Capstone Project (COMP 8960SEF)

Topic 0 - Project Introduction

Prepared by Dr. Jeff Au Yeung

香港都會大學
HONG KONG METROPOLITAN UNIVERSITY

Acknowledge: Thanks Prof. Andrew Lui providing the lecture material

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What is Capstone Project?

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Develop innovative and viable solutions for a worthwhile problem with computing technologies

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Capstone Project (2025 Spring)

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COMP 8960SEF – Capstone Project (for MCOMP) (6 credit-unit)
(2025 Spring + 2025 Summer)

- This course aims to provide an opportunity for students to develop a computing solution for a non-trivial problem in an application or technical domain. Students in the course will integrate knowledge and techniques in computing acquired in earlier courses in the programme and manage the project progress until completion.

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Learning Outcomes

- *Explain* the state-of-the-art computing techniques and applications related to his/her project.
- *Analyse* and *propose* solutions for computing technology or application problems.
- *Implement* prototypes of the proposed solutions with suitable methods.
- *Utilize* appropriate tools for project development.
- *Write* effective project reports to communicate project findings.

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Professionalism

- Bear responsibility
- Respectful, courteous, and considerate
- Competent and dependable
- Integrity

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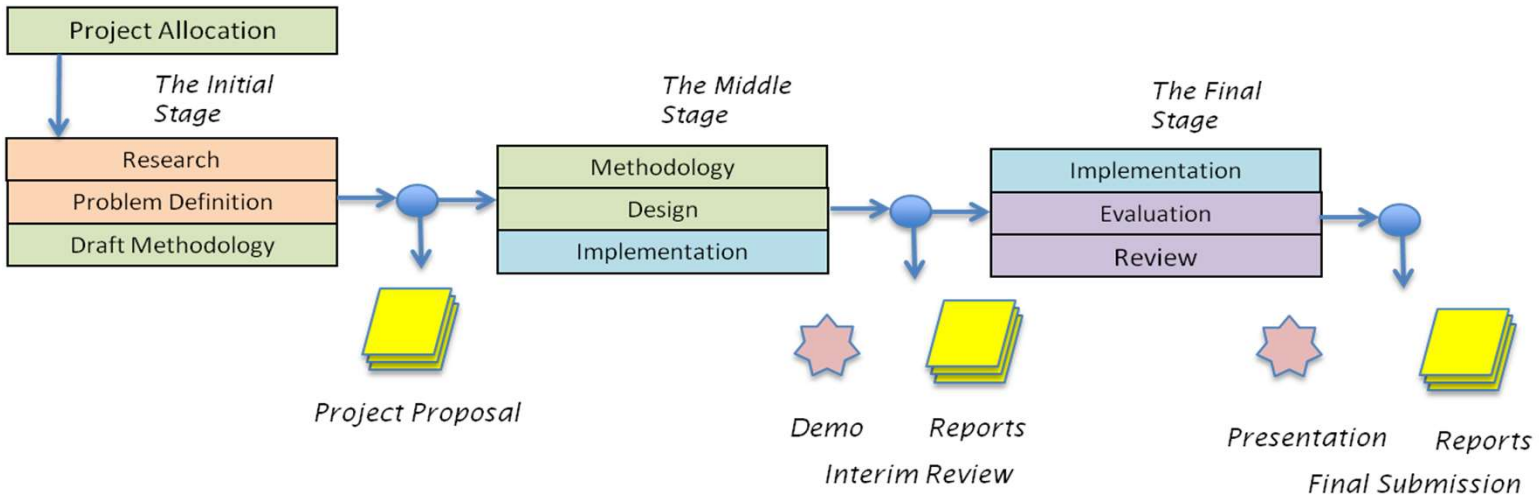
Stages of Capstone Project



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Assessment

Assessment	*Weighting*	*Components*
a. Initial Report (OCAS)	*15%*	*(1) Proposal Presentation (7.5%)* *(2) Initial Report (Project Proposal) (7.5%)*
b. Interim Review (OCAS)	*25%*	*(1) Interim Report + Demo (10%)*** *(2) Progress (15%)*
c. Final Report (OES)	*60%*	*(1) Final Report (15%)*** *(2) Final Presentation + Demo (15%)*** *(3) Overall Project Performance (30%)*

You need to get pass on both OCAS and OES to pass the course

** involved second examiner

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Schedule (2025 Spring)

Activities	*Week*	*Date*	*Topics*
a. Lectures (Spring Semester)	*1 (20)*	*13 Jan 2025*	*0- Introduction / 1- Project Type (f2f lecture)*
	2 (21)	*20 Jan 2025*	*2- Getting Started in Your Final Year Project (lecture video)*
	3 (22)	*27 Jan 2025*	*3- Defining Your Project (lecture video)*
	4 (23)	*3 Feb 2025*	*4 – Project Proposal Part 1 (lecture video)*
	5 (24)	*10 Feb 2025*	*5 – Project Proposal Part 2 (lecture video)*
	10 (29)	*17 Mar 2024*	*6 - The Middle Stage and Methodologies (lecture video)*
	13 (32)	*7 Apr 2024*	*7 – Interim Report (f2f lecture)*
b. Project topic selection	*1,2 (20,21)*	*25 Jan 2025*	*Submission of the Project Topic and Project supervisor allocation*
c. Project Proposal Presentation	*6 (25)*	*17, 20 Feb 2025*	*The presentation schedule will be announced later*
	7 (26)	*24, 27 Feb 2025*	
d. Initial Report	*8 (27)*	*9 Mar 2025*	*Submit through the OLE*

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Schedule (2025 Summer)

Activities	*Week*	*Date*	*Topics*
d. Interim Report **Interim Demo**	*1 (37)*	*18 May 2025 (tentative)*	*Submit through the OLE*
e. Lecture (Summer semester)	*2 (38)* *6 (42)* *10 (46)*	*19 May 2025* *16 June 2025* *14 July 2025*	*8 – Evaluation and Research Methodology (lecture video)* *9 – Effective Oral Presentation (lecture video)* *10 – Writing Final Report (lecture video)*
f. Final Presentation + Demo	*11 (47)* *12 (48)*	*21, 24 July 2025* *28, 31 July 2025*	*The presentation schedule will be announced later*
g. Final submission	*13 (49)*	*10 Aug 2025 (tentative)*	*1. Final Report* *2. Project Video* *3. Source Code*

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Assessment: Plagiarism and Copyright Infringement

- Plagiarism will be penalized severely – failed the course
  - Academic dishonesty – pretending the work is done by you
    - Copying from another document without reference
    - Using a method and not attributing to the original author
- Copyright infringement may be sued by the owner
  - Use of creative work without permission

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Project Selection and Supervisor Allocation

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- **Basic Principle**: You choose your own topic based on your academic background and working experience

- Individual Meetings will be arranged on week 1 and week 2 (16,20,23 Jan 2025)
  - During the meeting, you need to prepare one A4-page document with your project idea.
  - We will give you some feedback and suggestions to let you further revise your topic.
  - We prefer this meeting to be face-to-face, but a Zoom meeting is also ok if it is necessary.
  - The meeting schedule will be announced later.

- You need to submit your project topic on 25 Jan 2025 (in OLE)
  - One A4 page
  - (1) The title of the topic
  - (2) A summary of your proposal idea (<200 words)

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Project Selection and Supervisor Allocation

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- We are going to have **4** project supervisors in this course.
  - Dr. Jeff Au Yeung
  - Prof. Kenneth Tong
  - Prof. CK Poon
  - Ms. Justina Ho

- The supervisor allocation will be done on week 3. We will allocate the project based on your topics, the supervisors' expertise, and the supervisors' loading.

- The result of the allocation will be released in late week 3 (after the Lunar New Year holidays)

- You are expected to meet with your supervisors at least once every 2 weeks

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Project Supervisor

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Dr. Jeff Au Yeung

- Senior Lecturer, HKMU
- SMIEEE, MIET, MHKCS
- Programme Leader (BSCHCS, BSCHCOMP, MCOMP)
- BEng, MPhil, PhD (HKUST)
- Research Area
  - Digital Video and Image Processing
  - Digital Speech Processing
  - Natural Language Processing
  - Machine Learning
  - Deep Learning
  - I also supervised topics related to IoT, hardware-related topics

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Project Supervisor

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Prof. Kenneth Tong

- Chair Professor of Antennas and Applied Electromagnetics, HKMU
- Former Professor of Antennas and Applied Electromagnetics, University College London
- FIEEE, CEng, FEMA, FHEA
- BEng, PhD (CityU)
- Research Area
  - Antenna Design
  - Microware Engineering
  - Communication Engineering
  - Cyberphysical systems and the Internet of Things

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Project Supervisor

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Prof. CK Poon

- PT Lecturer, HKMU
- Former Professor, Dept. of Computer Science, The Hang Seng University of Hong Kong
- BSc, MPhil (HKU), PhD (University of Toronto)
- Research Area
  - Artificial Intelligence, Data Mining, & Information Retrieval,
  - Education Technology,
  - Data Structures and Algorithms
  - Operations Research, and
  - Computational Complexity

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Project Supervisor

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Ms. Justina Ho

- PT Lecturer, HKMU
- Director, Talent Wealth Group Limited
- BMath (University of Waterloo), MSc (University of Warwick), LLB (University of London)
- Hon FIET, MIEEE
- Research Area
  - Project Management,
  - Engineering Consulting,
  - Innovation Commercialization,
  - Digital Transformation,
  - Technology Transfer, International, STEM Education, EDI, NGO Management

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Getting Exposure to the Real World of IT

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Various Project Competition

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