<table>
<tr><td>1.</td><td>Name of Course</td><td colspan="5">Research Methodology</td></tr>
<tr><td>2.</td><td>Course Code</td><td colspan="5">GMET5073</td></tr>
<tr><td>3.</td><td>Name(s) of academic staff</td><td colspan="5"></td></tr>
<tr><td>4.</td><td>Rationale for the inclusion of the course/module in the programme</td><td colspan="5"><u>Faculty requirement</u>
Overview of how to design and conduct research projects in the area of information and communication technology. Research study design, preparation of proposals and manuscripts, intellectual property and ethics. Introduction to the main types of research methods, with a more in-depth examination of a few useful methods, to address ICT problems.</td></tr>
<tr><td>5.</td><td>Semester and Year offered</td><td colspan="5">Semester 1 / Year 1</td></tr>
<tr><td rowspan="3">6.</td><td>Total Student Learning Time (SLT)</td><td colspan="4">Face to Face</td><td>Total Guided and Independent Learning</td></tr>
<tr><td rowspan="2">L = Lecture
T = Tutorial
P = Practical
O= Others</td><td>L</td><td>T</td><td>P</td><td>O</td><td rowspan="2">Independent study=84 hours

Total =126</td></tr>
<tr><td>28</td><td>14</td><td>/</td><td>84</td></tr>
<tr><td>7.</td><td>Credit Value</td><td colspan="5">3
28 Hours of Lecture
14 Hours of Tutorial</td></tr>
<tr><td>8.</td><td>Prerequisite (if any)</td><td colspan="5">None</td></tr>
<tr><td>9.</td><td colspan="6">Objectives:
A course that provides an essential overview of the approaches, methods and techniques of research methodology and scientific writing for planning and writing scientific papers incl. Research reports.</td></tr>
<tr><td>10.</td><td colspan="6">Learning outcomes:
By the end of the subject, students should be able to:
Identify different types of research
Demonstrate the ability to search for information
Demonstrate the ability to review the literature critically
Analyse information and formulate research problems
Apply knowledge effectively to new situations and learn from the experience
Examine and consider accurately and objectively any topic, evidence, or situation
Outline/design a research methodology and a time frame
Illustrate a good understanding in academic writing practices
Produce high quality research proposal
Communicate effectively with a variety of audiences through a range of modes and media</td></tr>
<tr><td>11.</td><td colspan="6">Transferable Skills:
Become skilled in academic writing and information searching and formulating research problems.</td></tr>
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12. **Teaching-learning and assessment strategy**

A variety of teaching and learning strategies are used throughout the course, including:

- Classroom lessons. Lectures and Power Point presentations
- Tutorials
- brainstorming;
- Lecturer-led problem-solving sessions,
- Solving assigned problems in groups and individually
- collaborative and co-operative learning;
- Independent study.

Assessment strategies include the following:

- Ongoing quizzes
- Performance Assessment (Project, participation, Assigned exercises)
- Lecturer Observation

13. **Synopsis:**

The "Research Methodology" subject provides a general introduction to the field of research methodology, introducing students to a variety of research methods used in ICT field. To extend knowledge, one must explore, investigate, and contemplate. ICT research includes diverse activities: designing, testing, deploying, and project management. A researcher must be prepared to use a variety of approaches and tools in identifying and formulating the problems. The faculty graduate students need to focus on the following issues: the nature of research and research process, an appropriate research method, the essential stages in planning a research project, literature survey and use of statistical technique to analyze research data.

14. **Mode of Delivery:**

- Classroom lessons. Lectures and Presentations
- Tutorial sessions: Practice exercises

15. **Assessment Methods and Types:**

The assessment for this course will be based on the following:

Coursework		**100%**
• Participation	**5%**	
• Assignment	**40%**	
• Seminar Participation	**40%**	
• Research Proposal	**15%**	
Final Examination		**00%**
Assessment		**100%**

16. **Mapping of the course/module to the Programme Aims**

A1	A2	A3	A4	A5
5	2	1	3	3

17. **Mapping of the course/module to the Programme Learning Outcomes**

LO1	LO2	LO3	LO4	LO5	LO6	LO7
4	3	3	1	4	4	3

18.	Content outline of the course/module and the SLT per topic						
		Details	SLT				
			L	T	P	O	Total
	Topic 1	**Context of Research** • Research: a way of thinking. Application of Research. Definitions of Research. Characteristics of Research. Types of Research. The Research Process.	2	1	**0**	**6**	**9**
	Topic 2	**Writing a Research Proposal** • The Research Proposal. The Introduction. The Problem. The Objective of the Study. The Hypothesis to be tested. The Study Design. The Setting. Measurement Procedures. Sampling. Analysis of Data. Structure of the Report. Problems and Limitations. Work Schedule.	4	2	**0**	**12**	**18**
	Topic 3	**Formulating a Research Problem** • Reviewing the literature. Formulating a Research Problem. Identifying Variables. Constructing Hypothesis.	4	2	**0**	**12**	**18**
	Topic 4	**Conceptualizing a Research Design** • The Research Design. Selecting a Study Design.	4	2	**0**	**12**	**18**
	Topic 5	**Constructing an Instrument for Data Collection and Sampling** • Selecting a Method for Data Collection. Establishing the Validity and Reliability of a Research Instrument. Sampling.	4	2	**0**	**12**	**18**
	Topic 6	**Collecting and Processing Data** • Considering Ethical Issues in Data Collection, Processing, and Displaying Data.	4	2	**0**	**12**	**18**
	Topic 7	**Writing a Research Report** • Research Writing in General. Referencing. Writing a Bibliography. Developing an Outline. Writing About a Variable.	6	3	**0**	**18**	**27**
	Total SLT		**126**				

19.	**Main references supporting the course:** 1. Horn, R., Schwarzkopf, A. and Price, R., **"Information Systems Solutions: A project approach"**. McGraw Hill, 2006
	Additional references supporting the course: 1. Holtom, Daniel. "Enjoy writing your science thesis or dissertation! : a step by step guide to planning and writing dissertations and theses for undergraduate and graduate science students", Imperial College Press. 1999 2. Robert A Day. "How to write and publish a scientific paper". Oryx Press, 1989. 3. P D Leedy. "Practical Research: Planning and Design", Collier Macmillan, 1989. 4. Lindsay D. "A Guide to Scientific Writing", Longman, 1995.
20.	**Other additional information** All materials will be available to the students online.