

**Faculty of Engineering and Technology**  
**MGM UNIVERSITY**

***SYLLABUS FOR RESEARCH METHODOLOGY***

<b>NO.</b>	<b>Description</b>
1	Meaning of research
2	Objectives and motivation for research
3	Research Process
4	Identification and definition of a research problem
5	Literature survey / review and its importance
6	Ethical aspects of research
7	IPR issues - patenting, copyrights etc.
8	Need for a research design
9	Features of a good design
10	Important concepts relating to research design
11	Different research designs
12	Basic principles of experimental design
13	Sampling design
14	Selecting a sampling procedure
15	Different types of sample designs
16	Measurements in research
17	Scales of measurement
18	Scaling and classification of scales
19	Important scaling techniques
20	Methods of data collection
21	Difference between questionnaires and schedules
22	Secondary data - methods of collection
23	Processing operations
24	Types of analysis
25	Statistics in research
26	Measures of dispersion
27	Measures of skewness
28	Regression analysis
29	Correlation
30	Hypothesis and hypothesis testing
31	Parametric and non-parametric hypothesis test
32	ANOVA, ANOCOVA
33	Chi-square test, multivariate analysis
34	Research Report
35	Mechanics of writing
36	Layout of research paper
37	Impact factor
38	Citation and acknowledgements