Mobile Application Development

Higher Diploma in Science in Computer Science

Produced by

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eLearning support unit

Project Briefing Session

Structure of the Programme

Level 8 Higher Diploma in Science in Computer Science

Semester 1 (30 Credits)

All Mandatory

- Programming — *10 credits*
- Computer Networks — *5 credits*
- Web Development — *5 credits*
- Computer Systems — 5 credits
- Database — *5 credits*

Semester 2 (30 credits)

Specialisms (select 2)

- Mobile App Development — *10 credits*

Mandatory

- Project/Summer School — *5 credits*
- Enterprise Service Development — *10 credits*
- Developer Operations — *5 credits*
- Security & Forensics — *10 credits*

Semester 3 (30 credits)

- Project/Placement — *30 credits*

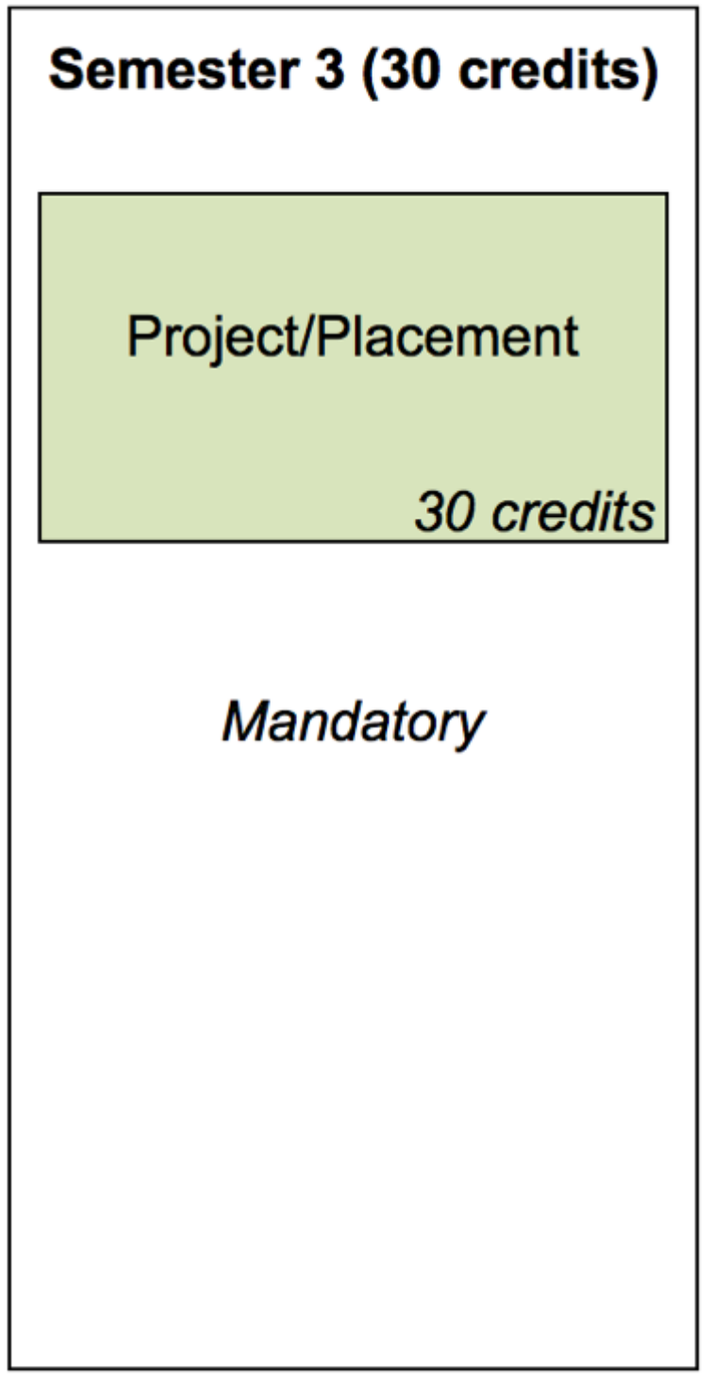
Mandatory

Semester 3

"Internships or work placements are seen as crucial to providing graduates with the context and confidence in their new knowledge. ...academic and industry partners will cooperate in the provision of appropriate academic supervision resources for the duration of this work placement activity..."

Project Lifecycle:

- Academic Project supervisor appointed in Semester 2
- Develop a project proposal draft during Semester 2, potentially in consultation placement opportunity
- Ongoing contact with supervisor during Semester 3
- Project assessed a conclusion



Project: Overall Goal

- There is a long tradition of Final Year Projects in Computing programmes

- They offer an opportunity to the student to apply their growing knowledge to diverse an interesting problems.

- Employers often find the project a useful jumping off point during first contact with students

- The project can be considered as part of a professional portfolio, within which the student can showcase key skills, abilities and achievements (for computing students - bitbucket/ github is a particularly effective portfolio host).

Project Elements

- Model
- Documentation
- Implementation
- Originality / Innovation / Complexity

Model

- Light-weight, relevant model of a problem/solution, generally in accordance with a recognised process.

- For a software project this is most commonly expressed in a subset of UML.

- For other types of project a different formalism may be more appropriate.

- May be entirely informal - based on simple and clearly communicated conventions

Documentation

- Project-related communication including:
  - keeping appropriate logs,
  - writing well-constructed formal reports,
  - maintaining sketches of ideas in diagrammatic/written form

Implementation

- Based on the modelling and the content of the reports.
- The implementation may a working prototype or software component
- The implementation may be a comprehensive report / analysis or a technology enabled business process innovation

Originality / Innovation / Complexity

- Use the project as an opportunity to explore a new process/technology

- Use the project to get better acquainted with the business of your placement opportunity

- Use the project to firm up an aspect of your core knowledge

- Use the project to build a compelling prototype

- Use the project to contribute to a community service

Structure of the Project

- Inception Phase:
  - including formation of the project concept, initial meeting with supervisor, draft and final proposals + (optionally) interaction with work place mentor.
- Development Phase:
  - Realisation of the project as proposed or amended in agreement with your supervisor.
- Dissemination Phase:
  - Preparation of final report. Presentation of project demonstration/ presentation. Delivery of final documentation.

Project Proposals

- Representative examples:
  - An entire application (mobile app, web app or both)
  - A component of an application (database, or other software component)
  - A software tool, library or framework
  - An analysis/profile of a system or component (for instance from a security perspective)
  - A project may be a detailed state of the art for a given field.
  - A document or enhanced Business Process or Technology enabled process improvement

Three Reports Required

- Proposal
  - This will articulate the project concept and nature and will serve to scope the work of realising the project. It may typically be less than 2 pages
- Interim Report
  - This will be a substantial update on the progress of the project – and can be regarded as an early draft of the final report. It may be 10-15 pages, depending on the project type
- Final Report
  - This is the final report – and may include a short number of slides for presentation/demonstration purposes. Final reports would typically be less than 40 pages.

Supervision

- Each student will be appointed an academic supervisor to provide guidance and advice for the duration of the project.
- Meetings will be by mutual agreement - and may be weekly initially. Typically this contact may amount to a total to 12 1/2 hour meetings or 6 1 hour meetings.
- The student will be expect to show progress, with the emphasis on risk-reduction from week to week as issues associated with (a) project requirements gathering, (b) technologies and (c) skills building are addressed.
- Each meeting must be logged perhaps simply by a brief exchange of emails between student and supervisor after the meeting outlining what was agreed and what is to be done for the next meeting.
- The supervisors role is centred on providing advice and guidance on project scope, structure, and progress, not necessarily technical support.
- Feel free to reach out to any member of the ICT Skills Tuition team for technical advice and support.

Milestones

Milestone 1: Initial Meeting with Supervisor (week of 24th November 2014)

Milestone 2: Draft Proposal:19th December 2014

Milestone 3: Final Proposal: Friday 23rd January 2015

Milestone 4: Interim Report: 13th March 2015

Milestone 5: Submission of Final Project: 8th May 2015

Milestone 6: Presentation of Final Project: 20th May 2015

Student Fair

- In addition, Ian Downey who is coordinator for the B.Sc. Hons Computing Projects, will collect abstracts and photographs for the Project Book published at the end of the year.

- This book is made available to future employers and others at the Student Fair at which you have the opportunity to show your projects.