

Course Introduction

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<https://www.duonghuuphuc.com>

Outline

- Course description
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Course description

- This course provides students with fundamental knowledge in software development based on service-oriented architecture
- After completing this course, students can know how to classify services towards business processes; besides that, students can also program a small service-oriented-based information system, and understand types of message exchange, life cycle, performance and security of the service

Course description

- Each semester, the lecturer will choose some specific topics and organize them into lecture and hands-on-practice sessions
- This semester, we will organize the course into three parts. In the first part, we take one week to present some fundamental definitions of SOA and get familiar with the RESTful API through some example programs
- In the second part, we will present Flask by taking a demonstration on a real-world application
- We organize the third part as a self-study to present how to program APIs with Java programming language

Course description

- We note that there are some prerequisites before registering and studying this course
- You need to be familiar with programming languages such as Java and Python
- You also need to have a good background in databases, either SQL or NoSQL.

Syllabus

- *Visit course homepage to get the latest version of syllabus*
- Course homepage: <https://cs504070.duonghuuphuc.com>

Textbooks

1. Sam Newman. Building Microservices. O'Reilly Media, Inc., 2021.
2. Miguel Grinberg. Flask Web Development, Second Edition. O'Reilly Media, Inc., 2018.
3. Bogunuva Mohanram Balachandar. RESTful Java Web Services, Third Edition. Packt Publishing, 2017.
4. Antonio Melé. Django 3 By Example. Packt Publishing, 2020.

Textbooks

1. Vaughn Vernon. Domain-Driven Design Distilled, 1/e. O'Reilly Media, Inc., 2016.
2. Don Norman. The Design of Everyday Things: Revised and Expanded Edition. Basic Books, 2013.
3. Nicloai M. Josuttis. SOA in Practice, First Edition. O'Reilly Media, Inc., 2007.

Teaching Materials

- All resources (lectures, exercises, etc.) are available on the following sites:
 - <https://cs504070.duonghuuphuc.com>

Assessment

- **10%** Exercises (on-class + homework)
- **20%** Mid-term Project
- **20%** Assignment
- **50%** Final project

Assessment

- **Mid-term Project**

- Each group will be assigned a mini project and need to finish in 2 weeks before the beginning of Mid-term Examination
- After the Mid-term Examination, we will host a presentation and score the project of each group
- The project must be implemented in SOA-based approaches

Assessment

- **Final Project:**

- The topics will be chosen in consultation with the instructor
- Using LaTeX format for both documents and slides
- Using *English* for report document, slide, oral presentation
- The project must be implemented in SOA-based approaches

Plans

- Week 1: group registration
- Week 2-3: registering final project topic (students)
- Week 3: assigning Mid-term project (instructor)
- Week 7: begin presentation of System Requirements, System Analysis and Design [Final Project – 50%]
- Week 10-11: begin Mid-term presentation
- Last 4 weeks: report Final Project

Policies

- You are allowed to absent **3** sessions for lecture hours.
- Exercises, assignment and final project must be submitted by the due date. No late submission will be accepted.
- For seminar, mid-term and final projects, all members of group must submit the works together.

Policies

- 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.

Teaching Staffs

- **Phuc H. Duong**
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 - WWW: www.duonghuuphuc.com
 - Office: Room C.119, TDTU (Tan Phong Campus)
- *Teaching assistants are presented on the course homepage*

Too much information!



When the world goes to sleep, developers stay up to chase their dreams.

-- Apple WWDC 2019