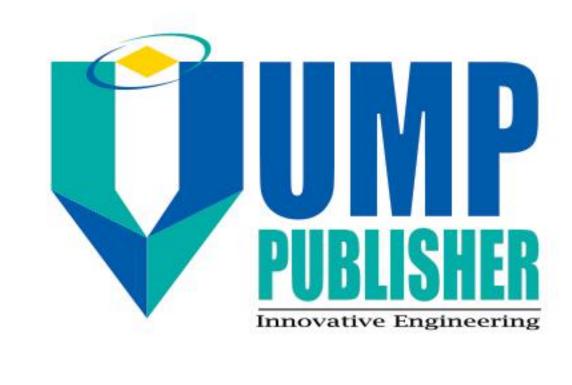**Dr Mazlina Abdul Majid** is an Associate Professor at Universiti Malaysia Pahang (UMP). She has more than 15 years experience as an academic lecturer at Faculty of Computer Systems & Software Engineering, UMP. She received her PHD in Computer Science from University of Nottingham, UK. Her Master and Bachelor Degrees were awarded from University of Malaya and Universiti Teknologi Malaysia, respectively. She holds various resposibilities in the administrative works including as a Deputy Dean of Research and Graduate Studies and Editor in Chief for International Journal of Computer Systems & Software Engineering. She is one of the academic program committee in UMP and other universities due to her vast experiences in teaching master and undergraduate courses. Teaching Research Methodology course is one of her preferences as she is enthusiastic on research exploration. Her research expertise is Sofware Agent, Software Usability Testing, Educational Software and Modelling & Simulation. She has published more than 100 publications in books, journals and conference proceedings. Moreover, she has shown an excellent achievement in research competition by wining gold medals and various awards in local and international exhibitions. Her outsanding performance in academic and research has been recognised locally and internationally.

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RESEARCH OVERVIEW

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RESEARCH OVERVIEW

MAZLINA ABDUL MAJID

PREFACE

The rebranding of 8 modules has been approved by the UMP Senate in February 2016. The 8 modules comprise:

     i.   Philosophy of Science and Ethics in Research
    ii.   Research Overview
   iii.   Literature Review
   iv.   Methodology
    v.   Data Collection and Analysis
   vi.   Scientific Writing
  vii.   Preparation for viva-voce
 viii.   Conceptual Paper

8 modules are one of the Institute of Postgraduate Studies (IPS) initiatives in helping students to understand ways and means to carry out research at Master's and PhD level. There are 2 sets of 8 modules provided by IPS in accordance with the technology and engineering cluster. These 8 modules are intended to help students in conducting systematic research owing to its utmost importance in determining the effectiveness and efficiency of the research process. The 8 modules shall help students to understand the research problem and identify the areas of research. The modules also assist students on how to write a literature review in order to understand how other researchers approach, define or manage the problem to keep the research pertinent to what is current in the field. In addition, 8 modules also facilitate students to understand the methods of collecting data in an organized and controlled way to achieve valid results, analyze the data according to the considered problem and make conclusions. Therefore, IPS hopes that these modules will be able to provide some insights and benefit students in conducting research at Master's and PhD level.

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MODULE DESCRIPTION

Welcome to this course titles "'Research Overview". This objective of this course is to provide a guide to postgraduate students as they embark on their research journey. In this introduction, we want to point out some features of learning about research overview and discuss how to use this report in research. As postgraduate students of UMP, students will be familiar with the idea of research being a multi-paradigm discipline: research does not have a single paradigm of interlinked theory and method. Presently there have been concerns on the philosophical basis of research and the choice of appropriate research methods. Research can be carried out in two main methods; qualitative and quantitative research strategy, thus we will be considering quantitative and qualitative approaches separately. But as far as the practice of research is concerned, it is also mandatory to know that the choice of strategy is based on the research question and what type of answers are to be pursued in the research. Therefore, this course aims to:

- Describe the key types, category and characteristics of research.
- Understand how to write an acceptable research proposal.
- Understand how to conduct research based on the research process
- Develop skills and knowledge about quantitative and qualitative research.
- Identify criteria used to evaluate an ethical research.

MODULE OUTCOMES

By the end of the course, and having completed the essential reading and activities, students should be able to:

- Have knowledge on the types, categories, characteristics and purpose of research.
- Write acceptable research proposal.
- Understand the complete research process
- Define a research method, tools or techniques.
- Discuss the practice and principles of qualitative and quantitative research.
- Use skills and knowledge acquired in the course to evaluate the quality of published research by a fellow researcher, academicians, practitioners and other scientists.
- Gain in-depth insight on ethics in research.

MODULE SUBTOPICS

- ❖ TOPIC 1 INTRODUCTION TO RESEARCH
- ❖ TOPIC 2 PREPARING FOR A RESEARCH STUDY (PROPOSAL WRITING)
- ❖ TOPIC 3 HOW TO CONDUCT RESEARCH
- ❖ TOPIC 4 ETHICS IN RESEARCH
- ❖ CONCLUSION
- ❖ REFERENCES AND FUTURE READING

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