FIT 5120 Student Guide Semester 2025 Semester 2

INDUSTRY EXPERIENCE STUDIO PROJECT

1. Introduction

This unit guide has been designed and written to provide an overview of the requirements for this unit. It has been designed to inform you of the relevant procedures, guidelines and issues that will need to be considered while undertaking the IE project and to help you obtain maximum benefit from the unit. Detailed coverage of the issues raised in the guide will be addressed during the studios organised for the unit. You are urged to read the details carefully contained in this guide and to raise questions in the studios, or directly with the IE teaching team.

2. Teaching Team (contact details on Moodle)

Chief Examiner & Consulting Mentors:

Chief Examiner: Gail Bourne, Lecturer, Sameera Patterson, Co-lecturer Peter Brown

Internal industry and academic mentors with contact details will be given to you in your studios.

3. Unit Outline

Unit Website

The unit website can be located through Moodle. The website will be used to make announcements and to post resources that may be of use to you. **You must check the website regularly**.

Description

The principal focus is to give students the opportunity to research contemporary approaches to system development, their specialisation and developing new skills. Students should be able to apply the knowledge and skills they have already gained to develop and deliver innovative IT solutions at par with industry standards which can be used by their intended audience: the community, researchers, NGO's, not for profits and so on. All projects must be aligned to the faculty core value of **IT for Social Good**.

Under the direction of Senior Managers, Project Directors and Industry Mentors, students work in self-managed teams and will:

- Carry out appropriate and current research into best practices;
- Develop new skills and apply these together with specialist skills already gained
- Manage the project through all its development stages;
- Communicate effectively with a range of project stakeholders, including senior industry mentors;
- Develop project documentation to a professional standard;
- Present their project work (to professional industry standards for evaluation and feedback to academics, clients, industry experts and peers);
- Create presentations in relevant and innovative ways;
- Reflect on their work and themselves to facilitate deeper learning;
- Attend unit seminars and studios
- Contribute in a professional and committed manner to the work of their team and to the class group.

Learning is encouraged through enquiry based and peer assisted approaches, student presentations and experiential learning. Reflection, through portfolios, is used to conceptualise, document and understand the experience and to develop an understanding of personal strengths.

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Learning Outcomes

At the completion of this unit, students should be able to:

1.Critically analyse complex information relevant to an advanced specialist domain and identify information requirements interpreting how they may be of benefit to an organisation or a community, including addressing security needs and ethical concerns.

2.Analyse how specialist domain projects are developed and evaluate the underlying principles and reasons underpinning each aspect of the development process, proposing the need for and then using a context driven methodological approach to deliver, ensuring security considerations in order that the final product is not only effective but also resilient against potential threats and vulnerabilities.

3. Differentiate and synthesise the interrelated roles and responsibilities of all stakeholders of a project and assess and analyse why these roles are important for a successful project.

4. Apply, in an industry standard setting, new concepts as well as aspects of theoretical approaches already learned, selecting the most appropriate fit for a specific situation and the rationale for that selection applying investigative research, while ensuring the end result has a responsible impact on society.

5. Demonstrate discernment and judgment in effective two-way communication to all stakeholders/audiences, both specialist and generalist, by using innovative, relevant and meaningful mechanisms to disseminate knowledge and ideas

6.Contrast and apply the most suitable professional practice skills on issues relevant to the chosen area of practice and operate effectively as a member of that practice team; including understanding the ethical and social responsibilities of IT professionals and teams.

7. Evaluate, assess and communicate both personal and team progress and learning, thus engaging in meaningful reflective practice of one's self and the outcomes and process of the project.

Along with these outcomes, the unit aims to introduce an entrepreneurial flavour to the students' activities, including innovative ways of presenting to senior industry experts and any sponsors, including the need to understand current best practices. This will provide all students with the chance to master a number of new technologies and tools through self-study, with little or no formal teaching. The ability to quickly research and adapt to and learn new technologies and tools is assumed by employers of senior IT graduates. It is expected that students will view the learning of a new technology or skill as a positive opportunity to broaden their marketable skills.

Studios and Seminars

Seminars

A seminar has been timetabled for 1 hour once a week.

- The seminar is live-streamed on Friday and recording will be available. This seminar will detail expectations for the week along with other important information, this is often given by industry guest speakers.

Many of the seminars will be given by industry speakers, discussing how what is being achieved in the unit is used in an industry setting. If there is no seminar during a particular week, then those hours will be spent on the project. Extra access to your Monash mentors can be made by appointment (through email) each week.

Studios

Studios have been timetabled one four-hour session and one three-hour session twice a week. Students are expected to spend at least another 16 hours each per week on the project, and related activities.

Prior to the studio, it is expected that students come prepared with the pre-reading materials each week. Many will be just reminders of what you have already learnt and some will be for distributing information about new tools and techniques that you may not have come across previously. These issues and this information will be discussed from 'real world' rather than academic or theoretical perspectives.

External industry partners will be invited to sponsor a studio, where they will contribute as mentors too and as managers to discuss the student groups' solutions. This way the students will be given access to communicating with a senior industry partner and debate/defend the solution they are delivering and changing, as necessary, as well as learning about current industry practices and gaining industry insights.

Within each studio there will be one Monash mentor, usually industry-based mentor (currently working in the IT industry or recently left) plus access to a Tech mentor.

The studios are compulsory for all students. If you cannot attend you must email your apologies to your Monash mentors and your team members. Failure to attend and actively engage will impact your contribution/professional practice/participation assessment component of this unit.

Presentations may be to a panel, consisting of industry experts and/or your peers, mentors and possible sponsors for your project.

Projects

Your project and your development approach will be decided by your team, in conjunction with your mentors (both Monash and Industry). The projects span a range of outputs (web sites, apps for mobile devices, IOT, visual endpoints, using virtual networks, firewalls and so on – depending on the strengths of the team and the project undertaken) and industries. The nature of any particular project does not in any way reduce the relevance or importance of the work that is done. The same high standard and professionalism is expected from all students for all projects.

You will be given directions to key open data sets but will be expected to find more and then analyse, model and wrangle as necessary (depending on the strengths of the team) the data that is available and create a problem space that you see as important to solve. You will then deliver a solution that is meaningful and useful to real business clients, community groups, researchers or NGOs. Examples will be given to you to help you understand the kinds of things you should deliver.

You will have access to a senior industry mentor who will add to your experience by mentoring and advising and indicating current industry practice. You will be allowed to organise your own development environment, depending on the team's strengths to create your solution. The approach is intended for you to reflect on best practices and to introduce an entrepreneurial flavour to your activities and practise skills of communication necessary for senior positions in industry. Your final project will be a working and innovative product of use, developed to industry standards.

It should be emphasised that the products of the project are often useful to show prospective employers. Students will document their products and their learning using Project Governance Portfolio (guidelines to be provided). Project profiles (topics) will be given to students in the third or fourth week of the semester.

Project Team

The students are entirely responsible for the performance of the project in professional, technical and control terms. Each team typically consists of four to five members. It is expected that all project team members contribute to the planning and task definition. All members are expected to liaise with the industry partner (mentor) in the studio. Each team member will be an integral part of the team and therefore will need to

support the analyst, data scientist, database designer, technical writer, programmer, tester, interface designer, network designer, security expert (and so on) functions.

Meetings

Studio meetings with IE mentors

Mentoring sessions will be conducted with all teams in a studio class, and with individual team members if required. The sessions rely on the active involvement of your class members and are essential to the class's success. All teams need to work collegially with their peers and take an interest and become familiar with all the projects undertaken by the other teams in their studio. These sessions have a strong educational purpose, giving class members the ability to view their work more realistically by gaining a greater knowledge and understanding of other projects and their problems. This shared knowledge enables team members to approach other class members for assistance with their problems. Students and supervisors are encouraged to use studio meetings creatively. Regular reviews in the studio, often with checklists for discussion, will involve teams, Monash staff and industry partners. These are not minuted.

Industry Partner meetings

These are the main vehicles for gathering and disseminating information with your industry partners and obtaining feedback **and will always be minuted.**

Team meetings

Only formal team meetings, of which there will be few, need to be minuted. Working and discussion in the studio a team **need not be minuted.**

The meeting process and subsequent deliverables are critical to the project's success and require thorough documentation on the team portfolio. Indicators of the quality of meetings are:

- Preparation, planning;
- Identification of issues;
- Follow up and resolution of issues.

You will work with your industry partner approximately every two weeks, either face to face in your studio or virtually (some industry partners are at site).

4. Mentors' responsibilities

The IE Academic mentors will take on a range of roles and responsibilities during the semester

5. Assessment

Your assessment for the Industry Experience units will be made up of 3 components. Each component will have marking guides and assessment criteria on Moodle.

Component 1 – Project Deliverables Type: Work Integrated (team-based)- 75%

The project consists of three iterations, focusing on the quality of processes and deliverables throughout the semester.

Teams will produce an 8-10 minute video presentation showcasing their project's objectives, learning journey and development progress, while reflecting on challenges and achievements.

The project concludes with a detailed handover, including all technical and business documentation to ensure it is thoroughly prepared for future use or further development.

To ensure that team members are rewarded appropriately for their contributions, an individual team member's final mark for Component 1 can vary based on defined criteria across the semester.

The total mark for a student for Component 1 cannot exceed the maximum of 75 marks.

Throughout the semester, mentors will assess the contribution of each student based on:

- Peer Evaluations (via FeedbackFruits)
- Studio Participation
- Mentor observation for the following:
- Stand-up meetings and in-class team discussion
- Equitable contribution across all deliverables with effort tracked in Leankit and evidence in PGP
- Feedback on individual performance provided by Industry Mentors
- Responsiveness to feedback from academic mentors
- Assisting other teams in studio
- Completion of homework in team activities

These variations can add up to be plus/minus 100% of the group mark for the individual's project deliverables.

So the final mark for Component 1 for an individual student is:
Team mark for the quality of project deliverables group mark adjusted by the contribution for each deliverable then +/- Mentor assessed assessment mark across the whole semester.

Component 2 – Reflection Type: Written - 15%

Part 1 Personal Learning Personal learning reflection throughout the semester

Each student will be required to submit a private written submission every 4 weeks on Moodle or face to face submission during studio. This activity is an essential part of the teaching and learning approach used in this unit. Students will engage in meaningful reflective practice of themselves, reflect upon, analyse and learn from their experiences. The students will constructively review their practices, with a view to improving personal future practice. Mentors will provide timely feedback and suggest improvements, strategies and/or support students.

Part 2 Portfolio Reflection

The student will reflect on how they used their discipline knowledge to develop the project.

Component 3 – Content Knowledge Type: Quiz/Test- 10%

Students will need to answer weekly quizzes based on pre-readings and activities completed to check asynchronous learning.

6. Deliverables

Your team will need to produce a range of deliverables at specific times during the semester that will need to be signed off by your Academic mentors. These deliverables are the products resulting from activities in the project development process. During IE there is a set of deliverable dates (a schedule is available) however, these may vary for a particular project.

Deliverables for the project may include written, verbal and technical outputs and must conform to the standards defined for IE and by your team. The deliverables must be appropriate for the problem and address the solution to the problem. The type and frequency of these deliverables will depend on the project, the development method, audience needs and supervisor's requirements. Other required items will be specified by

the mentors on a regular basis.
Assessment will focus on participation, quality of deliverables, any presentations given and regular reviews of the development process (to be carried out during the class by mentors).

Assessment of written deliverables outside and during the development process will address the following:

- Expression of content;
- Completeness in that the document leaves nothing unanswered;
- Consistency in the content meaning, vocabulary and style within the document;
- Structure of the document supports the understanding of content;
- Appropriateness to target audience and purpose;
- Inclusion of “soft” aids, where necessary, to assist in understanding (e.g. prototypes, help screens visualization sketches and so on).

Presentations will be necessary and may be to panels containing peers, industry experts,organisations, community members and academic staff.

Assessment of verbal/visual presentations will address the following:

1. Use of innovative presentation aids and the appropriateness (to the audience) of these aids;
2. Delivery of content -- voice projection, clarity and expression, if a stand up presentation;
3. Team dynamics indicating a cohesive group which introduces individuals and content and utilises all team members;
4. Content of the presentation is planned and organised in a way that is suitable for the target audience and addresses all relevant aspects for the type of presentation;
5. Evidence of preparation, practice and incorporating feedback.

Assessment of development processes will address the following:

1. Management of the process (observed in studio/iteration reviews)
2. The written information requirements
3. The actual product
   - Your understanding of the solution;
   - The usefulness of the solution
   - The design of the solution;
   - The usability of the solution;
   - The robustness, repeatability and maintenance of the solution.

You need to ensure that you have organized working documents such as minutes of meetings, schedules, work allocation etc to support your project in your Project Governance Portfolio folder (project control system) and relevant resources to the Industry Mentor ePortfolio. This information must be available on request by the Monash mentors at every class.

7. Development Resources and Project management software to be used

Development resources will be decided by your team, after your research and review into appropriate approaches, in conjunction with your IE mentors. **You will need to provide a password-protected space** for development and production, where the system can be shared to authorised stakeholders/users. Source version control is required to be practised by project teams to ensure the integrity of any source code. If teams need any software not available, please contact your Academic mentors. Leankit will be used for Project Management for this unit.

8. Expectations

The following section discusses what you can expect and what our expectations are of the industry experience unit.

Your Expectations of the unit

The IE project is unlike any other unit you will have undertaken during your postgraduate degree. For many of you, it will be your first opportunity to combine all that you have learnt so far and use your skills in an industry context. This is a wonderful opportunity to develop confidence in what you know, highlight weaker areas that need attention and to acquire new skills where necessary. You can expect the following:

- To work on a unique project, the successful management of which is your responsibility;
- Sufficient autonomy and authority to meet your project responsibilities;
- A degree of flexibility from the IE academic team to suit the unique nature of some projects;
- Provision of facilities and resources (as outlined elsewhere in this document) comparable to those found and used in many professional environments;
- Strong support and direction from highly accessible and skilled staff;
- Discipline specific support if needed;
- To learn more about yourself and how to work and interact with others.

There is much to be gained from this unit and you should recognise the importance of this unit to your future careers and development. By the end, hopefully you will acknowledge the significance of lessons learned, confidence gained and rewards that can only be earned in the cut--and--thrust environment of industry.

Your Expectations of the Academic Staff

Each IE studio has access to academic consultants (Gail Bourne, Sameera Patterson, Peter Brown), one of whom will visit every studio, and one to two academic mentors, one of whom will have extensive industry experience and the other who will have experience of the industry experience units, and an external Industry mentor. They will all be your mentors. The studio staff will have a hands-on role and will be available during the whole class session and for consultation as required. The industry mentor will be available frequently, for your entire class.. On-line meetings with them may occur at Monash or at the industry premises.

You can expect the following from your academic staff:

- Weekly contact for progress reporting and feedback;
- Timely response from all staff to queries (email/personal) with the opportunity to arrange out-of-class contact where necessary;
- Honest, constructive criticism delivered professionally with suggestions for change/improvement;
- The benefit of significant expertise and experience, both academic and industry, in a range of areas;
- To be treated with respect and professionalism;
- A fair and sympathetic hearing of any relevant issue raised with honest and impartial consideration.

Do not expect your academics to control your project – we will guide but you are in control. We prefer not to step in unless you are about to fall off a cliff.
This is a great opportunity for you to get to know your academics better and relate to them in ways not possible in other study areas.

Your Expectations of Yourselves

Your expectations of yourself are among the most critical factors that determine what you achieve, and ultimately, who you are. There are many rewards to be gained from this unit but they don't come easy – you have to put in, if you want to generate the returns.

In order to maximise your chances of obtaining successful outcomes you might wish to consider, adopt or modify some of the following self-expectations:

- Diligently work at least 24 hours each week on project related activities (including studio time);
- Attend all seminars and studios and arrive on time;

- Be organised at home – regular nutritious meals, lots of water, regular sleep;
- Be highly organised and keep accurate and timely records of your involvement;
- Be professional – you will be measured by your attitude and conduct;
- Maintain a positive attitude – respond positively to pressure and manage any challenges;
- Recognise areas of improvement and be prepared to work on them;
- Be courteous and professional to and with your team members, treat each other with honesty and respect;
- Encourage open communications and invite and discuss all member input;
- Be realistic about what can be achieved and by whom;
- Share with others what you know and take advantage of opportunities to learn from others;
- Be decisive – consider your choices carefully but make decisions quickly and confidently;
- Don't procrastinate – better to make a wrong decision but still move towards a target than to make no decisions and go nowhere;
- Be proactive, thereby responding and pre-empting rather than always reacting after the fact;
- Be confident in what you know and what you can do, but still question everything – what you know may not be appropriate in every context;
- Don't waste effort – until you are clear about what you should be doing, question what you are doing, ask for help if you need to;
- Understand the importance of working in a team, and being a responsible, reliable, trustworthy, patient, understanding team member;
- Understand and work with multicultural differences in your team
- Take your work very seriously, but not yourself!

These are just a few areas that could be used as the basis for a set of self-expectations, but don't be limited by these. Your expectations of yourself should be realistic, achievable and meaningful in that they are absolutely aimed at helping you achieve your goals.

Our Expectations

Our primary expectations are aimed at delivering successful projects and satisfactory learning outcomes for our students. To achieve these aims we expect that you will give some serious thought as to what it is you wish to achieve from your IE project and set all your expectations accordingly.

As well as expecting you to consider and adopt many of the areas of expectation already discussed, we also expect you:

- To work harder than you have in any other unit you have undertaken;
- To learn to work effectively in high performance, self-managed teams;
- To control your project and tell us what is and isn't happening;
- To accept failure and see it as a learning opportunity
- To establish connections and networks with internal colleagues and external clients and third parties;
- To improve your communication skills;
- To test and improve your existing skills and acquire new skills quickly where necessary;
- To behave professionally and ethically at all times;
- To treat your industry mentors, potential audience representatives, fellow team members and Monash staff with honesty, integrity and respect;
- To set realistic and achievable goals;
- To assess your own and your team members' performance honestly;
- To test everything that you think you know and be challenged by situations we sometimes can't even imagine;
- Attempt to break out of your mindset and try something new.

Perhaps this list is not as extensive as it could be because we have very high expectations of our students. With that in mind, we mostly wish you to recognise that in this unit you are no longer operating just as students – you are professionals working on a project that is important and may add real value. Above all else though, we expect you to learn, enjoy and have a good time undertaking this project.

9. System Ownership

Currently, the student teams will own the copyright. Should a sponsor be interested in the application(s), then Monash, with student agreement, will hand over rights to the application to that sponsor, with the understanding that the students will be acknowledged.

Remember - It is the policy of the Faculty of Information Technology that staff and students should not be paid for industry experience class work.