



RESEARCH METHODOLOGY (UANP 0013)

SEMESTER 2 2017/2018

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COURSE OVERVIEW

- ❖ Ice-Breaking
- ❖ Course Synopsis
- ❖ Course Outcome
- ❖ Course Outline
- ❖ Assessment and Grading
- ❖ Course References

ICE BREAKING

Nurulhuda Firdaus Mohd Azmi (Huda)

BSc Computer Science (UTM)

MSc Applied Statistics (UPM)

PhD in Computer Science (Univ. Of York, UK)

Admin Post:

COORDINATOR for Master of Science (Business Intelligence & Analytics) Program

Area of research:

Soft Computing, Operational Research, Information Filtering, Data Mining, Data Analytics

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COURSE OUTCOME

At the end of the course, students will be able to:

- **Formulate** the problem and the hypothesis of the research domain identified
- **Arrange** the relevant literature while applying research skills using research management tool
- **Create** a critical evaluation of the relevant literature while applying research skills
- **Propose** the research design and **display** research instruments.

COURSE OUTLINE

TOPICS

Introduction, Research in Computing, Research Paradigm, Research Approaches, Benchmark for Research in Computing

Problem Formulation

Research Process and Research Design

Systematic Literature Review

Research Tools and Instrument

Using research management tools like Endnote, Mendeley etc.

Citation, Referencing and Academic Ethics

Scientific Research Methodology: Quantitative Methodology

Scientific Research Methodology: Qualitative Methodology

Scientific Research Methodology: Mixed Methodology

Guide to Research Proposal Writing

ASSESSMENT & GRADING

| GRADING | | |
|---------|---------------------------|--------|
| No | Assessment | %Total |
| 1 | Report: Research Proposal | 30 |
| 2 | Report: SLR | 25 |
| 3 | Report: Research Design | 20 |
| 4. | Quiz | 15 |
| 5. | Presentation | 10 |
| Total | | 100% |

COURSE SCHEDULE & MATERIAL

COURSE & ASSIGNMENT MATERIAL → will be hand out after class

COURSE SCHEDULE:

Topic 1 (16 April) : Ice Breaking, Introduction to Research, Research Tools & Instrument & Discussion on Assignment # 1 (Research Proposal)

Topic 2 (20 April) : Research Design, Problem Formulation, Research Gap, Research Hypothesis, Research Questions and Research Objectives, Guide to write Research Proposal & Discussion on Assignment # 2 (Research Design based on selected Case Study)

Topic 3 (23 April) : Research Proposal Preparation

Topic 4 (27 April) : Literature Review, Systematic Literature Review, Citation Referencing & Research Ethics & Discussion on Assignment # 3 (SLR Assignment) + Discussion on Assignment # 4 (Technical Paper Writing)

Topic 5 (7 Mei) : Scientific Research Methodology: The Quantitative Methodology + Qualitative Methodology

Topic 6 (11 Mei) : Scientific Research Methodology – The Mixed Method Methodology & Research Proposal Presentation

COURSE REFERENCES

- Not Limited to
- 1) Dr Ranjit Kumar, Research Methodology: A Step-by-Step Guide for Beginners. Sage Publications Ltd; Third Edition, December 8, 2010. ISBN-10: 1849203016, ISBN-13: 978-1849203012
 - 2) Wayne C. Booth, Gregory G. Colomb and Joseph M. Williams. The Craft of Research, Third Edition (Chicago Guides to Writing, Editing, and Publishing). University Of Chicago Press; Third Edition, April 15, 2008. ISBN-10: 0226065669. ISBN-13: 978-0226065663
 - 3) Larry B. Christensen, R. Burke Johnson and Lisa A. Turner, Research Methods, Design, and Analysis. Allyn and Bacon; 11 edition, April 23, 2010. ISBN-10: 0205701655, ISBN-13: 978-0205701650
 - 4) Larry B. Christensen, Experimental Methodology, Allyn & Bacon; 10th edition, July 1, 2006. ISBN-10: 0205484735, ISBN-13: 978-0205484737
 - 5) Yvonne N. (Nguyen) Bui. How to Write a Master's Thesis. Sage Publications, Inc, April 22, 2009. ISBN-10: 1412957109, ISBN-13: 978-1412957106