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**COURSE DIRECTIVE**

**Bachelor of Information Technology (Tohu Paetahi o Hangarau Whakaaturanga)**

ID512: Fundamentals of Web Development

(Kāwhatuwhatu mō te whakaahu whārangi ipurangi)

Semester 2, 2022

**DESCRIPTION**

In this paper, tauira (learners) will be introduced to industrially relevant client and server-side technologies for web-based development.

**COURSE INFORMATION**

Credits: 15 credits

Prerequisites: IN510/ID510 Programming 1

**TEACHER (KAIAKO)**

Name: Adon Moskal

Location: D205a

Email: [adon.moskal@op.ac.nz](mailto:adon.moskal@op.ac.nz)

**COURSE DATES**

|  |  |
| --- | --- |
| Term 1 (11 weeks) | 18 July – 30 September |
| Mid semester break | 1 Oct – 16 Oct |
| Term 2 (5 weeks) | 17 Oct – 18 Nov |

**AIMS**

To enable tauira to use basic technologies for the development of web-based functionality.

**LEARNING OUTCOMES**

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

1. Use fundamental components of web pages and basic client/server communication.
2. Develop simple web-based applications using industry relevant client/server-side programming languages.
3. Use industry relevant tools and workflows in the development of web-based applications.

**RESOURCES**

**Software**

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

**Readings**

There is a Moodle site of curated information – this is basically a textbook, and you should think about it as such. It is divided into sections that include **pre-lecture preparation**, **in-class lecture notes**, **at-home revision exercises** and **optional advanced** information.

**PROVISIONAL SCHEDULE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Week** | **Date** | **Session 1** | **Session 2 (Remote)** | **SBA** |
| **1** | Jul 18 | Introduction to the web and the class etc | Web development tools |  |
| **2** | Jul 25 | HTML | Semantic HTML |  |
| **3** | Aug 1 | The HTML document | Structure and assets |  |
| **4** | Aug 8 | CSS/Selectors | Advanced selectors |  |
| **5** | Aug 15 | Box model | Positioning | **SBA** |
| **6** | Aug 22 | Flex | Grid | **SBA** |
| **7** | Aug 29 | Web design & responsiveness | Variables/transitions | **SBA** |
| **8** | Sep 5 | JS – variables, template literals | JS – loops & conditionals | **SBA** |
| **9** | Sep 12 | JS – functions | JS – Arrays | **SBA** |
| **10** | Sep 19 | JS – DOM manipulation 1 | JS – DOM manipulation 2 | **SBA** |
| **11** | Sep 26 | JS – Events | JS – Objects | **SBA** |
| **12** | Oct 17 | APIs and fetch 1 | APIs and fetch 2 | **SBA** |
| **13** | Oct 24 | Project work | Project work | **SBA** |
| **14** | Oct 31 | Project work | Project work | **SBA** |
| **15** | Nov 7 | Project work | Project work | **SBA** |
| **16** | Nov 14 | Project work | Project work | **SBA** |

**STREAMING/REMOTE WORKING**

**Both** web 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 student 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.**

**TEAMS**

A 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 **Web 1 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.

**ASSESSMENT (Aromatawai)**

|  |  |  |
| --- | --- | --- |
| **Aromatawai** | **Weight** | **Due Date** |
| Project | 70% | Friday, 18th Nov |
| Skills Based Assessments | 30% | Continuous |

Detailed assignment requirements, including instructions for submission, will be provided for each aromatawai.

**COURSE REQUIREMENTS & 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 assignment work***.

**Criteria for Passing**

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

**Attendance**

* Tauira are expected to attend all classes, both lectures and labs.
* If you miss a class, you will need to get notes from another person.
* If you cannot attend for a few days for any reason, please contact your kaiako.
* You must turn up ready for aromatawai 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 aromatawai.

**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 aromatawai details. Not checking will not be accepted as an excuse.

**Snow Days/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 your instructor will not be able to attend either, so classes will not physically be meeting. However, this does not become a holiday. Rather, 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 (Te Kura Matatini ki Otago) Facebook page https://www.facebook.com/OtagoPoly.

**Group Work and Originality**

Tauira in the Bachelor of Information Technology degree are expected to hand in original work. Tauira are encouraged to discuss aromatawai with fellow tauira, however, all work is to be completed as an individual 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 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, and method given when 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, prior to the submission deadline.

**Impairment**

In case of sickness contact your kaiako or IT Team Leader (Michael Holtz) as soon as possible, preferably before the aromatawai 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 should refer to the guide on impaired performance on the *Student Handbook*.

**Appeals**

If you are concerned about any aspect of your aromatawai, please approach the kaiako in the first instance. We support an open-door policy and aim to resolve issues promptly. Further support is available from the IT Team Leader (Michael Holtz) and Head of College (Mark Cartwright). Otago Polytechnic (Te Kura Matatini ki Otago) has a formal process for academic appeals if necessary.

**Other Documents**

Regulatory documents relating this course can be found on the Otago Polytechnic (Te Kura Matatini ki Otago) website.