

CSC301

# Full Stack Web Development

**School:** School of Science, Technology and Engineering

2023 | Semester 1

UniSC Sunshine Coast  
UniSC Moreton Bay

**BLENDED  
LEARNING**

Most of your course is on campus but you may be able to do some components of this course online.

Online

**ONLINE**

You can do this course without coming onto campus.

Please go to [usc.edu.au](https://usc.edu.au) for up to date information on the teaching sessions and campuses where this course is usually offered.

## 1. What is this course about?

### 1.1. Description

Modern web apps and websites involve the design and development of both the front-end view representation and backend server support. This course teaches you relevant skills for developing, managing, and integrating both ends to build complete web apps. You will learn about key technologies in the course including JavaScript and AJAX, Web server and Database server, HTTP protocol, RESTful APIs, and server-side development framework. Knowledge of HTML and CSS is assumed.

### 1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
<b>BLENDED LEARNING</b>			
<b>Learning materials</b> – Pre-recorded concept videos and associated activity	2hrs	Week 1	13 times
<b>Tutorial/Workshop 1</b> – On-Campus Computer workshop	2hrs	Week 1	13 times
<b>ONLINE</b>			
<b>Learning materials</b> – Pre-recorded concept videos and associated activity	2hrs	Week 1	13 times
<b>Tutorial/Workshop 1</b> – Online Computer workshop	2hrs	Week 1	13 times

### 1.3. Course Topics

- JavaScript and AJAX
- DOM programming
- Web server and Database server
- HTTP and RESTful APIs
- Server-side development framework

## 2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth full-time study year of an undergraduate program.

## 3. What is the unit value of this course?

12 units

## 4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES		GRADUATE QUALITIES
On successful completion of this course, you should be able to...		Completing these tasks successfully will contribute to you becoming...
1	Explain key components and technologies in developing complete Web apps	Knowledgeable
2	Configure a working Web and Database server	Empowered
3	Develop a complete Web app, including both front-end and backend, to address the given requirements	Creative and critical thinker Engaged
4	Evaluate and compare different solutions in the full stack development regarding real use cases	Creative and critical thinker Empowered
5	Report the design, implementation, and evaluation of the proposed solutions in written communication	Engaged

## 5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

### 5.1. Pre-requisites

CSC202 and DES222

### 5.2. Co-requisites

Not applicable

### 5.3. Anti-requisites

Not applicable

### 5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

## 6. How am I going to be assessed?

### 6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

### 6.2. Details of early feedback on progress

Students will complete individual weekly workshop activities under the guidance of the workshop facilitator, providing opportunities for rapid formative feedback throughout the semester.

### 6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Practical / Laboratory Skills, and Written Piece	Individual	20%	Code implementation and 500 words	Week 5	Online Assignment Submission with plagiarism check
All	2	Examination - not Centrally Scheduled	Individual	40%	2 Hours	Week 12	Online Test (Quiz)
All	3	Artefact - Technical and Scientific, and Written Piece	Individual	40%	Code implementation and 1000 words	Exam Period	Online Assignment Submission with plagiarism check

#### All - Assessment Task 1: Front-end development

GOAL:	Apply front-end skills to develop web pages that interact with the given web services		
PRODUCT:	Practical / Laboratory Skills, and Written Piece		
FORMAT:	You will be presented with a web-related challenge, and will use front-end skills to develop web pages.		
CRITERIA:	No.		Learning Outcome assessed
	1	Application of the full stack technology	1
	2	Develop front-end web pages that communicate with the back-end servers	3
GENERIC SKILLS:	Problem solving, Applying technologies		

#### All - Assessment Task 2: Examination

GOAL:	The exam will develop your ability to independently apply your skills and knowledge to solve familiar problem-based questions with confidence within a set time limit.					
PRODUCT:	Examination - not Centrally Scheduled					
FORMAT:	This examination consists of a set of questions on the use of full stack technology. The questions are based on tutorial activities and learning materials.					
CRITERIA:	No.					Learning Outcome assessed
	1	Application of full stack development				1
	2	Selection, adaption, and design of solutions using principles of full stack technology				2 3 4
	3	Comparison and evaluation of given full stack development designs				4
GENERIC SKILLS:	Problem solving, Applying technologies					

### All - Assessment Task 3: Full stack development

<b>GOAL:</b>	Apply full stack skills to develop complete web apps	
<b>PRODUCT:</b>	Artefact - Technical and Scientific, and Written Piece	
<b>FORMAT:</b>	You will explore a case study and apply your knowledge of full stack development to design, justify and develop a web app to meet the case study requirements. Besides the code, a report with 1000 words on design decisions is required.	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1 Configuration and deployment of backend Web and database servers	2
	2 Design and development of a complete Web app regarding the case study	3
	3 Selection, adaption and design of solutions using various technologies in full stack development	4
	4 Accurate communication and reporting of the proposed solution.	5
<b>GENERIC SKILLS:</b>	Communication, Problem solving, Applying technologies	

## 7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

## 8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

### 8.1. Prescribed text(s) or course reader

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Recommended	Chris Northwood	2018	The Full Stack Developer	n/a	Apress

### 8.2. Specific requirements

Not applicable

## 9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff.

## 10. What administrative information is relevant to this course?

### 10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

## 10.2. Assessment: Additional Requirements

### Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

## 10.3. Assessment: Submission penalties

Late submission of assessment tasks may be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.

- 10% (of the assessment task's identified value) for the third day - 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.

- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late. To request an extension you must contact your course coordinator to negotiate an outcome.

## 10.4. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email [safe@usc.edu.au](mailto:safe@usc.edu.au).

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au).

## 10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au).

## 10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au) or call 07 5430 1226.

## 10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email [AccessAbility@usc.edu.au](mailto:AccessAbility@usc.edu.au) or call 07 5430 2890.

## 10.8. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

## 10.9. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

## 10.10.General Enquiries

### In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

**Tel:** +61 7 5430 2890

**Email:** [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)