

Research Fundamentals

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Chief, AI Research Center, ACEM



Who am I?

2011

Bachelor's Degree (B.E.,)

Information Technology Engineering
Nepal



2014

Masters Degree (M.Eng.,)

Telecommunication Engineering
Thailand



51-100

QS WUR Ranking By Subject



2017

Doctoral Degree (D.Eng.,)

Telecommunication and Artificial
Intelligence

Thailand, Japan, USA



NII

Inter-University Research Institute Corporation
Research Organization of Information and Systems

National Institute of Informatics

W

UNIVERSITY of WASHINGTON

2022

PostDoc

Artificial Intelligence
Thailand, Japan



Chula
Chulalongkorn University



229

QS World University Rankings



76

QS World University Rankings

2023

Chief, AI Research Center

Advanced College of Engineering
and Management
Kathmandu, Nepal



**ADVANCED COLLEGE
OF ENGINEERING & MANAGEMENT**
Affiliated to Tribhuvan University (T.U.)



Research Profile- Google Scholar

Research Interests:

- Wireless Communication
- Artificial Intelligence
- Telecommunications
- Project Management



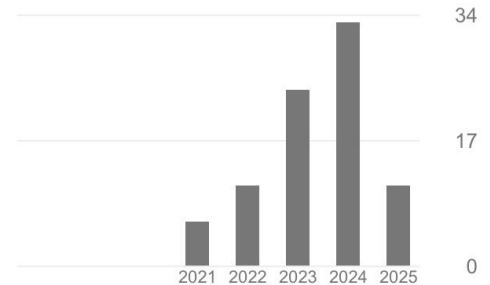
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[wireless communicaiton](#) [spectrum sensing](#) [Artificial Intelligence](#)

Cited by

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Citations	86	85
h-index	3	3
i10-index	2	2



Course Outline- Syllabus

Unit 1: Introduction (4 hrs)

Unit 2: Research Process Model (10 hrs)

Unit 3: Participants and Research Ethics (4 hrs)

Unit 4: Proposal Writing (4 hrs)

Unit 5: Report Writing (4hrs)



Course Outline: Introduction

1.1 What is research?

1.2 Research Aim and Objectives

1.3 Features of Research

1.4 Types of Research

1.5 The 6Ps of Research

1.6 Purpose of Research- reasons for doing research

1.7 Product of Research- outcomes of research

1.8 Research and Project



Course Outline: Research Process Model

2.1 Personal Experiences and Motivation

2.2 Literature Review

2.3 Research Question

2.4 Conceptual framework

2.5 Strategies

2.6 Data Generation Methods

2.7 Data Analysis



Course Outline: Participants and Research Ethics

3.1 Participants

3.2 The law and Research

3.3 Rights of People Directly Involved

3.4 Responsibilities of an Ethical Researcher



Course Outline: Proposal Writing

4.1 What is a research proposal?

4.2 Need of a Research Proposal

4.3 Components of a Research Proposal

4.4 A case study on any research paper/project



Course Outline: Report Writing

5.1 What is a research report?

5.2 Need of a Research Report

4.3 Components of a Research Report

4.4 A case study on any research paper/report



Course Outline- Books

1. Oates, B. J., Griffiths, M., & McLean, R. (2022). Researching information systems and computing. Sage.
2. Walia, A. M., & Uppal, M. (2020). Fundamentals of Research. Notion Press.



Course Outline- Evaluation

Internal Evaluation	Weight	Marks	External Evaluation	Marks
Theory		30	Semester End Examination	50
Attendance & Class Participation	10%			
Assignments	20%			
Presentation/Quizzes	10%			
Internal Assessment	60%			
Practical		20		
Proposal Report	30%			
Project Presentation	10%			
Final Project Report	40%			
Completeness of Project	20%			
Total Internal		50		
Full Marks: 50 + 50 = 100				



Practical Work

Phase I:

- The students are grouped in teams each containing at most 4 students.
- Each team chooses a problem to solve as their project/research work and they work in a team.
- They must define clearly what the problem is, justify why they choose the problem and how they will solve it and submit this as a proposal report (based on Unit 2 and 4).
- Each team presents their proposal orally.

Phase II:

- After the approval of their proposal, they start working on the project.
- Each team follows the research process studied in Unit 2 to do their project/research work.
- Students keep reporting their progress about the project/research work to their instructor.
- Students complete the project/research work, develop the final project/research report (based on Unit 2 and 5) and again present it orally.



Who are you?

Course Objective

1. What is research or project work,
2. How research is done,
3. Explain what research ethics must be followed during the research/project work,
4. How the research/project proposal is written, and
5. How to write final research/project report.