### **Medical Physics Research Proposal**

Focused on the application of physics in medicine, such as imaging or radiation therapy.

#### **1. Title Page**

* Research Title
* Researcher’s Name
* Institution/Department
* Supervisor’s Name
* Date of Submission

#### **2. Abstract**

* Provide a summary of the study, including the physics principles applied (200 words).

#### **3. Introduction**

* **Background**: Overview of the medical physics problem (e.g., imaging, radiation safety).
* **Problem Statement**: Define the clinical challenge being addressed.
* **Significance**: Highlight the impact on medical diagnostics or therapy.
* **Objectives**:
  + Primary Objective
  + Secondary Objectives

#### **4. Literature Review**

* Discuss previous applications of physics in similar medical research.
* Highlight gaps this study will fill.

#### **5. Methodology**

* **Study Design**: Describe the physics-based approach (e.g., computational modeling, experimental validation).
* **Equipment and Software**: List machines, imaging modalities, or computational tools.
* **Data Collection**: Outline how data will be collected and measured.
* **Analysis Methods**: Mention statistical or computational techniques.
* **Ethical Compliance**: Discuss patient safety, radiation exposure limits, etc.

#### **6. Expected Outcomes**

* Describe the potential contributions to medical physics research.

#### **7. Timeline**

* Provide a phased timeline from protocol development to data analysis.

#### **8. Budget**

* Detail costs for imaging equipment, software licenses, and computational resources.

#### **9. References**

* Provide a comprehensive list of references.