

CSC 7003 : Basics of Software Engineering

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<http://www-public.it-sudparis.eu/~gibson/Teaching/CSC7003/>

Introduction to Software Engineering

<http://www-public.it-sudparis.eu/~gibson/Teaching/CSC7003/L0-Introduction.pdf>

Evaluation :

- Continual assessment – Project 50%
- Written examination – OPEN BOOK 50%

Objectives :

- Capacity to identify and describe the software life cycle, roles, artefacts, and activities.
- Understand the concepts of software "best practices" and when they apply.
- Be able to adapt a software development process to ones needs and select an appropriate set of best practices that will guide you in completing a software development project.

Keywords : Discipline, Professionalism, Understanding, Fundamentals

Prerequisites : None (except basic programming experience)

Program :

To understand the true nature of software and appreciate that software should be engineered in a disciplined fashion, following professional standards.

To realise that engineering software has similarities to other engineering disciplines, but that there are aspects of engineering software which are unique to that discipline.

Place current (and future) technologies in software engineering into the context of software development techniques and tools that have appeared throughout the history of the discipline.

Provide the ‘big picture’ of software engineering so that students can progress to studying specialist techniques/tools/methods

Material to Cover

- History of Software Engineering
- The Nature of Software : modelling and abstraction
- Software Process Lifecycle : analysis, requirements, design, implementation, testing, maintenance
- Rigour and formality : Specification, validation, verification and testing
- Software Quality and Software Process Improvement : international standards
- Project Management : roles in software development teams
- Ethics and Software Engineering as a Profession
- Software Case Studies – successes and failures
- Current state of the art in software development and Leading Research Projects