

# CS139-15 Web Development Technologies

**26/27**

**Department**

Computer Science

**Level**

Undergraduate Level 1

**Module leader**

Andrew Hague

**Credit value**

15

**Module duration**

10 weeks

**Assessment**

Multiple

**Study location**

University of Warwick main campus, Coventry

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## Description

### Introductory description

To introduce students to contemporary technologies used for web design and development, and to equip them with the basic technical skills required to deploy such technologies. This module is only available to students based in the Computer Science Department and cannot be taken as an unusual option by external students.

### Module aims

To introduce students to contemporary technologies used for web design and development, and to equip them with the basic technical skills required to deploy such technologies.

### 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.

Concepts in website design

- Usability (user experience and user interface)
- Accessibility standards (WCAG, ARIA)
- Web systems (Cloud computing, PWAs, and software as a service, SaaS)
- Data security

### Web development technologies

- Server programming languages and frameworks (e.g. Python, Flask, Jinja, Node.JS, Express.JS)
- Configuration and maintenance of web servers (Full Stack development)
- Client programming languages and libraries (e.g. JavaScript, jQuery, TailwindCSS, Bootstrap)
- Web toolkits and static site generators (e.g. Flutter/Dart, React/JSX, Mkdocs, Gatsby)
- Markup languages (including HTML5, CSS, XML, JSON)

## Learning outcomes

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

- Demonstrate a critical appreciation of usability, accessibility and adherence to standards in the design of dynamic web sites.
- Configure and maintain a web server.
- Understand the technologies used to support dynamic web sites.
- Design and code functional web server applications.

## Indicative reading list

[Reading lists can be found in Talis](#)

[Specific reading list for the module](#)

## Subject specific skills

- Designing and coding web server applications with an appreciation of usability, accessibility, and adherence to standards
- How to configure and maintain a web server

## Transferable skills

- Full-stack web development
- Programming in various languages (Python, Javascript, HTML/CSS, etc.)
- Present and managing information from a database (ORM via SQLAlchemy)
- Recommendation for usability, accessibility and cultural awareness in web design

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## Study

## Study time

Type	Required
Lectures	20 sessions of 1 hour (13%)
Practical classes	10 sessions of 2 hours (13%)
Private study	110 hours (73%)
Total	150 hours

## Private study description

Private study will entail:

- Background reading of recommended texts
- Independent program design and programming related to the assignment
- Revision of lecture slides and past exam papers

## Costs

No further costs have been identified for this module.

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## Assessment

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

Students can register for this module without taking any assessment.

### Assessment group D1

	Weighting	Study time	Eligible for self-certification
Web Server Application Coursework Unsupervised practical assignment.	40%		No
Centrally-timetabled examination (On-campus) Examination	60%		No

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- Answerbook Pink (12 page)

### Assessment group R4

	<b>Weighting</b>	<b>Study time</b>	<b>Eligible for self-certification</b>
On-campus Examination - Resit Resit Examination	100%		No

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- Answerbook Pink (12 page)

## **Feedback on assessment**

Written feedback on practical assignment

[Past exam papers for CS139](#)

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## **Availability**

### **Courses**

This module is Optional for:

- Year 1 of UCSA-G500 Undergraduate Computer Science
- UCSA-G503 Undergraduate Computer Science MEng
  - Year 1 of G500 Computer Science
  - Year 1 of G503 Computer Science MEng
- Year 1 of UCSA-I1N1 Undergraduate Computer Science with Business Studies
- Year 1 of UCSA-G406 Undergraduate Computer Systems Engineering
- Year 1 of UCSA-G408 Undergraduate Computer Systems Engineering

This module is Option list A for:

- Year 1 of UCSA-G500 Undergraduate Computer Science
- UCSA-G503 Undergraduate Computer Science MEng
  - Year 1 of G500 Computer Science
  - Year 1 of G503 Computer Science MEng
- Year 1 of UCSA-I1N1 Undergraduate Computer Science with Business Studies
- Year 1 of UCSA-G4G1 Undergraduate Discrete Mathematics
- UCSA-G4G3 Undergraduate Discrete Mathematics
  - Year 1 of G4G1 Discrete Mathematics
  - Year 1 of G4G3 Discrete Mathematics

This module is Option list B for:

- Year 1 of UCSA-G4G1 Undergraduate Discrete Mathematics
- UCSA-G4G3 Undergraduate Discrete Mathematics
  - Year 1 of G4G1 Discrete Mathematics
  - Year 1 of G4G3 Discrete Mathematics