



# Course Directive

## IN608: Intermediate Application Development Concepts

### Semester One, 2021

#### Course Information

Credits: 15 Credits  
Prerequisite: IN607: Introductory Application Development Concepts  
Timetable: Monday 8am-10am D202 & Wednesday 3pm-5pm D207

#### Lecturers

Name: Tom Clark (Lecturer)  
Office: D305  
Email: tom.clark@op.ac.nz

#### Course Dates

Term 1: 22 February - 16 April (8 weeks)  
Mid Semester Break: 19 April - 30 April (2 weeks)  
Term 2: 03 May - 25 June (8 weeks)  
Easter Monday: 05 May  
Queens Birthday 07 June

#### Aims

To extend the concepts of application development including algorithms, data structures and design patterns that are required to use a complex, industry-relevant framework or library.

#### Learning Outcomes

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

1. Demonstrate sound programming by following design patterns and best practices.
2. Design and implement full-stack applications using industry relevant programming languages.

# Resources

## Software

This paper will be taught using **Jupyter Notebook** & **Microsoft Visual Studio Code**. An installer for **Jupyter Notebook** & **Microsoft Visual Studio Code** is available. See <https://jupyter.org/install> & <https://code.visualstudio.com>. Please refer any problems with downloads or installers to **Rob Broadley** in **D205a**.

## Readings

There is no textbook for the course.

## Provisional Schedule

Week	Date	Session 1	Session 2
1	22-02-2021	Python 1: Abstract Data Types & OOP Recap	Python 2: More Abstract Data Types
2	01-03-2021	Python 3: Functional Programming	Python 4: In-Built Functions & SOLID
3	08-03-2021	Python 5: Exceptions & Automation Testing	Python 6: Concurrency & Parallelism
4	15-03-2021	Django 1: Route, Model & Admin Site	Django 2: View & Template
5	22-03-2021	Django 3: Forms & Class-Based Views	Django 4: Template Inheritance, Static Files & CDNs
6	29-03-2021	Django 5: Automation Testing	Django 6: Authentication
7	05-04-2021	Easter Tuesday	Django 7: Security
8	12-04-2021	Django 8: Django REST Framework	Django 9: Deployment
Mid Term Break			
9	03-05-2021	React 1: Create-React-App & JSX	React 2: Components & Props
10	10-05-2021	React 3: State & Lifecycle Methods	React 4: Events & Conditional Rendering
11	17-05-2021	React 5: Lists & Keys	React 6: Forms
12	24-05-2021	React 7: Automation Testing (Self-Directed)	React 8: Deployment
13	31-05-2021	Project Work	Project Work
14	07-06-2021	Queen's Birthday	Project Work
15	14-06-2021	Project Work	Project Work
16	21-06-2021	Project Work	Project Work

## Assessments

Assessment	Weighting	Due Date	Learning Outcomes
Practicals	25%	Various	1
Django & OpenTDB API	40%	07-05-2020	1, 2
Django REST Framework, React & OpenTDB API	35%	23-06-2021	1, 2

# Course Requirements and Expectations

## Learning Hours

This course requires 150 hours of learning. This time includes 64 hours of timetabled class time, and 86 hours of self-directed reading, preparation and completion of assessment work.

## Criteria for Passing

To pass this paper, you must achieve an overall average of 50%. There must be a genuine attempt at all assessments. There are no resits.

## Attendance

- Students are expected to attend all classes, both lectures and labs.
- If you miss a class, you will need to get notes from another student.
- If you cannot attend for a few days for any reason, please contact your lecturer.
- You must turn up ready for assessments on the due date and at the correct time. No extra time will be scheduled. If you do not turn up, you have failed the assessment.

## Communication

Microsoft Outlook and Teams are the official communication channels. It is your responsibility to regularly check Microsoft Outlook/Teams and [GitHub](#) for important course-related 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 the 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 your lecturer will not be able to attend either, so classes will not physically be meeting. However, this does not become a holiday. Rather, the material will be made available on [GitHub](#) for classes affected by the closure. You are responsible for any material presented in this manner. Information about closure will be posted on the Otago Polytechnic Facebook page <https://www.facebook.com/OtagoPoly>.

## Group Work and Originality

Students in the Bachelor of Information Technology degree are expected to hand in original work. Students are encouraged to discuss assessments with their fellow students, however, all assessments are to be completed as individual work 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 own original work will be treated as plagiarism.

## Referencing

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

## Plagiarism

Plagiarism is submitting someone else's work as your own. Plagiarism offences are taken seriously and 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, and method given when the assessment is issued. Failure to meet all requirements may 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, and approved, before the submission deadline.

## **Impairment**

In case of sickness contact your lecturer or BIT Team Leader (Michael Holtz) as soon as possible, preferably before the assessment or exam is due. The policy regarding the granting of a mark that considers impaired performance requires a medical certificate and 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, please approach the lecturer in the first instance. We support an open-door policy and aim to resolve issues promptly. Further support is available from the BIT Team Leader (Michael Holtz) and Head of College (Richard Nyhof). Otago Polytechnic has a formal process for academic appeals if necessary.

## **Other Documents**

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