Xi'an Jiaotong-Liverpool University

西交利物浦大學

School of Advance Technology
Department of Computing

MODULE HANDBOOK

CPT203
Software Engineering 1

Soonphei, Tin

Semester *1*

2022/23

SECTION A: Basic Information

❑ **Brief Introduction to the Module**

The module is intended to develop an understanding of the problems associated with the development of significant computing systems (that is, systems that are too large to be designed and developed by a single person, and are designed to be used by many users) and to appreciate the techniques and tools necessary to develop such systems efficiently, in a cost-effective manner. In particular, this module introduces problems with each of the fundamental software engineering activities, and more importantly, methodologies and tools that are used to solve these problems. At the end of the module, the students are expected to realize the problems in designing and building significant computer systems. They should understand the need to design systems that fully meet the requirements of the intended users and appreciate the need to ensure that the implementation of a design is adequately tested to ensure that the completed system meets the specifications. Students should be fully aware of the principles and practice of an object-oriented approach to the design and development of software systems and their components and be able to apply these principles in practice.

❑ **Key Module Information**

Module name: *Software Engineering 1*

Module code: *CPT203*

Credit value: *5*

Semester in which the module is taught: *Semester 1*

Pre-requisites needed for the module: *CPT105 OR CPT111*

Programmes on which the module is shared: *ICS, CST, IMS*

❑ **Delivery Schedule**
- Lecture:
  - Group 1 : Monday 9 AM to 12 Noon (EB138)
  - Group 2 : Wednesday 9 AM to 12 Noon (EB138)
- Tutorial:
  - Group 1: Tuesday 1 PM to 2 PM (SD102)
  - Group 2: Friday 12 Noon to 1 PM (SC169)

** Refer to timetable scheduled by the registry.

- **Module Leader and Contact Details**

Name: *Soon Phei Tin*

Email address: *soon.tin@xjtlu.edu.cn*

Office telephone number:　*+86 (0)512 8188 9038*

Room number and office hours: *SD531, (Office hour: Refer to Learning Mall Core)*

Preferred means of contact: *e-mail*

- **Additional Teaching Staff and Contact Details**

Name: *Yihong Wang*

Email address: *yihong.wang@xjtlu.edu.cn*

Office telephone number:　*+86 (0)512 8188 7188*

Room number and office hours: *SD421, (Office hour: Refer to Learning Mall Core)*

Preferred means of contact: *e-mail*

SECTION B: What you can expect from the module

- **Educational Aims of the Module**

The module is intended to develop an understanding of the problems associated with the development of significant computing systems (that is, systems that are too large to be designed and developed by a single person, and are designed to be used by many users) and to appreciate the techniques and tools necessary to develop such systems efficiently, in a cost-effective manner.

- **Learning Outcomes**

At the end of the module, the student will:

[A] Appreciate and describe the issues and methods involved in designing and building computer systems to meet business goals.

[B] Understand how user requirements are elicited and incorporated into the design of a computing system while being able to recognise relevant legal, social, ethical and professional issues.

[C] Appreciate the need to ensure that the implementation of a design is adequately tested to ensure that the completed system meets the specifications.

[D] Apply an object-oriented approach to the design and development of software systems and their components.

[E] Recognize any risks or safety aspects that may be involved in the operation of a computer system.

❑ **Assessment Details**

Initial Assessment

No	Method	Assessment Type (Exam or CW)[2]	Learning outcomes assessed (use codes under Learning Outcomes)	Duration	Week	% of Final Marks	Resit (Y/N/S)[3]
1	Final Exam	Exam	ALL	2 hours		80	S
2	Assessment Task	CW	A		7	10	S
3	Assessment Task	CW	C		11	10	S

Resit Assessment

No	Assessment Type (Exam or CW)	Learning outcomes assessed (use codes under Learning Outcomes)	Duration	Week	% of Final Mark
1	Exam	ALL	2 hours		100

The resit exam will assess all of the learning outcomes of the module, and will be weighted as 100% of the final module mark. Other components of the assessment, regardless of whether or not the student passed or failed, will not be included in the calculation of the final module mark, following resit assessment.

❑ **Methods of Learning and Teaching**

Students will be expected to attend three hours of formal lectures, as well as to participate in one hour of supervised practical classes in a typical week. In addition, students will be expected to devote six hours of unsupervised time to private study: private study will provide time for reflection and consideration of lecture material and background reading.

❑ **Syllabus & Teaching Plan**

Week Number and/or Date	Lecture/Seminar/ Field Trip/Other	Topic/Theme/Title	Pre-reading
Week 2	Lecture	Intro to Software Engineering	Chapter 1
Week 3	Lecture	Software Process	Chapter 2
Week 4	Lecture	Agile Methodologies	Chapter 3
Week 5	Lecture	Requirement Engineering	Chapter 4
Week 6	Lecture	Systems Modelling and UML	Chapter 5
Week 7	Lecture	Systems Modelling and UML	Chapter 5
Week 8	Other	Assessment 1	
Week 9	Lecture	Architectural Design	Chapter 6
Week 10	Lecture	Design and Implementation	Chapter 7
Week 11	Lecture	Design and Implementation	Chapter 7
Week 12	Lecture	Software Testing + Assessment 2	Chapter 8
Week 13	Lecture	Project Management	Chapter 22
Week 14	Lecture	Revision	

❑ **Reading Materials**

Reference textbook

Ian Sommerville, Software engineering, 9th Edition, Pearson Publisher

Software Engineering: A Practitioner's Approach,RS Pressman, McGraw-Hill,2005

The Unified Modelling Language User Guide,G Booch, J Rumbaugh, and I Jacobson,Addison Wesley,1999

Project Management,H. Maylor,Pitman,1996

SECTION C: Additional Information

❑ **Student Feedback**

The University is keen to elicit student feedback to make improvements for each module in every session. It is the University policy that the preferred way of achieving this is by means of an online Student Module Feedback Questionnaire. Students will be invited to complete the questionnaire survey for this module at the end of the semester.

You are strongly advised to read the policies mentioned below very carefully, which will help you better perform in your academic studies.   All the policies and regulations related to your academic study can be found in 'Assessment and Examination' section under the heading "Policies and Regulations*" on* [E-bridge](#).

❑ **Plagiarism, Cheating, and Fabrication of Data.**

Offences of this type can result in attendance at a University-level committee and penalties being imposed. You need to be familiar with the rules. Please see the "Academic Integrity Policy" available on e-Bridge in the 'Assessment and Examination' section under the heading 'Policies and Regulations'.

❑ **Rules of submission for assessed coursework**

The University has detailed rules and procedures governing the submission of assessed coursework.   You need to be familiar with them. Details can be found in the "Code of Practice for Assessment" available on e-Bridge in the 'Assessment and Examination' section under the heading 'Policies and Regulations'.

❑ **Late Submission of Assessed Coursework**

The University attaches penalties to the late submission of assessed coursework. You need to be familiar with the University's rules. Details can be found in the "Code of Practice for Assessment" available on e-Bridge in the 'Assessment and Examination' section under the heading 'Policies and Regulations'.

❑ **Mitigating Circumstances**

The University is able to take into account mitigating circumstances, such as illness or personal circumstances which may have adversely affected student performance on a module. It is the student's responsibility to keep their Academic

Advisor, Development Advisor, Programme Director, or Head of Department informed of illness and other factors affecting their progress during the year and especially during the examination period. Students who believe that their performance on an examination or assessed coursework may have been impaired by illness, or other exceptional circumstances should follow the procedures set out in the "Mitigating Circumstances Policy", which can be found on e-Bridge in the 'Assessment and Examination' section under the heading 'Policies and Regulations'.

❑ **Learning Mall Core**

Copies of lecture notes and other materials are available electronically through XJTLU Learning Mall Core, the University's virtual learning environment at: https://sso.xjtlu.edu.cn/login.