

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 a written assignment and a summative test.
- Final assessment through an examination.
- The assignments or projects collectively will count 30% of your class mark.
- All tests will collectively account for 70% of your class mark.
- Your class mark contributes 30% towards your final mark for the subject, while the final assessment accounts for 70% of your final mark.

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.I.]: 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 which must be completed during the course.

Notional learning hours

Activity	Units	Contact Time	Structured Time	Self-Directed Time
Lecture		14.0		6.0
Formative feedback		2.0		
Project				
Assignment	1			3.0
Test	1		2.0	5.0
Exam	1		2.0	6.0
		16.0	4.0	20.0

Syllabus

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