



IS504070

Enterprise Service- Oriented Architecture

Phuc H. Duong, *M.Sc.*

Acknowledgement

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Outline

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Course description

- By the end of the course, students will be able to:
 - Understand the concepts and principles underlying enterprise SOA and Microservices
 - Develop a service-oriented perspective
 - Acquire proficiency in the service-oriented design paradigm
 - Design services for enterprise SOA
 - Understand how web services provide an effective technology platform for SOA
 - Gain awareness of service-oriented projects in industry

Lecture Syllabus (*Tentative*)

1. Service-Oriented Computing and SOA
2. Service-Orientation
3. Understanding Design Principles
4. RESTful Architectures
5. RESTful Web Services Design
6. Security and Performance
7. Understanding SOA Design Patterns
8. Service Design Patterns: Foundational Service Patterns
9. Service Design Patterns: Service Implementation Patterns
10. Service Design Patterns: Service Security Patterns
11. Service Design Patterns: Service Contract Design Patterns
12. Service Design Patterns: Legacy Encapsulation Patterns
13. Service Design Patterns: Service Governance Patterns

Textbooks (1)

1. Thomas Erl, [2007], SOA: Principles of Service Design, Prentice Hall.
2. Thomas Rischbeck, Thomas Erl, [2009], SOA Design Patterns, Prentice Hall.
3. Nicolai M. Josuttis, [2007], SOA in Practice: The Art of Distributed System Design, O'Reilly Media
4. Thomas Erl, [2005], Service-Oriented Architecture (SOA): Concepts, Technology, and Design, Prentice Hall
5. Dirk Krafzig, Karl Banke and Dirk Slama, [2004], Enterprise SOA: Service-Oriented Architecture Best Practices, Prentice Hall

Textbooks (2)

5. Thomas Erl, [2014], Next Generation SOA: A Concise Introduction to Service Technology & Service-Oriented Architecture, Prentice Hall
6. Jose Sandoval, [2009], RESTful Java Web Services, Packt Publishing, USA
7. Mark Hansen, [2007], SOA Using Java™ Web Services, Prentice Hall, USA
8. Chris Richardson, Floyd Smith, [2016], Microservices - From Design to Deployment, NGINX, Inc.
9. Chris Richardson, [2019], Microservices Patterns With Examples In Java, Manning Publications Co.

Teaching materials

All resources (lectures, exercises, etc.) are available on the following sites:

- SAKAI Portal – <http://sakai.it.tdt.edu.vn>
- Course Homepage – <https://www.duonghuuphuc.com/teaching/cs504070/>

Assessment (1)

10%	Exercises (on-class + homework + tests)
20%	Mid-term mini project
20%	Seminar
50%	Final project

Assessment (2)

Assignment & Final Project:

- Each team will study several materials assigned by the instructor in details
- Prepare and make a presentation and lead classroom discussion
- By the second week, students will be formed into several "groups", each group may consist of *1 - 3* students
- The topics will be chosen in consultation with the instructor
- Using **English** for report document and slide
- For oral presentation, **English** is encouraged

Assignment Plan

- 6/1: đăng ký nhóm
- 9/1: đăng ký Final Project
- 16/1 – 23/1: các nhóm báo cáo System Requirements và nghe phản biện, góp ý
- 13/2 – 27/2: các nhóm trình bày System Analysis và System Design
- 13/3 – 27/3: các nhóm lập trình hệ thống và báo cáo tiến độ (bằng văn bản vào đầu mỗi buổi học)
- 3/4 – 24/4: các nhóm tiếp tục lập trình hệ thống
- **8/5**: báo cáo Final Project

Seminar Plan

- 8/1: hoàn tất phân công đề tài (theo danh sách nhóm đã đăng ký)
- Từ 13/2: seminar đề tài được phân công (dự kiến: 1-2 nhóm/tuần)

Policies

Assignment and final project must be submitted by the due date. No late submission will be accepted. All members of each group must submit the work also.

About collaboration, you may discuss with other students on the review reports. However, you must write up the reports on your own independently.

You need to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action.

Schedule

Wednesday afternoon (3:05 PM – 5:30 PM)

Begin from 2/1/2019 to 8/5/2019

Venue: B206 (TDTU – Tan Phong Campus)

Teaching staffs

Phuc H. Duong, *M.Sc.*

- Email: phuc@it.tdt.edu.vn
- Website: <https://www.duonghuuphuc.com/>
- Office: Room C112, TDTU - Tan Phong Campus

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begins