### Agenda Summary

#### Part 1 – Procedural matters

1. **Announcements and Apologies**  
   - For information  
   - 3

2. **Minutes**  
   - Recommendation: That the Committee confirm the minutes of the meeting 4/2016.  
   - Attachment: Appendix 2A – Minutes of RSCS CDC Meeting 4/2016
   - For decision  
   - 3

3. **Matters Arising from Minutes and Action Items**  
   - Attachment:  
     - Appendix 3A – Action Item list
     - Appendix 3B – MComp Graduates Specialisations 2016
   - For information  
   - 3

4. **Confidential Items**  
   - For information  
   - 3

#### Part 2 – Reports

5. **Report from the Chair**  
   - Attachment: Appendix 5A – 12 week workload data to be updated
   - For information  
   - XLS

6. **Report from Program Convenors**  
   - Attachment:  
     - Appendix 6A – Report on Honours Benchmarking
     - Appendix 6B – MComp Review Update
   - For information  
   - 12

7. **Curriculum Proposals**  
   - Recommendation: That the Committee review the attached proposals and endorse them for submission to the College Education Committee.
   - Attachment: Appendix 7A – RSCS Curriculum Proposals
   - For decision  
   - 19

8. **Diploma of Computing Program Review**  
   - Recommendation: That the Committee review the attached review documents and endorse them for submission to the College Education Committee.
   - Attachment: Appendix 8A – Diploma of Computing Review
   - For decision  
   - 125
### Part 4 – Education Policy and Related Issues

9. **Committee Membership**  
   *Recommendation:* That the Committee provides feedback to elizabeth.nunrom@anu.edu.au by no later than 16 September 2016 on the proposed accreditation policy and suite of procedures (Appendices B to F).
   
   *Attachment:* Appendix 9A – RSCS CDC Membership and TOR 2016

10. **Accreditation Policy Framework**  
    *Recommendation:* That the Committee provides feedback to elizabeth.nunrom@anu.edu.au by no later than 16 September 2016 on the proposed accreditation policy and suite of procedures (Appendices B to F).
    
    *Attachment:* Appendix 10A – Accreditation Policy Framework

11. **Academic Integrity Report**  
    *Recommendation:* That the Committee:
    1. Note the Academic Integrity cases reported to the Registrar for the first half of 2016; and
    2. Note and compare the number of cases reported in the first half of 2015 to cases reported in 2016; and
    3. Submit feedback on the Academic Misconduct Rules and implementation, having been through the processes for 18 months to be sent to elizabeth.nunrom@anu.edu.au by 15 September 2016.
    
    *Attachment:* Appendix 11A – Academic Integrity Report

12. **Mark Scaling in RSCS**  
    *Attachment:* Appendix 12A – Mark Scaling in RSCS

13. **Peer Review and External Review Reports**  
    *Attachments:*
    - Appendix 13A – Report on COMP8705/3610/6361/3100/1730
    - Appendix 13B – COMP3900/COMP6390 Human-Computer Interaction – A course evaluation

14. **Review Process**  
    *Attachments:*
    - Appendix 14A – Peer Review Process
    - Appendix 14B – Course Review Process

### Part 5 – Items of other business

15. **Meeting Dates**  

16. **Other business and question time**
Part 1 – Procedural matters

Item 1  Announcements and apologies

1.1 Apologies
To be received

1.2 Announcements

Item 2  Minutes

The minutes of meeting of the RSCS CDC Committee 4/2016 held on 30 June 2016 are to be confirmed.

Recommendation

That the Committee confirm the minutes of the meeting 4/2016.

ACTION REQUIRED
For discussion ☐  For decision ☑  For information ☐  School response ☐

Item 3  Matters Arising from the Minutes

For the Committee to raise and note any matters arising from the Minutes.

Item 4  Confidential items

Consistent with the policy and practice of Council, all matters in the agenda of the University Education Committee relating to individual persons, including appointments, enrolment, candidacy for degrees, personal details, performance and conduct are declared to be confidential. If any member wishes to raise a confidential matter in relation to any other item, he or she should do so under this Item. After consideration of the confidential items, observers will be admitted to the meeting.
Meeting No. 4/2016 of the Research School of Computer Science Curriculum Development Committee was held on Thursday 30 June 2016 at 12pm in Room N335, CSIT Building (108).


In Attendance: Mrs Elizabeth Nunrom.

Absent: Tom Gedeon, Lynette Johns-Boast, John Slaney, Qing Wang, Klaus Weber.

PART 1 – PROCEDURAL MATTERS

ITEM 1 WELCOMES, ANNOUNCEMENTS AND APOLOGIES

1.1 Welcomes and Apologies

Apologies were received from Tom Gedeon, Lynette Johns-Boast, John Slaney, Qing Wang and Klaus Weber.

1.2 Announcements

There were no announcements.

ITEM 2 MINUTES

The Committee resolved to confirm the minutes of meeting 3/2016 of the RSCS Curriculum Development Committee held on 14 April 2016.

ITEM 3 MATTERS ARISING FROM THE MINUTES AND ACTION ITEMS

The Chair gave and received updates on the current action item list. The updated list is attached to these Minutes.

ITEM 4 CONFIDENTIAL ITEMS

There were no confidential items.
PART 2 REPORTS

ITEM 5 REPORT FROM THE CHAIR

The Chair briefed the Committee on the following items:

Results – The Chair noted that results had been released and that he was now fielding enquiries from students wanting to get their grades revised. The Manager, CECS Student Services, reported that some courses had not been published on time but were now fixed. He noted this had been a challenging time, with new staff still in training. The Chair noted that he had requested the source code for the Associate Dean (Education)’s Grade Moderation software, but there had been difficulties in receiving it through email.

Action: Ramesh Sankaranarayana to contact Natalie Young to check whether she has a copy of the Grade Moderation software source code.

Potential Academic Misconduct – The Chair related his experience with potential misconduct cases to the Committee, noting that the students involved were sourcing code in multiple ways – accessing multiple online sites, sharing answers on student forums, buying solutions, including being able to buy/source a solution at a level commensurate with their level of ability. He noted that there was a great level of student activity in this area and that the School would need to do more to address this issue. Discussion points included:

• The importance of identity assured assessment in combatting academic misconduct
• The possibility of using formative assessment, in which students would be encouraged to collaborate/share answers, with heavier-weighted mid- and end of semester exams
• The possibility of using smaller assessments and hurdles earlier in the course
• The importance of being clear when referencing is needed ie. for code or reflective practice
• The importance of informing students when they can share work and when they can’t ie. after the grade for that assessment had been released
• The necessity of looking at why some students are engaging in this type of activity and why others aren’t

Resolution:
The Curriculum Development Committee resolved to note the report and associated actions.

ITEM 6 REPORT FROM THE PROGRAM CONVENORS

6.1 Shayne Flint – Bachelor of Software Engineering

• Honours results for mid-year were encouraging with three students out of seven receiving H1 results with one a strong candidate for a University medal
• The Chair noted that he would be attending the University Medal Committee, where the new rules would be followed for the first time.

6.2 Eric McCreath – Bachelor of Advanced Computing (Hons and R&D) convenor

Eric McCreath spoke to the issue of Project courses in the BAC program. Discussion points included:

• The possibility of amending the 12 unit course so that students are have the option to take it over one or two semesters
• The necessity of reconsidering the enrolment process, including the study contract and how students obtain a supervisor, given that students can enrol in the course but end up with no supervisor
• The necessity of providing supervisors for students, given the new structure of the degree
• The possibility of looking at the supervisory load of each academic staff member and allocating students to those who have a small load. It was noted that the number of students would mean that each academic would have approximately 2 students.

• The need for projects. Possible sources/projects could be:
  o Converting existing tech launcher projects
  o Centrally allocating projects to staff/students
  o Supervisors nominating projects for students to choose
  o Canned projects
  o Accepting nominations for projects and supervisors picking from a central list

Action:
• Elizabeth Nunrom to check the unit value and variable status of the ENGN4560 and report back to Ramesh Sankaranarayana and Eric McCreath.
• Ramesh Sankaranarayana to discuss with Alistair Rendall the issue of ensuring that BAC students have a supervisor and then delegate actions to appropriate staff.

Resolution:
The Curriculum Development Committee resolved to note the reports and associated actions

PART 3 CURRICULUM PROPOSALS

ITEM 7 CURRICULUM PROPOSALS
The following curriculum proposal was not endorsed:

New Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3000</td>
<td>Innovation, Commercialization and Entrepreneurship in Technology</td>
</tr>
</tbody>
</table>

The following curriculum proposal was endorsed in principle subject to the stated conditions:

New Course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP 3001</td>
<td>Green IT: Evaluating and reducing computer energy use, carbon emissions and e-waste</td>
<td>The postgraduate version of the course, ENGN7310, should be reviewed internally. This course proposal, along with the internal review report, should be resubmitted for inclusion in the CDC agenda by 29 August.</td>
</tr>
</tbody>
</table>

Resolution:
The Curriculum Development Committee resolved:
1. not to endorse the new course proposal, COMP3000
2. to endorse the new course proposal, COMP3001, in principle and subject to the stated conditions
PART 4 EDUCATION POLICY AND RELATED ISSUES

ITEM 8 GRADUATE EXIT LEVELS
This item was not discussed.

ITEM 9 STUDENT CRITICAL INCIDENT POLICY AND PROCEDURE REVIEW
The Committee discussed the proposed Student Critical Incident Policy and Procedure, with discussion including the following points:

- The importance of contacting CECS Student Services if noticing warning signs that a critical incident may occur
- The probability of these incidents happening quickly or out-of-hours
- The importance of all staff knowing who to contact and what to do

Action: Ramesh Sankaranarayana to include information regarding critical incidents in the convenor's checklist.

Resolution:
The Committee resolved to provide feedback to elizabeth.nunrom@anu.edu.au by no later than 11 July 2016 on the proposed revisions to the Student Critical Incident Policy and Procedure.

ITEM 10 THRESHOLD STANDARDS AQF+1 REQUIREMENT
The Committee discussed proposed Qualification Requirements for Teaching Staff policy and procedure, noting that the TEQSA requirements for any teaching staff member were that they had graduated from a qualification that was at least 1 AQF level above that held by their students. The Committee noted that the CECS Tutor Quality Program (TQP) was running again this semester, with all six modules being offered. If tutors do all six modules, they meet CECS' professional development requirements for tutors and should satisfy the requirements of the policy. Tutors can also do four extra modules through CHELT and receive certification. It was also noted that guest lecturers were exempt from the AQF+1 requirement.

Action: Ramesh to investigate how the AQF+1 requirements are met in CBE.

Resolution:
That the Committee provide feedback to elizabeth.nunrom@anu.edu.au by no later than 11 July 2016 on the proposed Qualification Requirements for Teaching Staff policy and procedure (Appendices E and F) for the AQF+1 requirement specified in the Threshold Standards.

PART 6 ITEMS OF OTHER BUSINESS

ITEM 11 MEETING DATES
The Committee noted the Meeting dates for 2016

Resolution:
The Curriculum Development Committee resolved to note the dates of the 2016 Curriculum Development and College Education Committee meetings
ITEM 12 OTHER BUSINESS AND QUESTION TIME

18.1 Student Evaluation of Learning Support (SELS)
Dirk Pattinson told the Committee of an issue he had recently become aware of in relation to the SELS results. He noted where there was no formal request for this feedback to be sought, it is still collected but not sent to the convenor of the course. This includes the open-ended questionnaires.

**Action:** Paul Melloy to check whether a request form needs to be completed in order to have SELS feedback returned to the Convenor.

18.2 Master of Innovation and Professional Practice
Shayne Flint presented his proposal for the new Master of Innovation and Professional Practice to the Committee, noting that as the program is part of the new Flexible Vertical Double program and also a separate formalised credit arrangement, it would be open to the majority of students to complete as an additional year on top of their Bachelor degree. A number of issues need to be finalised – the membership of the advisory board, the possibility of setting up a steering group, details for the specialist courses, third-party market research and some final consultation with CBE, and also Richard Baker regarding the Vice-chancellor’s courses. It was also noted that areas outside CECS needed to firmly commit to running the courses for which they were responsible.

**Action:**
- Shayne Flint to distribute the MIPP ‘block’ diagrams to the Committee
- Feedback on the proposal should be sent to Shayne.Flint@anu.edu.au by close of business Monday 4th July.

**Resolution:**
The Curriculum Development Committee resolved to note the discussions and associated action items.

The meeting closed at 2.25pm

EJN 6/07/2016
<table>
<thead>
<tr>
<th>School</th>
<th>Meeting</th>
<th>Item</th>
<th>Action</th>
<th>Responsibility</th>
<th>Due</th>
<th>Status</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSCS</td>
<td>4/2015</td>
<td>3.2</td>
<td>Associate Director (Education) to annotate the Masters Working Group documentation with action items and circulate to the Committee for discussion and action.</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td>A Postgraduate Coursework working party will be held after the Undergraduate Working Party has been completed.</td>
</tr>
<tr>
<td>RSCS</td>
<td>4/2015</td>
<td>5</td>
<td>Position Descriptors to be completed</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>4/2015</td>
<td>9</td>
<td>Report of external audit of Honours projects to be written and presented to CDC.</td>
<td>Ramesh Sankaranarayana</td>
<td>22-Jun-16</td>
<td>Ongoing</td>
<td>John Sianey to write a short description of the process for distribution to CDC members.</td>
</tr>
<tr>
<td>RSCS</td>
<td>4/2015</td>
<td>11</td>
<td>Student Services to be informed of any course which require course requisite changes</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td>Any changes to be submitted by 29 August.</td>
</tr>
<tr>
<td>RSCS</td>
<td>4/2016</td>
<td>5</td>
<td>Ramesh Sankaranarayana to contact Natalie Young to check whether she has a copy of the Grade Moderation software source code.</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>7.3</td>
<td>Lynette Johns-Boast to speak to Janette Rawlinson regarding the possibility of facilities for MComp (Adv) students.</td>
<td>Lynette Johns-Boast</td>
<td>Not set</td>
<td>Ongoing</td>
<td>Master students have access to 1 internally controlled computer lab, out of hours and on weekends. They do not have designated desks.</td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>7.3</td>
<td>Paul Melloy to run report to identify students with 24 units remaining in their Master of Computing and a high GPA</td>
<td>Paul Melloy</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>7.4</td>
<td>Jochen Trumpf and Alistair Rendell to discuss issues surround the Diploma of Computing further</td>
<td>Jochen Trumpf and Alistair Rendell</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>8.2</td>
<td>John Slaney to review Bachelor of Data, Statistics and Society to ensure that the entry requirements for the Honours plan were satisfied</td>
<td>John Slaney</td>
<td>10-Mar</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>8.2</td>
<td>John Slaney to review all Honours plan Admission requirements in order to ensure that all meeting the Honours Working Party requirements and report back to RSCS CDC 2/2016</td>
<td>John Slaney</td>
<td>15-Mar</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>10</td>
<td>The Curriculum Development Committee resolved that enrolment data (timeline series) should be obtained for all postgraduate specialisations</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>10</td>
<td>The Curriculum Development Committee resolved that a review would be undertaken of Postgraduate programs</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>1/2016</td>
<td>12</td>
<td>The Committee resolved that an internal review would be conducted of COMP1730/3610/8705</td>
<td>Ramesh Sankaranarayana</td>
<td>7-Jul</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>School</td>
<td>Meeting</td>
<td>Item</td>
<td>Action</td>
<td>Responsibility</td>
<td>Due</td>
<td>Status</td>
<td>Notes</td>
</tr>
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<td>------------------------------------------------------------------------</td>
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<td>---------</td>
</tr>
<tr>
<td>RSCS</td>
<td>3/2016</td>
<td>5</td>
<td>New Wattle Site - Ramesh Sankaranarayana to add Natalie Young and Elizabeth Nunrom to the Course Convenor Wattle site.</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>3/2016</td>
<td>7</td>
<td>Lynette Johns-Boast to provide further study plans for the Master of Computer Science to Student Services. Students Services will put these on the program Commencers page and refer students to it via a note under 'Additional Information'.</td>
<td>Lynette Johns-Boast; CEC Student Services</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>4/2016</td>
<td>6</td>
<td>Elizabeth Nunrom to check the unit value and variable status of the ENGN4560 and report back to Ramesh Sankaranarayana and Eric McCreath.</td>
<td>Elizabeth Nunrom</td>
<td>Not set</td>
<td>Completed</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>4/2016</td>
<td>6</td>
<td>Ramesh Sankaranarayana to discuss with Alistair Rendall the issue of ensuring that BAC students have a supervisor and then delegate actions to appropriate staff.</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
<td></td>
</tr>
<tr>
<td>RSCS</td>
<td>4/2016</td>
<td>9</td>
<td>Ramesh Sankaranarayana to include information regarding critical incidents in the convenor’s checklist.</td>
<td>Ramesh Sankaranarayana</td>
<td>Not set</td>
<td>Ongoing</td>
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<td>RSCS</td>
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<td>10</td>
<td>Ramesh to investigate how the AQF+1 requirements are met in CBE</td>
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<td>18.1</td>
<td>Paul Melloy to check whether a request form needs to be completed in order to have SELS feedback returned to the Convenor.</td>
<td>Paul Melloy</td>
<td>Not set</td>
<td>Completed</td>
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<td>RSCS</td>
<td>4/2016</td>
<td>18.2</td>
<td>Shayne Flint to distribute the MIPP ‘block’ diagrams to the Committee</td>
<td>Shayne Flint</td>
<td>Not set</td>
<td>Completed</td>
<td></td>
</tr>
</tbody>
</table>
Summary of MComp Graduates Specialisations up to July 2016

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Students</td>
<td>52</td>
</tr>
<tr>
<td>AI</td>
<td>26</td>
</tr>
<tr>
<td>Computational Foundations</td>
<td>0</td>
</tr>
<tr>
<td>Computer Systems</td>
<td>3</td>
</tr>
<tr>
<td>HCC</td>
<td>8</td>
</tr>
<tr>
<td>SoftEng</td>
<td>24</td>
</tr>
<tr>
<td>Prof Comp</td>
<td>35</td>
</tr>
<tr>
<td>Total majors</td>
<td>96</td>
</tr>
<tr>
<td>Ave major/ps</td>
<td>1.85</td>
</tr>
</tbody>
</table>
Report on Honours benchmarking by calibration with Honours at UNSW.

We concentrated on calibration around the H2A level, as this is the typical Honours thesis, rather than on our treatment of the extremely good or the sub-standard cases. Consequently, we selected six of our theses for cross-marking: two which we had assessed as H2A, two at the lower end of H1 and two from the upper half of H2B. They sent six of their theses similarly.

We are still in the process of assessing the theses which they sent to us, but their report on ours is given below. Briefly, they note that our Honours projects tend to be somewhat more substantial and research-intensive than theirs, as one would expect given that ours are 24 units while theirs are 18, while they expect a longer document as the thesis than our students usually produce. They comment on how well our students present their work. The marks for our six theses are as follows:

<table>
<thead>
<tr>
<th>Thesis</th>
<th>ANU grade</th>
<th>UNSW grade</th>
<th>(ANU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chen</td>
<td>82</td>
<td>89</td>
<td>(83)</td>
</tr>
<tr>
<td>Gao</td>
<td>81</td>
<td>80</td>
<td>(73)</td>
</tr>
<tr>
<td>Cardenas</td>
<td>75</td>
<td>79</td>
<td>(72)</td>
</tr>
<tr>
<td>Mackenzie</td>
<td>73</td>
<td>76</td>
<td>(69)</td>
</tr>
<tr>
<td>Yin</td>
<td>69</td>
<td>84</td>
<td>(77)</td>
</tr>
<tr>
<td>Liyanagemage</td>
<td>68</td>
<td>79</td>
<td>(72)</td>
</tr>
</tbody>
</table>

ANU equivalents of the UNSW marks are given in parentheses. While there are variations in individual examiners’ opinions of individual theses (Libo Yin would have fared better at UNSW, while Jingyi Gao would have fared worse), overall there is approximate agreement as to what constitutes H2A standard work. The average mark we gave to these six theses was 74.7 and the average they gave (converted to the ANU marking scale) was 74.3 which is fairly close.
Overall comments

The level of details each assessor went to provide comments for each thesis varies, but the same marking criteria/grading scheme has been applied to all theses.

One academic noted that some of the ANU theses were much shorter in length than ours (30 pages versus 80 pages on average), and read like longer course projects. Also, she read the ANU marking guide for a reference and found it similar to ours overall. Some of the criteria require detailed knowledge of the students working style. An independent assessor would not necessarily know whether the student obtained concepts independently, or needed considerable assistance, worked hard or needed excessive prodding etc.

Overall, we thought the quality of writing was quite good. Do you do some training on academic writing with thesis students?

Brief reports and marks

Thesis By Albert Chen
Sparse Factor Representations and Operations for Inference in Probabilistic Graphical Models
Final Grade - 89/100
Presentation: very well written, good structure, can’t complain. In fact, so well-written it’s hard to believe it was written by a 4th-year student
Background: as a non-expert, a more detailed intro would have helped, e.g. it’s not clear to me why a sparse graph is a generalization of a dense graph, and sparsity is never precisely defined. What was there, however, is very good
Own work: it’s not quite clear what are the student’s original ideas. If the formulation of general factors and the methods for manipulating them are original, it’s impressive. It certainly seems that the proposed methods using sparse storage of factors is original, even if not original, it’s well-explained and analysed. The future work also contains a number of interesting ideas
Evaluation: the evaluation (ch.3) seems to come before the detailed description of the methods being evaluated (ch.4). However, the description of the experimental setup is clear and the analysis of the numbers is convincing.

Thesis by Jingyi Gao
Provenance Analysis for Entity Resolution
Final Grade = 80/100
Presentation: the overall flow of argument is ok, but there are many grammar errors (e.g. just in the abstract ”the repairing of entity solution”, ”how to reasonable level of credibility”) ... mostly these are minor and don’t affect the understandability but sometimes they make understanding harder than it needs to be. Thesis structure is fine, and appropriate for a research report. The intro motivates the problem well and spells out the contributions clearly. I’m not clear why the other terms for entity resolution are ”ironic”?
Background: the justification for and issues with blocking could have been treated in more detail. In general, more effort could have been put in describing the strengths/weaknesses of the methods being presented. The rule-learning
techniques (e.g. FOIL) that are cited as "recent" are actually very old. "Clustering algorithms have been reword such as..." means what? Perhaps "clustering graph" should have been described more before being used in Algorithm 1. Alg 1 "Transitive close (V,Theta)", presumably "closure", but do we need different notation to distinguish it from input (V,Theta)? Alg 1 is quite confusing... unfortunate, since "The project is established on this algorithm". The four points describing ProQL are taken almost verbatim from the Kourvanarakis et al paper... does the citation above cover this? Figure 2.2 is also from the Karvounarakis et al paper and no citation. The description and analysis of ERI is very terse.

Own work: overall, well-described and justified. Initial clustering graph segmentation not quite clear. Initially, I thought Ch.3 was the major description of the methods, but it just acts as a kind of overview... a slightly odd choice. On Page 20... compared to a tree, a graph structure sounds "more precise", but also more expensive for computations. The description of "provenance graph" could be clearer e.g. "Phi is a symmetric function that assigns a edge to a pair of edges". Alg 3: isn't the input P a provenance graph? not a clustering graph? Ch.4 seems to make an argument that graphs are "better" than trees, but then Ch.5 uses trees.

Evaluation: nice detailed description and justification, but there are some questionable aspects of the evaluation. "We simulated user feedback by randomly selecting..."... don't real users behave quite differently to "random"? The discussion on the results (graphs) is more descriptive than analytical... *why* do you think you observe these results?

Thesis By Jorge Cardenas
Integrating task and motion planning
Final Grade = 79/100
Presentation: The structure of the thesis is generally good. The description of previous approaches in section 6.1 would be better brought forward to the beginning of Chapter 5. There are a number of minor grammatical errors.
Background: Comprehensive coverage of previous work in task planning and integration. In the motion planning section all references are to a textbook rather than original sources.
Own Work: Three different prototypes are presented, each applied to different tasks. It would have been good to provide a more detailed descriptions of these tasks, in order to make the benefits of each stage more apparent.
Evaluation: Good analysis, both strengths and weaknesses are discussed.

Thesis By Martin Mackenzie
Large 3D Ultrasound Simulation on a GPGPU using the Westervelt Equation
Final Grade = 76/100
Presentation: The thesis is well organized and clearly written, with good use of diagrams.
Background: Relevant background on GPU computing, Westervelt equation and finite difference methods.
Own Work: It seems that previous work has implemented 2D simulation on GPU and 3D simulation on CPU, so main contribution is implementing
3D simulation on GPU and analysing performance. This is a solid incremental contribution, but additional models or more optimizations could have been attempted.

Evaluation: Comprehensive evaluation.

Thesis By Libo Yin
Improving Image Understanding with Concept Relation Graph
Final Grade = 84/100

Presentation: very dense presentation
Background: assumes familiarity with the area
Own work: good experimental work
Evaluation: good evaluation and analysis

Comments: Research-focussed thesis that appears to address a valid research problem, but presented in a highly condensed and inaccessible fashion.

Thesis By Migara Liyanagamage
Using a GPU to Simulate a Cluster of Independent Virtual Machines
Final Grade = 79/100

Presentation: well presented, though slightly marred by grammar errors
Background: short but sufficient
Own work: interesting experiments
Evaluation: good evaluation and analysis

Comments: Interesting topic, easy to comprehend and fun to read!
CSE Thesis B Report Marking Guide

Summary

The method improves the simplicity, consistency and reliability of assessment. We define a small set of assessment criteria. Markers award a grade, not a mark, for each criterion, and supply a comment to justify the grade. The final mark is computed by the system by mapping each grade to a mark and computing a weighted-sum of the individual criterion marks.

The process of assessing reports is intended to be analogous to the process of reviewing papers for journals/conferences (but, of course, the criteria/standards are different since we're dealing with 4th-year theses).

Grades

The following grades apply to all of the criteria mentioned below. The descriptions of the levels of achievement may need to be adapted for some criteria.

- **A+** (mapped to 96)
  - absolutely top-quality work, best I've seen
  - publishable in good conference with little change
  - corresponds to a very high HD (>95%)
  - would be awarded rarely (maybe once per year)
- **A** (88)
  - excellent work, does everything required
  - results are good, could be published with some re-working
  - corresponds to a solid HD
- **B** (77)
  - good quality work, but with some minor deficiencies
  - would need substantially more work to be publishable
  - corresponds to a Distinction (DN)
- **C** (77)
  - adequate
  - the topic could have been treated much better
  - corresponds to a Credit (CR)
- **D** (55)
  - just satisfactory, minimal standard for a CSE thesis
  - corresponds to a bare Pass (PS)
- **E** (40)
  - not up to standard required of a CSE thesis
  - corresponds to a FL grade (around 40%)
- **F** (20)
  - very much below the standard required of a CSE thesis
  - corresponds to a low fail (around 20%)

Thesis B Report Marking Criteria
What's required to mark a Thesis B Report:

- read it
- assign four grades and write a brief comment/justification for each criteria
- a comment can be as little as just a couple of words or a single sentence
- the four criteria for grading the report are:

1. Presentation (20% weighting)
   - quality of written english
   - structure of thesis (chapters/sections)
   - logical flow of arguments
   - effective citation and referencing

2. Background (20% weighting)
   - comprehensive description of problem space
   - reference to and analysis of other work

3. Own Work (30% weighting)
   - originality of approach to the problem
   - quality of the final results or system
   - for a research thesis: original contribution
   - for a development thesis: quality of software

4. Evaluation (30% weighting)
   - used appropriate analytical instruments
   - carried out analysis effectively
   - analysed results appropriately
   - realistic appraisal of achievements/limitations
MCOMP Review Update

1. Paul Melloy has hired a student to source the required student data and begin the data analysis. Unfortunately, due to assignment comments, the student has not yet done much work. It is expected they will work essentially full-time next week, i.e. the first week of the non-teaching period.

2. Data is being collected about students who enrolled prior to semester 2, 2016 and who are current in the 3 programs under review (MCOMP, Grad. Dip and MCOMP Advanced). We chose this subset of students as they will have an ANU GPA.

3. Paul has sourced the records for about 50% of the MCOMP domestic students and about 80% of domestic Grad. Dip students. The remainder of the domestic student records exist in an external (UAC) system and the sourcing of their data is more complex. We therefore propose not to spend time at this stage sourcing their data.

4. We should be able to source data for almost 100% of the international students for the 3 postgraduate programs under review.

5. We plan to have (some) data/information to put to the next Industry Advisory Board meeting in mid-September.
Part 3 – Curriculum Proposals

Item 7 Research School of Computer Science

Purpose
To review curriculum proposals from the Research School of Computer Science submitted to the Committee for their endorsement

Recommendation
That the Committee review the below proposals and endorse them for submission to the Academic Standards and Quality Office for action or transmission to the University Education Committee.

ACTION REQUIRED
For discussion ☐ For decision ☑ For information ☐ For response ☐

Background

New Programs

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<td>22</td>
<td>BADAN</td>
<td>Bachelor of Applied Data Analytics</td>
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<tr>
<td></td>
<td></td>
<td>• To replace the as yet unaccredited Bachelor of Data, Statistics and Society</td>
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<tr>
<td>34</td>
<td>HADAN</td>
<td>Bachelor of Applied Data Analytics (Honours)</td>
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<tr>
<td>45</td>
<td>MINIPP</td>
<td>Master of Innovation and Professional Practice (for noting)</td>
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Subplan Amendment

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<tr>
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<td>COMP-HSPC</td>
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<tr>
<td>61</td>
<td>CSCI-MAJ</td>
<td>Computer Science (for noting)</td>
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New Courses

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<td>VCUG 3200</td>
<td>Innovation and Professional Practice Internship (for noting)</td>
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<td>67</td>
<td>VCUG 6200</td>
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<td>COMP 4560</td>
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<td>COMP 6780</td>
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<td>COMP 2500</td>
<td>Software Construction for Software Engineers</td>
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<td>COMP 3006</td>
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<td>104</td>
<td>COMP 3100</td>
<td>Software Engineering Group Project</td>
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<td>107</td>
<td>COMP 3420</td>
<td>Algorithms and Techniques for Data Mining</td>
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<td>110</td>
<td>COMP 8400</td>
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<td>COMP 8740</td>
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<td>COMP 8750</td>
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<td>COMP 8780</td>
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<td>122</td>
<td>COMP 8790</td>
<td>Software Engineering Project</td>
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Sponsor
Associate Director of Education, Research School of Computer Science

Appendices
Appendix 7A – RSCS Curriculum Proposal forms
New Academic Award / Augmentation
Expression of Interest / Proposal
(Coursework)

Doc number 328/2016

Award name  Bachelor of Applied Data Analytics

Summary

- Provide an executive summary of this proposal for University Education Committee and Academic Board (100 words or fewer).

Australia requires a workforce with skills in data analytics as applied to high-quality, data-informed decision-making. This reflects a wider challenge to Australian business, government and community in terms of the effective use of public and commercial data for decision-making. The rapid expansion of a digitally enabled environment has broadened both the threat and the opportunity in data-driven innovation. We propose a multi-disciplinary bachelor degree comprising of computer science, statistics, and social science courses which can be applied across a host of settings from business, finance, health through to national security.

Part 1 – Priority approval criteria

Check all relevant criteria that this Award meets.

- Provide justification for each checked criterion in the ‘Rationale’ section in Part 2 below.

☑ Will attract, challenge and retain students of outstanding talent.

☐ Will be included in a double degree with at least one graduate Award (e.g. Vertical Double Degree or Double Masters Degree).

☑ Will respond to or anticipates changing national or global workforce needs.

☐ Will utilise learning technologies and teaching approaches to extend the University’s educational reach on a national or global level.

☐ Will promote executive education pathways, especially in the area of public policy and other disciplines of national significance.

☐ Will be offered in partnership with one or more university of outstanding reputation.

☐ Will provide pathways of demonstrated efficacy for underrepresented cohorts, in line with the University’s access and equity strategies.

If this new plan does not satisfy any of the University’s priority approval criteria, complete only Part 2 – Expression of interest.

If this new plan satisfies any of the University’s priority approval criteria, complete both Part 2 – Expression of interest and Part 3 – New plan proposal.

Part 2 – Expression of interest

New plan details

Australian Qualifications Framework level and type  Level 7 - Bachelor Degree
Admission pathway (e.g. exit only)  Direct admission
External accreditation body (if any) 42T
Full-time duration in years 3
(Single degree or vertical double degree)
Units required for completion 144
Available for enrolment from: First Semester 2017

Linked qualifications

- If this is a pathway (i.e. required for admission) or an early exit, list all relevant Awards.

Pathway to:
Bachelor of Applied Data Analytics (Honours)

Double degrees

- Is this Award to be part of a double degree?
  - ☑ Flexible Double Degree (Arts, Social Sciences, Sciences and Business 4 Year)
  - ☑ Flexible Double Degree (Arts, Social Sciences, Sciences and Business 5 Year)
  - ☐ Flexible Double Degree (Law, Engineering and Advanced Computing 6 Year)
  - ☑ Flexible Double Degree (Law)
  - ☑ Flexible Double Degree (Engineering and Advanced Computing)
  - ☐ Vertical Double Degree
  - ☐ Double Masters Degree

Governance

Responsible College ANU College of Engineering & Computer Science

Who is the convener of the plan? Dr Qing Wang

Does this Award have a dedicated governance committee or advisory board (other than College Education Committee)? If so, detail membership and frequency of meetings.

A Data Analytics Board of Studies will be established that is comprised of Associate Deans Education from CASS, CAP, CBE, CECs, CMBE, CPMS and CoL plus the Directors of RSCS, RSFAS and RSSS, chaired by the AD-E for CECS. Its mandate will be to advise the Associate Dean (Education) for CECS on issues of quality and internal alignment of courses to the degree – not the structure or business case for the degree. The latter will come under the remit of a data analytics education management committee comprising the Deans of CECS, CASS and CBE plus some external advisors, chaired by the Dean of CECS.

Rationale

Academic merit and strategic alignment

- Give details of how this Award aligns with University and College strategy (see ANU by 2020) and contributes to the standing of the discipline or interdisciplinary area nationally and (if relevant) internationally (200 words or fewer).

This proposed Bachelor degree will contribute to the national standing of the ANU in the emerging fields of data analytics and data science and allow for the continued building of research strength in this area. It is a distinctive inter-disciplinary degree drawing on expertise from across three different Colleges. Along with the new Masters in Data Analytics, it will see ANU well placed to contribute to national debate and policy formulation. It is also a high entry point degree which will attract outstanding national and international students to the university.
New Academic Plan Expression of Interest / Proposal

Research Led Education

- Identify the initiatives in this Award that contribute to the University’s goal of offering research-led education and how sustained scholarship will inform teaching and learning. (200 words or fewer)

The program is built on world-leading and unique expertise across three disciplines – computing, statistics and social science. Courses will also cover current industry and research developments in topics related to data analytics. The program places a major emphasis on students developing their research and analytical skills.

Market competition

- Identify a minimum of two competing Awards in the sector nationally or internationally.
- Highlight the ways in which this ANU Award is superior to competitors (200 words or fewer).

Data analytics is an emerging area but in the current environment is most commonly limited to business or data science. WSU have recently launched a bachelor degree in Data Science, RMIT have launched a 4 year Bachelor of Analytics, while other universities are also in the process of developing data science degrees. There are also a small number of undergraduate majors in business analytics (eg Deakin BComm) or data analytics (eg UTS BSc). There are currently no degrees that capture the inter-disciplinary nature of data analytics as proposed in this new ANU degree. There is therefore an opportunity to occupy a key space in inter-disciplinary data analytics in the Australian landscape.

Internationally, there are few similar degrees. Southern New Hampshire University in the US offers an online Bachelor of Science in Data Analytics which is more related to business data analytics and does not truly capture the social science aspects of the ANU degree. There are a number of MOOC’s on data science.

The proposed degree has been tested with potential employers for the recently approved Master of Applied Data Analytics and has been received favourably.

Estimated enrolment

- Provided an estimate of enrolment numbers in EFTSL.
- Provide evidence for estimated enrolment numbers (200 words or fewer).

20 EFTSL in Year 1, 30 commencing EFTSL in Yr 2, and 40+ commencing EFTSL each year after that.

Joint award responsibilities

- If this Award is offered in conjunction with another institution, describe how responsibilities for course delivery, fees, pre-enrolment engagement of students, student services and care and student visa requirements are shared (200 words or fewer).
- These details may be provided to TEQSA.

N/A.

Monitoring of performance and quality

- Provide targets for the following indicators: enrolment, student retention, student experience (including SELS), student outcomes and pathway to further study (200 words or less).

Monitoring of performance and quality will be managed by a Board of Studies. Due to our relatively high entrance requirement and continued support through close monitoring of student progress,
pastoral care and ongoing tutoring support, we would expect few students to withdraw. It is therefore anticipated that retention rates will be around 90%. CECS also schedules SELT surveys for all courses and would also expect an agreement rate of at least 60% in SELS surveys undertaken for the courses within this degree.

- Provide details of how performance will be monitored against the above targets, including timeframes (200 words or less).

Monitoring of all of the above will be provided by a Board of Studies on a bi-annual basis. Performance indicators will be measured in EFTSL per year and SELT response rates each semester. CECS, CBE and CASS will also maintain close contact with its alumni and follows their careers through email, Facebook and LinkedIn and makes contact when opportunities arise through overseas visits to international graduates.

Consultation

Academic consultation

- Includes ANU and external consultation about academic merit and strategic alignment, contribution to teaching, cross-College disciplines, and cross-College pathway degrees
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

This program was developed across CECS, CASS and CBE. Key people involved include from CECS: Prof Eulanor Huntington (Dean), Prof Alistair Rendell (Director RSCS), Professor Peter Christen (RSCS), Associate Professor Jochen Trumpf (Associate Dean (Education)(CECS)); Dr Qing Wang (RSCS) from CBE: Prof Steven Roberts (Director RSFAS), Assoc Prof Stephen Sault (Deputy Director and Director of Education RSFAS); and from CASS: Prof Matthew Gray (Director CSRM / RSSS), Prof Darren Halpin (Head SS, RSSS). The Deans of CASS, CAP, CBE and Directors of MSI, RSPH have been consulted.

Consultation with Division of Student Administration

- Includes degree structures, nomenclature, AQF and legislative compliance, Commonwealth support, CRICOS eligibility
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

ASQO provided significant support in the development of the degree orders.

Consultation with Division of Student Services

- Includes support for specific cohorts, international students under the age of 18
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

Minimal impact is anticipated for the Division of Student Life as this is a small number of additional undergraduate students relative to the total size of the student population.

Consultation with Division of International Operations and Student Recruitment

- Includes admissions, student recruitment, international agreements, international experiences, University publications
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.
Recruitment – All three Colleges involved will assist with student recruitment but does anticipate support from the ANU Student Recruitment team as part of their normal activities.

Admission – Normal ANU processes will be used for admission of students.

Consultation with Information Technology Services
- Includes support for specific software and infrastructure needs
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

Minimal impact

Consultation with ANU Library
- Includes access to specific online and physical collections, specialist information literacy training
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

Minimal impact

Note that insufficient consultation may preclude or delay approval or implementation

Part 3 – New plan proposal

Description and study requirements

Marketing and publication description
- This section is published on the ‘Programs and Courses’ website to an external audience and is used primarily for marketing.
- Describe the plan including any key features, its research led elements and any external accreditation of the plan (100 words or fewer).

The Bachelor of Applied Data Analytics is a three year full-time (or equivalent part-time) interdisciplinary degree that is designed to address a global shortage of graduates with skills in data analytics as applied to high-quality, data-informed decision-making. It is designed to develop interdisciplinary knowledge across the three base disciplines of computing, statistics and social science. You will receive exposure to best practice in data analytics as well as an opportunity to acquire knowledge in a discipline that relies on data analytics, or deepen knowledge in one of computation, statistics, or social science.

Single degree study requirements and Orders
- Provide requirements for the completion of this Award as a single degree.
- New courses must be approved before being entered into requirements.
- Orders will be drafted by the Academic Standards and Quality Office for confirmation of the appropriate ANU College Associate Dean to then be made by the Deputy Vice-Chancellor (Academic) (see Undergraduate Awards Rules and Graduate Awards Rules).
- This section is published on the ‘Programs and Courses’ website to an external audience.

The Bachelor of Applied Data Analytics requires the completion of 144 units, of which:

A maximum of 60 units may come from completion of 1000-level courses.
New Academic Plan Expression of Interest / Proposal

The 144 units must consist of:

72 units from completion of the following compulsory courses
- COMP2400 Relational Databases
- COMP3425 Data Mining
- COMP3430 Data Wrangling
- DEMO2002 Population Analysis
- SOCR1001 Foundations of Social Research
- SOCY2043 Introduction to Qualitative Research Methods
- SOCY2166 Social Science of the Internet
- SOCR3001 Data for Decision Making
- STAT2001 Introductory Mathematical Statistics
- STAT2008 Regression Modelling
- STAT3011 Graphical Data Analysis
- STAT3040 Statistical Learning

6 units from completion of courses from the following list:
- COMP1030 Art of Computing
- COMP1100 Programming as Problem Solving
- COMP1130 Programming as Problem Solving (Advanced)
- COMP1730 Programming for Scientists

6 units from completion of courses from the following list:
- COMP1040 The Craft of Computing
- COMP1110 Structured Programming
- COMP1140 Structured Programming (Advanced)

Either:
- 12 units from completion of the following courses:
  - STAT1003 Statistical Techniques
  - MATH1113 Mathematical Foundations for Actuarial Studies

Or:
- 12 units from completion of the following courses:
  - MATH1003 Algebra and Calculus Methods
  - MATH1113 Mathematical Foundations for Actuarial Studies

Or:
- 12 units from completion of the following courses:
  - MATH1013 Mathematics & Applications 1
  - MATH1014 Mathematics & Applications 2
  - MATH1115 Mathematics & Applications 1 Honours
  - MATH1116 Advanced Mathematics & Applications 2

48 units from completion of elective courses offered by ANU

Double degree study requirements and Orders

- Provide requirements for the completion of this Award as a double degree (if applicable).
- For Flexible Double Degrees, provide only the Global Requirements (e.g. maximum of 1000-level courses) and any additional requirements specific to Flexible Double Degrees.
- For Vertical Double Degree undergraduate plans and Double Masters Degree plans, provide full requirements for the double degree (i.e. both Awards’ components).
- New courses must be approved before being entered into requirements.
- Orders will be drafted by the Academic Standards and Quality Office for confirmation of the appropriate ANU College Associate Dean to then be made by the Deputy Vice-Chancellor (Academic) (see Undergraduate Awards Rules and Graduate Awards Rules).
The Bachelor of Applied Data Analytics flexible double degree component requires completion of 96 units, of which:

- A maximum of 48 units may come from completion of 1000-level courses
- 12 units count towards the requirement of the other degrees

For Bachelor of Engineering (Honours)/Bachelor of Applied Data Analytics:

- 12 units from completion of courses from the following list required for the Bachelor of Engineering contribute towards the Bachelor of Applied Data Analytics component of this double degree:
  - 6 units from the following list of courses:
    - MATH1014 Mathematics & Applications 2
    - MATH1116 Advanced Mathematics & Applications 2
  - 6 units from the following list of courses:
    - COMP1100 Programming as Problem Solving
    - COMP1730 Programming for Scientists

For Bachelor of Engineering (Research and Development) (Honours)/Bachelor of Applied Data Analytics:

- 12 units from completion of courses from the following list required for the Bachelor of Engineering contribute towards the Bachelor of Applied Data Analytics component of this double degree:
  - 6 units from the following list of courses:
    - MATH1014 Mathematics & Applications 2
    - MATH1116 Advanced Mathematics & Applications 2
  - 6 units from the following list of courses:
    - COMP1100 Programming as Problem Solving
    - COMP1730 Programming for Scientists

For Bachelor of Software Engineering (Honours)/Bachelor of Applied Data Analytics:

- 12 units from completion of courses from the following list required for the Bachelor of Engineering contribute towards the Bachelor of Applied Data Analytics component of this double degree:
  - 6 units from the following list of courses:
    - MATH1014 Mathematics & Applications 2
    - MATH1116 Advanced Mathematics & Applications 2
  - 6 units from the completions of course from the following subject area:
    - COMP Computer Science
  - 6 units from the following list of courses:
    - COMP1730 Programming for Scientists

Learning outcomes

- Learning outcomes are high-level statements of the skills and knowledge which ANU certifies that all graduates of the plan possess.
- If this plan is within a Vertical Double Degree or Double Masters Degree, provide full learning outcomes for both degrees.
- This section is published on the ‘Programs and Courses’ website to an external audience.

Upon successful completion, students will have the skills and knowledge to:

Comment [C1]: Should recent changes to the BSEng be approved by AB, this section can be removed. Please note, if not approved, changes have been made to the Math courses.
1. Select, adapt, apply, and communicate advanced data analytics methods and techniques;
2. Apply data analytics to decision making about policy, business and service delivery;
3. Examine current issues in data analytics using leading-edge research and practices in the field;
4. Demonstrate strong cognitive, technical, and communication skills to work independently and collaboratively to collect, process, interpret and communicate the outcomes of data analytics problems; and
5. Communicate complex data analytics outcomes to diverse audiences.

Admission requirements

Undergraduate
- ATAR, QLD Band and International Baccalaureate score.
- Include any other requirements, such as current 'Working with Vulnerable People’ check, successful medical check, etc.
- Include secondary schooling prerequisites
- This section is published on the ‘Programs and Courses’ website to an external audience.

- ATAR of 95, Qld Band 3, IB 38, or equivalent
- Assumed Knowledge: ACT Math Methods, NSW Mathematics, or equivalent
- Note that we will be working with ANU College and MSI to deliver face-to-face and/or online bridging modules to assist students with preparation for MATH1003 if they have only done ACT Maths Applications or NSW General Maths or equivalent.

Delivery

Delivery mode(s): In person - 75% or more on campus, maximum 25% of courses online
- Off campus – this plan is to be administered and completed externally to the Acton campus.
- Intensive – this plan is to be completed by undertaking accelerated courses in a full-time block. Intensive plan duration in weeks (from commencement to submission of final assessment): 42T
- There is a compulsory work-based training of 42T hours per week for 42T weeks.

List all teaching periods in which students may commence study.
- i.e. Summer, First Semester, Autumn, Winter, Second Semester and/or Spring
- Note that international student visa holders must be able to complete within the normal duration of study without the need to ‘underload’ or take leave.

- First Semester, Second Semester

☐ To be registered on CRICOS for student visa eligibility.
☑️ International student visa holders are able to complete within the normal duration of study without the need to ‘underload’ or take leave when commencing in all listed teaching periods.

**Typical full-time pattern of study**

Provide typical full-time patterns of study for each teaching period in which students may commence study.

- Each study pattern should demonstrate completion of the Orders given above in the full-time plan duration.
- Give the course type, level and unit value in each cell (see Examples below).
- Cells should be merged for courses of 12 or more units.
- Copy and paste rows as needed

<table>
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<th>STAT1003 6 units</th>
<th>MATH1003 6 units</th>
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<td>STAT2001 6 units</td>
<td>SOCY2038 6 units</td>
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<td>STAT2008 6 units</td>
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<td>SOCR30XX 6 units</td>
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<tr>
<td></td>
<td>STAT3011 6 units</td>
<td>STAT3040 6 units</td>
<td>Elective 6 units</td>
<td>Elective 6 units</td>
</tr>
</tbody>
</table>

**Fees**

Fee places available: **Commonwealth Support and International Student Fees**

- For Awards with ISF places, identify an existing Award with the same indicative international student fee (see the annual fee schedule).

  *Bachelor of Advanced Computing (Honours)*

- Provide details of additional costs, such as compulsory fieldwork expenses (excludes SA Fee).

  *N/A.*
Consistent with Australian Qualifications Framework, including Level 9 research component where relevant
If not consistent, give details: 42T

Consistent with National Code 2007
If not consistent, give details: 42T

Consistent with policy: Academic Programs and Courses Accreditation
If not consistent, give details: 42T

Consistent with policy: Nomenclature
If not consistent, give details: 42T

Consistent with policy: Structure and Wording of Coursework Award Requirements, including Registrar approval
If not consistent, give details: 42T

Consistent with other relevant University policies and standards (e.g. Admission requirements template)
If not consistent, give details: 42T

Formal Award name
Bachelor of Applied Data Analytics

Formal Award post nominal
BAppDataAnalyt

Career
UGRD - Undergraduate

Does this new plan require a new program?
New program - a new program must be created

Program code(s) (4 digits each)
3702

Single degree program type (if new)
10 - Bachelors Pass

Duration / units per year
48/3

Plan code
BADAN

Detailed Field of Education code
010199 – Mathematical Sciences n.e.c.

First available term
2730

Indicative annual international student fee from first term available, above.
$36,720

CRICOS study duration
150

CRICOS full cost of student from year of registration, i.e. the current year.
$111,060.00

Detail of Plan - Australian Higher Education Graduation Statement (AHEGS)
The Bachelor of Applied Data Analytics, BAppDataAnalyt, is an AQF Level 7 Bachelor Degree qualification taught in English and normally takes three years of full-time-equivalent study. The program structure requires the successful completion of both compulsory and elective courses (units of study).
Admission is normally based on secondary and/or tertiary education academic results.

Full study details and learning outcomes are published on the University website: www.anu.edu.au

Plan Features - Australian Higher Education Graduation Statement (AHEGS)

U

Plan Pathway - Australian Higher Education Graduation Statement (AHEGS)

Graduates may progress to an AQF level 8 qualification (Bachelor Honours Degree, Graduate Certificate or Graduate Diploma) or an AQF level 9 qualification (Masters Degree), subject to specific admission requirements.

Plan Accreditation - Australian Higher Education Graduation Statement (AHEGS)

U

College Education Committee

Date considered by College Education Committee (CEC)
	Tuesday 22 December 2015

CEC recommendation to UEC

- Endorse with no conditions
- Endorse with conditions (specified below)
- Do not endorse

Note: New Award Proposal approved by College Education Committee Out-of-Session – 22/12/2015.

As approved by the Dean or delegated authority
Dr Jochen Trumpf on Tuesday 22 December 2015

University Education Committee

Date considered by University Education Committee (UEC)
	42T

Document Number
	42T

UEC recommendation to Academic Board

- Accredit with no conditions
- Accredit with conditions (specified below)
- Do not accredit

42T

Academic Board

Date considered by Academic Board
	42T

Document Number
	42T

Academic Board

11 | THE AUSTRALIAN NATIONAL UNIVERSITY
New Academic Plan Expression of Interest / Proposal

- Accredits with no conditions from 42T
- Accredits with conditions (specified below) from 42T
- Does not accredit

42T
New Academic Award / Augmentation
Expression of Interest / Proposal
(Coursework)

Doc number 329/2016

Award name

Bachelor of Applied Data Analytics (Honours)

Summary

- Provide an executive summary of this proposal for University Education Committee and Academic Board (100 words or fewer).

Australia requires a workforce with skills in data analytics as applied to high-quality, data-informed decision-making. This reflects a wider challenge to Australian business, government and community in terms of the effective use of public and commercial data for decision-making. The rapid expansion of a digitally enabled environment has broadened both the threat and the opportunity in data-driven innovation. We propose an honours year as an addition to the three year Bachelor of Applied Data Analytics to allow students to specialise in one of the three core disciplines of the bachelor degree.

Part 1 – Priority approval criteria

Check all relevant criteria that this Award meets.

- Provide justification for each checked criterion in the ‘Rationale’ section in Part 2 below.

☑ Will attract, challenge and retain students of outstanding talent.

☐ Will be included in a double degree with at least one graduate Award (e.g. Vertical Double Degree or Double Masters Degree).

☑ Will respond to or anticipates changing national or global workforce needs.

☐ Will utilise learning technologies and teaching approaches to extend the University’s educational reach on a national or global level.

☐ Will promote executive education pathways, especially in the area of public policy and other disciplines of national significance.

☐ Will be offered in partnership with one or more university of outstanding reputation.

☐ Will provide pathways of demonstrated efficacy for underrepresented cohorts, in line with the University’s access and equity strategies.

If this new plan does not satisfy any of the University’s priority approval criteria, complete only Part 2 – Expression of interest.

If this new plan satisfies any of the University’s priority approval criteria, complete both Part 2 – Expression of interest and Part 3 – New plan proposal.

Part 2 – Expression of interest

New plan details

Australian Qualifications Framework level and type

Level 8 - Bachelor Honours Degree

Admission pathway (e.g. exit only)

Direct admission

External accreditation body (if any)

41T
Full-time duration in years 1
(Single degree or vertical double degree)
Units required for completion 48
Available for enrolment from: First Semester 2017

Linked qualifications
- If this is a pathway (i.e. required for admission) or an early exit, list all relevant Awards.

41T

Double degrees
- Is this Award to be part of a double degree?
  - Flexible Double Degree (Arts, Social Sciences, Sciences and Business 4 Year)
  - Flexible Double Degree (Arts, Social Sciences, Sciences and Business 5 Year)
  - Flexible Double Degree (Law, Engineering and Advanced Computing 6 Year)
  - Flexible Double Degree (Law)
  - Flexible Double Degree (Engineering and Advanced Computing)
  - Vertical Double Degree
  - Double Masters Degree

Governance

Responsible College ANU College of Engineering & Computer Science

Who is the convener of the plan? Dr Qing Wang

Does this Award have a dedicated governance committee or advisory board (other than College Education Committee)? If so, detail membership and frequency of meetings.

A Data Analytics Board of Studies will be established that is comprised of Associate Deans Education from CASS, CAP, CBE, CECS, CMBE, CPMS and CoL plus the Directors of RSCS, RSPAS and RSSS, chaired by the AD-E for CECS. Its mandate will be to advise the Associate Dean (Education) for CECS on issues of quality and internal alignment of courses to the degree – not the structure or business case for the degree. The latter will come under the remit of a data analytics education management committee comprising the Deans of CECS, CASS and CBE plus some external advisors, chaired by the Dean of CECS.

Rationale

Academic merit and strategic alignment
- Give details of how this Award aligns with University and College strategy (see ANU by 2020) and contributes to the standing of the discipline or interdisciplinary area nationally and (if relevant) internationally (200 words or fewer).

This proposed Honours degree is part of a suite of new degrees that will contribute to the national standing of the ANU in the emerging fields of data analytics and data science and allow for the continued building or research strength in this area. It is a distinctive inter-disciplinary degree drawing from expertise across three different Colleges. Along with the new Masters in Data Analytics, it will see ANU well placed to contribute to national debate and policy formulation. It is also allows high achieving students to pursue an honours pathway and will attract outstanding national and international students to the university.
Research Led Education

- Identify the initiatives in this Award that contribute to the University’s goal of offering research-led education and how sustained scholarship will inform teaching and learning. (200 words or fewer)

The program is built on world-leading and unique expertise across three disciplines – computing, statistics and social science. The honours year places a major emphasis on students developing their research skills. Students will be provided with research methods and principles training, undertake some advanced coursework, and complete a major research project under the supervision of world class staff.

Market competition

- Identify a minimum of two competing Awards in the sector nationally or internationally.
- Highlight the ways in which this ANU Award is superior to competitors (200 words or fewer).

Data analytics is an emerging area but in the current environment is most commonly limited to business or data science. WSU have recently launched a bachelor degree in Data Science, RMIT have launched a 4 year Bachelor of Analytics, while other universities are also in the process of developing data science degrees. There are also a small number of undergraduate majors in business analytics (eg Deakin BComm) or data analytics (eg UTS BSc). There are currently no degrees that capture the inter-disciplinary nature of data analytics as proposed in this new ANU degree. There is therefore an opportunity to occupy a key space in inter-disciplinary data analytics in the Australian landscape, and offer an honours degree to high achieving students.

Internationally, there are few similar degrees. Southern New Hampshire University in the US offers an online Bachelor of Science in Data Analytics which is more related to business data analytics and does not truly capture the social science aspects of the ANU degree. There are a number of MOOC’s on data science.

Estimated enrolment

- Provided an estimate of enrolment numbers in EFTSL.
- Provide evidence for estimated enrolment numbers (200 words or fewer).

5-10 EFTSL pa

Joint award responsibilities

- If this Award is offered in conjunction with another institution, describe how responsibilities for course delivery, fees, pre-enrolment engagement of students, student services and care and student visa requirements are shared (200 words or fewer).
- These details may be provided to TEQSA.

N/A.

Monitoring of performance and quality

- Provide targets for the following indicators: enrolment, student retention, student experience (including SELS), student outcomes and pathway to further study (200 words or less).

Monitoring of performance and quality will be managed by a Board of Studies. Due to our relatively high entrance requirement and continued support through close monitoring of student progress, pastoral care and ongoing tutoring support, we would expect few students to withdraw. It is therefore anticipated that retention
rates will be around 90%. CECS also schedules SELT surveys for all courses and would also expect an agreement rate of at least 60% in SELS surveys undertaken for the courses within this degree.

- Provide details of how performance will be monitored against the above targets, including timeframes (200 words or less).

Monitoring of all of the above will be provided by a Board of Studies on a bi-annual basis. Performance indicators will be measured in EFTSL per year, the honours performance of students, and SELT response rates each semester. CECS will also maintain close contact with its alumni and follows their careers through email, Facebook and LinkedIn and makes contact when opportunities arise through overseas visits to international graduates.

### Consultation

#### Academic consultation

- Includes ANU and external consultation about academic merit and strategic alignment, contribution to teaching, cross-College disciplines, and cross-College pathway degrees
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

*This program was developed across CECS, CASS and CBE. Key people involved include from CECS: Prof Elanor Huntington (Dean), Prof Alistair Rendell (Director RSCS), Prof Peter Christen (RSCS), Associate Professor Jochen Trumpf (Associate Dean (Education)(CECS)); Dr Qing Wang (RSCS) from CBE: Prof Steven Roberts (Director RSFAS), Assoc Prof Stephen Sault (Deputy Director and Director of Education RSFAS); and from CASS: Prof Matthew Gray (Director CSRM / RSSS), Prof Darren Halpin (Head SS, RSSS). The Deans of CASS, CAP, CBE and Directors of MSI, RSPH have been consulted.*

#### Consultation with Division of Student Administration

- Includes degree structures, nomenclature, AQF and legislative compliance, Commonwealth support, CRICOS eligibility
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

*ASQO provided significant support in the development of the degree orders.*

#### Consultation with Division of Student Services

- Includes support for specific cohorts, international students under the age of 18
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

*Minimal impact is anticipated for the Division of Student Life as this is a small number of additional undergraduate students relative to the total size of the student population.*

#### Consultation with Division of International Operations and Student Recruitment

- Includes admissions, student recruitment, international agreements, international experiences, University publications
Part 3 – New plan proposal

Description and study requirements

Marketing and publication description

- This section is published on the ‘Programs and Courses’ website to an external audience and is used primarily for marketing.
- Describe the plan including any key features, its research led elements and any external accreditation of the plan (100 words or fewer).

*The Bachelor of Applied Data Analytics (Honours) is a one year full-time (or equivalent part-time) degree available in one of Computing, Statistics, or Social Sciences that exemplifies the ANU commitment to research-led education. Building upon the Bachelor of Applied Data Analytics, the degree will provide you with high level preparation for life as a practitioner or for undertaking a higher degree by research. You will be provided with research methods and principles training, undertake some advanced coursework, and complete a major research project.*

Single degree study requirements and Orders

- Provide requirements for the completion of this Award as a single degree.
- New courses must be approved before being entered into requirements.
- Orders will be drafted by the Academic Standards and Quality Office for confirmation of the appropriate ANU College Associate Dean to then be made by the Deputy Vice-Chancellor (Academic) (see Undergraduate Awards Rules and Graduate Awards Rules).
- This section is published on the ‘Programs and Courses’ website to an external audience.

*The Bachelor of Applied Data Analytics (Honours) requires completion of 48 units, which must consist of:

48 units from completion of one of the following Honours specialisations:

Biology Honours*
Business Information Systems Honours  
Computer Science Honours  
Digital Humanities Honours  
Mathematics Honours  
Population Health Honours  
Statistics Honours  
Sociology Honours  

**HONS4700** Final Honours Grade will be used to calculate the class of Honours and the mark. It will be calculated using the formula: \( \frac{\sum (\text{mark} \times \text{units})}{\sum \text{units}} \), giving NCN and WN a nominal mark of zero.

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**Learning outcomes**

- Learning outcomes are high-level statements of the skills and knowledge which ANU certifies that all graduates of the plan possess.
- If this plan is within a Vertical Double Degree or Double Masters Degree, provide full learning outcomes for both degrees.
- This section is published on the ‘Programs and Courses’ website to an external audience.

Upon successful completion, students will have the skills and knowledge to:

1. Demonstrate a sound knowledge and critical understanding of research design and methods
2. Apply that knowledge to the development of a research proposal and research plan
3. Develop the capacity to perform high-level independent research
4. Exhibit in-depth knowledge of their chosen research topic
5. Demonstrate a high level of ability to critically analyse and evaluate research questions and communicate the results.

---

**Assessment alignment (Bachelor Honours Degrees only)**

- Provide an explanation of how the structure of assessment will determine whether the Honours learning outcomes have been met.

The thesis reports the student’s work on a research project. Evaluation is based on the extent to which the thesis demonstrates understanding of the research topic (outcomes 4 and 5), the quality of project planning and execution (outcomes 1, 2 and 3), the significance of results obtained (outcome 3) and the structure of the document and clarity of writing (outcome 5). In addition, students must complete two presentations to staff. These presentations are assessed principally for effectiveness in communication of research topics and results (outcome 5), but also as demonstrations of knowledge and understanding (outcome 4) and as reports of the conduct of the project (outcomes 2 and 3). The coursework component includes 6 units specifically on research methods (outcome 1), and the other 18 units consist of 4000-level courses all of which have as a minimum assessment components directly related to outcome 5.

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**Timing of Honours assessment (Bachelor Honours Degrees only)**

- Provide an explanation of how either: a minimum of 25% of the assessment which contributes to the final honours grade or; 15% of the assessment which contributes to the final Honours mark and formalised monitoring of progress by staff other than each student’s supervisor or Honours convener is completed in the first half (in terms of duration) of Honours study.
Students will have completed at least 25% (12 units) of their graded coursework in the first half of their honours year.

Honours research training availability (Bachelor Honours Degrees only)

- If Honours research training courses are to be available to students only once per calendar year, describe the strategies to be used to ensure that students who commence Honours in the Period in which these courses are not taught will not be disadvantaged.

Students who have not undertaken research training will complete a Research Methods course as identified in the degree requirements as one of their approved honours courses and/or will have research training embedded in their honours thesis.

Admission requirements

Honours Awards (with specialisations)

- Complete the template below.
- Delete text in brackets if not required.
- Delete Item 1 if the degree name is specified.
- Final admission requirements will be drafted by the Academic Standards and Quality Office for confirmation of the appropriate ANU College Associate Dean.
- This section is published on the ‘Programs and Courses’ website to an external audience.

A Bachelor of Applied Data Analytics from ANU, or equivalent from another institution, completed within the last two years and the satisfaction of any requirements specified in the relevant honours specialisation

The number of places available in the program may be limited by the Dean due to supervisory capacity.

Cognate disciplines (Bachelor Honours and direct-entry Graduate Coursework only)

- List each discipline considered to be ‘cognate’ for the purposes of admission and/or credit.
- This section is published on the ‘Programs and Courses’ website to an external audience.

Computing, Statistics, Sociology

Delivery

Delivery mode(s): In person - 75% or more on campus, maximum 25% of courses online

- Off campus – this plan is to be administered and completed externally to the Acton campus.
- Intensive – this plan is to be completed by undertaking accelerated courses in a full-time block.
  Intensive plan duration in weeks (from commencement to submission of final assessment): 41T
- There is a compulsory work-based training of 41T hours per week for 41T weeks.
List all teaching periods in which students may commence study.

- i.e. Summer, First Semester, Autumn, Winter, Second Semester and/or Spring
- Note that international student visa holders must be able to complete within the normal duration of study without the need to ‘underload’ or take leave.

**First Semester, Second Semester**

- To be registered on CRICOS for student visa eligibility.
- International student visa holders are able to complete within the normal duration of study without the need to ‘underload’ or take leave when commencing in all listed teaching periods.

### Typical full-time pattern of study

Provide typical full-time patterns of study for each teaching period in which students may commence study.

- Each study pattern should demonstrate completion of the Orders given above in the full-time plan duration.
- Give the course type, level and unit value in each cell (see Examples below).
- Cells should be merged for courses of 12 or more units.
- Copy and paste rows as needed

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<thead>
<tr>
<th>Year 1</th>
<th>Honours Specialisation Course 12 units</th>
<th>Honours Specialisation Course 6 units</th>
<th>Honours Specialisation Course 6 units</th>
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<td><strong>Honours Specialisation Course</strong> 6 units</td>
<td><strong>Honours Specialisation Course</strong> 6 units</td>
</tr>
</tbody>
</table>

### Fees

Fee places available: Commonwealth Support and International Student Fees

- For Awards with ISF places, identify an existing Award with the same indicative international student fee (see the annual fee schedule).

**Bachelor of Advanced Computing (Honours)**

- Provide details of additional costs, such as compulsory fieldwork expenses (excludes SA Fee).

N/A.
**Division of Student Administration use only**

- ☑ Consistent with *Australian Qualifications Framework*, including Level 9 research component where relevant
  - If not consistent, give details: 41T

- ☑ Consistent with *National Code 2007*
  - If not consistent, give details: 41T

- ☑ Consistent with policy: *Academic Programs and Courses Accreditation*
  - If not consistent, give details: 41T

- ☑ Consistent with policy: Nomenclature
  - If not consistent, give details: 41T

- ☑ Consistent with policy: Structure and Wording of Coursework Award Requirements, including Registrar approval
  - If not consistent, give details: 41T

- ☑ Consistent with other relevant University policies and standards (e.g. Admission requirements template)
  - If not consistent, give details: 41T

**Formal Award name**
Bachelor of Applied Data Analytics (Honours)

**Formal Award post nominal**
BAppDataAnalytHons

**Career**
UGRD - Undergraduate

**Does this new plan require a new program?**
New program - a new program must be created

**Program code(s) (4 digits each)**
3702

**Single degree program type (if new)**
09 - Bachelors Honours

**Duration / units per year**
48/1

**Plan code**
HADAN

**Detailed Field of Education code**
010199 – Mathematical Sciences n.e.c.

**First available term**
2730

**Indicative annual international student fee from first term available, above.**
$36,720

**CRICOS study duration**
46

**CRICOS full cost of student from year of registration, i.e. the current year.**
$35,234.00

**Detail of Plan - Australian Higher Education Graduation Statement (AHEGS)**

_The Bachelor of Applied Data Analytics (Honours), BAppDataAnalytHons, is an AQF Level 8 Bachelor Honours qualification taught in English and normally takes one year of full-time-equivalent study following a_
A three-year-long AQF Level 7 Bachelor Degree. The program structure requires the successful completion of both compulsory and elective courses (units of study) and includes a supervised thesis.

Admission is normally based on the successful completion of an AQF Level 7 Bachelor Degree with at least a 70 per cent average mark.

Full study details and learning outcomes are published on the University website: www.anu.edu.au

Plan Features - Australian Higher Education Graduation Statement (AHEGS)

U

Plan Pathway - Australian Higher Education Graduation Statement (AHEGS)

Graduates may progress to an AQF level 9 qualification (Masters Degree) or AQF level 10 qualification (Doctoral Degree), subject to specific admission requirements.

Plan Accreditation - Australian Higher Education Graduation Statement (AHEGS)

U

College Education Committee

Date considered by College Education Committee (CEC)  Tuesday 22 December 2015

CEC recommendation to UEC

⊙ Endorse with no conditions
⊙ Endorse with conditions (specified below)
⊙ Do not endorse

Note: New Award Proposal approved by College Education Committee Out-of-Session – 22/12/2015.

As approved by the Dean or delegated authority

Dr Jochen Trumpf on Tuesday 22 December 2015

University Education Committee

Date considered by University Education Committee (UEC)  41T

Document Number  41T

UEC recommendation to Academic Board

⊙ Accredit with no conditions
⊙ Accredit with conditions (specified below)
⊙ Do not accredit

41T

Academic Board
New Academic Plan Expression of Interest / Proposal

Date considered by Academic Board  41T
Document Number  41T
Academic Board

- Accredits with no conditions from 41T
- Accredits with conditions (specified below) from 41T
- Does not accredit

41T
New Academic Award / Augmentation
Expression of Interest / Proposal (Coursework)

Award name: Master of Innovation and Professional Practice

Summary:
- Provide an executive summary of this proposal for University Education Committee and Academic Board (100 words or fewer).

ANU graduates will live and work in a world of rapid technological, economic, environmental and social change. The Master of Innovation and Professional Practice (MIPP) builds upon the ANU Vice Chancellor’s courses to prepare students from all disciplines with the knowledge, skills and confidence required to build successful careers and achieve great things in this uncertain, but exciting world.

The program is multidisciplinary in enrollment, content and teaching, and provides students with extensive opportunities to learn by working in multidisciplinary teams on complex real-world challenges and opportunities with business, the innovation eco-system, government, NGOs and the broader community.

Note that the Minor and Major in Innovation and Professional Practice provide undergraduate students with pathways to the MIPP. Students who have met specific requirements have completed 48 units of their bachelor’s degree with a GPA of at least 5.0 will be permitted to take postgraduate versions of courses in the minor and major that correspond to courses in the MIPP. Students who complete these postgraduate courses will be given 24 units credit for the corresponding courses in the MIPP. In addition, students who complete the major will be given 24 units credit for the four university electives in the MIPP.

Part 1 – Priority approval criteria

Check all relevant criteria that this Award meets.

- Will attract, challenge and retain students of outstanding talent.
- Will be included in a double degree with at least one graduate Award (e.g. Vertical Double Degree or Double Masters Degree).
- Will respond to or anticipates changing national or global workforce needs.
- Will utilise learning technologies and teaching approaches to extend the University’s educational reach on a national or global level.
- Will promote executive education pathways, especially in the area of public policy and other disciplines of national significance.
- Will be offered in partnership with one or more university of outstanding reputation.
- Will provide pathways of demonstrated efficacy for underrepresented cohorts, in line with the University’s access and equity strategies.
If this new plan does not satisfy any of the University’s priority approval criteria, complete only Part 2 – Expression of interest.

If this new plan satisfies any of the University’s priority approval criteria, complete both Part 2 – Expression of interest and Part 3 – New plan proposal.

**Part 2 – Expression of interest**

**New plan details**

| Australian Qualifications Framework level and type | Level 9 - Masters Degree (Coursework) |
| Nomenclature type (Graduate Coursework only) | Narrow Field Named Award (e.g. Master of Chemistry) with a minimum of 48 units in the named Narrow Field |
| Admission pathway (e.g. exit only) | Direct admission |
| External accreditation body (if any) | N/A |
| Full-time duration in years | 2 |
| (Single degree or vertical double degree) | |
| Units required for completion | 96 |
| Available for enrolment from: | First Semester 2017 |

**Linked qualifications**

- If this is a pathway (i.e. required for admission) or an early exit, list all relevant Awards.

| 41T |

**Double degrees**

- Is this Award to be part of a double degree?
  - [ ] Flexible Double Degree (Arts, Social Sciences, Sciences and Business 4 Year)
  - [ ] Flexible Double Degree (Arts, Social Sciences, Sciences and Business 5 Year)
  - [ ] Flexible Double Degree (Law, Engineering and Advanced Computing 6 Year)
  - [ ] Flexible Double Degree (Law)
  - [ ] Flexible Double Degree (Engineering and Advanced Computing)
  - [x] Vertical Double Degree
  - [ ] Double Masters Degree

**Governance**

| Responsible College | ANU College of Engineering & Computer Science |
| Who is the convener of the plan? | Dr Shayne Flint |
| Does this Award have a dedicated governance committee or advisory board (other than College Education Committee)? If so, detail membership and frequency of meetings. | A Board of Studies is being established. Membership so far comprises: |
| | Dr Shayne Flint, CECS |
| | Prof Richard Baker, PVC(University Experience) |
| | Prof Alistair Rendell, Director RSCS |
| | Prof Gabriele Bammer, CMBE |
| | Prof Mike Smithson, CMBE |

2 | THE AUSTRALIAN NATIONAL UNIVERSITY
We will invite others to ensure appropriate representation from every ANU college, industry and government. This will include the following individuals who have been consulted on various aspects of the proposed program.

- Prof Mick Cardew-Hall, PVC (Innovation)
- Prof Tim Senden, Director RSPE
- Dr Craig Davis, Griffin Accelerator
- Petr Adamek, Kiln Incubator
- Dr Sarah Pearson, CEO CBR Innovation Network

Rationale

Academic merit and strategic alignment
- Give details of how this Award aligns with University and College strategy (see ANU by 2020) and contributes to the standing of the discipline or interdisciplinary area nationally and (if relevant) internationally (200 words or fewer).

The Master of Innovation and Professional Practice (MIPP) will be both responsive to student needs and to the requirements of the nation (ANU by 2020) by preparing students for future careers characterised by rapid, and often unpredictable, change, complex challenges, exciting opportunities and uncertainty.

MIPP students will complement their disciplinary-specific undergraduate studies by working across disciplines and with industry, government and the broader community to develop generic knowledge and competencies in design thinking, systems thinking, complexity, uncertainty, creativity, entrepreneurship, innovation, leadership and multi-disciplinary teamwork. They will develop the ability to use these skills, along with their disciplinary knowledge and competencies, to adapt to rapid change and to address complex opportunities and challenges.

The MIPP is based on existing courses including the Vice Chancellor’s courses and will engage students and stretch them intellectually, encouraging them to question the norms – to ask “why” not only “how” and to discover through their own research (ANU by 2020). In doing so, the MIPP will produce graduates with the deep disciplinary knowledge and skills along with the generic competencies required to work in multi-disciplinary teams to change the world.

Research Led Education
- Identify the initiatives in this Award that contribute to the University’s goal of offering research-led education and how sustained scholarship will inform teaching and learning. (200 words or fewer)

Throughout the program, students will be exposed to research through lectures, workshops and supervision by experts across the university. They will be exposed to research practices through a mandatory Research Methods course.

In courses such as Creating Impact, Unravelling Complexity and the Group Research and Innovation Project, students will learn in multi-disciplinary teams to identify, integrate and apply appropriate research practices and applicable research to address complex real-world challenges and opportunities with industry, government and the broader community.

Market competition
- Identify a minimum of two competing Awards in the sector nationally or internationally.
• Highlight the ways in which this ANU Award is superior to competitors (200 words or fewer).

Most universities, including the ANU, have various programs that cover innovation, entrepreneurship and professional practice. However, they are generally add-on degrees aligned to a specific discipline (usually business, commerce or management). A notable exception is:

- Northumbria - Multidisciplinary Innovation MA/MSc (https://www.northumbria.ac.uk/study-at-northumbria/courses/multidisciplinary-innovation-ft-dtfmu6/). This post-graduate program is open to all disciplines and takes a multi-disciplinary approach.

As far as we can tell, the MIPP is unique:

- The MIPP is a university-wide multi-disciplinary program available to students from any discipline.
- Students will ‘Learn by Doing’ with experts across the university as well as from business, government and the broader community.
- The MIPP is broader than just innovation and entrepreneurship. It covers a wider range of competencies that will be required by future workers including design thinking, multi-disciplinary teamwork, creativity, modern innovation methods, and dealing with complexity, uncertainty and rapid change.
- There are several flexible pathways to the MIPP including a minor and major in Innovation and Professional Practice that can be taken by undergraduate students.
- The final year of the MIPP acts, in many ways, as a capstone experience that brings together students’ disciplinary depth with the skills and competencies they have developed in innovation and professional practice.
- The MIPP will recognise student participation in activities such as innovation competitions, hackathons and conferences.

Estimated enrolment

• Provided an estimate of enrolment numbers in EFTSL.
• Provide evidence for estimated enrolment numbers (200 words or fewer).

A reliable estimate of enrolments is not possible at this time. However, given that the program will be available to all ~10,000 undergraduate students at the ANU, it is not unreasonable to expect at least 100 students (1% of undergraduate students) to enrol in the MIPP.

Joint award responsibilities

• If this Award is offered in conjunction with another institution, describe how responsibilities for course delivery, fees, pre-enrolment engagement of students, student services and care and student visa requirements are shared (200 words or fewer).
• These details may be provided to TEQSA.

N/A

Monitoring of performance and quality

• Provide targets for the following indicators: enrolment, student retention, student experience (including SELS), student outcomes and pathway to further study (200 words or less).

- **Enrolment:** We expect at least 1% of ANU undergraduates to enrol in the MIPP.
- **Student retention:** The majority of students entering the MIPP will be undergraduate students who have completed the Major in Innovation and Professional Practice. As such
they will be highly motivated, well informed as to expectations, and therefore likely to complete. Of the students who take the MIPP as a stand-alone program, 65% are expected to complete.

- **Student experience (including SELS):** We expect an agreement rate of at least 60% in SELS surveys undertaken for the courses within this degree.

- **Student outcomes:** Student outcomes for the MIPP will be many and varied. Indicators could include the number of start-ups created by graduates, numbers employed in start-ups or jobs relating to innovation, or the use of competencies developed in the MIPP. Because it is not possible to make reliable estimates for such indicators at this stage, we propose to collect data from initial graduates and then use that as a baseline against which to evaluate our ongoing performance.

- **Pathway to further study:** N/A

Provide details of how performance will be monitored against the above targets, including timeframes (200 words or less).

The MIPP will be fully ‘instrumented’ as part of an emerging research project within the Research School of Computer Science. This research aims to develop and evaluate a framework for providing improved evidence to support program and course design, amendments and ongoing evaluation. We will collect fine-grained data on all aspects of the programs including enrolments, retention rates, satisfaction data (SELS and focus groups), marks, written teacher and student feedback (including peer assessment) at the course and assessment task level, engagement across and external to the ANU, and how competencies developed during the program are used in careers after graduation.

We will use quantitative and qualitative methods, machine learning, visualisation and other techniques to develop insights into the collected data and the effectiveness of the MIPP and its components. This data will provide an evidence base for ongoing performance monitoring and improvement.

ANU Graduate Coursework model (Graduate Coursework only)

☑ This Award is consistent with the University’s Graduate Coursework Model

☐ This Award requires approval as an exception to the ANU Graduate Coursework model.

- For Graduate Certificates and Graduate Diplomas, provide a strategic case for the creation of this Award and attach all available evidence.
- For Masters Degrees requiring more or less than 96 units, or with admission requirements than a non-cognate Bachelor Degree, provide significant justification for creation of this Award (e.g. professional accreditation or international standards) and attach all available evidence.

N/A

Consultation

Academic consultation
Includes ANU and external consultation about academic merit and strategic alignment, contribution to teaching, cross-College disciplines, and cross-College pathway degrees
Include evidence of consultation, such as meeting dates, links to published minutes, etc.

The following have been consulted regarding the MIPP. All have been supportive of the proposal.
- Marnie Hughes-Warrington – DVC(A)
- Richard Baker – PVC (Student Experience)
- Mick Cardew-Hall – PVC (Innovation)
- Elanor Huntington – Dean CECS
- Alistair Rendell - Director RSCS
- Rob Mohony – Director RSEng
- Jochen Trumpf – AD(E) CECS
- Byron Keating – Director RSM, CBE
- Chris Nailer – RSM, CBE
- Ed Russell – RSM, CBE
- Tim Senden – Director RSPE
- Allen Rodrigo – Director RSB
- Denise Ferris – Head, School of Art
- Gabriele Bammer - CMBE
- Mike Smithson - CMBE
- John Debs – RSPE, CPMS
- Chris Browne - CECS
- Giles Hirst - CBE
- Ian Elsum - CBE
- Fiona Nelms – Director, TTO
- RSCS Industry Advisory Board
- RSEng Industry Advisory Board
- Craig Davis - CEO Griffin Accelerator
- Petr Ademec - CEO Kiln Incubator
- Sarah Pearson - CEO CBR Innovation Network
- Glen Hassett - ACT Government
- Nick McNaughton – CEO ANU Connect Ventures

Consultation with Division of Student Administration
- Includes degree structures, nomenclature, AQF and legislative compliance, Commonwealth support, CRICOS eligibility
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

The following people have been consulted and have provided advice that has been incorporated in to this proposal.
- Mr Ewan Evans, Assistant registrar ASQO
- Mr Jake Francis, Senior Projects Office, ASQO

Consultation with Division of Student Services
- Includes support for specific cohorts, international students under the age of 18
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

Dr Stephen Milnes, Deputy Director Student Experience, Division of Student Life
Consultation with Division of International Operations and Student Recruitment

- Includes admissions, student recruitment, international agreements, international experiences, University publications
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

Consultation with Information Technology Services

- Includes support for specific software and infrastructure needs
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

Not required.

Consultation with ANU Library

- Includes access to specific online and physical collections, specialist information literacy training
- Include evidence of consultation, such as meeting dates, links to published minutes, etc.

Not required.

Note that insufficient consultation may preclude or delay approval or implementation

Part 3 – New plan proposal

Description and study requirements

Marketing and publication description

- This section is published on the ‘Programs and Courses’ website to an external audience and is used primarily for marketing.
- Describe the plan including any key features, its research led elements and any external accreditation of the plan (100 words or fewer).

The Master of Innovation and Professional Practice (MIPP) is for students from any discipline who want to change the world.

The program builds upon ANU Vice Chancellor’s courses to prepare students from all disciplines with the knowledge, skills and confidence required to achieve great things in our uncertain, but exciting world of rapid technological, economic, environmental and social change.

The program is multidisciplinary in enrollment, content and teaching, and provides students with extensive opportunities to learn by working in multidisciplinary teams on complex real-world challenges and opportunities with business, the innovation eco-system, government, NGOs and the broader community.

Single degree study requirements and Orders

- Provide requirements for the completion of this Award as a single degree.
- New courses must be approved before being entered into requirements.
Orders will be drafted by the Academic Standards and Quality Office for confirmation of the appropriate ANU College Associate Dean to then be made by the Deputy Vice-Chancellor (Academic) (see Undergraduate Awards Rules and Graduate Awards Rules).

This section is published on the ‘Programs and Courses’ website to an external audience.

The Master of Innovation and Professional Practice requires completion of 96 units, which must consist of:

- 54 units from completion of the following compulsory courses:
  - MGMT7161 Entrepreneurship and New Venture Planning
  - MGMT8015 Entrepreneurship and Innovation
  - MGMT8145 Innovation and Commercialisation
  - VCPG6001 Unraveling Complexity
  - VCPG6002 Mobilising Research
  - VCPG6004 Creating Impact
  - VCPG6100 Group Research and Innovation Project (12 units)
  - VCPG8001 Wicked Problems
  - VCPG8002 Ignorance!

- 6 units from completion of a research methods course from the following list:
  - ENVS6014 Qualitative Research Methods for Sustainability
  - ENVS6103 Introduction to Environmental and Social Research
  - HUMN6003 Digital Humanities: Methods and Practices
  - MGMT8006 Management Research Methods
  - MGMT8018 Qualitative Research Methods
  - MGMT8019 Quantitative Research Methods
  - POPH8315 Methods in Applied Epidemiological Research
  - SOCY8101 Social Research Theory and Design
  - STAT6006 Marketing Research Methods

- 12 units from completion of breadth courses from the following list:
  - VCPG6200 Innovation Internship (6-12 units)
  - Any 8000-level course offered by an ANU college

- 24 units from completion of elective courses offered by ANU

Double degree study requirements and Orders

- Provide requirements for the completion of this Award as a double degree (if applicable).
- For Flexible Double Degrees, provide only the Global Requirements (e.g. maximum of 1000-level courses) and any additional requirements specific to Flexible Double Degrees.
- For Vertical Double Degree undergraduate plans and Double Masters Degree plans, provide full requirements for the double degree (i.e. both Awards' components).
- New courses must be approved before being entered into requirements.
- Orders will be drafted by the Academic Standards and Quality Office for confirmation of the appropriate ANU College Associate Dean to then be made by the Deputy Vice-Chancellor (Academic) (see Undergraduate Awards Rules and Graduate Awards Rules).
- This section is published on the ‘Programs and Courses’ website to an external audience.

The Master of Innovation and Professional Practice component of a Flexible Vertical Double Degree requires completion of 72 units, which must consist of:

- 24 units from completion of the following introductory graduate coursework component:
  - 18 units from completion of the following compulsory courses:
    - MGMT8015 Entrepreneurship and Innovation
    - MGMT8145 Innovation and Commercialisation
    - VCPG6001 Unravelling Complexity
    - VCPG6004 Creating Impact
6 units from completion of a research methods course from the following list:
- ENVS6014 Qualitative Research Methods for Sustainability
- ENVS6103 Introduction to Environmental and Social Research
- HUMN6003 Digital Humanities: Methods and Practices
- MGMT8006 Management Research Methods
- MGMT8018 Qualitative Research Methods
- MGMT8019 Quantitative Research Methods
- POPH8315 Methods in Applied Epidemiological Research
- SOCY8101 Social Research Theory and Design
- STAT6006 Marketing Research Methods

36 units from completion of the following compulsory courses:
- MGMT7161 Entrepreneurship and New Venture Planning
- VCPG6002 Mobilising Research
- VCPG6100 Group Research and Innovation Project (12 units)
- VCPG8001 Wicked Problems
- VCPG8002 Ignorance!

12 units from completion of breadth courses from the following list:
- VCPG6200 Innovation Internship (6-12 units)
- Any 8000-level course offered by an ANU college

Learning outcomes
- Learning outcomes are high-level statements of the skills and knowledge which ANU certifies that all graduates of the plan possess.
- If this plan is within a Vertical Double Degree or Double Masters Degree, provide full learning outcomes for both degrees.
- This section is published on the ‘Programs and Courses’ website to an external audience.

Upon successful completion, students will be able to demonstrate:

1. an advanced understanding of the systems context in which complex challenges and opportunities emerge including environmental, economic, political, social, safety, historical, sustainability and ethical aspects;
2. the ability to use appropriate research methods and exercise critical thinking and professional judgement to select, adapt and apply appropriate knowledge, practices and tools to make sense of, and address complex problems and opportunities in a broad range of contexts;
3. an advanced understanding and practical experience of operating within the innovation ecosystem;
4. the ability to learn quickly, adapt and innovate in new and complex environments;
5. the ability to lead and work effectively in multi-disciplinary, multi-cultural and distributed teams;
6. the ability to communicate complex concepts effectively with diverse audiences using a range of modalities;
7. the ability to act in a professional and ethical manner; and
8. a capacity for lifelong learning.

Research component (Masters Degrees only)
- Provide an explanation of and list of courses for how the AQF Level 9 Masters Degree (Coursework) requirement that graduates must be able to “plan and execute a substantial research-based project, capstone experience and/or piece of scholarship” is demonstrated.

Students will begin developing research skills through project work in ‘Creating Impact’ and ‘Unravelling Complexity’. Students are also required to complete a Research Methods course.
Student will use knowledge and skills gained in these courses to support project work in subsequent courses. In their final year, students will bring knowledge and skills from all courses together to 'plan and execute a substantial research-based project' during the capstone 'Group Research and Innovation Project'.

Admission requirements

Direct-entry Graduate Coursework
- Complete the template below.
- Final admission requirements will be drafted by the Academic Standards and Quality Office for confirmation of the appropriate ANU College Associate Dean.
- This section is published on the ‘Programs and Courses’ website to an external audience.

A Bachelor degree or international equivalent with a GPA of at least 5.0 on a 7-point scale.

All applicants must meet the University’s English Language Admission Requirements for Students.

Applicants with a Bachelor Degree or Graduate Certificate in a cognate discipline may be eligible for 24 units (one semester) of credit.

Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for 48 units (one year) of credit.

Cognate disciplines (Bachelor Honours and direct-entry Graduate Coursework only)
- List each discipline considered to be 'cognate' for the purposes of admission and/or credit.
- This section is published on the ‘Programs and Courses’ website to an external audience.

All disciplines

Delivery

Delivery mode(s): In person - 75% or more on campus, maximum 25% of courses online
- Off campus – this plan is to be administered and completed externally to the Acton campus.
- Intensive – this plan is to be completed by undertaking accelerated courses in a full-time block. Intensive plan duration in weeks (from commencement to submission of final assessment): 41T
- There is a compulsory work-based training of 41T hours per week for 41T weeks.

List all teaching periods in which students may commence study.
- i.e. Summer, First Semester, Autumn, Winter, Second Semester and/or Spring
- Note that international student visa holders must be able to complete within the normal duration of study without the need to ‘underload’ or take leave.

First Semester
To be registered on CRICOS for student visa eligibility.

International student visa holders are able to complete within the normal duration of study without the need to ‘underload’ or take leave when commencing in all listed teaching periods.

Typical full-time pattern of study

Provide typical full-time patterns of study for each teaching period in which students may commence study.

- Each study pattern should demonstrate completion of the Orders given above in the full-time plan duration.
- Give the course type, level and unit value in each cell (see Examples below).
- Cells should be merged for courses of 12 or more units.
- Copy and paste rows as needed

<table>
<thead>
<tr>
<th>Year 2</th>
<th>VCPG6100 Group Research and Innovation Project 12 units</th>
<th>VCPG6002 Ignorance! 6 units</th>
<th>VCPG6002 Mobilising Research 6 units</th>
<th>MGMT71615 Entrepreneurship and New Venture Planning Innovation and Commercialisation 6 units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VCPG8001 Wicked Problems 6 units</td>
<td>Breadth Elective 6 units</td>
<td>Breadth Elective 6 units</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Research Methods Elective 6 units</th>
<th>MGMT71615 Entrepreneurship &amp; New Venture Planning Innovation 6 units</th>
<th>Elective 6 units</th>
<th>Elective 6 units</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>VCPG6004 Creating Impact 6 units</td>
<td>VCPG6001 Unravelling Complexity 6 units</td>
<td>Elective 6 units</td>
<td>Elective 6 units</td>
</tr>
</tbody>
</table>

Fees

Fee places available: Domestic Tuition Fees and International Student Fees

- For Awards with ISF places, identify an existing Award with the same indicative international student fee (see the annual fee schedule).

  Indicative Annual Fees are: DTF $29,280; ISF $29,024 (ANU Band 3A)

- Provide details of additional costs, such as compulsory fieldwork expenses (excludes SA Fee).
### Division of Student Administration use only

- **Consistent with Australian Qualifications Framework**, including Level 9 research component where relevant
  - If not consistent, give details: 41T

- **Consistent with National Code 2007**
  - If not consistent, give details: 41T

- **Consistent with policy: Academic Programs and Courses Accreditation**
  - If not consistent, give details: 41T

- **Consistent with policy: Nomenclature**
  - If not consistent, give details: 41T

- **Consistent with policy: Structure and Wording of Coursework Award Requirements, including Registrar approval**
  - If not consistent, give details: 41T

- **Consistent with other relevant University policies and standards (e.g. Admission requirements template)**
  - If not consistent, give details: 41T

**Formal Award name**: Master of Innovation and Professional Practice

**Formal Award post nominal**: MInnov&ProfPrac

**Career**: PGRD - Graduate Coursework

**Does this new plan require a new program?**

- New program - a new program must be created

**Program code(s) (4 digits each)**: 7714

**Single degree program type (if new)**: 04 - Masters (Coursework)

**Load level rule**: 48/2

**Plan code**: MINPP

**Detailed Field of Education code**: 129999 Mixed Field Programmes, n.e.c.

**First available term**: 2730

**Indicative annual fee from first term available, above.**

- DTF $29,280; ISF $39,024

**CRICOS study duration**: 98 weeks

**CRICOS full cost of student from year of registration, i.e. the current year.**

- $76,080 ($76,668 + $588)
The Master of Innovation and Professional Practice, MInnov&ProfPrac, is an AQF Level 9 Masters Degree (Coursework) qualification taught in English and normally takes two years of full-time-equivalent study following a three-year-long AQF Level 7 Bachelor Degree. Course credit may be granted for students with relevant higher qualifications. The program structure requires the successful completion of both compulsory and elective courses (units of study).

Admission is normally based on the successful completion of an AQF Level 7 Bachelor Degree with a Grade Point Average of at least 5.0/7.0. Full study details and learning outcomes are published on the University website: www.anu.edu.au

Plan Features - Australian Higher Education Graduation Statement (AHEGS)

U

Plan Pathway - Australian Higher Education Graduation Statement (AHEGS)

Graduates may progress to an AQF level 10 qualification (Doctoral Degree), subject to specific admission requirements.

Plan Accreditation - Australian Higher Education Graduation Statement (AHEGS)

U

College Education Committee

Date considered by College Education Committee (CEC)
CEC recommendation to UEC
- Endorse with no conditions
- Endorse with conditions (specified below)
- Do not endorse

As approved by the Dean or delegated authority
Associate Professor Jochen Trumpf on Wednesday 27 July 2016

University Education Committee

Date considered by University Education Committee (UEC) 41T
Document Number 41T
UEC recommendation to Academic Board
- Accredit with no conditions
- Accredit with conditions (specified below)
- Do not accredit

41T
<table>
<thead>
<tr>
<th>Date considered by Academic Board</th>
<th>41T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document Number</td>
<td>41T</td>
</tr>
<tr>
<td>Academic Board</td>
<td></td>
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<tr>
<td>○ Accredits with no conditions from 41T</td>
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<tr>
<td>○ Accredits with conditions (specified below) from 41T</td>
<td></td>
</tr>
<tr>
<td>○ Does not accredit</td>
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</tbody>
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41T
Honours Specialisation Amendment

Specialisation name: Computer Science Honours
Specialisation code: COMP-HSPC
Responsible College: ANU College of Engineering and Computer Science

Marketing and publication description (Maximum 120 words)

- Complete this section only if the description is being amended

Admission requirements

- Complete the template below only if the description is being amended
- Delete numbered items as required.
- A maximum of 12 courses may be specified.

EITHER

Satisfaction of the admission requirements described in the relevant honours plan with at least a major or equivalent in computer science and with the written approval of an identified supervisor for the research project/thesis course.

OR

Completion of the Bachelor of Applied Data Analytics:
1. with at least a major or equivalent in computer science;
2. with a weighted average mark equivalent to an ANU 70 per cent calculated from the 36 units (i.e. 0.75 EFTSL) of courses in cognate disciplines, excluding 1000-level courses (i.e. introductory undergraduate courses), with the highest marks; and
3. with the written approval of an identified supervisor for the research project/thesis course.

Cognate disciplines

- List each Subject Areas (e.g. LAWS Law) considered to be ‘cognate’ for the purposes of admission.

COMP Computer Science
INFS Information Systems

Computing-related courses in the following subject areas:
ENGN Engineering
MATH Mathematics
STAT Statistics

Learning outcomes

- Complete this section only if the learning outcomes are being amended
- Number learning outcomes for reference

Upon successful completion, students will have the knowledge and skills to:

1.

Study requirements

- Complete this section only if the study requirements are being amended

This Honours specialisation requires the completion of 48 units, which must consist of:
Assessment alignment
- If the learning outcomes are being amended, provide an explanation of how the structure of assessment will determine whether the Honours learning outcomes have been met.

Timing of assessment
- Provide an explanation of how either: a minimum of 25% of the assessment which contributes to the final honours grade or; 15% of the assessment which contributes to the final Honours mark and formalised monitoring of progress by staff other than each student’s supervisor or Honours convener is completed in the first half (in terms of duration) of Honours study.

Research training availability
- If Honours research training courses are to be available to students only once per calendar year, describe the strategies to be used to ensure that students who commence Honours in the Period in which these courses are not taught will not be disadvantaged.

Exclusivity
- If this Honours specialisation is restricted to particular Awards, list them below.

<table>
<thead>
<tr>
<th>Plan code</th>
<th>Award name</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

Endorsement, approval and accreditation

**College**
Endorsed by ____________________________ on ____________________________

**University Education Committee**
☐ Endorsed ☐ Not endorsed on ____________________________

**Academic Board**
☐ Approved ☐ Not approved on ____________________________
MEMO

SUBJECT  Minor amendments to CSCI-MAJ and CSCI-MIN

TO  Anna Cowan, Deputy Dean Education (Acting) Science

FROM  Ramesh Sankaranarayana, Associate Director of Education, RSCS

DATE  Friday 19 August 2016

We wish to make the following changes to Computer Science major and Computer Science minor.

Summary of changes:
- Rearrange and update the listings with courses that are being recoded and/or renamed

CSCI-MAJ

This major requires the completion of 48 units, which must include:

6 units from completion of the following course(s):
  COMP1600  Foundations of Computing (formerly Formal Methods in Software Engineering)

6 units from completion of the following course(s):
  COMP1100  Programming as problem solving (formerly Introduction to Programming and Algorithms)
  COMP1130  Introduction to Programming and Algorithms (Advanced)
  COMP1730  Programming for Scientists

6 units from completion of the following course(s):
  COMP1110  Structured Programming (formerly Introduction to Software Systems)
  COMP1140  Structured Programming (Advanced) (formerly Introduction to Software Systems (Advanced)

6 units from completion of the following course(s):
  COMP2100  Software Design Methodologies (formerly Software Construction)
  COMP2300  Introduction to Computer Systems

A maximum of 6 units may come from completion of courses from the following list:
2000 level Computer Science (COMP) courses

A minimum of 18 units must come from completion of courses from the following list:
3000/4000 level Computer Science (COMP) courses

CSCI-MIN

This minor requires the completion of 24 units, which must include:

6 units from completion of the following course(s):
  COMP1600  Foundations of Computing (formerly Formal Methods in Software Engineering)

6 units from completion of the following course(s):
  COMP1100  Programming as problem solving (formerly Introduction to Programming and Algorithms)
  COMP1130  Introduction to Programming and Algorithms (Advanced)
  COMP1730  Programming for Scientists

6 units from completion of the following course(s):
  COMP1110  Structured Programming (formerly Introduction to Software Systems)
MEMO

Subject

COMP1140  Structured Programming (Advanced) (formerly Introduction to Software Systems
(Advanced)

6 units from completion of the following course(s):
COMP2100  Software Design Methodologies (formerly Software Construction)
COMP2300  Introduction to Computer Systems
Academic Course Form

CEC Document Number

Subject Area VCUG Catalogue Number 3200

Date Approved 16/08/2016

Course Status Approved

Request Type New Course

Amendment Type None

Amendment Description

Rationale
This course is one of a suite of new Vice Chancellor’s courses that have been developed as part of the proposed Major in Innovation and Professional Practice. It provides an opportunity for students to develop innovation and professional practice skills by completing an internship in business, government, an NGO or broader community organisations.

Long Course Title Innovation and Professional Practice Internship
Short Course Title IPP Internship

ACADEMIC USE

To Take Effect From 02/01/2018
Course Minimum Unit Value 6
Course Maximum Unit Value 12

Does this course have an UG / PG Equivalent? Yes
UG / PG Equivalent VCPG6200

Proposed Date

Proposer Name Dr Shayne Flint

Primary Convenor's Email ben.swift@anu.edu.au
Primary Convenor's Name Dr Ben Swift

Course Description
This course will enable students from any discipline to develop competencies expected of professionals working in business, government or the broader community. The course coordinator will maintain a list of available internship opportunities for which students can apply. An holistic selection process will be used to select the best applicant for each opportunity. Students can also propose internships, but these will always be established following negotiations between the ANU and potential host organisations, and then offered to students along with other opportunities.

Course Structure and Content
This course will comprise four stages:

1/ Students will apply for internship opportunities offered by the convenor each semester. Students will undergo a selection process which may include a written application, and/or an interview with representatives of the ANU and/or the host organisation.

2/ Successful candidates will attend a pre-internship workshop aimed at preparing them for the internship and ensuring they are familiar with applicable agreements between the student, ANU and host organisation, as well as assessment and other requirements. The workshops will also
Learning Outcomes

Upon completion of this course, students will be able to demonstrate:

1/ Personal commitment to ethical behavior; practicing competently; taking responsibility for their work; and acknowledging the work of others.

2/ A commitment to safety and sustainability; engagement with relevant stakeholders; the identification, assessment and management of risk; and meeting legal and regulatory requirements.

3/ The use of effective communication strategies; initiative; multi-disciplinary teamwork; and sound judgment to achieve defined workplace objectives.

4/ Proficiency in the application of disciplinary knowledge and practices; the exploration of complex/wicked problems; creativity and innovation; and the evaluation of outcomes and impact.

Workload

10 hours per week, per 6 units: 9 hours in the workplace, 1 hour developing the student's Portfolio of Evidence.

Prescribed Texts (Reading to Support the Course)

None

Preliminary Reading

None

Indicative Reading List

None

Assumed Knowledge, Required Skills and Recommended Courses (not prerequisites)

None

Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility)

You will need to contact the Research School of Computer Science to request a permission code to enrol in this course.

Indicative Assessment

- 20% Portfolio of Evidence - Stage 1 [LO1-4]
- 50% Portfolio of Evidence - Stage 2 [LO1-4]
- 20% Industry supervisor report [LO1-4]
- 10% Public Presentation or Poster display [LO1-4]

Assessment Rationale

This course is about the development and demonstration of professional workplace competencies. Students will do this while working in business, government or the broader community. They will keep records of the work they do and artifacts they produce. They will use these records to prepare a body of evidence to support claims of achieving the learning outcomes listed above. Students will be encouraged to integrate these portfolios with those developed in other VC courses to form a single ePortfolio that showcases all of their work in a form that can be used to provide evidence in support of job, funding, promotion and other applications, as well as professional accreditation.

Additional Assessment | Learning Outcomes

None

Mode of Delivery

Others

Quality Assurance Arrangements

SELTs, mid-course and end-of-course focus groups.
### Transitional Arrangements (if applicable)

N/A

### Relevant ANU internal and external consultation

Matthew Doolan, RSEng  
Jake Francis, ASQO  
Alistair Rendell, Director RSCS

### Intended Market and work undertaken to evaluate the market

Students taking the Major in Innovation and Professional Practice

### Estimated Enrolment Numbers and rationale

None

### Areas of Interest

None

### Is this required on a Sub-Plan?


## ADMINISTRATION USE

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<th>ANU College of Engineering and Computer Science</th>
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<td>Eligibility for Graduate Studies (Graduate Coursework Only)</td>
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<td>Academic Career</td>
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<tr>
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</table>
Proposed Scheduling (for the next three years)
Semesters 1 and 2 in 2018 and 2019.

Does this course have more than one owner? No

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### COURSE FEES

Field of Education Code 090300
HECS Band: 1

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Fee rate is same as existing course

Department ID CE200

Submit by Email to Course Registry
Academic Course Form

CEC Document Number

Subject Area VCPG Catalogue Number 6200

Date Approved 16/08/2016

Course Status Approved

Request Type New Course

Amendment Type None

Amendment Description

Rationale This course is one of a suite of new Vice Chancellor's courses that have been developed as part of the proposed Master of Innovation and Professional Practice (MIPP). It provides an opportunity for students to develop innovation and professional practice skills by completing an internship in business, government, an NGO or broader community organisations.

Long Course Title Innovation and Professional Practice Internship (100 characters)

Short Course Title IPP Internship (30 characters)

ACADEMIC USE

To Take Effect From 02/01/2018

Course Minimum Unit Value 6

Course Maximum Unit Value 12

Does this course have an UG / PG Equivalent? Yes

UG / PG Equivalent VCUG3200

Do you want this course to be offered as a variable unit course? Yes

Proposed Date

Proposer Name Dr Shayne Flint

Primary Convenor's Email ben.swift@anu.edu.au

Primary Convenor’s Name Dr Ben Swift

Course Description This course will enable students from any discipline to develop competencies expected of professionals working in business, government or the broader community. The course coordinator will maintain a list of available internship opportunities for which students can apply. An holistic selection process will be used to select the best applicant for each opportunity. Students can also propose internships, but these will always be established following negotiations between the ANU and potential host organisations, and then offered to students along with other opportunities.

Course Structure and Content This course will comprise four stages:

1/ Students will apply for internship opportunities and undergo a selection process which may include a written application, and/or an interview with representatives of the ANU and/or the host organisation.

2/ Successful candidates will attend a pre-internship workshop aimed at preparing them for the internship and ensuring they are familiar with assessment requirements.
3/ Students will undertake the internship in accordance with applicable agreements made between the student, ANU and host organisation. The detailed requirements of each specific internship opportunity will vary, but they will always allow the student to achieve the generic learning outcomes listed below.

4/ On completion of the internship, students will deliver a presentation outlining the outcomes they achieved during the internship.

### Learning Outcomes

Upon completion of this course, students will be able to demonstrate:

1/ Personal commitment to ethical behavior; practicing competently; taking responsibility for their work; and acknowledging the work of others.

2/ A commitment to safety and sustainability; engagement with relevant stakeholders; the identification, assessment and management of risk; and meeting legal and regulatory requirements.

3/ The use of effective communication strategies; initiative and leadership; multi-disciplinary teamwork; and sound judgment to achieve agreed workplace objectives.

4/ Proficiency in the application of advanced disciplinary knowledge and practices; the identification and exploration of complex/wicked problems; creativity and innovation; and the evaluation of outcomes and impact.

### Workload

10 hours per week, per 6 units: 9 hours in the workplace, 1 hour developing the student's Portfolio of Evidence.

### Prescribed Texts (Reading to Support the Course)

None

### Preliminary Reading

None

### Indicative Reading List

None

### Assumed Knowledge, Required Skills and Recommended Courses (not prerequisites)

None

### Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility)

You will need to contact the Research School of Computer Science to request a permission code to enrol in this course.

### Indicative Assessment

- 20% Portfolio of Evidence - Stage 1 [LO1-4]
- 50% Portfolio of Evidence - Stage 2 [LO1-4]
- 20% Industry supervisor report [LO1-4]
- 10% Public Presentation or Poster Display [LO1-4]

### Assessment Rationale

This course is about the development and demonstration of professional workplace competencies. Students will do this while working in business, government or the broader community. They will keep records of the work they do and artifacts they produce. They will use these records to prepare a body of evidence to support claims of achieving the learning outcomes listed above. Students will be encouraged to integrate these portfolios with those developed in other VC courses to form a single ePortfolio that showcases all of their work in a form that can be used to provide evidence in support of job, funding, promotion and other applications, as well as professional accreditation.

### Additional Assessment | Learning Outcomes

None

### Mode of Delivery

Others

### Quality Assurance Arrangements

SELTs, mid-course and end-of-course focus groups.
### Transitional Arrangements (if applicable)
N/A

### Relevant ANU internal and external consultation
Matthew Doolan, RSEng  
Jake Francis, ASQO  
Alistair Rendell, Director RSCS

### Intended Market and work undertaken to evaluate the market
Students enrolled in the Master of Innovation and Professional Practice

### Estimated Enrolment Numbers and rationale

### Areas of Interest
None

### Is this required on a Sub-Plan?

**ADMINISTRATION USE**

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Proposed Scheduling (for the next three years)  
Semesters 1 and 2 in 2018 and 2019.

Does this course have more than one owner?  
No

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**COURSE FEES**

Field of Education Code 090300  
HECS Band: 1

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Fee rate is same as existing course

Department ID CE200

Submit by Email to Course Registry
Amendment Type: Minor Amendment - Change of Pre-requisite

Amendment Description: Adding an incompatibility, which was mistakenly overlooked in the initial proposal.

Rationale: The courses COMP1110 and COMP2140 are incompatible, because of a large overlap in content. COMP2140 is the reactivated version of a previously deactivated course, COMP2750.

The prereqs for COMP2140 make it clear that it is incompatible with COMP1110. However, the prereqs for COMP1110 still refers to the old COMP2750 in its list of incompatible courses. This needs to be updated and COMP2750 replaced with COMP2140. This cannot wait until next year as one student has already used this loophole to enrol in COMP1110 after having completed COMP2140.

Unfortunately, in the recent review and subsequent amendment proposal for COMP1110, this was overlooked and only came to our attention due to the above-mentioned student.

Long Course Title: Structured Programming
Short Course Title: Structured Programming

ACADEMIC USE

To Take Effect From: 01/01/2017
Course Minimum Unit Value: 6
Course Maximum Unit Value: 6

Does this course have an UG / PG Equivalent?: No

Do you want this course to be offered as a variable unit course?: No

Proposer Name: Ramesh Sankaranarayana

Primary Convenor's Email
Primary Convenor's Name
Course Description
Course Structure and Content
Learning Outcomes
To enrol in this course you must have completed COMP1100 or COMP1130 or COMP1730. You are not able to enrol in this course if you have completed COMP1140 or COMP1510 or COMP2140.
If yes, reason

Eligibility for Graduate Studies (Graduate Coursework Only) Yes

Graduate Studies Classification 1

Graduate Studies Classification 2

List of course topics (Topics are descriptors on course names) (30 character limit each topic)

Academic Organisation (Offered by) 07345 – Research School of Computer Science

Academic Group ENGIT (ANU College of Eng & Comp Sci)

Academic Career

How many times may this course be repeated after successful completion? (Please enter number only) 0

Course Grading Basis

Is this a work experience or course internship? No

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota

Proposed Scheduling (for the next three years)

Does this course have more than one owner? No

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COURSE FEES

Field of Education Code

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Fee rate is same as existing course

Department ID CE200

Submit by Email to Course Registry
Academic Course Form

CEC Document Number

Subject Area COMP Catalogue Number 1710

Date Approved

Course Status Not Approved

Request Type Course Amendment

Amendment Type Minor Amendments- Change to an Existing Course

Amendment Description Addition of a learning outcome and modification of workload; Update of Co-taught course status.

Rationale

Long Course Title Web Development and Design

Short Course Title

To Take Effect From 01/01/2017

Course Minimum Unit Value 6

Course Maximum Unit Value 6

Does this course have an UG / PG Equivalent ? Yes

UG / PG Equivalent COMP6780

Do you want this course to be offered as a variable unit course? No

Proposed Date

Proposer Name Tom Gedeon

Primary Convenor's Email Tom.gedeon@anu.edu.au

Primary Convenor's Name Tom Gedeon

Course Description

Course Structure and Content

Learning Outcomes Upon successful completion of the course, the student will be able to:

- Understand and be able to develop and design web sites including multimedia content by applying current web design principles, guidelines and heuristics.
- Apply a user-centred focus to the development and design of web sites.
- Demonstrate knowledge of accessibility, compliance with standards, privacy concerns and personalisation for web sites.
- Understand and be able to separately control the content, the appearance and the behaviour of web sites.
- Understand and report on the nature and practice of human computer interaction research in an ethical environment.

Workload Thirty one-hour lectures and nine two-hour laboratory sessions, plus five hours of research participation (or equivalent)

Prescribed Texts (Reading to Support the Course)

RSCS Curriculum Development Committee Agenda 5/2016
Graduate Studies Classification 1

Graduate Studies Classification 2

List of course topics (Topics are descriptors on course names) (30 character limit each topic)

Academic Organisation (Offered by): 07345 – Research School of Computer Science

Academic Group: ENGIT (ANU College of Eng & Comp Sci)

Academic Career

How many times may this course be repeated after successful completion? (Please enter number only):

0

Course Grading Basis

Course Component

Is this a work experience or course internship? No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

拟

Quota

Proposed Scheduling (for the next three years)

Does this course have more than one owner? No

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Fee rate is same as existing course

Department ID: CE200

Submit by Email to Course Registry
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<th><strong>Course Amendment</strong></th>
<th><strong>Update course description and learning outcomes, assessment and other required information</strong></th>
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<td><strong>Rationale</strong></td>
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<td><strong>Proposed Date</strong></td>
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<td><strong>Proposer Name</strong></td>
<td>Lynette Johns-Boast</td>
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<td><strong>Primary Convenor's Email</strong></td>
<td><a href="mailto:Lynette.johns-boast@anu.edu.au">Lynette.johns-boast@anu.edu.au</a></td>
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<td><strong>Course Description</strong></td>
<td>This course aims to provide students with sufficient knowledge of the basic principles of software project management that they may support a project manager to carry out the project administrative functions of a program office, understand leadership and management within the context of an agile project development team, and understand the context in which project management is conducted. Many of the skills gained are of use outside formal project management environments. Key topics: • Leadership, Management, Professionalism, Ethics and Teamwork • Communication • Project Context • Project Management Body of Knowledge (PMBoK) • Agile Project Planning • Agile Project Management • Project Scope Management • Quality &amp; Risk Management • Project Control and Governance</td>
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<td><strong>Course Structure and Content</strong></td>
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<td><strong>Learning Outcomes</strong></td>
<td>On successful completion of this course, students will be able to: • Identify and describe the impact of business context on a software development project, including an</td>
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</table>
understanding of the role professional ethics plays in the conduct of a successful project

- Evaluate the features of traditional and agile approaches to managing software development to decide an appropriate project management approach for a project in a business context
- Demonstrate key project management skills such as scope determination; task decomposition; effort estimation, schedule creation and tracking; progress reporting; and management of risk and quality
- Employ research, critical thinking and reflection to formulate and communicate an argument concerning project management concepts.
- Demonstrate teamwork and collaboration skills, and an understanding of the difference between leadership and management

**Workload**

| Twelve two-hour lectures, twelve one-hour lectures, and eight two-hour workshop sessions. |

**Prescribed Texts (Reading to Support the Course)**

| No prescribed text |

**Preliminary Reading**

| |

**Indicative Reading List**

| Jeff Patton and Peter Economy. User story mapping: discover the whole story, build the right product. O'Reilly, 2014. |

**Assumed Knowledge, Required Skills and Recommended Courses (not prerequisites)**

| |

**Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility)**

| To enrol in this course you must have completed COMP2130 or INFS2024 or COMP3110. You must not have completed COMP8110 |

**Indicative Assessment**

| Small group assignments incorporating written and oral components 40% |
| Workshop participation 10% |
| Written examination 50% |

**Assessment Rationale**

| |

**Additional Assessment | Learning Outcomes**

| |

**Mode of Delivery**

| |

**Quality Assurance Arrangements**

| |

**Transitional Arrangements (if applicable)**

| |

**Relevant ANU internal and external consultation**

| |

**Intended Market and work undertaken to evaluate the market**

| |

**Estimated Enrolment Numbers and rationale**

| |

**Areas of Interest**

| Please select Areas of Interest |
Is this required on a Sub-Plan? Please specify Major / Minor / Spec

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Is Consent Required to Enrol? No

If yes, reason

Eligibility for Graduate Studies (Graduate Coursework Only) No

Graduate Studies Classification 1

Graduate Studies Classification 2

List of course topics (Topics are descriptors on course names) (30 character limit each topic)

Academic Organisation (Offered by) 07345 – Research School of Computer Science

Academic Group ENGIT (ANU College of Eng & Comp Sci)

Academic Career

How many times may this course be repeated after successful completion? 0

Course Grading Basis

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Is this a work experience or course internship? No

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota

Proposed Scheduling (for the next three years)

Does this course have more than one owner? No

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Fee rate is same as existing course

Department ID: CE200

Submit by Email to Course Registry
Academic Course Form

CEC Document Number

Subject Area COMP  Catalogue Number 3820

Date Approved

Course Status Not Approved

Amendment Type

Major Amendment - Change of Course Title
Minor Amendments- Change to an Existing Course

Amendment Description

Change COMP3820 to variable unit value (6-24cp), also change LOs & assessment

Rationale

Unit value change: to allow students to do one-semester full-time internships, to bring it line with ENGN3200 (engineering internship). Learning outcomes change: to make this course dovetail with the LOs and assessment of the new VCUG3200 internship course and harmonise our overall internship offerings

Long Course Title

Computer Science & Software Engineering Internship

Short Course Title

CS SoftEng Internship

ACADEMIC USE

To Take Effect From 01/01/2017

Course Minimum Unit Value 6

Course Maximum Unit Value 24

Does this course have an UG / PG Equivalent ? No

Do you want this course to be offered as a variable unit course? Yes

Proposed Date 01/01/2017

Proposer Name Ben Swift

Primary Convenor's Email ben.swift@anu.edu.au

Primary Convenor’s Name Ben Swift

Course Description

This course will enable students from computer science and software engineering to develop competencies expected of professionals working in business, government or the broader community. The course coordinator will maintain a list of available internship opportunities for which students can apply. A holistic selection process will be used to select the best applicant for each opportunity. Students can also propose internships, but these will always be established following negotiations between the ANU and potential host organisations, and then offered to students along with other opportunities.

Course Structure and Content

The course is structured in four stages:

1. Students will apply for internship opportunities offered by the convenor each semester. Students will undergo a selection process which may include a written application, and/or an interview with representatives of the ANU and/or the host organisation.

2. Successful candidates will attend a pre-internship workshop aimed at preparing them for the internship and ensuring they are familiar with applicable agreements between the student, ANU and host organisation, as well as assessment and other requirements. The workshops will also cover professional workplace behaviour, and managing expectations and relationships.
3. Students will undertake the internship in accordance with applicable agreements made between the student, ANU and host organisation. The detailed requirements of each specific internship opportunity will vary, but they will always allow the student to achieve the generic learning outcomes listed below.

4. On completion of the internship, students will submit a portfolio of evidence and give a public presentation or poster display outlining the outcomes they achieved during the internship.

Learning Outcomes

Upon completion of this course, students will be able to demonstrate:

1. a personal commitment to ethical behaviour, competent practice, meeting legal and regulatory requirements, taking responsibility for their own work and acknowledging the work of others

2. a commitment to safety and sustainability, appropriate engagement with relevant stakeholders, and identify, assess and manage risk

3. effective communication, initiative, effective work practices in a multi-disciplinary team, and sound judgement to achieve defined workplace objectives

4. proficient application of computer science and software engineering knowledge and practices; exploration of real-world problems; creativity and innovation; evaluation of the outcomes and impact of their work

Workload

10 hours per week per 6 units: 9 hours in the workplace, 1 hour developing the student's Portfolio of Evidence.

Prescribed Texts (Reading to Support the Course)

Preliminary Reading

Indicative Reading List

Assumed Knowledge, Required Skills and Recommended Courses (not prerequisites)

Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility)
(For more information please refer Requisite Design Guide)

Indicative Assessment

• 20% Portfolio of Evidence - Stage 1 [LO1-4]
• 50% Portfolio of Evidence - Stage 2 [LO1-4]
• 20% Industry supervisor report [LO1-4]
• 10% Public Presentation or Poster display [LO1-4]

Assessment Rationale

This course is about the development and demonstration of professional computer science and software engineering workplace competencies. Students will do this while working in business, government or the broader community. They will keep records of the work they do and artefacts they produce. They will use these records to prepare a body of evidence to support claims of achieving the learning outcomes listed above.

Additional Assessment | Learning Outcomes

Mode of Delivery

In person

Quality Assurance Arrangements

SELS, mid-course and end-of-course focus groups.

Transitional Arrangements (if applicable)
**Relevant ANU internal and external consultation**

School of Computer Science, School of Engineering

**Intended Market and work undertaken to evaluate the market**

Current software engineering and computer science students

**Estimated Enrolment Numbers and rationale**

[Blank]

**Areas of Interest**

- Software Development
- Software Engineering
- Computer Science

**Is this required on a Sub-Plan?**

No

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**ADMINISTRATION USE**

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<th>Responsible College</th>
<th>ANU College of Engineering and Computer Science</th>
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<td><a href="mailto:elizabeth.nunrom@anu.edu.au">elizabeth.nunrom@anu.edu.au</a></td>
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<td>Associate Dean / Dean/ College Dean</td>
<td>Associate Professor Jochen Trumpf</td>
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(Work Experience course are where student learning and performance is not directed by the university)
Quota

Proposed Scheduling (for the next three years)

Does this course have more than one owner? No

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**COURSE FEES**

Field of Education Code

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Fee rate is same as existing course

Department ID: CE200

Submit by Email to Course Registry
**Amendment Type**: Major Amendment - Change of Unit Value

**Amendment Description**: Changed from fixed 12-unit course, to variable 6-12 unit course

**Rationale**: Currently students can only take this capstone project course in a single semester (12 units), however, we would like the flexibility of students being able to take it over 2 semesters. This is important for two reasons. Firstly, from an educational perspective it gives students a longer time period to undertake the project giving students more time to reflect and excel in their projects (a 2 semester period is given to all the other capstone project courses in the school including COMP4500 which is also 12 units yet over 2 semesters). Secondly, the change will provide important program flexibility enabling students to more easily obtain majors and specializations.

**Long Course Title**: Advanced Computing Project

**Short Course Title**: ACADEMIC USE

**To Take Effect From**: 01/01/2017

**Course Minimum Unit Value**: 6

**Course Maximum Unit Value**: 12

**Does this course have an UG / PG Equivalent?**: No

**Do you want this course to be offered as a variable unit course?**: Yes

**Proposed Date**: 04/08/2016

**Proposer Name**: Eric McCreath

**Primary Convenor's Email**: Weifa Liang

**Primary Convenor's Name**: Weifa.Liang@anu.edu.au

**Course Description**

**Course Structure and Content**

**Learning Outcomes**

**Workload**

**Prescribed Texts (Reading to Support the Course)**
<table>
<thead>
<tr>
<th>Graduate Studies Classification 1</th>
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List of course topics (Topics are descriptors on course names) (30 character limit each topic)

| Academic Organisation (Offered by) | 07345 – Research School of Computer Science |

| Academic Group | ENGIT (ANU College of Eng & Comp Sci) |

| Academic Career |                                  |

| How many times may this course be repeated after successful completion? | 0 |

(Please enter number only)

<table>
<thead>
<tr>
<th>Course Grading Basis</th>
<th>Course Component</th>
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| Is this a work experience or course internship? | No |

(Work Experience course are where student learning and performance is not directed by the university)

| If yes, to a work experience course, will the learning and assessment be directed by the ANU? | |

| Quota | |

Proposed Scheduling (for the next three years)

Does this course have more than one owner? | No |

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### COURSE FEES

| Field of Education Code | |
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Fee rate is same as existing course

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Submit by Email to Course Registry
## Academic Course Form

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**Request Type**: Course Amendment  
**Amendment Type**: Minor Amendments- Change to an Existing Course

**Amendment Description**: Addition of learning outcomes and modification of workload

**Rationale**:

**Long Course Title**: Web Development and Design  
**Short Course Title**: (30 characters)

### ACADEMIC USE

**To Take Effect From**: 01/01/2017  
**Course Minimum Unit Value**: 6  
**Course Maximum Unit Value**: 6

**Does this course have an UG / PG Equivalent?**  
**UG / PG Equivalent**: COMP1710

**Do you want this course to be offered as a variable unit course?**  
**Proposed Date**:

**Proposer Name**: Tom Gedeon  
**Primary Convenor's Email**: Tom.gedeon@anu.edu.au

**Primary Convenor's Name**: Tom Gedeon  
**Course Description**:

**Course Structure and Content**:

**Learning Outcomes**: Upon successful completion of the course, the student will be able to:
- Understand and be able to develop and design interactive web sites including multimedia content by applying current web design principles, guidelines and heuristics.
- Apply a user-centred focus to the design and development of web sites.
- Demonstrate knowledge of accessibility, compliance with standards, privacy concerns and personalisation for web sites.
- Understand and be able to separately control the content, the appearance and the behaviour of web sites.
- Understand and report on the nature and practice of human computer interaction research in an ethical environment.

**Workload**: Thirty one-hour lectures and nine two-hour laboratory sessions, plus five hours of research participation (or equivalent)

**Prescribed Texts (Reading to Support the Course)**: RSCS Curriculum Development Committee Agenda 5/2016

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RSCS Curriculum Development Committee Agenda 5/2016  
Page 88
Preliminary Reading

Indicative Reading List

Assumed Knowledge, Required Skills and Recommended Courses (not prerequisites)

Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility)
(For more information please refer Requisite Design Guide)

Indicative Assessment

Assessment Rationale

Additional Assessment | Learning Outcomes

Mode of Delivery

Quality Assurance Arrangements

Transitional Arrangements (if applicable)

Relevant ANU internal and external consultation

Intended Market and work undertaken to evaluate the market

Estimated Enrolment Numbers and rationale

Areas of Interest Please select Areas of Interest

Is this required on a Sub-Plan? Please specify Major / Minor / Spec

ADMINISTRATION USE

Responsible College ANU College of Engineering and Computer Science

Send Notifications To elizabeth.nunrom@anu.edu.au

Associate Dean / Dean/ College Dean Associate Professor Jochen Trumpf

Is Consent Required to Enrol? No

If yes, reason

Eligibility for Graduate Studies (Graduate Coursework Only) No
Graduate Studies Classification 1

Graduate Studies Classification 2

List of course topics (Topics are descriptors on course names) (30 character limit each topic)

Academic Organisation (Offered by) 07345 – Research School of Computer Science

Academic Group ENGIT (ANU College of Eng & Comp Sci)

Academic Career

How many times may this course be repeated after successful completion? 0

(Please enter number only)

Course Grading Basis

Course Component

Is this a work experience or course internship? No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota

Proposed Scheduling (for the next three years)

Does this course have more than one owner? No

Split Ownership

Academic Organisation

Percentage EFTSL

COURSE FEES

Field of Education Code

Year

Per Unit ISF

Per Unit DTF

Fee rate is same as existing course

Department ID CE200

Submit by Email to Course Registry
### Academic Course Form

**Request Type**  
Course Amendment

**Amendment Type**  
- Minor Amendment - Others
- Minor Amendments- Change to an Existing Course
- Minor Amendment - New/Change Course Topic

**Amendment Description**  
Change course content (ie description), add learning outcomes, assessment, and other required information

**Rationale**  
Currently non-compliant

**Long Course Title**  
Managing Software Projects in a System Context

**Short Course Title**  
Managing Software Projects

### ACADEMIC USE

**To Take Effect From**  
29/08/2016

**Course Minimum Unit Value**  
6

**Course Maximum Unit Value**  
6

**Does this course have an UG / PG Equivalent?**  
Yes  
**UG / PG Equivalent**  
comp3120

**Do you want this course to be offered as a variable unit course?**  
No

**Proposer Name**  
Kerry Taylor

**Primary Convenor's Email**  
Lynette.Johns-Boast@anu.edu.au

**Primary Convenor's Name**  
Lynette Johns-Boast

**Course Description**  
This course aims to provide students with sufficient knowledge of the basic principles of software project management that they may support a project manager to carry out the project administrative functions of a program office, lead and manage an agile project development team, and understand the context in which project management is conducted. Many of the skills gained are of use outside formal project management environments.

Key topics:
- Leadership, Management, Professionalism, Ethics and Teamwork
- Communication
- Project Context
- Project Management Body of Knowledge (PMBoK)
- Agile Project Planning
- Agile Project Management
- Project Scope Management
- Quality & Risk Management
- Project Control and Governance

**Course Structure and Content**

**Learning Outcomes**  
- Identify and describe the impact of business context on a software development project, including
### Learning Outcomes

- Understanding the role professional ethics play in the conduct of a successful project.
- Evaluate the features of traditional and agile approaches to managing software development to synthesise an appropriate project management approach for a project in a business context.
- Apply key project management skills such as scope determination; task decomposition; effort estimation, schedule creation and tracking; progress reporting; and management of risk and quality.
- Use research, critical thinking and reflection to formulate and communicate an argument concerning project management concepts.
- Demonstrate improved leadership, teamwork and collaboration skills.

### Workload

Twelve two-hour lectures, twelve one-hour lectures, and eight two-hour workshop sessions.

### Prescribed Texts (Reading to Support the Course)

No prescribed text.

### Preliminary Reading

### Indicative Reading List

- Jeff Patton and Peter Economy. User story mapping: discover the whole story, build the right product. O'Reilly, 2014.
- Michele Sliger and Stacia Broderick. The Software Project Manager's Bridge to Agility.

### Assumed Knowledge, Required Skills and Recommended Courses (not prerequisites)

### Requisite Statement for Course

To enrol in this course you must be studying a Master of Computing. You cannot enrol in this course if you've completed COMP3120.

### Indicative Assessment

- Small group assignments incorporating written and oral components 40%
- Workshop participation 10%
- Written examination 50%

### Assessment Rationale

### Additional Assessment | Learning Outcomes

### Mode of Delivery

### Quality Assurance Arrangements

### Transitional Arrangements (if applicable)

### Relevant ANU internal and external consultation

### Intended Market and work undertaken to evaluate the market

### Estimated Enrolment Numbers and rationale
Areas of Interest

Please select Areas of Interest

Is this required on a Sub-Plan?

Please specify Major / Minor / Spec

ADMINISTRATION USE

Responsible College

ANU College of Engineering and Computer Science

Send Notifications To

elizabeth.nunrom@anu.edu.au

Associate Dean / Dean / College Dean

Associate Professor Jochen Trumpf

Is Consent Required to Enrol?

No

If yes, reason

Eligibility for Graduate Studies (Graduate Coursework Only)

No

Graduate Studies Classification 1

Graduate Studies Classification 2

List of course topics (Topics are descriptors on course names) (30 character limit each topic)

Academic Organistion (Offered by)

07345 – Research School of Computer Science

Academic Group

ENGIT (ANU College of Eng & Comp Sci)

Academic Career

How many times may this course be repeated after successful completion?

(Please enter number only)

0

Course Grading Basis

Course Component

Is this a work experience or course internship?

No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota

Proposed Scheduling (for the next three years)

Does this course have more than one owner?

No

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Fee rate is same as existing course

Department ID: CE200

Submit by Email to Course Registry
Request Type: Course Amendment

Amendment Type: Major Amendment - Inactivate a Course

Amendment Description: Inactivate the course

Rationale: This is a co-badged course with COMP1110 (currently Introduction to Software Systems). It is no longer required in the revised version of the Bachelor of Software Engineering, which takes effect from 2017.

Long Course Title: Introduction to Software Engineering

Short Course Title: (30 characters)

To Take Effect From: 01/01/2017

Course Minimum Unit Value: 6

Course Maximum Unit Value: 6

Does this course have an UG / PG Equivalent?: No

Do you want this course to be offered as a variable unit course?: No

Proposer Name: Ramesh Sankaranarayana

Primary Convenor’s Email

Primary Convenor’s Name

Course Description

Course Structure and Content

Learning Outcomes

Workload

Prescribed Texts (Reading to Support the Course)

Preliminary Reading

Indicative Reading List
Administered by: ANU College of Engineering and Computer Science

Send Notifications To: elizabeth.nunrom@anu.edu.au

Associate Dean / Dean / College Dean: Associate Professor Jochen Trumpf

Is Consent Required to Enrol?: No

Eligibility for Graduate Studies (Graduate Coursework Only): No

Graduate Studies Classification 1

Graduate Studies Classification 2

List of course topics (Topics are descriptors on course names) (30 character limit each topic)
Academic Organisation (Offered by): 07345 – Research School of Computer Science

Academic Group: ENGIT (ANU College of Eng & Comp Sci)

Academic Career:

How many times may this course be repeated after successful completion? (Please enter number only) 0

Course Grading Basis:

Course Component:

Is this a work experience or course internship? No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota:

Proposed Scheduling (for the next three years):

Does this course have more than one owner? No

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COURSE FEES

Field of Education Code:

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Fee rate is same as existing course:

Department ID: CE200

Submit by Email to Course Registry
### Request Type
- Course Amendment

### Amendment Type
- Major Amendment - Inactivate a Course

### Amendment Description
Inactivate the course

### Rationale
This is a co-badged course with COMP2100 (currently Software Construction). It is no longer required in the revised version of the Bachelor of Software Engineering, which takes effect from 2017.

### Long Course Title
Software Construction for Software Engineers

### Short Course Title

### Academic Course Form

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### Course Minimum Unit Value
6

### Course Maximum Unit Value
6

### Does this course have an UG / PG Equivalent?
No

### Do you want this course to be offered as a variable unit course?
No

### To Take Effect From
01/01/2017

### Proposed Date

### Ramesh Sankaranarayana

### Primary Convenor’s Email

### Primary Convenor’s Name

### Course Description

### Course Structure and Content

### Learning Outcomes

### Workload

### Prescribed Texts (Reading to Support the Course)

### Preliminary Reading

### Indicative Reading List
Academic Organisation (Offered by) | 07345 – Research School of Computer Science
---|---
Academic Group | ENGIT (ANU College of Eng & Comp Sci)
Academic Career | 
How many times may this course be repeated after successful completion? | 0
(Please enter number only)
Course Grading Basis | 
Course Component | 
Is this a work experience or course internship? | No
(Work Experience course are where student learning and performance is not directed by the university)
If yes, to a work experience course, will the learning and assessment be directed by the ANU? | 
Quota | 
Proposed Scheduling (for the next three years) | 
Does this course have more than one owner? | No

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COURSE FEES

Field of Education Code | 

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Fee rate is same as existing course | 
Department ID | CE200

Submit by Email to Course Registry
Academic Course Form

CEC Document Number

Subject Area COMP Catalogue Number 3006

Date Approved

Course Status Not Approved

Request Type Course Amendment

Amendment Type Major Amendment - Inactivate a Course

Amendment Description Inactivate the course

Rationale This course was part of the old Bachelor of Computer Science (Honours) and is no longer required.

Long Course Title Computer Science Research Project

Short Course Title

ACADEMIC USE

To Take Effect From 01/01/2017

Course Minimum Unit Value 6

Course Maximum Unit Value 6

Does this course have an UG / PG Equivalent? No

Do you want this course to be offered as a variable unit course? No

Proposer Name Ramesh Sankaranarayana

Primary Convenor's Email

Primary Convenor's Name

Course Description

Course Structure and Content

Learning Outcomes

Workload

Prescribed Texts (Reading to Support the Course)

Preliminary Reading

Indicative Reading List

Assumed Knowledge, Required Skills and Recommended Courses (not

RSCS Curriculum Development Committee Agenda 5/2016 Page 101
prerequisites

Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility)
(For more information please refer Requisite Design Guide)

Indicative Assessment

Assessment Rationale

Additional Assessment | Learning Outcomes

Mode of Delivery

Quality Assurance Arrangements

Transitional Arrangements (if applicable)

Relevant ANU internal and external consultation

Intended Market and work undertaken to evaluate the market

Estimated Enrolment Numbers and rationale

Areas of Interest Please select Areas of Interest

Is this required on a Sub-Plan? Please specify Major / Minor / Spec

ADMINISTRATION USE

Responsible College ANU College of Engineering and Computer Science

Send Notifications To elizabeth.nunrom@anu.edu.au

Associate Dean / Dean/ College Dean Associate Professor Jochen Trumpf

Is Consent Required to Enrol? No

If yes, reason

Eligibility for Graduate Studies (Graduate Coursework Only) No

Graduate Studies Classification 1

Graduate Studies Classification 2

List of course topics (Topics are descriptors on course names) (30 character limit each topic)

Academic Organisation (Offered by) 07345 – Research School of Computer Science
Academic Group: ENGIT (ANU College of Eng & Comp Sci)

Academic Career:

How many times may this course be repeated after successful completion?
(Please enter number only)

Course Grading Basis:

Course Component:

Is this a work experience or course internship?
No (Work Experience courses are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota:

Proposed Scheduling (for the next three years):

Does this course have more than one owner?
No

Split Ownership:

Academic Organisation:

Percentage EFTSL:

FIELD OF EDUCATION CODE:

COURSE FEES

Year | Per Unit ISF | Per Unit DTF
--- | --- | ---

Fee rate is same as existing course

Department ID: CE200

Submit by Email to Course Registry
**Academic Course Form**

<table>
<thead>
<tr>
<th>CEC Document Number</th>
<th>Subject Area</th>
<th>Catalogue Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>COMP</td>
<td>3100</td>
</tr>
</tbody>
</table>

**Date Approved**

**Course Status** 
Not Approved

**Amendment Type** 
Major Amendment - Inactivate a Course

**Amendment Description**
Inactivate the course

**Rationale**
This is a co-badged course with COMP3500 Software Engineering Project. It is no longer required in the revised version of the Software Development major and Bachelor of Advanced Computing, which takes effect from 2017.

**Long Course Title**
Software Engineering Group Project

**Short Course Title**
(30 characters)

**ACADEMIC USE**

<table>
<thead>
<tr>
<th>To Take Effect From</th>
<th>Course Minimum Unit Value</th>
<th>Course Maximum Unit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/01/2017</td>
<td>6</td>
<td>6</td>
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</tbody>
</table>

**Does this course have an UG / PG Equivalent?**
No

**Do you want this course to be offered as a variable unit course?**
No

**Proposed Date**

**Proposer Name**
Ramesh Sankaranarayana

**Primary Convenor’s Email**

**Primary Convenor’s Name**

**Course Description**

**Course Structure and Content**

**Learning Outcomes**

**Workload**

**Prescribed Texts (Reading to Support the Course)**

**Preliminary Reading**

**Indicative Reading List**
<table>
<thead>
<tr>
<th>Assumed Knowledge, Required Skills and Recommended Courses (not prerequisites)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility) (For more information please refer Requisite Design Guide)</td>
</tr>
<tr>
<td>Indicative Assessment</td>
</tr>
<tr>
<td>Assessment Rationale</td>
</tr>
<tr>
<td>Additional Assessment</td>
</tr>
<tr>
<td>Mode of Delivery</td>
</tr>
<tr>
<td>Quality Assurance Arrangements</td>
</tr>
<tr>
<td>Transitional Arrangements (if applicable)</td>
</tr>
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<td>Intended Market and work undertaken to evaluate the market</td>
</tr>
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<td>Estimated Enrolment Numbers and rationale</td>
</tr>
<tr>
<td>Areas of Interest</td>
</tr>
<tr>
<td>Is this required on a Sub-Plan?</td>
</tr>
</tbody>
</table>

### ADMINISTRATION USE

**Responsible College**: ANU College of Engineering and Computer Science

**Send Notifications To**: elizabeth.nunrom@anu.edu.au

**Associate Dean / Dean/ College Dean**: Associate Professor Jochen Trumpf

**Is Consent Required to Enrol?**: No

**Eligibility for Graduate Studies (Graduate Coursework Only)**: No

**Graduate Studies Classification 1**

**Graduate Studies Classification 2**

**List of course topics (Topics are descriptors on course names) (30 character limit each topic)**
How many times may this course be repeated after successful completion? 0

Is this a work experience or course internship? No

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota

Proposed Scheduling (for the next three years)

Does this course have more than one owner? No

COURSE FEES

Fee rate is same as existing course

Submit by Email to Course Registry
Amendment Type: Major Amendment - Inactivate a Course

Amendment Description: Inactivate the course

Rationale: This course is being replaced by two other courses, COMP3425 Data Mining and COMP3430 Data Wrangling.

Long Course Title: Algorithms and Techniques for Data Mining

Short Course Title:

ACADEMIC USE

To Take Effect From: 01/01/2017

Course Minimum Unit Value: 6

Course Maximum Unit Value: 6

Does this course have an UG / PG Equivalent?: Yes

UG / PG Equivalent: COMP4800

Do you want this course to be offered as a variable unit course?: No

Proposer Name: Ramesh Sankaranarayana

Primary Convenor's Email

Primary Convenor's Name

Course Description

Course Structure and Content

Learning Outcomes

Workload

Prescribed Texts (Reading to Support the Course)

Preliminary Reading

Indicative Reading List

Assumed Knowledge, Required Skills and Recommended Courses (not

RSCS Curriculum Development Committee Agenda 5/2016
### Requisite Statement for Course

(For more information please refer Requisite Design Guide)

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Please select Areas of Interest

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Please specify Major / Minor / Spec

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**ADMINISTRATION USE**

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<tr>
<th>If yes, reason</th>
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07345 – Research School of Computer Science
**Academic Group**: ENGIT (ANU College of Eng & Comp Sci)

**Academic Career**: 

**How many times may this course be repeated after successful completion?**

(Please enter number only)

<table>
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<th>Course Grading Basis</th>
<th>Course Component</th>
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**Is this a work experience or course internship?**

No

(Work Experience course are where student learning and performance is not directed by the university)

**If yes, to a work experience course, will the learning and assessment be directed by the ANU?**

Quota

**Proposed Scheduling (for the next three years)**

**Does this course have more than one owner?**

No

<table>
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<tr>
<th>Split Ownership</th>
<th>Academic Organisation</th>
<th>Percentage EFTSL</th>
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**COURSE FEES**

**Field of Education Code**

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</table>

Fee rate is same as existing course

Department ID: CE200

Submit by Email to Course Registry
**Academic Course Form**

**Request Type**
- Course Amendment

**Amendment Type**
- Major Amendment - Inactivate a Course

**Amendment Description**
- Inactivate the course

**Rationale**
- This course is being replaced by two other courses, COMP8410 Data Mining and COMP8430 Data Wrangling.

**Long Course Title**
- Algorithms and Techniques for Data Mining

**Short Course Title**
- (30 characters)

**To Take Effect From**
- 01/01/2017

**Course Minimum Unit Value**
- 6

**Course Maximum Unit Value**
- 6

**Does this course have an UG / PG Equivalent?**
- Yes

**UG / PG Equivalent**
- COMP3420

**Proposer Name**
- Ramesh Sankaranarayana

**Proposed Date**
- 

**Course Description**

**Course Structure and Content**

**Learning Outcomes**

**Workload**

**Prescribed Texts (Reading to Support the Course)**

**Preliminary Reading**

**Indicative Reading List**

**Assumed Knowledge, Required Skills and Recommended Courses (not**
Academic Group: ENGIT (ANU College of Eng & Comp Sci)

Academic Career: 

How many times may this course be repeated after successful completion? (Please enter number only) 0

Course Grading Basis: 

Course Component: 

Is this a work experience or course internship? No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU? 

Quota: 

Proposed Scheduling (for the next three years): 

Does this course have more than one owner? No

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COURSE FEES

Field of Education Code: 

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Fee rate is same as existing course: 

Department ID: CE200

Submit by Email to Course Registry
Request Type: Course Amendment

Amendment Type: Major Amendment - Inactivate a Course

Amendment Description: Inactivate the course

Rationale: This course was part of the old Master of Computing (the one year version) and is no longer required.

Long Course Title: Artificial Intelligence Project

Short Course Title: Artifical Intelligence Project (100 characters)  

Course Minimum Unit Value: 6

Course Maximum Unit Value: 6

Does this course have an UG / PG Equivalent?: No

Do you want this course to be offered as a variable unit course?: No

Proposer Name: Ramesh Sankaranarayana

Primary Convenor's Email

Primary Convenor's Name

Course Description

Course Structure and Content

Learning Outcomes

Workload

Prescribed Texts (Reading to Support the Course)

Preliminary Reading

Indicative Reading List

Assumed Knowledge, Required Skills and Recommended Courses (not

To Take Effect From: 01/01/2017

Course To Take Effect From: 01/01/2017

ACADEMIC USE
| **prerequisites** |
| **Requisite Statement for Course** (includes Corequisite/Prerequisite and Incompatibility) (For more information please refer Requisite Design Guide) |
| **Indicative Assessment** |
| **Assessment Rationale** |
| **Additional Assessment | Learning Outcomes** |
| **Mode of Delivery** |
| **Quality Assurance Arrangements** |
| **Transitional Arrangements (if applicable)** |
| **Relevant ANU internal and external consultation** |
| **Intended Market and work undertaken to evaluate the market** |
| **Estimated Enrolment Numbers and rationale** |
| **Areas of Interest** Please select Areas of Interest |
| **Is this required on a Sub-Plan?** Please specify Major / Minor / Spec |

**ADMINISTRATION USE**

| Responsible College | ANU College of Engineering and Computer Science |
| Send Notifications To | elizabeth.nunrom@anu.edu.au |
| Associate Dean / Dean/ College Dean | Associate Professor Jochen Trumpf |
| Is Consent Required to Enrol? | No |
| If yes, reason | |
| Eligibility for Graduate Studies (Graduate Coursework Only) | No |
| Graduate Studies Classification 1 | |
| Graduate Studies Classification 2 | |
| List of course topics (Topics are descriptors on course names) (30 character limit each topic) | |
| Academic Organisation (Offered by) | 07345 – Research School of Computer Science |
**Academic Group**

ENGIT (ANU College of Eng & Comp Sci)

**Academic Career**

**How many times may this course be repeated after successful completion?**

(Please enter number only)

**Course Grading Basis**

**Course Component**

**Is this a work experience or course internship?**

No

(Work Experience course are where student learning and performance is not directed by the university)

**Quota**

**Proposed Scheduling (for the next three years)**

**Does this course have more than one owner?**

No

**Split Ownership**

<table>
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<tr>
<th>Academic Organisation</th>
<th>Percentage EFTSL</th>
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</table>

**COURSE FEES**

**Field of Education Code**

**Year**

<table>
<thead>
<tr>
<th>Per Unit ISF</th>
<th>Per Unit DTF</th>
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</tr>
</tbody>
</table>

**Fee rate is same as existing course**

**Department ID**

CE200

Submit by Email to Course Registry
### Academic Course Form

<table>
<thead>
<tr>
<th>Request Type</th>
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</tr>
<tr>
<td>Amendment Description</td>
<td>Inactivate the course</td>
</tr>
<tr>
<td>Rationale</td>
<td>This course was part of the old Master of Computing (the one year version) and is no longer required.</td>
</tr>
<tr>
<td>Long Course Title</td>
<td>Computer Systems Project</td>
</tr>
<tr>
<td>Short Course Title</td>
<td></td>
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</tbody>
</table>

#### ACADEMIC USE

<table>
<thead>
<tr>
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<th>01/01/2017</th>
</tr>
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<tbody>
<tr>
<td>Course Minimum Unit Value</td>
<td>6</td>
</tr>
<tr>
<td>Course Maximum Unit Value</td>
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</tr>
<tr>
<td>Does this course have an UG / PG Equivalent?</td>
<td>No</td>
</tr>
<tr>
<td>Do you want this course to be offered as a variable unit course?</td>
<td>No</td>
</tr>
<tr>
<td>Proposed Date</td>
<td></td>
</tr>
<tr>
<td>Proposer Name</td>
<td>Ramesh Sankaranarayana</td>
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</tbody>
</table>

<table>
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<tr>
<th>Primary Convenor's Email</th>
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<tbody>
<tr>
<td>Primary Convenor's Name</td>
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</tr>
<tr>
<td>Course Structure and Content</td>
</tr>
<tr>
<td>Learning Outcomes</td>
</tr>
<tr>
<td>Workload</td>
</tr>
<tr>
<td>Prescribed Texts (Reading to Support the Course)</td>
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<tr>
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<tr>
<td>Indicative Reading List</td>
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<tr>
<td>Assumed Knowledge, Required Skills and Recommended Courses (not</td>
</tr>
</tbody>
</table>
Academic Group: ENGIT (ANU College of Eng & Comp Sci)

Academic Career: 

How many times may this course be repeated after successful completion? (Please enter number only) 0

Course Grading Basis: 

Course Component: 

Is this a work experience or course internship? No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU? 

Quota: 

Proposed Scheduling (for the next three years): 

Does this course have more than one owner? No

Split Ownership | Academic Organisation | Percentage EFTSL
<table>
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COURSE FEES

Field of Education Code: 

Year | Per Unit ISF | Per Unit DTF
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Fee rate is same as existing course: 

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<td>Rationale</td>
<td>This course was part of the old Master of Computing (the one year version) and is no longer required.</td>
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<tr>
<td>Long Course Title</td>
<td>Information and Human Centered Computing Project</td>
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<td>Short Course Title</td>
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<td>Subject Area</td>
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Academic Group: ENGIT (ANU College of Eng & Comp Sci)

Academic Career:

How many times may this course be repeated after successful completion?
(Please enter number only)

0

Course Grading Basis:

Course Component:

Is this a work experience or course internship?

No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota:

Proposed Scheduling (for the next three years):

Does this course have more than one owner?

No

Split Ownership | Academic Organisation | Percentage EFTSL
---|---|---

COURSE FEES

Field of Education Code:

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Fee rate is same as existing course

Department ID: CE200

Submit by Email to Course Registry
**Request Type** | Course Amendment
---|---
**Course Status** | Not Approved

**Subject Area** | COMP
**Catalogue Number** | 8790

**Amendment Type** | Major Amendment - Inactivate a Course

**Amendment Description**
Inactivate the course

**Rationale**
This course was part of the old Master of Computing (the one year version) and is no longer required.

**Long Course Title**
Software Engineering Project

**Short Course Title**

**To Take Effect From** | 01/01/2017
**Course Minimum Unit Value** | 6
**Course Maximum Unit Value** | 6

**Does this course have an UG / PG Equivalent ?** | No

**Do you want this course to be offered as a variable unit course ?** | No

**Proposer Name** | Ramesh Sankaranarayana

**Primary Convener's Email**

**Primary Convener's Name**

**Course Description**

**Course Structure and Content**

**Learning Outcomes**

**Workload**

**Prescribed Texts (Reading to Support the Course)**

**Preliminary Reading**

**Indicative Reading List**

**Assumed Knowledge, Required Skills and Recommended Courses (not**
### Requisite Statement for Course (includes Corequisite/Prerequisite and Incompatibility)

For more information please refer Requisite Design Guide

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<tr>
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<th>Transitional Arrangements (if applicable)</th>
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<tr>
<th>Relevant ANU internal and external consultation</th>
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<th>Intended Market and work undertaken to evaluate the market</th>
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<th>Estimated Enrolment Numbers and rationale</th>
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<th>Areas of Interest</th>
<th>Please select Areas of Interest</th>
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</table>

<table>
<thead>
<tr>
<th>Is this required on a Sub-Plan?</th>
<th>Please specify Major / Minor / Spec</th>
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</thead>
</table>

### ADMINISTRATION USE

<table>
<thead>
<tr>
<th>Responsible College</th>
<th>ANU College of Engineering and Computer Science</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Send Notifications To</th>
<th><a href="mailto:elizabeth.nunrom@anu.edu.au">elizabeth.nunrom@anu.edu.au</a></th>
</tr>
</thead>
</table>

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<tr>
<th>Associate Dean / Dean/ College Dean</th>
<th>Associate Professor Jochen Trumpf</th>
</tr>
</thead>
</table>

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<tr>
<th>Is Consent Required to Enrol?</th>
<th>No</th>
</tr>
</thead>
</table>

<table>
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<tr>
<th>If yes, reason</th>
<th></th>
</tr>
</thead>
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<table>
<thead>
<tr>
<th>Eligibility for Graduate Studies (Graduate Coursework Only)</th>
<th>No</th>
</tr>
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<table>
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<tr>
<th>Graduate Studies Classification 1</th>
<th>Graduate Studies Classification 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>List of course topics (Topics are descriptors on course names) (30 character limit each topic)</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Academic Organisation (Offered by)</th>
<th>07345 – Research School of Computer Science</th>
</tr>
</thead>
</table>
Academic Group: ENGIT (ANU College of Eng & Comp Sci)

Academic Career:

How many times may this course be repeated after successful completion? (Please enter number only)

(Please enter number only)

0

Course Grading Basis:

Is this a work experience or course internship? Yes

No

(Work Experience course are where student learning and performance is not directed by the university)

If yes, to a work experience course, will the learning and assessment be directed by the ANU?

Quota:

Proposed Scheduling (for the next three years):

Does this course have more than one owner? Yes

No

Split Ownership: Academic Organisation: Percentage EFTSL:

COURSE FEES:

Field of Education Code:

Year | Per Unit ISF | Per Unit DTF
---|---|---

Fee rate is same as existing course: Yes

Department ID: CE200

Submit by Email to Course Registry
Academic Award Review (Coursework)

How to use this form

To fill out this Microsoft Word Form, click underlined italicised grey text, e.g. 41T, then make a selection or enter text.

To edit the fields in the document headers or footers, first double click in the header area. Once edited, the field will be updated on all subsequent pages.

Long-answer text fields allow the use of standard formatting features, such as bullet points, and will span pages if necessary.

Program details

Program name: Diploma of Computing
Program code: 2701
Full-time duration in years: 1
Units required for completion: 48
AQF level and type: Level 5 - Diploma
Current Fee places available: N/A
External accreditation body (if any): N/A
First accredited by ANU (if known): Friday 20 June 2014
Date of last review (if known): 41T
Data for this review correct at (date): Friday 19 August 2016

Published Admission Requirements

- Refer to Policy: Academic Programs and Courses Accreditation for entry pathways and early exits.

Admission to all programs is on a competitive basis. Admission to undergraduate degrees is based on meeting the ATAR requirement or an equivalent rank derived from the following qualifications:
- An Australian year 12 qualification or international equivalent; OR
- A completed Associate Diploma, Associate Degree, AQF Diploma, Diploma, AQF Advanced Diploma or Graduate Certificate; OR
- At least one standard full-time year (1.0 FTE) in a single program of degree level study at an Australian higher education institution; OR
- An approved tertiary preparation course unless subsequent study is undertaken.

The University reserves the right to alter or discontinue its programs as required.
ATAR: 70
QLD Band: 14
International Baccalaureate: 26

Prerequisites
Maths Methods or equivalent.
Students who meet the ATAR entry requirement for the Bachelor of Information Technology are not eligible to enrol in the Diploma.
Published Cognate disciplines (Graduate Coursework only)

- List each discipline considered to be ‘cognate’ for the purposes of admission and credit on a new line.

41T

Current Linked qualifications

- If this is a pathway or an exit qualification program, please name the program or programs that it is linked to. For information on pathways and exit qualifications, please see Policy: Academic Programs and Courses Accreditation

Bachelor of Information Technology

Plan details

Provide details of all academic plans included in this review

(Copy and paste fields in this section as required)

- Only plans of the same Australian Qualifications Framework level and type may be included. e.g. Bachelor of Art (Ceramics) and Bachelor of Art (Sculpture), not Bachelor of Genetics and Bachelor of Genetics with Honours.
- All plans must have the same 4-digit program code. e.g. 6789XABCD and 6789SWXYZ, not 6789XABCD and 6123XABCD.

Award or Augmentation name

Diploma of Computing

Academic plan code

ECOMP

CRICOS code (7 characters) if registered.

084573A

Double degrees

- Indicate if this plan is part of a double degree
  - Flexible Double Degree (Arts, Social Sciences, Sciences and Business 4 Year)
  - Flexible Double Degree (Arts, Social Sciences, Sciences and Business 5 Year)
  - Flexible Double Degree (Law, Engineering and Advanced Computing 6 Year)
  - Flexible Double Degree (Law)
  - Flexible Double Degree (Engineering and Advanced Computing)
  - Vertical Double Degree
  - Double Masters Degree

Published Learning outcomes

- Learning outcomes must align with the selected Australian Qualifications Framework qualification type. Refer to the embedded AQF learning outcome charts. Note that Graduate Certificate and Graduate Diploma are not included.

Upon successful completion, students will have the skills and knowledge to:

1. Solve IT and IS problems and to contribute as an effective member to the performance of a modern workplace
2. Apply computing principles in solving IT and IS problems
3. Consider business implications when applying information technology in general and information systems in particular
4. Demonstrate basic technical expertise in computer programming, web site development and design, and in the creation and use of relational databases
5. Be able to work to specification and according to a deadline, document tasks undertaken, and report outcomes to a third party
6. Be capable of independent learning with some ability to evaluate critically work undertaken

Governance

Responsible College          ANU College of Engineering & Computer Science
Who is the convener of the program?      Professor Tom Gedeon

Does this award have a dedicated governance committee or advisory board (i.e. other than College Education Committee)? If so, detail membership and frequency of meetings.

Joint program responsibilities

Is this program offered in conjunction with another institution? In 200 words or fewer, describe how responsibilities for course delivery, fees, pre-enrolment engagement of students, student services and care and student visa requirements are shared.

ANU College delivers the program. This review has focused on the relationship and quality assurance. ANUC course convenors are moderated by RSCS course convenors of the relevant COMP course. The goal is to maintain a balance between oversight and autonomy. Moderation contact to ramp up during semesters the COMP course runs as this is when changes may be made, lighter contact appropriate in the alternative semester.

Delivery

Current Delivery mode(s): In person - 75% or more on campus, maximum 25% of courses online

☐ Off campus – this plan is administered and completed externally to the Acton campus.

☐ Intensive – this plan is to be completed by undertaking accelerated courses in a full-time block.
  Intensive plan duration in weeks (from commencement to submission of final assessment): 41T

☐ There is a compulsory work-based training of 41T hours per week for 41T weeks.

List all teaching periods in which students may commence study.

- i.e. Summer, First Semester, Autumn, Winter, Second Semester and/or Spring
- Note that international student visa holders must be able to complete within the normal duration of study without the need to underload or take leave.

41T
International student visa holders are able to complete within the normal duration of study without the need to underload or take leave when commencing in all listed teaching periods.

ANU Graduate Coursework model (Graduate Coursework only)

☐ This Award is consistent with the University’s Graduate Coursework Model

☐ This Award requires approval as an exception to the ANU Graduate Coursework model.

- For low-enrolment Graduate Certificates and Graduate Diplomas, provide a strategic case for retention of this Award and attach all available evidence.
- For Masters Degrees requiring more or less than 96 units, or with admission requirements other than a non-cognate Bachelor Degree, provide significant justification for creation of this Award (e.g. professional accreditation or international standards) and attach all available evidence.

Assessment alignment (Bachelor Honours Degrees only)

- Provide an explanation of how the structure of assessment determines whether the Honours learning outcomes have been met.

Timing of Honours assessment (Bachelor Honours Degrees only)

- Provide an explanation of how either: a minimum of 25% of the assessment which contributes to the final honours grade or; 15% of the assessment which contributes to the final Honours mark and formalised monitoring of progress by staff other than each student’s supervisor or Honours convener is completed in the first half (in terms of duration) of Honours study.

Honours research training availability (Bachelor Honours Degrees only)

- If Honours research training courses are available to students only once per calendar year, describe the strategies used to ensure that students who commence Honours in the Period in which these courses are not taught are not disadvantaged.

Research component (Masters Degrees only)

- Provide an explanation of and list of courses for how the AQF Level 9 Masters Degree (Coursework) requirement that graduates must be able to “plan and execute a substantial research-based project, capstone experience and/or piece of scholarship” is demonstrated.

Recommendations of last review

Recommendations of last review (if known):
This will be the inaugural review of this program

Details of actions taken to address recommendations of last review

N/A

Progress report on actions designed to address recommendations of last review

N/A

Strategic contribution and market position

Academic merit and strategic alignment

• Give details of how this academic plan aligns with University and College strategy (see ANU by 2020) and contributes to the standing of the discipline or interdisciplinary area nationally and (if relevant) internationally (200 words or fewer)

In its acquisition of ANU College, Study Group seeks to partner with the ANU to identify discipline areas in which Study Group can assist the ANU to grow its access to international and domestic student markets. This is in part achieved by the development of pathway programs that allow students who do not initially meet the direct entry requirements of an ANU degree the chance to develop their academic and other skills in a highly supportive environment to a level where a transfer into an ANU degree may be seriously considered. As with the Foundation Studies program, ANU sets exit requirements for Diploma students entering BIT and other relevant degrees. For visa purposes international students will require a conditional BIT offer in addition to a Diploma offer.

The first program proposed for new development is in the discipline of computer science. In developing this program the Research School of Computer Science (RSCS) is seeking to broaden its student base, particularly into markets that it does not otherwise reach. In the international market this includes, for example Vietnam, Indonesia and Saudi Arabia. Recent flagged changes to the higher education policy environment provide additional incentives for development of sub-degree programs for the Australian domestic market from 2016. The program provides an environment in which students are served by a staged transition into the ANU which allows students to develop academic, language and communication skills in an intimate, high-support environment staffed by academics and administrative staff expert in developing students’ academic skills and language ability.

Research Led Education

• Identify initiatives in this program that contribute to the University’s goal of offering research-led education (200 words or fewer)

Students enrolled in the Diploma will have access to fundamental computer science concepts and approaches developed in part by research taking place within the College. The program provides an important opportunity for students to access innovative technology-based pedagogies that support excellence in teaching and learning of Comp/IT (this would align with ANU by 2020 targets “engaging curriculum” and “innovative learning and teaching, including the appropriate use of technology” 2020 p.11
Market competition

- Identify a minimum of two competing programs in the sector nationally or internationally.
- Highlight the ways in which this academic plan is superior to competitor programs (200 words or fewer)

A number of other universities provide pathway programs into computer related degree programs. Three notable, but slightly different examples are Monash University, UWA and Macquarie:

<table>
<thead>
<tr>
<th>University</th>
<th>Award</th>
<th>Entry Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monash Uni</td>
<td>Monash College Diploma of Engineering Studies Year 12 completion</td>
<td>ATAR 70</td>
</tr>
<tr>
<td>UWA</td>
<td>Diploma of Science (in partnership with Study Group)</td>
<td>ATAR 70</td>
</tr>
<tr>
<td>Macquarie University</td>
<td>SIBT Diploma of Electronic Engineering</td>
<td>ATAR 60 entry</td>
</tr>
</tbody>
</table>

- Monash College Diploma does not have a diploma directly related to computing or IT, but it does have a Diploma of Engineering that enables students who successful complete this course to transfer into the second year of engineering. For a student wishing to focus on computing or IT this appears to provide only limited credit transfer.
- The Diploma of Science gives entry into the UWA Bachelor of Science with majors in Computer Science and Applied Computing
- Macquarie University through Sydney Institute of Business and Technology (SIBT) currently offers a Diploma and an Advanced Diploma in computing which allow entry into the start or mid-point of the second year of a BIT degree. In this respect of the examples given here, the SIBT Diploma is most similar to what is proposed here.

A Diploma pathway to computing will allow ANU to attract larger numbers of students to the computer science program by being able to better compete with programs at other quality universities.

Students who do not achieve direct entry to the Bachelor program can be directed to the Diploma. The Diploma then allows these students to be ‘screened’ and scaffolded for capability prior to entering the degree program. This high-support preparation for university potentially reduces attrition in the degree program without compromising overall student numbers in the degree, quality of student outcomes or student revenues.

Targets and Performance

Demand and load trends

Annual commencing and continuing EFTSL from the year of last review or accreditation (whichever is later) to the current year.

Please use only official ANU statistical data (visit http://unistats.anu.edu.au/statistics/students/collections/).

Two students have completed the Diploma and transferred into the BIT, starting in semester 2 of 2016. A steady state of 20 students per semester is anticipated, the next cohort consists of 9 students, and the subsequent cohort of 12 students.

Proposed targets for annual commencing and continuing EFTSL for the next five years or until the year of next review ( whichever is sooner), and the actions that support the achievement of those targets (200 words or fewer)
Student retention

If the annual rate of student retention for the latest full year is not above 80 per cent, provide a justification. Note that this rate indicates students retained at ANU within the same career (i.e. undergraduate or graduate coursework), not necessarily in the same academic program/plan(s). Please use only official ANU statistical data (visit http://unistats.anu.edu.au/statistics/students/collections/).

Not available

Proposed actions for improvement of student retention

41T

Student experience - SELS

Courses specified in this program with SELS Overall Satisfaction agreement rate below 50 per cent when last evaluated and actions undertaken to address those results. Do not include unspecified electives (such as for the 48 units available in single undergraduate programs)

Visit http://unistats.anu.edu.au/surveys/selt/results/learning/

Not applicable

Student experience – Course Experience Questionaire (CEQ)

Annual CEQ results from the year of last review or accreditation (whichever is later) to the current year – use only official ANU statistical data (note: not currently available by program).

Not available

Proposed actions for improvement of CEQ results

41T

Student outcomes and further study

Annual Graduate Destinations Survey (GDS) employment rates from the year of last review or accreditation (whichever is later) to the current year. Please use only official ANU statistical data.

Visit http://unistats.anu.edu.au/surveys/gds/

Not available

Proposed actions for improvement of GDS employment rates
Annual GDS Further Study rates (to higher AQF level) from the year of last review or accreditation (whichever is later) to the current year. Please use only official ANU statistical data (visit ).

Not available

Proposed actions for improvement of GDS Further Study rates (to higher AQF level)

Recommendations – targets and timeframes for improvement

- Provide targets and implementation timeframes for all proposed actions
- This will be provided to UEC as the summary of the review.
- Please number each recommendation/response for future reference.

<table>
<thead>
<tr>
<th>Recommendation Target</th>
<th>Implementation Actions</th>
<th>Completed By (Date)</th>
</tr>
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<tbody>
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Division of Student Administration use only

☐ All plans comply with Australian Qualifications Framework
  If not compliant, give details: 41T

☐ All plans comply with National Code 2007
  If not compliant, give details: 41T

☐ All plans comply with policy: Academic Programs and Courses Accreditation
  If not compliant, give details: 41T

☐ All plan comply with other relevant University policies and standards (e.g.
  If not compliant, give details: 41T
English Language requirements, Orders)

If not appropriate/accurate, provide new AHEGS below (copy and paste for multiple plans as necessary).
Duration is normally calculated as 46 weeks for the 1st year and 52 weeks per year thereafter (or part thereof), or the specified duration of intensive plans.

AHEGS (if changes required)

Plan code: 41T

Detail of Plan - Australian Higher Education Graduation Statement (AHEGS)

Plan Features - Australian Higher Education Graduation Statement (AHEGS)

Plan Pathway - Australian Higher Education Graduation Statement (AHEGS)

Plan Accreditation - Australian Higher Education Graduation Statement (AHEGS)

College Education Committee

Date reviewed by College Education Committee (CEC) 41T

URL of review outcomes 41T

CEC recommendation to UEC

- Reaccredit with no conditions
- Reaccredit with conditions (specified below)
- Cease intake until conditions met (specified below)
- Disestablish program / academic plan(s) (list all academic plans below)

Note that a separate Award Disestablishment (Coursework) proposal must be completed and teach-out approved to affect disestablishment.

41T

As approved by the Dean or delegated authority

41T on 41T
## University Education Committee

<table>
<thead>
<tr>
<th>Date reviewed by University Education Committee (UEC)</th>
<th>41T</th>
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<tbody>
<tr>
<td>Document Number</td>
<td>41T</td>
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</tbody>
</table>

**UEC recommendation to Academic Board**

- Reaccredit with no conditions
- Reaccredit with conditions (specified below)
- Cease intake until conditions met (specified below)
- Disestablish program / academic plan(s) (list all academic plans below)
  
  Note that a separate Award Disestablishment (Coursework) proposal must be completed and teach-out approved to affect disestablishment.

## Academic Board

<table>
<thead>
<tr>
<th>Date reviewed by Academic Board</th>
<th>41T</th>
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</thead>
<tbody>
<tr>
<td>Document Number</td>
<td>41T</td>
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</table>

**Academic Board decision**

- Reaccredit with no conditions
- Reaccredit with conditions (specified below)
- Cease intake until conditions met (specified below)
- Disestablish program / academic plan(s) (list all academic plans below)
  
  Note that a separate Award Disestablishment (Coursework) proposal must be completed and teach-out approved to affect disestablishment.

41T
Three meetings were held with ANUC representatives, two of them on housekeeping issues as well, with the substantive Diploma review meeting on 19 August 2016.

The meeting of the 19 August 2016 was chaired by Tom Gedeon (RSCS Diploma of Computing convenor), and attended by Patrick Tran (ANUC Course Coordinator - Diplomas and Associate Degrees) and Stephanie Hester (ANUC Acting Academic Director).

The meeting focused on:
1. Relationship between Study Group Australia and CECS
2. Quality assurance processes

Discussion:
1. Both CECS and ANUC representatives expressed the view that the relationship was working well, various teething problems with regards use of labs and interaction between ANUC and RSCS coordinators of matching courses was working well. Similarly, a clear intention to continue the relationship and Diploma was expressed by both CECS and ANUC representatives. Stephanie Hester expressed clearly that Study Group was pleased with how the Diploma was going and would like to continue.

At the time of the original ANU accreditation of the Diploma it was envisaged that once it was possible, that Study Group would apply for their own accreditation. As the funded sub-degree places are not yet available to Study Group but are available to ANU, the current process should continue, and be considered at the next review.

2. The meeting noted that the first small cohort has now finished the Diploma, and led to the two students transferring into the BIT, and are now 7 weeks into their first semester as ANU BIT students, hence quality assurance of Diploma outputs (student quality and subsequent progression) was not yet possible.

Quality assurance of ANUC course delivery was discussed, the responsibility matrix which was developed earlier was considered and confirmed as accurate as to the process which has been followed recently, and appropriate for the purpose. The 1 page version entitled "Diploma Coordination Procedure" is attached.

The final decision was to reconvene a similar group to consider the progression of the next cohort transferring in, and to clarify possible destinations for ANUC students who do not meet the CECS criteria to transfer into the BIT.
# Diploma Coordination Procedure (Draft)

**Note:** This proposal aims to detail relevant items in the Academic Coordination Responsibility Matrix

<table>
<thead>
<tr>
<th>Item</th>
<th>Timeline / Triggering Event</th>
<th>Coordination Activities</th>
<th>Outcome / Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduce teaching staff and course conveners</td>
<td>Before the semester starts</td>
<td>ANUC Coordinator introduces the Diploma teachers to ANU course conveners, and ask for access to the teaching materials.</td>
<td><strong>Access to the course’s Wattle site</strong> (or other course sites) is granted to the ANUC teacher and coordinator. <strong>Unit of study guides and other documents</strong> (assessment details and lecture slides where applicable) are made available to ANUC.</td>
</tr>
<tr>
<td>Course outline and study plan</td>
<td>Before the semester starts</td>
<td>ANUC teachers send their course outlines (adopted from the Bachelor’s course guides) to ANU conveners for feedback. ANUC teachers discuss with ANU conveners on moderation arrangements: what items need to be moderated, sample size and other matters</td>
<td>ANU conveners provide <strong>feedback and perhaps suggestions on the ANUC’s course outline.</strong> This is to ensure the content and course delivery are aligned with ANU standards. An agreement is reached on <strong>how moderation would be conducted</strong></td>
</tr>
<tr>
<td>Pre-moderation: Major Assessment Items (weight of 20% or above) e.g. big assignments, mid-term exam, final exam</td>
<td>Once the assessment documents are available</td>
<td>ANUC teachers send the assessment documents to ANU conveners for feedback.</td>
<td>ANU conveners provide <strong>feedback and perhaps suggestions on the assessment items</strong> to make sure they are aligned with ANU expectations.</td>
</tr>
<tr>
<td>Post-moderation: Major Assessment items (weight of 20% or above )</td>
<td>Once the marking of the assessment items are complete</td>
<td>ANUC teachers send the sample of marked papers to ANU conveners for comments on their marking.</td>
<td>The <strong>sample of papers is checked</strong> by ANU conveners to ensure they follow ANU marking standards.</td>
</tr>
<tr>
<td>Final sign-off of grades</td>
<td>Once all the grades are finalized before the final result release day</td>
<td>ANUC coordinator presents the final grades to the College’s authorised staff for the final sign-off.</td>
<td>The <strong>final grades are entered into ANU database</strong> by the College’s administrator staff (or ANUC coordinator if arranged previously)</td>
</tr>
</tbody>
</table>
RESEARCH SCHOOL OF COMPUTER SCIENCE

CURRICULUM DEVELOPMENT COMMITTEE 2016

Membership

<table>
<thead>
<tr>
<th>Name</th>
<th>Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Associate Director (Education), RSCS</td>
</tr>
<tr>
<td>Ramesh Sankaranarayana</td>
<td></td>
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<tr>
<td>Members</td>
<td>Director</td>
</tr>
<tr>
<td>Alistair Rendall</td>
<td></td>
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<tr>
<td>Associate Director (Education), RSE</td>
<td></td>
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<tr>
<td>Klaus Weber</td>
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<tr>
<td>Student Services Manager</td>
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<tr>
<td>Paul Melloy</td>
<td></td>
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<tr>
<td>Program Convenors</td>
<td></td>
</tr>
<tr>
<td>Eric McCreath (BAC (Hons) &amp; (R&amp;D))</td>
<td></td>
</tr>
<tr>
<td>Shayne Flint (BSEng (Hons))</td>
<td></td>
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<tr>
<td>Tom Gedeon (BIT)</td>
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<tr>
<td>John Slaney (Honours)</td>
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<tr>
<td>Lynette Johns-Boast (Graduate Coursework)</td>
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<tr>
<td>Other CS Representatives (3)</td>
<td></td>
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<tr>
<td>Dirk Pattison</td>
<td></td>
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<tr>
<td>Tony Hosking</td>
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<tr>
<td>Qing Wang</td>
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<tr>
<td>Information Systems Representative</td>
<td></td>
</tr>
<tr>
<td>Alexander Richardson (CBE)</td>
<td></td>
</tr>
<tr>
<td>Observers:</td>
<td></td>
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<tr>
<td>Jochen Trumpf</td>
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</tbody>
</table>

Terms of Reference

Develop and endorse proposals on curriculum development and educational innovation to ensure that the structure, content and delivery of all RSCS coursework programs:

- reflect the expectations of key stakeholders, including the University, School, students, industry and the broader community;
- comply with legislative requirements such as the Australian Quality Framework (AQF); and
- comply with the requirements of professional bodies such as the Australian Computer Society and Engineers Australia.

Operation

The Committee shall meet twice per semester. Proposals from the Committee shall be presented to the School for consideration and approval, before being presented to the College Education Committee for consideration.

The topics that will be considered by the Committee will include, but not be limited to:

- Curriculum and content for the School's undergraduate and masters coursework programs.
- Standard and quality of programs, including oversight of periodic internal and external reviews of courses and programs, external audits of courses and responses to such reviews and audits.
- Changes to programs, minors/majors/specializations, course descriptions and course offerings.
- Recommendations and best practice for the use of educational technologies and alternate delivery modes.
- Monitoring of student profile and experience, with respect to our courses and programs.
- Identification of future directions for computing education.
- Any other matters that impact on education programs in the School.
Item 10: Accreditation Policy Framework

Purpose
To consider a University policy and suite of procedures for curriculum accreditation.

Recommendation
That the Committee provides feedback to elizabeth.nunrom@anu.edu.au by no later than 16 September 2016 on the proposed accreditation policy and suite of procedures (Appendices B to F).

ACTION REQUIRED
For discussion ☑ For decision ☐ For information ☐ For response ☑

Executive Summary of Issues
The current suite of University accreditation policies and procedures have been benchmarked and reviewed, with a replacement suite proposed to enable streamlining of low-risk processes and incorporate of a variety of Board-approved decisions as yet not incorporated into the University's policy framework.

Alignment with ANU by 2020
ANU aims to create a holistic educational experience, unique in Australia, including: an engaging curriculum at both undergraduate and postgraduate levels; extended university involvement for students; research-led education, and; innovative learning and teaching, including the appropriate use of technology. This accreditation policy framework is designed to support this endeavour.

Background
The University's current suite of accreditation policies and procedures were introduced in 2013. Since that time, the University has undertaken significant work in refining and enhancing the curriculum through a number of formal working parties and determinations, and informal feedback has been provided about approaches to accreditation. In response, a small working group was formed to draft a new framework for the University's approach to programs and courses, initially by benchmarking our Group of Eight peers, examining strengths and bottlenecks in our current processes. From this process, a suite of one new policy and four new procedures is proposed to replace the current suite of three policies and one procedure:

Current:
Academic programs and courses accreditation policy
Academic programs and courses accreditation procedure
Nomenclature and post-nominal policy
Structure and wording of coursework award requirements (program orders) policy

Proposed:
Programs and Courses Accreditation, Amendment, Disestablishment and Reaccreditation policy
Programs and Courses Accreditation, Reaccreditation, Amendment and Disestablishment procedure
Specification of Program Requirements procedure
Titles, Structure and Features of Coursework Awards and Subplans procedure
Structure and Features of Coursework Courses procedure

Key changes include:
- Streamlining of approval authorities and Committee endorsements for changes that are not major.
- Ensuring a comprehensive framework of what is expected for each of the University's qualifications.
- Incorporation of a number of Committee decisions that are otherwise not published within the current policy framework.

Implementation
The current policies and procedures will be rescinded and replaced by the proposed policy and procedures on approval by Academic Board.

Consultation and Discussion Record
Education Standards and Quality Committee, 8 August 2016
That the Education Standards and Quality Committee provide feedback to policy.regs@anu.edu.au by no later than 26 September 2016 on the proposed accreditation policy and suite of procedures (Appendices B to F).

Review by DVC(A)
Significant feedback on both the organisation an content was provided by the DVC(A) and is incorporated in Appendices B – F

**ASQO Policy and Projects Meeting, 10 May 2016**

That college professional staff representatives provide initial feedback the proposed policy and procedures. Feedback is provided in **Appendix A**. Changes are tracked in **Appendices B – F**.

**Sponsor**
Deputy Vice-Chancellor (Academic)

**Author**
Senior Policy Officer, Academic Standards and Quality, Division of Student Administration
Assistant Registrar, Academic Standards and Quality, Division of Student Administration

**Appendices**
**Appendix A:** Feedback and Amendment Schedule following ASQO Policy and Projects 10 May 2016
**Appendix B:** Programs and Courses Accreditation, Amendment, Disestablishment and Reaccreditation policy
**Appendix C:** Programs and Courses Accreditation, Reaccreditation, Amendment and Disestablishment procedure
**Appendix D:** Specification of Program Requirements procedure
**Appendix E:** Titles, Structure and Features of Coursework Awards and Subplans procedure
**Appendix F:** Structure and Features of Coursework Courses
**Appendix G:** Academic programs and courses accreditation policy
**Appendix H:** Academic programs and courses accreditation procedure
**Appendix I:** Nomenclature and post-nominal policy
**Appendix J:** Structure and wording of coursework award requirements (program orders) policy
# Appendix A: Feedback and Amendment Schedule following ASQO Policy and Projects 10 May 2016

<table>
<thead>
<tr>
<th>No.</th>
<th>Feedback</th>
<th>Response</th>
<th>Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Programs and Courses Accreditation, Amendment, Disestablishment and Reaccreditation policy: 2 Do programs have to meet all the following criteria, just one or a specified quota?</td>
<td>Priority is given to programs which meet one or more of the criteria</td>
<td>Point 2 clarified.</td>
</tr>
<tr>
<td>2.</td>
<td>Programs and Courses Accreditation, Reaccreditation, Amendment and Disestablishment procedure: Destination Threshold In the case of Exit quals, ie. Grad Cert Applied Data Analytics which will be part-time by nature of cohort – will this apply?</td>
<td>Yes. This is the current threshold recommended by the UEC Graduate Coursework Working Party. The predominance of part-time study in graduate coursework was a factor in setting the threshold at this low point.</td>
<td>None.</td>
</tr>
<tr>
<td>3.</td>
<td>Programs and Courses Accreditation, Reaccreditation, Amendment and Disestablishment procedure: Pathway Threshold Should transfers also be included ie in the case where a student goes into the Grad Dip program by choice, even though they meet the requirements for the Masters, and then decided to transfer into the longer program?</td>
<td>No. The primary recommendation of the UEC Graduate Coursework Working Party was to admit students directly to their ultimate destination program by removing the need to articulate through Graduate Certificates and Graduate Diplomas into a Masters Degree. Historically, the overwhelming majority of Graduate Coursework students are Masters students, with only a handful of Graduate Certificates and Graduate Diplomas attracting more than a few students. This threshold is intended to maintain these Graduate Certificates and Graduate Diplomas while encouraging the vastly more popular Masters options in other areas.</td>
<td>None.</td>
</tr>
<tr>
<td>4.</td>
<td>Specification of Program Requirements procedure: 24 units from completion of MEDI8206 Public Health Research Project, which must be completed more than once, in consecutive semesters Lack clarity – is this a 48 unit course taken as 24 units in each semester? Or is it a 24 unit course, taken as 12 units in each semester?</td>
<td>The units listed in the study requirements represent the total to be accumulated by consecutive enrolments. This is clear in the context of full program requirements where an overall total units and other study requirements are specified. A number of current graduate coursework programs allow for such courses to be taken over any number of semesters with varying units contributed each semester (e.g. 18u in S1, 6u in S2, 24u in S3). Any further specification of units other than the total required will eliminate this flexibility.</td>
<td>None.</td>
</tr>
<tr>
<td>5.</td>
<td>Specification of Program Requirements procedure: Students must achieve a minimum XX% weighted average mark in each period (Summer/First Semester/Autumn and Winter/Second Semester/Spring) in order to continue in the Award name Does this still allow us to specify that only ‘our’ courses are used in the calculation, as opposed to using all courses ie. Electives, other component of double-degree etc?</td>
<td>A clearly-defined subset of courses within the program may be specified.</td>
<td>Point clarified.</td>
</tr>
<tr>
<td></td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: 8 Does this include the augmentation?</td>
<td>Yes.</td>
<td>None.</td>
</tr>
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<tr>
<td>7.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 5: Study loads, equivalents, pathways and exits points of Single Awards: Graduate Diploma – Early Exit Should Grad Cert be an option here?</td>
<td>No. Progression requirements are not an option for Graduate Diplomas so an early exit destination would never need to be specified. Students may still transfer from a Graduate Diploma to a Graduate Certificate to graduate.</td>
<td>None.</td>
</tr>
<tr>
<td>8.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 5: Study loads, equivalents, pathways and exits points of Single Awards: Graduate Masters Degree (Advanced) – Early Exit Masters Degree should be an exit option from Masters Advanced. Students are transferred from a Masters Advanced to a Masters if they don’t meet the progression requirements</td>
<td>Agreed. Masters Degree should be an early exit option from Masters (Advanced) and Masters Degree (Extended).</td>
<td>Masters Degree exit option added to Masters (Advanced) and Masters Degree (Extended).</td>
</tr>
<tr>
<td>9.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 6: Necessary features of Single Awards: Embedded Honours Degree – 4000-level courses We would also expect our students to do these courses in second year.</td>
<td>This is recommendation 14.2 of the Honours Working Party. The Committee should discuss this further before changing approach.</td>
<td>None.</td>
</tr>
<tr>
<td>10.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 6: Necessary features of Single Awards: Embedded Honours Degree – Final Honours Mark Does 'all' mean 'only' or can non-hons course also be included in the calculation.</td>
<td>This means 'all'. No course identified as an Honours course is to be excluded from the calculation, excluding repeat attempts of previously-passed courses in which case only the first attempt is included.</td>
<td>None.</td>
</tr>
<tr>
<td>11.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 6: Necessary features of Single Awards: Undergraduate Research Degree: Research and Development – ASC/ASE course requirements CECS currently doesn’t comply with this.</td>
<td>This is recommendation 2 of the PhB Working Party, approved by Academic Board and currently in effect. Programs should be amended as soon as possible.</td>
<td>None.</td>
</tr>
<tr>
<td>12.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 6: Necessary features of Single Awards: Undergraduate Research Degree: Research and Development – experience opportunities R&amp;D students can be in double degrees, where there is no room to do this.</td>
<td>This is recommendation 4 of the PhB Working Party, approved by Academic Board and currently in effect. Programs should be amended as soon as possible.</td>
<td>None.</td>
</tr>
<tr>
<td></td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 6: Necessary features of Single Awards: Undergraduate Research Degree: Research and Development – Final Honours Mark Does 'all' mean 'only'?</td>
<td>This means 'all'. No course identified as an Honours course is to be excluded from the calculation, excluding repeat attempts of previously-passed courses in which case only the first attempt is included.</td>
<td>None.</td>
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<tr>
<td>14.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 7: Study loads and necessary features of Double Degrees: Double Bachelor Degrees – Each component includes at most 36 units of 1000-level courses How does this work with double-counted courses? This might be a problem for Engineering. Does delegate have power to vary this for exceptional cases?</td>
<td>This requirement was primarily intended to keep the proportion of 1000-level courses below half of the total for the double degree. The maximum could increase to 48 units without exceeding 50% of the total units in the case of four-year-long degrees, which would accommodate engineering.</td>
<td>Feature revised to: maximum 36u for 3-year degrees; maximum 48u for 4-year degrees.</td>
</tr>
<tr>
<td>15.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 8: Study load and necessary features of Subplans (Majors, Minors and Specialisations) – Consists of 1000- to 3000-level courses/ Consists of 2000- to 3000-level courses We have 4000-level, as a 4 year degree.</td>
<td>Given enrolment restrictions on 4000-level courses and the availability of subplans across degrees, 4000-level course may be allowed where: the major/minor may be completed without completing 4000-level courses or; the subplan is exclusive to an embedded Honours degree.</td>
<td>Feature revised.</td>
</tr>
<tr>
<td>16.</td>
<td>Procedure: Titles, Structure and Features of Coursework Awards and Subplans: Table 8: Study load and necessary features of Subplans (Majors, Minors and Specialisations) – Undergraduate Specialisations Require at least one co-requisite Major or where appropriate core requirements are specified.</td>
<td>Distinguishing feature of undergraduate specialisations is their relationship to a major – they are in essence a minor in all other respects. If this relationship does not exist, a minor should be used instead.</td>
<td>No change.</td>
</tr>
<tr>
<td>17.</td>
<td>Structure and Features of Coursework Courses procedure – 3 Change to: &quot;A College approves the creation of and changes to courses it administers.&quot;</td>
<td>Agreed.</td>
<td>Changed as suggested.</td>
</tr>
<tr>
<td>18.</td>
<td>Structure and Features of Coursework Courses procedure – 12 Please clarify - Is this more than one coursework course (ie excluding the thesis code)? Or does this mean that Colleges will be required to change the code of their Honours to HONS. CAP uses THES4501 and STST4001 for International Security Studies, and THES4502 and ASIA4001 for Asian Studies (applicable to the PhB as well). These are specific to Honours and coded this way to be specific to the College and Hons plans. If a change is required, what consideration will be provided to Colleges given that recodes for plans/subplans are due 27 July for 2017?</td>
<td>This refers to the administrative course used to indicate on student transcripts the final Honours marks, i.e. the mark calculated based on performance in Honours courses. Coursework courses should not use the subject code HONS.</td>
<td>None.</td>
</tr>
<tr>
<td>No.</td>
<td>Section</td>
<td>Text</td>
<td>Notes</td>
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<tr>
<td>19.</td>
<td>Structure and Features of Coursework Courses procedure – 26</td>
<td>Our embedded honours 4000-level courses will have just other courses (1000-3000 level courses) as pre-reqs. This is recommendation 8 of the UEC Honours Working Party, approved by Academic Board and currently in effect. Requisites should be amended as soon as possible.</td>
<td>None.</td>
</tr>
<tr>
<td>20.</td>
<td>Structure and Features of Coursework Courses procedure – 26</td>
<td>Is this a or b or c, or a and b or c. Only one option is required (a or b or c).</td>
<td>Clarified.</td>
</tr>
<tr>
<td>21.</td>
<td>Structure and Features of Coursework Courses procedure – 29</td>
<td>Please confirm the approximate hours per week for a 12 week semester from 2017? Current indications are 10 hrs per week in a 13 week semester, does this change for 12 weeks? There should be no change in the overall workload.</td>
<td>None.</td>
</tr>
<tr>
<td>22.</td>
<td>Structure and Features of Coursework Courses procedure – 31</td>
<td>And thesis, mobility and exchange courses? Thesis courses fall under the broad umbrella of courses supporting research training, alongside research methods, smaller research projects, etc.. Typically, incoming mobility and exchange students undertake the same courses as ANU students.</td>
<td>None.</td>
</tr>
<tr>
<td>23.</td>
<td>Structure and Features of Coursework Courses procedure – 32</td>
<td>Has 15 been missed here? Units provided are examples only. Neither 15 nor 21 are included. Revised to list all numbers divisible by 3.</td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Structure and Features of Coursework Courses procedure – 38</td>
<td>What does this mean? 2 in 5 years etc? Who sets the quota? This applies to the same topic offered in consecutive sessions (e.g. in First Semester then Second Semester of a given year) or in consecutive years (e.g. 2016 then 2017). This requires no other action than for the College Education Committee to consider if it is appropriate to convert this topic into a course in order to prevent pseudo-courses being offered as topics and avoiding College oversight. The review period is the standard course review period of five years, not every time the topic is offered in consecutive sessions or years – see 39.</td>
<td>None.</td>
</tr>
<tr>
<td>25.</td>
<td>Structure and Features of Coursework Courses procedure – 50</td>
<td>What are the implications of restriction to a specific plan, and implications of a GSS classification for all PG courses? The strength of GSS is the variety of courses available to students from across the University. This requirement ensures that all graduate coursework courses are available in GSS unless there is cause to restrict availability to certain plans. This may include contractual or other eligibility considerations (e.g. clinical placements, military-only courses).</td>
<td>None.</td>
</tr>
<tr>
<td>26.</td>
<td>Structure and Features of Coursework Courses procedure: Table 1: Use, features and co-teaching options of course levels</td>
<td>Coteaching options are provided in the table. These include: 1000 to 1000 6000 to 7000 6000 to 8000 7000 to 8000 4000-level courses cannot be cotaught with 1000- to 3000-level courses. This is recommendation 4 of the UEC Honours Working Party.</td>
<td>None.</td>
</tr>
<tr>
<td>27. Structure and Features of Coursework Courses procedure: Table 1: Use, features and co-teaching options of course levels</td>
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<tr>
<td>CAP was seeking to have 6000 level courses to be co-taught language courses only. Schools have been requested to code all other co-taught PG courses at the 8000 level or as appropriate to the AQF level for the degree. 8000 with 3000, 6000 with 2000 &amp; 3000 but only for languages.</td>
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<tr>
<td>This represents a departure from the University norm of 6000-level courses representing graduate courses cotaught with undergraduate courses. Several other determinations, such as the Honours Working Party recommendations, are based on the course levels framework presented in this procedure and to adopting a new framework for the University would have significant resource implications for other Colleges and central divisions.</td>
<td></td>
<td></td>
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<tr>
<td>None.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>28. Structure and Features of Coursework Courses procedure: Table 1: Use, features and co-teaching options of course levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>How are 7000 and 8000 level courses different from each other?</td>
</tr>
<tr>
<td>7000-level courses are distinguished from 8000-level course in different ways in different Colleges. There are no prescribed differences at the University level.</td>
</tr>
<tr>
<td>None.</td>
</tr>
</tbody>
</table>
Policy: Programs and Courses Accreditation, Amendment, Disestablishment and Reaccreditation

Purpose
To outline the standards which underpin the accreditation, reaccreditation, amendment and disestablishment of the University’s programs and courses.

Overview
The policy provides the principles and strategic priorities for of the University’s academic programs and courses.

Scope
This Policy applies to all ANU staff with education responsibilities.

Policy statement
1. ANU accredits and reaccredits programs and courses that:
   a. Align with the strategic directions of the University;
   b. Are consistent with external regulatory frameworks including the Australian Qualifications Framework, including the Issuance Policy, Pathways Policy, and Register Policy, and Levels Criteria, Qualification Type Descriptors and Qualification Type Specifications, the ESOS Act and associated National Code, HESA, and the Higher Education Standards Framework;
   c. Are aligned with the Bologna Process;
   d. Are consistent with the academic standards of the University, as set out in University policies and procedures;
   e. Demonstrate viability and appropriate resourcing; and
   f. Demonstrate a clear progression of learning through the program or course.

2. Prioritisation is given to programs which:
   a. Attract, challenge and retain students of outstanding talent;
   b. Provide combinations of awards, including at least one graduate award;
   c. Respond to or anticipate changing national or global workforce needs;
   d. Utilise learning technologies and teaching approaches to extend the University’s educational reach on a national or global level;
   e. Promote executive education pathways, especially in the area of public policy and other disciplines of national significance;
f. Are offered in partnership with one or more universities of outstanding reputation; and

g. Provide pathways of demonstrated efficacy for underrepresented cohorts, in line with the University’s access and equity strategies.

Delegations relevant to this policy

- **000030**: Determine matters relating to the establishment and disestablishment of awards, and the variation of programs and courses, including pre-requisites, corequisites, assessment methods and requirements for completion of programs

- **000031**: Determine matters relating to the establishment, disestablishment and variation of courses, including prerequisites, co-requisites, assessment methods and requirements for completion of courses

- **000032**: Approve for publication as Orders in the Coursework Handbook, program and course requirements
Appendix C

Procedure: Programs and Courses Accreditation, Reaccreditation, Amendment and Disestablishment

Purpose

To describe the process for accreditation, reaccreditation, amendment and disestablishment of the University's programs and courses.

Procedure

1. Accreditation timing is detailed in the schedule published by the Academic Standards and Quality Office (ASQO) at http://drss.anu.edu.au/asqo/updates-schedule.php and amended from time to time.

Programs

2. The University accredits programs for a maximum period of five years.

3. A proposal for a new program includes:
   a. An academic case; and
   b. A business case supported by market research.

4. Prior to the conclusion of an accreditation period a program is reviewed and reaccredited. A new accreditation period is set on approval of a review by Academic Board (AB).

5. Reviews include input from an independent, external reviewer who is appropriately qualified and experienced, noting that where a program is professionally accredited input from external professional accreditation bodies satisfies this requirement.

6. Reviews cover both curriculum and viability.

7. If a program is not reviewed prior to the conclusion of an accreditation period, the College may request one extension of the accreditation period of up to 12 months to allow the review to take place, subject to an accepted explanation of why the review could not be completed.

8. During an accreditation period a program may be amended in accordance with Table 1. Amendments do not change the accreditation period.
9. University Education Committee (UEC) performs an annual health check of programs and shortens accreditation periods and triggers an immediate review for programs that meet one of the following criteria:
   a. Annual commencing EFTSL under 5;
   b. Evidence of student retention rates under 80%;
   c. For three consecutive years, a majority of the specified courses within the program with a SELT result of less than 50% for overall Satisfaction;
   d. Graduate Certificates or Graduate Diplomas that do not meet one of the threshold criteria specified in Table 2.

10. When calculating commencing EFTSL, where there is both a pass plan and an Honours plan, the EFTSL load in each is added together.

11. UEC may also shorten accreditation periods and trigger early reviews if it becomes aware of other information of concern with regards to a program.

12. If an accreditation period expires a program transitions into teach out mode.

13. If a program is disestablished, the relevant College ensures that course teaching plans, and teach out plans are in place for students to be able to complete the program, and transitional arrangements are available. The minimum timeframe for teach out is:
   a. Where an equivalent program for students to transition to can be identified, the full-time duration for the final cohort of students admitted;
   b. Where an equivalent program for students to transition to cannot be identified, twice the full-time duration for the final cohort of students admitted.

14. Professional accreditation is the responsibility of the relevant College and does not determine the outcomes of the University’s accreditation processes.

**Table 1: Program Accreditation Processes**

<table>
<thead>
<tr>
<th>New</th>
</tr>
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<tbody>
<tr>
<td>1. Relevant form submitted by the proposer. If new courses or subplans are in the program the relevant course proposal or subplan proposal forms are completed and submitted prior or concurrently.</td>
</tr>
<tr>
<td>2. If does not meet one of the University’s priorities for new coursework programs, truncated proposal consisting of the business case:</td>
</tr>
<tr>
<td>a. Endorsed by Associate Dean</td>
</tr>
<tr>
<td>b. Endorsed by UEC</td>
</tr>
<tr>
<td>3. Full proposal endorsed by Associate Dean</td>
</tr>
<tr>
<td>4. Endorsed by ASQO for policy and legislative compliance.</td>
</tr>
<tr>
<td>5. (Optional) Endorsed by the Coursework Awards and Admissions</td>
</tr>
</tbody>
</table>
Committee (CAAC).
6. Endorsed by UEC.
7. Endorsed by DVC(A).
8. AB approves the proposal and sets the accreditation period.
9. Updates are made to the University Handbook
   (http://programsandcourses.anu.edu.au)

### Review and Reaccreditation

1. ASQO advises the programs for review each year
2. Review undertaken by local area completing relevant formal
documentation with input from an external reviewer.
3. Endorsed by Associate Dean
4. (Optional) Endorsed by CAAC.
5. Endorsed by ASQO for policy and legislative compliance.
6. Endorsed by UEC.
7. Endorsed by DVC(A).
8. AB approves the proposal and sets the reaccreditation period.

### Amendment

1. Relevant form completed by the proposer. If new courses or
subplans are in the program the relevant course proposal or
subplan proposal forms are completed and submitted.
2. Endorsed by Associate Dean
3. Endorsed by ASQO for policy and legislative compliance.
4. (Optional) Endorsed by CAAC.
5. (Optional) Endorsed by UEC.
6. Approved by DVC(A).
7. Record of approved changes published and updates made to
   the University Handbook
   (http://programsandcourses.anu.edu.au)

### Disestablishment

1. Relevant form completed by the proposer.
2. Endorsed by Associate Dean.
3. Endorsed by ASQO for policy and legislative compliance and
   appropriate teach out arrangements.
4. (Optional) Endorsed by UEC.
5. Endorsed by DVC(A).
6. Approved by AB.
7. Updates are made to the University Handbook
   (http://programsandcourses.anu.edu.au)

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Table 2: Threshold criteria for Graduate Certificates and Graduate Diplomas

<table>
<thead>
<tr>
<th>Destination Threshold</th>
<th>At least 5 students graduate from the program and do not proceed to a cognate Masters at ANU within two years.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathway Threshold</td>
<td>At least 20 students graduate from the program and proceed to a cognate Masters at ANU within two years.</td>
</tr>
</tbody>
</table>
15. Endorsement by CAAC is required for programs with offshore teaching models or non-standard admission requirements.

16. Where referral to UEC is optional, endorsement by UEC is required where programs contain:
   a. Inter-College implications;
   b. An alternate teaching location or partnership with another provider;
   c. Changes to learning outcomes;
   d. Structures outside of the ANU models; and/or
   e. A change to mode of delivery.

17. Where a proposal has inter-College implications consultation is undertaken prior to endorsement of the proposal by the Associate Dean.

18. Transnational programs and third party arrangements are subject to additional requirements as detailed in the Transnational and Third Party Education Partnerships (Coursework) Policy and Procedure.

19. Programs delivered in a language other than English – that do not have as their primary purpose education in language proficiency – are subject to additional requirements as detailed in the Teaching in languages other than English Policy and Procedure.

20. Non-award study structures are non-AQF studies that do not lead to an Award, and as administrative shells their creation, amendment and disestablishment require endorsement by the Associate Dean and are approved by the Registrar.

Majors, Minors, and Specialisations (Subplans)

21. Majors, Minors, and Specialisations (subplans) are accredited as per Table 3.

22. Subplans are reaccredited as part of the review and reaccreditation of the programs they are offered within.

23. Where subplans exist in multiple programs the subplan is reaccredited for the period of the program reaccreditation, and does not require additional reaccreditation for each program.

24. The Deputy Vice-Chancellor may trigger a review of a subplan independent of a program review and reaccreditation on the basis of viability, quality, student outcomes, or student experience.

Table 3: Subplan Accreditation Processes
<table>
<thead>
<tr>
<th>New</th>
<th>1. Relevant form submitted by the proposer. If new courses are in the subplan, forms are completed and submitted prior or concurrently. If the subplan is to be included in programs, relevant program forms are completed and submitted in time for the relevant program amendment deadline.</th>
</tr>
</thead>
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<tr>
<td></td>
<td>2. Endorsed by Associate Dean.</td>
</tr>
<tr>
<td></td>
<td>3. Endorsed by ASQO for policy and legislative compliance.</td>
</tr>
<tr>
<td></td>
<td>4. Endorsed by UEC with 75% majority.</td>
</tr>
<tr>
<td></td>
<td>5. Approved by DVC(A).</td>
</tr>
<tr>
<td></td>
<td>6. Record of approved changes published and updates made to the University Handbook (<a href="http://programsandcourses.anu.edu.au">http://programsandcourses.anu.edu.au</a>)</td>
</tr>
<tr>
<td>Amendment</td>
<td>1. Relevant form submitted by the proposer. If new courses are in the subplan relevant course forms are completed and submitted prior or concurrently.</td>
</tr>
<tr>
<td></td>
<td>2. Approved by Associate Dean if the amendment is not to the learning outcomes of the subplan.</td>
</tr>
<tr>
<td></td>
<td>3. If the learning outcomes are being amended:</td>
</tr>
<tr>
<td></td>
<td>a. Endorsed by ASQO for policy and legislative compliance.</td>
</tr>
<tr>
<td></td>
<td>b. Endorsed by UEC with 75% majority.</td>
</tr>
<tr>
<td></td>
<td>c. Approved by DVC(A)</td>
</tr>
<tr>
<td></td>
<td>4. Updates are made to the University Handbook (<a href="http://programsandcourses.anu.edu.au">http://programsandcourses.anu.edu.au</a>)</td>
</tr>
<tr>
<td>Disestablishment</td>
<td>1. Relevant form completed by the proposer. If the subplan is to be removed from programs, relevant program forms are completed and submitted in time for the relevant program amendment deadline.</td>
</tr>
<tr>
<td></td>
<td>2. Endorsed by Associate Dean.</td>
</tr>
<tr>
<td></td>
<td>3. Endorsed by ASQO for policy and legislative compliance and appropriate teach out arrangements.</td>
</tr>
<tr>
<td></td>
<td>4. (Optional) Endorsed by UEC with 75% majority.</td>
</tr>
<tr>
<td></td>
<td>5. Approved by DVC(A).</td>
</tr>
<tr>
<td></td>
<td>6. Record of approved changes published and updates made to the University Handbook (<a href="http://programsandcourses.anu.edu.au">http://programsandcourses.anu.edu.au</a>)</td>
</tr>
</tbody>
</table>

**Courses**

25. Proposals for courses – whether new courses, amendments, or disestablishments – are:

a. Proposed on the appropriate form;

b. Approved by the Associate Dean; and

c. Updates are made to the University Handbook (http://programsandcourses.anu.edu.au).
26. Proposals may be referred back to the Associate Dean by ASQO in the case of approvals based on incorrect or inaccurate information.

27. Courses are reaccredited as part of the review and reaccreditation of the programs they are offered within.

28. An Associate Dean may trigger a review of courses independent of a program review and reaccreditation on the basis of viability, quality, student outcomes, or student experience.

29. A review of a course may be triggered by UEC on the basis of SELT agreement rates of less than 50%, with two or more consecutive results requiring:
   a. The course be disestablished; or
   b. The course be significantly redesigned

30. A course review triggered by UEC requires endorsement from UEC and approval by AB prior to the course being offered again.

31. Accreditation of Professional and Short Courses is covered under the Professional and Short Courses Policy and Procedure.

**Delegations relevant to this procedure**

000030: Determine matters relating to the establishment and disestablishment of awards, and the variation of programs and courses, including pre-requisites, corequisites, assessment methods and requirements for completion of programs

000031: Determine matters relating to the establishment, disestablishment and variation of courses, including prerequisites, co-requisites, assessment methods and requirements for completion of courses

000032: Approve for publication as Orders in the Coursework Handbook, program and course requirements
Appendix D

Procedure: Specification of Program Requirements

Purpose
To ensure that wording for program requirements fits their purpose as legislative orders.

Procedure

1. A program requirement is an Order of the University and is written in a format appropriate for a legislative instrument.

2. All coursework Awards have program requirements published in the Handbook (http://programsandcourses.anu.edu.au).

3. Program requirements govern a program’s completion. Requirements refer to only prescribed and standard elements.

4. Program requirements are not used to explain choices and are not open to ambiguity or interpretation. Exceptional options requiring permission or other such variations are not included.

5. Program requirements are self-contained and:
   a. do not reference external materials including other programs;
   b. do not advise of the need to seek further advice from University staff or other sources; and
   c. do not require enrolment in additional, non-specified courses in order to complete compulsory courses.

6. The language used is plain, concise and formal.

7. Requirements are expressed in the terms of a unit value. Requirements are not expressed in number of courses, semesters of study etc.

8. The primary requirement is the total number of units needed for completion of the Program. All other requirements are expressed as a subset of this.

9. All unit values are expressed as an exact number or as a minimum/maximum.

10. Referencing broad groupings of courses is done by catalogue number; 1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, or 9000-level. References to ‘first year’, ‘second year’, ‘third year’, ‘later year’, ‘fourth year honours’ are not used as study patterns and intensities differ.
11. Requirements for undergraduate coursework do not refer to organisational units other than ANU or ANU Colleges.

12. Requirements for graduate coursework do not refer to organisational units other than ANU.

13. Program requirements use the templates provided in Table 1: Program Orders Requirements.

14. Subject areas using course alpha codes are used only where a review of all courses with the relevant alpha code has confirmed they are appropriate for the relevant program and consideration of similar courses assigned to other subject areas is demonstrated.

15. Program requirements that do not use this procedure including Table 1: Program Orders Requirements require endorsement of the Registrar.

16. A global requirement is one that/which….

17. A principal requirement is one that/which…

18. This procedure adheres to the definitions of compulsory and elective courses as laid out in the policy: Glossary - student policies and procedures.

Table 1: Program Requirements

<table>
<thead>
<tr>
<th>Global requirements</th>
<th>This requirement must be used where there are global unit values required. Global unit values apply across all other requirements. Requirements for majors, minors and specialisations must be self-contained and consist of both Global requirements and Principal requirements, and must not contain Hurdle requirements or Progression requirements. The Major and Minor subplans are undergraduate only. Subject Areas may be used in a Program Order only where a review of all courses with the relevant alpha code has confirmed they are appropriate for the relevant program and consideration of similar courses assigned to other Subject Areas has been undertaken.</th>
<th>The Award name [with Augmentation name] or Subplan name requires the completion of XXX units, of which: List global unit values by level, College or Subject Area here The XXX units must consist of: List Principal requirements here Example: The Master of Economic History requires the completion of 96 units, of which: A minimum of 60 units must come from completion of 8000-level courses The 96 units must consist of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This requirement must be used where there are no global unit values required.</td>
<td>The Award name or Subplan name requires the completion of XXX units, which must</td>
</tr>
</tbody>
</table>
Requirements for majors, minors and specialisations must be self-contained and consist of both Global requirements and Principal requirements, and must not contain Hurdle requirements or Progression requirements. The Major and Minor subplans are undergraduate only.

| Global unit values required by level | The word “may” must be used for maximum values and “must” must be used for minimum and exact values. The word “and” must be used to indicate that the limit applies to the sum of units where more than one level is listed. | [A maximum of / A minimum of] XX units [may / must] come from completion of XXXX-level [and YYYY-level] courses Examples: A maximum of 60 units may come from completion of 1000-level courses A minimum of 24 units must come from completion of 2000- and 3000-level courses |
| Global unit values required by College | This requirement must refer to the host College only. This requirement must be expressed as a minimum value only. | A minimum of XX units must come from completion of courses offered by the ANU College of XXXXXXXXXX Example: A minimum of 96 units must come from completion of courses offered by the ANU College of Business and Economics |
| Principal requirements | Use where there is exactly one compulsory course. | XX units from completion of ABCD2001 Course Title Example: 6 units from completion of ANTH8019 Practical Studies in Social Analysis |
|  | Use where all courses listed must be completed. The number of units required must be equal to sum of units from all listed courses. Where there is more than one | XX units from completion of the following compulsory courses: XXXX2001 Course Title YYYY4002 Course Title ZZZZ6003 Course Title |
compulsory course, all compulsory
courses must be listed together, except
to give effect to a progression
requirement (see ‘Split requirements’
below).
Prerequisite / Corequisite courses of
compulsory courses must also be
compulsory.
Courses incompatible with compulsory
courses must not also be listed in the
Orders
Do not give the list a description.
Do not give alternatives to compulsory
courses, eg:
XXXX2001
YYYY4002
ZZZZ6003 or ZZZZ8004

Example:
24 units from completion of the following
compulsory courses:
MATH1115 Mathematics and Applications 1
Honours
MATH1116 Mathematics and Applications 2
Honours
MATH2405 Maths Methods 1 Honours:
Ordinary Differential Equations and Advanced
Vector Calculus
MATH2406 Maths Methods 2 Honours: Partial
Differential Equations, Fourier Analysis and
Complex Analysis

| The total units available from |
| completion of courses in the listed |
| subject areas must be greater than total |
| units required. |
| Sufficient prerequisites and corequisites |
| to meet these requirements must be |
| available in the Principal requirements |
| of the plan for students to complete |
| without needing to undertake additional |
| courses. |
| Subject Areas (course alpha codes) |
| may be used in a Program Order only |
| where a review of all courses with the |
| relevant alpha code has confirmed they |
| are appropriate for the relevant |
| program and consideration of similar |
| courses assigned to other Subject |
| Areas has been undertaken. |

| Use where there is exactly one Subject |
| Area. |
| The total units available from |
| completion of courses in the listed |
| subject area must be greater than total |
| units required. |
| Sufficient prerequisites and corequisites |
| to meet these requirements must be |
| available in the Principal requirements |
| of the plan for students to complete |

| [A minimum of / A maximum of] XX units from |
| completion of courses from the following |
| subject areas: |
| XXXX Subject Area X |
| YYYY Subject Area Y |
| ZZZZ Subject Area Z |

Example:
A minimum of 24 units from completion of |
courses from the following subject areas: |
COMP Computer Science |
ENGN Engineering |
MATH Mathematics

| [A minimum of / A maximum of] XX units from |
| completion of courses from the subject area |
| XXXX Subject Area X |

Example:
A maximum of 12 units from completion of |
courses from the subject area LAWS Law |
without needing to undertake additional courses. Subject Areas may be used in a Program Order only where a review of all courses with the relevant alpha code has confirmed they are appropriate for the relevant program and consideration of similar courses assigned to other Subject Areas has been undertaken.

<table>
<thead>
<tr>
<th>A list description must be used. Where a list description is used, it must be used to identify a content topic or pedagogical function, eg “Regolith geology” or “Project courses”. The words “compulsory”, “core”, “elective”, “component”, and “advanced” must not be used in the list description. The total of units available from listed courses must be greater than the number of units required. Sufficient prerequisites and corequisites to meet these requirements must be available in the Principal requirements of the plan for students to complete without needing to undertake additional courses.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A minimum of XX units from completion of [description] courses from the following list: XXXX2001 Course Title YYYY4002 Course Title ZZZZ6003 Course Title Example: A minimum of 6 units from completion of genetics courses from the following list: BIOL3157 Bioinformatics and Functional Genomics BIOL3159 Analysis Tools for Population Genetics BIOL3161 Genomics and its Applications BIOL3204 Human Genetics Counterexample: A maximum of 12 units from completion of elective courses from the following list: ANTH8042 Migration, Refugees and Development ANTH8056 Introduction to Humanitarian Action LAWS8252 International Refugee Law STST8021 Intelligence and Security STST8027 Insurgency &amp; Counterinsurgency in an Age of Terror</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Multiple lists may be used as part of a single requirement List descriptions must be used to identify a content topic or pedagogical function, eg “Regolith geology” or “Project courses”. The words “compulsory”, “core”, “elective”, “component”, and “advanced” must not be used in the list descriptions.</th>
</tr>
</thead>
<tbody>
<tr>
<td>XX units from completion of courses from [one / N / any] of the following lists: List A description XXXX2001 Course Title XXXX6003 Course Title List B description YYYY2001 Course Title YYYY6003 Course Title Example: 6 units from completion of courses from one of the following lists:</td>
</tr>
<tr>
<td>Use where a course may/must be completed more than once.</td>
</tr>
<tr>
<td>Use where there is exactly one compulsory major.</td>
</tr>
<tr>
<td>Use where there is exactly one compulsory minor.</td>
</tr>
<tr>
<td>Use where there is exactly one compulsory specialisation.</td>
</tr>
<tr>
<td>A list description must be used. The words “compulsory”, “core”, “elective”, “component”, and “advanced” must not be used in the list description.</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>48 units from completion of one of the following core majors: Ceramics Furniture Gold and Silver Smithing Textiles</td>
</tr>
<tr>
<td>A list description must be used. The words “compulsory”, “core”, “elective”, “component”, and “advanced” must not be used in the list description.</td>
</tr>
<tr>
<td>24 units from completion of one of the following [description] minors: Minor A Minor B Minor C Example: 24 units from completion of one of the following policy minors: Climate Science and Policy Environmental Policy Forest Science and Policy</td>
</tr>
<tr>
<td>Principal Requirement or Global Unit Value here, which may contribute to meeting any other requirements</td>
</tr>
<tr>
<td>Genetics</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>BIOL3161 Genomics and its Applications</td>
</tr>
<tr>
<td>BIOL3204 Human Genetics</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Double counting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where students may freely elect between two sets of Principal requirements of different kinds, the words “Either” and “Or” must be used as specified over. To avoid ambiguity, no other words must be used.</td>
</tr>
<tr>
<td>Either:</td>
</tr>
<tr>
<td>Principal Requirement A</td>
</tr>
<tr>
<td>Principal Requirement B</td>
</tr>
<tr>
<td>Or:</td>
</tr>
<tr>
<td>Principal Requirement C</td>
</tr>
<tr>
<td>Not</td>
</tr>
<tr>
<td>Either:</td>
</tr>
<tr>
<td>Principal Requirement A</td>
</tr>
<tr>
<td>and:</td>
</tr>
<tr>
<td>Principal Requirement B</td>
</tr>
<tr>
<td>or:</td>
</tr>
<tr>
<td>Principal Requirement C</td>
</tr>
<tr>
<td>Example:</td>
</tr>
<tr>
<td>Either:</td>
</tr>
<tr>
<td>48 units from completion of the Latin Major</td>
</tr>
<tr>
<td>Or:</td>
</tr>
<tr>
<td>24 units from completion of the Latin minor</td>
</tr>
<tr>
<td>24 units from completion of courses from the subject area ANCH Ancient History</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Split requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use for hurdle Progression requirements before research components. Masters and embedded Honours Degrees only. Not available in Masters Degrees that may be in a flexible vertical double degree.</td>
</tr>
<tr>
<td>XX units from completion of the following coursework component:</td>
</tr>
<tr>
<td>List Principal requirements here</td>
</tr>
<tr>
<td>XX units from completion of the following research component:</td>
</tr>
<tr>
<td>List Principal requirements here</td>
</tr>
<tr>
<td>Students must achieve a minimum XX% weighted average mark in the coursework component to continue to the research component.</td>
</tr>
<tr>
<td>Example:</td>
</tr>
<tr>
<td>72 units from completion of the following coursework component:</td>
</tr>
<tr>
<td>72 units from completion of the following compulsory courses:</td>
</tr>
<tr>
<td>[…]</td>
</tr>
<tr>
<td>24 units from completion of the following research component:</td>
</tr>
<tr>
<td>24 units from completion of ENGN8180 Master Thesis Project, which must be completed more than once, in consecutive semesters</td>
</tr>
<tr>
<td>Students must achieve a minimum 75%</td>
</tr>
<tr>
<td>Progression requirements</td>
</tr>
</tbody>
</table>

Use for progression requirements effective after a specified point. Not available in Graduate Certificate or Graduate Diploma, Not available in Masters Degrees that may be in a flexible vertical double degree. | Students must achieve a minimum XX% weighted average mark in the first ZZ units of courses attempted in order to remain enrolled in the Award name. If the total number of units attempted exceeds ZZ in the same teaching period in which the ZZth unit is attempted, exactly ZZ units will be used in the calculation of the weighted average mark with units from the course with the highest mark applied first followed by further units from courses in descending order of marks. Example: Students must achieve a minimum 65% weighted average mark in the first 24 units of courses attempted in order to remain enrolled in the Master of Arts. If the total number of units attempted exceeds 24 in the same teaching period in which the 24th unit is attempted, exactly 24 units will be used in the calculation of the weighted average mark with units from the course with the highest mark applied first followed by further units from courses in descending order of marks. |
<table>
<thead>
<tr>
<th>Progression destination requirements</th>
<th>Use where students who do not meet hurdle or progression requirements are transferred to a specific destination Award.</th>
<th>Students who do not achieve a minimum of XX% weighted average mark will be transferred to the Award name. Example: Students who do not achieve a minimum of 80% weighted average mark will be transferred to the Bachelor of Arts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undergraduate specialisation co-requisite</td>
<td>Undergraduate specialisations must be undertaken in conjunction with one or more majors.</td>
<td>This specialisation must be taken in conjunction with the co-requisite name major Example: This specialisation must be taken in conjunction with the International Relations major</td>
</tr>
<tr>
<td>Electives</td>
<td>Use only where students’ choice of courses is restricted only by ‘Global requirements’. These are the only lists of courses which may be identified as electives (see Principal requirements)</td>
<td>XX units from completion of elective courses offered by ANU Example: 48 units from completion of elective courses offered by ANU</td>
</tr>
</tbody>
</table>

**Delegations relevant to this procedure**

000032: Approve for publication as Orders in the Coursework Handbook, program and course requirements
Appendix E

Procedure: Titles, Structure and Features of Coursework Awards and Subplans

Purpose
To outline requirements of coursework awards. These requirements are used when assessing new, amended and reviewed coursework Awards.

Procedure

1. The University complies with the qualification type criteria, type descriptors and pathways specified in the Australian Qualifications Framework (AQF)

Titles

2. All Award titles indicate the qualification category and accurately represent the field of study or discipline.
   a. The qualification category is capitalised.
   b. The field of study is capitalised.
   c. Titles:
      i. clearly identify the level, broad disciplinary content, and (where applicable) professional orientation of the program in such a way that they are readily recognised by prospective students, employers, professional bodies and other stakeholders;
      ii. are consistent with nomenclature that has national and international acceptance, if it exists;
      iii. are sustainable in the long term; and
      iv. are consistent across a suite of related Awards.

3. For all Awards, the separator 'of' is used between the qualification category and the discipline area, e.g. Bachelor of Chemistry, Graduate Certificate of Chemistry, Master of Chemistry.

4. If an Award is a double degree the two degrees must be separated by a ‘/’ (forward slash) in both the full name and the abbreviation.

5. Information in parentheses is used in the following cases only:
a. For four-year AQF Level 8 Bachelor Honours Degrees, “(Honours)” is to be used to qualify the level of the Award;

b. For one-year AQF Level 8 Bachelor Honours Degrees, “(Honours)” is to be used to qualify the level of the Award;

c. For AQF Level 9 Master Degrees (Coursework), “(Advanced)” may be used to qualify the level of the Award.

6. In full Award titles, ‘and’ is represented by the text ‘and’, not by an ampersand (‘&’).

7. Titles for Awards that articulate into each other are consistent.

8. Including any augmentations or information in parentheses, Award nomenclature is no greater than 79 characters in total length, including spaces, to allow appropriate display on a graduand’s testamur across no more than three lines.

9. All Graduate Coursework programs comply with the nomenclature detailed in Table 1: Graduate Coursework Nomenclature. Compliance will be considered at the time of proposal, amendment, or review.

10. The names of Awards, majors, minors, specialisations, and augmentations, are not revised after introduction except in cases of administrative error such as a misspelling of a term. All other changes to names are to be effected by disestablishment of the former offering and introduction of a new Award, major, minor, specialisation, or augmentation with the new name.

11. Honorary degrees are non-AQF qualifications and do not entitle the recipient to call themselves ‘Doctor’.

Post-nominals

12. A Post-nominal is the shortened way for graduands to refer to attainment of an Award. Graduands may reference a post-nominal in letterhead, business cards, and other official communications. When used in practice, ‘ANU’ may be placed after the post-nominal in italics.

13. A Post-nominal is created by compiling a number of abbreviations, referencing both the type of Award and the discipline in which it has been studied.

14. Post-nominals are meaningful, easily recognisable, free from possible negative connotations and comply with the list of approved abbreviations detailed under Table 2: Award Abbreviations and Table 3: Discipline Abbreviations.

15. New post-nominals not detailed under Table 2: Award Abbreviations and Table 3: Discipline Abbreviations are approved by Academic Board following endorsement.
from the Registrar, Student Administration, and will comply with the following principles:

a. An abbreviation for a single discipline/field of study will not normally exceed six characters.

b. The same abbreviation will not be used for unrelated disciplines.

c. If an accepted international form has been established, this will be used.

d. Multiple abbreviations for the one discipline/field of study must not be used.

e. Post-nominals will not include spaces or punctuations between any letters.

f. The first letter of each abbreviated word must be capitalised.

g. Post-nominals must use no more than 20 characters in total.

h. ‘And’ should be represented by an ampersand (‘&’) not by the text ‘and’.

i. Post-nominals will not include parentheses, brackets or other delimiting characters such as dashes.

16. Post-nominals for an Award are not greater than 20 characters in total. Where compliance with the abbreviations in Table 3 would result in a post-nominal of greater than 20 characters, an alternate abbreviation must be submitted for endorsement by the Registrar and approval by Academic Board.

17. Table 4 details exceptions to standard approved post-nominals as compiled from tables 2 and 3, on the basis of international standards.

Features

18. New Awards require an expected commencing EFTSL of 5 supported by independent market research. Where the commencing EFTLS is expected to be less than 5 justification must be provided to the satisfaction of the endorsing and accrediting authorities.

19. Total units required and Full-Time-Equivalent (FTE) study durations for all Single Awards are determined by Table 5.

20. Vertical Double Degrees are:

   a. Bachelor Degree / Masters Degree
   b. Bachelor Degree / Masters (Advanced) Degree
   c. Bachelor Degree / Masters (Extended) Degree
21. Double Bachelor Degrees are:
   a. Bachelor Degree / Bachelor Degree
   b. Bachelor Degree / Embedded Honours Degree
   c. Bachelor Degree / Undergraduate Research Degree
   d. Embedded Honours Degree / Embedded Honours Degree
   e. Embedded Honours Degree / Undergraduate Research Degree
   f. Undergraduate Research Degree / Undergraduate Research Degree

22. Double Masters Degrees are:
   a. Masters Degree / Masters Degree

23. Total units required and Full-Time-Equivalent (FTE) study durations for all Double Degrees are determined by Table 7.

24. Pathways programs, early exit points and progression requirements of all Single Awards are determined by Table 5.

25. Pathways of Double Degrees are the same as the lower of the two component Single Awards.

26. Students may exit from a double degree through graduating from a single degree.

27. Subplans (Majors, Minors and Specialisations) which may be included in the study requirements of all Single Awards are determined by Table 6.

28. Subplans (Majors, Minors and Specialisations) which may be included in the study requirements of Double Degrees are the same for as each of the component Single Awards.

29. Necessary features of all Single Awards are determined by Table 6.

30. Necessary features of Double Degrees are the same as the two component Single Awards with exceptions determined by Table 7.

31. Necessary features for all Subplans are determined by Table 8.

32. Exceptions to total units, FTE study duration, pathways, exit points, subplans, progression requirements and necessary features are approved by Academic Board only with significant justification, consisting of:
   a. Evidenced justification of how and why the standard model is not suited to the target student body, and one of the following:
b. Reference to international standards; and/or

c. Professional accreditation requirements.

**Mode of delivery**

33. Program modes of delivery are defined in Table 9.

34. A program may simultaneously be online, multimodal and in person.

35. Where a program can be taken through a variable combination of in-person and online courses:

   a. It is represented as having multiple delivery modes, e.g. ‘in person or multimodal’

   b. It must have an ‘in-person’ mode in order to be registered on CRICOS.

36. Where a program is ‘in person’ but has one or more compulsory courses that must be taken online, students are advised of this on the Programs and Courses website and any marketing materials containing the text that “This program may be studied in person, which means that the significant majority of units (75% or more) come from in-person courses, however one or more compulsory courses must be taken online.” The online compulsory courses are then listed.

37. Monitoring of the enrolment of international student visa holders is undertaken through either restrictions on enrolment actions for online courses or through implementation of an endorsed reporting and monitoring methodology.

38. A program with multiple modes of delivery has study requirements with the same basic structural elements for each delivery mode, but alternative courses may populate these elements if necessary. Different basic structural elements may be possible so long as learning outcomes are explicitly assured across delivery modes through a detailed mapping.

39. Distinct academic plans are used for Awards that have different study requirements for different modes of delivery and these will have distinct pages on the Programs and Courses website.

40. Plans leading to the same Award have the same learning outcomes.

41. Variance in any of the following may require an alternate program:

   a. CSP or HELP eligibility

   b. Course start dates

   c. Study durations

   d. Academic calendars
e. Term load limits

42. Mode of delivery does not determine eligibility for course scheduling in trimesters or adjustment of the Student Services and Amenities Fee.
<table>
<thead>
<tr>
<th>Award Type</th>
<th>Example</th>
<th>Requirement</th>
<th>Comments</th>
<th>Formal Documentation</th>
<th>Coding</th>
<th>Orders</th>
<th>CRICOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad Field Named Award</td>
<td>Master of Arts</td>
<td></td>
<td></td>
<td>Testamur Transcript AHEGS</td>
<td>Unique program code</td>
<td>One entry</td>
<td>One</td>
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<td>Narrow Field Named Award</td>
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<td>48 units or greater in the narrow field</td>
<td>For Awards of less than 48 units, 100% of the Award must be in the narrow field</td>
<td>Testamur Transcript AHEGS</td>
<td>Unique program code</td>
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<td>Broad Field Named Award with Augmentation</td>
<td>Master of Arts in International Relations</td>
<td>At least 36 units in the field contained in the augmentation</td>
<td>For Awards of less than 48 units, at least 75% of the Award must be in the augmentation</td>
<td>Testamur Transcript AHEGS</td>
<td>Each augmentation is a separate plan in the same program The default plan does not have an augmentation</td>
<td>One for the broad field named Award, shared between Augmentations</td>
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<td>Graduate Specialisation</td>
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<td>24 units in the field</td>
<td>Should not be used in an Award with augmentation. Some consistency must exist across students exiting an Award with various specialisations otherwise it should be a Narrow Field Named Award.</td>
<td>Transcript AHEGS</td>
<td>Sub-plan</td>
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<td>Bracketed Award</td>
<td>Master of Arts (Advanced)</td>
<td>Only to be used where the information in brackets qualifies the level of the Award but does not describe the field/s of study.</td>
<td>The current utilisation of Master of Arts (Field of Study) to denote an Advanced Award needs to be revised to be either Master of Arts (Advanced), Master of [Field of Study] (Advanced), or Master of Arts in [Field of Study] (Advanced) Not available for Graduate Certificate and Graduate Diplomas.</td>
<td>Testamur Transcript AHEGS</td>
<td>Unique plan code that sits within the standard, non ‘advanced’ program</td>
<td>Unique Programs and Courses entry for the ‘Advanced’ plan</td>
<td>Unique CRICOS</td>
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Table 2: Award Abbreviations

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Table 3: Discipline Abbreviations

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**Table 4: Approved Exceptions to Tables 2 and 3 on the basis of international standards**

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<td>Subplans include only Majors and Minors.</td>
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<td>Subplans include only Majors, Minors and Specialisations (Undergraduate).</td>
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<td>Includes at most 60 units from 1000-level courses</td>
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<td>Includes at least 48 units of electives.</td>
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</tr>
<tr>
<td>Embedded Honours Degrees</td>
<td>Includes at most 60 units of 1000-level courses</td>
</tr>
<tr>
<td></td>
<td>Includes at least 48 units of electives.</td>
</tr>
<tr>
<td></td>
<td>Specifies at least 48 units of courses as Honours 4000-level courses, at a minimum of AQF Level 8. The Delegated Authority may approve variations on a student-by student basis. For four-year AQF Level 8 Bachelor Honours Degrees, these courses may be completed in the third year and/or fourth year.</td>
</tr>
<tr>
<td></td>
<td>Includes both research training and the application of that training in one or more research projects to ensure that students develop “an advanced knowledge of the research principles and methods and theoretical concepts of their discipline/s or specialisation such that they can design and implement research projects that lead to the development of new understandings or that provide solutions to complex problems.”</td>
</tr>
<tr>
<td></td>
<td>• The research training minimum in an Honours plan must be equivalent to 12 units of summative assessment</td>
</tr>
</tbody>
</table>
- The research project minimum in an Honours plan must be equivalent to 12 units of summative assessment tasks at a minimum of AQF Level 8. To serve as a potential
- PhD pathway the research project in an Honours plan must comply with the recommendations of the ANU PhD Pathways Working Group as approved by Academic Board.
- Research training and research project/s may be in courses dedicated solely to research training or a research project, or may be embedded as one component in each of multiple courses.

At least 25% of the summative assessment, or a combination of both (i) a minimum of 15% summative assessment and (ii) formalized progress monitoring involving staff other than the supervisor or Honours convenor, is to be completed in the first half (in terms of duration) of an Honours plan.

The final Honours mark includes all courses identified as Honours courses, and for each plan a single method of calculation that gives NCN and WN a nominal mark of zero is approved by Academic Board. Failed Honours courses are included in the calculation of the final honours mark. Subsequent attempts of previously-passed Honours courses are not included in the calculation.

The University Honours grading schema is used for the final Honours grade.

Includes progression requirements.

Subplans include only Majors, Minors, Specialisations (Undergraduate) and Specialisations (Honours).

<table>
<thead>
<tr>
<th>One Year Honours Degree (3+1 Honours)</th>
<th>Consists of 48 units of 4000-level courses, at a minimum of AQF Level 8. The Delegated Authority may approve variations on a student-by student basis.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Includes both research training and the application of that training in one or more research projects to ensure that students develop “an advanced knowledge of the research principles and methods and theoretical concepts of their discipline/s or specialisation such that they can design and implement research projects that lead to the development of new understandings or that provide solutions to complex problems.”</td>
</tr>
<tr>
<td></td>
<td>- The research training minimum in an Honours plan must be equivalent to 12 units of summative assessment tasks at a minimum of AQF Level 8.</td>
</tr>
<tr>
<td></td>
<td>- The research project minimum in an Honours plan must</td>
</tr>
</tbody>
</table>
be equivalent to 12 units of summative assessment tasks at a minimum of AQF Level 8. To serve as a potential

- PhD pathway the research project in an Honours plan must comply with the recommendations of the ANU PhD Pathways Working Group as approved by Academic Board.
- Research training and research project/s may be in courses dedicated solely to research training or a research project, or may be embedded as one component in each of multiple courses.

The final Honours mark includes all courses taken towards the Honours plan and is calculated as \( \frac{\sum (\text{mark} \times \text{units})}{\sum \text{units}} \), giving NCN and WN a nominal mark of zero. Subsequent attempts of previously-passed courses are not included in the calculation.

Moderation of marks may apply to individual courses, but not to the final Honours mark.

The University Honours grading schema is used for the final Honours grade.

Does not include progression requirements.

Subplans include only Specialisations (Honours).

<table>
<thead>
<tr>
<th>Undergraduate Research Degree: Bachelor of Philosophy (Honours)</th>
<th>Includes at most 60 units of 1000-level courses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Includes 48 units of 4000-level courses.</td>
</tr>
<tr>
<td></td>
<td>Includes at least 48 units of electives.</td>
</tr>
</tbody>
</table>

For PhB programs that typically follow the 3+1 honours model, the program should include a minimum of:
- Years 1-2 24u ASE or ASC
- Year 3 12u ASC
- Year 4 24u ASC

For R&D or other programs that typically follow the embedded honours model, the program should include a minimum of:
- Years 1-2 24u ASE or ASC
- Year 3 12u ASC
- Year 4 12u ASC

All students have the opportunity to complete one of the following:

- an internship in industry or other organisation with research capacity (such as government or NGOs), or
- an international experience at a university with a reputation for research in the students’ field of study
- 12u of the ANU minor in leadership and research
The research training requirements for this program match those outlined for the four-year AQF Level 8 Bachelor Honours Degrees

The final Honours mark includes all courses taken towards the plan and is calculated as $\Sigma (\text{mark} \times \text{units}) / \Sigma \text{units}$, giving NCN and WN a nominal mark of zero.

Moderation of marks may apply to individual courses, but not to the final Honours mark.

The University Honours grading schema is used for the final Honours grade.

Includes progression requirements.

Subplans include only Majors, Minors, Specialisations (Undergraduate) and Specialisations (Honours).

<table>
<thead>
<tr>
<th>Undergraduate Research Degree: Research and Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes at most 60 units of 1000-level courses</td>
</tr>
<tr>
<td>Includes at least 48 units of electives.</td>
</tr>
</tbody>
</table>

The structure of ANU undergraduate research programs should include clearly identifiable components that provide the research experience. These components should be advanced study courses (ASC) that are stand-alone research projects, and advanced study extension (ASE) courses that are standard courses with an additional module for PhB or R&D cohorts.

For PhB programs that typically follow the 3+1 honours model, the program should include a minimum of:

- Years 1-2 24u ASE or ASC
- Year 3 12u ASC
- Year 4 24u ASC

For R&D or other programs that typically follow the embedded honours model, the program should include a minimum of:

- Years 1-2 24u ASE or ASC
- Year 3 12u ASC
- Year 4 12u ASC

All students have the opportunity to complete one of the following:

- an internship in industry or other organisation with research capacity (such as government or NGOs), or
- an international experience at a university with a reputation for research in the students' field of study
- 12u of the ANU minor in leadership and research
The research training requirements for this program match those outlined for the four-year AQF Level 8 Bachelor Honours Degrees.

The final Honours mark includes all courses identified as Honours courses, and for each plan a single method of calculation that gives NCN and WN a nominal mark of zero is approved by Academic Board.

Includes progression requirements.

Subplans include only Majors, Minors, Specialisations (Undergraduate) and Specialisations (Honours).

<table>
<thead>
<tr>
<th>Degree Level</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Graduate Certificate** | Narrow Field Awards have 24 units (0.5 EFTSL) in the specific discipline or multi-disciplinary field named in the Award title.  
Broad field Graduate Certificates with Augmentations have a minimum of 18 units (0.375 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Augmentation.  
Does not include progression requirements.  
Subplans include only Specialisations (Graduate). |
| **Graduate Diploma**   | Narrow Field Graduate Diplomas have 48 units (1 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Award title.  
Broad Field Graduate Diplomas with Augmentations have a minimum of 36 units (0.75 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Augmentation.  
Does not include progression requirements.  
Subplans include only Specialisations (Graduate). |
| **Masters Degree**     | Maximum 24 units of course credit from completion of a cognate Bachelor Degree or cognate Graduate Certificate (not cumulative)  
Maximum 48 units of course credit from completion of a cognate Bachelor Honours or cognate Graduate Diploma (not cumulative)  
Includes minimum research training of 50% of 12 units of summative assessment tasks at AQF Level 9 in courses dedicated solely to research training or embedded as one component in each of one or more courses. |
| **Masters (Advanced) Degree** | Narrow Field Masters Degrees have 48 units (1 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Award title.

Broad Field Masters Degrees with Augmentations have a minimum of 36 units (0.75 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Augmentation, and a common structure across all Augmentations of the same Broad Field Award.

May include progression requirements.

Subplans include only Specialisations (Graduate).

Maximum 24 units of course credit from completion of a cognate Bachelor Degree or cognate Graduate Certificate (not cumulative)

Maximum 48 units of course credit from completion of a cognate Bachelor Honours or cognate Graduate Diploma (not cumulative)

Includes a thesis or research project of 24 units at AQF Level 9 in a course solely dedicated to a thesis or research project.

Includes minimum research training of 12 units of summative assessment tasks at AQF Level 9 in courses dedicated solely to research training or embedded as one component in each of one or more courses.

Narrow Field Masters Degrees have 48 units (1 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Award title.

Broad Field Masters Degrees with Augmentations have a minimum of 36 units (0.75 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Augmentation, and a common structure across all Augmentations of the same Broad Field Award.

May include progression requirements.

Subplans include only Specialisations (Graduate).

| **Masters (Extended) Degree** | Narrow Field Masters Degrees have 48 units (1 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Award title.

Broad Field Masters Degrees with Augmentations have a minimum of 36 units (0.75 EFTSL) of courses in the specific discipline or multi-disciplinary field named in the Augmentation, and a common structure across all Augmentations of the same Broad Field Award.

May include progression requirements.

Subplans include only Specialisations (Graduate). |
specific discipline or multi-disciplinary field named in the Augmentation, and a common structure across all Augmentations of the same Broad Field Award.

Does not include progression requirements.

Subplans include only Specialisations (Graduate).

Table 7: Study loads and necessary features of Double Degrees

<table>
<thead>
<tr>
<th>Double Degree</th>
<th>Units required</th>
<th>EFTSL</th>
<th>FTE duration</th>
<th>Exceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Double Degree</td>
<td>192-288</td>
<td>4-6</td>
<td>4-6 years</td>
<td>Includes at least 24 units of electives Masters Degree component does not include progression requirements.</td>
</tr>
<tr>
<td>Double Bachelor Degree</td>
<td>192-288</td>
<td>4-6</td>
<td>4-6 years</td>
<td>Each component includes at most 36 units of 1000-level courses where the single degree is three years long (144 units) and at most 48 units of 1000-level courses where the single degree is four years long (192 units) No electives included</td>
</tr>
<tr>
<td>Double Masters Degree</td>
<td>144</td>
<td>3</td>
<td>3 years</td>
<td>No electives included</td>
</tr>
</tbody>
</table>

Table 8: Study load and necessary features of Subplans (Majors, Minors and Specialisations)

<table>
<thead>
<tr>
<th>Subplan</th>
<th>Units required</th>
<th>EFTSL</th>
<th>FTE duration</th>
<th>Necessary features</th>
</tr>
</thead>
</table>
| Major   | 48             | 1     | 1 year       | Consists of 1000- to 3000-level courses, or 1000- to 4000-level courses where:  
• the major may be completed without completing 4000-level courses or;  
• the major is exclusive to an Embedded Honours Degree or Undergraduate Research Degree. |
| Minor (Undergraduate) | 24 | 0.5 | 0.5 years | Consists of 1000- to 3000-level courses, or 1000- to 4000-level courses where:  
- the minor may be completed without completing 4000-level courses or;  
- the minor is exclusive to an Embedded Honours Degree or Undergraduate Research Degree.  
No admission requirements  
May be exclusive to specified Awards  
May not be available in specified Awards  
Does not include progression requirements |
|-----------------------|----|-----|-----------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Specialisation        | 24 | 0.5 | 0.5 years | Consists of 2000- and 3000-level courses, or 2000- to 4000-level courses where:  
- the specialisation may be completed without completing 4000-level courses or;  
- the specialisation is exclusive to an Embedded Honours Degree or Undergraduate Research Degree.  
Require at least one co-requisite Major.  
May be exclusive to specified Awards |
| Specialisation (Graduate) | 24 | 0.5 | 0.5 years | Consists of 6000- to 8000-level courses  
No admission requirements  
May be exclusive to specified Awards  
May not be available in specified Awards  
Does not include progression requirements |
|--------------------------|----|-----|-----------|--------------------------------------------------------------------------------|
| Specialisation (Honours) | 48 | 1   | 1 year    | Consists of 4000-level courses  
Specific admission requirements  
Both research training and the application of that training in one or more research projects as specified in Table 5.  
Before approving proposals relating to Honour Specialisations, Academic Board considers, amongst other things, the sustainability, distinctiveness, and role as a pathway of the Specialisation  
Does not include progression requirements |

Table 9: Definitions of program mode of delivery

<table>
<thead>
<tr>
<th>Mode of Delivery</th>
<th>Description</th>
<th>Commonwealth Reported Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>A program designed so that students may choose a sequence of courses meeting the full study requirements, such that all courses are online. The full study requirements are those published on P&amp;C</td>
<td>External</td>
</tr>
<tr>
<td>Multimodal</td>
<td>A program designed so that students may choose a sequence of courses meeting the full study requirements, such that some units come from</td>
<td>Multimodal</td>
</tr>
<tr>
<td>completion of in-person courses but these are less than a significant majority (less than 75%) of the total units required. The full study requirements are those published on P&amp;C.</td>
<td>In Person</td>
<td>A program designed so that students may choose a sequence of courses meeting the full study requirements, such that a significant majority of units (75% or more of the total) come from completion of in-person courses. The full study requirements are those published on P&amp;C.</td>
</tr>
</tbody>
</table>
Procedure: Structure and Features of Coursework Courses

Purpose

To outline requirements of courses and course structures that form part of programs. Professional and Short Courses are covered under the Professional and Short Courses Policy and Procedure.

Procedure

Course Ownership

1. The Academic Organisation (AO) indicates the area (School/Department/Centre) responsible for a course.
2. The Academic Group indicates the College under which the course is administered.
3. A College approves changes to courses it administers.
4. A College may advise on courses where cross-collaboration is required.
5. In the case of joint ownership the College that is listed first approves any changes, with the College listed second required to endorse proposals prior.

Course Alpha Codes

6. Alpha codes for courses are University-wide, discipline based codes, and are not exclusive to particular programs, contractual arrangements, or organisational structures.
7. New alpha codes for courses require the approval of the Registrar.
8. A request is submitted to the Registrar by the relevant Associate Dean and specifies:
   a. The four digit alpha code requested;
   b. The formal discipline description;
   c. A brief explanation for its introduction
   d. An undertaking that the code does not conflict with alpha codes currently in use across the University; and
e. That other areas of the University that may have an interest have also been consulted.

9. The Registrar considers the request on the basis of the above points and also with regards to whether the new alpha code is:
   a. Meaningful to students;
   b. Discipline based rather than intended to be specific to a particular program, plan, or contractual arrangement, or reflecting organisational structures; and
   c. Not in conflict with existing and historical alpha codes

10. An outcome is provided within 14 days of all required information being received.

Course numeric codes

11. Courses have numeric codes consistent with the use and features in Table 1.

12. Where an Honours plan consists of more than one course, an administrative shell will be created to enable the award of a final Honours mark and class of Honours. There should be no more than one such shell for each College for “+1 year” Honours plans. Each College’s default shell will be coded HONS4XXX, with the second digit indicating the College. Where approved by Academic Board on the basis of justification based on academic or professional accreditation reasons, there may be separate shells for each embedded Honours program.

Co-taught courses

13. A co-taught course is where two or more courses share the same teaching events.

14. Co-taught courses are incompatible with each other unless they contain topics, in which case the co-taught topics are incompatible with each other

15. Possible combinations of levels for co-taught courses are in Table 1.

16. Each version of a co-taught course has learning outcomes and assessment (including standards and rubrics) that are at a minimum appropriate to the relevant AQF level of the program in which the course is included.

17. In addition to any shared teaching events, small group activities may be organised separately if academically appropriate and designed for the expected learning outcomes of each cohort.

18. Separate course outlines are produced for all versions, emphasising differentiated learning outcomes, assessment and small group activities.
19. Students are informed in the course outline that it is a co-taught course. Where courses include both an undergraduate and graduate cohort, course outlines include the wording ‘graduate students attend joint classes with undergraduates but are assessed separately’.

20. Where colleges appoint class representatives, all co-taught instances are invited to be represented.

Course Requisites

21. Expectations of prior skills and knowledge for students to be able to achieve the learning outcomes are communicated as “assumed knowledge”.

22. Courses have requisites where:
   a. It is likely that students will fail the course if they have not completed specified prior courses, achieved a specified GPA or completed a specified number of prior units; or
   b. Limited resources or course design make it unfeasible for the course to be offered to students other than those undertaking a specific plan.

23. Requisites can be based on one or more of the following:
   a. Plans;
   b. Number of units completed;
   c. Courses; and
   d. GPA.

24. Requisites can require prior completion (prerequisite) or concurrent completion (corequisite) of a requirement, or that a requirement has not been completed (incompatibility).

25. Where courses are offered in sequence, a course requisite is the prior course and does not duplicate all requisites of the prior course.

26. The requisite for all 4000-level Honours courses is:
   a. Enrolment in relevant Honours plan(s); or
   b. With “Permission of the Convenor”; or
   c. Prior 4000-level Honours courses where a study sequence is required.

Other expectations are communicated as “assumed knowledge”.

27. If a requisite is too complex or inappropriate for a system-based formula, enrolment is limited by permission (department consent).
28. Permissions is not used where it is possible to restrict enrolment using requisites.

**Student Workload and Units**

29. The typical student workload is 130 hours per 6 unit course, while acknowledging that students learn at different rates. This includes time spent in scheduled classes and self-directed study time, including any preliminary readings, assignments, and examination preparation.

30. A student enrolled in units totalling 48 units represents 1 EFTSL. 6 ANU units corresponds to 7.5 European Credit Transfer (ECTS) credits.

31. The standard unit value of courses at ANU is 6. Courses worth multiples of 3 (e.g. i.e. 9, 12, 15, 18, 21, 24) may also be permitted to meet professional accreditation or clinical requirements, or to support research training.

32. Where courses are offered in multiples of 3 units but not 6 units (e.g. i.e. 3, 9, 15), further courses within the discipline must be available to students within the same session (e.g. Summer, Semester 1, Autumn) such that a student can enrol in a total number of units that is divisible by 6.

33. Where courses are offered in multiples of 3 units but not 6 units (e.g. i.e. 3, 9, 15), student progress is monitored to ensure program completion within the full-time duration of the program with the exact unit value set out in the Program Orders and without overloading.

34. Where endorsed by the Deputy Vice-Chancellor (Academic) and Registrar and approved by Academic Board based on significant academic and business cases, courses delivered completely online in a trimester or non-standard session model may be 8 units.

35. Zero-unit courses are permitted where an activity has to be undertaken by a student as a progression requirement or prerequisite to undertake future coursework, or the courses are a requirement to practice in a profession (e.g. Work Experience in Industry (WEI)).

**Course topics**

36. Where the title of a course does not provide a meaningful description of the content of a course, either:

   a. For courses in which the same content is delivered to each student enrolled in a topic (typically, lecture or seminar based courses), a topic is assigned to that course before students can enrol; or
b. For courses in which the topic is not pre-set and each student negotiates their own topic (for example thesis, readings, project, and internship courses), a topic is entered through use of a transcript note for each student at the time that the grade is entered for the course, apart from in cases where the grade is KU – “Continuing Course” where the topic is entered at the time of entering the final result.

37. Topics assigned describe the content of that offering of the course.

38. Where topics are to be used repeatedly in consecutive sessions or years the College Education Committee must have reviewed the topic and considered the creation of a standalone course instead within the last 5 years.

39. Where a topic has not been offered in a prior session nor the previous year, the offering is not required to be approved by College’s Education Committee.

40. Each intersection of academic organisational unit, discipline alpha code, numeric level (e.g. 1000 level, 2000 level, etc.), unit value, and learning outcomes only has one course which may be offered multiple times with multiple topics assigned.

Repeat enrolment and double-counting

41. Students may retake a successfully completed course if it has a different topic assigned.

42. Students may retake a successful completed course if it has a result of “KU – Continuing Course”.

43. A student enrolled in two honours plans may enrol in the same thesis course twice but must write on a different topic each time. Any material common to the two theses must be appropriately quoted and cited as common to the two theses in the thesis that is submitted second.

44. Unless program requirements indicate that a course or courses may be double counted, for both single and combined degrees a single course cannot satisfy multiple sections of the program requirements.

Course Learning Outcomes

45. All courses have a list of numbered learning outcomes.

46. Learning outcome statements follow the standard stem: “Upon successful completion of this course, students will have the knowledge and skills to:”
Course Indicative Assessment

47. All courses have a list of indicative assessment items consisting of at least
   a. the type of assessment (e.g. presentation, essay)
   b. scope (e.g. 30 minutes, 3000 words)
   c. the contribution of the assessment to the learning outcomes and overall
      grade

48. Coursework theses are exempt from the Student Assessment (Coursework) Policy
   and Procedure sections “Assessment Task Submission” and “Late Assessment
   Task Submission” and instead follow the requirements in the relevant Course
   Outline.

49. Coursework theses are consistent with the practice of HDR theses with regard to
   the use of text-matching software.

Graduate Studies Select Classifications

50. All graduate coursework courses (6000, 7000 and 8000 level) have a Graduate
    Studies Select Classification unless requisites for a course restrict enrolments to a
    specific plan.

51. The classifications are transitional, advanced, specialist and research, and are
    described in Table 2.

Course Mode of Delivery

52. Course modes of delivery are defined in Table 3.

53. Each course may be ‘online’, ‘in person’ or ‘online or in person’, though a scheduled
    class may only be either ‘online’ or ‘in person’, not both.

54. Curriculum documentation demonstrates alignment between learning outcomes,
    learning opportunities and assessment such that there is no inherent difference in
    outcomes or disadvantage to students studying in either mode. This information is
    made available to students in Programs & Courses, and in the Course Outline.

55. Courses that are available as both in-person and online offerings share the same
    course code with the mode of delivery differing between classes. Learning
    outcomes and total workload are the same between the classes.

Table 1: Use, features and co-teaching options of course levels

<table>
<thead>
<tr>
<th>Course</th>
<th>Use</th>
<th>Features</th>
<th>Co-teaching</th>
</tr>
</thead>
</table>

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<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>Introductory undergraduate courses that students typically undertake in their first year of full-time study</td>
<td>No GSS classification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6000 level</td>
</tr>
<tr>
<td>2000</td>
<td>Undergraduate courses that students typically undertake in their second year of full-time study</td>
<td>No GSS classification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6000 level</td>
</tr>
<tr>
<td>3000</td>
<td>Advanced undergraduate courses that students typically undertake in their third year of full-time study</td>
<td>No GSS classification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6000 level</td>
</tr>
<tr>
<td>4000</td>
<td>Honours year courses</td>
<td>No GSS classification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8000 level</td>
</tr>
<tr>
<td>5000</td>
<td>Administration courses, e.g. outgoing exchange and cross-institutional enrolment.</td>
<td>No GSS classification</td>
</tr>
<tr>
<td>6000</td>
<td>Graduate courses that are co-taught with undergraduate courses</td>
<td>Possible GSS classifications:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transitional;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced; Specialist.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 level</td>
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<tr>
<td></td>
<td></td>
<td>2000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6000 level</td>
</tr>
<tr>
<td>7000</td>
<td>Graduate courses, including Masters Degree (Coursework) thesis and research project courses</td>
<td>Possible GSS classifications:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transitional;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced; Specialist;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Research.</td>
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<tr>
<td></td>
<td></td>
<td>Research projects of less than 24 units are referred to as research projects and not “Thesis”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8000 level</td>
</tr>
<tr>
<td>8000</td>
<td>Graduate courses, including Masters Degree (Coursework) thesis and research project courses</td>
<td>Possible GSS classifications:</td>
</tr>
<tr>
<td>(to</td>
<td></td>
<td>Transitional;</td>
</tr>
<tr>
<td>8899)</td>
<td></td>
<td>Advanced; Specialist;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Research.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Research projects of less than 24 units are referred to as research projects and not “Thesis”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7000 level</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8000 level</td>
</tr>
</tbody>
</table>

Table 2: Graduate Studies Select classifications

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description</th>
</tr>
</thead>
</table>

RSCS Curriculum Development Committee Agenda 5/2016
<table>
<thead>
<tr>
<th>Mode of Delivery</th>
<th>Description</th>
<th>Commonwealth Reported Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>A course where the curriculum has been designed with no expectation that students need to attend any face-to-face events on-campus or in a facility managed by the University in order to achieve the learning outcomes. Such a course is supported by a learning management system, which will provide access to the Course Outline and an online assessment submission facility, and access to other resources such as notes and recordings, and peer- or teacher-led activities via interactive technologies. In some circumstances an online course may require invigilated assessment in person at a location determined by the University.</td>
<td>‘External’</td>
</tr>
<tr>
<td>In Person</td>
<td>A course where the curriculum has been designed with every expectation that students need to attend one or more face-to-face events on-campus or in a facility managed by the University during the semester or term in order to achieve the learning outcomes. Such a course is supported by a learning management system which will provide access to the Course Outline and an online assessment submission facility at the very least, but may also provide access to other resources such as notes and recordings.</td>
<td>In-person courses delivered away from the ANU campus will be reported as ‘External’, otherwise ‘Internal’.</td>
</tr>
</tbody>
</table>
Item 11: Academic Integrity Report

Purpose
To advise the committee on the number of Academic Misconduct cases reported to the Registrar via the Academic Standards and Quality Office for the first half of 2016, and the education and awareness strategies undertaken by the office to increase compliance.

Recommendations
That the Committee:
1. Note the Academic Integrity cases reported to the Registrar for the first half of 2016; and
2. Note and compare the number of cases reported in the first half of 2015 to cases reported in 2016; and
3. Submit feedback on the Academic Misconduct Rules and implementation, having been through the processes for 18 months to be sent to elizabeth.nunrom@anu.edu.au by 15 September 2016.

ACTION REQUIRED
For discussion ☑️ For decision ☐ For information ☑️ For response ☑️

Executive Summary of Issues
The Academic Misconduct Rules were implemented on 1 January 2015. This report includes comparison of reported cases received by the Registrar for the periods of 1 January – 30 June for 2015 and 2016. The paper discusses the education, training and support provided by the Academic Standards and Quality Office to ensure the awareness and compliance of the Rules.

Alignment with ANU by 2020
ANU by 2020 indicates that “ANU will aim to increase both undergraduate and postgraduate student numbers at rates that are sustainable and will not compromise quality.” The upholding of academic integrity processes is central to the achievement of the quality portion of this outcome.

Background
Since the implementation of the Academic Misconduct Rules on 1 January 2015 all findings for Academic Integrity cases are required to be notified to the Registrar via the Academic Standards and Quality Office (ASQO). The office has, for the past 18 months referred, recorded and filed the cases, findings, penalties applied and where appropriate, added comments to student records.

During the past year and a half, ASQO have undertaken a number of training and briefing sessions to enhance awareness and compliance of the Academic Misconduct Rules. These sessions were initially run as a standalone presentation prior to the semester 1, 2015 examination period, and as part of jointly coordinated training sessions with ANU Online and the Academic Skills and Learning Centre on Turnitin and Academic Integrity.

To support these training sessions a dedicated webpage was created where staff can find links to the rules, academic integrity guides, definitions, example cases and outcomes, checklists, flowcharts and communication templates.

Following this initial training, ASQO held more focused briefing and training sessions with individual colleges, advising on the Rules, and creating awareness of the resources on the website and reinforcing the support that ASQO is able to provide.

ASQO also met with Associate Deans, convenors and professional staff to hear concerns, answer questions, and collect feedback about the Rules and processes. Feedback was also received from convenors who indicated they felt more supported by the university, since the new process was implemented.

Ongoing daily support has been provided for individual staff going through the process, via email, phone consultation, and one-on-one meetings, advising on the Rule and processes.

Following the awareness and education activities in 2015 ASQO have seen a large increase in reporting of Academic Integrity Cases to the Registrar. From 1 January 2015 until 30 June 2015 (Table 1) the Registrar received 86 reported cases of breaches of the Academic Misconduct Rules 2014. During the same period in 2016, the Registrar received 279 reported cases of breaches of the Academic Misconduct Rule 2015 (Table 2).
To continue education and awareness of the Academic Misconduct Rule 2015, ASQO along with ANU Online and the Academic Skills and Learning Centre are working on an online training module to be available to staff who are unable to attend face to face training sessions. Work will continue with ASQO, Colleges and Associate Deans to provide education and support for the processes, and ensure compliance.

Table 1: Reported Academic Integrity Cases 1 January – 30 June 2015

<table>
<thead>
<tr>
<th>Category</th>
<th>CAP</th>
<th>CASS</th>
<th>CBE</th>
<th>CECS</th>
<th>Law</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred cases, in progress</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>19</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>No Breach</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor PAP</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor Academic Practice</td>
<td>15</td>
<td>18</td>
<td>10</td>
<td>12</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Academic Misconduct</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Reported Academic Integrity Cases 1 January – 30 June 2016

<table>
<thead>
<tr>
<th>Category</th>
<th>CAP</th>
<th>CASS</th>
<th>CBE</th>
<th>CECS</th>
<th>Law</th>
<th>Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred Cases; in progress</td>
<td>7</td>
<td>2</td>
<td>22</td>
<td>21</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>No Breach</td>
<td></td>
<td>1</td>
<td>10</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Very Minor Mistake</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Poor Academic Practice</td>
<td>25</td>
<td>21</td>
<td>25</td>
<td>24</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Academic Misconduct</td>
<td>2</td>
<td>6</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Consultation and Discussion Record

*Education Standards and Quality Committee, 8 August 2016*

The Education Standards and Quality Committee:

1. Noted the Academic Integrity cases reported to the Registrar for the first half of 2016; and
2. Noted and compared the number of cases reported in the first half of 2015 to cases reported in 2016;
3. Requested feedback from Colleges on the Academic Misconduct Rules and implementation, having been through the processes for 18 months to be sent to policyregs@anu.edu.au by Monday 19 September 2016 and for this to be reported back to ESQC 5/2016;
4. Noted that upon receipt of feedback from the Colleges on recommendation 3, recommendations 1-3 will be endorsed for transmission to the University Education Committee.

Sponsor
Deputy Vice-Chancellor (Academic)

Author
Senior Programs and Academic Integrity Officer, Academic Standards and Quality, Division of Student Administration
July 2016
Mark Scaling in RSCS

Purpose

Mark scaling has a single purpose and that is to rectify the effects of unanticipated or exceptional circumstances during an assessment.

This includes anomalies in the assessment material or procedure itself (e.g. that learning outcomes where not yet sufficiently covered in the course, mistakes in the examination material, the marking schema did not relate to the learning outcomes), or events during the assessment (e.g. the examination was interrupted by external circumstances).

Mark scaling (including the form of mark scaling applied) needs to be documented and related to the unanticipated or exceptional circumstance which it attempts to rectify.

If possible, action should be taken to avoid the need for such a rectification in subsequent assessments and reiterations of the course.

Method

The following basic fairness constraints need to be considered:

• Scaling must not be applied to a subset of students, i.e. the domain of the scaling function must encompass the full range of marks and shall not be defined piece-wise.

• Scaling must not reverse the ranks of any pair of students in the raw marks, i.e. the scaling function must be monotonically increasing.

Furthermore we can agree school wide on a set of accepted scaling function (as for instance what Engineering or the College of Science prescribe for themselves). Suggestions are:

- Mean shift: \( \text{mark} = \max(0, \min(\text{mark}_{\text{max}}, \text{shift} + \text{mark}_{\text{raw}})) \)
- Scale: \( \text{mark} = \min(\text{mark}_{\text{max}}, \text{scale} \cdot \text{mark}_{\text{raw}}) \)
- Gamma correction: \( \text{mark} = \text{mark}_{\text{max}} - \text{mark}_{\text{max}} \cdot \left(\frac{\text{mark}_{\text{raw}} - \text{mark}_{\text{max}}}{\text{mark}_{\text{max}} - \text{mark}_{\text{min}}}\right)^{\text{gamma}} \)

The first two involve clipping which might level out previous existing rank orders. Gamma correction has a similar effect to scaling, yet avoids the clipping and replaces it with compression at the high marks.
Report on COMP 8705, Semester 2, 2015

Course Title. Professional Communication II

Convenor and Lecturer. Lynette Joans-Boast (program convenor), Emmaline Lear (course convenor and lecturer, ANU College)

Number of Students. This is an ENG double-badged course with an overall enrolment of about 80, 37 of which are CS students.

Suitability of Prerequisites. Prerequisites are suitable and include Professional Communication I.

Composition of Student Cohort. About 50% domestic and 50% international students, however feedback was given by 93% international students.

Relevance of the Course for Students. Judging from the free-form responses of students in the SELT evaluation, some students appear to under-appreciate the relevance of the course as it is not a hard technical course.

Suitability of Learning Offerings and Assessment. The assessment is varied (individual participation in discussion forum, group presentation and both individual/group presentation of a design). Groups are multi-disciplinary/multi-cultural. The assessment is practical and modelled after a real-world task and gives the students to demonstrate their knowledge and approach. Assessment is suitable for the task. Learning offerings are a two-hour lecture and tutorials which appears appropriate.

Feedback and Availability of Resources. Availability of Resources was good, and feedback was given through wattle for group discussions, assignments and discussion.

Percentage of Student Feedback. 15 students gave feedback out of a total of about 80 students enrolled in the course.

Recommendations. There appears to be nothing wrong with the course as such and the criticism addresses items that are unavoidable for a course of this nature: It is not perceived as a hard core technical course that leads some students to question its worth and value. International students find it harder to achieve high marks and appreciate the course due to linguistic and cultural differences. Moreover, the course has been extensively re-designed and ran for the first time in its current form and will therefore require some fine-tuning.

We make the following recommendations.
1. To give more consideration to the linguistic and cultural background of students in the context of feedback and assessment

2. Emphasise both structure and the particular goals of individual assessment items more clearly
Report on COMP3610/6361 Principles of Programming Languages - Semester 2 2015

Course Title. Principles of Programming Languages

Course Convenor. Clem Baker-Finch (Lecturer and Convenor) and Dirk Pattinson (Lecturer)

Number of Students. 35

Percentage of Student Feedback. 15/35 ≈ 42%

Relevance of the Course for Students. The course is both a relevant and timely offering as it covers key aspects of computer science not covered in any other course the school offers. As a 3rd year course students should have sufficient background and maturity to tackle this course. The course is an optional course which is part of the computational foundations major (given the theory aspects of the course) and also part of the computer engineering major (given the more applied compiler aspects of the course). There would be a mix of reasons that students would do this course, so some would do this because they are interested in the area, others to help contribute to their majors, and some to contribute to the number of COMP course they are required to complete.

Suitability of Learning Offerings. The mode of delivery was a mix of a traditional and flipped classes. In terms of student comments and the coordinator’s report the mode of delivery was not problematic. Moreover there was a number of very positive student comments that related to the lectures and tutorials. Also no resource issues were highlighted.

Suitability of Assessment. The assessment tasks that provided feedback to students over the semester were 2 assignments. The first due in Week 8 and the second due in Week 12. This feedback was provided via wattle. So the marked feedback to students from these assignment would have only been in the later part of the course. Given there was no marks associated with the tutorials one would assume there would have been a cohort of students that would not have attended and as such would not have gained much from this important learning activity.

Evaluation. From the experience of learning course evaluation results the two weakest aspect of the course were "The teaching and learning activities (eg. lectures, tutorials, field trips) supported my learning" and "The feedback I received during the course supported my learning". Yet there
was many very positive comments associated with the teaching and learning activities. This would suggest there does not need to be a significant change in the course either in terms of content or in terms of the teaching mode of delivery. Rather the course coordinators should explore ways of fine tuning the course to provide better feedback and to help student understand how the teaching and learning activities do support their learning. I would suspect that with two large assignments students would believe that what they mainly needed to learn was the content/skills for completing these 2 assignments, yet the lectures and tutorials would need to be much broader than this. And hence students would not see the lectures and tutorial activities as supporting their learning as the semester progressed. So adding assessment tasks that aligns with and covers more of the course would help on both in terms of feedback and also in terms students seeing that the learning/teaching activities do support their learning.

I recommend the course explores one of:

1. associating some marked feedback with the tutorials,
2. adding lab tests or quizzes, or
3. possibly even a mid-semester exam.

These would provide better feedback to students on how they are progressing in the course and they would also help students understand how the teaching and learning activities do support their learning.
Report on COMP 3100, Semester 2, 2015

Course Title. Tech Launcher

Course Convenor. Shayne Flynt

Number of Students. 36 (COMP 3100) and 28 (COMP 4500)

Data Gathering To provide the context for the review, the following sources of information were consulted:

- Course: COMP3100 Software Engineering Group Project
- Programs and Courses page: http://programsandcourses.anu.edu.au/course/comp3100

Shayne also provided a series of notes and access to all TechLauncher systems via Dirk Pattinson.

It is clear that the course has not reached 'steady state', with a number of on-going tweaks, some of which (I understand) make parts of this review outdated.

The course is co-badged with a number of other courses in CS, all with similar entries on Programs & Courses.

Class Structure Programs and Courses (P&C) (http://programsandcourses.anu.edu.au/course/comp3100) indicates that the course involves lectures (2 hours per week) and group project time (260 hours).

It is clear that the emphasis in this course is on the group project process, and almost all formal and informal learning takes place in this context.

Learning outcomes P&C list 11 learning outcomes for the course (note: a list of 10-12 outcomes appear to be similar across all the co-badged courses).

Assessment P&C indicates three major assessment items:

- individual portfolio (30
- group project reviews (60)
- final group poster (10)

This weighting appears to be different for the 2016 course guide (https://anutechlauncher.net/projects/course-guide-2016-s1/wiki/2016_Semester_1_Course_Guide), with no portfolio, and instead a ‘tutor review’ based on individual’s efforts within the group.

Mapping LOs to Assessment The Rubrics for the assessment are in Wattle(https://wattlecourses.anu.edu.au/mod/folder/view.php?id=856554). The LOs are in line with the criteria in the marking rubrics, but are not explicitly mapped.

Based on the available material, almost all of the assessment is based around the group work, both processes within the project and artefacts produced throughout the project.

Feedback Feedback to students appears to be embedded through the group project itself, where regular reviews are conducted within the team and with a tutor.

Feedback for the course is collected through a survey in Wattle with reasonably high completion (86 responses for all co-badged variants). The feedback in this process is promising, with 70% agreement with the satisfaction of the project, team and tutor meetings. This less formal path appears very positive compared to the SELS process.

The SELS reports appear to be very noisy, with little consistency in the time series reports between the differently badged courses. There are also large differences between semesters. It is not clear what the reasons for this might be without understanding the historical context for the course (which I do not).

Cohort There are clear differences in the 'overall satisfaction' levels between cohorts in the course, based on the SELS. A brief summary is shown below:

<table>
<thead>
<tr>
<th>Course</th>
<th>2014 S1</th>
<th>2014 S2</th>
<th>2015 S1</th>
<th>2015 S2</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP3100</td>
<td>58%</td>
<td>33%</td>
<td>43%</td>
<td>44%</td>
</tr>
<tr>
<td>COMP3500</td>
<td>60%</td>
<td>100%</td>
<td>40%</td>
<td>83%</td>
</tr>
<tr>
<td>COMP3550</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>COMP4500</td>
<td>-</td>
<td>-</td>
<td>38%</td>
<td>33%</td>
</tr>
<tr>
<td>COMP8715</td>
<td>-</td>
<td>-</td>
<td>75%</td>
<td>82%</td>
</tr>
</tbody>
</table>

The SELS indicate that there are 36 students in 3100 in 2015, which makes up (I think) a little over one-quarter of the entire cohort. Beyond that, it is unclear what the make-up of the cohort is.

This could reasonably lead to an assumption that different cohorts of students value the course in different ways.
Summary of convener’s notes Shayne provided comments about the problems and solutions he perceives in the course. These include:

- concerns over student preparedness for the course, including students who are concurrently enrolled in prerequisites
- student concerns over assessment, including peer assessment
- tutors with industry experience are more useful than those without industry experience
- difficulty getting students to make connections to what they have learnt in other courses
- students not understanding course requirements, or being misled by inaccurate information provided by peers

Kerry agreed with Shayne’s account.

Shayne provided example feedback produced by peers for a regular review, worth 3 marks. The feedback is a highly-developed, clear and comprehensive template for collecting and disseminating feedback in a group project.

A Grading Guidelines document was also provided. This document gives some insight into the philosophy of the course, and a clear discussion about the approach for marking aligned with educational philosophy.

Review Topics Below are comments against the suggested review topics.

1. Is the topic of the course relevant and timely for students?

   TechLauncher could be classified as a ‘capstone’ course, where apply the knowledge they have gained through their degree to a problem of their choosing. A third-year ‘capstone’ (COMP3100) is, perhaps, early in the program, but appears to be appropriate given the main goal is to work in teams to develop a project, which is an activity that requires scaffolded practice.

   Shayne points out that the timeliness may be a significant issue for students, as some students are enrolling in this course at the same time as the first-year prerequisites.

   Group project work for software engineers is clearly a valuable skill to develop in an undergraduate degree. However, problems can manifest in small groups when all the assessment relies on the success of the group.

   From the ‘outside’, there are a few considerations that may improve the apparent preparedness of students for learning in an open-ended project:
Program level

provide more opportunities for students to engage in meaningful group work in first and second year. Developing software is (typically) not an individual enterprise, and if working in a development team is an important graduate skill it should be scaffolded earlier in the program (for example, smaller tasks such as debugging code or adding a module to existing software).

Course level

one of the frustrations from Shayne’s comments is that some students do not have the requisite coding skills to participate productively in the course. This is not a unique problem, and this problem is replicated across many degrees and courses in higher education. However, the ability to write code is not explicitly stated in the prerequisites (it is assumed), and there are no learning outcomes or even assessment tasks that explicitly require a student to be able to write code. If being able to code is a desired outcome of the course, it should be explicitly stated as a formal prerequisite (and an informal requirement depending on projects).

Team level

teams are formed around projects of interest based on an estimation of the required roles for the project. Given that diversity of the skills within a team is desired, it follows that there is a value that each individual brings to the team. For example, if project planning is a required role in the team, there is no need for the project planner to also demonstrate their capacity to code, except to the extent that she can communicate effectively with the software developer so that she can best estimate the amount of time required for a task.

2. How is it embedded into the overall education offering?

COMP3100 makes up 12 units in the Software Development major, and is part of the third-year pattern the Bachelor of Advanced Computing (Honours).

It is a considerable challenge that students enrolled in different courses and at different stages of their program and learning are bundled in together. This could be seen as an opportunity to promote the diversity required to make successful group projects work, such as assigning special roles in teams to differently badged students (noting that this is likely to be already in operation where appropriate at the team level).

Rather than seeing the assumed pre-requisites as a constraint, there may actually be some value in removing all specific pre-requisites, and instead require students to have completed a cer-
tain number of units (eg 96 units, or 24 COMP units). Taking this more open approach could also make the TechLauncher project more attractive to students from outside computer science.

It is unclear why there are so many co-badged variants. In my opinion, all this serves to do is cause difficulty in navigating course information. As far as I could tell and for all intents and purposes, students in differently badged courses are not treated or assessed differently.

Each of the co-badged courses has a very long list of very specific learning outcomes.

3. In which way is feedback given? How timely is the feedback?
   The course offers many opportunities for students to get feedback, primarily from their peers or those working close to the project, such as tutors.
   The framework for developing feedback is exemplary, and in my opinion demonstrates a high-quality process for group work.
   It is not clear how quickly feedback from assessment items is returned. Based on the philosophy of the course, it would appear that the emphasis is on formative feedback rather than any summative feedback. This approach to feedback appears entirely reasonable for the course as it stands.

4. Were all required resources available at all times?
   All of the resources required appear to be available as required. The resources, however, require deliberate navigation between multiple systems. Considerable effort has gone into developing these resources.
   Whilst there is a great amount of resources to navigate the course, I could not find content resources that might help students approach their project. For example, procedures/frameworks for debugging code or developing customer requirements. I imagine that navigating approaches and concerns is done informally through review sessions and tutorials.

5. Does the mode of delivery foster the learning outcomes?
   The mode of delivery appears to be entirely appropriate for the goal and philosophy of the course. However, in my opinion, there are too many learning outcomes to be able to connect to the course delivery or assessment in meaningful ways.
   I would suggest that the learning outcomes could be condensed to consider 5 key outcomes (below, with the current LOs as sub-points). This smaller list could simplify the communication of the course objectives, and provide an easier base for constructive alignment around the course assessment and activities.
**Effective team work**

- Work as an effective member of a team to implement a software based solution that delivers measurable value to an industry or university client.
- Exhibit an awareness of team formation strategies and stages leading to the development of high performing, self-managing teams; sound meeting practice; and how personality traits can impact upon team performance and how to use individual traits to achieve the most from team work.

**Clear communication**

- Communicate effectively, orally and in writing, with peers, supervisors and commercial clients/stakeholders.
- Participate in a group presentation, including a demonstration, to an audience of peers, clients and supervisors.

**Sound decision-making skills**

- Make and defend sound engineering decisions.
- Creatively identify and implement a solution to a complex problem that exists within the domain of ICT.

**Professional practice skills**

- Explain the role and importance of project management, configuration and risk management processes when undertaking a software development project. Demonstrate experience in undertaking the activities associated with these.
- Explain and understand the importance of the different stages of, and activities associated with each, the software development lifecycle (SDLC). Demonstrate experience in all stages of the SDLC.
- Explain the role and importance of standards in software development. Demonstrate experience in tailoring those standards appropriately according to the project they are currently undertaking.

**Capacity to act on feedback and personal reflection**

- Participate effectively in project and artefact reviews with peers, supervisors and clients/stakeholders.
- Develop life-long learning through reflection, as demonstrated through continual reflection on the software development lifecycle and team work processes experienced throughout the year.

6. Are the learning outcomes covered by the assessment, and are only learning outcomes being assessed?
The rubrics and marking guides cover the majority of the learning outcomes. I found it difficult to connect assessment to some of the LOs, as some LOs describe tasks undertaken in the course rather than learning outcomes (for example, group formation strategies). With the detailed list of LOs and the group-based assessment, I do not believe that it is possible identify an individual’s capacity to meet the LOs.

Notes and Recommendations. COMP3100 clearly has low overall satisfaction in the SELS. However, feedback provided in informal paths such as Wattle for all TechLauncher cohorts suggests that satisfaction is in fact reasonable at \( \sim 70\% \).

Having navigated through the various systems and course structure, there are a number of notable areas of strength as well as areas for improvement.

Noteworthy

- the established methodology for continuous peer assessment is highly developed and well-considered. This should be recognised at a college level as a problem that occurs across all group work, and this approach could inform a methodology for widespread adoption across all professional group-work courses in CS and engineering.

- the real-world context of the course is ambitious and leverages a broad network of professionals for the benefit of students

- the information, structure and philosophy of the course is detailed and considered

Recommendations

As always, there are opportunities for improvement. These recommendations are provided with little understanding of the history or politics of the course and degree program. In no order:

At a program level:

- foster a community of professional practice - students shouldn’t have to wait until third-year to create meaningful software. An emphasis should be placed on developing professional practice throughout the degree, from first year

- streamlined peer evaluation - the peer evaluation process is automated, but requires offline data entry for the user. This appears to be a major reason for missing 3 marks on a regular basis. A modern, easy-to-navigate peer evaluation system/application would produce better feedback
• simplify enrolment options - the TechLauncher project should have a single course code (perhaps with postgraduate variation) that can be recognised across degree programs and throughout the university

At a course level:

• eliminate specific prerequisites - as each project needs and roles are different, the requirement to have completed specific units appears strange. Relaxing the prerequisites to a number of units (eg 96 units) may be an opportunity to walk-the-talk when it comes to valuing diversity in professional practice

• simplify learning outcomes - the learning outcomes should be simplified to 5-6 thematic outcomes. A suggested grouping is provided in 5 of the Review Topics

• align simple learning outcomes to assessment criteria - the marking criteria for each assessment item should derive from the learning outcomes

• individual assessment - there is no individual assessment in this course, raising the stakes of the group project. I would recommend designing a task, ~ 30% of the final mark, that allows individuals to showcase their achievement of the learning outcomes of the course in a purposeful way. One way to frame this may be to use only the experience of the course to write a job 'application', addressing the LOs as the selection criteria. In addition, an exit interview with each student to go through their 'application' would enable a more thorough examination of individual learning.

• regular, strategic communication - as there are no lectures in the course, there are no opportunities to make whole-of-course announcements. Most of the information about the course is provided in self-service mode. A 'newsletter'-style email/post with what’s happening in the coming/following week could orientate students to the immediate requirements.

• develop online learning resources - a field guide, alongside a repository of worked examples and case studies could help orientate students to the expectations of practice in the course. These resources should address relevant topics, such as 'tips for how to run a meeting', or 'how to have difficult conversations', etc, and could be used as reference material.

• allow students to focus on strengths?
Report on COMP 1730, Semester 2, 2015

Course Title. Programming for Scientists

Convenor. Patrik Haslum

Number of Students. 309 (COMP 1730) plus 20 (COMP 6730)

History. This course has had severe problems in the past (overall satisfaction in SELS at 20% in 2010 and 2011) but has been turned around more recently (satisfaction over 60% in 2013 and 2014). In 2015 the percentage for the satisfaction question was down at 51% but the average score for that question remains at 3.4 which is in line with the 3.5 and 3.6 for the previous two years. Hence part of the overall picture is that a big improvement has been made over the last 4 years and needs to be continued rather than radically changed. Note also that the numbers of students taking this course have increased markedly (roughly doubled since 2012, and before that it was a small course).

Suitability of Prerequisites. No prerequisites. The convenor (Patrik Haslum) notes that a small number of students are too advanced for the course and there were enrollments of 3rd year CS students.

Composition of Student Cohort. Of the 100 students who gave feedback, 66% were domestic. 68% are first year students with 58% reporting no prior programming experience. More than half of the students were enrolled in Engineering (excluding SE) and about 40% were Science students. The rest are scattered across schools.

Relevance of the Course for Students. The course is a general introduction to programming for non-CS students. It is required for 2/3 of students who provided SELT feedback.

Suitability of Learning Offerings and Assessment. Assessment was by means of two assignments at 15% each, two exams (mid-semester at 20% and final at 40%) and five lab quizzes (total of 10%). As many students noted in the open-ended SELT feedback and the evaluation done by the convenor, it was felt that there was an imbalance between assignments (the 2nd was considered too difficult and less relevant). Learning offerings are good but one may consider more “hands-on” ways of delivering content.

Feedback and Availability of Resources. Availability of Resources was good, although some students felt that the second assignment should have been released earlier in full.

Percentage of Student Feedback. 100 students gave feedback out of a total of 309 students enrolled in COMP 1730.
**Recommendations.** The course faces the same difficulties as any other introductory programming course. The main challenge is to create a level playing field, as roughly half of the students have prior programming experience, as well as dealing with a student cohort that is diverse both in terms of cultural and educational background. The course was subject to an external review conducted by Bernd Meyer (Monash) and the suggestions provided in the review were carefully implemented by the convenor. The convenor’s report provided for this review thoughtfully analyses and evaluates and reflects on the course and echoes some of the recommendations given below. One difficulty noted by the convenor was plagiarism.

1. Balance the difficulty of the two assignments and make sure that they are fully released in a timely fashion.

2. As suggested in Bernd Meyer’s report, consider streaming of students. This could be done by offering practical hands-on sessions that are voluntary, maybe through PAL, or by simply providing drop-in sessions where students can bring laptops and ask questions, or an extra tutorial for beginners. It may be worth while to couple this giving students feedback into the course by means of (weekly?) polls (e.g. “how confident do you feel to write a recursive program?”) to inform content of a possible extra tutorial for beginners, and also to direct students (e.g. “if you have answered yes to any of the above, we strongly encourage you to attend”).

3. as suggested by the convenor, students that are clearly too advanced for the course should not be enrolled.

4. Specialise the generic policy on plagiarism to the special case of CS. Elaborate more on plagiarism in the administrative course handout, possibly in the style of frequently asked questions. What is OK and what is not OK? For example, is it OK to discuss assignments with peers? (I would say yes). Is it OK to scribble on paper? (I would say yes). Is it OK that every participant of the discussion receives a copy of the notes (I would say no – they should be discarded). Is it OK to sit down in a group in front of a computer and discuss the assignment? (I would say no). Is it OK to share files related to the assignment (Of course not!). What happens if someone copies my solution (I will loose marks due to collusion). This list is clearly not exhaustive and may seem to detailed but a specialisation of the generic policy on plagiarism for the concrete case of programming courses may be appropriate as more than half of the cohort are non-CS students.

5. Consider an even more flipped classroom model. The convenor has implemented a flipped classroom model as suggested by the external course review. As noted in the convenor’s comments, this changed the
style, but not the content, of student’s comments in the evaluation. Compared to previous editions, the amount of live programming has increased but students still feel that they learn more by programming themselves compared to watching someone else. One may consider to dedicate, say, one lecture slot, to group programming exercises and shifting the background material to reading assignments.

6. In the individual SELT rubrics, the course was rated lowest for feedback (3.3). The convenor should explore ways to provide more student feedback, ideally on a weekly basis, e.g. through lab quizzes. Also, can the self-test questions contained in the textbook made electronic and can one require that all students complete them on a weekly basis?
COMP3900/COMP6390
Human-Computer Interaction –
A Course Evaluation
Professor Bruce H. Thomas
University of South Australia

1 INTRODUCTION

This report describes my evaluation of the course COMP3900/COMP6390 Human-Computer Interaction. These observations are from my visit on June 23rd and 24th of 2016. The conclusions are based on interviewing the academic in charge, interviewing a sample of students from the course, reading the course documentations, and reviewing the course web page.

Overall I found the course very professional developed. All the course content is well presented. The structure of the course is excellent. The academic in charge Duncan Stevenson is doing an outstanding job. This course is a very interesting and covers a large portion of the topic area. The course is inherently difficult to teach. There are many different topics to cover. Duncan has done an excellent job in providing the students some tangible “hands-on” experience in evaluation techniques.

The report provides a more detailed review the documentation of the course. The review the documentation is followed by a description of the outcome of the student interviews. The report finishes with some suggestions for improvement.

2 DOCUMENTATION

This section is a review of the course documentation provided.

2.1 ASSIGNMENTS

I like how the assignments build on each other. This building allows the students to construct a larger project over the semester. I do not like this for courses in the student’s earlier years, but more senior students get a large amount of learning outcomes from this approach.

The approach of switching between the individual and group work is unique. I quite like the idea.

Assignment 1

The assignment is thoughtful and well written. The assignment allows for the students to be creative, but it is clear to the students how they are being assessed.

Assignment 2
Assignment 2 is a natural progression from assignment 1. It is also very well constructed.

Assignment 3
Assignment 3 is an excellent learning assignment. The students will get a very good grounding in running HCI experiments, as they are difficult to teach. This assignment is a great way to guide them through the process.

Assignment 4
Assignment 4 is a good way to have the students reflect on the learning experience.

Overall the assignments allow the students to be creative (a critical factor in HCI) and gain experience in evaluation techniques. I like the skill and theory balance with assignments.

2.2 COURSE OUTLINE
The course outline is well structured and clear for the students. I like the fact it is not verbose, but it has all the information the students need. From reading it, I have a good understanding of what is required of the students, and what the students are expecting from the course.

2.3 GRADES
The grades seem to be a bit on the high side, but I do not know what is expected of a senior course at ANU. To fully understand the distribution, I would have to understand what is a normal distribution for an ANU course and a normal distribution for this course over the past three years.

The table below shows the distribution of the grades provided to me. The percentages do not include the UN students, as they had unenrolled. I recalculated the grades on the UniSA scale:

HD: 85-100
D: 75-84
C: 65-74
P: 50-64

When viewed on the UniSA scale, the grades appear to be similar to upper-level courses I have taught and reviewed.
### 2.4 FINAL EXAM

A small point, I prefer exams out of 100. It makes it easier for the students to understand the impact of each question.

The exam is well written and covers the topic in detail. The smaller sub-questions allows the student to understand what is expect from the question overall.

A small suggestion is to have one question that requires the student to put the total answer together without the sub-sections. This form of a question would test the student's higher-level reasoning.

### 2.5 MARKING OF THE FINAL EXAMINATION

The marking of the final exam was done professionally. I was given seven exams to examine, and I was only able to read six of them (one of the scanned exams was too faint to read).

I was clear from the marking the exam was able to cater to students of different abilities. Some of the exam answers showed students of a high distinction ability, and other exams depicted students of pass and credit level ability. The marking of the examinations was performed well, and I agree with the marks given. Because reasons for the marks being taken off were not given (which is normal in examination marking), I was required to make a judgement on the marking. The marking appeared to be quite consistent across the six papers.

I note all of the exams depicted students who seriously attempted the final exam. While not all the students received high marks for the exams, all the students attempted a large portion of the exam. The fact the students attempted large portions of the final examination demonstrates the examination covered core topics of the subject.

### 2.6 REVIEW OF STUDENT WORK

I reviewed the student work provided.

The comments on work were very detailed. The lecturer provided excellent feedback to the students. The students know what is expected of them and how to improve. This level of detail is very much of a better quality and larger quantity than most courses I have observed.
The students work presented a range of quality. Some very excellent and some middle of the road. It is clear the course stretches the students of different abilities.

2.7 Responding to the points raised in the recent student feedback for the HCI course.

The academic addressed a number of concerns. Some responses were clarifications, and some were noted methods of improvements.

2.8 Students responses

The course overall had very positive responses.

The student responses range in the very positive with a number of points. A number of these points were addressed in the course coordinators responses.

2.9 Web Pages

I have reviewed the Wattle web pages for the course. They are well laid out in a logical structure. It is easy for the students to access the required information.

3 Student Interviews

3.1 Student A

This student was very positive about the course. The phrases they used to describe the course were as follows:

- Different,
- More creative,
- More thinking,
- It puts you in the shoes of the user,
- Interesting,
- Pleasant,
- I liked it, and
- Did not stress.

The overall workload of the course outside the contact hours was about seven to eight hours per week. This level of workload is normal for a course at this level.

They felt the assignments were fair in what they asked them to perform and in the grading.

The student suggested a number of possible points of improvement.

1. The tutorials could have a rethink. The purpose of the tutorials is a bit unclear.
2. The inclusion of another tutor might help with the tutorials.
3. The lecturing style towards the end of the semester was a little monotone, repetitive, and “static”.
4. One possible solution is to bring in an HCI guest lecturer later in the course.
5. A second option is to use some videos to highlight some concepts.
Overall the student enjoyed the course. They: “Got a lot out of it.”

3.2 STUDENT B
This student mainly had positive points about the course. These will be outlined below. They pointed out some major challenges to the course (not the teaching of the course).

- The overall challenge is to position this course in the total curriculum.
- This course is the only advanced HCI course in the major focused on design and evaluation. There is pressure on this course to cover a large amount of topics that are not covered in other courses. This leads to the possible solutions:
  - Add more content other HCI courses or other courses, and
  - A new HCI course that covers more material.
- The course has to cater for students from a number of different backgrounds and levels of ability
- There is an overlap between this course and Group Software Project. There is the potential to harmonize the content between the courses.

3.2.1 Positive comments about the course:
- Clearly, defines the learning outcomes.
- It does what it set out to do. The outline is clear.
- Taught well
- Touches on a number of key topics
- Lots of core topics covered
- Skill development in:
  - Critical thinking
  - Qualitative evaluation
  - Self-Reflection
- The course provided an interconnection between the subject matter and:
  - HCI research at the ANU
  - Research in the larger CHI community
  - Industry

3.2.2 Improvements:
- Content on the light side
- Some more content could be included
  - HCI theory
    - Overview of other theories
  - Other evaluation methods should be covered, such as
    - Diary studies, and
    - Cultural probes, and
    - Ethnography.
  - Prototyping skills
    - Early stage prototyping,
    - Wireframing, and
    - Graphic design.
  - Different design approaches
    - Participatory design
• Only user-centred design approaches explored
  • Solution is to have a critical discussion of the use of UCD and
  • Compare UCD with other methods.

3.2.3 Assignments
  • Positive comments
    o The workload and style of assignments are consistent with other universities.
    o This course is the students first exposure to:
      ▪ Design of experiments,
      ▪ The concept of research questions,
      ▪ Conducting interviews,
      ▪ Evaluation of qualitative data,
      ▪ Reflection, and
      ▪ Writing up research results.
    o No rote learning any content
  • Pitfalls of the early assignments in the semester
    o Specifications are not clear,
    o Assessment criteria could be more clearly spelled out, and
    o The rubric should have more detail.

3.2.4 Teaching (All positive comments)
  • The lecturer had a student centred approach in mind at all times.
  • Small and large discussion groups worked well.
  • The course had a strong group focus.
  • The lecturer brought a large amount of experience to the course, and the background with CSIRO was very helpful.
  • The course caters well to a diverse group of students.
  • Real world connections to the course.
  • The guest presenters add a great deal to the course.
  • The student said it was well taught more than three times!

3.3 Students C and D
There were two students interviewed at once. One student double majored in systems engineering and computer science and the other student was a psychology major.

Both students very much liked the course. HCI was the first course for both of them. Both students were heavily engaged in the course, but one student did not attend all the lectures.

While talking the students, it became apparent they did not realise how much time they spent on the assignments. The work was engaging and enjoyable. While they spent a reasonable amount of time investigating issues concerning the assignments, the workload did not “feel” like a large amount of time.

Comments included:
  • Interesting
  • More engagingly taught than other courses
• It was one of the smaller classes in student numbers
• Likes the tutorials
• The lectures were constantly in a tutorial style, and this was engaging
• Was not a difficult course
• Less time was spent on this course than others; this leaves room from deeper content
• The lecturer and tutor were very approachable
• The lecturer cared about the learning
• Group learning positive experience; this made for a different experience

Areas of possible improvement

• Could accommodate more topics
• Mark attendance to encourage attendance to lectures
• More detail on the HCI topics could be done
• More areas of HCI research could be included

3.4 STUDENT E
The student very much enjoyed the course. The course provided a different set of useful skills than other computer science courses (other than coding or maths). The course helps the student understand how people use a product and what users' think of those products.

“I really like Duncan!”

The guest presenters were positively received. The presenter with the vision impairment was extremely good.

At first appearance, the course seemed to be simplistic, but the student quickly realised the importance of the topic. The student felt they learned from the course. They are applying this knowledge while currently working for a company that performs design thinking activities. The course helped them understand the concept of design thinking.

The student the course should contain more design thinking content. A method to increase the content of design thinking could include inviting professionals that are working in design thinking.

The lecture and tutor were very approachable. The lecturer would stay back after the lecture to help the students.

“Duncan and Tom have done such a good job!”

4 SUGGESTIONS

There are a few suggestions to improve the course on top of what was presented in the report to this point. There is a large amount of content in this course. The course cannot include everything concerning this topic. These suggestions must be taken in the context that they might require removal of content. The number of changes is a judgement left to the academics in charge of the course.
4.1 PERSONAL SUGGESTIONS

The first is I would provide an overview of quantitative experimental designs and then an overview of the analytical techniques. The choice of analytical techniques greatly impacts on the design of the experiment. I might have missed this in reviewing the lecture notes, but here is one suggestion, an overview of the following topics:

- independent and dependent variables,
- within versus between group analysis,
- t-tests versus ANOVA,
- parametric testing versus non-parametric testing, and
- data cleaning (removal of outliers).

Second I would add this paper for the students to read.


This paper represents a foundation of many interaction students for the past 25 years.

4.2 RECOMMENDED STUDENT SUGGESTIONS

The students supplied suggestions to improve the course. I found the following ones to consider first:

- The overall challenge is to position this course in the total curriculum. The course has a number of topics it is covering. There is scope for a second course in Human-Computer Interaction. This second course could cover a range of topics such as natural user interfaces, 3D user interfaces, mobile user interfaces, user interfaces for virtual environments, and IoT with user interfaces.
- Have a look at the between this course and Group Software Project. There is the potential to harmonize the content between the courses.
- Have a look at the specifications for the assignments. There were comments the first assignment had some problems with the students understanding what was expected of them. This problem was fixed for the later assignments. Make sure the first assignment is corrected.
- The course should broaden the topics on qualitative evaluation techniques.
  - Other evaluation methods should be covered, such as
    - Diary studies, and
    - Cultural probes, and
    - Ethnography.
  - Prototyping skills
    - Early stage prototyping,
    - Wireframing, and
    - Graphic design.
  - Different design approaches
    - Participatory design
    - A critical discussion of the use of UCD
    - Compare UCD with other methods.
  - Include more design thinking content
  - Have more guest lectures on HCI topics
### 4.3 Possible Additional Improvements from the Students’ Suggestions

- The course could provide an overview of other HCI theories.
- The inclusion of a second tutor might help with the tutorials.
- The lecturing style towards the end of the semester was a little monotone, repetitive, and "static".
  - One possible solution is to bring in an HCI guest lecturer later in the course.
  - A second option is to use some videos to highlight some concepts.
Preamble

The course review group understands that SELS scores can provide an indication that something may be wrong with a course, but not a proof that something is wrong with a course.

Peer Review Process

Course Convenor’s report

The review group would like to ask the conveners for a brief report on the course containing the following, where we expect that most points can be addressed in a single line.

1. A link to Programmes and Courses page of the particular course
2. A link to the course home page and the assessment scheme
3. A brief description of the style of delivery of the course (lectures, practicals, etc.)
4. A short map between learning outcomes and both assessment and mode of delivery
5. Examples of marked assessment items (including feedback), if available.
6. Feedback received on the course, include informal feedback and the SELS responses to the free-form questions.
7. A brief description of the composition of the student cohort
8. A brief description on how feedback was given to students
9. The convener’s assessment of
   • the suitability of prerequisites
   • the perceived relevance of the course for students, and how it relates to other education offerings

Peer review

Peer review for each course will be conducted by two people with one person taking the lead and the second person acting as sounding board. The group asks the ADir(E) to seek a course report from each course convenor upon which the review will be based, and the review group plans to engage with the individual course conveners. Further information will be obtained as necessary. The following questions guide the peer review process:

1. Is the topic of the course relevant and timely for students?
2. How it it embedded into the overall education offering?
3. In which way is feedback given? How timely is the feedback?
4. Were all required resources available at all times?
5. Does the mode of delivery foster the learning outcomes?
6. Are the learning outcomes covered by the assessment, and are only learning outcomes being assessed?

The review group will also take historical data into account to detect outliers.

The findings for each particular course will then be discussed in the group, and a joint report will be prepared.
Course Review Process

A course can be reviewed for the following reasons:

- The course has a low SELS response to Q6 in the SELS course survey. Q6 is a measure of the student satisfaction with the course. Any course whose agreement rate for this question (measured by combining the values for the agree and strongly agree components) is less than 60% will be a trigger for a review. This is in line with the University’s expectations regarding the threshold agreement rate for a course.

- Other factors such as a significant number of students withdrawing from or disengaging with the course, issues with the assessment or delivery of the course and the learning outcomes not being met.

- As a part of the School’s regular quality control process.

Plan of action

A course can be peer reviewed by a small group made of up mainly academics from within the School or it can be externally reviewed.

If the reason for choosing a course for review is something other than a low SELS satisfaction score, then the decision to have it peer reviewed or externally reviewed will be made by the ADir(E), in consultation with the Director.

If the SELS score for the course is below 60%, then following process will be adopted:

First time below the threshold

1. If the course has a SELS score under 60%, is co-badged, with one of the versions having a score over 60%, then the convenor writes a report evaluating the two versions, identifying issues and providing suggestions for improvement.

2. Else, a small group (3-4 people) will peer review the course and provide a report, which will include feedback, identifying issues and providing suggestions for improvement.

Second time below the threshold

1. An external reviewer will review the course and provide a report, which will include feedback, identifying issues and providing suggestions for improvement.

Follow up action

Once the report from a review is received, the ADir(E) will do the following:

1. Make available a copy of the report to the course convenor. The convenor will have the opportunity to respond to the recommendations in the report. The convenor will send their response to the ADir(E).

2. Table the report and the convenor’s response at the next CDC for information and discussion. The CDC will make a decision to support or not support each of the recommendations, after taking into consideration the response from the convenor.

3. Inform the convenor of the decision of the CDC with respect to the recommendations in the report.

The course convenor will then do the following:
1. Implement those recommendations that were supported by the CDC in the next version of the course.

2. At the end of the semester, in their course report, include a section discussing the implementation of the recommendations and the outcome.
**Part 5 – Items of other business**

**Item 15  Meeting Dates 2016**

**Purpose**
To note the remaining meeting dates for 2016

**Recommendation**
That the Committee note the dates of the remaining 2016 meetings.

**ACTION REQUIRED**

For discussion ☐   For decision ☐   For information ☑   For School response ☐

<table>
<thead>
<tr>
<th>RSE and RSCS CDC Agenda Deadline</th>
<th>RSCS CDC Meeting 12-2pm RSISE B123</th>
<th>Notes and Deadlines</th>
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<tbody>
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<td>13 October</td>
<td>20 October</td>
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**Sponsor**
Associate Director (Education)
Research School of Computer Science

**Item 16  Other business and question time**

**Purpose**
For Committee members to ask questions and raise items of other business

**Recommendation**
That the Committee note the matters raised and the responses.

**ACTION REQUIRED**

For discussion ☐   For decision ☐   For information ☑   For School response ☐

**Sponsor**
Associate Director (Education)
Research School of Computer Science