for student Design Project: Drover, Welch & Lindlan	1974
Citation, National Competition on Correctional Architecture by National Clearinghouse for Criminal Justice, Planning and Architecture, jointly with AIA	1974
Monarch Tile Scholarship	1974
Arizona State Academic Scholarship	1973 - 1975
Lee Churchill Masonry Award	1973
California Teacher's Association Scholarship	1972
Certificate of Appreciation, MSRC School Playground	1972
Southwest Pine Association Design Award	1972
Architecture Foundation Scholarship	1972
CAC/AIA Scholarship	1971







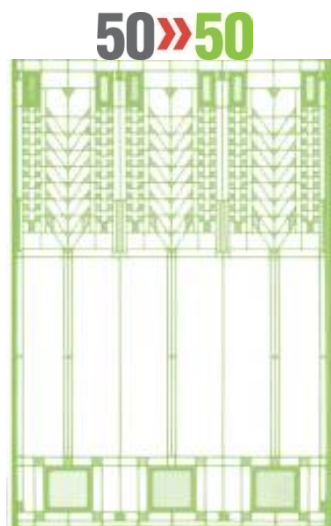
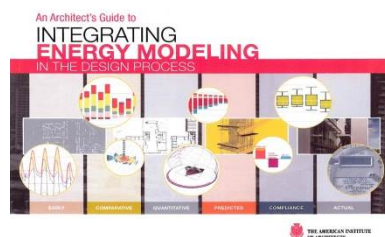
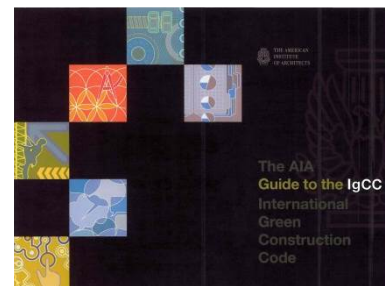
## SIGNIFICANT WORK - PUBLICATIONS

DENNIS A. ANDREJKO, FAIA

ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

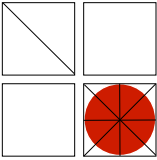
### ■ Books Reports Journals

The AIA Guide to the IgCC – AIA's guidebook on the International Green Construction Code (co-contributor)	2012
Integrating Energy Modeling in the Design Process – AIA's Guide on energy modeling and high performance design (co-contributor)	2012
Berkshire Encyclopedia of Sustainability – The Law of Politics and Sustainability - International Green Construction Code	2011
50 to 50 – AIA's Sustainability Resource for Carbon Neutral Design <a href="http://www.aia.org/fiftytofifty">www.aia.org/fiftytofifty</a> (co-contributor)	2007
Seventh Generation Green Building: St. Regis Mohawk Tribe Environment Building Final Concept Studies	2006
UB High Performance Building Guidelines, University at Buffalo	2005
UB Green Committee (co-participant/contributor)	2005
Least Cost Cooling Study, Natural Cooling Optimization, University at Buffalo, with Wendel Duscherer, NYSEDA Research (co-contributor)	2003
ARCHITECTURAL GRAPHIC STANDARDS – Passive Solar Design Concepts Page, 8 <sup>th</sup> 9 <sup>th</sup> 10 <sup>th</sup> 11 <sup>th</sup> Editions	1994 - 2009
West Side Community Development – Passive Solar Design Prototype Single Family House Proposal, LISC and HUD supported	2001- 2003
Solar Today - Cover Photograph and feature article by Burke Miller Thayer "Passive Solar in the Gloombelt," featuring Andrejko Residence	1994
ASSESSMENT OF SOLAR ENERGY TECHNOLOGIES, American Solar Energy Society. National Press release in Washington, D.C.	1989
12th NATIONAL PASSIVE SOLAR CONFERENCE PROCEEDINGS American Solar Energy Society, with John Hayes	1987
OUT OF THE COLD: Emerging Architectural Aesthetics with Edward Steinfeld	1984
8th NATIONAL PASSIVE SOLAR CONFERENCE PROCEEDINGS American Solar Energy Society, with John Hayes	1983
PASSIVE SOLAR ARCHITECTURE: logic and beauty co-author with David Wright	1982
Book of the Month", McGraw-Hill Architects Book Club	
"Key Alternate Book Selection", Library of Urban Affairs Book Club	
"Alternate Book Selection", McGraw-Hill Engineering Book Club; Mid-Spring	
SOLAR 4: ARCHITEKTUR UND ENERGIE. Berlin, Germany Amerika Haus co-author with Hasso Schrek, Doug Kelbaugh, James Lambeth, and David Wright	1981



### ■ Articles Papers Proceedings

New Architecture Program Mainstreams Sustainable; Design Thinking PCI Ascent Magazine, Winter Edition	2013
Berkshire Encyclopedia of Sustainability - IgCC	2009
Do No Harm: Preparing the Architecture Profession for the 21st Century Oxford Press, University of Oxford	2008
Sustainability and Architecture – Invited author to VISION – Cornell University Student Publication	2008
Sustainability in Higher Education – Pomona Sustainability Summit	2007
CLIMATE BASED AESTHETICS: Design Explorations in Cold Regions with Edward Steinfeld	1989
PASSIVE SOLAR HEATING in "Assessment of Solar Energy Technologies" with Pamm McFadden	1989
ENVIRONMENTAL IMPACT OF SOLAR ENERGY UTILIZATION Roundtable on Societal Costs of Energy, Washington, DC	1989
OVERALL BUILDING DESIGN: ENERGY AND AESTHETICS IN COLD REGIONS with Edward Steinfeld.	1989
ENERGY AND AESTHETICS IN COLD REGIONS: Exposure and Enclosure	1989
COLD CLIMATE AESTHETICS: EMERGING TRENDS AND IDEAS 1988	
UNDERSTANDING THE LOGIC AND BEAUTY OF PASSIVE SOLAR ARCHITECTURE in Tagungsbericht des 4 International Sonnenforums Berlin, Germany: International Congress Center	1982



## SIGNIFICANT WORK - PUBLICATIONS

DENNIS A. ANDREJKO, FAIA

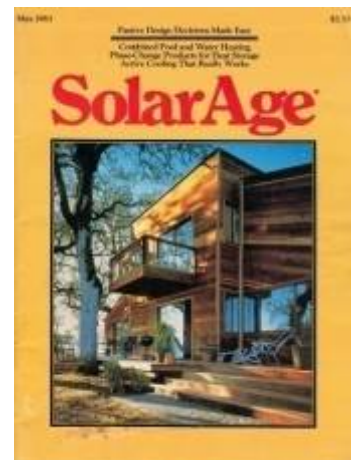
ROCHESTER INSTITUTE OF TECHNOLOGY / ANDREJKO + ASSOCIATES

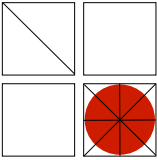
### ■ Articles Papers Proceedings (con't)

PERFORMANCE EVALUATION OF PASSIVE AND HYBRID SYSTEMS FOR TRACT HOUSING IN ARID REGIONS, with Brian Duffy and Marshall Thomas	1982
NATURAL SOLAR ARCHITECTURE/MICROCLIMATE DESIGN	1981
Tagungsbericht des 3 International Sonnenforums, Hamburg, Germany	
PASSIVE SOLAR ARCHITECTURE: LOGIC AND BEAUTY in "Solar Magazine"	1981
with David Wright	
THE PRIMACY OF MICROCLIMATE in "Solar Age"	1980
with David Wright, article also published in Russian.	
THE SOLAR MODULATOR: A NOVEL APPROACH FOR CONTROLLING DIRECT SOLAR GAIN IN ARCHITECTURAL APPLICATIONS	1976
MIT, Industrial Liaison Program	

### ■ Citations + Notations

Rochester Business Journal – Article on Innovative Architecture Program	2011
City News Magazine, Rochester New York – Buildings Without Expiration	
Dates, Interview and Article	2011
RIT Athenaeum –Building Blocks to a Sustainable Future, Interview and Article	2011
North Bay Business Journal - Windsor SDAT	2008
Business first – Pathfinder Award	2008
The Fifty Year History of the International Solar Energy Society	2007
and its National Sections	
Arizona Daily Star - Tucson SDAT	2007
THE BUFFALO NEWS – Another Voice – Global Warming	2007
Business First – Article and Interview on Sustainable Design	2007
Business First – Article and Interview on Commercial Buildings and Sustainability	2007
Business First - Article on Passive Solar	2006
Builder/Architect Magazine	2005
Buffalo Spree	2004
Business First - AIA/ Buffalo Western New York Awards Program	2002
For Your Home: The Front Porch, Friedman/Fairfax Publishers, NY	1998
SOLAR TODAY	1998
US Department of Energy Website - Solar Residence featured	1999
THE BUFFALO NEWS - Article on Solar Energy in Western New York	1998
SUSTAINABLE ENERGY BUILDINGS IN THE US., ASES, PSIC, DOE and NREL	1995
THE BUFFALO NEWS - article on Cold Climate Aesthetics	1993
SUN, WIND, LIGHT, John Wiley and Sons, G.Z. Brown, et al	1992
MECHANICAL AND ELECTRICAL EQUIPMENT FOR BUILDINGS, 8th Ed	1992
WHO'S WHO IN THE WORLD, 8th, 9th, 10th, 11th Editions	1987 - 1991
WHO'S WHO IN AMERICA, (special listing)	1988
WHO'S WHO IN THE EAST, 20th, 21st, 22nd, 23rd Editions	1986 - 1990
PROGRESSIVE ARCHITECTURE – Research Citation Notation	1990
BUFFALO MAGAZINE - Special Housing Supplement	1988
Cover photo and feature article	
SOURCE: Research Digest", University at Buffalo, State University of New York	1983
SOLAR AGE	1983
SOLAR AGE - Cover photo and additional photography of design work for feature article	1983
PROGRESSIVE ARCHITECTURE - Book review on PASSIVE SOLAR	1983
ARCHITECTURE: logic and beauty	
THE BUFFALO NEWS - Article on Aesthetics for the Cold Exhibit	1983
BUFFALO NEWS - Article on Passive Solar Architecture.	1982
SOLAR REMODELING: PASSIVE HEATING & COOLING, Sunset Magazine	1982
SUNSET MAGAZINE – Article Solar Retrofit	1982
SOLAR AGE - Article on Solar Retrofit	1982





## ■ Citations+Notations (con't)

SOLAR MAGAZINE	1982
TEMPE DAILY NEWS - Article on Andrejko + Associates	1982
EARTH SHELTER LIVING - Article on Private Residence	1981
EARTH SHELTERED HOMES: PLANS AND DESIGNS	1981
ARCHITECTURAL RECORD – Photo of Private Residence for California Redwood Association	1981
LE MUR TROMBE ET SES DEUX VERSIONS: maconnerie pleine et recipients d'eau". Par Pierre Bazan, Responsable De L'Antenne D'Architecture Naturelle Et Solaire De Perpignan	1980
RESEARCH AND DESIGN, AIA/ Research Corporation	1980
A SURVEY OF PASSIVE SOLAR HOMES, AIA/Research Corporation/ HUD	1980
THE UNION - Nevada City, California, Special Insert – Passive Solar	1980
L'ARCHITECTURE D'AUJOURD'HUI – Private Residence Features	1980
CURRENT PASSIVE SOLAR HEATING WORK IN THE UNITED STATES	1979
Ralph M. Lebens, RIBA, ARCAED, London W1, England	
RESEARCH & DESIGN - AIA Research Corporation	1979
SOLAR AGE - Article on MIT Solar 5 Building	1979
ABSTRACT AND PROCEEDINGS OF THE 3rd NATIONAL PASSIVE SOLAR CONFERENCE, ASES, Conference Cover Design as student	1979
MIT SOLAR BUILDING 5, INITIAL PERFORMANCE - by T.E. Johnson, et al	1979
EXPLORING VARIOUS ASPECTS OF SOLAR ENERGY COLLECTION, WITH PARTICULAR REFERENCE TO ITS POTENTIAL USE IN THE REHABILITATION OF NINETEENTH CENTURY ROW HOUSING IN ENGLAND, R.M. Lebens, MIT	1979
SOLAR HEATED BUILDINGS OF NORTH AMERICA: 120 OUTSTANDING EXAMPLES, W.A. Shurcliff.	1978
SOLAR AGE	1978
US MAGAZINE	1978
POPULAR SCIENCE	1978
SOLAR ENERGY	1978

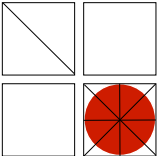
## ■ Radio + Media

Channel 7, ABC – Sustainability Interview, Lewes, DE	2008
WBFO – Radio Interview on Sustainability and Design	2007
Noon Radio Interview Program - St. Regis	2006
Channel 4, CBS – Architecture and Sustainability	2005
Channel 2 – WGRZ TV – PSA – Commercial Spot – “Hire an Architect” combined with 30 minute documentary on Architectural Heritage in Buffalo	2004
Film Documentary – Solar Energy for the New York Region	2003
Avacodo Productions. Private Residence showcased (one of two) in educational documentary	
Channel 4, CBS Winter Documentary – Preparing for Winter in the Buffalo Region	2003
Buffalo WNY Chapter/AIA Commercial/Public Service Announcement thirty second piece showcasing Andrejko residence	1998
Channel 4 News - Two part series on Renewable Energy Alternatives	1997
WKBW - Noon Interview Program, with Erie County Legislator J. Bozer	1992
Dominic Cortez Saturday Program - "House Doctor," WBEN Radio	1992
9th National Passive Solar Conference - Live TV newscast for ABC, NBC, CBS networks for Passive Solar Conference	1985
WBEN - Lou Douglas Noon Interview program. SOLAR ENERGY IN BUFFALO	1983
Videotaping and Radio Interview - Arizona State University, Media Center Architecture and Energy Filming	1982
"HOW TO KEEP HEAT IN YOUR HOUSE". Bullfrog Films, Oley, PA	1980

Twenty eight minute film shown on PBS and Cable Health Network







## PRACTICE – SELECTED WORKS

DENNIS A. ANDREJKO, FAIA

ANDREJKO + ASSOCIATES

### ■ Selected Works

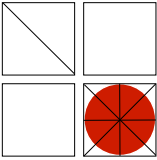
Projects by Andrejko + Associates offer unique solutions resulting from a careful assessment of site, climate and user needs. These examples illustrate various sustainable concepts both subtle and expressive.

All projects shown are the sole responsibility of Dennis A. Andrejko.

1. Urban, daylight loft space, Buffalo
2. Western New York Passive Solar
3. Western New York Passive Solar
4. Southern New York Passive Solar
5. Central New York Sustainable Residence
6. Western New York Passive Solar
7. Sustainable Michigan Residence, South
8. Southern New York Interior
9. Central New York Sustainable Residence
10. Arts and Crafts Passive Solar, Western New York
11. Sustainable Michigan Residence
12. Southern New York Passive Solar
13. Western New York Passive Solar







# EDUCATION - SELECTED STUDENT PROJECTS

DENNIS A. ANDREJKO, FAIA

UNIVERSITY AT BUFFALO

## Concrete Thinking – Precast Institute National Design Competition

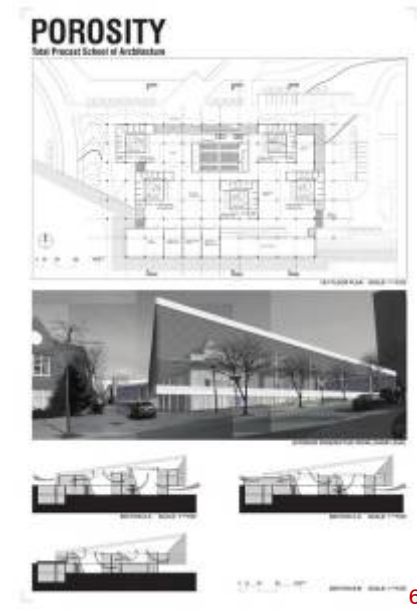
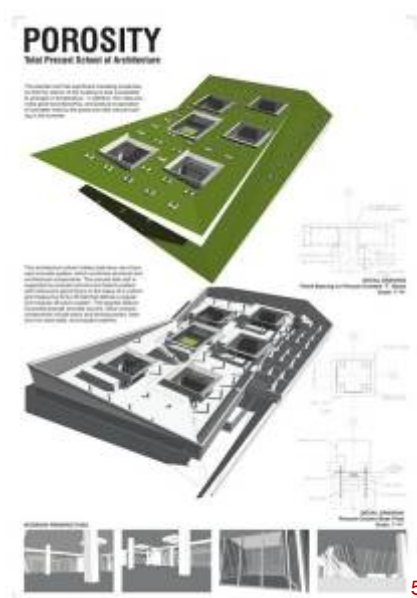
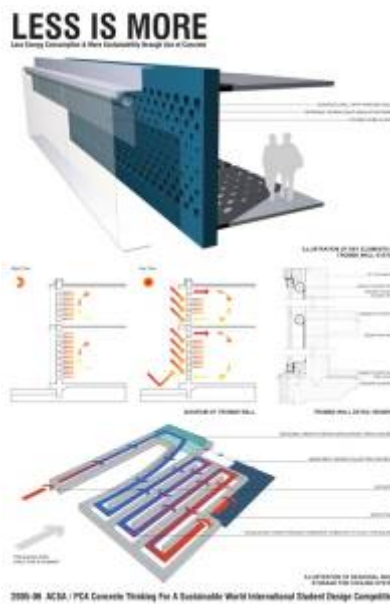
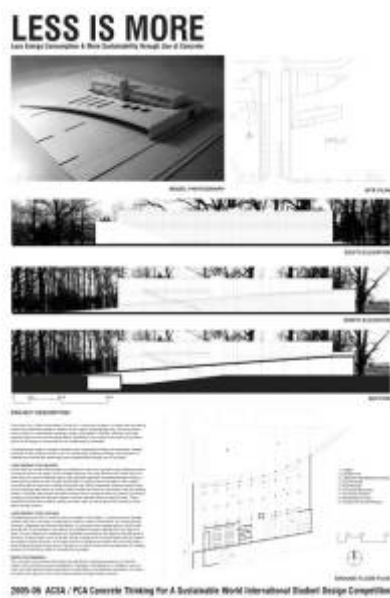
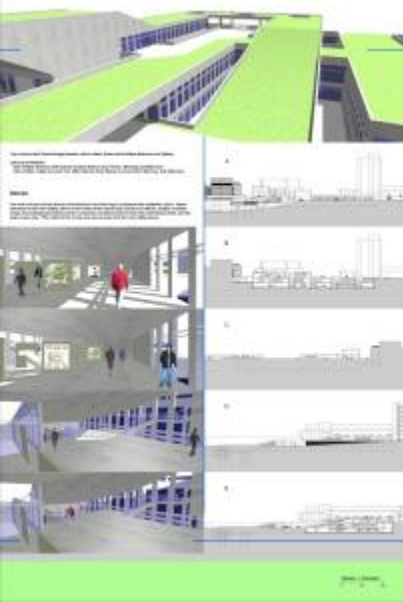
New School of Architecture and Planning Building, Amherst Campus, 2006

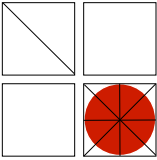
Design investigation included sustainable investigation, innovative precast concrete use, and earth sheltering exploration. Materiality and the “absence” of form compelled students to think beyond the normal bounds of form making.

Student Project, Third Place National Award (1, 2)

Student Project (3, 4)

Student Project (5, 6)





# EDUCATION – SELECTED STUDENT PROJECTS

DENNIS A. ANDREJKO, FAIA

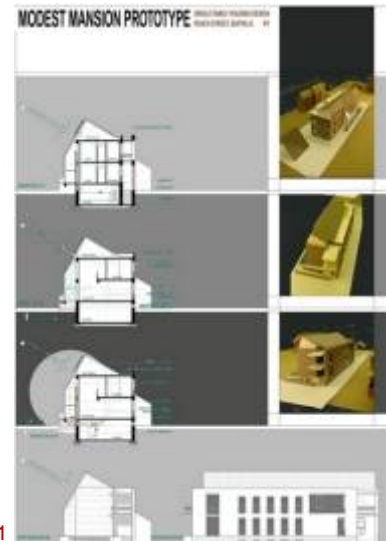
UNIVERSITY AT BUFFALO

## ■ Modest Mansion Prototypes – NESEA Design Competition

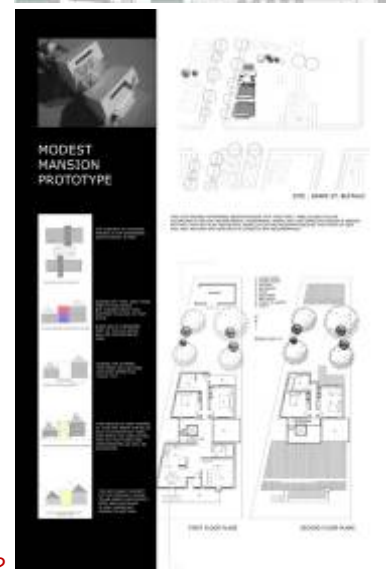
Single Family Urban Infill in Buffalo, 2002

During a three week design charrette, students were asked to explore sustainable design concepts for affordable housing in a blighted area within the Buffalo city limits. Design concepts emphasized conservation and efficiency, passive solar and other alternative energy concepts.

Student Awards – Collective First, Second and Third Place Prizes were awarded by NESEA. (1, 2, 3, 4)



1



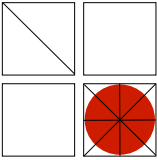
2



4



3



# EDUCATION – SELECTED STUDENT PROJECTS

DENNIS A. ANDREJKO, FAIA

UNIVERSITY AT BUFFALO

## Other Explorations – Graduate Studio Work

Various Graduate Studio Projects Investigating Sustainability and Carbon Neutral Design require holistic and comprehensive design investigation.

Regionally appropriate design solutions, energy efficiency, and carbon reduction become key design foci.

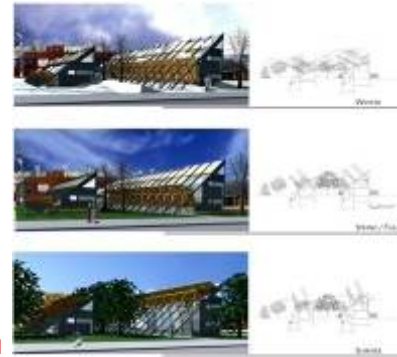
Children's Library and Learning Center – Sun and Snow Form Generation(1)

Climate Data and Collection Center – Tift Farm Nature Preserve (2)

crErc – Cold Regions Environmental Research Center – UB (3)

Retail Complex – Wind as form generator (4)

Zero Energy Housing Study (5)

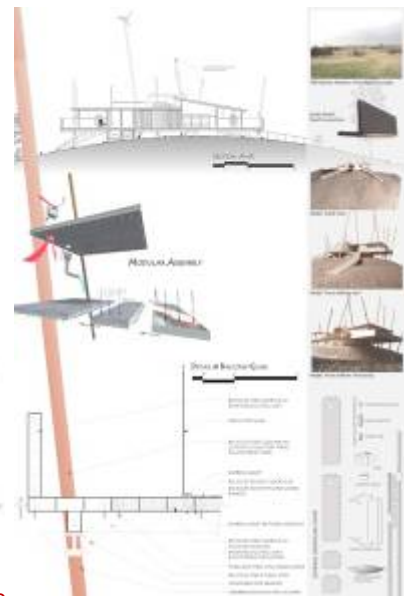


1

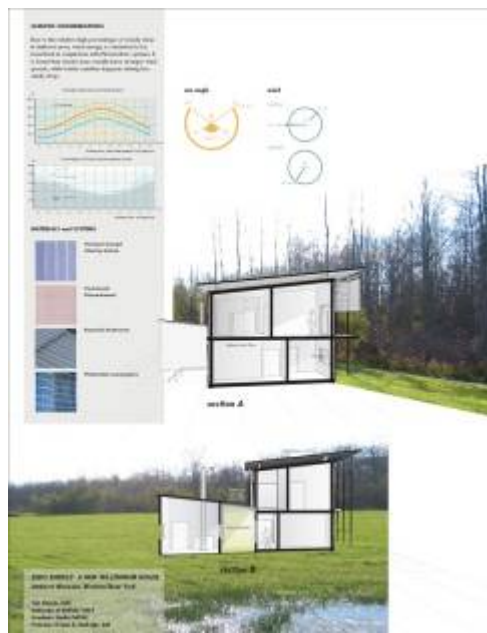


3

4



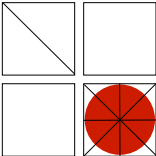
2



5







# SCHOLARSHIP - RESEARCH + OUTREACH

DENNIS A. ANDREJKO, FAIA

ANDREJKO + ASSOCIATES

## ■ Assessment of Solar Technology 1984 (1, 2, 3)

The first critical white paper by ASES, exploring solar wind and biofuels and assessing the environmental impacts of each.

## ■ The Oxford Conference (4, 5, 6) 2008

As a keynote plenary representing the AIA, this presentation identified diversity, integrated project delivery and environmental sustainability as strategic elements for the profession for the next 50 years.

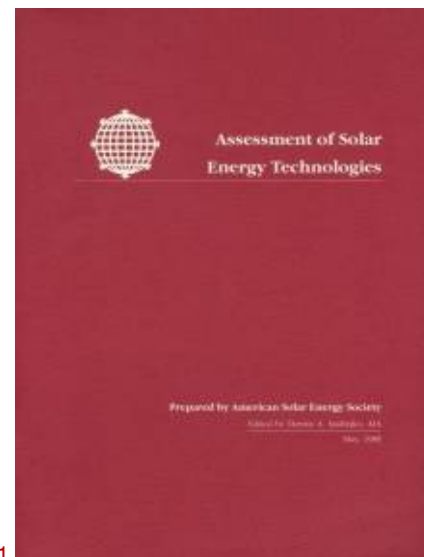
## ■ Masdar Headquarters to Be Located in World's First 'Positive Energy' Mixed-Use Building ABU DHABI, United Arab Emirates, Feb. 22 /PRNewswire/ -- 2008

Photo of Jury and AS+GG at Emirates Palace (above)



Masdar announced today that it has chosen Chicago architecture firm Adrian Smith + Gordon Gill Architecture (AS+GG) to design its headquarters in Abu Dhabi's Masdar City, the world's first zero-carbon, zero-waste city fully powered by renewable energy. The headquarters will be the world's first large-scale, mixed-use "positive energy" building, producing more energy than it consumes. In addition to being the location of Masdar Headquarters, the building will accommodate private residences and 'early bird' businesses starting up in the city.

A global jury of seven world renowned design and urban planning experts chose AS + GG's design from the finalists. The jury consisted of: -- A. Hashim Sarkis -- Aga Khan Professor of Landscape, Architecture and Urbanism in Muslim Societies in the Department of Urban Planning & Design at Harvard's Graduate School of Design (Cambridge, MA) -- **Dennis A. Andrejko -- Associate Professor at the University of Buffalo School of Architecture and Planning (Buffalo, NY)** -- Greg Mella, AIA, LEED AP - Principal at SmithGroup (Washington, D.C.) -- Jean-Marie Charpentier -- Architect for Maison Mozart (Paris) -- Dr. Hans-Rudolf Schalcher -- Professor at the Holcim Foundation for Sustainable Construction (Zurich), where he is also the Head of Technical Competence Center and Member of the Management Board; Chair of the Planning and Management in Construction for the Institute for Construction Engineering and Management at the Swiss Federal Institute of Technology (Zurich) -- John Quale -- Assistant Professor at the University of Virginia's School of Architecture (Charlottesville, VA) -- Volker Hartkopf -- Professor of Architecture at Carnegie Mellon University's Center for Building Performance and Diagnostics, The Robert L. Preger Intelligent Workplace; Director at CBPD (Pittsburgh, PA)



1



2



4



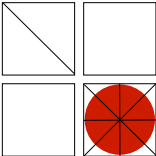
5



6



3



# SCHOLARSHIP - RESEARCH + OUTREACH

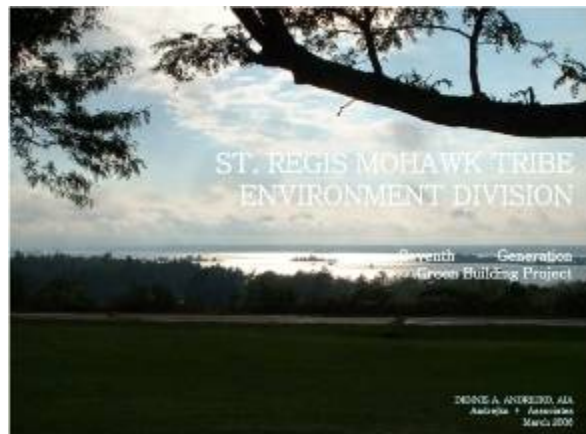
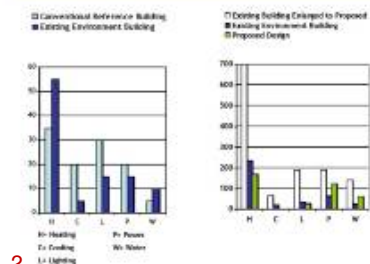
DENNIS A. ANDREJKO, FAIA

ANDREJKO + ASSOCIATES

## ■ St. Regis Mohawk Tribe – Seventh Generation Green Building Project

Research project and design concept studies for an Environment Building, to understand and reinforce the tribe's history, culture and unique perspective on sustainability. Design explorations led to substantial reduction carbon reduction values being met.

Office/Lab Energy Consumption (Estimated Values)



## SOLAR SPINE

### Overview

This scheme provides passive solar heating with a mass wall and sunspace corridor, acting as the main "Linking Street" of the proposal. It totals approximately 20,000 square feet and is also on two levels. It has a living, or green, roof for water absorption and site mitigation, which makes up the majority of the roofscape. Thirteen light wells and PV panels provide for daylight and electrical power. The building is oriented slightly to the east of south, symbolically referencing the Mohawk's traditional role of "keepers of the Eastern Door". Other design highlights include: water retention/bioremediation, an interactive energy kiosk, daylight harvesting, natural ventilation, building integrated photovoltaics (BIPV), insulated concrete formwork as primary exterior walls (ICFs), geothermal, and a vegetative sunscreen for solar control.



### Solar Spine Scheme



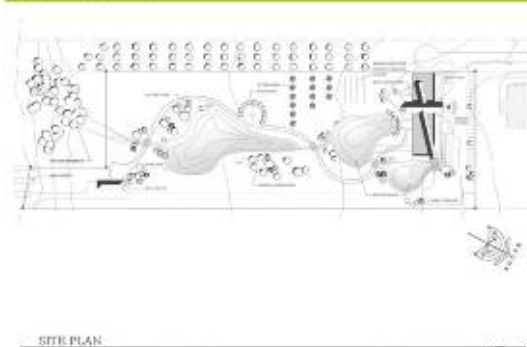
## ATRIUM CORE

### Overview

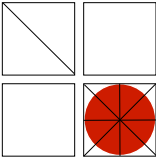
This scheme utilizes a main atrium and diagonal atrium core as its design theme. It is approximately 18,000 square foot in size and is two-stories in height. It utilizes a Trombe Wall for passive solar heating and the atrium ceilings allow for daylighting. A "P.V. Orchard", mimicking the apple orchard, incorporate tracking photovoltaic panels for electrical generation. Other design highlights include: porous paving, waterless toilets, engineered wood, rainwater collection, a structural insulated panel wall system (SIPS), stormwater retention and wetlands preservation.



### Atrium Core Scheme



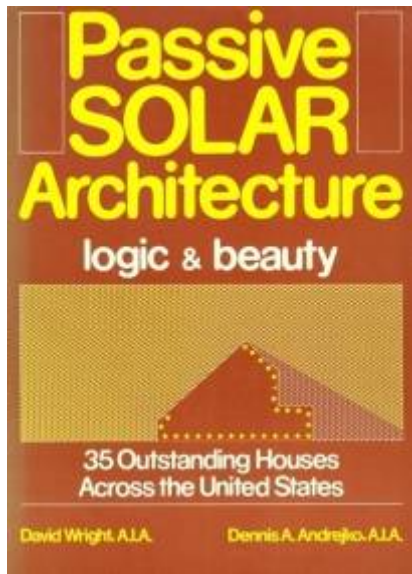




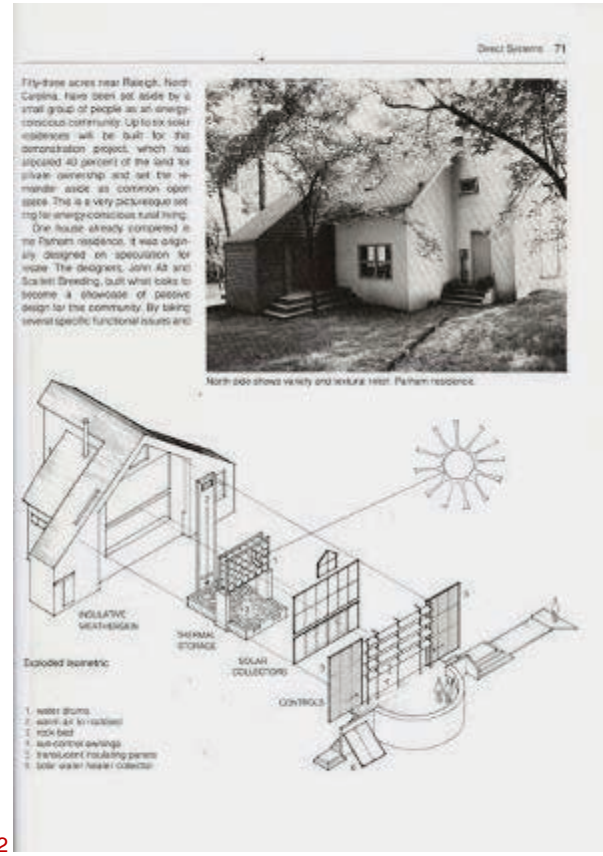
## ■ Passive Solar Architecture: logic and beauty 1982

As a foundation publication on solar buildings in the early 1980s, Passive Solar Architecture became a seminale contribution to the literature as a means of exploring solar energy architecturally.

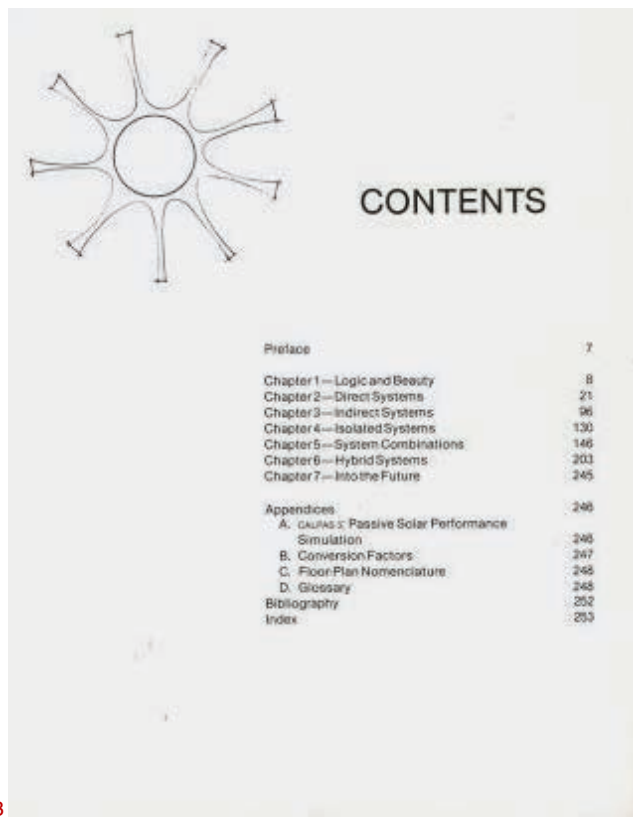
As noted, this publication is co-authored.



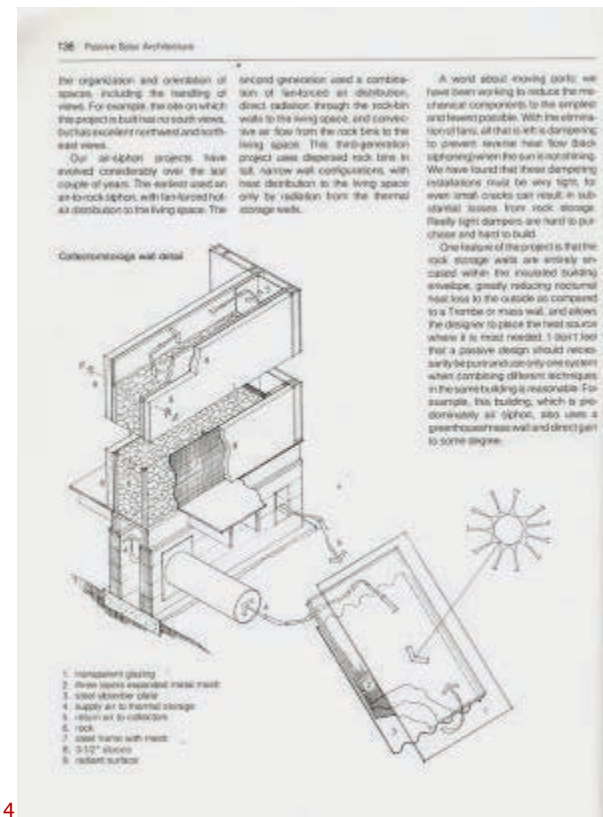
1



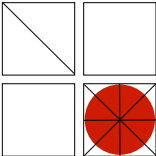
2



3



4



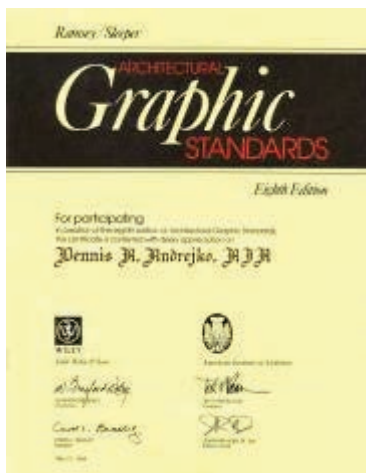
## ■ Solar Age Article, 1980 (1, 2, 3)

The Primacy of Microclimate

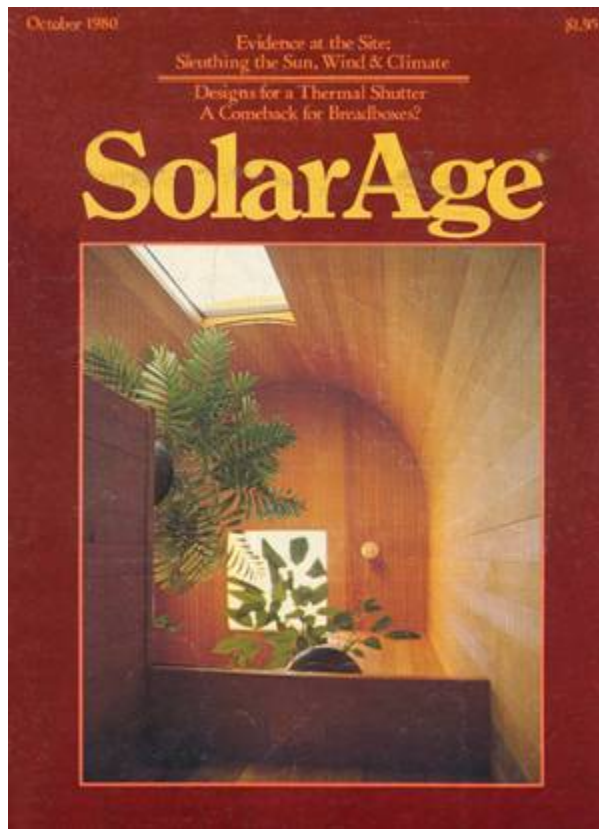
Co-authored, as noted with David Wright. Article examines microclimate assessment as a means of ecological and environmental design exploration.

## ■ Graphic Standards, 1998 – present (4)

Passive Solar Design Page, Editions 8, 9, 10, 11 – Authorship of the introductory page to Passive Solar Design in the last four editions of Graphic Standards.



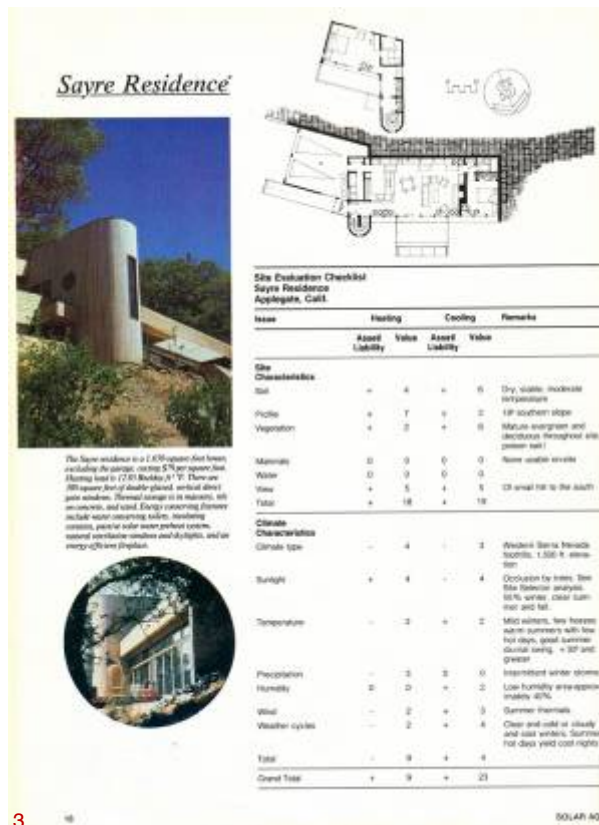
4



1



2



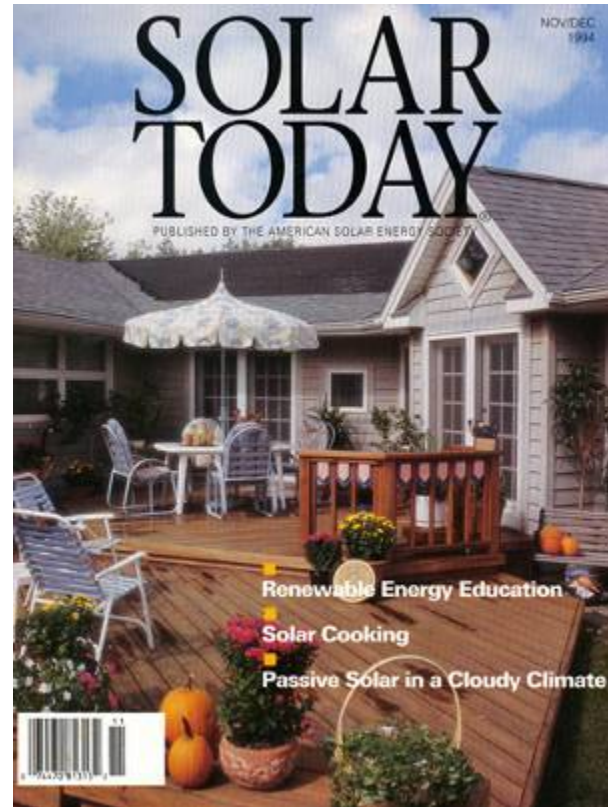
3



■ Solar Today, 1994 (1, 2, 3)

Passive Solar in the Gloom Belt, an article by Burke Thayer, thaqt all climate regions have opportunity for resource conservation and energy efficiency.

Cover Photo and article on private residence designed and occupied by Dennis Andrejko, illustrates high performance with passive solar systems, daylighting, and solar hot water. Hundreds of visitors have been welcomed into his home as a living learning laboratory.



1



The passive solar addition is a Peñón, New York home built around and heavily while using the sun's energy and power.

Buffalo, New York is probably not the first city that comes to mind when you think of passive solar design—and for good reason. The sun shines only about a third of the time during the coldest months of the year, and temperatures stay below freezing almost constantly.

In this climate, most architects, builders and homeowners don't think much about solar energy when designing new homes or renovating old ones. Architect Dennis Andrejko, however, does. Andrejko claims that solar design can make sense, even in Buffalo. The key to successful residential architecture, according to Andrejko, is to "combine logic with beauty" in creating "enjoyable, relaxing, comfortable spaces that meet spiritual, social and personal needs." And solar energy has an important role to play.

Andrejko's recent addition to his own home is an excellent example of what he teaches his architectural students and strives for in his own practice. Andrejko's 3000-sq-ft (186-m<sup>2</sup>) ranch-style home was built in the mid-1950s in a typical suburban neighborhood outside of Buffalo. It was built to the conventional standards of the time, with only minimal attention to energy efficiency and none to solar design. In 1990, Andrejko added a little over 1000-sq-ft (93-m<sup>2</sup>) to the house, creating some living space for his family and making

*His solar-heated addition combines logic with beauty in perhaps the nation's least solar-friendly climate, and at virtually no extra cost.*

This is the fourth in a series of six \$4,000 USGBC exhibits showcasing successful sustainable energy buildings throughout the U.S. The series is part of the Buildings for a Sustainable America Education Campaign, co-sponsored by AIA and the American Solar Industries Council. This exhibit will continue on the 4th floor of Building Energy Research, U.S. Department of Energy, ENR 30, through the National Renewable Energy Laboratory and under California's DOE technical assistance.

November/December 1994

21

### Passive Solar

Andreflo's obituary shows that passive solar design is not just for arid conditions, and that it can make sense anywhere in the country, even in the "glush" belt of western New York. Based on Andreflo's results, anyone considering expanding their home, in any climate, would be wise to consider solar design options, both for "the look and the beauty" of a home.

Barry Miller (Duke) is an environmental education and writer living in Nederland, Colorado. He can be reached through the American Solar Energy Society, 2008 Central Avenue, Unit C-2, Boulder, Colorado 80501, (303) 442-1100, FAX (303) 442-2722.

**The ASES/PMC Buildings for a Sustainable America Education Campaign** is a nationwide effort by trade policymakers, building professionals and consumers across layers of the business of applying sustainable energy principles to building design and construction. These firms include environmental sustainability, energy, jobs, and environmental issues, and energy conservation and improve health.

Share's home the Autopilot Solar Addition starts up.

**Energy**  
14 percent overall reduction in total energy use was achieved in different ways

**Environment**  
Worldwide oil and the *Netherlands* forming savings distributive natural gas, which is a plentiful and certainly low-cost fuel source in the plant area. In the long term, however, reductions in natural gas usage and become more significant as natural gas supplies decline and become more environmentally friendly.

**Affordability.** When compared with a reference case, the Affordable addition saves an estimated \$126 per year in space heating bills at an added cost of \$1228 for an energy-efficient fuel value-based addition. This translates to a simple payback of about 1 year.

**Jobs and Economy**  
Because the Andechs are spending less on utility bills, they have more money to spend in the local economy, which creates more jobs. Money spent on energy efficiency creates jobs, particularly in the construction and manufacturing industries, both of which are more labor-intensive than the energy industry.

**Health and Productivity**  
In a cold and damp winter climate, the solar attitude maintains the occupant's exposure to sunlight, which has a positive impact on mental health.

### Andreiko Residence Project Details

**Project Description:** *Andriola Residence*, addition to 18th-century house  
Architect: *Joella A. Andriola, AIA, Andriola & Associates*  
Builder: *Frank Carr, Inc.*  
Location: *Williamsport, Penn. USA*  
House Size: *7 story, 4 bedrooms, 2000 sq. ft.*  
Addition Size: *1 story, 850 sq. ft.*  
Date completed: *December, 1991*  
Residing Degree Days: *2600*  
Cooling Degree Days: *179*

#### ENERGY PERFORMANCE

	Reference	Australia (mean)	Finland (median)
<b>Harvest load before</b>			
solar contribution	31,246 (ha/100/yr)	21,294 (ha/100/yr)	29.5
300 million pixels/yr (1/yr)		1122 million pixels/ha/100/yr	
<b>Harvest load after</b>			
solar contribution	37,200 (ha/100/yr)	26,158 (ha/100/yr)	14.9
300 million pixels/yr (1/yr)		1278 million pixels/ha/100/yr	

Therapeutics of hepatic insufficiency and its direct consequences

Need any heating systems, air conditioning, wood-burning stoves, 1000's of items in stock.

Signature: \_\_\_\_\_

- South-facing glass (11 percent of floor area)
  - 21 of 31 sq ft of 2-inch thick glass in direct sunlight
  - 10 of 31 sq ft of south and north glazings in direct sunlight
- ENERGY EFFICIENCY/CONSERVATION FEATURES**
- 3.0 rating (three-plus stars)
  - 5.0 rating after glass limits to 3rd party with job-site audits
  - 2009
  - Double south-facing windows and doors (1.1 m changes per sq ft)
  - Double double-pane windows (1.1 m)

• **Stress** is a response to a stimulus that is perceived as a threat to well-being.

ADDED COST (LINEAR DEPRECIATION) EFFICIENT CONSTRUCTION	
ADDED Features	
Roof construction, insulation upgrades	\$1000
Lower windows	\$100
Decorative window placements	\$0
Total	\$1100

Fluorination of the catalysts for the

Total Admitted Cases	16,238
----------------------	--------

## Appendix 1: Space-Evaluating Charts

Subsystem (nominal)	Subsystem (nominal)	Subsystem
000000	000000	000000

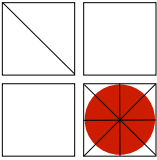
26

SEE US TODAY

2

3





# SCHOLARSHIP - EXHIBITIONS + OUTREACH

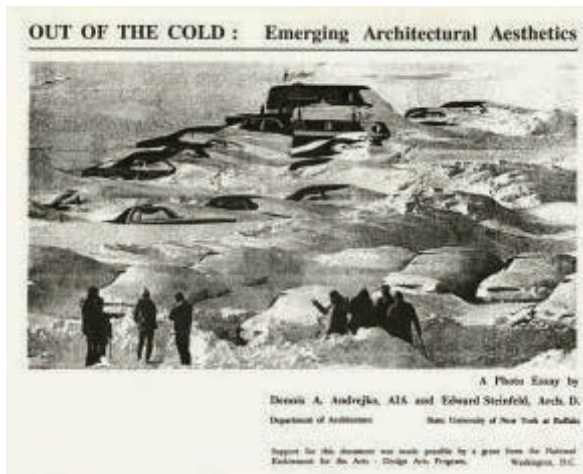
DENNIS A. ANDREJKO, FAIA

UNIVERSITY AT BUFFALO / ANDREJKO + ASSOCIATES

## ■ Aesthetics for the Cold and Out of the Cold (1,2,3,4) 1983 - 1984

Co-author and co-curator with Edward Steinfeld

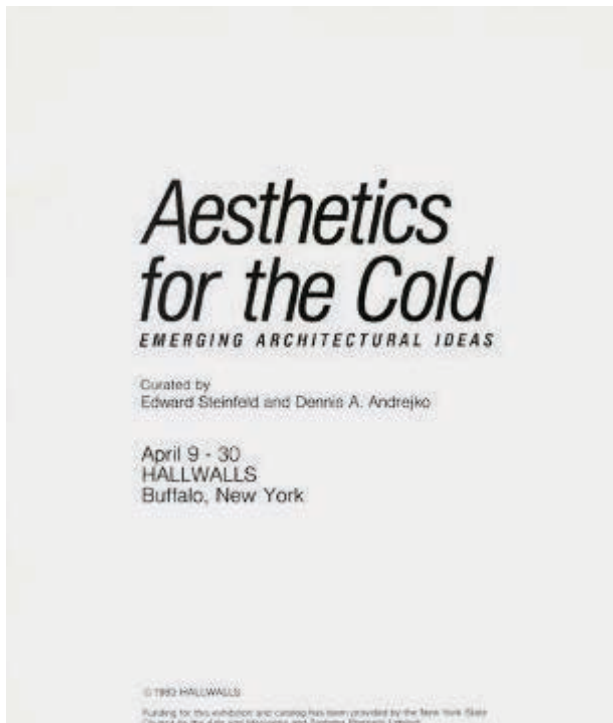
Funded by the National Endowment for the Arts, Design Arts Program; and New York State Council on the Arts. Exploration and exhibition on how extreme climates serve as form generators for architectural ideas and concepts.



1



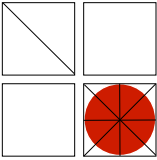
2



3



4



## ■ Passive Solar Forum (1) 1987 - 1989

Multiple Exhibitors as noted – One of 30 architects worldwide.

Passive Solar Forum, Tokyo, Ginza Pocket. Travelling exhibit to Okinawa and Hokkaido Japan. Sponsored by the Japan Solar energy Society, Architectural Institute of Japan and Tokyo Gas Company

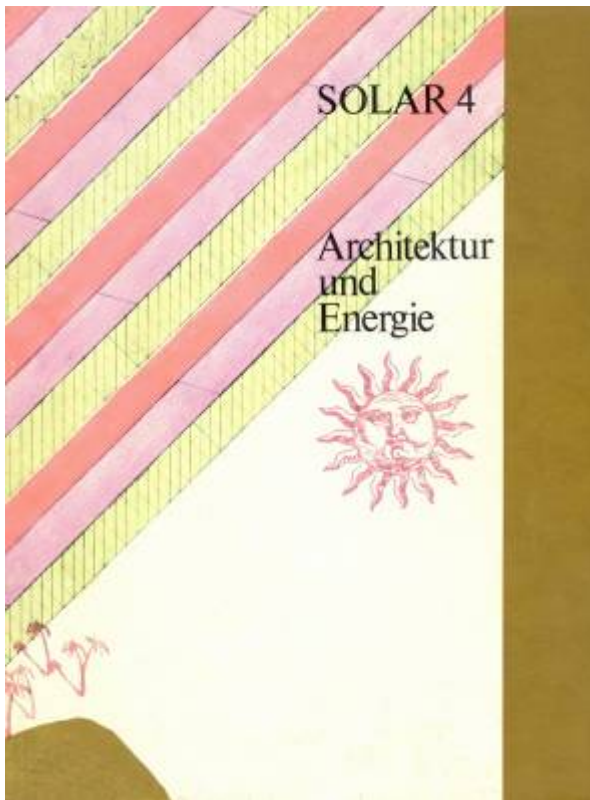
## ■ Solar 4: Architektur und Energie (2, 3) 1981 - 1983

With Doug Kelbaugh (Kelbaugh and Lee), Haasso Schrek, James Lambeth, and David Wright (SEAgrouP)

An Exhibition of Passive Solar Architecture at Amerika Haus, West Berlin, Germany (1981), Hannover, Germany, (1982) and 9 other German cities throughout (1982).



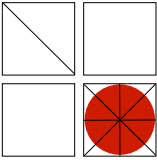
1



2



3



# SERVICE - COMMUNITY - SUSTAINABLE OUTREACH

DENNIS A. ANDREJKO, FAIA

ANDREJKO + ASSOCIATES

## ■ SDATS – Sustainable Design Assessment Teams

Northampton, MA – Team Expert  
 Englishtown, NJ – Team Leader  
 Tucson, AZ – Team Expert  
 Windsor, CA – Team Leader  
 Kauai, HI – Team Expert  
 Indianapolis, IN – Team Leader

The SDAT program is a community assistance program focusing on the principles of sustainability. SDATs bring together architect led volunteer professionals of various disciplines to work with community decision-makers and stakeholders to assist in developing a vision and framework for a sustainable future. SDATs provide focused interaction with stakeholders, professionals, and the public community. Process, product, and follow-up share equal importance.

1. Charrette engagement in Windsor
2. Northampton SDAT Report
3. Northampton SDAT Report
4. Presentation to the Windsor Community
5. Tucson SDAT Report
6. Tucson SDAT Report
7. One on one scheming in Englishtown



1



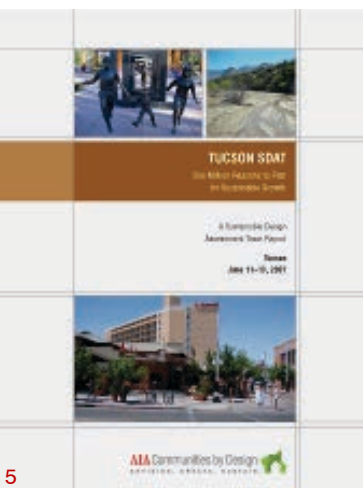
2



3



4



5

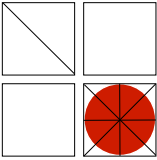


6



7





# SERVICE - COMMUNITY - SUSTAINABLE OUTREACH

DENNIS A. ANDREJKO, FAIA

UNIVERSITY AT BUFFALO / ANDREJKO + ASSOCIATES

## ■ Architecture and Children Program

With the Architecture and Children Program, architecture is used as a vehicle to explore both the physical and natural environment. The program brings together students, educators, architects, and architecture students – all interacting in a collaborative way – to draw from architecture to learn about who and what we are as a part of a larger world. In addition, architecture is used as the medium to develop lesson plans in the physical, social, mathematical, and scientific study areas.

There is nothing more heartfelt than watching children play as they learn. To assure a sustainable future, there is nothing more rewarding, more valuable, and more important, than educating and nurturing our youth.

The following “in action” images reveal and capture our future leaders at work..

1. Grade school children designing their neighborhood.
2. Architecture students with their public school mentor developing lesson plans.
3. A youthful imagination at work
4. Our leader of tomorrow pondering a sustainable future!!!



1



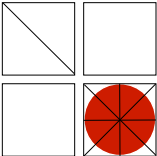
2



3



4



■ **Dennis A. Andrejko, FAIA**

ANDREJKO + ASSOCIATES  
203 Delamere Road  
Williamsville, New York 14221

ROCHESTER INSTITUTE OF TECHNOLOGY  
Golisano Institute for Sustainability  
Department of Architecture  
111 Lomb Memorial Drive  
Rochester, NY 14623-5608

[www.rit.edu/architecture](http://www.rit.edu/architecture)

585.475.4990 (O)  
585.475.4880 (F)

[daaarch@rit.edu](mailto:daaarch@rit.edu)



Rochester Institute of Technology  
3172 Golisano Sustainability Hall  
Rochester, NY 14623  
585-475-6238  
jjcnct@rit.edu

## **CURRICULUM VITAE**

# Jules Chiavaroli

### **Experience**

last 10 years

### **PROFESSOR**

#### **ROCHESTER INSTITUTE OF TECHNOLOGY: 1978-PRESENT**

Golisano Institute for Sustainability (GIS)  
College of Imaging Arts & Sciences (CIAS)  
National Technical Institute for the Deaf (NTID)

Teach or have taught a variety of design and technical courses in six different departments in three different colleges. These courses have been in the construction technologies, computer technologies, imaging and publishing technologies, interior design, and architecture. Additionally have provided support services for NTID students enrolled in Baccalaureate programs in CIAS.

Served as Program Coordinator for three years for the Arts & Imaging Studies Department, NTID responsible for managing the progress of 150+ students through programs, scheduling of all courses, scheduling of faculty to teach courses, and managing the transition from two old curricula to a new one. Served as CAD System Manager for two years for the School of Science and Engineering Careers, NTID responsible for implementation and operations of this school-wide facility.

### **ARCHITECT**

#### **JULIUS J. CHIAVAROLI, ARCHITECT: 1976-PRESENT**

Sole practitioner/ licensed architect in the State of New York specializing in residential, institutional, and small commercial projects. Provide a full range of architectural services including pre-design, design development, contract documents, bidding/ negotiation, construction supervision, and post-occupancy evaluations.

### **Education**

#### **ROCHESTER INSTITUTE OF TECHNOLOGY**

— courses taken in Ph.D. in Sustainability program

#### **ROCHESTER INSTITUTE OF TECHNOLOGY**

— Master of Business Administration, 1983

#### **UNIVERSITY OF NOTRE DAME**

— Bachelor of Architecture with honors, 1972

**Certifications/ Licenses**

LEED® Accredited Professional, US Green Building Council, 2009  
Sign Communication Proficiency Interview (a rating of sign language fluency), rated “Advanced”, 2004  
Certified in Criterion Referenced Instruction, Mager Associates, 1983  
Certified in Instructional Module Development, Mager Associates, 1983  
Licensed Architect, State of New York, 1976 (no. 13241)  
Certified by National Council of Architectural Registration Boards, 1976 (no. 15605)  
Eisenhart Outstanding Teaching Award (nominated), 2017

**Grants, Awards, Honors**

Provost Award for Outstanding Mentorship (nominated), 2017  
Provost’s Learning Innovation Grant, 2017  
Medal of Distinction, AIA Rochester, 2015  
AIA Leadership Grant Award 2012  
AIA Component Grant Award, 2012  
Promotion to Professor, Rochester Institute of Technology, National Technical Institute for the Deaf, 2004  
Granted Tenure, Rochester Institute of Technology, National Technical Institute for the Deaf, 1984

**Teaching**  
since 2011

ARCH-611 Architectural Representation I  
ARCH-612 Architectural Representation II  
ARCH-632 Architectural Design II  
ARCH-699 Co-op Architecture  
ARCH-731 Architectural Studio I: Site  
ARCH-735 Architectural Studio IV: Integrative  
ARCH-741 Integrated Building Systems I  
ARCH-742 Integrated Building Systems II  
ARCH-743 Integrated Building Systems III  
ARCH-744 Integrated Building Systems IV  
ARCH-763 Sustainable Building Metrics  
ARCH-781 Graduate Scholarship  
ARCH-789 ST: Working Drawings with BIM  
ARCH-789 ST: Digital Architectural Practice  
ARCH-799 Independent Study (various topics)  
ARCH-761 Understanding Sustainability (for RIT Dubai)  
ARCH-762 Industrial Ecology Fundamentals (for RIT Dubai)



**Scholarship**

*Scholarship of engagement* in the Hudson Avenue neighborhood of Rochester, NY in collaboration with the Coalition of Northeast Associations (CONEA) and the City of Rochester. An ongoing effort utilizing an elective each semester involving students to create and disseminate knowledge and creative expression that contributes to the discipline of architecture while strengthening the ties with and well-being of the Hudson Avenue community.

*Comprehensive & Integrative Design*. Textbook proposal currently under review for publication.

*A New Life for American Cities: Urban Strategies and Community Engagement* (with Giovanna Potesta), Conference Proceedings for Scholarship of Engagement Symposium, University of Kansas, October 2016

*AEC Drafting Fundamentals*. Chiavaroli. West Educational Publishing Company. 1994

*AEC Drafting Drawings*. Chiavaroli. West Educational Publishing Company. 1994

Faculty Exhibition, Bevier Gallery, Rochester Institute of Technology, 2009

*A New Life for American Cities: Urban Strategies and Community Engagement* (with Giovanna Potesta), Presentation at the Scholarship of Engagement Symposium, University of Kansas, October 2016

Presentation on Sustainable Design at RIT for the Ministry of Public Works - United Arab Emirates, 2015

Panelist on Scholarship of Engagement Forum at RIT, 2015

Presentation on Resiliency Theory (with Mary Scipioni), AIA NY State Design Conference, 2014

Rochester Architects Art Show, Bausch & Lomb Rotunda Gallery, 2009

Arts & Imaging Studies Faculty Show, Dyer Arts Center, Rochester Institute of Technology, 2006, 2008, 2010



**Professional Service****AMERICAN INSTITUTE OF ARCHITECTS**

Member 1967-present

National Level

- Architects in Education Committee, 1993-97
- Housing Committee, 1993-97

State Level: New York State Association of Architects

- Awards Juror, 2015
- Convention Task Force, 1987
- Board of Directors, 1982-83

Local Level: AIA Rochester

- President; 2012, 1981
- President-Elect; 2011, 1980
- Past President's Committee, 1992-present
- Board of Directors, 1975-83, 2011-12
- State Representative, 1982-83
- Education Director, 1979
- Newsletter Editor, 1975-78

**NEW YORK UPSTATE CHAPTER, U.S. GREEN BUILDING COUNCIL**

Member 2010-present

**COMMUNITY DESIGN CENTER ROCHESTER**

Advisory Council, 2010-present

Coordinator for many community design charettes

**NEW YORK STATE ENGINEERING TECHNOLOGY ASSOCIATION**

Member 1990-1997

- Conference Planning Committee, 1993

**UPSTATE NEW YORK INTERGRAPH GRAPHICS USERS GROUP**

Member 1987-1991

- President, 1987/88
- Co-founder, 1987

**Institute Service**

last 10 years

RIT Academic Senator from GIS, 2012 - present; Vice Chair 2017-18; Communications Officer 2016-17

RIT University Council Member, 2012 - present

RIT Golisano Institute for Sustainability Tenure & Promotion Committee Chair, 2014-present

RIT/Malmo University Affiliation Steering Committee Member, 2013 - present

RIT Scholarship of Engagement Task Force, 2013 - 2016

RIT Tenure Committee, 2014-15, and 2016-17

RIT Promotion Committee, 2014-15, and 2016-17

Architecture Program Search Committee Chair, 2013-14, and 2014-15.

College of Imaging Arts & Sciences, Interior Design Search Committee Member, 2014-15.

RIT Architecture Program B. Arch. Development Committee Member, 2013 - present

RIT Architecture Program Curriculum Committee Chair, 2011-present

RIT Architecture Program Admissions Committee, 2011-present

NTID Full Professor Promotion Committee, 2010-11

RIT Architecture Program Chair Search Committee, 2010-11

RIT Sustainability Alliance, 2009-2012

RIT University Policy Review and Development Project, Co-chair Section D Task Force, 2009-10

RIT Architecture Program Development Committee, 2007-10

RIT Graduate Council, 2007-11

NTID Arts & Imaging Studies Department Space Study Committee, 2006-07

NTID Arts & Imaging Studies Department Curriculum Committee, 2005-07

### **Community Service**

last 10 years

Rochester District Golf Association

- Board of Directors, 2011-2014
- Handicap Committee, 2011-2014
- Tournament Committee, 2012-2014
- Long Range Planning Committee, 2011-2014

PGA Championship, Volunteer, 2003

Wegman's LPGA Championship, Volunteer, 1978-2014

Arc of Monroe County

- Facilities & Transportation Committee, 1990-2010
- Medicaid Waiver Committee, 1991-1998

**Giovanna Potestà, PhD,**  
Assistant Professor  
Department of Architecture  
Golisano Institute for Sustainability  
Rochester Institute of Technology  
Architect, license n.5056, Ordine degli Architetti, Florence Italy  
gxpgis@rit.edu

## **Curriculum Vitae**

### **RESEARCH INTERESTS AND DISCIPLINE SKILLS:**

Architectural Design and Urban Design, Critical Architecture and Reuse Techniques, Design of Sustainable Settlements in Developed and Developing Regions, History and Theory of Architecture.

### **EDUCATION:**

- 2005            PhD, Architecture and Urban Design, University of Florence. Dissertation title: *"The River in Florence: centrality and urban edge"* (advisors prof. M.G. Eccheli, A. Natalini).
- 1995            Laurea in Architettura, University of Florence. Thesis: *"Urban design requalification of the Villa Demidoff area in Novoli, Firenze"* (highest honour), advisor professor Adolfo Natalini).
- 2008            Master in Philosophy: Aesthetic and Representation of Symbolic Forms, University of Florence.
- 1986            Maturità classica. Liceo Classico Dante, Florence

### **ACADEMIC APPOINTMENTS:**

- 2015 - Present            Assistant Professor: Rochester Institute of Technology, Golisano Institute for Sustainability; courses: Architectural Design, Thesis Research Methods. Co-adviser Master Thesis.
- 2009 – Dec 2014            Assistant Professor: Kuwait University College of Architecture; courses taught: Architectural Design, Urban Design, Architectural Theory and Criticism, Architectural History; Architectural Criticism. Adviser Master Thesis.
- 2003 - 2007            Adjunct Professor: Architecture, Analysis of Urban Form (post-graduate students). Kent State University, Florence Program, Italy.
- 2000 – 2005            Adjunct Professor: Architecture (undergraduate). California State University, Florence.
- 2000 - 2003            Adjunct Professor: Architecture, Urban Design and Planning (undergraduate and graduate programs), University of Florence.
- 1995 - 1998            Teaching Assistant of Urban Design (4th year students). University of Florence, Italy.

### **PROFESSIONAL APPOINTMENTS:**

- 2003 - 2005            Design and project (co-designer M.C. Bodini) of an office/commercial building in Florence. Client: Immobiliare NovoliSpA (28,000 feet, completed in 2005)
- 2004 - 2007            Design and project (co-designer M.C. Bodini) of a residential/commercial building in Florence. Client: Immobiliare Novoli SpA (25,000 feet, completed in 2008).

- 1998 - 2008 Architectural consultant for the urban renewal of area Novoli, Florence (36 hectares, client Immobiliare Novoli SpA).
- 1997 Urban Design project (with A. Castellana) for Piazza Manin, Livorno. Client: Municipality of Livorno (Italy).
- 1996 - 2000 Restoration design and project of apartments in Florence, country houses in Chianti area.
- 1996 Exhibit design and project (with A. Natalini) for two exhibitions in Florence. Client: Biennale della Moda:  
 -“Elton John, metamorphosis” at Uffizi.  
 -“Bruce Weber, secret love” at Palazzo Feroni-Ferragamo.
- 1995 – 1998 Collaboration with Natalini Office, Florence - Amsterdam. Contribution as a designer to the projects of the period in Italy and Netherlands. Architecture and Urban design.
- 1992 – 1994 Collaboration with CSPE Office. Technical details draftsman.

#### **PROFESSIONAL LICENSE:**

- 1997 - present: Licensed architect. Ordine degli Architetti di Firenze n. 5056.
- 2016 – present AIA Associate

#### **RESEARCH GRANTS:**

- 2014 - “Socio-Economic-Typological changes in Kuwait Housing after 2000 building rules”. Approved by Research Sector Kuwait University. PI: Dr Adel Al-Saffar. ongoing. (\$ 20.000)
- 2011 – 2013 “The Collective Space of Commerce in Kuwait between Identity and Globalization”, Granted Research, Kuwait University. Awarded as excellent Research by Kuwait University Research Committee (\$ 15.000). Research published.
- 2006 – 2008 “Planning a structured green space in the city”. Granted by Immobiliare Novoli SpA. Research not published (\$ 18.000).
- 2005 “The Architecture of Raffaello Fagnoni for the Aviation School of Florence (L’Architettura di Raffaello Fagnoni per la Scuola di Applicazione Aeronautica)”. Founded by Italian Ministry of Defence. Research published (\$ 60.000).
- 2000 - 2003 Research grant from the University of Florence “A Theory of Urban Centralities”. Research leader Prof. Paolo Giovannini, founded by Immobiliare Novoli (\$ 110.000). Research published.

#### **PUBLICATIONS:**

##### **Books:**

- G. Potestà (one author), book: *The Architecture of Raffaello Fagnoni for the Aeronautic School of Florence (L’Architettura di Raffaello Fagnoni per la Scuola di Applicazione Aeronautica Scuola di Guerra Aerea Firenze)*, Firenze, Polistampa, 2006. Hard cover book, English translation, total pages 180. Introduction by F. Gurrieri, Professor Architectural conservation, former Dean Faculty of Architecture, University of Florence. ISBN 8859601487.
- G. Potestà (co-author with P. Giovannini), book: *San Donato a Novoli: da area industriale s centralità urbana (San Donato in Novoli: from industrial area to urban centrality)*, Firenze, Polistampa, 2004. Hard cover book,

total pages 120. Preface by R. Innocenti, Professor Urban Planning, former Dean Faculty of Architecture, University of Florence. ISBN 8883047869.

#### **Books, Editor, Contributor of Chapter(s):**

- G.Potesta', editor and chapter contributor in: Adolfo Natalini, *Ricognizioni*, Octavo, Florence, 1999. ISBN 8880300733.

#### **Refereed Journals and Proceedings**

- "The Collective Space of Commerce between Identity and Globalization in Kuwait" in *International Journal of Architecture and Design*, ISSN: 2051-5820, Vol.25, Issue.2, 2014. Pp1116-1126. Research grant Kuwait University.
- G. Potesta', article: "Dubai: The Deconstruction of a City" published on the Proceedings of Conference "Sguardi sulle citta' in Trasformazione", University of Bologna, Italy, April 7th 2011, La Mandragora, Imola, 2012. ISBN 978-88-7586-349-4.
- G.Potesta', article: "Giuseppe Poggi e la nascita della citta' Borghese", *"Il Nuovo Corriere di Firenze"*, Daily Newspaper, Florence, December 31, 2011.
- G. Potesta', M. Al Jassar, article: "Occidentalism, A Middle Eastern approach on a European Theme of Urban Design" *Constructed Environment Journal*, Common Ground Publisher, ISSN 2154-8587, volume 1, issue 3, 2011.
- G.Potestà, article: "I viaggi del signor N. architetto" in *"Firenze Architettura"*, n.1, 2004, pp. 20-24.

#### **Referred Congresses and Conferences:**

- 2016 Paper presented (with J. Chiavaroli): "A New Life for American Cities. Urban Strategies and Community Engagement", Scholarship of Engagement Symposium, University of Kansas, Lawrence KA, October 20-21.
- 2016 Paper presented: "Looking for a New Downtown in American Cities: Case study in Rochester, NY", Cross disciplinary Conference Urban Spaces, University of Florence, Florence June 27-28.
- 2016 Paper presented: "The making of a New neighbourhood in Florence, Italy", Conference AIA Rochester, New Urbanism and Implementation, Rochester, April 21-22<sup>nd</sup>.
- 2015 Paper presented: "Making Successful Urban Places: An A Posteriori Critique of the Area Ex- Fiat in Florence", The Future of Places, Stockholm, June 28<sup>th</sup> – July 1<sup>st</sup>.
- 2013 Paper presented: *"The collective space of Commerce in Kuwait between Identity and Globalization"*, Constructed Environment Conference, Lisbon, Portugal, 4 -5 November 2013.
- 2012 Paper presented: *"The traditional Urban Fabric of Florence: a Comparison among different Conservation Philosophies"*, 3<sup>rd</sup> Architectural Conservation Conference, Dubai, December 17-19, 2012.
- 2012 Paper presented: *"The design of Commercial spaces in the Northern Arab Peninsula: The case of Kuwait between Tradition and Modernization"*, to the "ASCE Conference – Texas Section", Fort Worth, Texas, USA, 7-10 November 2012.
- 2011 Paper presented: *"The transformation of commercial space in Kuwait: from the souk to the mall"*, Constructed Environment Conference 2011, Chicago, USA, November.

- 2010 Paper presented (with M. Al-Jassar): *"Occidentalism: A Middle Eastern approach on a European Theme of Urban Design"*, Constructed Environment Conference 2010, November 2010, Venice.
- 2007 Paper presented: *"Modern and Contemporary city: form and formless"*. XVII International Congress of Aesthetics. Sanart – Metu, Ankara, 2007.
- 2005 Paper presented: *"City"*. Conference: *"Le parole che noi usiamo. Categorie storiografiche e interpretative dell'Europa moderna"*. Università La Sapienza, Rome, 2005.
- 2005 Paper presented: *"Nuovi interventi urbani in Europa. Pianificazione multidisciplinare"*. International conference: *"Urban changes in Europe"*. University of Florence, 2005.
- 2004 Paper presented: *"Urban renewal in Europe"*. Seminar: *"PostMetropoli"*, Ordine degli Architetti di Prato, 2004.
- 2004 Paper presented: *"Metapolis by Actar and Non Stop City by Archizoom"*. Symposium: *"Metapolis"*, Municipality of Florence, 2004.
- 2002 Paper presented: *"Novoli, New Urban centrality"*. Conference: *"Outskirts of European cities, COST C10 – University of Florence, 2002."*

#### **ACADEMIC ADMINISTRATIVE EXPERIENCE:**

- 2015 - present Serving in several Committees (Bachelor Program, NAAB Accreditation, Prospective Students, Design coordination). Head of the Master Thesis Committee.
- 2009 – 2014 Coordinator of the following Committees at Kuwait University: *"Theoretical and Historical subjects"*, *"Library"*, *"Lectures and Events"*.
- 2005 – 2007 Architecture Program Coordinator, Kent State University, Florence, Italy.

#### **WORKSHOPS AND SEMINARS:**

- 2014 International Summer School Programme: *Qualitative Research*. University West Essex, Bristol, UK. One-week intensive course.
- 2010 E-learning course. Kuwait University. Two days course.
- 2006 – 2007 Post Master Diploma in Aesthetic, Department of Philosophy, University of Florence, *Aesthetic and Hermeneutic of Symbolic Forms*, professor Sergio Givone.
- 2003 Università' Internazionaledel'Arte, Florence. One week Seminar: *Preservation of Historical Gardens: Future and Contradiction*.

#### **HONORS:**

- 2015 *"Featured Faculty"* for Golisano Institute of Sustainability.

#### **Academic: Competitions (projects awarded or published):**

- 2008 *"New Church Madonna delle Grazie in Lodi"*(Milan), National design completion on invitation, Episcopal Italian Conference, Leader of Group project with Michelizzi Architetti. Second Award. Published in Casabella 785, January 2010.

- 2004 "La casa dell'architetto". National design competition, Ordine degli Architetti, Florence. Group project. Published.
- 2004 "Art Gallery in Casalbeltrame, Novara". International design competition. City of Casalbeltrame. Group project. Published.
- 2003 "A new piazza in Arezzo". International design competition. City of Arezzo. Group project. 3<sup>rd</sup> place award.

#### **Exhibitions (professional work):**

- 2010 "New Church Madonna delle Grazie in Lodi" (Milan), Design completion on invitation, Episcopal Italian Conference, Group project with Michelizzi Architetti. Awarded. Published in additional booklet to Casabella 785, January, 2010. Exhibited in Rome, CEI, Piazza di Porta San Giovanni 10.
- 2005 "La casa dell'architetto". National design competition, Ordine degli Architetti, Florence. Group project. Published. Exhibited in Florence, via Corridoni, building area.
- 2003 "Progetti area ex Fiat a Novoli. Municipality of Florence, Urban Center, Loggiato degli Innocenti, Firenze.
- 2003 "Art Gallery in Casalbeltrame, Novara". International design competition. City of Casalbeltrame. Group project. Exhibited in the Casalbeltrame Municipal Building.
- 2001 "A new piazza in Arezzo". International design competition. City of Arezzo. Group project. 3<sup>rd</sup> place award. Exhibited in Arezzo, Piazza Grande, in temporary structure.

#### **MEMBERSHIP AND ACTIVITIES IN THE PROFESSION**

- Member of the New York Academy of Science, since 2016.
- Member AIA (Associate) since 2016.
- Member "Ordine degli Architetti di Firenze" (Architectural Association, Florence) since 1997.
- Member ACSA since 2014.
- Member Text and Academic Authors Association, 2015.
- Member Constructed Environment, 2010-2013.
- Member Kuwait University Faculty Society 2009-2014.

## **Appendix G – Cost Model: Revenue/Cost Projections/Expenses**



GIS						
B Architecture						
ACADEMIC PROGRAM PROPOSAL PROJECTION						
PROGRAM DEVELOPMENT PHASE: FULL PROGRAM DEVELOPMENT						
YEAR	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	5 Year Total
	1	2	3	4	5	
<b>PLANNED ENROLLMENT</b>						
Continuing Students		35	67	98	126	
New Student Intake	40	40	42	42	42	
Total Enrollment	40	75	109	140	168	
Student Attrition	(5)	(8)	(11)	(14)	(14)	
Student Completion	0	0	0	0	(28)	
Continuing Students	35	67	98	126	126	
<b>PLANNED FACULTY</b>						
Tenure/TT (FTE)	0.00	1.00	2.00	3.00	4.00	
Lecturer (FTE)	2.00	2.00	2.00	2.00	2.00	
<b>PLANNED STAFF</b>						
Staff (FTE)	2.00	2.00	2.00	3.00	3.00	
Undergraduate Academic Advisor (FTE)	0.20	0.30	0.40	0.50	0.60	
<b>CREDIT HOURS</b>						
Program Required Credit Hours	160					
% of Curriculum from Newly Created Courses	57%					
CH Consumed	1,200	2,322	3,340	4,452	5,343	
<b>PROJECTED FINANCIALS - CALCULATED USING APR COST PER CREDIT HOUR RATES<sup>1)</sup></b>						
Revenue (Net of Aid)	\$ 1,032,143	\$ 1,998,253	\$ 2,994,048	\$ 3,963,576	\$ 4,903,382	\$ 14,891,401
Contribution Margin Surplus/(Deficit) - College Level (APR)	\$ 344,286	\$ 635,232	\$ 984,612	\$ 1,218,866	\$ 1,527,834	\$ 4,710,830
<b>COLLEGE SPENDING PLAN</b>						
Variance Status @ Year 5	FAVORABLE - COLLEGE MAINTAINS AVERAGE SPENDING RATES					
College Planned Instruction	\$ 156,741	\$ 256,830	\$ 361,824	\$ 471,908	\$ 587,270	\$ 1,834,574
Employee Benefits	\$ 99,133	\$ 135,271	\$ 173,154	\$ 233,648	\$ 275,737	\$ 916,943
College Planned Direct Costs - Non Instruction	\$ 202,609	\$ 268,589	\$ 323,344	\$ 427,494	\$ 484,514	\$ 1,706,550
Total College Direct Costs	\$ 458,483	\$ 660,689	\$ 858,322	\$ 1,133,051	\$ 1,347,521	\$ 4,458,067
Nonrecurring	\$ 361,500	\$ 361,500	\$ 361,500	\$ 361,500	\$ 361,500	\$ 1,807,500
Program Cash flow: Revenue (Net of Aid) Less: Direct College Costs <sup>2)</sup>	\$ 212,160	\$ 976,063	\$ 1,774,226	\$ 2,469,025	\$ 3,194,361	\$ 8,625,834
Variance in Spending Plan Favorable/(Unfavorable)	\$ (90,953)	\$ (8,237)	\$ 71,776	\$ 126,736	\$ 187,676	\$ 286,998
<b>NONRECURRING EXPENDITURES</b>						
Equipment Capital	\$ 325,000					
Nonrecurring Expenditures	\$ 1,482,500					
Total Nonrecurring Expenditures	\$ 1,807,500					
Space Requested	10,850 Sq Ft					
<b>LIBRARY</b>						
Annual Cost @ year 3	\$ 14,000					
<b>FINANCIAL THRESHOLD FOOTNOTES:</b>						
<sup>1)</sup> Measures the incremental cash flow effect of net tuition from new students less proposed new spending.						
<sup>2)</sup> Flag to indicate that Enrollment Management provided and/or concurs with enrollment estimates.						
<sup>3)</sup> Flag to indicate predicted APR metrics at year 5 for the college level of responsibility, given the current cost structure in the most recent APR model. (APR measures Academic Affairs and Full cost shown on page 2).						
<sup>4)</sup> Flag to indicate that a department is not proposing additional spending which is greatly in excess of its current cost of operations.						

# FINANCIAL THRESHOLDS

## Primary

Program has incremental positive cashflow.<sup>1</sup>

Enrollment based on EMCS<sup>2</sup>

## Secondary

APR College level surplus in year 5.<sup>3</sup>

Program accretive/spending plan within 102% tolerance (@78%).<sup>4</sup>

**GIS**  
**B Architecture**  
**Sensitivity Analysis**

Assumptions:  
 Student Enrollment Increase 5.00%  
 College Spending Plan Decrease 5.00%

→Projected Enrollment and Net Tuition Increase→					
Enrollment	168	176	185	193	201
Net Tuition Revenue	\$ 4,903,382	\$ 5,144,838	\$ 5,407,927	\$ 5,641,783	\$ 5,875,639

↓College Spending Plan ↓		→Projected Cashflow with expense reduction and enrollment increase →					
Current	\$ 1,709,021	\$ 3,194,361	\$ 3,435,817	\$ 3,698,905	\$ 3,932,762	\$ 4,166,618	
@ 95%	\$ 1,623,570	\$ 3,279,812	\$ 3,521,268	\$ 3,784,357	\$ 4,018,213	\$ 4,252,069	
@ 90%	\$ 1,538,119	\$ 3,365,263	\$ 3,606,719	\$ 3,869,808	\$ 4,103,664	\$ 4,337,520	
@ 85%	\$ 1,452,668	\$ 3,450,714	\$ 3,692,170	\$ 3,955,259	\$ 4,189,115	\$ 4,422,971	
@ 80%	\$ 1,367,217	\$ 3,536,165	\$ 3,777,621	\$ 4,040,710	\$ 4,274,566	\$ 4,508,422	

Indicates current model

**GIS**  
**B Architecture**  
**ACADEMIC PROGRAM PROPOSAL PROJECTION**

**PROGRAM DEVELOPMENT PHASE: FULL PROGRAM DEVELOPMENT**

	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	5 Year Total	
Revenue							
Tuition	\$ 1,686,316	\$ 3,275,124	\$ 4,922,955	\$ 6,538,160	\$ 8,114,783	\$ 24,537,337	
Unfunded Aid	(654,172)	(1,276,871)	(1,928,907)	(2,574,584)	(3,211,401)	(9,645,936)	-39.31%
Net Tuition	1,032,143	1,998,253	2,994,048	3,963,576	4,903,382	14,891,401	
Direct Department Controlled College Expenses							
College Faculty Projection							
CIAS	31,751	62,786	92,696	126,483	155,388	469,104	
COLA	61,844	122,654	180,699	246,890	303,554	915,641	
COS	14,496	28,625	42,107	57,622	70,829	213,679	
GIS	154,550	306,391	451,701	616,999	759,059	2,288,700	
Total College Faculty Projection	262,642	520,456	767,203	1,047,994	1,288,829	3,887,124	
College Other Direct Costs							
CIAS	6,303	12,464	18,401	25,108	30,846	93,122	
COLA	3,494	6,930	10,209	13,949	17,151	51,733	
COS	1,540	3,041	4,474	6,122	7,526	22,704	
GIS	41,149	81,577	120,265	164,276	202,099	609,366	
Total College Other Direct Costs	52,486	104,012	153,350	209,456	257,622	776,925	
Direct College Controlled Costs	315,128	624,468	920,552	1,257,450	1,546,451	4,664,049	
College Overhead (Not Department Controlled)	372,729	738,553	1,088,884	1,487,259	1,829,097	5,516,522	
Total Overhead	372,729	738,553	1,088,884	1,487,259	1,829,097	5,516,522	
<b>Total College Responsibility Cost</b>	<b>\$ 687,857</b>	<b>\$ 1,363,021</b>	<b>\$ 2,009,436</b>	<b>\$ 2,744,709</b>	<b>\$ 3,375,548</b>	<b>\$ 10,180,571</b>	
<b>Contribution Margin Surplus/(Deficit) - College Level</b>	<b>\$ 344,286</b>	<b>\$ 635,232</b>	<b>\$ 984,612</b>	<b>\$ 1,218,866</b>	<b>\$ 1,527,834</b>	<b>\$ 4,710,830</b>	
<i>Contribution % at College Level</i>	33.36%	31.79%	32.89%	30.75%	31.16%	31.63%	
Less: Academic Affairs Allocation	106,383	205,908	301,405	409,333	502,658	1,525,686	
<b>Contribution Margin Surplus/(Deficit) - Academic Affairs Level</b>	<b>\$ 237,903</b>	<b>\$ 429,324</b>	<b>\$ 683,206</b>	<b>\$ 809,534</b>	<b>\$ 1,025,177</b>	<b>\$ 3,185,144</b>	
<i>Contribution % at Academic Affairs Level</i>	23.05%	21.48%	22.82%	20.42%	20.91%	21.39%	
Less: Full Allocation	183,519	363,695	536,096	732,324	900,635	2,716,268	
<b>Contribution Margin Surplus/(Deficit) - Fully Allocated Level</b>	<b>\$ 54,385</b>	<b>\$ 65,630</b>	<b>\$ 147,110</b>	<b>\$ 77,209</b>	<b>\$ 124,542</b>	<b>\$ 468,876</b>	
<i>Contribution % at Fully Allocated Level</i>	5.27%	3.28%	4.91%	1.95%	2.54%	3.15%	

# ACADEMIC PROGRAM PROPOSAL PROJECTION

For questions, please contact Leanne Hill, lkhcto@rit.edu.

Please submit to Leanne Hill for review prior to submission to Academic Affairs

## PROGRAM DEVELOPMENT PHASE

Anticipated Start Date

FULL PROGRAM DEVELOPMENT
2019-2020

Today's Date: 26-Apr-18

Enter name of program: B Architecture

Select Home College: GIS

Select Secondary College: CIAS

Enter Home Dept: Architecture

Program Type: Bachelors 5 yr w/o Coop UG

RIT Online Program (Yes or No): NO

PDF File Name: GIS\_B Architecture\_2019-2020

	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	Total
Preloaded FT CrHr Mask	30	30	30	30	30	150
Program Specific Adjustments		2		6	2	10
FT Basis for Model	30	32	30	36	32	160

### Student Completion Profiles

	Retention Rate / 1 st year	Completion Rate	Years to Complete	Crs/Sem
1 Full Time	87.64%	66.32%	5.00	
2 Part Time	87.64%	66.32%	14.00	6.00
Summer Classes (Part Time Students Only)	NO			3.00

	CH Totals	% of Total	CH New Courses	CH Existing Courses
CAST		0%		0
CHST		0%		0
CIAS	15	9%		15
COLA	45	28%		45
COS	9	6%		9
COS-GIS		0%		0
GCCIS		0%		0
GIS	91	57%	91	0
KGCOE		0%		0
SCB		0%		0
Total	160	GOOD	91	69
Hours taken outside of Program college-includes general education classes taken outside of the college and required program courses **	69			
Interdisciplinary % of Total	43%			

## Enrollment

Incremental Intake (Headcount)	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
Full Time	40	40	40	40	40
External Transfers - Year 2					
External Transfers - Year 3			2	2	2
Part Time					
Total	40	40	42	42	42
Accum. HC	40	75	109	140	168



Please check box to confirm you have received confirmation from Enrollment Management for above Incremental Intake. Please submit the confirmation memo with your documentation.

## ACADEMIC PROGRAM PROPOSAL PROJECTION

### Space, Nonrecurring and Library Costs

#### PROGRAM DEVELOPMENT PHASE: FULL PROGRAM DEVELOPMENT

*The purpose of this worksheet is to identify any space needs, capital costs and other non-recurring needs to launch the program. Listed items will be part of the dialogue in new program approval.*

#### Dedicated Space Needs

Space Retrofitting/Remodeling/Outfitting for fabrication shop

Preferred Location	Square Feet	Space Type
New Space in Building 78	2,400	Lab

- Student Studio Space - incremental 2,000 hot desk studio starting in year 1, incremental 4800 Sq Ft starting year 3. Note additional 4100 sq ft renovation required in M Arch program included in original M Arch cost model (Bay 3 mezzanine or other as originally planned in Bldg 78). Reassigning SLA 1220/2200.  
- Crit Review Space - incremental 900 sq. ft. (3 room at 300 sq. ft. each)  
- Faculty Office Space - 6 faculty offices (600 sq. ft.) and admin reception space (150 sq. ft)

New Space in B78 - studio space	8,450	Office
New Space in B78 or B81 - crit space		

#### Nonrecurring and One Time Costs

Faculty startup/relocation expenses \$10K per incremental faculty

Amount
\$ 50,000

#### Equipment Needs

Fabrication shop equipment & furnishings (shelving, lockers, work tables/stools)

Amount
\$ 250,000

Studio Furnishings

\$ 75,000
-----------

#### Library Resources (Required in Table 5, submit letter from librarian with your proposal)

\$14,000 annually per letter from Kari Horowicz

Year 1	Year 2	Year 3
\$ 14,000	\$ 14,000	\$ 14,000

---

Projected Capital	
Cost Per Sq Foot	Costs
\$ 280	\$ 672,000

\$ 90	\$ 760,500
-------	------------

Annual Cost	
\$ 14,000	

**GIS**  
**B Architecture**  
**Detailed College Spending Plan**

**PROGRAM DEVELOPMENT PHASE: FULL PROGRAM DEVELOPMENT**

**GIS**

**YEAR 5 PLAN STATUS: FAVORABLE**

	2019-2020 1	2020-2021 2												
<b>Faculty Salary Expense Allowance</b>	<b>\$ 154,550</b>	<b>\$ 306,391</b>												
<b>Faculty Inputs</b>	<b>Base Salary Assumption (Exclude Benefits)</b> <table> <tr> <td>Tenure/TT (Enter FTE)</td><td>\$ 85,000</td><td>1</td></tr> <tr> <td>Lecturer (Enter FTE)</td><td>\$ 67,000</td><td>1</td></tr> <tr> <td>Adjunct (Enter Sections)</td><td>\$ 5,000</td><td></td></tr> <tr> <td>Other: Faculty Release Time, Program Director</td><td></td><td></td></tr> </table>		Tenure/TT (Enter FTE)	\$ 85,000	1	Lecturer (Enter FTE)	\$ 67,000	1	Adjunct (Enter Sections)	\$ 5,000		Other: Faculty Release Time, Program Director		
Tenure/TT (Enter FTE)	\$ 85,000	1												
Lecturer (Enter FTE)	\$ 67,000	1												
Adjunct (Enter Sections)	\$ 5,000													
Other: Faculty Release Time, Program Director														
College Planned Faculty Salary Expense														
Tenure TT Cost	\$ -	\$ 96,170												
Lecturer Cost	\$ 73,955	\$ 75,804												
Total Adjunct Cost	\$ -	\$ -												
Other Cost	\$ -	\$ -												
<b>College Planned Faculty Salary Expense</b>	<b>\$ 73,955</b>	<b>\$ 171,974</b>												
<b>Variance to Allowance</b>	<b>\$ 80,595</b>	<b>\$ 134,417</b>												
<b>Other Direct College Costs</b>	<b>\$ 41,149</b>	<b>\$ 81,577</b>												
<b>Staffing: Please List</b>	<b>Base Salary Assumption (Exclude Benefits)</b> <table> <tr> <td>Student Services Coordinator/Administrative Assistant</td><td>\$ 50,000</td><td>1</td></tr> <tr> <td>Shop Technician</td><td>\$ 70,000</td><td>1</td></tr> </table>		Student Services Coordinator/Administrative Assistant	\$ 50,000	1	Shop Technician	\$ 70,000	1						
Student Services Coordinator/Administrative Assistant	\$ 50,000	1												
Shop Technician	\$ 70,000	1												
College Planned Staffing Salary Expense														
Student Services Coordinator/Administrative Assistant Cost	\$ 55,191	\$ 56,570												
Shop Technician Cost	\$ 77,267	\$ 79,199												
	\$ -	\$ -												
<b>Total Staffing</b>	<b>\$ 132,458</b>	<b>\$ 135,769</b>												
<b>Other Direct Costs (Please List)</b>														
Supplies	\$ 31,844	\$ 59,755												
Travel	\$ 3,000	\$ 6,000												
Software & Instructional Supplies	\$ 10,000	\$ 12,500												
TA's @ \$10,500 (FTE: 1, 3.5, 5, 6, 8)	\$ 11,307	\$ 40,565												
<b>Total Non-Salary</b>	<b>\$ 56,151</b>	<b>\$ 118,820</b>												
<b>College Planned Staffing and Other Direct Costs</b>	<b>\$ 188,609</b>	<b>\$ 254,589</b>												
<b>Variance to Allowance</b>	<b>\$ (147,459)</b>	<b>\$ (173,012)</b>												
<b>College Planned Expense vs. Threshold</b>														
Total Home College Planned Expenses	\$ 262,564	\$ 426,563												
Total Secondary College Planned Expenses	\$ 82,786	\$ 84,856												
New Program Expense Allowance Threshold*	\$ 254,397	\$ 503,182												
Variance	\$ (90,953)	\$ (8,237)												
Variance Status to Model	<b>unfavorable</b>	<b>unfavorable</b>												

\*Threshold is the calculated expense allowance for each year plus 2% net tuition revenue.

**CIAS (Secondary College)**  
**B Architecture**

**PROGRAM DEVELOPMENT PHASE: FULL PROGRAM DEVELOPMENT**

Complete Secondary College Worksheet Below

CIAS	2019-2020 1	2020-2021 2
<b>Faculty Salary Expense Allowance</b>	<b>\$ 31,751</b>	<b>\$ 62,786</b>
<b>Faculty Inputs</b>	<b>Base Salary Assumption (Exclude Benefits)</b>	
Tenure/TT (Enter FTE)		
Lecturer (Enter FTE)	\$ 60,000	1
Adjunct (Enter Sections)	\$ 5,000	3
Other: Faculty Release Time, Program Director		
College Planned Faculty Salary Expense		
Tenure TT Cost	\$ -	\$ -
Lecturer Cost	\$ 66,229	\$ 67,884
Total Adjunct Cost	\$ 16,557	\$ 16,971
Other Cost	\$ -	\$ -
<b>College Planned Faculty Salary Expense</b>	<b>\$ 82,786</b>	<b>\$ 84,856</b>
<b>Variance to Allowance</b>	<b>\$ (51,035)</b>	<b>\$ (22,069)</b>
<b>Other Direct College Costs</b>	<b>\$ 6,303</b>	<b>\$ 12,464</b>
<b>Staffing: Please List</b>	<b>Base Salary Assumption (Exclude Benefits)</b>	
College Planned Staffing Salary Expense		
	\$ -	\$ -
	\$ -	\$ -
	\$ -	\$ -
<b>Total Staffing</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Other Direct Costs (Please List)</b>		
<b>Total Non-Salary</b>	<b>\$ -</b>	<b>\$ -</b>
<b>College Planned Staffing and Other Direct Costs</b>	<b>\$ -</b>	<b>\$ -</b>
<b>Variance to Allowance</b>	<b>\$ 6,303</b>	<b>\$ 12,464</b>



Year			
2021-2022	2022-2023	2023-2024	Total
3	4	5	
\$ 451,701	\$ 616,999	\$ 759,059	\$ 2,288,700
2	3	4	
1	1	1	
\$ 197,148	\$ 303,115	\$ 414,257	\$ 1,010,689
\$ 77,699	\$ 79,642	\$ 81,633	\$ 388,734
\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -
\$ 274,847	\$ 382,757	\$ 495,890	\$ 1,399,424
\$ 176,853	\$ 234,242	\$ 263,169	\$ 889,276
\$ 120,265	\$ 164,276	\$ 202,099	\$ 609,366
1	2	2	
1	1	1	
\$ 57,985	\$ 118,869	\$ 121,840	\$ 410,455
\$ 81,179	\$ 83,208	\$ 85,288	\$ 406,140
\$ -	\$ -	\$ -	\$ -
\$ 139,163	\$ 202,077	\$ 207,128	\$ 816,595
\$ 86,782	\$ 111,357	\$ 133,536	\$ 423,274
\$ 9,000	\$ 12,000	\$ 15,000	\$ 45,000
\$ 15,000	\$ 15,000	\$ 15,000	\$ 67,500
\$ 59,399	\$ 73,061	\$ 99,850	\$ 284,182
			\$ -
\$ 170,181	\$ 211,418	\$ 263,386	\$ 819,955
\$ 309,344	\$ 413,494	\$ 470,514	\$ 1,636,550
\$ (189,079)	\$ (249,218)	\$ (268,415)	\$ (1,027,184)
\$ 584,191	\$ 796,251	\$ 966,404	
\$ 86,977	\$ 89,151	\$ 91,380	
\$ 742,944	\$ 1,012,138	\$ 1,245,460	
\$ 71,776	\$ 126,736	\$ 187,676	
favorable	favorable	favorable	

<b>CIAS (Secondary College)</b>			
<b>B Architecture</b>			

2021-2022 3	2022-2023 4	2023-2024 5	Total
\$ 92,696	\$ 126,483	\$ 155,388	\$ 469,104

1	1	1
3	3	3

\$ -	\$ -	\$ -	\$ -
\$ 69,582	\$ 71,321	\$ 73,104	\$ 348,120
\$ 17,395	\$ 17,830	\$ 18,276	\$ 87,030
\$ -	\$ -	\$ -	\$ -
\$ 86,977	\$ 89,151	\$ 91,380	\$ 435,150
\$ 5,719	\$ 37,331	\$ 64,007	\$ 33,954

\$ 18,401	\$ 25,108	\$ 30,846	\$ 93,122
-----------	-----------	-----------	-----------


\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -

			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
			\$ -
\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -
\$ 18,401	\$ 25,108	\$ 30,846	\$ 93,122

## ACADEMIC PROGRAM PROPOSAL PROJECTION

Table 5: New Resources

College: GIS

Program Name: B Architecture

### PROGRAM DEVELOPMENT PHASE: FULL PROGRAM DEVELOPMENT

Table 5: New Resources

List the costs of the **new** resources that will be engaged specifically as a result of the new program (e.g., a new faculty position or additional library resources). New resources for a given year should be carried over to the following year(s), with adjustments for inflation, if they represent a continuing cost.

New Expenditures	Year 1	Year 2	Year 3
Personnel	\$ 289,199	\$ 392,599	\$ 500,988
Library	\$ 14,000	\$ 14,000	\$ 14,000
Equipment*	\$ 325,000		
Laboratories*	\$ 672,000		
Supplies & Expenses (Other Than Personal Service)	\$ 56,151	\$ 118,820	\$ 170,181
Capital Expenditures*	\$ 760,500		
Other	\$ 149,133	\$ 135,272	\$ 173,153
<b>Total all</b>	<b>\$ 2,265,983</b>	<b>\$ 660,690</b>	<b>\$ 858,322</b>

\*Capital expenditure total reflects projected spending in years one thru three.

## Overview:

Each type of degree award requires a different number of general education credits as mandated by the New York State Education Department (NYSED). When providing guidance, NYSED uses the term “liberal arts and sciences” to refer to general education. In accordance with NYSED’s guidelines, students in the following programs must complete, at a minimum, the number of credits indicated in each category, as illustrated in Table 1.

Table 1. The table shows the minimum number of semester credit hours (sch) required in each category. Details can be found in the sections below for each degree program.

	BS	BFA	AAS	AS
Foundation				
First-Year Seminar*	6	6	6	6
First-Year Writing Intensive course				
Perspectives Categories	24	12	15	15
Immersion				
Three additional, related courses	9	9	0	0
General Education Electives	21	3	3	9
MINIMUM TOTAL	60	30	24	30

\*First-Year Seminar will not be offered in AY 2014/15, and may be replaced with a General Education Elective

Courses approved for use as electives, Foundation, and Perspectives are overseen by the General Education Committee, and designations for each type are marked in the Student Information System. The choices for Immersions are listed in the Course Bulletin.

**Use of program courses in General Education:** Programs may count no more than three courses (not including labs) from their home academic unit as General Education. These courses must be approved to carry general education designation by the General Education Committee. Programs may **NOT** require students to complete a specific immersion or restrict students to a group of immersions.

### The categories for Perspectives courses are as follows:

1. Ethical
2. Artistic
  3. Global
  4. Social
  5. Natural Science Inquiry
  6. Scientific Principles
  7. Mathematical

### Framework by Degree Type:

**I. General Education Guidelines for Bachelor of Science (BS):** Students earning a BS degree must complete a minimum of 60 General Education credits. In addition to the two Foundation courses, these students must take one course from each of the first six perspective categories and two courses from the Mathematical category for a total of eight courses. A BS program may not require specific courses in more than three Perspective categories. The students must also complete an immersion. The remaining credits can be used as General Education electives.

**II. General Education Guidelines for the Bachelor of Fine Arts (BFA):** Students earning a BFA degree must complete a minimum of 30 General Education credits. In addition to the two Foundation courses, these students must take a total of four Perspective courses, one from each of the following four categories: Ethical, Artistic, Global, and Social. A BFA program may not require specific courses in more than two Perspective Categories. The students must also complete an immersion. The remaining three credits can be used as a General Education elective.

**III. General Education Guidelines for the Associate of Applied Science (AAS):** Students earning an AAS degree must complete a minimum of 24 General Education credits. In addition to the two Foundation courses, these students must take a total of five Perspective courses, one each from the following five categories: Ethical, Artistic, Global, Social, and Scientific Principles. The remaining course will be a General Education elective.

**IV. General Education Guidelines for Associate of Science (AS):** Students earning an AS degree must complete a minimum of 30 General Education credits. In addition to the two Foundation courses, these students must take a total of five Perspective courses, one from each of the following five categories: Ethical, Artistic, Global, Social, and Scientific Principles. The remaining three courses will be General Education electives.

**V. General Education Guidelines for Associate of Occupational Studies (AOS):** NYSED does not require that an AOS degree include general education courses. RIT Colleges offering AOS degrees should establish their own guidelines.