Applied Software Engineering SIT725

T2 2024

Valeh Moghaddam

Lecture 1
Introduction to the Applied Software Engineering

Outline

- Unit organisation and structure
- Weekly plan and assessment tasks
- Resources and references

What will you learn?

Learn about your tools and more

Visual studio code, Git, Node, MongoDB, HTML , CSS etc

Work as a team

Effectively divide tasks and keep track of workloads

Design and Develop Software

Be able to understand current systems and create new ones

Weekly Plan

- Online lecture
- Workshops (on-campus/ online)
- Assessment Tasks through the OnTrack

Lectures (w1-w11)

- Tuesday – 11- 1:150 am
- Online/ Microsoft Teams
- Lectures slides and recordings will be available through the Lecture channel in Microsoft Teams and the Unit site

- *The theory and key concepts are introduced and discussed through q&a*

Workshops (w1-w11)- BYOD

- **On-campus**

A closer and more detailed look to the practical side of the unit .

Burwood: Friday- 1-3 pm (Room: LC3-105), 3-5 pm (Room:LC5-105)

- **Online only for online students** – Microsoft Teams –Thursday 5:30pm-7:30pm (Microsoft Teams-→ Workshop Channel

- Weekly slides will be available through the Practical Channel in Microsoft Teams

Study material

- Lecture slides

Constitutes a summary of the topics each week

- Textbook

➢ Software Engineering, Global Edition

Ian Sommerville

- Workshop slides and LinkedIn Learning courses

Full Stack Developer

Assessment Tasks- OnTrack

- Weekly tasks
  - Theory
  - Practical
  - Group project

- OnTrack

https://ontrack.deakin.edu.au/

- Need help with OnTrack?

https://www.deakin.edu.au/students/help/about-clouddeakin/assessment/ontrack

Grading criteria and why target grade?

- P/C/D/HD
- F
- Choose your target grade in Week 1 (you can change it in Week 4)
- Focus on improving and learning

Portfolio-based Unit

- Comprehensive collection and evaluation of your involvement and participation throughout a trimester

- Individual and group tasks

Group Project

- Commencing on Week 3

- **Choose among one of the 4 key areas of research at Deakin SIT:**

➢Software Engineering (any)

➢Cyber Security

➢Data Science / AI

➢IOT

Group project calendar

Week 3: Project ideation

Week 4: Finalise the idea and prepare the pitch video

Week 5: Finalise team members

Intra-trimester break

Week 6: start working on project and regular meeting with your group

Week 10: Sprint 1 review

Week 12: Sprint 2 / project delivery and meeting with Unit chair

Technologies

What we use in this unit?

- **Programming Language** NodeJS and vanilla JS, because we can use it both on backend and frontend, and it is the easiest one to get into. You can do small programs or master it and create huge ones.

- **WebDevelopment** : HTML, CSS and JS, supported by Materialize. We will not use any framework such as React, to keep the difficulty low.

- **Database** : we are going to use MongoDb, because it interfaces well with WebTechnologies and is very scalable.

- Any alternative? Preferably NO

mongoDB

Improve your Programming

- As Deakin Students, you have free access to LinkedIn Learning.
- This unit requires that you are capable of writing software. I have prepared a course on LinkedIn to make sure that everyone has enough skills to complete the unit. Complete by Week 4

- Full Stack Developer

Programming environment

- VS Code
- NodeJS
- Unix Based System , either Mac or Ubuntu, or install WSL on Windows
- MongoDB
- Trello board
- Git. https://docs.github.com/

Installation tips:

- Homebrew for Mac users

https://brew.sh/

- Scoop for windows

https://scoop.sh/

- Try to get it done in your first workshop

What will you learn in lectures?

Week 1: Introduction to the unit

Week 2: Writing SRS document

Wee3: Design

Week 4: Coding/ Ethical programming

Week 5: Project Manegement

Week 6: Testing

Week 7: Introduction to the cloud

Week 8: Virtualisation

Week 9: Guest Lecture

Week 10: Recap

Teaching team

- Unit chair: Valeh Moghaddam

Email: valeh.moghaddam@deakin.edu.au

Tutor: Faisal Alam

Email: faisal.alam@deakin.edu.au

Microsoft Teams channel or Email me

Unit site discussion board

Question?