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Course Directive

ID607001: Introductory Application Development Concepts   
(Pia o te taupānga tukutuku)  
Semester Two, 2022

# Course Information

Credits: 15 Credits

Prerequisite: ID511001: Programming 2

Timetable: Tuesday 10 AM D313 & Thursday 10 AM D105b (remote)

# Teacher (Kaiako)

Name: Adon Moskal

Position: Principal Lecturer

Office Location: D205b

Email Address adon.moskal@op.ac.nz

# Course Dates

Term 1: Monday 18 July - Friday 30 September

Mid Semester Break: Monday 3 October - Friday 14 October   
Term 2: Monday 17 October - Friday 18 November

**Public Holidays & Anniversary Days**

A list of public holidays & anniversary days can be found here - <https://www.op.ac.nz/students/importantdates>

# 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 Outcome

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

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

# Assessments (Aromatawai)

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| --- | --- | --- | --- |
| **Assessment** | **Weighting** | **Due Date** | **Learning Outcomes** |
| Practical: Node.js REST API Testing Research | 20% | 15-09-2022 (Thursday at 4.59 PM) | 1 |
| Project 1: Node.js REST API | 30% | 15-09-2022 (Thursday at 4.59 PM) | 1 |
| Project 2: React CRUD | 50% | 17-11-2022 (Thursday at 4.59 PM) | 1 |

# Provisional Schedule

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| --- | --- | --- |
| **Week** | **Date Starting** | **Topics** |
| 1/Tahi | 18-07-2022 | JavaScript Basics: Map, Filter, Reduce, Error Handling & Reading in Data |
| 2/Rua | 25-07-2022 | Node.js REST API 1: Introduction to APIs, Express, Prisma |
| 3/Toru | 01-08-2022 | Node.js REST API 2: Postman, Controllers & Routes |
| 4/Whā | 08-08-2022 | Node.js REST API 3: Relationships & Validation |
| 5/Rima | 15-08-2022 | Node.js REST API 4: Seeding, Heroku & Postman Documentation |
| 6/Ono | 22-08-2022 | Node.js REST API 5: - Mocha & Chai |
| 7/Whitu | 29-08-2022 | Project Work |
| 8/Waru | 05-09-2022 | Project Work |
| 9/Iwa | 12-09-2022 | Project Work |
| 10/Tekau | 19-09-2022 | React 1: Introduction to JSX & Components |
| 11/Tekau mā tahi | 26-09-2022 | React 2: Fetch |
|  |  | Mid Term Break |
| 12/Tekau mā rua | 17-10-2022 | React 3: |
| 13/Tekau mā toru | 24-10-2022 | React 4: |
| 14/Tekau mā whā | 31-10-2022 | Project Work |
| 15/Tekau mā rima | 07-11-2022 | Project Work |
| 16/Tekau mā ono | 14-11-2022 | Project Work |

## Streaming/Remote working

**Both** classes will be **streamed on Teams**.

For the first class of the week, I will physically be in the classroom, but streaming the lecture. You are welcome to join in person, or remotely (or in fact, be in the classroom and **still** watching the stream, which a lot of students like to do!)

We are going to run every **second class** remotely (i.e. I will not physically be in the classroom). Take note that **there is still a classroom booked for this time slot**, and you are welcome to **physically be on campus and join the remote session** from the classroom (I will just not be there in person).

We are doing this for several reasons. In recent times, the pandemic has necessitated we become familiar/comfortable with working remotely. Should the campus be closed again in the future (which is always a looming possibility) we need to be prepared and slip easily into an online working situation. Second, more and more companies (particularly in the web space) are prioritising remote working; becoming comfortable with this working arrangement is a skill to develop for your future career. Finally, by streaming/recording the lectures, it provides greater flexibility and access for you to the materials – if you are sick, or unable to make it to class for whatever reason, you can still tune in to the stream, or access the recording later at your leisure. You can also review the lecture as many times as you need, rewatching it, pausing it, etc… it allows you to work **how you are most comfortable** and **to your own pace.**

TeamsA further note on **Teams** – this will be the **primary communication channel** for this paper. I will **attempt to reach you** first and foremost through Teams, to check on progress, to give feedback, to return SBA results, etc, etc… I will also post periodically to the **Intro App Dev channel**, with announcements or updates to the class site, etc… It is **strongly recommended** you have Teams on your home computers or phone, or somewhere you will see the notifications.

# Resources

## Software

This paper will be taught using **Microsoft Visual Studio Code** & **Node.js**. An installer for **Microsoft Visual Studio Code** & **Node.js** are available - <https://code.visualstudio.com/download> & [https://nodejs.org/en/download.](https://nodejs.org/en/download) Please refer any problems with downloads or installers to **Rob Broadley** in D205a.

**Readings**

No textbook is required for this course. URLs to useful resources will be provided in the lecture notes.

# 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 aromatawai.

## Criteria for Passing

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

## Attendance

Tauira 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](https://github.com/otago-polytechnic-bit-courses/ID607001-intro-app-dev-concepts) for important course material, including changes to class scheduling or aromatawai details. Not checking will not be accepted as an excuse.

## Snow Days/Polytechnic Closure

In the event **Otago Polytechnic — Te Kura Matatini ki Otago** 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 teaching staff 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](https://github.com/otago-polytechnic-bit-courses/ID607001-intro-app-dev-concepts) 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 — Te Kura Matatini ki Otago Facebook** page [https://www.facebook.com/OtagoPoly.](https://www.facebook.com/OtagoPoly)

## Group Work & Originality

Tauira in the **Bachelor of Information Technology (Hangarau Whakaaturanga)** programme are expected to hand in original work. Tauira are encouraged to discuss aromatawai with their fellow tauira, however, all work is to be completed by individuals 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 kaiako.

## Plagiarism

Plagiarism is submitting someone else’s work as your own. Plagiarism offences are taken seriously & an aromatawai 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 aromatawai are to be submitted by the time, date, & method given when 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 teaching staff or **Head of Information Technology (Michael Holtz)** as soon as possible, preferably before the aromatawai 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 aromatawai, approach the teaching staff 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 — Te Kura Matatini ki Otago** has a formal process for academic appeals if necessary.

## Other Documents

Regulatory documents relating to this course can be found on the **Otago Polytechnic — Te Kura Matatini ki Otago** website.