INTRODUCTION TO SOFTWARE ENGINEERING (CT114H)

Overview of Course

(20 theory hours + 20 lab hours)

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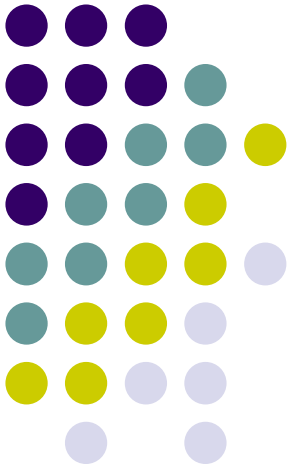
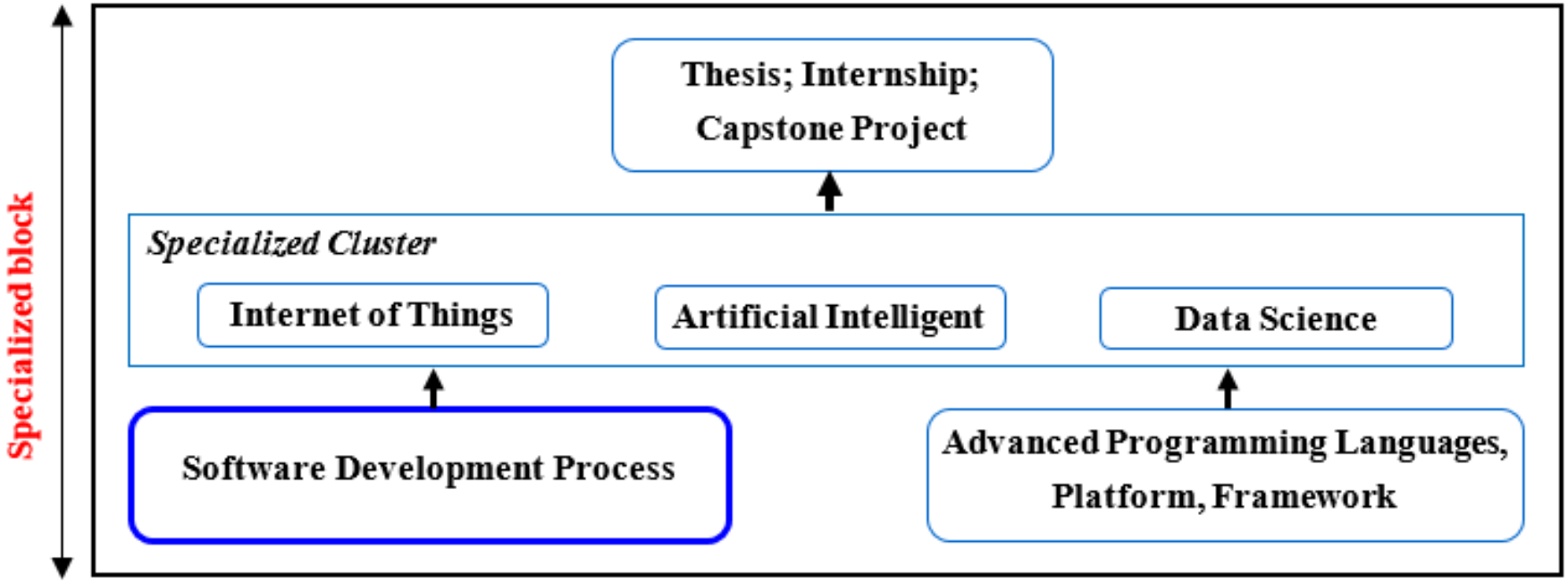
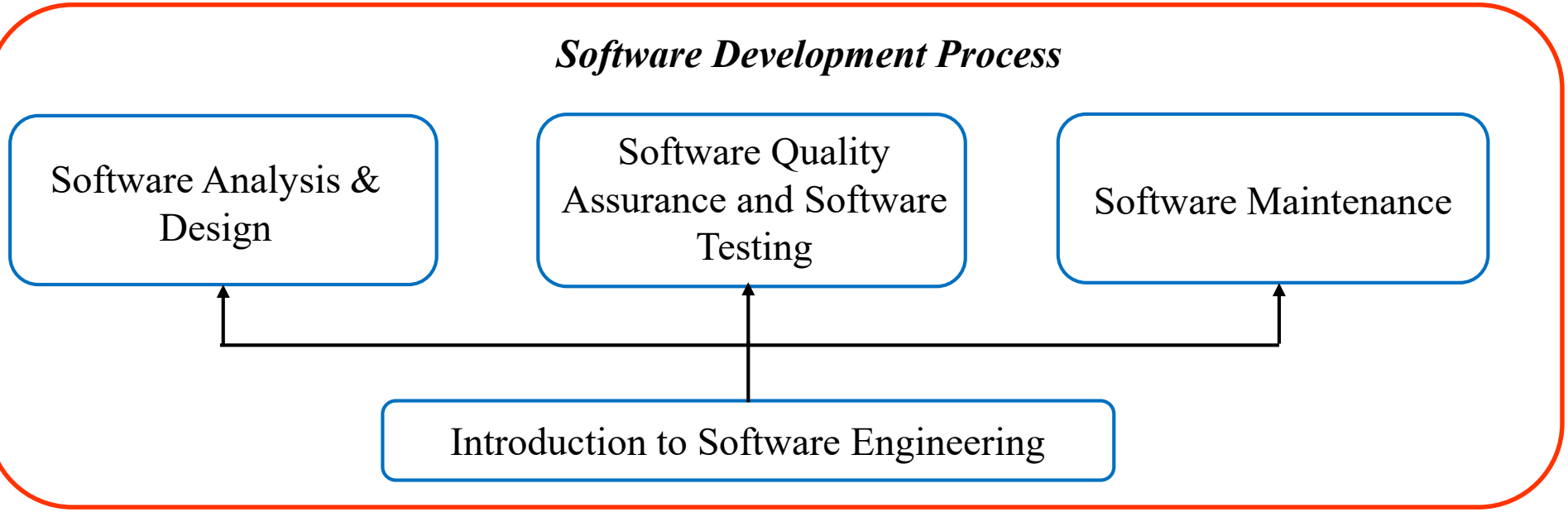
(pplan@ctu.edu.vn)



Outline

- Course learning outcomes
- Course content
- Textbook and references
- Course schedule


Specialized block
Thesis; Internship;
Capstone Project
Specialized Cluster
Internet of Things
Artificial Intelligent
Data Science
Software Development Process
Advanced Programming Languages,
Platform, Framework


Software Development Process
Software Analysis & Design
Software Quality Assurance and Software Testing
Software Maintenance
Introduction to Software Engineering

Course Learning Outcomes

Knowledge

- Explain terminology used in software engineering (SE), the importance of SE, the phases of software development, the characteristics of well-known software process models and the required tasks in software project management.
- Specify the steps of process for capturing requirements, the design contents, the programming contents, the steps and methods of software testing, and the tasks for deploying and maintaining software systems.
- Distinguish the software measurement and cost estimation methods.

Skills

- Implement the software development for a project (emphasis on analysis, design, and unit test).
- Improve technical writing skills.
- Learn to work with a group.

Attitudes/Autonomy/Responsibilities

- Have conscious to develop a software product according to process and quality assurance.

Course Content

- Part I: Overview of software engineering
- Part II: Software process
- Part III: Software measurement and cost estimation

Course Content

- Part I: Overview of software engineering
  - What is software engineering?
  - Software process models
  - Software project management
    - Project schedule
    - Project personnel
    - Quality management
    - Software configuration management
    - …

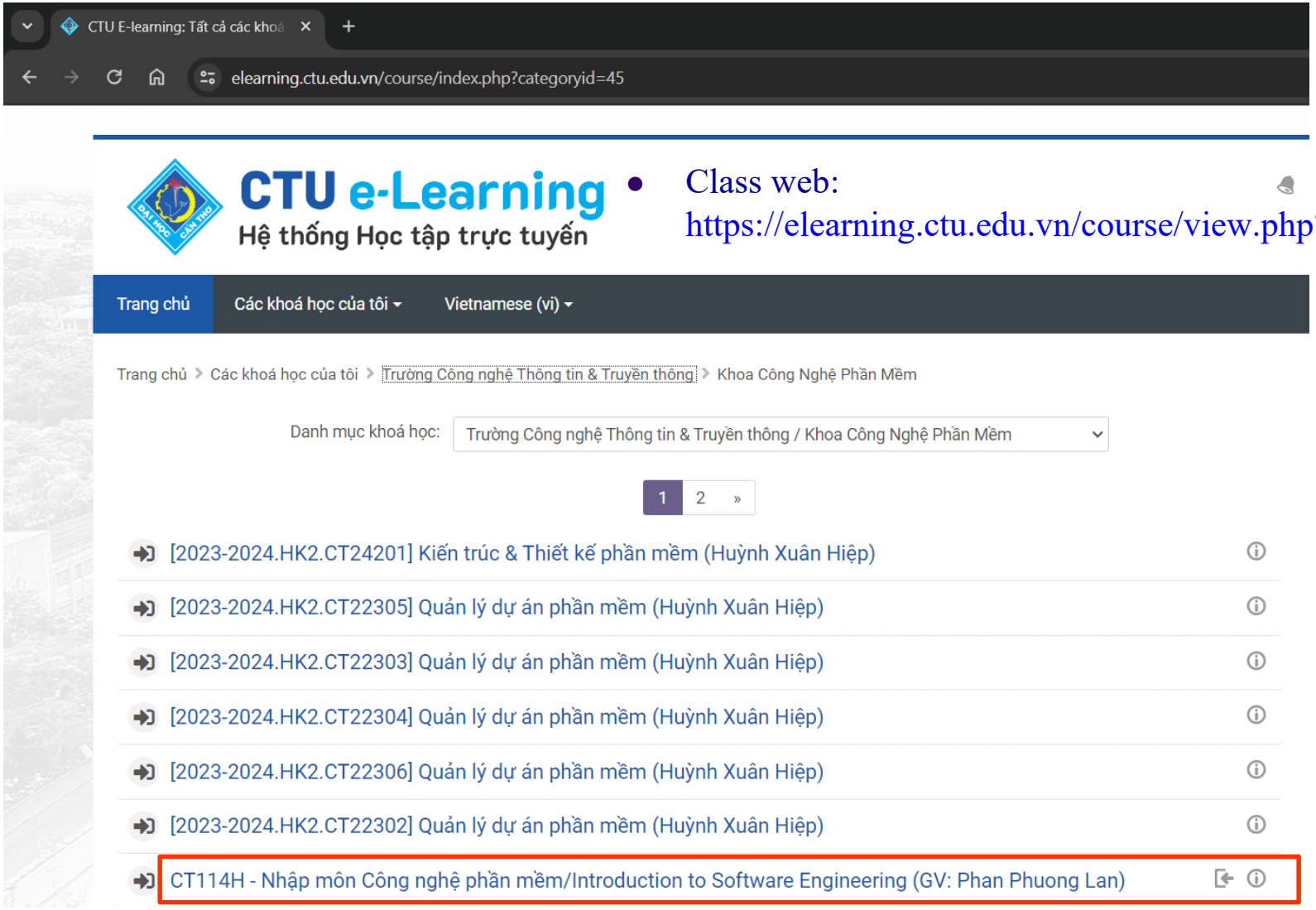
Course Content

- Part II: Software process
  - Software specification
  - Design
  - Implementation
  - Validation (software testing)
  - Deployment
  - *Software maintenance*

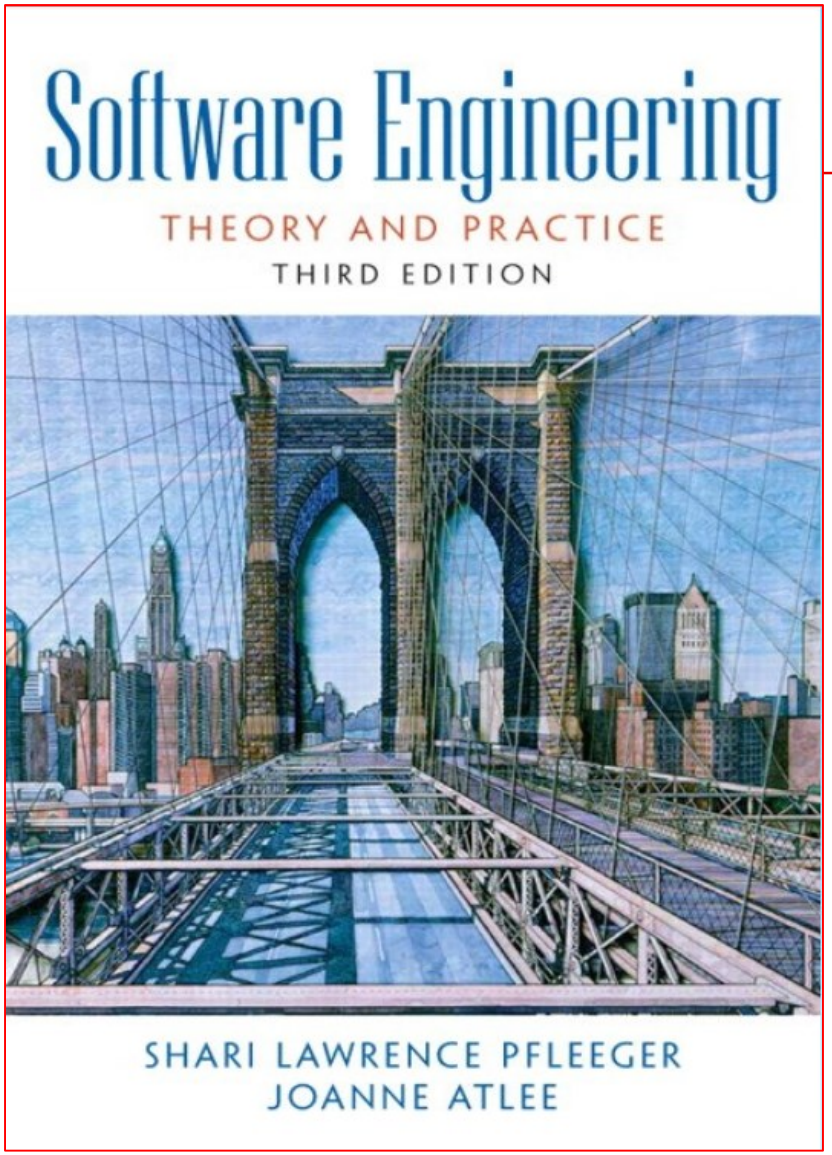
Course Content

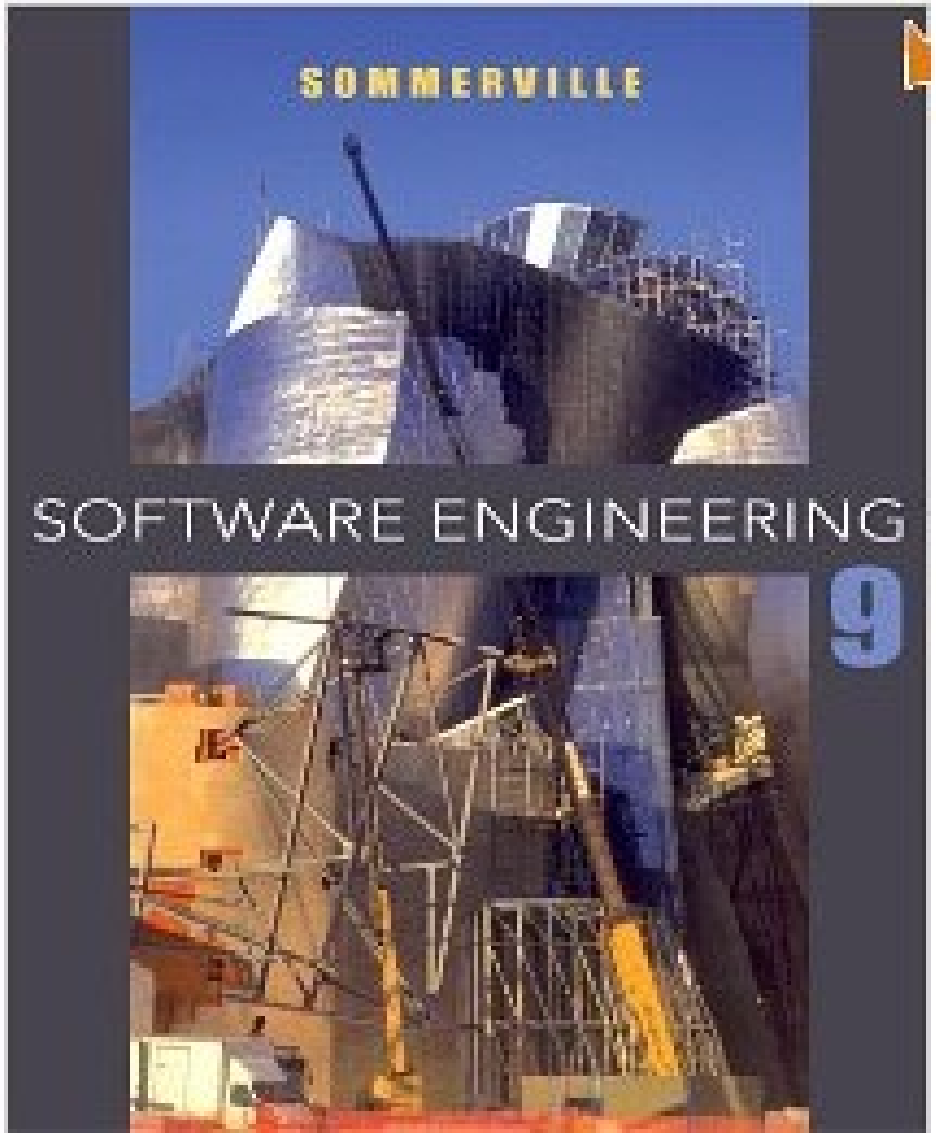
- Part III: Software Measurement and Estimation
  - Software metrics
  - Cost estimation

Textbook and References



- Class web: https://elearning.ctu.edu.vn/course/view.php?id=1767


Software Engineering
THEORY AND PRACTICE
THIRD EDITION
SHARI LAWRENCE PFLEEGER
JOANNE ATLEE


SOMMERVILLE
SOFTWARE ENGINEERING
9

TS. HUỲNH XUÂN HIỆP
Th.S PHAN PHƯƠNG LAN

Nhập Môn
CÔNG NGHỆ PHẦN MỀM

NHÀ XUẤT BẢN ĐẠI HỌC CẦN THƠ

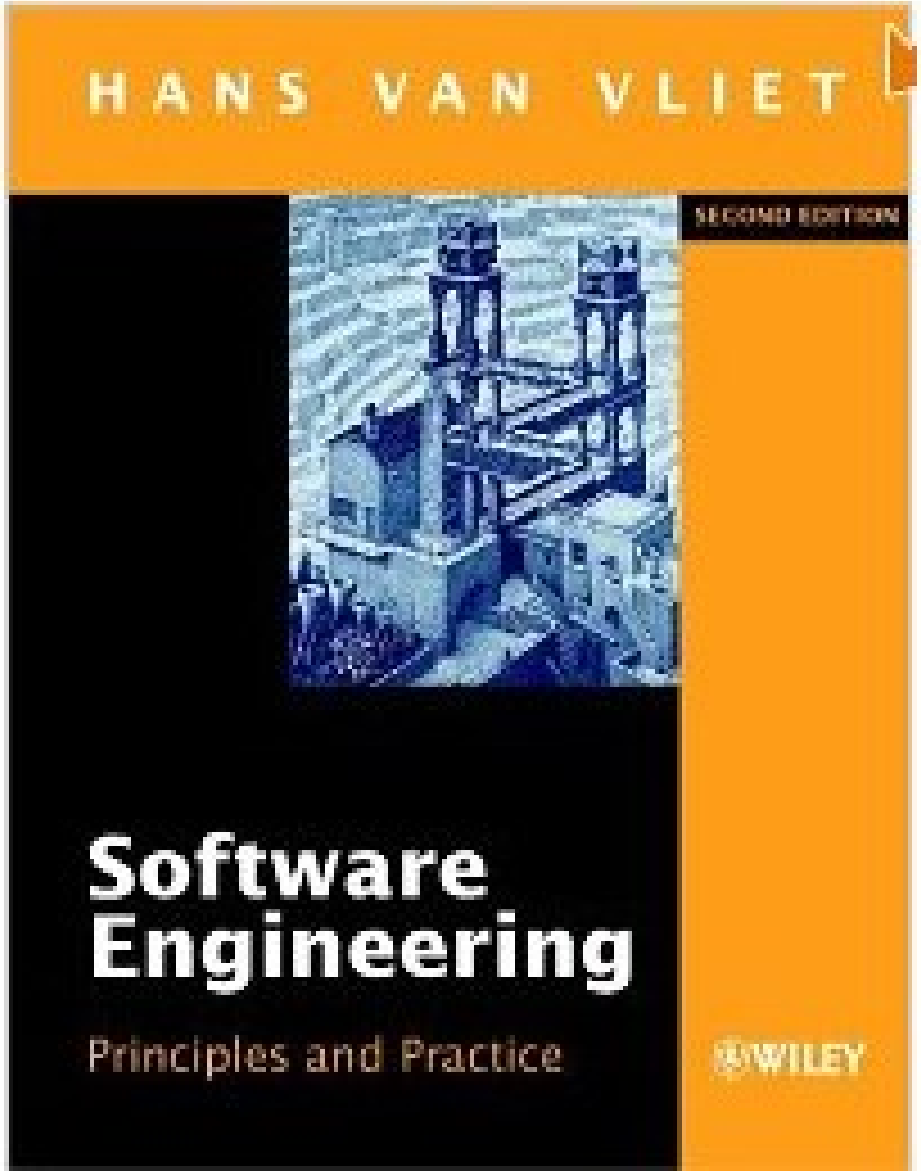
TS. HUỲNH XUÂN HIỆP - Th.S PHAN PHƯƠNG LAN
Nhập Môn
CÔNG NGHỆ PHẦN MỀM

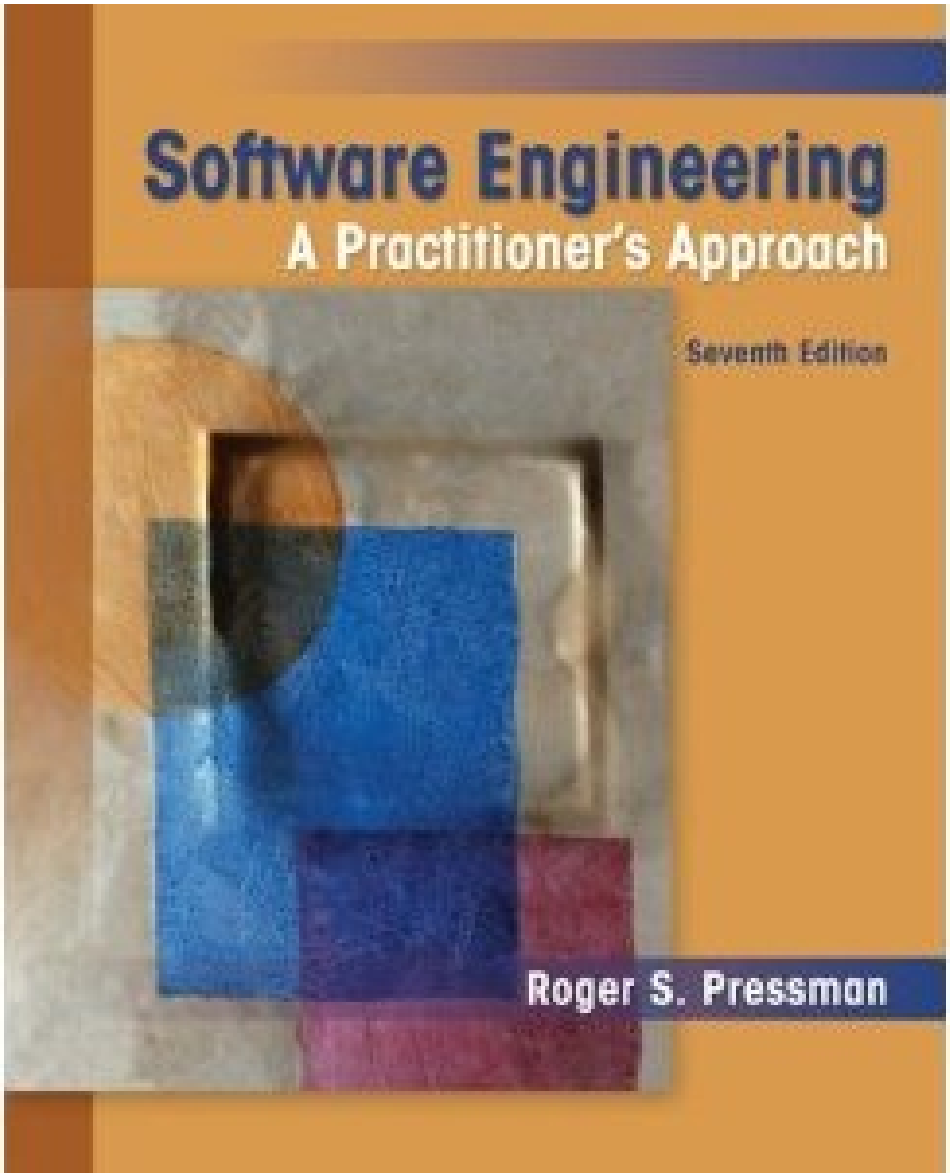
TS. HUỲNH XUÂN HIỆP
Th.S PHAN PHƯƠNG LAN
Nhập Môn
CÔNG NGHỆ PHẦN MỀM

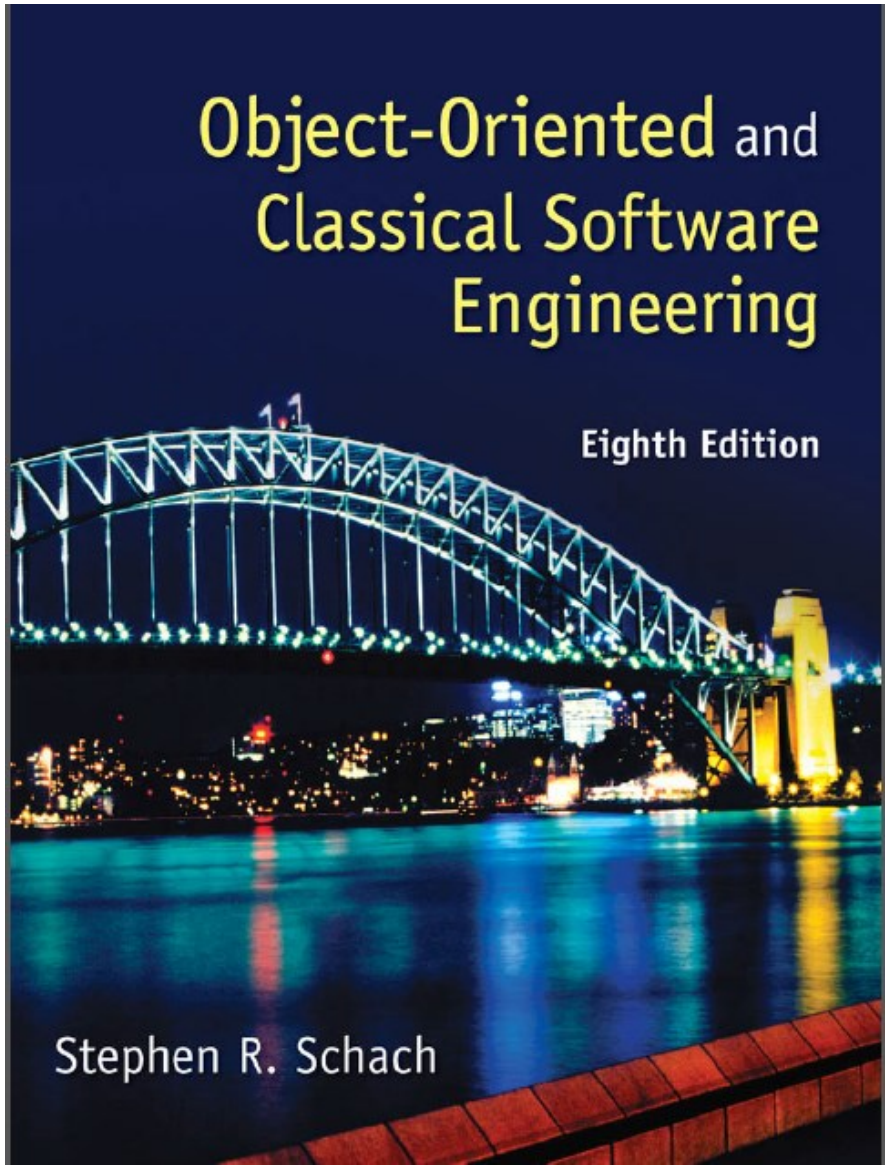
Giá:.....

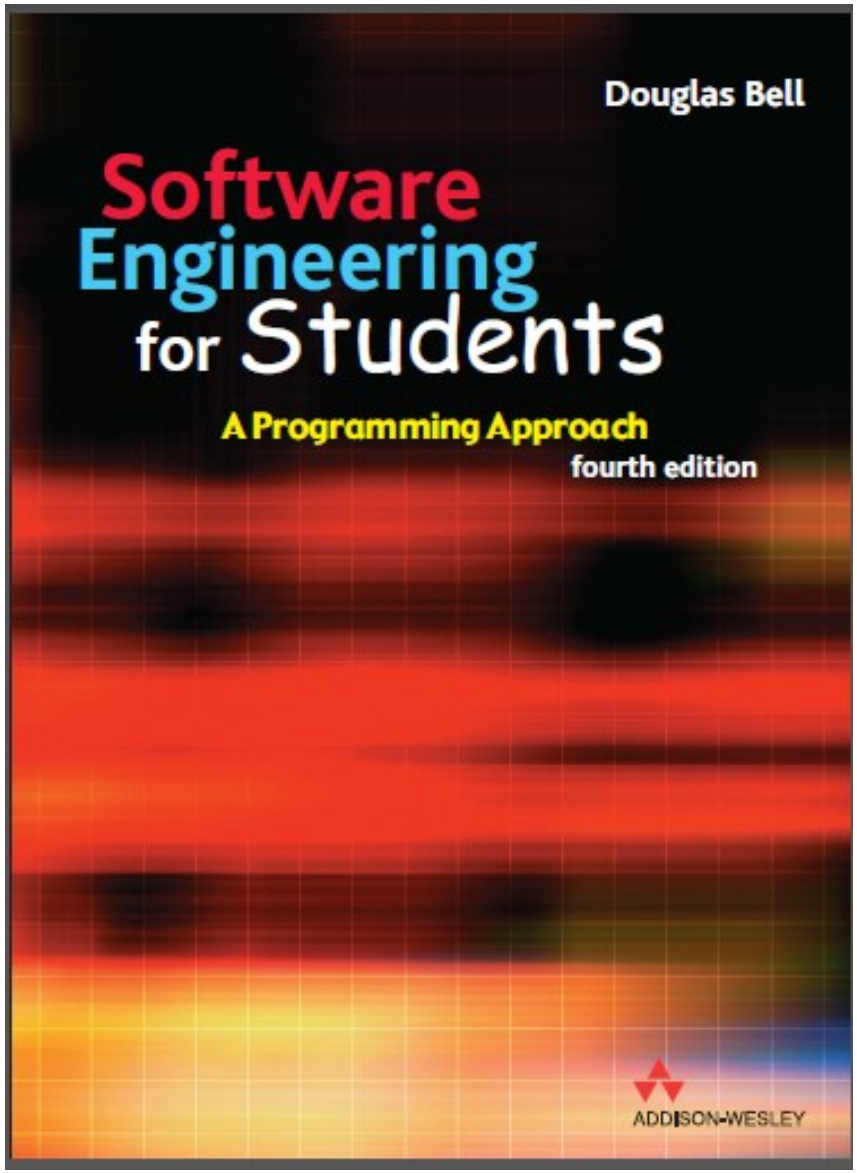
Textbook and References

- *References:*
  - Hans Van Vliet, Software Engineering principles and practice, John Wiley, 2000.
  - Pressman, Roger S., Software Engineering: A Practitioner's Approach, McGraw-Hill, 5th edition, 2003.
  - …


HANS VAN VLIET
SECOND EDITION
Software Engineering
Principles and Practice
WILEY


Software Engineering
A Practitioner's Approach
Seventh Edition
Roger S. Pressman


Object-Oriented and Classical Software Engineering
Eighth Edition
Stephen R. Schach


Douglas Bell
Software Engineering for Students
A Programming Approach
fourth edition
ADDISON-WESLEY

Assessment

- Group project: 40%
- Exams: 25% + 35%

Assessment - Group project

- A group of 3 - 4 students.
- Propose a software to be developed.
- A set of final version deliverables - plan, analysis, design, unit test documents and source code (if any) - is required to be submitted at the end of semester.

Course Schedule

- Lecture:
  - CT114HM01, 07:00 Wednesday, week: 1-4, 6, 9, 11-13, 15.
  - CT114HM02, 13:30 Wednesday, week: 1-4, 6, 9, 11-13, 15.
- Lab:
  - CT114HM01, 07:00 Wednesday, week: 5, 10, 14, 17.
  - CT114HM02, 13:30 Wednesday, week: 5, 10, 14, 17.
- Project presentation: week 17
- Final exam: week 18

Q&A