# 01 – Introduction to Software Engineering

## Dr. Essam Eliwa

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Textbook: Software Engineering, by Ian Sommerville

# About me

**Dr. Essam Eliwa**

- Assistant Professor

- MSc and PhD **-** The University of Nottingham, UK.

- 20+ years of teaching experience.
  - MIU, University of Nottingham, Arab Academy, and ITI

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# Agenda

Course overview

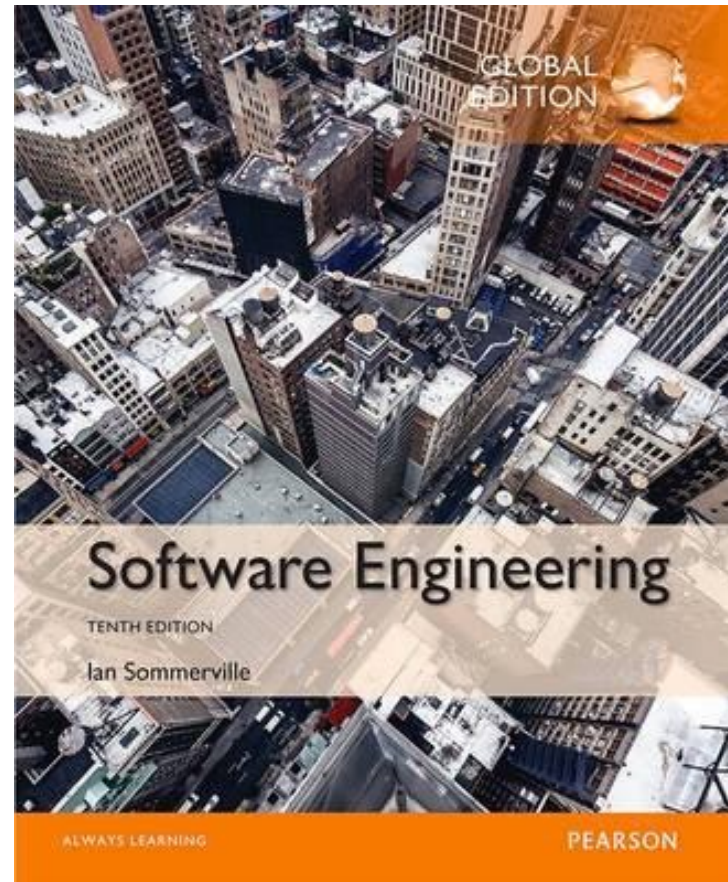Professional software development

What is meant by software engineering

Why Software Engineering

# Textbook:
## Software Engineering, by Ian Sommerville

1. Introduction
2. Software processes
3. Agile Software development
4. Requirement engineering
5. System modelling
6. Architectural design
7. Design and implementation
8. Software Testing

# Team project

▶ Groups of 5

▶ General **Web-based/ Desktop** Applications

    ▶ Real customer

    ▶ Live production (Publishing the web application online)

▶ Grade distribution: **40% distributed as follow**

    ▶ Project Design: 5%

    ▶ Project Implementation: 5%

    ▶ A software requirements specification (SRS) document : 10%

    ▶ A software design document (SDD) : 5%

    ▶ Testing and User Guide : 5%

    ▶ Discussion: 10%

# Project Documents

▶ Proposal document.

▶ Software Requirements Specification document (SRS).

▶ Software Design Document (SDD).

▶ Testing and User Guide documents.

# Overleaf

▶ Must use LaTeX editor, the following tool is recommended as a LaTex IDE: https://www.overleaf.com/

▶ You must read and apply the following tutorial: https://www.overleaf.com/learn/latex/Learn_LaTeX_in_30_minutes

# Recommended collaboration tools

▶ Version control using [Git](Git) and [GitHub](GitHub)

▶ Project Management Tool:

   ▶ [https://clickup.com/](https://clickup.com/)

   ▶ [https://trello.com/en](https://trello.com/en)

# Project Timeline 1

**Week 1**
- Idea proposed
- Teams (5 students)

**Week 3**
- Idea Confirmed
- Proposal Document

**Week 6**
- Software Requiremnts Specification (SRS)
- Implementation: Completed Frontend + 20% Backend

# **Project Timeline 2**

| | |
|---|---|
| **Week 9** | • Testing Document |
| **Week 10** | • Software Design Document (SDD) |
| **Final Discussion** | • Final SRS, Testing Documents, and SDD<br>• Completed application |