RMIT University

WIL
Software Engineering Projects

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RMIT University

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Overview

- ## We offer two courses:
  - ### Undergraduate – 48 credit points over two semesters (i.e., part time)
  - ### Post graduate – 48 credit points over one semester (i.e., full time)
- ## Software engineering and industry focus

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Overview

- The courses are designed to provide students with hands on practical experience developing software in a commercial project environment

- The emphasis is on understanding and working within a corporate environment, using formal project and software delivery methodologies

- The final deliverable (application/ programs) is scoped and agreed with the corporate sponsor

Undergraduate Project Overview

- Mandatory capstone project in 4th year

- External or internal sponsors

- Teams of 4 – 6 students

- Working at corporate site or at University

- Mostly as per the Post Grad project structure but runs part time over 2 semesters.

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Post Graduate Overview

- Running successfully since 2005
- Each project = 1 semester = 16 weeks (-2)
- 4 – 6 students per team full time = 3,000 hours
- Projects undertaken from inception to installation
- Developed at the "Your Software" Business Office (RMIT)
- Overseen by professional project manager

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Post Grad Work Environment

- RMIT has established an 'office' where students 'come to work' everyday. They have their own workstations and the server / software is independent of the school's infrastructure but is supported by the technical services group

- Individual secure directories for each project (i.e. not shared with other projects)

- Emulation of corporate set up (tools, databases)

- Meeting room for 'think' sessions, workshops etc.

- On site (corporate) for initial requirements gathering, UAT and implementation

Project Profile

- Non mission critical

- Sufficiently complex / challenging

- Accomplishable in timeframe

- Platforms / languages / tools flexible depending on sponsors' environments

- Teams research and recommend tools etc.

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Project Deliverables

- Project Charter (includes governance model)
- Project Definition / Project Gannt Chart
- Software Requirements Specification
- Software Architecture / Design Specification
- Test Plan, Test Cases and Test Reports
- Weekly Reports, Issues and Risk Registers
- Programs (code) and full supporting documentation
- Project Closure Report (with PIR data)
- User guides / manuals where relevant

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Work / Course Structure

- Formal project management methodologies
  - May follow sponsor methodology if required (templates, QA etc)
- Formal software development methodologies
  - As agreed with the sponsor - traditional SDLC, OO RUP. Or Agile (e.g., SCRUM)
  - May follow sponsor SDLC if required
- Signed off deliverables
- Group assessment for major deliverables
- Individual assessment – Personal Student Review
- Peer Reviews

Sponsor Commitment

- Provide a representative to attend weekly (or other frequency) status / issues / progress meetings, or liaise as agreed in the Governance model
- Provide resource/s during requirements gathering phase
- Approve project plan
- Sign off other agreed major deliverables
- Perform User Acceptance Testing (if applicable)
- Commit to the term of the project

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Team Formation

- Project Proposal presentation and discussion
- Week one research groups
- Academic histories
- CVs
- Nomination Forms
- Preferences
- International students
- Local students
- The right skill mix

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Student Learnings / Achievements

- Industry experience

- Customer relationship management

- Team management

- Applied Software Engineering principles

- A final outcome / product

- Project Management
    - Issues and Risk Management
    - Change Management
    - Quality Management
    - Time Management

Student Learnings / Achievements

- Practical application of previous semesters' theory and knowledge
- Additional self learning and cross learning
- Professional behaviour
- Team dynamics / behaviours
- Interpersonal skills - contact at various levels within and without the team
- Self awareness – skills and capabilities
- Confidence
- Industry ready

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Successful Outcomes

Your Software

Department of Primary Industries

Designed and built a system to automate the process of gathering environmental data and informing farmers of their daily irrigation needs. Complex and highly successful project that allows farmers to reduce the amount of water used to irrigate their vegetable farmlands. Links with the Department of Meteorology. Daily information is sent to farmers via SMS or email.

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Everyday Interactive Networks (EIN)

This complex project required a hybrid-P2P networking engine (API) to be built as a replacement of the existing network engine. The API will be used to create the underlying network topology of the i3d Platform over the LAN and Internet. This network engine adhered to i3d platform specifications and handles client and server requests within the LAN and Internet. This task was divided into five major functionalities which have been further subdivided into successive unit modules to serve as reusable and scalable modules. It has been successfully incorporated into EIN's continued R & D program.

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Your Software

National Australia Bank (nab)

Designed and built a stand alone disaster recovery management tool with a common console for all DR and Business Continuity staff to access during test and actual DR exercises. Includes on line functionality and current and historical management reports. The tool was successfully installed for DR tests.

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Contact

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