Project

Project Briefing

An outline of the scope and timelines of the Project

HDip in Computer Science

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5
Jan-June	June-Dec	Jan-June	June-Dec	Jan-April

Semester 1 (Jan-June)
- Programming Fundamentals — 10 credits
- Web Development — 5 credits

Semester 2 (June-Dec)
- Computer Systems & Networks — 10 credits
- ICT Skills 1 — 2.5 credits
- Database — 5 credits

Semester 3 (Jan-June)
- Enterprise Web Development — 10 credits
- Developer Operations — 5 credits

Semester 4 (June-Dec)
- Mobile App Development — 10 credits
- ICT Skills 2 — 2.5 credits
- Project Inception
- Project *RAMP
- Placement (any contiguous 4-6 month period)

Semester 5 (Jan-April)
- Project Implementation & Dissemination — 30 credits

*RAMP
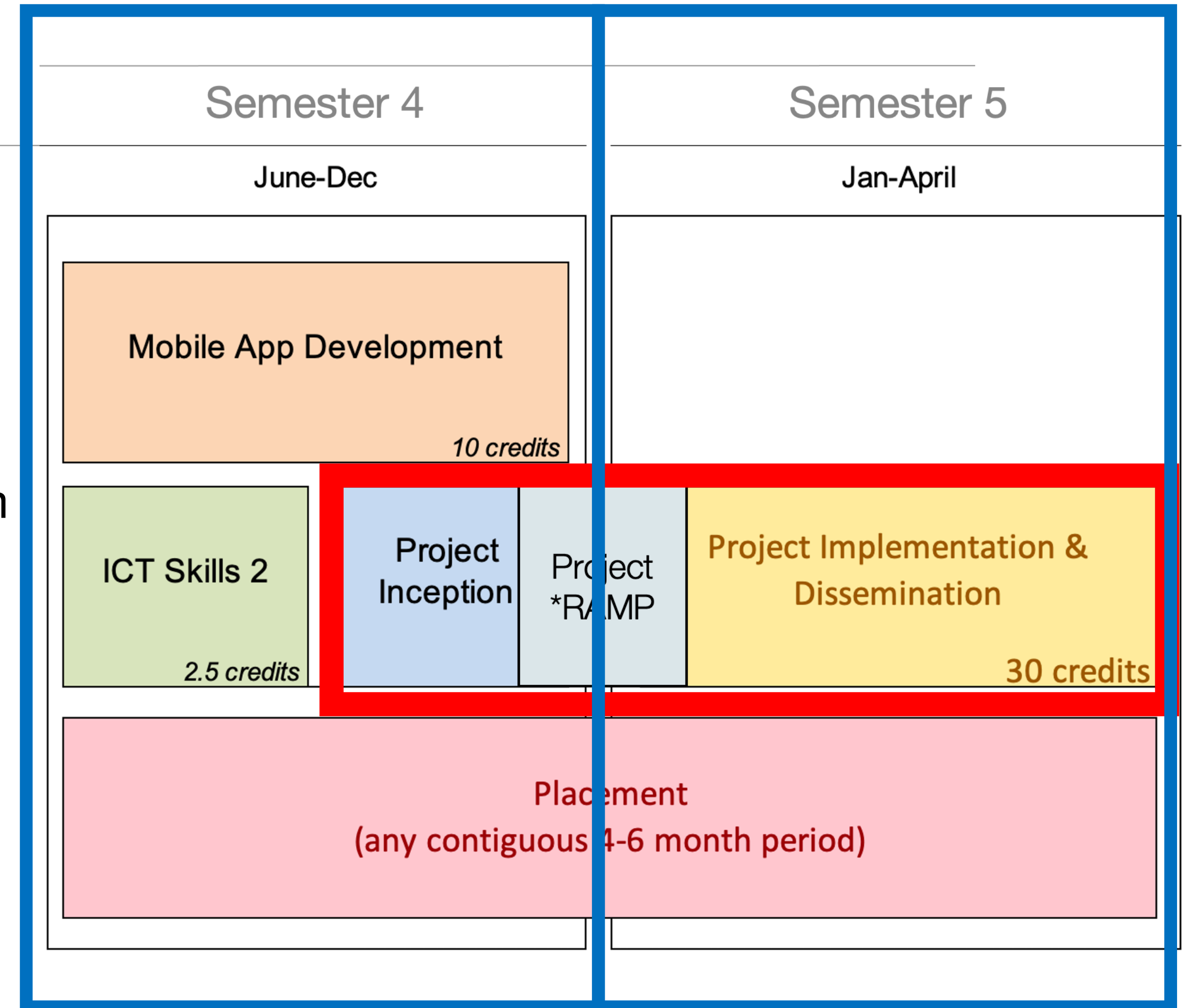Research, Analysis & design, Methodology, Planning

Project Lifecycle - 1

- **Semester 4**
  - 2 meetings with project coordinator
  - Develop a project proposal draft & final
  - Start Research, Analysis & design (system diagram, data models, screen designs, walkthroughs), Methodology, Plans

- **Semester 5**
  - Complete RAMP
  - (re)Define Scope
  - Project Development / Implementation
  - Ongoing contact with project supervisor
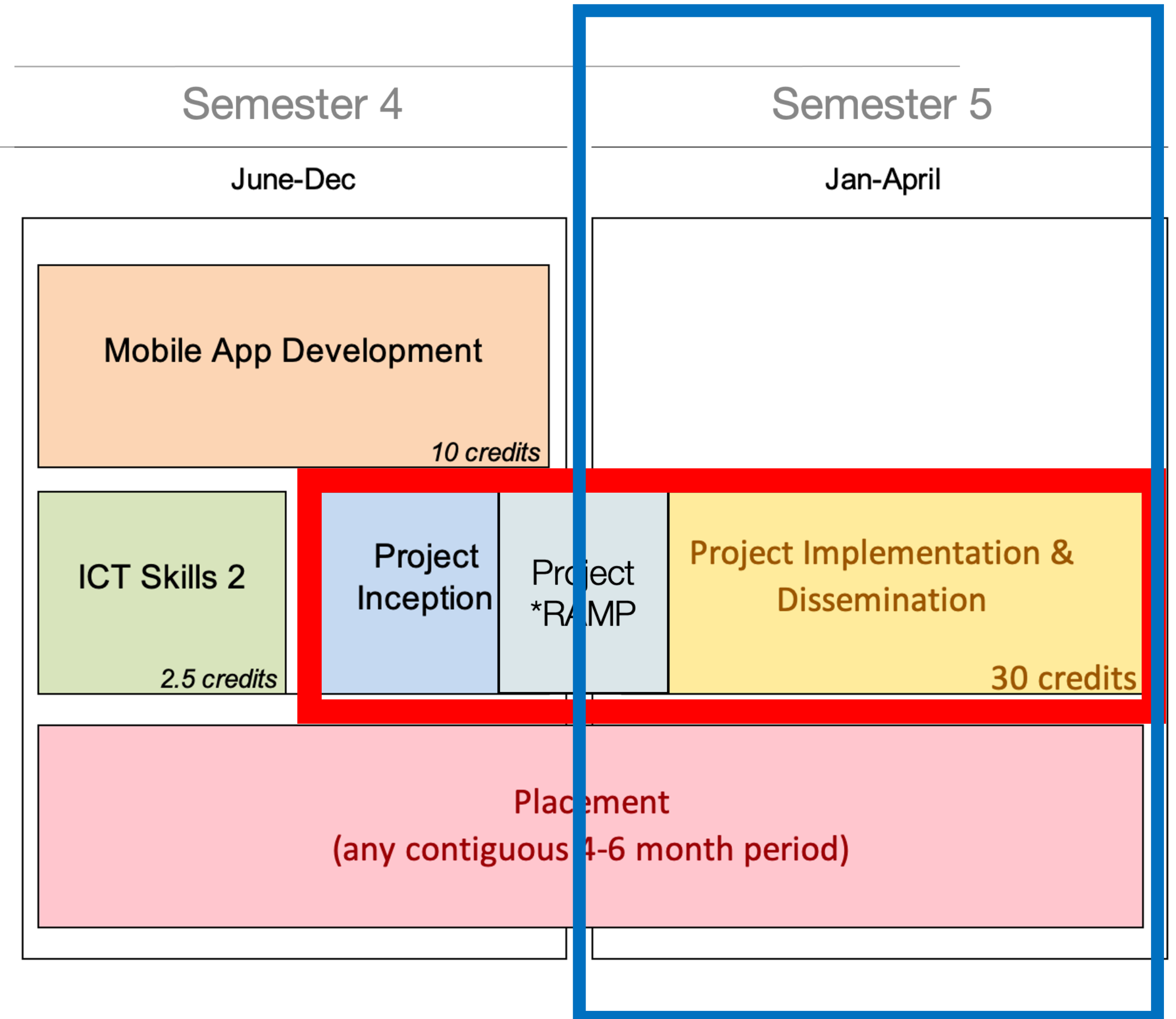 - (7 sprints / Slack / Trello / Github)

Semester 4	Semester 5
June-Dec	Jan-April

Mobile App Development
10 credits

ICT Skills 2
2.5 credits

Project Inception

Project *RAMP

Project Implementation & Dissemination
30 credits

Placement
(any contiguous 4-6 month period)

Project Lifecycle - 2

- **Semester 5**

  - Dissemenation

    - Project website

    - Single Github Project Repo

    - Showcase Entry

    - Final Report

    - Trello Board

    - Demo Video

    - Presentation to assessment panel

  - Assessment at Conclusion of project:

   - End of semester 5 *(or Autumn)*

	Semester 4	Semester 5
	June-Dec	Jan-April

Mobile App Development
10 credits

ICT Skills 2
2.5 credits

Project Inception

Project *RAMP

Project Implementation & Dissemination
30 credits

Placement
(any contiguous 4-6 month period)

Agenda

1. **Purpose** of the project

2. Project **Timeline**

3. Project **Phases**

4. **Styles** of Project

5. Project **Assessment Guidelines**

6. Project **Assessment Process**

7. Project **Scale**

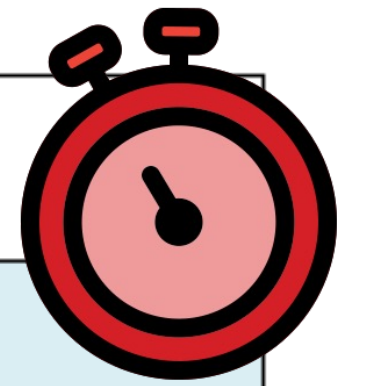8. **Sample** Projects

9. **Project Handbook**

1. **Purpose** of Project
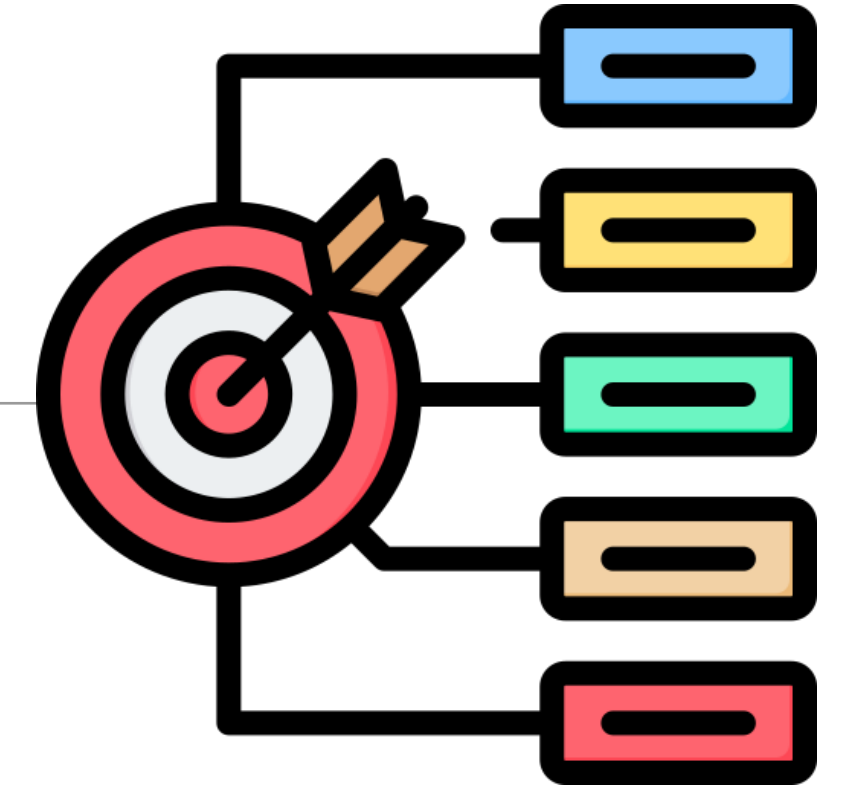
- A **Capstone** for learning from the course

- Integrate **knowledge from multiple modules**

- **Investigate new** domains, technologies or procedures

- Document and record your **work experience**

- Formally **research** a new technical domain

- **Showcase** skills and achievements

2. Project **Timeline**

Semester	Milestone	Description	When?
4	1	**Meeting 1** with Project Coordinator	October
4	2	**Draft Proposal**	Early November
4	3	**Meeting 2** with Project Coordinator	Mid November
4	4	**Final Proposal**	Early December
		RAMP Phase Research, analysis & design, Methodology, Plans	Dec-Mid Jan
		Individual Project Supervisor Appointed	end of semester / start of next semester
5	5	**Interim Report**	Mid-February
5	6	**Showcase Entry**	End of March / Start of April
5	7	**Final Project Submission** (**code** and **final report**)	+1 week
5	8	**Video** demo of project	+1 week
5	9	**Presentation** of Final Project	+1 week

Project Inception - Submissions

- Draft Proposal
- Final Proposal

Project Development - Submissions

- Interim Report

Project Dissemination - Final Submissions

- Project Showcase Handbook Summary
- Final Report & Code
- Project Video
- Presentation Slides
- HDIPCS2022-ProjectShowcase-FINAL-draft5
  - Project Slots - Native Android Apps -
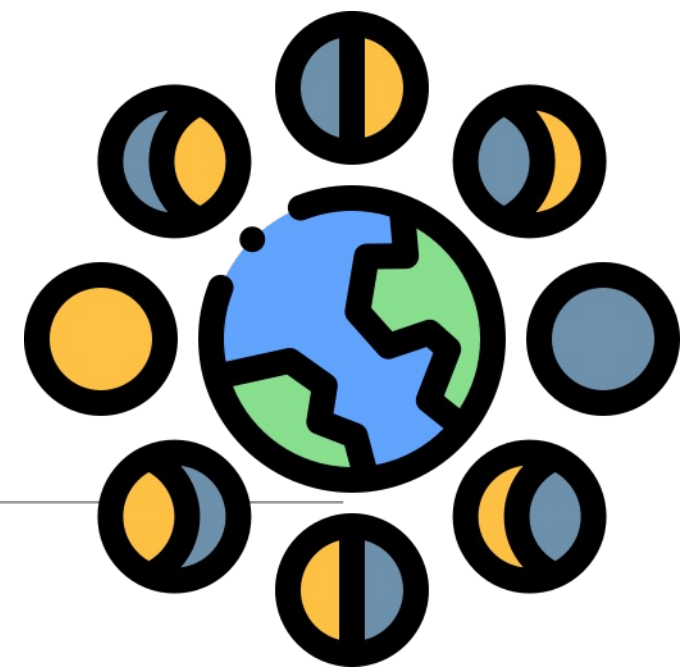 - Project Slots - Web Apps 1 -
  - Project Slots - Web Apps 2 -
  - Project Slots - Web & Mobile Combined, Hybrid Mobile, CI/CD -
  - Project Slots - Workplace, MS AdOn -
  - Project Slots - Physical Computing, IOT, Research -
- Project Submission - August

3. Project **Phases**

1. **Inception Phase**:
   Formation of the project concept, two meetings with coordinator, draft and final proposals + (optionally) interaction with work place mentor. Scoping the project.

2. **RAMP Phase**:
   Research, Analysis & design (system diagram, data models, screen designs, walkthroughs), Methodology (AGILE SCRUM), Plans (Trello)

3. **Development Phase**:
   Realisation of the project as proposed or amended in agreement with your supervisor. 1/2 week Sprints (6/7 sprints), slack / zoom meetings, GitHub Commits, Working on Final Report and project web page updated.

4. **Dissemination Phase**:
   Preparation of project web page, GITHUB project repo, Showcase Entry, Final report.TRELLO, Creation and publishing of a demonstration video. Project demonstration/presentation. Delivery of final documentation

4. Project **Styles**

- **Work Based Project**
  A project allocated by your work experience supervisor, representing a reasonably independent piece of work you have been implementing on your placement or place of work:

  - A standalone **application** (e.g. web app, native mobile app)

  - A **component** of a larger system

  - A new or improved **workflow / business process** serving some need in the workplace (CI/CD pipeline)

- **Independent Project**
  unrelated to work placement, consisting of an implemented software system designed to explore or consolidate knowledge in a specific domain

- **Research Paper**
  exploring a specific topic or set of topics and developed to _conference paper standard_. May or my not be related to work placement.

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5. Project **Assessment Indicative Guidelines**

Core Criteria (85%)	**+**	**Critical Self-Review (15%)**

Core Criteria (85%)

- **Model (15%)**
  light-weight, relevant modelling, generally in accordance with a recognised process. e.g. UML, Architectural Model, Process Flow Charts, Data Models (E-R), System diagrams, Wireframes etc.

- **Documentation (15%)**
  project-related communication including, but not limited to: learning logs (work placement), writing well-constructed formal reports (tables, numbering, Harvard Referencing & citations), sketches of ideas in diagrammatic/written form, wireframes, Trello board (used for plans and progress). Submitting all requirements (draft & final proposal, Handbook entry, Project Web Page, Final Report, Video, Code, Github repo - history/releases

- **Implementation (30%)**
  based on the modelling and the content of the reports.

- **Level (25%)**
  appropriate mix of (a) originality, (b) innovation and (c) complexity

Critical Self-Review (15%)

- what you **learned (5%)**

- what you **achieved (5%)**
  + in what direction the project might be taken if more time was available

- **problems encountered (5%)**
  how they were addressed and solved

- Supervisor provides indicative marks before presentations

- Panel of 3+ lecturers mark each project after presentations

- Marks are reviewed again at the end, ranked/compared against each other & normalised.

6. Assessment Process – pre presentation

Before presentations are made :

- A handbook will be created **grouping** the projects by type.

- Up to 6 presentations per day **scheduled**.

- A **panel** of 3+ lecturers review all projects. The panel makeup will be communicated to all beforeh presentations

- Your supervisor will provide marks to the panel (for indicative purposes only)

- All panel members will have viewed your demo video.

- At least 1 member will have read your report in detail.

- At least 1 member may have reviewed your code repos.

- Majority of panel members will be present for your presentation. Your supervisor may attend also.

6. Assessment Process – post presentation

After each presentation

- The panel member will have an **indicative grade or ranking** for each project.

- After all presentations have been completed, the panel will meet to discuss the projects in a **collegiate** fashion, **ranking** the projects **for each category initially** starting with highest and lowest working towards the middle. When all project categories have been completed, the panel will break.

- On return, the projects within each of the **categories will be merged**.

- Then, **marks** will be applied based on the based on the Project Grade categories.

- The project marks will be **shared** with all supervisors

- If there is an unacceptable difference between a supervisors suggested mark and the panels allocated mark, the project and mark can be **reviewed again**.

- Where there are more than 1 panel, there will be an additional step of reviewing and merging the results of each panel.

7. Project **Scale**

- Size of Project – see showcases
  Grade appears on Graduation Transcript **BUT NOT included in the calculation of the overall award level**

- **Proposal** - 2 pages

- Documented in a **Showcase Entry**
  (Name, Profile Picture, Project Title, 100 word abstract, project web page, Project Type {web app, mobile app, both, CI/CD, OTHER},
  Youtube project demo video link, github project repo)

- A **Final Project Report**
  (Maximum of 8000 words for the document core - excludes TOC, Bibliography, Appendices, Preface, Acknowledgements)

- A link to your demo **Video**
  (10 mins max) which will become part of the project legacy. Uploaded to your Student YouTube account as unlisted or public.

- **Presentation** to a panel in April/May (or August/September)
 (15 mins max + 10 mins Q&A)

8. Project **Handbook**

- Similar to contents above but also contains additional details about the each submission, examples, and dates. It contains many Appendicies with samples.

- Dates will be shared on the **SLACK #PROJECT** channel at start of each semester

Project Handbook

Detailed guidelines on your work placement project.
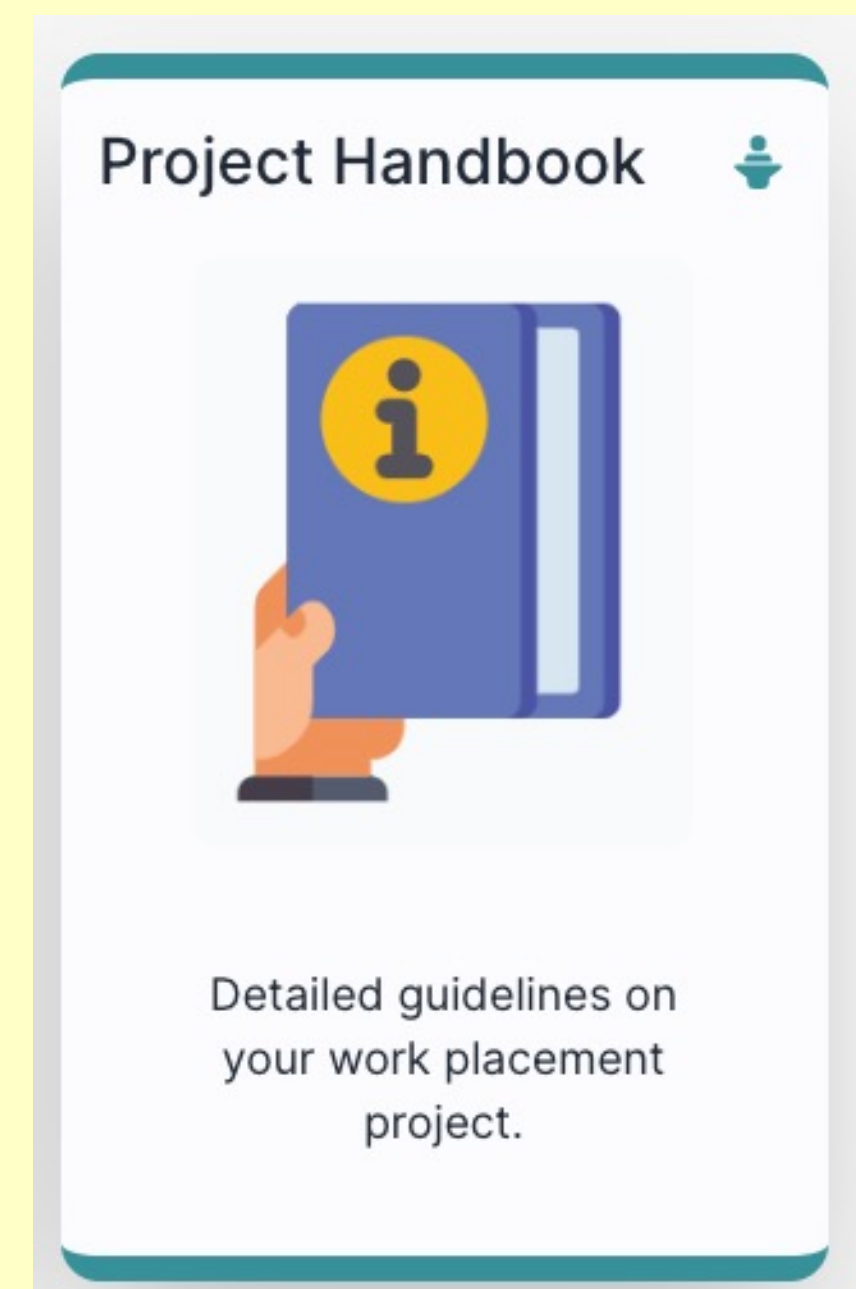
9. **Sample Projects**

- Take a look at showcases from previous years (NOTE requirements &specs change over time)
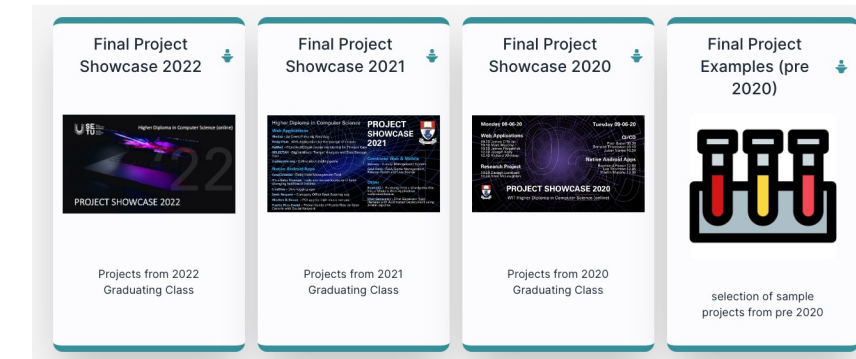
- **2021 Showcase**

Higher Diploma in Computer Science — PROJECT SHOWCASE 2021

Web Applications
Wedoo - An Event Planning Web App
RecipeHub - Web Application for the storage of recipes
ReMed - REmote MEDical device monitoring for Primary Care
SELECTAH - Digital Music 'Tempo' Analysis and Data Storage Tool
tradegame.org - Online stock trading game

Native Android Apps
CowCalendar - Dairy Herd Management Tool
It's a Baby Changer - rate and review locations of baby changing facilities in Ireland.
LiveDive – Dive logging app
Desk Request – Company Office Desk Booking app
Rhythm & Booze – POI app for Irish music venues
Puerto Rico Social – Pocket Guide of Puerto Rico de Gran Canaria with Social Network

Combined Web & Mobile
iSurvey - Survey Management System
GAA Data - GAA Game Management, Referee Watch and Live Scores

Other
EvolveCLI - Evolving from a Wordpress Site into a Modern Web Application waltoninstitute.ie
Chat Generator - Chat Generator Test Harness with Automated Deployment using Jenkin pipeline

- **2020 Showcase**

Higher Diploma in Computer Science — PROJECT SHOWCASE 2020

Web Applications
Simple GIS. Map-Based Geo Survey Tool
Car Park Management System (Rasberry Pi Camera)
Clue Online - Bill of Materials
Testing Strategy - Testing for a Fintech Enterprise
Hospital Laboratory Information & E-Learning Tool

CI/CD
CI/CD framework for Automated Data Movement
CI/CD Pipeline & "Running Social" Web App
Performance and Scalability Performance Driven Dev

Native Android Apps
Sportif Waterford Cycling Club App
StatMaster - App to record GAA Statistics
Orienteering Event Management App

Research Project
The Future Of MES In Industry 4.0
Open Historical Maps of Ireland

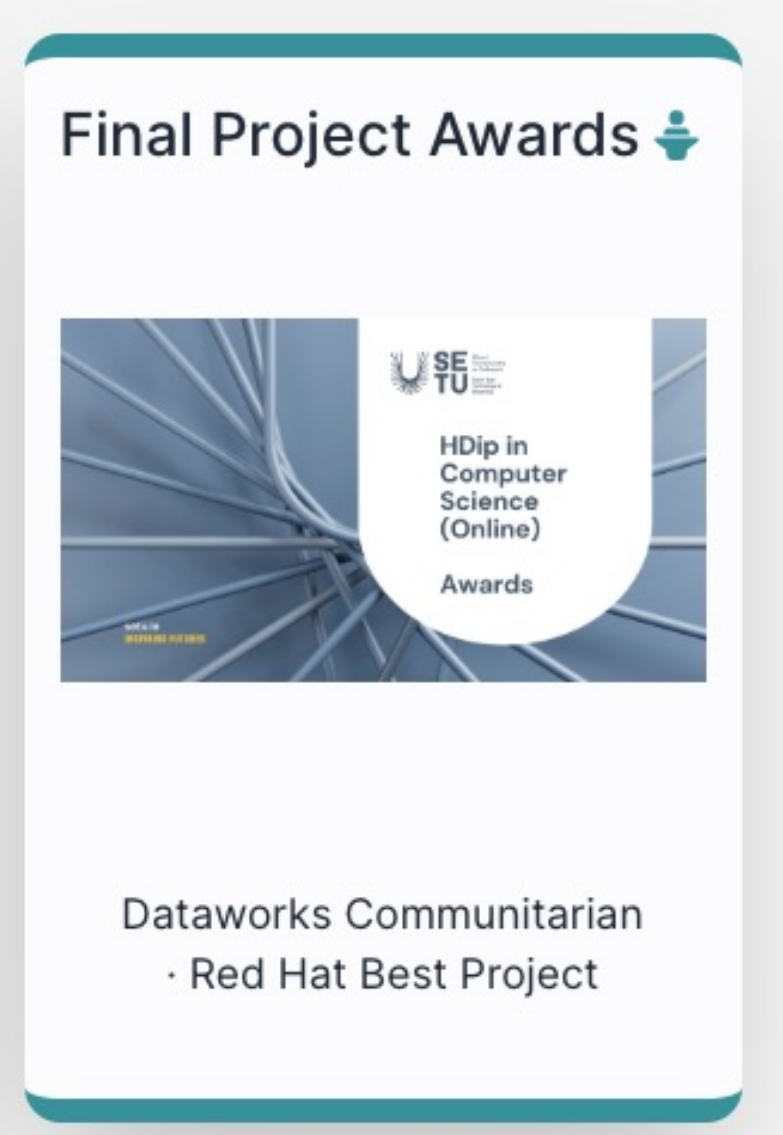
Higher Diploma in Computer Science (online)

PROJECT SHOWCASE 2022

Work Placement & Project

- One module – **30 credits**

- **Academic Writing Workshops**

    - schedule posted mid September,

    - runs next semester at 5.15,

    - repeated twice/week

- **Project Awards**

Academic Writing Workshops 2021-22

Week	Day	Date	Time	Topic
Week 1	Monday	27th September	5.15pm	Academic writing Overview
	Friday	1st October	5.15pm	Academic writing Overview
Week 2	Monday	4th October	5.15pm	Essay Planning & Topic of Students Choice
	Friday	8th October	5.15pm	Essay Planning & Topic of Students Choice
Week 3	Monday	11th October	5.15pm	Referencing & Topic of Students Choice
	Friday	15th October	5.15pm	Referencing & Topic of Students Choice
Week 4	Monday	18th October	5.15pm	Reading Effectively
	Friday	22nd October	5.15pm	Reading Effectively
Week 5 (Revision)	Tuesday	26th October	5.15pm	Revision Workshop
	Wednesday	27th October	5.15pm	Revision Workshop
	Thursday	28th October	5.15pm	Revision Workshop
Week 6	Monday	1st November	5.15pm	Editing & Proof Reading, Assignment Checklists
	Friday	5th November	5.15pm	Editing & Proof Reading, Assignment Checklists
Week 7	Monday	8th November	5.15pm	Literary Reviews & Reading Effectively
	Friday	12th November	5.15pm	Literary Reviews & Reading Effectively
Week 8	Monday	15th November	5.15pm	Academic Toolkit & Time Saving Tips
	Friday	19th November	5.15pm	Academic Toolkit & Time Saving Tips
Week 9	Monday	22nd November	5.15pm	Referencing & Report Writing
	Friday	26th November	5.15pm	Referencing & Report Writing
Week 10 (Revision)	Tuesday	30th November	5.15pm	Revision Workshop
	Wednesday	1st December	5.15pm	Revision Workshop
	Thursday	2nd December	5.15pm	Revision Workshop (Possible Drop in Clinic)

Final Project Awards

SE TU
HDip in Computer Science (Online)
Awards

Dataworks Communitarian
· Red Hat Best Project

Work Placement & Project

- If you are **working in tech**,

    - You have choice of work based or independent project.

    - We recommend **work based project**.

- If you are **not working in tech**,

    - You are by definintion doing **independent project**.

    - You are incentivised to enhance your learning experience by undertaking **certification programmes**

        that we will make available.

    - Project grading for such projects will take this into account. **Project is capped 70%** unless you

        undertake certification (effectively costs you a grade)

- **Free Certification** options will be made available (September) including Linux, RedHat

- **Certification** will take place from September to August to complete