Software Engineering Project Workshop (SENG202)

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Lecture 1 – Introduction

July 13, 2020

UC
UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

ALERT LEVEL 1

UC UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha

He waka eke noa. We're all in this together.

1 If you're sick, stay home.

2 Focus on your hygiene:
- Wash your hands.
- Sneeze and cough into your elbow.
- Don't touch your face.

3 Keep track of where you've been.

Agenda

1. Why this course

2. Organizational issues

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1. Why this course

2. Organizational issues

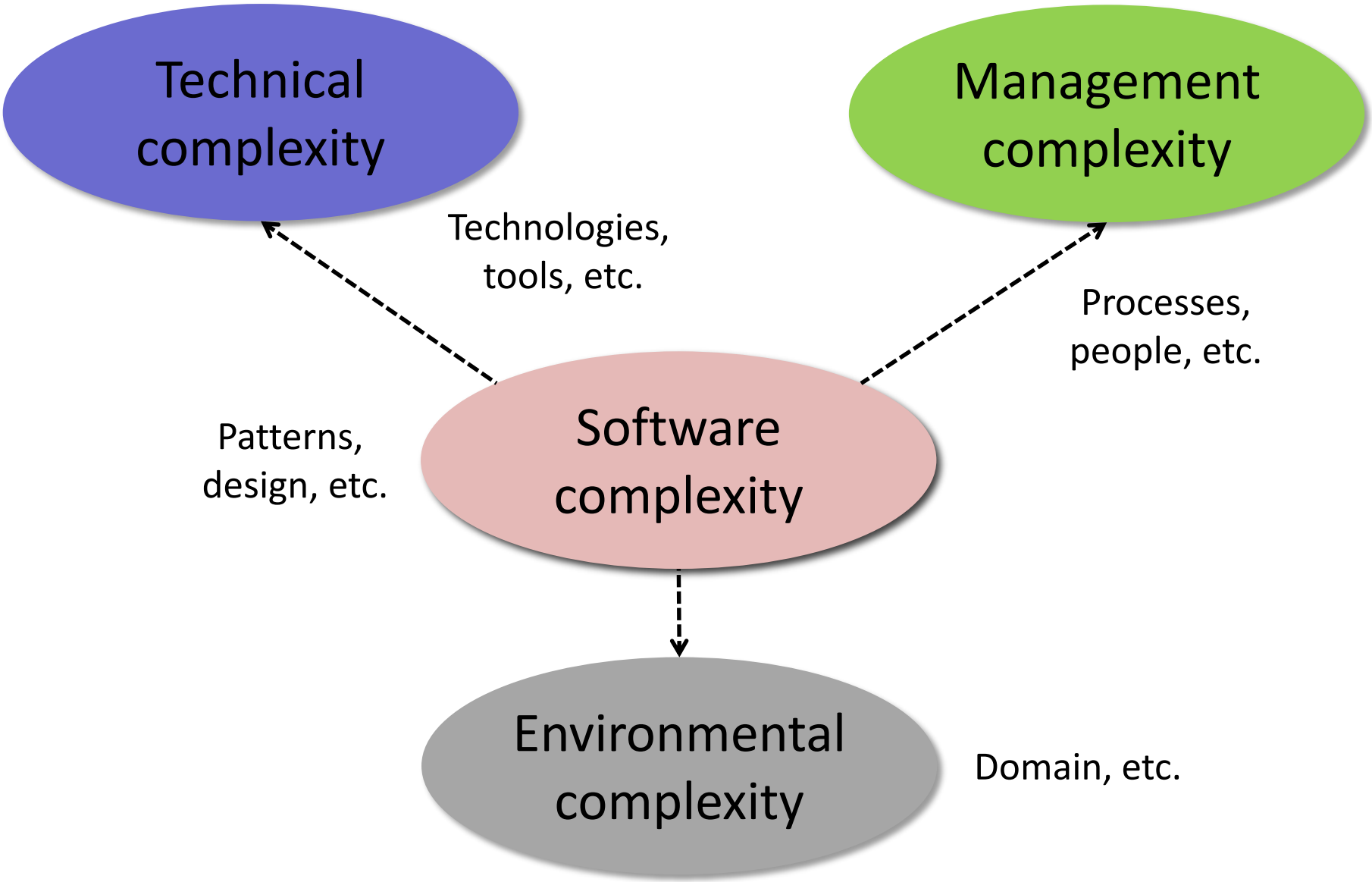
What is software engineering?

People working **together**
to **create** and **maintain**
robust software
for a **client**

Remember why software projects fail

- Project's complexity, unmanaged risks
- Unrealistic, unarticulated project goals
- Inaccurate estimates of resources
- Badly defined requirements
- Poor reporting of project status
- Use of immature technology
- Sloppy development practices
- Poor team work and project management
- Poor communication among stakeholders
- Stakeholder politics, commercial pressure
- Etc.

It is all about complexity



Course objectives

Simulate real-world project

Expose problems

Mirror work habits from industry

Reflect on own practices

Agenda

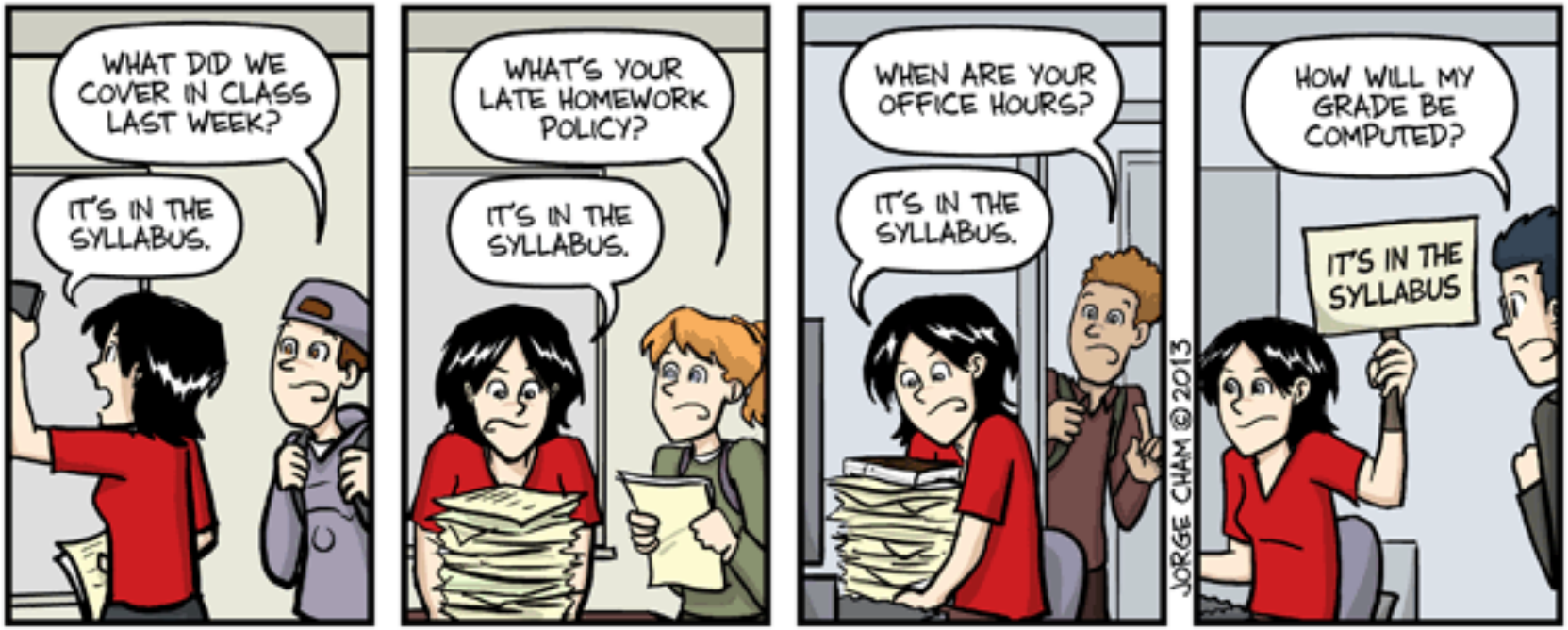
1. Why this course

2. Organizational issues

Read documents on Learn carefully

More documents will be added as the we progress through the course

Some will evolve frequently



IT'S IN THE SYLLABUS

This message brought to you by every instructor that ever lived.

WWW.PHDCOMICS.COM

Warning

No “paper” project

but

“Potentially shippable” product
(includes reports, documentation, code, tests, etc.)

No meetings every 2-3 weeks

but

Continuous interaction with staff

Teaching staff

Matthias Galster
(lecturer + course supervisor)

Sam Shankland
(tutor + tech support)

Luke Walsh
(tutor + tech support)

Patricia Inez de Andrade
(senior tutor)

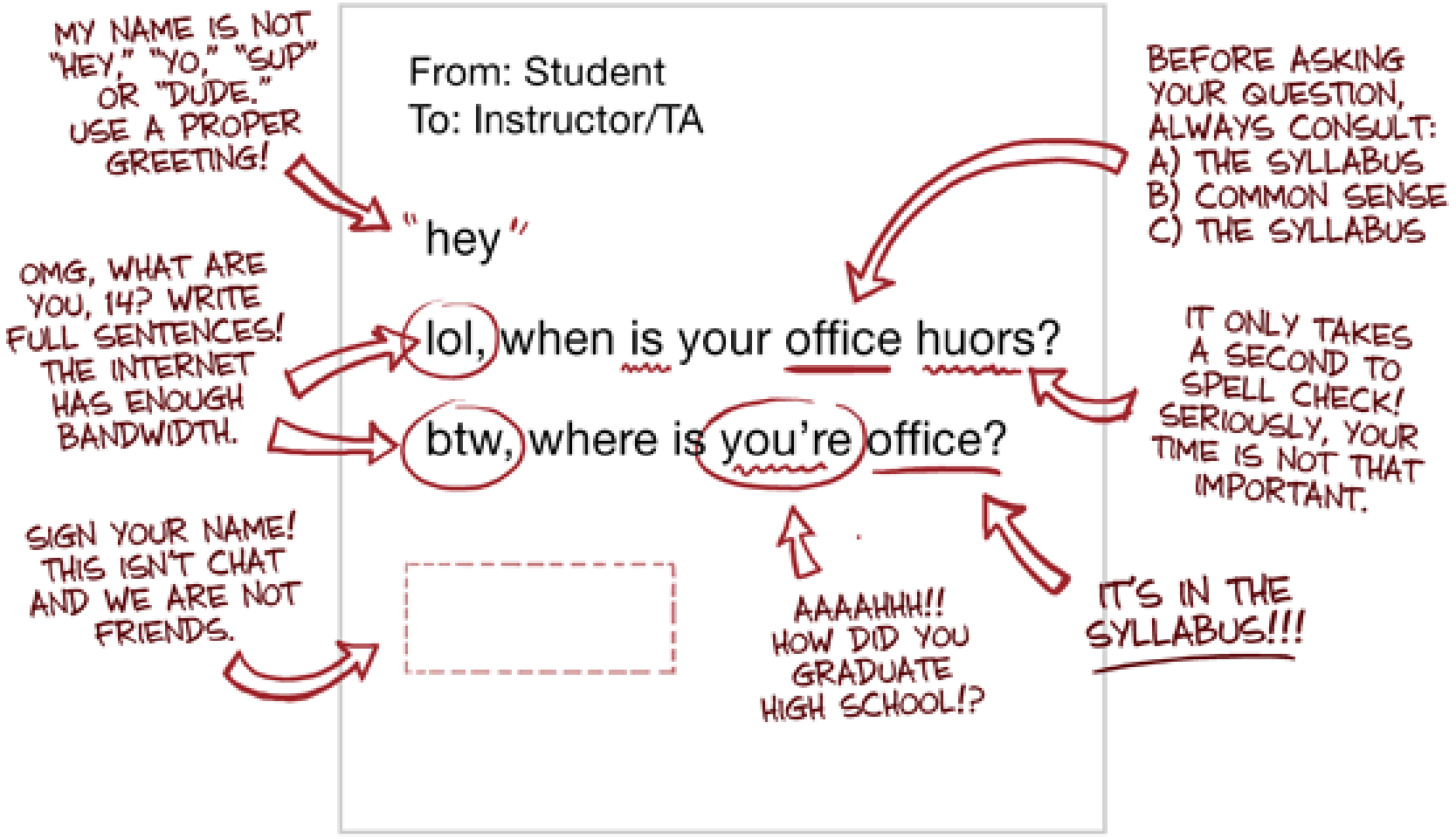
How to communicate with us

- In lectures and labs
- By appointment
- Drop-in

- Learn forums
  - If relevant for whole class
- E-mail
  - Include name and course

Remember that tutors are busy too

HOW TO WRITE AN E-MAIL TO YOUR INSTRUCTOR OR T.A.



Disclaimer

Teaching staff may not always be able to give you concrete answers

Why is that?

- We don’t know the answer

- There are many alternatives
  - Trade-offs: comparison of design alternatives
  - Often no “exact” solution, no “true” or “false”, but “good” or “better”
  - No single approach to reach goal: same project implemented differently

- Explore yourself: develop, express, justify professional opinion

- Clients in the real world?
  - Busy
  - Vague (on purpose?), inconsistent, change their minds

Course format

- Lectures
  - 1 lecture per week
  - 1 hour
  - Topics related to project, phases and/or topics requested by teams

- Labs
  - 2 sessions per week (**both sessions are mandatory for all students**)
  - 2 hours
  - Start this week
  - Project work, tutorials, quizzes
  - Weekly status presentations (~5 minutes per team)
  - Presentation of deliverables 1 and 2 (~15 minutes per team)

Assessment

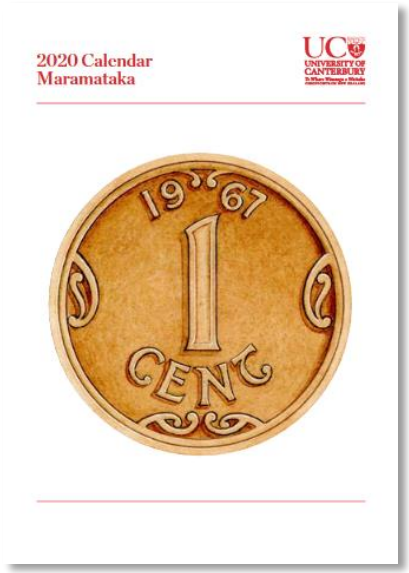
- Quizzes (20%): throughout the semester
- Deliverable 1 (25%): August 3 (presentations in same week)
- Deliverable 2 (25%): September 21 (presentations in same week)
- Deliverable 3 + demo (30%): October 5 + demo in week 11
- Deliverables to be submitted **by 5:00pm** on submission date
  - **No drop-dead date**

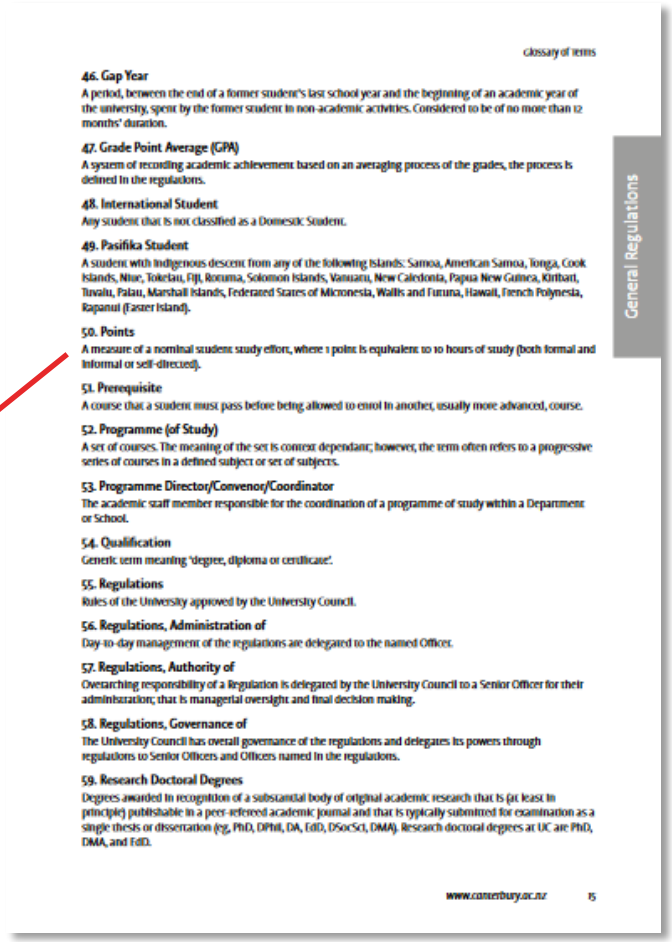
Assessment process (more soon)

- See course outline on Learn (for now) – more later

- Will also assess professional behaviour

Workload





Glossary of Terms

46. Gap Year
A period, between the end of a former student's last school year and the beginning of an academic year of the university, spent by the former student in non-academic activities. Considered to be of no more than 12 months' duration.

47. Grade Point Average (GPA)
A system of recording academic achievement based on an averaging process of the grades, the process is defined in the regulations.

48. International Student
Any student that is not classified as a Domestic Student.

49. Pasifika Student
A student with indigenous descent from any of the following islands: Samoa, American Samoa, Tonga, Cook Islands, Niue, Tokelau, Fiji, Rotuma, Solomon Islands, Vanuatu, New Caledonia, Papua New Guinea, Kiribati, Tuvalu, Palau, Marshall Islands, Federated States of Micronesia, Wallis and Futuna, Hawaii, French Polynesia, Rapanui (Easter Island).

50. Points
A measure of a nominal student study effort, where 1 point is equivalent to 10 hours of study (both formal and informal or self-directed).

51. Prerequisite
A course that a student must pass before being allowed to enrol in another, usually more advanced, course.

52. Programme (of Study)
A set of courses. The meaning of the set is context dependant; however, the term often refers to a progressive series of courses in a defined subject or set of subjects.

53. Programme Director/Convenor/Coordinator
The academic staff member responsible for the coordination of a programme of study within a Department or School.

54. Qualification
Generic term meaning 'degree, diploma or certificate'.

55. Regulations
Rules of the University approved by the University Council.

56. Regulations, Administration of
Day-to-day management of the regulations are delegated to the named Officer.

57. Regulations, Authority of
Overarching responsibility of a Regulation is delegated by the University Council to a Senior Officer for their administration; that is managerial oversight and final decision making.

58. Regulations, Governance of
The University Council has overall governance of the regulations and delegates its powers through regulations to Senior Officers and Officers named in the regulations.

59. Research Doctoral Degrees
Degrees awarded in recognition of a substantial body of original academic research that is (at least in principle) publishable in a peer-refereed academic journal and that is typically submitted for examination as a single thesis or dissertation (eg, PhD, DPhil, DA, EdD, DSocSci, DMA). Research doctoral degrees at UC are PhD, DMA, and EdD.

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General Regulations

50. Points

A measure of a nominal student study effort, where 1 point is equivalent to 10 hours of study (both formal and informal or self-directed).

Workload (lower bound)

- Assumption 1
  - SENG202: 15 points
  - 15 points x 10 hours = 150 hours (lower bound workload)

- Assumption 2
  - Weekly scheduled hours: 1 lecture (1 hour) + 2 labs (2 hours each) = 5
  - Total scheduled hours: 12 weeks x 5 hours = 60 hours

- Conclusion: minimum time spent outside scheduled hours
  - 150 hours (for course) – 60 hours (timetabled) = 90 hours
  - 90 hours / 12 weeks = 7.5 hours per week (or ~8 hours over 11 weeks)

Recommended readings

- Software engineering + Java
  - I. Sommerville.

    Software Engineering
  - R.S. Pressman.

    Software Engineering: A Practitioner's Approach
  - C. Horstmann.

    Big Java
  - B. McLaughlin et al.

    Object-Oriented Analysis & Design
  - Websites, blogs, forums, e.g.,

    stackoverflow.com

    

  - Others as required, e.g.,

    API's, documentation, forums, Google, etc.

    

    

Class rep

What can I do to fail this course?

- Start late
- Don’t ask for feedback (early)
- Skip team meetings and labs, miss assessment dates
- Communicate poorly
- Don’t read announcements and documents on Learn
- Don’t report any problems (team, sickness, personal issues, etc.)

Summary

1. Why this course 
2. Organizational issues