Module: Web Servers 361

Module name:	Web Servers 361
Code:	WSE361
NQF level:	6
Type:	Speciality – Diploma in Information Technology (Web Development)
Contact time:	24 hours
Structured time	4 hours
Self-directed time	12 hours
Notional hours:	40 hours
Credits:	4
Prerequisites:	WFS361

Purpose

This course introduces the learners to routing features for a web application using a back-end routing framework or library by building and testing an Application Programming Interface.

It is a back-end course in which participants will learn to configure a server with very little overhead; in turn allowing them to focus on building features into a web server. The course will also explore the architectural and technical concerns of how a web server handles the request-response cycle.

Outcomes

Upon successful completion of this module, the student will be able to demonstrate:

- Detailed knowledge of building a web server using a web framework, including an understanding of how to configure and build web server features.
- The ability to solve given problems by creating a web server that provides specified features based on known requirements.
- The ability to communicate effectively with a variety of audiences through a range of modes and media to present a clear, coherent and independent exposition; and using appropriate discourse.
- The ability to work as part of a team, and to take responsibility for decisions and actions taken within the team.

Assessment

Assessment is performed using a variety of instruments:

- Continuous evaluation of theoretical work through one written assignment, two practical projects, two formative assessments, and a summative test.
- Continuous evaluation of practical work, whereby the student must create and deploy a website.
- Final assessment through a written examination.

Teaching and Learning

Learning materials

Prescribed books (EBSCO)

  📖 ***Yaapa, H. (2013) Express Web Application Development. Birmingham: Packt Publishing.***

  📖 ***David Herron (2018) Node.js Web Development : Server-side Development with Node 10 Made Easy, 4th Edition. [S.l.]: Packt Publishing.***

Learning activities

The teaching is a combination between presentation of practical and theoretical concepts, and exercises and discussions. It is practice-oriented, with a mandatory assignment and project which must be completed during the course.

Notional learning hours

Contact	Distance	Other	Type of learning activities	% Learning
y	y	n	Lectures (face-to-face, limited interaction or technologically mediated)	40%
y	y	n	Tutorials: individual groups	20%
n	y	n	Syndicate groups	10%
n	y	n	Independent self-study of standard texts and references (study guides, books, journal articles)	10%
n	y	n	Independent self-study of specially prepared materials (case studies, multi-media, etc.	20%

Syllabus

- Introduction to Express
- Node and Express
- Building an Express server
- Creating route handlers
- Using middleware
- HTTP methods
- REST protocol
- API testing