

# Software Design

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## Syllabus Information

CS 1890 - Software Design

Associated Term: 2020/21 Academic Session

## Learning Objectives:

The course addresses concepts required for performing software design activities. Core course content aims at interpreting requirements, identifying software components, documenting software design and understanding the various stages of software development, as well as techniques with a focus on software design. This course will emphasise problem based learning. Students will progress through case studies in critiquing software, acquiring and expressing requirements, designing software and documenting their designs. Students will learn to use current industry standard notations such as User Stories and UML. Students will see how design is achieved in various current Software Engineering processes, including the waterfall and agile processes.

## Learning Outcomes:

1. Identify common software requirements and how these map to software components. They will be able to recognise how these requirements have been discharged in existing systems and critique their effectiveness.
2. Understand several techniques and notations that make it possible to document software design. They will understand that Software Engineering supports communication of design ideas and this will allow them to see how Software Engineering is a team activity.
3. Understand the importance of the several activities of a professional software engineer. This will include techniques from agile software development, but will focus on requirements acquisition and software design.

4. Apply several techniques to design software based on user requirements. They will be able to judge the appropriateness of designs produced using these techniques, both formally and informally.

5. analyse and critique the design of existing software. This will include the User Experience of software as a measure of its fitness for purpose.

Required Materials:

[Click here for the reading list system](#)

Technical Requirements:

The total number of notional learning hours associated with course are 150.

These will normally be broken down as follows:

14 hour(s) of Lectures across 10 week(s)

20 hour(s) of Laboratory classes across 10 week(s)

116 hour(s) of Guided Independent Study

Formative Assessment:

Lectures

Labs

Summative Assessment:

Project - 60 hours - 65%

Quizzes - 12 hours - 35%