Course Directive
IN607: Introductory Application Development Concepts
Semester One, 2022

Course Information

Credits:	15 Credits
Prerequisite:	IN511: Programming 2
Timetable:	Stream A - Tuesday 1 PM D105b & Friday 8 AM D105b
	Stream B - Tuesday 3 PM D207 & Friday 1 PM D207

Lecturer

Name:	Grayson Orr
Position:	Lecturer & Second/Third-Year Coordinator
Office Location:	D311
Email Address	grayson.orr@op.ac.nz

Course Dates

Term 1:	Monday 21 February - Thursday 14 April
Mid Semester Break:	Monday 18 April - Friday 29 April
Term 2:	Monday 02 May - Thursday 23 June
Public Holidays:	Friday 15 April (Good Friday)
	Friday 24 June (Matariki)

Aims

To introduce the concepts of application development including algorithms, data structures & design patterns that are required to use a simple, industry-relevant development framework.

Learning Outcomes

At the successful completion of this course, learners will be able to:

1. Design & build usable, secure & attractive applications with dynamic database functionality following an appropriate software development methodology.

Provisional Schedule

Week	Date	Topics
1	21-02-2022	ES6 Basics 1 - Variables, Control Structures, Loops, Functions, Arrays & Objects
2	28-02-2022	ES6 Basics 2 - Functional Programming, Error Handling & File Processing
3	07-03-2022	Node.js REST API 1 - Introduction, Express, In-Memory Storage, Controllers, Routes & Postman
4	14-03-2022	Node.js REST API 2 - MongoDB Atlas, Validation & Relationships
5	21-03-2022	Node.js REST API 3 - Seeders, Caching & Rate Limits
6	28-03-2022	Node.js REST API 4 - JSON Web Tokens, Heroku & Postman Documentation
7	04-04-2022	Project 1: Node.js REST API Assessment Work
8	11-04-2022	Project 1: Node.js REST API Assessment Work
Mid Term Break		
9	02-05-2022	Practical: Node.js REST API Testing Research Assessment Work
10	09-05-2022	React 1 - Introduction
11	16-05-2022	React 2 - Functional Components & Hooks
12	23-05-2022	React 3 - Reactstrap
13	30-05-2022	React 4 - Authentication with JWT
14	06-06-2022	React 5 - End-to-End Testing with Cypress
15	13-06-2022	Project 2: React CRUD Assessment Work
16	20-06-2022	Project 2: React CRUD Assessment Work

Assessments

Assessment	Weighting	Due Date	Learning Outcomes
Practical: Node.js REST API Testing Research	20%	13-05-2022	1
Project 1: Node.js REST API	30%	14-04-2022	1
Project 2: React CRUD	50%	21-06-2022	1

Resources

Software

This paper will be taught using **Microsoft Visual Studio Code**. An installer for **Microsoft Visual Studio Code** is available - https://code.visualstudio.com/download. Please refer any problems with downloads or installers to **Rob Broadley** in D205a.

Readings

There is no textbook for the course.

Course Requirements & Expectations

Learning Hours

This course requires **150 hours** of learning. This time includes **64 hours** of timetabled class time, & **86 hours** of self-directed reading, preparation & completion of assessments.

Criteria for Passing

To pass this paper, you must achieve a cumulative pass mark of **50%** over all assessments. There are no reassessments or resits.

Attendance

- Learners are expected to attend all classes, including lectures & labs.
- If you cannot attend for a few days for any reason, contact the course.

Communication

Microsoft Outlook/Teams are the official communication channels for this course. It is your responsibility to regularly check **Microsoft Outlook/Teams** & GitHub for important course material, including changes to class scheduling or assessment details. Not checking will not be accepted as an excuse.

Snow Days/Polytechnic Closure

In the event **Otago Polytechnic** is closed or has a delayed opening because of snow or bad weather, you should not attempt to attend class if it is unsafe to do so. It is possible that the course lecturer will not be able to attend either, so classes will not physically be meeting. However, this does not become a holiday. Rather, the course material will be made available on GitHub for classes affected by the closure. You are responsible for any course material presented in this manner. Information about closure will be posted on the **Otago Polytechnic Facebook** page https://www.facebook.com/OtagoPoly.

Group Work & Originality

Learners in the **Bachelor of Information Technology** programme are expected to hand in original work. Learners are encouraged to discuss assessments with their fellow learners, however, all assessments are to be completed as individual works unless group work is explicitly required (i.e. if it doesn't say it is group work then it is not group work – even if a group consultation was involved). Failure to submit your original work will be treated as plagiarism.

Referencing

Appropriate referencing is required for all work. Referencing standards will be specified by the course lecturer.

Plagiarism

Plagiarism is submitting someone elses work as your own. Plagiarism offences are taken seriously & an assessment that has been plagiarised may be awarded a zero mark. A definition of plagiarism is in the Student Handbook, available online or at the school office.

Submission Requirements

All assessments are to be submitted by the time, date, & method given when the assessment is issued. Failure to meet all requirements will result in a penalty of up to **10%** per day (including weekends).

Extensions

Extensions are only available for unusual circumstances. These must be applied for, & approved, before the submission date.

Impairment

In case of sickness contact the course lecturer or **Head of Information Technology (Michael Holtz)** as soon as possible, preferably before the assessment is due. The policy regarding the granting of a mark that considers impaired performance requires a medical certificate & a medical practitioner's signature on a form. You may refer to the guide on impaired performance on the student handbook.

Appeals

If you are concerned about any aspect of your assessment, approach the course lecturer in the first instance. We support an open-door policy & aim to resolve issues promptly. Further support is available from the **Head of Information Technology (Michael Holtz)** & **Second/Third-Year Coordinator (Grayson Orr)**. **Otago Polytechnic** has a formal process for academic appeals if necessary.

Other Documents

Regulatory documents relating to this course can be found on the **Otago Polytechnic** website.