THOMAS ADEWUMI UNIVERSITY, OKO-IRESE	
Faculty	Computing and Applied Sciences
Department	Mathematical and Computing Science
Program	Computer Science
Course Code	CSC 314
Course Title	**RESEARCH METHODOLOGIES AND GRANT PROPOSAL**
Study Year	3
Credit Hours	2
Contact Hours	24
Pre-requisite	
Status	Required
Semester	Second
Mode of Assessment	Lecture, Assessment and Practical
Mode of Delivery	- Classroom Lectures - Laboratory Practical Sessions
Assignment practical **Test** **Examination** **Total**	10% 20% 70% 100%
Course Lecturer and Instructor	
Course Description	A course on research methodology and grant proposal writing is designed to equip students with the knowledge and skills necessary to plan, conduct, and communicate research effectively. This course typically covers a range of topics related to the research process and the preparation of grant proposals
Course Objectives	To teach the students: • To understand the fundamental principles of research methodology. • To develop the ability to design and conduct research studies. • To learn how to write persuasive and successful grant proposals
Learning Outcome	At the end of this course, students will be able to: - Understands Research paradigms and approaches - Formulating research questions and hypotheses. - Understands Components of a grant proposal - Develops a compelling problem statement and research objectives
Detailed course contents	Defining research and its significance. Research paradigms and approaches. Ethical considerations in research. Formulating research questions and hypotheses. Selecting appropriate research methods (qualitative, quantitative, mixed methods). Sampling techniques and sample size determination

	Components of a grant proposal (e.g., abstract, introduction, literature review).Developing a compelling problem statement and research objectives	
Course Contents Sequencing		
Weeks	**Detailed Course Outline**	**Allocated Time**
WEEK 1	**Introduction to Research Methodology**: • Defining research and its significance. • Research paradigms and approaches. • Ethical considerations in research.	2 Hours
WEEK 2	**Research Design and Planning**: • Formulating research questions and hypotheses. • Selecting appropriate research methods (qualitative, quantitative, mixed methods). • Sampling techniques and sample size determination.	2 Hours
WEEK 3	**Data Collection Methods**: • Surveys, interviews, observations, and experiments. • Data collection instruments and techniques. • Data management and organization.	2 Hours
WEEK 4,5	**Data Analysis and Interpretation**: • Statistical and qualitative data analysis methods. • Interpretation of research findings. • Drawing conclusions and making recommendations. **Literature Review and Review of Related Grants**: • Conducting a comprehensive literature review. • Analyzing and critiquing research articles. • Reviewing successful grant proposals for insights.. C.A Test	4 Hours
WEEK 6, 7,8	**Grant Proposal Writing: Part 1**: • Components of a grant proposal (e.g., abstract, introduction, literature review). • Developing a compelling problem statement and research objectives. **Grant Proposal Writing: Part 2**:	6 Hours

	• Methodology section of a grant proposal. • Data collection, analysis, and timeline. • Budget planning and justification. **Grant Proposal Writing: Part 3**: • Evaluation and dissemination plans. • Writing a clear and persuasive proposal narrative. • Ethical considerations in grant proposal writing.	
WEEK 9,10	**Peer Review and Feedback**: • Conducting peer reviews of grant proposals. • Providing constructive feedback to peers. • Revising and improving grant proposals based on feedback. **Grant Proposal Submission and Post-Award Management**: • Submission procedures and timelines. • Post-award responsibilities and reporting. C.A Test	4 Hours
WEEK 11, 12	• **Presentation and Communication Skills**: • Preparing research presentations. • Communicating research findings effectively. • Public speaking and presentation skills. • **Ethical Considerations in Research and Proposal Writing**: • Research ethics and integrity. • Ethical dilemmas in research and grant proposal writing.	4 Hours
WEEK 13	REVISION	

READING LIST:

1. **Research Design: Qualitative, Quantitative, and Mixed Methods Approaches** by John W. Creswell and J. David Creswell
2. **The Craft of Research** by Wayne C. Booth, Gregory G. Colomb, and Joseph M. Williams
3. **Research Methodology: A Step-by-Step Guide for Beginners** by Ranjit Kumar
4. **How to Write a Grant Proposal"** by Cheryl Carter New and James Aaron Quick
5. **The Only Grant-Writing Book You'll Ever Need** by Ellen Karsh and Arlen Sue Fox
6. **Successful Grant Writing: Strategies for Health and Human Service Professionals** by Laura N. Gitlin and Kevin J. Lyons
7. **Writing Successful Grant Proposals from the Top Down and Bottom Up** by Robert J. Sternberg