CS3D4-15 Enterprise IT Architecture

20/21

Department
> Computer Science

Level
> Undergraduate Level 3

Module leader
> Adam Chester

Credit value
> 15

Module duration
> 5 weeks

Study location
> University of Warwick main campus, Coventry

Description

Introductory description

This module will give students an understanding IT Architecture in the context of enterprises, namely about the need for IT governance, the different framework for IT Architecture, and how emerging platforms, e.g. the cloud, may affect the overall enterprise architecture, which will ultimately allow them to critically evaluate technological solutions based on their compatibility with the adopted framework.

Module aims

The principle aims of this module are to introduce students to thinking about how IT systems are architectures in real-world situations, where there are already existing and possible competing systems within the IT estate.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

This module will contain topics on:

- Understanding the need for governance in IT
- Understanding business needs
- Frameworks for supporting enterprise architecture: ISO/IEC/IEEE 42010:2100, Zachman

framework, and The open group Architectural Framework (TOGAF)
- Capacity planning and engineering for performance
- Evaluating architectural decisions through case studies

Learning outcomes

By the end of the module, students should be able to:

- Understand the need for governance in IT.
- Understand how IT supports business functions, and the drivers behind investment in IT.
- Understand existing frameworks for enterprise architecture, and contrast them.
- Critically evaluate proposed technological solutions within the context of a framework, to establish its fitness for purpose.
- Evaluate system capacity and develop a strategy for growth.
- Evaluate the effectiveness of IT strategy governance through case studies.

Indicative reading list

Kotusev, S., "The Practice of Enterprise Architecture", SK Publishing (2018)
Perroud, T., and Inversini, R., "Enterprise Architecture Patterns", Springer (2013)

Subject specific skills

- Can identify, analyse and evaluate security threats and hazards to planned and installed information systems or services (e.g. Cloud services)
- Can apply organisational theory, change management, marketing, strategic practice, human resource management and IT service management to technology solutions development
- Apply industry standard processes, methods, techniques and tools to execute projects
- Can plan, design and manage computer networks with an overall focus on the services and capabilities that network infrastructure solutions enable in an organisational context
- How business exploits technology solutions for competitive advantage
- The organisation's data architecture

Transferable skills

- Have demonstrated that they have mastered basic business disciplines, ethics and courtesies, demonstrating timeliness and focus when faced with distractions and the ability to complete tasks to a deadline with high quality.
- Flexible attitude
- Ability to perform under pressure
- A thorough approach to work

Study

Study time

Type	Required
Lectures	20 sessions of 1 hour (13%)
Tutorials	14 sessions of 1 hour (9%)
Practical classes	7 sessions of 2 hours 30 minutes (11%)
Work-based learning	60 sessions of 1 hour (40%)
Other activity	38 hours 30 minutes (25%)
Total	150 hours

Private study description

No private study requirements defined for this module.

Other activity description

Self directed learning and revision

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Feedback on assessment

Written

Availability

Courses

Course availability information is based on the current academic year, so it may change. This module is Core for:

- Year 4 of DCSA-I1I2 Undergraduate Computer Science and Technology Solutions (Data Analyst) (Degree Apprenticeship)