NOTICE OF MEETING

Meeting 2018/5 of the Undergraduate Studies Committee will be held at 10 am on Tuesday 10 July in the Senate Room. The agenda for the meeting is attached.

Alyssa White
Committee Officer

AGENDA

1 WELCOME AND APOLOGIES
   Presenter: Chair

2 PROCEDURAL MATTERS

   2.1 Minutes of Meeting 2018/4 (15 May 2018)
      Presenter: Chair
   attached

   2.2 Actions Arising
      Presenter: Members
   verbal update

3 STANDING ITEMS

   3.1 Report of the Chair
      Presenter: Chair
   verbal update

   3.2 Report of the Academic Board
      Presenter: Tony Masters
   attached

4 ITEMS FOR APPROVAL

   Major Course Proposals

      No items for approval

Respect is a core value of the Academic Board
Minor Course Proposals

4.1 **Education Portfolio**: Review of Amendment Proposals by the Faculty of Engineering and Information Technologies  
Peter McCallum  
attached

4.2 **Faculty of Engineering and Information Technologies**: Amendment to Faculty Resolutions  
Marjorie Valix  
attached

4.3 **Faculty of Engineering and Information Technologies**: Bachelor of Engineering Honours (Chemical and Biomolecular) change to stream core  
Marjorie Valix  
attached

4.4 **Faculty of Engineering and Information Technologies**: Amendment to majors in Table A for Bachelor of Advanced Computing and Bachelor of Science  
Marjorie Valix  
attached

4.5 **Faculty of Engineering and Information Technologies**: Combined Bachelor of Engineering (Honours) and Bachelor of Commerce resolution change and unit substitution  
Marjorie Valix  
attached

4.6 **Faculty of Engineering and Information Technologies**: Combined Bachelor of Engineering (Honours) and Bachelor of Arts unit substitution for Aeronautical, Mechanical and Mechatronic streams  
Marjorie Valix  
attached

5 STRATEGIC ITEMS

No items for review.

6 ITEMS FOR NOTING

No items for noting

7 OTHER BUSINESS

7.1 Any Other Business  
Chair

Next meeting: Tuesday, 4 September 2018, 10.00am to 12.00pm  
Senate Room, Quadrangle
TERMS OF REFERENCE

PURPOSE
The Undergraduate Studies Committee assists the Academic Board in ensuring the maintenance of the highest standards and quality in teaching, learning and scholarship at the University of Sydney. It advises the Academic Board about resolutions, policy and procedures relating to undergraduate study at the University and determines undergraduate matters, including the approval of new and amended courses, in accordance with the University of Sydney (Delegations of Authority – Academic Functions) Rule 2016.

TERMS OF REFERENCE
1. To advise the Academic Board on resolutions, policy and procedures relating to all undergraduate studies in the University, including the pattern of undergraduate award courses.
2. To make recommendations to the Academic Board about proposals to introduce new undergraduate award courses and amendments to existing undergraduate award courses.
3. To make recommendations to the Academic Board about requirements to be satisfied by candidates for the award of a degree, diploma or certificate.
4. To determine procedures for the consideration, and deadline for submission of proposals for new and amended undergraduate award programs and courses in consultation with the University Executive Curriculum and Course Planning Committee.
5. To provide academic oversight in relation to domains 1.4.1; 1.4.2, 3.1.1, 3.1.2, 3.1.3; 3.1.4; 3.1.5; 5.1.2; 5.1.3, 5.4.2 and 6.3.2(c) of the Higher Education Standards Framework (Threshold Standards) 2015.
6. To ensure undergraduate education is compliant with appropriate rules, policies and procedures, including, but not limited to the:
   - University of Sydney (Coursework) Rule 2014
   - Coursework Policy 2014
   - Assessment Procedures 2011
   - Learning and Teaching Policy 2015
   - Learning and Teaching Procedures 2016
   - Academic Honesty in Coursework Policy 2015
   - Academic Honesty Procedures 2016.
7. To contribute to the development of the University’s strategic objectives in relation to undergraduate study and to formulate, recommend to the Academic Board, and regularly review resolutions, policy and procedures supporting those strategic objectives.
8. To receive reports from, and provide advice to, the Deputy Vice-Chancellor (Education) and, where appropriate the Pro-Vice-Chancellor (Global Engagement) on quality assurance and other matters relating to undergraduate study.
9. To obtain information or reports from any Faculty, University School, Board of Studies, school or department, the Library or other academic unit on academic matters relating to undergraduate studies.
10. To ensure proper communication channels are established with other committees of the Academic Board and the University Executive to promote cross-referencing and discussion of matters concerning undergraduate students.
11. To determine the terms and conditions of undergraduate awards, scholarships and prizes established within the University.
12. To receive annual reports on the awarding of Honours and the University Medal from Faculties, University Schools and Boards of Studies.
13. To provide regular reports on its activities to the Academic Board.
14. To consider and report on any matter referred to it by the Academic Board, or its committees, the University Executive or the Vice-Chancellor.
欢迎和道歉

欢迎和道歉

主席介绍了成员和与会者的到来。

Resolution UGSC2018/4-1

 undergraduate studies committee 决定注意到已收到成员的道歉，并且他们因缺席而被免除责任。

程序性事项

2.1 前次会议的会议纪要

前次会议的会议纪要于2018年4月24日被接受为会议的正式记录。

Resolution UGSC2018/4-2

 undergraduate studies committee 决定会议纪要2018年3月24日被确认为正式记录。

2.2 行动

主席提供了关于委员会行动的口头更新，没有讨论。

Resolution UGSC2018/4-3

 undergraduate studies committee 注意到提供的更新，关于之前会议的未完成行动。

3 站立事项

3.1 主席报告
The Chair for the Undergraduate Studies Committee thanked members for their assistance with review of the large pack of papers. It was noted that the 15 May meeting is the deadline for 2019 implementation.

Resolution UGSC2018/4-4
The Undergraduate Studies Committee noted the report of the Chair.

3.2 Report of the Academic Board
The Report of the Academic Board was taken as read and noted without discussion.

Resolution UGSC2018/4-5
The Undergraduate Studies Committee noted the report of the Academic Board meeting of 1 May 2018.

4 ITEMS FOR ACTION

MAJOR COURSE PROPOSALS
No items were presented to the committee.

MINOR COURSE PROPOSALS

4.1 Education Portfolio: Education portfolio review of minor course amendment proposals
This paper was presented by the A/Prof McCallum. The Committee supported the inclusion of the advice provided in the consideration of proposals.

Resolution UGSC2018/4-6
That the Undergraduate Studies Committee
1. incorporate this advice into their consideration of the minor course amendment proposals presented to it at this meeting; and
2. where it agrees with the issues, request the faculties resolve them to their satisfaction.

Science

4.2 Science: Bachelor of Liberal Arts and Sciences Resolutions
Dr Muscatello presented the proposal to the Committee. He outlined that the change will allow students to select the full range of undergraduate majors in the new curriculum offered by the Faculty of Science. This change will significantly improve student choice and reduce the administrative burden of maintaining two similar but not identical sets of majors in different tables.

The proposal was endorsed in principle for 2019 implementation with further consultation with the Academic Modelling Team on the exact wording of resolutions to be confirmed prior to submission to the Academic Board.

Resolution UGSC2018/4-7
That the Undergraduate Studies Committee recommend subject to amendments that the Academic Board:
1. approve the proposal from the Faculty of Science to amend the Course Resolutions for the Bachelor of Liberal Arts and Sciences
2. approve the amendment to the Course Resolutions arising from the proposal with effect from 1 January 2019.

4.3 Science: Bachelor of Liberal Arts and Sciences Degree Table
Dr Muscatello presented the proposal to the Committee. He outlined the changes to the Bachelor of Liberal Arts and Sciences degree table to reflect the new curriculum and units of study being developed and old units being retired in 2019.

The proposal was endorsed for 2019 implementation

Resolution UGSC2018/4-8
That the Undergraduate Studies Committee recommend that the Academic Board:
1. approve the proposal from the Faculty of Science to update the degree table for the Bachelor of Liberal Arts and Sciences with effect from 1 January 2019.

4.4 Science: Table A Advanced Stream
Dr Muscatello presented the proposal to the Committee. He outlined the changes that provide clarity about which units will count towards the 24 credit points of advanced units that must be taken in a major to complete the requirements of the Advanced stream. The changes allow clearer communication to students and improve clarity at graduation checking.

The proposal was endorsed for 2019 implementation

**Resolution UGSC2018/4-9**
That the Undergraduate Studies Committee recommend that the Academic Board:
1. approve the proposal from the Faculty of Science to amend the Table A description of the Advanced Stream with effect from 1 January 2019.

4.5 Science: Bachelor of Science addition of Nanoscience and Nanotechnology Program
Dr Muscatello presented the proposal to the Committee. He outlined the amendment of the Course Resolutions for the Bachelor of Science/ Bachelor of Advanced Studies to allow students in the combined Bachelor of Engineering Honours / Bachelor of Science degree to select the Nanoscience and Nanotechnology program.

The proposal was endorsed in principle for 2019 implementation with further consultation with the Education Portfolio and Academic Modelling Team on the exact wording of resolutions to be confirmed prior to submission to the Academic Board.

**Resolution UGSC2018/4-10**
That the Undergraduate Studies Committee recommend subject to amendments that the Academic Board:
1. approve the proposal from the Faculty of Science to amend the Course Resolutions for the Bachelor of Science/ Bachelor of Advanced Studies to allow student in the combined Bachelor of Engineering Honours / Bachelor of Science degree to select the Nanoscience and Nanotechnology program; and
2. approve the amendment of Faculty and Course Resolutions arising from this proposal, with effect from 1 January 2019.

4.6 Science: Bachelor of Animal and Veterinary Biosciences Course Resolutions
Dr Muscatello presented the proposal to the Committee. He outlined the amendment to resolutions to reflect accurately the core and selective units required for student to graduate and to ensure students are able to complete the required 3000-level units of study.

The proposal was endorsed in principle for Semester 2, 2018 implementation with further consultation on the exact wording of resolutions to be confirmed prior to submission to the Academic Board.

**Resolution UGSC2018/4-11**
That the Undergraduate Studies Committee recommend subject to amendments that the Academic Board:
1. approve the proposal from the Faculty of Science to amend the Course Resolutions for the Bachelor of Animal and Veterinary Sciences degree with immediate effect.

4.7 Science: Bachelor of Science Table A changes
Professor Ross presented the proposal to the Committee, she outlined the changes to the Table A major, minor, program and stream tables for 2019.

The proposal was endorsed in principle for 2019 implementation with further consultation with the Education Portfolio on the inclusion of ICPU units and with the Mathematical Sciences program on the changes to be confirmed prior to submission to the Academic Board.

**Resolution UGSC2018/4-12**
That the Undergraduate Studies Committee, subject to amendments recommend that the Academic Board:
1. Approve the amendments to the Table A major tables arising from the proposal, with effect from 1 January 2019;
2. Approve the amendments to the Course Resolutions for the Bachelor of Psychology, resulting from the incorporation of changes to the intermediate psychology subjects due to be introduced in 2019;
3. Approve the amendments to the Course Resolutions for the Bachelor of Science, resulting from the name change of the major in Behavioural Sciences to “Psychological Science” with effect from 1 January 2019;
4. Approve the amendments to the Course Resolutions for the Bachelor of Science/Master of Mathematical Sciences, to reflect change in credit points for the Mathematical Sciences Program, resulting from inclusion of the Data Science major as part of the program and to bring resolutions of the BSc/MMathSci into line with the Mathematical Sciences Program structure with effect from 1 January 2019.

4.8 Science: Resolutions of the Faculty of Science

Dr Muscatello presented the proposal to the Committee, outlining the resolution changes required to ensure that the Taronga Wildlife Conservation stream of the Bachelor of Science/Bachelor of Advanced Studies has access to special admissions.

The proposal was endorsed for 2019 implementation

Resolution UGSC2018/4-13
That the Undergraduate Studies Committee recommend that the Academic Board:
1. approve the proposal from the Faculty of Science to allow students to enter the Bachelor of Science / Bachelor of Advanced Studies (Taronga Wildlife Conservation) via the special admission programs already available to other streams of the Bachelor of Science / Bachelor of Advanced Studies; and
2. approve the amendment of faculty and course resolutions arising from this proposal, with effect from 1 January 2019.

4.9 Science: Bachelor of Science / Doctor of Medicine

Dr Muscatello presented the proposal to the Committee, outlining minor amendments to the course resolutions.

The proposal was endorsed for 2019 implementation

Resolution UGSC2018/4-14
That the Undergraduate Studies Committee recommend that the Academic Board:
1. approve the proposal from the Faculty of Science to amend the Course Resolutions for the Bachelor of Science/ Doctor of Medicine; and
2. approve the amendment of Course Resolutions arising from this proposal, with effect from 1 January 2019.

4.10 Science: Bachelor of Veterinary Biology / Doctor of Veterinary Medicine

Dr Muscatello presented the proposal to the Committee, outlining updates to the Bachelor of Veterinary Biology/ Doctor of Veterinary Medicine degree table to reflect new units of study being developed and old units being retired in 2019.

The proposal was endorsed for 2019 implementation

Resolution UGSC2018/4-15
That the Undergraduate Studies Committee recommend that the Academic Board:
1. approve the proposal from the Faculty of Science to update the degree table for the Bachelor of Veterinary Biology/ Doctor of Veterinary Medicine with effect from 1 January 2019.

4.11 Science: Bachelor of Science (pre-2018) Table 1 Majors

Dr Muscatello presented the proposal to the Committee, outlining updates to the Bachelor of Science (pre-2018) Table 1 major tables to reflect new units of study being developed and old units being retired in 2019.
The proposal was endorsed in principle for 2019 implementation with further consultation with the Education Portfolio on the exact wording of resolutions to be confirmed prior to submission to the Academic Board.

Resolution UGSC2018/4-16
That the Undergraduate Studies Committee recommend subject to amendments that the Academic Board:

1. approve the proposal from the Faculty of Science to update the Bachelor of Science (pre-2018) Table 1 major tables with effect from 1 January 2019.

4.12 Science: Nanoscience and Technology Table 1 Major

Dr Muscatello presented the proposal to the Committee, outlining that the Nanoscience and Technology major from Table 1 is being replaced in the new curriculum and will no longer be offered for new intake.

The proposal was endorsed for 2019 implementation

Resolution UGSC2018/4-17
That the Undergraduate Studies Committee recommend that the Academic Board:

1. approve the proposal from the Faculty of Science to close the Nanoscience and Technology major offered in Bachelor of Science (pre-2018) and Bachelor of Liberal Arts and Sciences Table 1 major tables with effect from 1 January 2019

4.13 Science: Degree Tables (pre-2018)

Dr Muscatello presented the proposal to the Committee, outlining updates to multiple pre-2018 Degree Tables to reflect new units of study being developed and old units being retired in 2019.

The proposal was endorsed for 2019 implementation

Resolution UGSC2018/4-18
That the Undergraduate Studies Committee recommend that the Academic Board:

1. approve the proposal from the Faculty of Science to update the course tables.
2. approve the amendment of the Course resolutions arising from this proposal, with effect from 1 January 2019

Engineering and Information Technology

4.14 Engineering and Information Technology: New major in Food and Bioprocessing in the Bachelor of Engineering (Honours) Chemical and Biomolecular stream

Associate Professor Valix presented the proposal to the Committee, outlining the request from the School of Chemical and Biomolecular Engineering the introduces of a new Table A major into the Bachelor of Engineering Honours with the name Food and Bioprocessing.

The proposal was endorsed for 2020 implementation.

Resolution UGSC2018/4-19
That the Undergraduate Studies Committee recommend that the Academic Board:

1. approve the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering Honours resolutions;
2. approve the introduction of a new major to the Bachelor of Engineering Honours; and
3. approve the amendment to the table of Units of Study arising from these proposals, with effect from Semester 1, 2020

4.15 Engineering and Information Technology: New units of study AMME5060 and AMME5292 to be incorporated in the Bachelor of Engineering (Honours)

Associate Professor Valix presented the proposal to the Committee, outlining the request to amend the Unit of Study Tables for the Bachelor of Engineering (Honours) Aeronautical and Mechanical streams to introduce new units AMME5060 Advanced Computational Engineering and AMME5292 Advanced Fluid Dynamics. She also detailed that AMME5060 will be a core unit in the Computational Engineering major and AMME5292 will be a core unit in the Fluids Engineering major.

Respect is a core value of the Academic Board
The proposal was endorsed for 2019 implementation

**Resolution UGSC2018/4-20**
That the Undergraduate Studies Committee recommend that the Academic Board approve:
1. the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering (Honours); and
2. the amendment to the table of Units of Study arising from these proposals, with effect from Semester 1, 2019

4.16 Engineering and Information Technology: New units of study and re-coded units of study in the Bachelor of Advanced Computing and the Bachelor of Engineering Honours streams of Biomedical, Electrical and Software

Associate Professor Valix presented the proposal to the Committee, outlining the following amendments to the Bachelor of Advanced Computing and the Bachelor of Engineering Honours streams of Biomedical, Electrical and Software:

- Introduction of INFO1910 Introduction to Programming (Advanced)
- Introduction of DATA2901 Big Data and Data Diversity (Advanced)
- Addition of ENGG3800 Industry and Community Projects to BAdvComp Table A electives
- Re-coding of some project units at the request of the Faculty of Science, as detailed in the amendment.

The proposal was endorsed in principle for 2019 implementation with minor amendments to be completed by the Faculty prior to submission to the Academic Board.

**Resolution UGSC2018/4-21**
That the Undergraduate Studies Committee recommend subject to amendment that the Academic Board approve:
1. The proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Advanced Computing and the Bachelor of Engineering (Honours); and
2. The amendments to the tables of Units of Study arising from these proposals, with effect from Semester 1, 2019.

4.17 Engineering and Information Technology: Bachelor of Project Management Table A majors in Construction and in Built Environment

Associate Professor Pollack presented the proposal to the Committee, outlining the proposal to amend the units of study in the Table A “Construction” Major; and to rename the Table A “Infrastructure” Major to “Built Environment” and amend the related units of study.

The proposal was endorsed for 2019 implementation

**Resolution UGSC2018/4-22**
That the Undergraduate Studies Committee recommend that the Academic Board approve:
1. the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Project Management;
2. the amendment to the Course Resolutions of Bachelor of Project Management degree; and;
3. the amendment to the table of Units of Study arising from these proposals, with effect from Semester 1, 2019.

4.18 Engineering and Information Technology: Curriculum updates to Bachelor of Engineering (Honours) Civil stream and associated majors

Associate Professor Valix presented the proposal to the Committee, outlining the amendments the Unit of Study Tables for the Bachelor of Engineering (Honours) Civil stream and relevant majors.

It was noted that the codes in the paperwork presented to the Committee needs minor amendments prior to submission to Academic Board.

The proposal was endorsed for 2019 implementation

Respect is a core value of the Academic Board
Resolution UGSC2018/4-23
That the Undergraduate Studies Committee recommend subject to amendments that the Academic Board approve:
1. the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering (Honours); and
2. the amendment to the table of Units of Study arising from these proposals, with effect from Semester 1, 2019

4.19 Engineering and Information Technology: New alpha codes for units of study in the area of Biomedical Engineering

Associate Professor Valix presented the proposal to the Committee, outlining needs to re-code Biomedical units with new alpha code “BMET”.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-24
That the Undergraduate Studies Committee recommend that the Academic Board approve:
1. the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering (Honours) Biomedical stream; and
2. the amendment to the table of Units of Study arising from this proposal, with effect from Semester 1, 2019.

4.20 Engineering and Information Technology: Combined Bachelor of Engineering (Honours) and Bachelor of Project Management requirements for award

Dr Chung presented the proposal to the Committee. He outlined the amendment to clarify the requirements for award of the combined degree with Bachelor of Project Management.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-25
That the Undergraduate Studies Committee recommend that the Academic Board approve:
1. the proposal from the Faculty of Engineering and Information Technologies to amend the combined Bachelor of Engineering (Honours) and Bachelor of Project Management degree; and
2. the amendment to the Course Resolutions of the Combined Bachelor of Engineering Honours degree, with effect from Semester 1, 2019.

4.21 Engineering and Information Technology: Amendment of the Project Management Table S major resulting from changes to the Bachelor of Project Management

It was noted by the Committee that this proposal had been approved at the 1 May Academic Board meeting and subsequently it was withdrawn.

Resolution UGSC2018/4-26
That the Undergraduate Studies Committee note the withdrawal of Item 4.21.

Health Sciences

4.22 Health Sciences: Minor course amendment proposal – Hearing and Speech major and minor

This proposal was noted to have been omitted from the papers received. A circulation meeting for approval of this item was agreed by members.

Resolution UGSC2018/4-27
That the Undergraduate Studies Committee note this item will be forwarded for circular resolution prior to the 12 June Academic Board.

4.23 Health Sciences: Minor course amendment proposal – Bachelor of Applied Science (Physiotherapy)

Dr Keep present the proposal to the Committee. He outlined the minor amendment to the table of units of study for Year 1 and Year 2 of the Bachelor of Applied Science (Physiotherapy) to replace existing core units EXSS1029 Muscle Mechanics and Training and EXSS2027 Exercise Physiology for Clinicians, with EXSS2xxx Muscle Adaptations to Use and Disuse and EXSS3xxx Exercise Responses and Programming.
The proposal was endorsed for 2019 implementation

Resolution UGSC2018/4-28
That the Undergraduate Studies Committee recommends that the Academic Board approve the proposal from the Faculty of Health Sciences to amend the course tables for the Bachelor of Applied Science (Physiotherapy), with effect from Semester 1, 2019.

Law

4.24 Sydney Law School: Proposed changes to the Bachelor of Laws elective tables

Associate Professor Glister presented the proposal to the Committee. He outlined the addition and renaming of units of study in the Bachelor of Laws elective tables.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-29
That the Undergraduate Studies Committee recommend that the Academic Board approve the amendment of the Course Resolutions of the Faculty of Law for the Bachelor of Laws

Architecture, Design and Planning

4.25 Architecture, Design and Planning: Bachelor of Design in Architecture (Honours) / Master of Architecture Minor Course Amendment

Dr Anderson presented the proposal to the Committee. He outlined the introduction of two new units of study and resulting changes to the Units of Study table. It was noted that this update does not require Academic Board approval.

Resolution UGSC2018/4-30
That the Undergraduate Studies Committee recommends that the Academic Board:
1. note the endorsement of the introduction of two new units for the Bachelor of Design in Architecture (Honours) / Master of Architecture, in the Honours stream.
2. note the amendments to the Units of Study table, with effect from 1 January 2019.

Business

4.26 The University of Sydney Business School: Minor course amendments: Bachelor of Commerce (Table A) and Table S

Mr Clubb presented the proposal to the Committee. He outlined the changes to the Professional Accounting program, and the new units of study for inclusion in Table A and Table S course components in Accounting and Industrial Relations and Human Resource Management. He also spoke about the opportunities for students in new work integrated learning and global mobility electives for the Bachelor of Commerce.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-31
That the Undergraduate Studies Committee recommend that the Academic Board:
1. approve the proposal to amend the Bachelor of Commerce (Table A) and Table S; and
2. approve the amendment of unit of study tables arising from the proposal, with effect from 1 January 2019.

Pharmacy

4.27 Pharmacy: Pharmacy Undergraduate Coursework programs

Associate Professor Wheate presented the proposal to the Committee. He outlined the amendments to the Faculty Course Resolutions for the Bachelor of Pharmacy and Bachelor of Pharmacy and Management required to reflect changes to progression rules.

The proposal was endorsed in principle for 2019 implementation with further consultation with OGC to occur to confirm the local provisions listed prior to submission to the Academic Board.

Resolution UGSC2018/4-32
That the Undergraduate Studies Committee recommend subject to amendments that the Academic Board approve the Faculty of Pharmacy’s request to amend the Faculty Course
Resolutions with regard to the progression rules and admission to the integrated Honours program for the Bachelor of Pharmacy and Bachelor of Pharmacy and Management degrees.

4.28 Pharmacy: Pharmacy Undergraduate Coursework programs (Project Unit)

Associate Professor Wheate presented the proposal to the Committee. He outlined the introduction of the new interdisciplinary unit of study to ensure that final-year undergraduate pharmacy students may participate in the Industry Community Projects program.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-33
That the Undergraduate Studies Committee recommend that the Academic Board endorse the Faculty of Pharmacy’s request to amend Units of Study Tables for the Bachelor of Pharmacy and Bachelor of Pharmacy and Management.

Dentistry

4.29 Dentistry: Deletion of the Bachelor of Dentistry

Dr Coulton presented the proposal to the Committee. She outlined the Bachelor of Dentistry Degree was replaced by the Doctor of Dental Medicine in 2012, with the final intake in 2011. It was noted that the last remaining students enrolled in the Bachelor of Dentistry completed the course in 2016.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-34
That the Undergraduate Studies Committee recommends that the Academic Board that the Bachelor of Dentistry is deleted from the Resolutions of Senate with effect from 1st January 2019.

Arts and Social Sciences

4.30 Arts and Social Sciences: Minor Course Amendment for the Bachelor of Visual Arts and Bachelor of Visual Arts/Bachelor of Advanced Studies

Dr Dracopoulos presented the proposal to the Committee. He outlined the amendment to the resolutions for the Bachelor of Visual Arts and Bachelor of Visual Arts/Bachelor of Advanced Studies to ensure alignment with the requirements with new curriculum terminology and to allow access to students to new units of study with the introduction of Art History units.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-35
That the Undergraduate Studies Committee recommend that the Academic Board approve the proposed changes to the resolutions which will clarify inconsistencies, update the requirements of the course and allow students access to new units of study, with effect from 1 January 2019.

4.31 Arts and Social Sciences: Minor Course Amendment for Bachelor of Arts and Bachelor of Arts/Bachelor of Advanced Studies

Dr Dracopoulos presented the proposal to the Committee. He outlined the proposal to approve the introduction of two new majors Criminology and Politics and International Relations. There was discussion around the consultation that had taken place with the Education Portfolio on these proposals.

The proposal for the introduction of the Politics and International Relations major was endorsed for 2019 implementation. The proposal for the introduction of the Criminology major was endorsed for 2020 implementation.

Resolution UGSC2018/4-36
That the Undergraduate Studies Committee recommend that the Academic Board:

1. approve the proposal from the Faculty of Arts and Social Sciences to amend the Bachelor of Arts and Bachelor of Arts / Bachelor of Advanced Studies to allow the introduction a new major Politics and International Relations with effect from 1 January 2019;
2. approve the introduction a new major Criminology with effect from 1 January 2020;
3. approve clarification of the OLE requirements, with effect from 1 January 2019;

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4. approve confirmation that the Global Studies and Media Studies majors are available to students enrolled in Bachelor of Arts/Bachelor of Laws, with effect from 1 January 2019; and

5. approve the amendment of course resolutions and unit of study tables arising from these proposals.

4.32 Arts and Social Sciences: Minor Course Amendment for the Diploma of Arts, Diploma of Social Sciences, and Diploma of Language Studies

Dr Dracopoulos presented the proposal to the Committee. He outlined the updates to the resolutions of the Diploma of Arts, Diploma of Social Sciences and the Diploma of Language Studies in order to accommodate the new curriculum major and minors and to amend the completion requirements. The proposal outlines that completion will required 48 credit points from the Bachelor of Arts Table A, with completion of a major or minor being optional.

It was noted that consultation with the Education Portfolio had affirmed that the diet re-build of the undergraduate diplomas was work already slated for 2019 implementation. The proposal was therefore endorsed for 2019 implementation.

Resolution UGSC2018/4-37
That the Undergraduate Studies Committee recommend that the Academic Board:

1. approve the changes to the resolutions of the Diploma of Arts to reflect the new curriculum majors and minors, and to amend the requirement to 48 credit points from the Bachelor of Arts Table A, with a major or minor being optional;
2. approve the changes to the resolutions of the Diploma of Social Sciences to reflect the new curriculum majors and minors, and to amend the requirement to 48 credit points from the Bachelor of Arts Table A, with a major or minor being optional;
3. approve the changes to the resolutions of the Diploma of Language Studies to reflect the new curriculum majors and minors, and to amend the requirement to 48 credit points from the Bachelor of Arts Table A, with a major or minor being optional.

4.33 Arts and Social Sciences: Minor Course Amendment for the Bachelor of Social Work

Dr Dracopoulos presented the proposal to the Committee. He outlined the amendments to the resolutions of Bachelor of Social Work are to accommodate the introduction of two new core Social Work units at 1000 level; SCWK1001 Social Justice Practice and SCWK1002 Introduction to Human Services. He spoke on the improved student experience by providing earlier opportunities to engage in social work studies, and interaction with other social work students from the newly introduced compulsory units. It was noted that these units will also meet new accreditation requirements by the Australian Association of Social Workers.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-38
That the Undergraduate Studies Committee recommend that the Academic Board approve the changes to the resolutions of the Bachelor of Social Work to allow for the introduction of two new Social Work core units at 1000 level, with effect from 1 January 2019.

4.34 Arts and Social Sciences: Minor Course Amendment for the Bachelor of Economics and Bachelor of Economics/Bachelor of Advanced Studies

Dr Dracopoulos presented the proposal to the Committee. He outlined the changes to the resolutions to provide clarification to students that they must take a minimum of 12 credit points of OLE units.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-39
That the Undergraduate Studies Committee recommend that the Academic Board approve the additional minor changes to clarify that students must take a minimum of 12 credit points of OLE units.

4.35 Arts and Social Sciences: Minor Course Amendment for the Bachelor of Education (Secondary: Mathematics) and Bachelor of Science

Dr Dracopoulos presented the proposal to the Committee. He outlined how the amendments would clarify inconsistencies within the resolutions and allow students to take the proper teaching areas. Advice was also provided that Sydney School of Education and Social Work affirms that in
addition to the course resolutions students in accredited courses are provided with ongoing, clear and detailed advice on selection of teaching areas and the necessary enrolment patterns to be awarded an accredited degree.

The proposal was endorsed in principle for 2019 implementation, however the Committee raised concerns about the removal of specific subject areas and the communication to students on expected outcomes differed from other course resolutions such as those in Item 4.36, further consultation was requested to ensure the changes to resolutions did not have adverse consequences for students. The Committee also requested further consultation with the Science Faculty to take place prior to submission to the Academic Board.

Resolution UGSC2018/4-40
That the Undergraduate Studies Committee recommend subject to amendments that the Academic Board approve the changes to the resolutions which will clarify inconsistencies, and also allow students to access to teaching areas that had not previously been available to them, with effect from 1 January 2019.

4.36 Arts and Social Sciences: Minor Course Amendment to the Bachelor of Education (Secondary: Humanities and Social Sciences) and Bachelor of Arts

Dr Dracopoulos presented the proposal to the Committee. He outlined the amendments to provide students with more flexibility in choosing teaching areas. The amendments allow students to choose teaching areas previously not available to them, which improves their employment prospects at the end of their teaching degree.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-41
That the Undergraduate Studies Committee recommend that the Academic Board:
1. approve updating the table aligning majors/minors and accreditable teaching areas; and
2. amend the resolutions to allow a second teaching area from relevant Table A or Table S options, with effect from January 2019.

4.37 Arts and Social Sciences: Revision of Unit of Study Tables for Table A’s in FASS

Dr Dracopoulos presented the proposal to the Committee. He outlined the following amendments to the Table A unit of study tables:
- Adding new units, primarily at 3000-level, to existing majors;
- the addition attaching Interdisciplinary Projects and selective Industry Community Project Units (ICPUs) to each major;
- Addition of the two new proposed majors; Criminology (2020 implementation) and Politics and International Relations;
- updating as necessary nomenclature of unit of study level to 1000,2000,3000 rather than Junior, Intermediate, Senior; and
- a small number minor updates in requirements of majors e.g to indicate collections are “Selective” where students have choice of units from a given selection, or better align requirements of a minor with the relevant major.

The proposal was endorsed for 2019 implementation.

Resolution UGSC2018/4-42
That the Undergraduate Studies Committee recommend that the Academic Board approve the submitted Table A unit of study tables, with effect from January 2019.

4.38 Arts and Social Sciences: Student-centred enrolment pathways for Languages

Dr Dracopoulos presented the proposal to the Committee. He outlined the difficulties experienced when a student commencing languages at the University currently enters. Students begin with different levels of prior knowledge, from absolute beginners, to HSC-level graduates to native speakers. He spoke on the current state where all students enrol in a single version of the associated language major, the rules of which are built to accommodate a beginner level. This process means that for a percentage of students (depending on the language, this could be a quarter or a third of the cohort) who have prior language knowledge, enrolment is difficult and confusing as the available units and rules do not match what is necessary for them to complete. This can result in a high degree of manual intervention and special permissions required to accommodate ensure students are in the correct sequences.

Respect is a core value of the Academic Board
The faculty feel this is a poor experience for the student and administratively burdensome and would like to pilot a solution that formalises the current practices of pathways at beginner, intermediate and advanced language levels and have specific diets and handbook entries built for students on these pathways.

Concerns were raised by the Committee regarding the administration of these changed diets, and it was agreed that the Faculty would review the pilot program before further implementation across other languages was made.

The proposal for a pilot for Italian Studies was endorsed for 2019 implementation.

**Resolution UGSC2018/4-43**

That the Undergraduate Studies Committee recommend that the Academic Board:

1. approve the proposal from the Faculty of Arts and Social Sciences to pilot a student-centred enrolment pathway for Italian Studies, with effect from 1 January 2019; and
2. request the Faculty submit a review of the pilot before further implementation.

5 STRATEGIC ITEMS

No items were presented to the committee.

6 ITEMS FOR NOTING

6.1 Education Portfolio: Update on Implementation of Strategic Initiatives Relating to Assessment

A/Prof McCallum briefly outlined the paper to the Committee.

**Resolution UGSC2018/4-44**

That the Undergraduate Studies Committee note this progress report from the Assessment Working Group

7 OTHER BUSINESS

The Meeting adjourned at 12:15 pm.

**Date of next meeting**

10:00am-12:00pm, Tuesday 10 July, Senate Room, Quadrangle
RECOMMENDATION

That the Undergraduate Studies Committee note the report of the Academic Board meeting held on 12 June 2018.

REPORT OF ACADEMIC BOARD MEETING

Items related to the Undergraduate Studies Committee

The Academic Board noted the report from meeting of the Undergraduate Studies Committee held on 15 May 2018 and:

- approved the proposal from the Faculty of Science to amend the Bachelor of Liberal Arts and Science and approved the amendment of course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Liberal Arts and Science and approved the amendment of unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science / Bachelor of Advanced Studies to clarify the requirements of the Advanced stream, and approved the amendment of unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science / Bachelor of Advanced Studies to allow students in the combined Bachelor of Engineering Honours / Bachelor of Science degree to select the Nanoscience and Nanotechnology program, and approved the amendment of course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Animal and Veterinary Sciences and approved the amendment of course resolutions arising from this proposal, with immediate effect;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science Table A; approved the amendment of course resolutions arising from the proposal; approved the amendment of the Bachelor of Science to incorporate a name change from the major in Behavioural Sciences to Psychological Science, and approved the amendment of course resolutions arising from the proposal; and approved the amendment of the Bachelor of Science / Master of Mathematical Sciences to reflect a change in credit points for the Mathematical Sciences Program resulting from inclusion of the Data Science major, as well as to bring resolutions of the BSc / MMathSci into line with the Mathematical Sciences Program structure, and approved the amendment of course resolutions arising from the proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science / Bachelor of Advanced Studies (Taronga Wildlife Conservation) to allow students to enter via special admission programs available to other award courses offered by the Faculty, and approved the amendment of faculty resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science / Doctor of Medicine and approved the amendment of course resolutions arising from the proposal, with effect from 1 January 2019;
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- approved the proposal from the Faculty of Science to amend the Bachelor of Veterinary Biology / Doctor of Veterinary Medicine and approved the amendment of unit of study tables arising from the proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to update the units of study in the Bachelor of Science (pre-2018) Table 1, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science (pre-2018) and Bachelor of Liberal Arts and Sciences to close the Nanoscience and Technology major, and approved the amendment of unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science / Master of Nutrition and Dietetics, Bachelor of Science in Agriculture, Bachelor of Food and Agribusiness, Bachelor of Animal and Veterinary Bioscience and Bachelor of Environmental Systems and approved the amendment of unit of study tables arising from the proposal, with effect from 1 January 2019.
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering Honours; approved the introduction of a new major in Food and Bioprocessing to the Bachelor of Engineering Honours; and approved the amendment of course resolutions and unit of study arising from the proposal, with effect from Semester 1, 2020;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering (Honours); and approved the amendment of unit of study tables arising from the proposal, with effect from Semester 1, 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Advanced Computing and the Bachelor of Engineering (Honours); and approved the amendments to the tables of Units of Study arising from this proposal, with effect from Semester 1, 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Project Management and approved the amendment of course resolutions and unit of study tables arising from this proposal, with effect from Semester 1, 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering (Honours) Civil stream and approved the amendment of unit of study tables arising from this proposal, with effect from Semester 1, 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering (Honours) Biomedical stream and approved the amendment of unit of study tables arising from this proposal, with effect from Semester 1, 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the combined Bachelor of Engineering (Honours) and Bachelor of Project Management and approved the amendment of course resolutions of the Bachelor of Engineering Honours combined degrees, with effect from Semester 1, 2019;
- approved the proposal from the Faculty of Health Sciences to amend the units of study for the Hearing and Speech Table S major, and approved the amendment of unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Health Sciences to amend the Bachelor of Applied Science (Physiotherapy) and approved the amendment of unit of study tables arising from this proposal, with effect from Semester 1, 2019;
- approved the proposal from the Sydney Law School to amend the Bachelor of Laws and approved the amendment of unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Business School to amend the Bachelor of Commerce and approved the amendment of unit of study Table A and Table S arising from this proposal, with effect from 1 January, 2019;
- approved the proposal from the Sydney Pharmacy School to amend the Bachelor of Pharmacy and Bachelor of Pharmacy and Management and approved the amendment of course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Sydney Pharmacy School to amend the Bachelor of Pharmacy and Bachelor of Pharmacy and Management and approved the amendment of unit of study tables arising from the proposal, with effect from 1 January 2019;
- agreed to recommend that Senate approved a proposal from the Sydney Dental School to delete the Bachelor of Dentistry from the Resolutions of Senate for the Faculty of Dentistry, with effect from 1 January 2019, noting that this degree is no longer offered and has been replaced by the Doctor of Dental Medicine in 2012;
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- approved the proposal from the Faculty of Arts and Social Science to amend the Bachelor of Visual Arts and Bachelor of Visual Arts / Bachelor of Advanced Studies and approved the amendment of course resolutions and unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Bachelor of Arts and Bachelor of Arts / Bachelor of Advanced Studies to allow the introduction a new major Politics and International Relations with effect from 1 January 2019; to allow the introduction a new major Criminology with effect from 1 January 2020; to clarify the OLE requirements, with effect from 1 January 2019; and to confirm that the Global Studies and Media Studies majors are available to students enrolled in Bachelor of Arts/Bachelor of Laws, with effect from 1 January 2019; and approved the amendment of course resolutions and unit of study tables arising from these proposals;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the resolutions of the Diploma of Arts, Diploma of Social Sciences and Diploma of Language Studies to reflect the new curriculum majors and minors and approved the amendment of course resolutions arising from the proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Bachelor of Social Work and approved the amendment of course resolutions arising from the proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Bachelor of Economics and Bachelor of Economics / Bachelor of Advanced Studies to clarify OLE requirements, and approved the amendment of course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Bachelor of Education (Secondary: Mathematics) and Bachelor of Science and amend course resolutions arising from this proposal, with effect from January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Bachelor of Education (Secondary: Humanities and Social Sciences) and Bachelor of Arts and approved the amendment of course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend Table A, with effect from 1 January 2019; and
- approved the proposal from the Faculty of Arts and Social Sciences to pilot a student-centred enrolment pathway for Italian Studies, with effect from 1 January 2019.

Items related to the Academic Quality Committee

The Academic Board noted the report from the meeting of the Academic Quality Committee held on 8 May 2018 and:

- noted a paper identifying issues with the current HDR thesis examination process as provided by the Director, Graduate Research and invited the Director, Graduate Research to develop a more detailed submission on the matter;
- approved the course review from the Faculty of Science for the Master of Nutrition and Dietetics, as presented; and
- approved the Academic Board / University Executive Phase Four Faculty Review Report for the Sydney Conservatorium of Music, as presented.

Items related to the Academic Standards and Policy Committee

The Academic Board noted the report from the meeting of the Academic Standards and Policy Committee held on 22 May 2018 and:

- endorsed the amendment of the Assessment Procedures 2011, as presented, to enable implementation of a common system of late penalties and a common submission time for some forms of assessment, with effect from Semester 1 2019;
- agreed to recommend that Senate approved the amendment of the University of Sydney (Coursework) Rule 2014, as presented, with effect as soon as practicable following approval by Senate;
- agreed to recommend that Senate approved the amendment of the University of Sydney - Delegations of Authority (Academic Functions) Rule 2018, as amended, with effect as soon as practicable following approval by Senate; and
- noted the update on the implementation of strategic initiatives relating to assessment, as presented.
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Items related to the Graduate Studies Committee

The Academic Board noted the report from meeting of the Graduate Studies Committee held on 22 May 2018 and:

- approved the proposal from Sydney Law School to amend the Juris Doctor and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from Sydney Law School to amend the Master of Administrative Law and Policy, Master of Criminology (Coursework), Graduate Diploma in Criminology, Master of International Law, Graduate Diploma in International Law; Master of Business Law, Graduate Diploma in Business Law, Master of Environmental Law, Graduate Diploma in Environmental Law, Master of Laws, Graduate Diploma in Law and Graduate Diploma in Commercial Law; and approved the amendment of unit of study tables and course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the School of Architecture, Design and Planning to amend the Bachelor of Design in Architecture (Honours) / Master of Architecture and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the School of Architecture, Design and Planning to amend the Master of Architectural Science (Sustainable Design) and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the School of Architecture, Design and Planning to amend the Master of Architecture and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the School of Architecture, Design and Planning to amend the Master of Heritage Conservation and amend the course resolutions and unit of study table arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Doctor of Arts and Doctor of Social Sciences examination procedures and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Graduate Certificate of Art Curating and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Graduate Diploma in Contemporary Art and Master of Contemporary Art and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Master of Crosscultural and Applied Linguistics and amend the course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Graduate Certificate in Digital Communication and Culture and amend the course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Master of Education and embedded award courses and amend the course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Master of Education (Educational Management and Leadership) and embedded programs and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Executive Master of Arts and Social Sciences and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Executive Master of Public Administration and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Graduate Certificate in Human and Community Services and amend course resolutions and unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Master of Peace and Conflict Studies and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Master of US Studies and embedded award courses and amend course resolutions arising from this proposal, with effect from 1 January 2019;
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- approved the proposal from the Faculty of Arts and Social Sciences to amend the Master of International Relations, Master of International Security and Master of Political Economy and amend course resolutions and unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Postgraduate unit of study tables, with effect from 1 January 2019;
- approved the proposal from the Faculty of Arts and Social Sciences to amend the Master of Moving Image and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Business School to amend the Master of Commerce and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Business School to amend the Master of Business Administration (Leadership & Enterprise) and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Business School to amend the Master of Human Resource Management and Industrial Relations and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Business School to amend the Master of Business Administration and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Business School to amend the Master of Professional Accounting and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Business School to amend the Master of Logistics and Supply Chain Management and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Master of Professional Engineering / Master of Engineering and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Master of Engineering and Master of Professional Engineering and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Master of Health Technology Innovation and embedded award courses and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Master of Project Management and amend course resolutions and unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Master of Project and Program Management and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Engineering and Information Technologies to amend the Master of Information Technology and Master of Information Technology Management and embedded award courses and amend course resolutions and unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to amend the Graduate Certificate in Evidence-Based Complementary Medicines and Master of Pharmacy and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to delete the Graduate Certificate in Clinical Dentistry (Oral Rehabilitation) and agreed to recommend that Senate approved the amendment of Resolutions of Senate for the Faculty of Dentistry arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to amend the Doctor of Clinical Dentistry and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to amend the Master of Medicine / Master of Science in Medicine and associated award courses, amend course resolutions and unit of study tables
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arising from this proposal, and agreed to recommend that Senate approved the amendment of the Resolutions of Senate for the Faculty of Medicine, with effect from 1 January 2019;

- approved the proposal from the Faculty of Medicine and Health to amend the Master of Health Policy and embedded award courses and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to amend the Master of Medicine / Master of Science in Medicine (Infection and Immunity) and embedded award courses and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to amend the Resolutions of the University of Sydney Medical School for coursework courses, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to amend the Master of Medicine / Master of Science in Medicine (Clinical Epidemiology) and embedded award courses, and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Medicine and Health to amend the Master of Medicine / Master of Science in Medicine (General Practice and Primary Health Care) and embedded award courses and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Graduate Diploma in Psychology and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Master of Clinical Psychology and Master of Clinical Psychology / Doctor of Philosophy and amend course resolutions arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Master of Environmental Science and Master of Environmental Science and Law and embedded award courses and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science / Master of Mathematical Sciences and amend the course resolutions and unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Bachelor of Science / Master of Nutrition and Dietetics and amend unit of study tables arising from this proposal, with effect from 1 January 2019;
- approved the proposal from the Faculty of Science to amend the Master of Veterinary Studies / Master of Veterinary Clinical Studies and amend course resolutions arising from this proposal, with effect from 1 January 2019; and
- noted the proposal from the Faculty of Medicine and Health to amend the Master of Mental Health Nursing, Nursing postgraduate award courses, Master of Surgery; Master of Global Health and the Master of Public Health.

Other matters
The Academic Board also:

- received a presentation from Dr Ann Rogerson (Director of Academic Integrity and Assessment - Faculty of Business, University of Wollongong) on Trends in Academic Integrity;
- received and noted the Reports of the Chair and of the Vice-Chancellor;
- received and noted reports from the student members of the Academic Board;
- approved the amendment of the Assessment Procedures 2011, to enable implementation of a common system of late penalties and a common submission time for some forms of assessment, with effect from Semester 1 2019;
- noted the appointment of academic staff members to the 2018 Central Promotion committee; and
- received an update on the implementation of strategic initiatives relating to assessment.

The agenda pack for the 12 June 2018 meeting of the Academic Board (excluding the Reports of the Undergraduate and Graduate Studies Committees) is available here.

The Report of the Undergraduate Studies Committee is available here.

The Report of the Graduate Studies Committee is available here.
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Associate Professor Tony Masters
Chair, Academic Board

Respect is a core value of the Academic Board
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<table>
<thead>
<tr>
<th>Author</th>
<th>Dr Laurie Monier, Education Strategy Project Officer</th>
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<tbody>
<tr>
<td>Reviewer/Approver</td>
<td>Associate Professor Peter McCallum, Director, Education Strategy</td>
</tr>
<tr>
<td>Paper title</td>
<td>REVIEW OF AMENDMENT PROPOSALS BY THE FACULTY OF ENGINEERING AND INFORMATION TECHNOLOGIES</td>
</tr>
<tr>
<td>Purpose</td>
<td>To advise the USC on the content of three amendments submitted by the Faculty of Engineering and Information Technologies</td>
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RECOMMENDATION

That the Undergraduate Studies Committee (USC):
- incorporate this advice into their consideration of the amendment proposals presented to it at this meeting; and
- where it agrees with the issues, request the faculty resolve them to their satisfaction.

EXECUTIVE SUMMARY

The Education portfolio reviewed the amendment proposals submitted by the Faculty of Engineering and Information Technology. A number of issues were identified for discussion with the USC. Firstly, the change to the Faculty Resolutions proposed anticipates the process currently underway to enact a University-wide Mobility Policy, so it is recommended that the USC consider delaying approving this change. The ‘minor’ course amendment proposal for the Bachelor of Engineering (Honours) and Bachelor of Commerce effectively introduces a new sized degree core and adds access to a new program, both of which are changes that may require new diet builds and thus needed to meet the June deadline for approvals in order to be accommodated for introduction by 2019. If this change is approved by the committee, it should note that the build would not be undertaken until 2020 due to the missed deadline.

BACKGROUND

Faculty Resolutions amendments:
The Faculty is proposing to make a number of changes to the Faculty Resolutions to ensure their alignment with University policy and strategy. Among them is a clause that sets out the conditions for applying for an International Exchange and the authority responsible for approving the units of study to be taken overseas.

Minor Course Amendment Proposal for Bachelor of Engineering (Honours) and Bachelor of Commerce
This amendment requests changes to the units offered in the combined degree from 2019. Currently, there are mutual prohibitions between the core Bachelor of Engineering (Honours) unit MATH 1005 Statistics and the core Bachelor of Commerce unit BUSS1020. Students in the combined degree are advised to take MATH1005 (3 credit points) and are exempt from taking BUSS1020 (6 credit points). In addition, students take a Business Elective (6 credit points). Following changes to the content of MATH1005 and feedback from students, the University of Sydney Business School has indicated that MATH1005 alone is not considered an adequate prerequisite for subsequent quantitative units in the Bachelor of Commerce. The proposed course amendment is:
1. to have students take BUSS1020 and be exempted from MATH1005; and
2. to remove the requirement for students to take the 6 credit points Business Elective; and
3. to recommend students to take MATH1004 to make up for the 3 credit point gap.

As BUSS1020 is an accreditation requirement for the Professional Accounting Program, the change means that students in the combined Bachelor of Engineering (Honours) and Bachelor of Commerce degree will no longer be prohibited from undertaking this program. As such, the Faculty also proposes that the combined Bachelor of Engineering (Honours) resolutions be amended to remove this prohibition which would make the program available in 2019.
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ISSUES

Faculty Resolutions amendments proposal
As the University is still finalising its Mobility Policy, adding a subclause outlining the conditions and authority responsible for approving units of study to be undertaken while on exchange may be in conflict with the outcome of consultations regarding that policy which are likely to have a bearing on these issues. It is therefore recommended that the clause not be added to the Faculty Resolutions until the University-wide policy is finalised.

Minor Course Amendment Proposal for Bachelor of Engineering (Honours) and Bachelor of Commerce
The minor course amendment requested for the combined Bachelor of Engineering (Honours) and Bachelor of Commerce means that the students will undertake 24 credit points of Business Core units instead of 18. This is compatible with the requirement for award outlined in the combined course resolutions. However, the proposal requests the amended combined degree and course resolutions be enacted from 1 January 2019. This may require a new diet build by the Academic Model team.

Additionally, as students in the combined Bachelor of Engineering (Honours) and Bachelor of Commerce will no longer be prohibited from undertaking the Professional Accounting program, this means adding a new program to the degree. The Academic Board approval deadline for adding new curriculum components for 2019 was 12 June 2018. These deadlines are established to manage the workload impacting the Academic Model team and to ensure that subsequent deadlines for publishing, advertising and enrolling students can be met. As previously agreed by University Executive, new curriculum components added at this stage can not be implement until 2020.
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<table>
<thead>
<tr>
<th>Author</th>
<th>Christine Lacey, Curriculum Team Leader, Faculty of Engineering and Information Technologies</th>
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<tbody>
<tr>
<td>Reviewer/Approver</td>
<td>David Lowe, Associate Dean (Education), Faculty of Engineering and Information Technologies</td>
</tr>
<tr>
<td>Paper title</td>
<td>Amendment to Faculty Resolutions – Faculty of Engineering and Information Technologies</td>
</tr>
<tr>
<td>Purpose</td>
<td>To amend the Faculty Resolutions to align with University policy and strategy with regard to degree candidature time limits and international exchange</td>
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**RECOMMENDATION**

That the Undergraduate Studies Committee recommend that the Academic Board approve:

a) The proposal from the Faculty of Engineering and Information Technologies to amend the Faculty Resolutions of the Faculty of Engineering and Information Technologies

**EXECUTIVE SUMMARY**

It has been advised that the Faculty Resolutions re time limits do not align with the University Coursework Policy with regard to periods of suspension and lapsed candidature, and it is proposed to amend the resolutions to correct this. It is further proposed to change FEIT degree time limits to be consistent with those specified by University Policy.

The existing Faculty Resolutions restrict student access to short term exchange, so it is proposed to amend this clause to broaden access to mobility experiences.

**ATTACHMENTS**

Attachment 1: Minor Course Amendment proposal - Faculty Resolutions
Minor Course Amendment Proposal

Faculty: Engineering & IT

Contact person: Tim Wilkinson (x15104), Christine Lacey (x40678)

1. Name of award course
   Faculty of Engineering and Information Technologies – Faculty Resolutions

2. Purpose of proposal
   It is proposed to make a number of changes to the Faculty Resolutions to ensure that they align with University Policy and strategy.

   a) Degree Candidature Time Limits
   The existing Faculty Resolutions include the phrase “Periods of suspension, exclusion or lapsed candidacy will be added to maximum completion time except that no completion time may exceed 10 years from first enrolment”. The University Coursework Policy includes the phrase “periods of suspension will not be counted when calculating the maximum period.” We have received advice from the Office of General Counsel that if a student is readmitted by an application process to the degree after lapse or exclusion that it is counted as a new candidacy and the time limit resets. Therefore a change to the current wording is required.

   Currently the FEIT time limits are stricter than the global university limits. It is proposed to adopt the more generous university-wide time limits for all award courses. FEIT has an increasing number of students who wish to study part time and more generous time limits will help accommodate students with work, family and carer commitments. Consistency with university-wide time limits will also reduce administrative confusion, improving the student experience.

   b) International Exchange
   The University has set a strategic goal of 50% of students having a global mobility experience within their degree. The current Faculty Resolutions make it difficult for many students to go on short term exchange because it is classed as “cross institutional study”. Hence it is proposed to amend the resolutions to allow both participation in the University of Sydney Exchange Program and in non-exchange mobility.

3. Details of amendment
   Appendix 1: Faculty of Engineering and IT – Faculty Resolutions

4. Transitional arrangements
   The change to the resolutions will apply from 2019.

5. Other relevant information
   N/A

6. Signature of Dean
   [Signature]
   26/6/18
Resolutions of the Faculty of Engineering and Information Technologies for coursework awards

These resolutions apply to all undergraduate and postgraduate coursework award courses in the Faculty, unless specifically indicated otherwise. Students enrolled in postgraduate research awards should consult the resolutions for their course. These resolutions must be read in conjunction with applicable University By-laws, Rules and policies including (but not limited to) the University of Sydney (Coursework) Rule 2014 (the 'Coursework Rule'), the Coursework Policy 2014 (the 'Coursework Policy'), the resolutions for the course of enrolment, the University of Sydney (Student Appeals against Academic Decisions) Rule 2006 (as amended), the Academic Honesty in Coursework Policy 2015 and the Academic Honesty Procedures 2016. Up to date versions of all such documents are available from the Policy Register: http://sydney.edu.au/policies.

Part 1: Course Enrolment

1 Enrolment Restrictions

(1) Except where explicitly listed in a Faculty recommended program of enrolment, or with the permission of the Dean or delegate, an undergraduate student shall satisfy the following enrolment requirements.

(a) No more than 26 credit points in either semester one or two;
(b) No more than 12 credit points in the summer session and 6 credit points in the winter session;
(c) A student may enrol only;
(i) in level 1000 units of study during their first year;
(ii) in level 1000 or 2000 units of study during their second year;
(d) A student shall enrol in lower year level core units of study as a priority above any higher year level units of study irrespective of meeting any prerequisite requirements of the higher year units.

(e) Any student subject to the requirements of the Professional Engagement Program (PEP) shall successfully complete each required stage of the Program prior to enrolling in units that could extend their completed credit points past the specified level for that stage.

2 Transferring Between Streams or Degrees

(1) Students admitted to specific postgraduate degrees or streams wishing to transfer between degrees or streams managed by the Faculty need to apply to the Faculty and obtain the approval of the Dean (or delegate). Students will be assessed based on their progress in their current degree or stream and must be able to show that they meet the criteria that apply to commencing students.

3 Time Limits

(1) Except where specific course resolutions specify alternative requirements, the following conditions must be met:
(a) A student must complete all the requirements for a coursework doctorate, within ten calendar years of first enrolment;
(b) A student must complete all the requirements for a combined BEHons or combined BAdvComp within ten calendar years of first enrolment;
(c) A student must complete all the requirements for a single (non combined) BEHons, BAdvComp, BComp or BPM within the lesser of 16 enrolled semesters or ten calendar years of first enrolment;
(d) A student must complete all the requirements for a graduate certificate within two calendar years of first enrolment; completing in a minimum of 1 semester and a maximum of 4 semesters;
(e) A student must complete all the requirements for a graduate diploma within four calendar years of first enrolment; completing in a minimum of 2 semesters and a maximum of 6 semesters;
(f) A student must complete all the requirements for a master's degree within six calendar years of first enrolment; completing in a minimum of 2 semesters and a maximum of 8 semesters.

(2) Periods of suspension, exclusion or lapsed candidature will be added to maximum completion times except that no completion time may exceed 10 years from first enrolment.

(3) Credits will not be granted for prior learning older than 10 years at the time of first enrolment.

1 The provisions of the Coursework Rule apply to the time limits for undergraduate and postgraduate programs, unless otherwise stated in the course resolutions, with the following clarification:
(a) For a course within an embedded sequence, the time limit commences at the time of first enrolment in the sequence.

4 Suspension, Discontinuation and Lapse of Candidature

The Coursework Rule and Coursework Policy specify the conditions for suspending or discontinuing candidature, and return to candidature after these events. The Rule and Policy also define the circumstances when candidature is deemed to have lapsed. Students seeking to suspend, discontinue or apply for a return to candidature after a lapse must apply to the Dean of Engineering and Information Technologies or their delegate for permission, supplying detailed reasons and evidence to support the request.

5 Credit for Previous Study

(1) Conditions for the granting of credit for previous study are in accordance with the Coursework Rule and Policy, except:
(a) the maximum credit that may be granted to the Bachelor of Engineering Honours degree, Bachelor of Engineering Honours combined degrees, Bachelor of Advanced Computing degree or Bachelor of Advanced Computing combined degrees is 96 credit points;
(b) the maximum credit that may be granted to the Bachelor of Computing or Bachelor of Project Management is 48 credit points; and
(c) credit for prior learning at the University of Sydney at postgraduate level may be granted subject to the approval of the Faculty and to the following conditions:
(i) where no award has been conferred, credit may be transferred in full to the Graduate Diploma and Master degree;
(ii) if an award has been conferred credit to a limit of 12 credit points may be transferred.
(d) credit for prior learning at postgraduate level at an external institution recognised by the University of Sydney may be granted as follows:
(i) where no award has been conferred credit to a maximum of 50 percent of the degree may be approved, provided units of study have been completed at credit average and are equivalent to units of study offered under the degree being taken;
(ii) where an award has been conferred credit to a maximum of 12 credit points may be approved provided units of study have been completed at credit average and are equivalent to units of study offered under the degree being taken;
Part 2: Unit of Study Enrolment

6 Cross-institutional Study

(1) Provided permission has been obtained in advance, the Dean (or delegate) may permit a student to complete a unit of study at another institution and have that unit credited to the student’s course requirements, provided that:
(a) the resolutions of the student's course of enrolment do not specifically exclude cross-institutional study; and either
(b) the unit of study content is not taught in any corresponding unit of study at the University; or
(c) the student is unable, for good reason, to attend a corresponding unit of study at the University.

7 International Exchange

The Faculty encourages students to participate in international exchange programs, except where specified otherwise in the resolutions for a particular course. Students must apply to the Head of the relevant School of Engineering and Information Technologies to obtain approval for their planned enrolment while on exchange. This guarantees that the units completed externally will be correctly matched to the core requirements of their course. International exchange must not exceed 12 months / 48cp and must not be approved where it would result in less than 50% of the normal course requirements being completed at the University of Sydney.

(1) The Faculty encourages students to participate in international study, unless the resolutions for a particular course preclude this, by participating in:
(a) the University of Sydney Exchange Program; or
(b) non-exchange mobility

(2) The following conditions shall apply:
(a) Units of study taken overseas are approved in advance as equivalent to units of study not yet successfully completed within the student’s course.
(b) International exchange must not exceed 12 months / 48 credit points and must not be approved where it would result in less than 50% of the normal course requirements being completed at the University of Sydney.
(c) A student meets any additional qualification or application requirements specified by the administrative unit responsible for managing international exchange

Part 3: Studying and Assessment

8 Attendance

(1) Students are required to be in attendance at the correct time and place of any formal or informal examinations. Non attendance on any grounds insufficient to claim special consideration will result in the forfeiture of marks associated with the assessment. Participation in a minimum number of assessment items may be a requirement of any unit of study.

(2) Students are expected to attend a minimum of 90 percent of timetabled activities for a unit of study, unless granted exemption by the Dean or Head of School most concerned. The Dean or Head of School most concerned may determine that a student fails a unit of study because of inadequate attendance. Alternatively, at their discretion, they may set additional assessment items where attendance is lower than 90 percent.

9 Special Consideration for Illness, Injury or Misadventure

Special consideration is a process that affords equal opportunity to students who have experienced circumstances that adversely impact their ability to adequately complete an assessment task in a unit of study. The Coursework Policy provides full details of the University policy and procedures.

10 Concessional Pass

In this Faculty the grade PCON (Concessional Pass) is not awarded.

11 Re-assessment

The Faculty does not offer opportunities for re-assessment other than on the grounds of approved special consideration.

Part 4: Progression, Results and Graduation

12 Satisfactory Progress

The Faculty will monitor students for satisfactory progress towards the completion of their award course. In addition to the common triggers used to identify students not meeting academic progression requirements (as defined by the Progression requirements of the Coursework Rule and Coursework Policy, students must pass any unit of study identified in the course resolutions as being critical to progression through the course.

13 Award of the Bachelor's Degree with Honours

Honours is available to students as either appended honours or integrated honours. Admission, requirements and award for the honours courses are in accordance with the relevant course resolutions.

14 Faculty of Engineering and Information Technologies Specific Weighted Average Mark Indicators

The Weighted Average Mark (WAM) is calculated by the formula:

Formula

\[ WAM = \frac{\sum (CPi \times Mi)}{\sum CPi} \]

where

(a) \( CPi \) is the number of credit points for the unit of study.
(b) \( Mi \) is the mark achieved for the unit of study.

The Engineering Integrated Honours Weighted Average Mark (EIHWAM) is calculated by the formula:

Formula

\[ EIHWAM = \frac{\sum (Wi \times CPi \times Mi)}{\sum Wi \times CPi} \]

where

(a) \( Wi \) is the weighting given by 0 for 1000 level units of study, 2 for 2000 level units, 3 for 3000 level units and 4 for 4000 level or above units. Thesis units of study are given a double weighting of 8.
(b) \( CPi \) is the number of credit points for the unit of study.
(c) \( Mi \) is the mark achieved for the unit of study.

All attempts at units of study are included except for: units of study assessed on a pass/fail basis; units of study with a grade of DC; and
credited units of study from other institutions. The mark used for units of study with a grade of AF or DF is zero.

15 University Medal

A student who has qualified for the award with first class honours and has an EIHWAM of 85 or above, and who has demonstrated excellence in their honours thesis will be considered for the award of a University Medal. The Medal is awarded at the discretion of the Dean or relevant Associate Dean, after the recommendation of the relevant Head of School, to the highest achieving students who in the opinion of the Faculty have an outstanding academic record, in accordance with the Coursework Rule and Coursework Policy.

Part 5: Other

16 Transitional Provisions

(1) These resolutions apply to students who commenced their candidature on or after 1 January, 2018.
(2) Students who commenced prior to 1 January, 2018 may:
(a) complete the requirements in accordance with the resolutions governing their candidature immediately prior to these changes; or
(b) where approved by the Faculty, elect to proceed under these resolutions provided appropriate programs of study can be identified.
Non-Confidential

Author | Christine Lacey, Curriculum Team Leader, Faculty of Engineering and Information Technologies
Reviewer/Approver | David Lowe, Associate Dean (Education), Faculty of Engineering and Information Technologies
Paper title | Bachelor of Engineering Honours (Chemical and Biomolecular) change to stream core
Purpose | To amend the Bachelor of Engineering Honours (Chemical and Biomolecular) stream core units of study

**RECOMMENDATION**

*That the Undergraduate Studies Committee recommend that the Academic Board approve:*

a) The proposal from the Faculty of Engineering and Information Technologies to amend the Bachelor of Engineering (Honours) Chemical and Biomolecular stream.

b) The amendment to the table of Units of Study arising from this proposals, with effect from Semester 1, 2019

**EXECUTIVE SUMMARY**

It is proposed to add CHNG3804 Biochemical Engineering, which is currently an elective unit, to the core units in the BE(Hons) Chemical and Biomolecular stream. It will replace CHNG3807 Products and Value Chains, which will become an elective unit.

The changes in the core and elective units proposed here are intended to

- Improve unit of study focus and coherence with the major in Food and Bioprocessing
- Strengthen chemical engineering foundations in biochemical process
- Strengthen progression of chemical engineering knowledge from basic principles to applications in the middle years of the program.

**ATTACHMENTS**

Attachment 1: Minor Course Amendment proposal Bachelor of Engineering Honours (Chemical and Biomolecular Stream)
Minor Course Amendment Proposal

Faculty/Board of Studies: Faculty of Engineering and Information Technologies

Contact person: Alejandro Montoya (x12040), Christine Lacey (x40678)

1. Name of award course
Bachelor of Engineering (Honours) in Chemical and Biomolecular Engineering

2. Purpose of proposal
To amend the stream core units in the Bachelor of Engineering (Honours) Chemical and Biomolecular Engineering stream.

Proposal:
• Change the six-credit point unit CHNG3807: Products and Value Chains from core unit in third year, semester two, to an elective unit in the third year, semester two.
• Convert the six-credit point unit CHNG3804: Biochemical Engineering from an elective unit in third year, semester two, to a core unit in the third year, semester two.

The changes in the core and elective units proposed here are intended to
• Improve unit of study focus and coherence with the major in Food and Bioprocessing
• Strengthen chemical engineering foundations in biochemical process
• Strengthen progression of chemical engineering knowledge from basic principles to applications in the middle years of the program.

Who is affected?
The proposed change will affect the Bachelor Honours Chemical and Biomolecular Engineering stream students

3. Details of amendment
Appendix 1 – BE (Hons) Chemical and Biomolecular Unit of Study Table

4. Transitional arrangements
The change will be implemented in 2019 and will apply to students who commenced their candidature in 2017 or later and who will therefore enter their third year in 2019.

CHNG3807 will be offered as an elective unit in 2019, so any student who does not pass the unit in 2018 can enrol in it again in 2019.

5. Other relevant information
1) There proposed changes do not affect the list of assumed knowledge, prerequisites, corequisites or prohibition of the units.
2) The proposed changes have been approved in consultation with the Head of School and all academics in the school.
3) This proposal is the final step of a three-stage curriculum plan to develop a strong foundation covering all main research areas within the school. The changes that have already been approved include i) Renaming and internal restructuring of core chemical engineering units in the second year, ii) new advanced elective units in the final years of the degree, and iii) Creation of three new optional majors offered from 2019.
4) The proposed changes align with the school research theme in Food Industry Transformation and supported through the Centre for Excellence in Advanced Food Enginomics.
5) The school will review the pre-requisites for CHNG4802 and 4806 from 2020 onwards.

6. Signature of Dean

[Signature]

26/6/18
## Chemical Engineering Stream Table

### Chemical and Biomolecular Stream Core units

Complete all 108 credit points of the following units of study:

<table>
<thead>
<tr>
<th>Unit of study</th>
<th>Credit points</th>
<th>A: Assumed knowledge</th>
<th>P: Prerequisites</th>
<th>C: Corequisites</th>
<th>N: Prohibition</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGG1801 Engineering Computing</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semester</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1 Summer Main</td>
</tr>
<tr>
<td>CHEM1111 Chemistry 1A</td>
<td>6</td>
<td>A Students who have not completed HSC Chemistry (or equivalent) and HSC Mathematics (or equivalent) are strongly advised to take the Chemistry and Mathematics Bridging Courses (offered in February).</td>
<td></td>
<td></td>
<td>CHEM1001 or CHEM1101 or CHEM1901 or CHEM1903 or CHEM1109 or CHEM1011 or CHEM1111 or CHEM1991</td>
<td>Semester 1 Semester 2 Summer Main</td>
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<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CHEM1112 Chemistry 1B</td>
<td>6</td>
<td>P CHEM1111 or CHEM1911 or CHEM1101 or CHEM1901 or (75 or above in CHEM1011 or CHEM1001)</td>
<td>CHEM1002 or CHEM1102 or CHEM1902 or CHEM1904 or CHEM1108 or CHEM1012 or CHEM1912 or CHEM1992</td>
<td>Semester 1 Semester 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG1103 Conservation of Mass and Energy</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semester 2</td>
</tr>
<tr>
<td>CHNG2801 Fluid Mechanics</td>
<td>6</td>
<td>A Calculus, Computations (Matlab, Excel), Mass and Energy Balances.</td>
<td>CHNG2802 OR AMME2960</td>
<td></td>
<td></td>
<td>Semester 1</td>
</tr>
<tr>
<td>CHNG2802 Applied Maths for Chemical Engineers</td>
<td>6</td>
<td>A Enrolment in this unit of study assumes that all core science and engineering UoS in first-year have been successfully completed.</td>
<td>(MATH1001 OR MATH1021 OR MATH1901 OR MATH1921) AND (MATH1002 OR MATH1902) AND (MATH1003 OR MATH1023 OR MATH1903 OR MATH1923) AND (MATH1005 OR MATH1015 OR MATH1905) AND CHNG1103</td>
<td></td>
<td></td>
<td>Semester 1</td>
</tr>
<tr>
<td>CHNG2803 Heat and Mass Transfer</td>
<td>6</td>
<td>A Ability to conduct mass and energy balances, and the integration of these concepts to solve real chemical engineering problems Ability to understand basic principles of physical chemistry, physics and mechanics. Ability to use mathematics of calculus (including vector calculus) and linear algebra, and carry out computations with MATLAB and MS</td>
<td></td>
<td></td>
<td></td>
<td>Semester 1</td>
</tr>
</tbody>
</table>
### CHNG2804
**Chemical Engineering Thermodynamics**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Ability to conduct mass and energy balances, and the integration of these concepts to solve real chemical engineering problems. Ability to understand basic principles of physical chemistry, physics and mechanics. Ability to use mathematics of calculus (including vector calculus) and linear algebra, and to carry out computations with Matlab and MS-Excel.</td>
</tr>
</tbody>
</table>

**Prerequisites:** CHNG1103 AND (CHEM1101 OR CHEM1111) AND (CHEM1102 OR CHEM1112) AND (CHNG2805 AND CHNG2806) OR MECH2901

<table>
<thead>
<tr>
<th>Semester</th>
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<tr>
<td>2</td>
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</table>

### CHNG2805
**Engineering for a Sustainable Society**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>6</td>
<td>Ability to conduct mass and energy balances, and the integration of these concepts to solve real chemical engineering problems. Ability to understand basic principles of physical chemistry, physics and mechanics. Ability to use mathematics of calculus (including vector calculus) and linear algebra, and carry out computations with MATLAB and MS EXCEL.</td>
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</table>

**Prerequisites:** CHNG1103

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<tr>
<th>Semester</th>
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<td>2</td>
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</table>

### CHNG2806
**Separation Processes**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>6</td>
<td>Ability to conduct mass and energy balances, and the integration of these concepts to solve real chemical engineering problems. Ability to understand basic principles of physical chemistry, physics and mechanics. Ability to use mathematics of calculus (including vector calculus) and linear algebra, and carry out computations with MATLAB and MS EXCEL. Ability to read widely outside of the technical literature, and to synthesise arguments based on such literature. Ability to write coherent reports and essays based on qualitative and quantitative information.</td>
</tr>
</tbody>
</table>

**Prerequisites:** CHNG1103 AND CHNG2803

<table>
<thead>
<tr>
<th>Semester</th>
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<tr>
<td>2</td>
<td></td>
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</table>

### CHNG3801
**Process Design**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>6</td>
<td>Enrolment in this unit of study assumes that all (six) core chemical engineering UoS in second year have been successfully completed.</td>
</tr>
</tbody>
</table>

**Prerequisites:** CHNG2801 AND CHNG2802 AND CHNG2803 AND CHNG2804 AND CHNG2805 AND CHNG2806) OR (CHNG2801 AND CHNG2803 AND CHNG2804 AND AMME2960) AND CHNG3803, CHNG3802

<table>
<thead>
<tr>
<th>Semester</th>
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<tbody>
<tr>
<td>1</td>
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</table>

### CHNG3802
**Control and Reaction Engineering**

<table>
<thead>
<tr>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>6</td>
<td>Enrolment in this unit of study assumes that all (six) core chemical engineering UoS in second year have been successfully completed.</td>
</tr>
</tbody>
</table>

**Prerequisites:** CHNG2801 AND CHNG2802 AND CHNG2803 AND CHNG2804 AND CHNG2805 AND CHNG2806) OR (CHNG2801 AND CHNG2803 AND CHNG2804 AND AMME2960)

<table>
<thead>
<tr>
<th>Semester</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>CHNG3803</td>
<td>Chemical/Biological Process Design</td>
</tr>
<tr>
<td>CHNG3806</td>
<td>Management of Industrial Systems</td>
</tr>
<tr>
<td>CHNG3807</td>
<td>Products and Value Chains</td>
</tr>
<tr>
<td>CHNG3804</td>
<td>Biochemical</td>
</tr>
</tbody>
</table>

Note: P indicates Prerequisite, C indicates Corequisite.
### Engineering

**CHNG4802 Chemical Engineering Design A**

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Credit Points</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHNG4802</td>
<td>6</td>
<td>CHNG3801 AND CHNG3802 AND CHNG3803 AND CHNG3805 AND CHNG3806 AND CHNG3807. Enrolment in this unit of study assumes that all six core chemical engineering unit of study in third year have been successfully completed. P CHNG3801, CHNG3802, CHNG3803, CHNG3805, CHNG3806, CHNG3807 N CHNG4203</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

*Department permission required for enrolment prior to CHNG4802 in the case of Mid-Year Entry students.*

### Chemical and Biomolecular Stream Specialist units

Complete 48 credit points from the following:

Select a maximum of 12 credit points from the following units of study:

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Credit Points</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL1006</td>
<td>6</td>
<td>HSC Biology. Students who have not completed HSC Biology (or equivalent) are strongly advised to take the Biology Bridging Course (offered in February). N BIOL1001 or BIOL1911 or BIOL1991 or BIOL1906 or BIOL1996</td>
<td>Semester 1 Summer Main</td>
</tr>
</tbody>
</table>

**Note:** Department permission required for enrolment

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Credit Points</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL1906</td>
<td>6</td>
<td>85 or above in HSC Biology or equivalent. N BIOL1001 or BIOL1911 or BIOL1991 or BIOL1906 or BIOL1996</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

**Note:** Department permission required for enrolment

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Credit Points</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL1996</td>
<td>6</td>
<td>90 or above in HSC Biology or equivalent N BIOL1001 or BIOL1911 or BIOL1991 or BIOL1906 or BIOL1993 or BIOL1998</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

**Note:** Department permission required for enrolment

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Credit Points</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL1007</td>
<td>6</td>
<td>HSC Biology. Students who have not completed HSC Biology (or equivalent) are strongly advised to take the Biology Bridging Course (offered in February). N BIOL1907 or BIOL1997</td>
<td>Semester 2 Summer Main</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Points</td>
<td>Prerequisites</td>
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</tr>
<tr>
<td>BIOL1907</td>
<td>From Molecules to Ecosystems (Advanced)</td>
<td>6</td>
<td>A 85 or above in HSC Biology or equivalent&lt;br&gt;N BIOL1007 or BIOL1997</td>
</tr>
<tr>
<td>BIOL1997</td>
<td>From Molecules to Ecosystems (SSP)</td>
<td>6</td>
<td>A 90 or above in HSC Biology or equivalent&lt;br&gt;N BIOL1007 or BIOL1907</td>
</tr>
<tr>
<td>CHNG1108</td>
<td>Introduction to Chemical Engineering</td>
<td>6</td>
<td>A HSC Mathematics and Chemistry&lt;br&gt;N ENGG1800 OR CIVL1900 OR MECH1560 OR AERO1560 OR AMME1960 OR MTRX1701 OR ENGG1960</td>
</tr>
<tr>
<td>ENGG1800</td>
<td>Introduction to Engineering Disciplines</td>
<td>6</td>
<td>N CIVL1900 OR CHNG1108 OR MECH1560 OR AERO1560 OR AMME1690 OR MTRX1701 OR ENGG1960</td>
</tr>
<tr>
<td>PHYS1001</td>
<td>Physics 1 (Regular)</td>
<td>6</td>
<td>A HSC Physics or PHYS1003 or PHYS1004 or PHYS1902 or equivalent. Students who have not completed HSC Physics (or equivalent) are strongly advised to take the Physics Bridging Course (offered in February). Students are also encouraged to take (MATH1X21 or MATH1931 or MATH1X01 or MATH1906) and MATH1X02 concurrently.&lt;br&gt;N PHYS1002 or PHYS1901 or EDUH1017 or PHYS1903</td>
</tr>
<tr>
<td>PHYS1003</td>
<td>Physics 1 (Technological)</td>
<td>6</td>
<td>A HSC Physics or PHYS1001 or PHYS1002 or PHYS1901 or equivalent. Students who have not completed HSC Physics (or equivalent) are strongly advised to take the Physics Bridging Course (offered in February). Students are also encouraged to take (MATH1X23 or MATH1933 or MATH1X03 or MATH1907) and MATH1X05 concurrently.&lt;br&gt;C Recommended Co-requisites: (MATH1003 or MATH1903) and (MATH1005 or MATH1905).&lt;br&gt;N PHYS1004 or PHYS1902 or PHYS1904</td>
</tr>
<tr>
<td>PHYS1901</td>
<td>Physics 1A (Advanced)</td>
<td>6</td>
<td>A (85 or above in HSC Physics or equivalent) OR (75 or above in one of PHYS1003 or PHYS1004) OR (PHYS1902 or PHYS1904). Students are also encouraged to take (MATH1X21 or MATH1931 or MATH1X01 or MATH1906) and MATH1X02 concurrently.&lt;br&gt;N PHYS1001 or PHYS1002 or EDUH1017 or PHYS1903</td>
</tr>
<tr>
<td>CHEM2401</td>
<td>Molecular Reactivity and Spectroscopy</td>
<td>6</td>
<td>A 6cp MATH1XXX&lt;br&gt;P (CHEM1XX1 or CHEM1903) and (CHEM1XX2 or CHEM1904)&lt;br&gt;N CHEM2001 or CHEM2101 or CHEM2301 or CHEM2311 or CHEM2502 or CHEM2901 or CHEM2903 or CHEM2911 or</td>
</tr>
<tr>
<td>Unit Code</td>
<td>Unit Name</td>
<td>Credit Points</td>
<td>Prerequisites</td>
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<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CHEM2915</td>
<td>This is a required chemistry unit of study for students intending to major in chemistry.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHEM2402</td>
<td>Chemical Structure and Stability</td>
<td>6</td>
<td>A 6cp MATH1XXX P (CHEM1XX1 or CHEM1903) and (CHEM1XX2 or CHEM1904) N CHEM2202 or CHEM2302 or CHEM2902 or CHEM2912 or CHEM2916</td>
</tr>
<tr>
<td>CHEM2403</td>
<td>Chemistry of Biological Molecules</td>
<td>6</td>
<td>A 6cp MATH1XXX P (CHEM1XX1 or CHEM1903) and (CHEM1XX2 or CHEM1904) N CHEM2001 or CHEM2101 or CHEM2301 or CHEM2311 or CHEM2502 or CHEM2901 or CHEM2903 or CHEM2913</td>
</tr>
<tr>
<td>CHEM2404</td>
<td>Forensic and Environmental Chemistry</td>
<td>6</td>
<td>A 6cp MATH1XXX P (CHEM1XX1 or CHEM1903) and (CHEM1XX2 or CHEM1904) N AGCH3033</td>
</tr>
<tr>
<td></td>
<td>To enrol in Senior Chemistry, students are required to have completed (CHEM2401 or CHEM2911 or CHEM2915) and (CHEM2402 or CHEM2912 or CHEM2916).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Advanced Breadth**

Select a minimum of 12 credit points from the following units of study:

<table>
<thead>
<tr>
<th>Unit Code</th>
<th>Unit Name</th>
<th>Credit Points</th>
<th>Prerequisites</th>
<th>Corequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEN3004</td>
<td>Food Processing and Value Adding</td>
<td>6</td>
<td>A 6cp from (BIOL1XXX, MBLG1XXX) and 6cp from CHEM1XXX P 6cp from (CHEM1XXX or AGEN1004 or AGEN1006) and 6cp from (BIOL1XXX or MBLG1XXX)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>CHNG3807</td>
<td>Products and Value Chains</td>
<td>6</td>
<td>Ability to conduct mass and energy balances, and the integration of these concepts to solve real chemical engineering problems. Ability to understand basic principles of physical chemistry, physics and mechanics. Ability to use mathematics of calculus (including vector calculus) and linear algebra, and carry out computations with MATLAB and MS EXCEL. Ability to read widely outside of the technical literature, and to synthesise arguments based on such literature. Ability to write coherent reports and essays based on qualitative and quantitative information. P CHNG2801; CHNG2802; CHNG2803; CHNG2804; CHNG2805; CHNG2806 C CHNG3805; CHNG3806</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>CHNG3804</td>
<td>Biochemical</td>
<td>6</td>
<td>A 6cp from (CHEM1XXX or AG1004 or AGEN1006) and 6cp from (BIOL1XXX or MBLG1XXX)</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Unit Code</td>
<td>Unit Title</td>
<td>Credit Points</td>
<td>Prerequisites</td>
<td>Semester</td>
<td></td>
</tr>
<tr>
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<td>-----------------------------------------------------------------------------</td>
<td>---------------</td>
<td>----------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>CHNG3808</td>
<td>Engineering Macromolecules and Nanocomposites</td>
<td>6</td>
<td>P CHNG2801 AND CHNG2806 C CHNG3802</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CHNG3809</td>
<td>Laboratory and Industrial Practice</td>
<td>6</td>
<td>P CHNG1103, CHNG2801, CHNG2802, CHNG2803, CHNG2804, CHNG2805 AND CHNG2806 C CHNG3801, CHNG3802, CHNG3803</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CHNG5003</td>
<td>Green Engineering</td>
<td>6</td>
<td>A CHNG3801 AND CHNG3802 AND CHNG3803 AND CHNG3805 AND CHNG3806 AND CHNG3807. All core third year chemical engineering.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CHNG5005</td>
<td>Wastewater Engineering</td>
<td>6</td>
<td>A Ability to conduct mass and energy balances, and the integration of these concepts to solve 'real' chemical engineering problems. Ability to understand basic principles of physical chemistry, physics and mechanics. Ability to use basic calculus and linear algebra, and carry out such computations using Matlab and MS Excel. Ability to read widely outside of the technical literature and to synthesise arguments based on such literature. Ability to write coherent reports and essays based on information from diverse sources.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CHNG5603</td>
<td>Analysis, Modelling, Control: BioPhy Sys</td>
<td>6</td>
<td>A It is assumed that students have a general knowledge of: (MATH1001 OR MATH1021) AND (MATH1003 OR MATH1023)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>CHNG5605</td>
<td>Bio-Products: Laboratory to Marketplace</td>
<td>6</td>
<td>This course is for Master degree students and also is offered as an elective course for fourth year students. Some lectures may be given by a guest lecturer.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>ENGG3800</td>
<td>Industry and Community Projects</td>
<td>6</td>
<td>Note: Department permission required for enrolment</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Advanced Depth</td>
<td>Select a minimum of 12 credit points from the following units of study:</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>CHNG5001</td>
<td>Process Systems Engineering</td>
<td>6</td>
<td>A First year undergraduate physics and mathematics (differential equations). Use of mathematical and/or computer-based modelling tools and techniques. Feedback control concepts and principles as taught in CHNG3802/CHNG5802 or similar courses. Students who are unsure about meeting these requirements should contact the unit coordinator for advice.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>CHNG5001</td>
<td>Process Systems Engineering</td>
<td>6</td>
<td>This unit of study is for Masters students and can be selected</td>
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<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Points</td>
<td>Semester</td>
<td></td>
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<td>------------</td>
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<td></td>
<td></td>
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<tr>
<td>CHNG5004</td>
<td>Particles and Surfaces</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG5006</td>
<td>Advanced Wastewater Engineering</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG5008</td>
<td>Nanotechnology in Chemical Engineering</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG5601</td>
<td>Membrane Science</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG5602</td>
<td>Cellular Biophysics</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG5604</td>
<td>Advanced Membrane Engineering</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG5606</td>
<td>Advanced Food Processing</td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG5607</td>
<td>Advanced Biochemical Engineering</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Department permission required for enrolment.

Note: School permission required for enrollment.

Select a maximum of 12 credit points of units of study from the Bachelor of Engineering Honours General Elective table. It is strongly recommended that candidates select CHNG1108 as one of these electives in the first year of their candidature.
Non-Confidential

<table>
<thead>
<tr>
<th>Author</th>
<th>Christine Lacey, Curriculum Team Leader, Faculty of Engineering and Information Technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewer/Approver</td>
<td>David Lowe, Associate Dean (Education), Faculty of Engineering and Information Technologies</td>
</tr>
<tr>
<td>Paper title</td>
<td>Amendment to majors in Table A for Bachelor of Advanced Computing and Bachelor of Science</td>
</tr>
<tr>
<td>Purpose</td>
<td>To amend the Computer Science, Information Systems, and Software Development majors in line with changes to other Bachelor of Science Table A majors approved by UGSC 15 May.</td>
</tr>
</tbody>
</table>

**RECOMMENDATION**

*That the Undergraduate Studies Committee recommend that the Academic Board:*
  a) Approve the proposal from the Faculty of Engineering and Information Technologies to amend the Computer Science, Information Systems, and Software Development majors.
  b) The amendment to the table of Units of Study arising from these proposals, with effect from Semester 1, 2019

**EXECUTIVE SUMMARY**

At the UGSC meeting held 15 May, the Faculty of Science introduced amendments to incorporate Interdisciplinary Project units into all BSc Table A majors.

The following majors appear in the Bachelor of Advanced Computing Table A, as well as the BSc Table A, and Table S:
- Computer Science major
- Information systems major
- Software Development major

The Faculty of Science has requested amendment to these majors in line with the other BSc Table A majors. It has been agreed with FEIT that the ICPU will be incorporated in the BSc Table A and the Table S versions of these majors. Students in the BAdvComp will take the interdisciplinary project unit specific to the major. The ICPU has already been added to the BAdvComp as a Table A elective unit.

**ATTACHMENTS**

Attachment 1: Minor Course Amendment proposal – Shared Table A majors
Minor Course Amendment Proposal

Faculty/Board of Studies: Faculty of Engineering and Information Technologies

Contact person: Masahiro Takatsuka (x15903), Christine Lacey (x40678)

1. Name of award course
   - Computer Science major
   - Information systems major
   - Software Development major

2. Purpose of proposal
   At the UGSC meeting held 15 May, the Faculty of Science introduced amendments to incorporate Interdisciplinary Project units into all BSc Table A majors.

   The following majors appear in the Bachelor of Advanced Computing Table A, as well as the BSc Table A, and Table S:
   - Computer Science major
   - Information systems major
   - Software Development major

   The Faculty of Science has requested amendment to these majors in line with the other BSc Table A majors. It has been agreed with FEIT that the ICPU will be incorporated in the BSc Table A and the Table S versions of these majors. Students in the BAdvComp will take the interdisciplinary project unit specific to the major. The ICPU has already been added to the BAdvComp as a Table A elective unit.

3. Details of amendment
   Appendix 1 – Computer Science major unit of study table
   Appendix 2 – Information Systems major unit of study table
   Appendix 3 – Software Development major unit of study table

4. Transitional arrangements
   The amended majors will be implemented from 2019.

5. Other relevant information
   It is understood that the Faculty of Science has consulted with the DVC(E) regarding the interdisciplinary project unit model used in this proposal.

6. Signature of Dean

   [Signature]

   24/6/18
COMPUTER SCIENCE

Advanced coursework and projects will be available in 2020 for students who complete this major.

Computer Science major

A major in Computer Science requires 48 credit points from this table including:

(i) 12 credit points of 1000-level core units

(ii) 18 credit points of 2000-level core units

(iii) 18 credit points of 3000-level core units

(iv) 6 credit points of 3000-level interdisciplinary project units according to the following rules:

(a) for students in the Bachelor of Advanced Computing or Bachelor of Computing they must complete the COMP coded interdisciplinary project units

(b) all other students may complete either the COMP or SCPU coded units

(iv) 6 credit points of 3000-level selective units

Computer Science minor

A minor in Computer Science requires 36 credit points from this table including:

(i) 12 credit points of 1000-level core units

(ii) 18 credit points of 2000-level core units

(iii) 6 credit points of 3000-level selective units

Units of study

The units of study are listed below.

1000-level units of study
### Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFO1110</td>
<td>Introduction to Programming</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INFO1113</td>
<td>Object-Oriented Programming</td>
<td>6</td>
<td>P INFO1110 N INFO1103 OR INFO1105 OR INFO1905</td>
<td>Semester 1 Semester 2</td>
</tr>
</tbody>
</table>

### 2000-level units of study

#### Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP2123</td>
<td>Data Structures and Algorithms</td>
<td>6</td>
<td>P INFO1110 OR INFO1113 OR DATA1002 OR INFO1103 OR INFO1903 N INFO1105 OR INFO1905 OR COMP2823</td>
<td>Semester 1</td>
</tr>
<tr>
<td>COMP2823</td>
<td>Data Structures and Algorithms (Adv)</td>
<td>6</td>
<td>P Distinction level result in at least one of INFO1110 OR INFO1113 OR DATA1002 OR INFO1103 OR INFO1903 N INFO1105 OR INFO1905 OR COMP2123</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

*Note: Department permission required for enrolment*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP2017</td>
<td>Systems Programming</td>
<td>6</td>
<td>P INFO1113 OR INFO1105 OR INFO1905 OR INFO1103 C COMP2123 OR COMP2823 OR INFO1105 OR INFO1905 N COMP2129</td>
<td>Semester 1</td>
</tr>
<tr>
<td>COMP2022</td>
<td>Programming Languages, Logic and Models</td>
<td>6</td>
<td>A MATH1004 OR MATH1904 OR MATH1064 OR MATH2069 OR MATH2969 OR MATH1004 OR MATH1904 OR MATH1064 OR MATH2069 OR MATH2969 P INFO1103 OR INFO1903 OR INFO1113 N COMP2922</td>
<td>Semester 2</td>
</tr>
<tr>
<td>COMP2922</td>
<td>Programming Languages, Logic and Models (Adv)</td>
<td>6</td>
<td>A MATH1004 OR MATH1904 OR MATH1064 OR MATH2069 OR MATH2969 P Distinction level result in INFO1103 OR INFO1903 OR INFO1113 N COMP2022</td>
<td>Semester 2</td>
</tr>
</tbody>
</table>

*Note: Department permission required for enrolment*
## 3000-level units of study

### Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP3600</td>
<td>Computer Science Project (Adv)</td>
<td>6</td>
<td>P (COMP2123 OR COMP2823) AND COMP2017 AND (COMP2022 OR COMP2922) with Distinction level results in at least one of the above listed units. N INFO3600 OR COMP3615.</td>
<td>Semester 2</td>
</tr>
<tr>
<td>COMP3615</td>
<td>Computer Science Project</td>
<td>6</td>
<td>P (COMP2123 OR COMP2823) AND COMP2017 AND (COMP2022 OR COMP2922). N INFO3600 OR COMP3600.</td>
<td>Semester 2</td>
</tr>
<tr>
<td>COMP3027</td>
<td>Algorithm Design</td>
<td>6</td>
<td>A MATH1004 OR MATH1904 OR MATH1064 P COMP2123 OR COMP2823 OR INFO1105 OR INFO1905 N COMP2007 OR COMP2907 OR COMP3927</td>
<td>Semester 1</td>
</tr>
<tr>
<td>COMP3927</td>
<td>Algorithm Design (Adv)</td>
<td>6</td>
<td>A MATH1004 OR MATH1904 OR MATH1064 P COMP2123 OR COMP2823 OR INFO1105 OR INFO1905 N COMP2007 OR COMP2907 OR COMP3027</td>
<td>Semester 1</td>
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</table>

Note: Department permission required for enrolment

### Interdisciplinary projects

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP3988</td>
<td>Computer Science Project (Advanced)</td>
<td>6</td>
<td>P (COMP2123 OR COMP2823) AND COMP2017 AND (COMP2022 OR COMP2922) with Distinction level results in at least one of the above listed units. N INFO3600 OR COMP3615.</td>
<td>Semester 2</td>
</tr>
<tr>
<td>COMP3888</td>
<td>Computer Science Project</td>
<td>6</td>
<td>P (COMP2123 OR COMP2823) AND COMP2017 AND (COMP2022 OR COMP2922) N INFO3600 OR COMP3600.</td>
<td>Semester 2</td>
</tr>
</tbody>
</table>

Note: Department permission required for enrolment
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCPU3001</td>
<td>Science Interdisciplinary Project</td>
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</tr>
<tr>
<td>Major selective</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMP3221</td>
<td>Distributed Systems</td>
<td>6</td>
<td>P (INFO1105 OR INFO1905) OR ((INFO1103 OR INFO1113) AND (COMP2123 OR COMP2823))</td>
<td>Semester 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N COMP2121</td>
<td></td>
</tr>
<tr>
<td>COMP3308</td>
<td>Introduction to Artificial Intelligence</td>
<td>6</td>
<td>A Algorithms. Programming skills (e.g. Java, Python, C, C++, Matlab)</td>
<td>Semester 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N COMP3608</td>
<td></td>
</tr>
<tr>
<td>COMP3608</td>
<td>Introduction to Artificial Intelligence (Adv)</td>
<td>6</td>
<td>A Algorithms. Programming skills (e.g. Java, Python, C, C++, Matlab)</td>
<td>Semester 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P Distinction-level results in some 2nd year COMP or MATH or SOFT units.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N COMP3308</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMP3308 and COMP3608 share the same lectures,</td>
<td></td>
<td>but have different tutorials and assessment (the same type but more</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>challenging).</td>
<td></td>
</tr>
<tr>
<td>COMP3419</td>
<td>Graphics and Multimedia</td>
<td>6</td>
<td>A Programming skills</td>
<td>Semester 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P COMP2123 OR COMP2823 OR INFO1105 OR INFO1905</td>
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<tr>
<td>COMP3520</td>
<td>Operating Systems Internals</td>
<td>6</td>
<td>P COMP2129</td>
<td>Semester 1</td>
</tr>
<tr>
<td>Minor selective</td>
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<tr>
<td>COMP3027</td>
<td>Algorithm Design</td>
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<td>A MATH1004 OR MATH1904 OR MATH1064</td>
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</tr>
<tr>
<td></td>
<td></td>
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<td>N COMP2007 OR COMP2907 OR COMP3927</td>
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<tr>
<td>COMP3927</td>
<td>Algorithm Design (Adv)</td>
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<td>A MATH1004 OR MATH1904 OR MATH1064</td>
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<td>P COMP2123 OR COMP2823 OR INFO1105 OR INFO1905</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>N COMP2007 OR COMP2907 OR COMP3027</td>
<td></td>
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<tr>
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<td>Note: Department permission required for enrolment</td>
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<td></td>
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<tr>
<td>COMP3221</td>
<td>Distributed Systems</td>
<td>6</td>
<td>P (INFO1105 OR INFO1905) OR ((INFO1103 OR INFO1113) AND (COMP2123 OR COMP2823))</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

*Note: Department permission required for enrolment*
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP2121</td>
<td>Algorithms. Programming skills (e.g. Java, Python, C, C++, Matlab)</td>
<td>6</td>
<td>N COMP3608</td>
<td>Semester 1</td>
</tr>
<tr>
<td>COMP3608</td>
<td>Introduction to Artificial Intelligence (Adv)</td>
<td>6</td>
<td>A Algorithms. Programming skills (e.g. Java, Python, C, C++, Matlab)</td>
<td>Semester 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P Distinction-level results in some 2nd year COMP or MATH or SOFT units.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N COMP3308</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMP3308 and COMP3608 share the same lectures, but have different tutorials and assessment (the same type but more challenging).</td>
<td></td>
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<tr>
<td>COMP3419</td>
<td>Graphics and Multimedia</td>
<td>6</td>
<td>A Programming skills</td>
<td>Semester 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>COMP3520</td>
<td>Operating Systems Internals</td>
<td>6</td>
<td>P COMP2129</td>
<td>Semester 1</td>
</tr>
<tr>
<td></td>
<td>This unit of study is not available in 2018</td>
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</tbody>
</table>
INFORMATION SYSTEMS

Advanced coursework and projects will be available in 2020 for students who complete this major.

Information Systems major

A major in Information Systems requires 48 credit points from this table including:

(i) 12 credit points of 1000-level core units
(ii) 18 credit points of 2000-level core units
(iii) 12 credit points of 3000-level major core units, including 1 interdisciplinary project unit
(iv) 6 credit points of 3000-level interdisciplinary project units according to the following rules:

(a) for students in the Bachelor of Advanced Computing or Bachelor of Computing they must complete the ISYS coded interdisciplinary project units
(b) all other students may complete either the ISYS or SCPU coded units

Information Systems minor

A minor in Information Systems requires 36 credit points from this table including:

(i) 12 credit points of 1000-level core units
(ii) 18 credit points of 2000-level core units
(iii) 6 credit points of 3000-level minor selective unit

Units of study

The units of study are listed below.

1000-level units of study

Core
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Intensive</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFO1110</td>
<td>Introduction to Programming</td>
<td>6</td>
<td>P INFO1110 N INFO1103 OR INFO1105 OR INFO1905</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Intensive</td>
<td>Semester</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>July</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Semester 2</td>
<td></td>
</tr>
<tr>
<td>INFO1113</td>
<td>Object-Oriented Programming</td>
<td>6</td>
<td>P INFO1110 N INFO1103 OR INFO1105 OR INFO1905</td>
<td>Semester 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Semester 2</td>
<td></td>
</tr>
</tbody>
</table>

### 2000-level units of study

#### Core

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Intensive</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISYS2120</td>
<td>Data and Information Management</td>
<td>6</td>
<td>A Programming skills P INFO1113 OR INFO1103 OR INFO1105 OR INFO1905 OR INFO1003 OR INFO1903 OR DECO1012 N INFO2120 OR INFO2820 OR COMP5138</td>
<td>Semester 2</td>
<td></td>
</tr>
<tr>
<td>ISYS2110</td>
<td>Analysis and Design of Web Info Systems</td>
<td>6</td>
<td>P INFO1113 OR INFO1103 OR INFO1105 OR INFO1905 N INFO2110</td>
<td>Semester 1</td>
<td></td>
</tr>
<tr>
<td>ISYS2160</td>
<td>Information Systems in the Internet Age</td>
<td>6</td>
<td>A INFO1003 OR INFO1103 OR INFO1903 OR INFO1113 N ISYS2140</td>
<td>Semester 2</td>
<td></td>
</tr>
</tbody>
</table>

### 3000-level units of study

#### Major core

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Intensive</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISYS3401</td>
<td>Information Technology Evaluation</td>
<td>6</td>
<td>P (INFO2110 OR ISYS2110) AND (INFO2120 OR ISYS2120) AND (ISYS2140 OR ISYS2160)</td>
<td>Semester 1</td>
<td></td>
</tr>
<tr>
<td>ISYS3402</td>
<td>Decision Analytics and Support Systems</td>
<td>6</td>
<td>A Database Management AND Systems Analysis and Modelling P (ISYS2110 OR INFO2110) AND (ISYS2120 OR INFO2120)</td>
<td>Semester 2</td>
<td></td>
</tr>
<tr>
<td>ISYS3400</td>
<td>Information Systems Project</td>
<td>6—</td>
<td>P (INFO2110 OR ISYS2110) AND (INFO2120 OR ISYS2120) AND (ISYS2140 OR ISYS2160) N INFO3600 or ISYS3207</td>
<td>Semester 2</td>
<td></td>
</tr>
</tbody>
</table>
### Interdisciplinary project

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISYS3888</td>
<td>Information Systems Project</td>
<td>6</td>
<td>P (INFO2110 OR ISYS2110) AND (INFO2120 OR ISYS2120) AND (ISYS2140 OR ISYS2160)</td>
<td>Semester 2</td>
</tr>
<tr>
<td>SCPU3001</td>
<td>Science Interdisciplinary Project</td>
<td>6</td>
<td></td>
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</tr>
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</table>

### Minor selective

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISYS3401</td>
<td>Information Technology Evaluation</td>
<td>6</td>
<td>P (INFO2110 OR ISYS2110) AND (INFO2120 OR ISYS2120) AND (ISYS2140 OR ISYS2160)</td>
<td>Semester 1</td>
</tr>
<tr>
<td>ISYS3402</td>
<td>Decision Analytics and Support Systems</td>
<td>6</td>
<td>A Database Management AND Systems Analysis and Modelling P (INFO2110 OR INFO2110) AND (ISYS2120 OR INFO2120)</td>
<td>Semester 2</td>
</tr>
</tbody>
</table>
SOFTWARE DEVELOPMENT

Advanced coursework and projects will be available in 2020 for students who complete this major.

Software Development major

A major in Software Development requires 48 credit points from this table including:

(i) 12 credit points of 1000-level core units
(ii) 18 credit points of 2000-level core units
(iii) 18 credit points of 3000-level core units, including 1 interdisciplinary project unit
(iv) 6 credit points of 3000-level interdisciplinary project units according to the following rules:

(a) for students in the Bachelor of Advanced Computing or Bachelor of Computing they must complete the SOFT coded interdisciplinary project units
(b) all other students may complete either the SOFT or SCPU coded units

Software Development minor

A minor in Software Development requires 36 credit points from this table including:

(i) 12 credit points of 1000-level core units
(ii) 18 credit points of 2000-level core units
(iii) 6 credit points of 3000-level selective units

Units of study

The units of study are listed below.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Offered In</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFO1110</td>
<td>Introduction to Programming</td>
<td>6</td>
<td>P INFO1110 OR INFO1113 OR INFO1103 OR INFO1903 OR INFO1105 OR INFO1905 N INFO1105 OR INFO1905 OR COMP2823</td>
<td>Intensive July Semester 1 Semester 2</td>
</tr>
<tr>
<td>INFO1113</td>
<td>Object-Oriented Programming</td>
<td>6</td>
<td>P INFO1110 OR INFO1103 OR INFO1105 OR INFO1905 N INFO1105 OR INFO1905</td>
<td>Semester 1 Semester 2</td>
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### 2000-level units of study

#### Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMP2123</td>
<td>Data Structures and Algorithms</td>
<td>6</td>
<td>P INFO1110 OR INFO1113 OR DATA1002 OR INFO1103 OR INFO1903 OR INFO1105 OR INFO1905 OR COMP2823</td>
</tr>
<tr>
<td>COMP2823</td>
<td>Data Structures and Algorithms (Adv)</td>
<td>6</td>
<td>P Distinction level result in at least one of INFO1110 OR INFO1113 OR DATA1002 OR INFO1103 OR INFO1903 OR INFO1105 OR INFO1905 OR COMP2123</td>
</tr>
<tr>
<td></td>
<td>Note: Department permission required for enrolment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOFT2201</td>
<td>Software Construction and Design 1</td>
<td>6</td>
<td>P INFO1113 OR INFO1103 OR INFO1105 OR INFO1905 N INFO3220</td>
</tr>
<tr>
<td>SOFT2412</td>
<td>Agile Software Development Practices</td>
<td>6</td>
<td>P INFO1113 OR INFO1103 OR INFO1105 OR INFO1905</td>
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### 3000-level units of study

#### Major core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFT3202</td>
<td>Software Construction and Design 2</td>
<td>6</td>
<td>P SOFT2201 OR INFO3220</td>
</tr>
<tr>
<td>SOFT3413</td>
<td>Software Development Project</td>
<td>6</td>
<td>A SOFT3202. P 18CP 2000-level or above units from SOFT, COMP or INFO</td>
</tr>
<tr>
<td>SOFT3410</td>
<td></td>
<td>6</td>
<td>P (INFO1105 OR INFO1905) OR ((INFO1103 OR INFO1113)</td>
</tr>
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</table>
### Interdisciplinary project

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFT3888</td>
<td>Software Development Project</td>
<td>6</td>
<td>A SOFT3202, P 18CP 2000-level or above units from SOFT, COMP or INFO</td>
<td>Semester 2</td>
</tr>
<tr>
<td>CPU3001</td>
<td>Science Interdisciplinary Project</td>
<td>6</td>
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</table>

### Minor selective

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFT3202</td>
<td>Software Construction and Design 2</td>
<td>6</td>
<td>P SOFT2201, N INFO3220</td>
<td>Semester 1</td>
</tr>
<tr>
<td>SOFT3410</td>
<td>Concurrency for Software Development</td>
<td>6</td>
<td>P (INFO1105 OR INFO1905) OR ((INFO1103 OR INFO1113) AND (COMP2123 OR COMP2823))</td>
<td>Semester 2</td>
</tr>
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</table>
To amend the Course resolutions of the combined Bachelor of Engineering (Honours) degree to allow students in the combined Bachelor of Commerce to undertake the Professional Accounting program.

RECOMMENDATION

That the Undergraduate Studies Committee recommend that the Academic Board approve:

a) The proposal from the Faculty of Engineering and Information Technologies to amend the combined Bachelor of Engineering (Honours) and Bachelor of Commerce degree.

b) The amendment to the Course Resolutions of the Combined Bachelor of Engineering Honours degree

EXECUTIVE SUMMARY

The FEIT Faculty Board has approved that from 2019 students enrolled in the combined BE(Hons)/BCom will be exempted from MATH1005 Statistics and be required to undertake the core BCom unit BUSS1020 Quantitative Business Analysis. This change has been made following consultation with the School of Business. As per the BE(Hons) combined degree resolutions, the Faculty Board may approve, based on appropriate academic justification, a list of approved unit alternatives.

Prior to this change, BE(Hons)/BCom students could not undertake the Professional Accounting program, as BUSS1020 is an accreditation requirement for this program. As BE(Hons)/BCom students will now take BUSS1020, the combined BE(Hons) resolutions will be amended such that the prohibition on this program is removed.

Students in the BE(Hons)/BCom will replace one BCom elective with BUSS1020, and will have an additional 3 cp in the BE(Hons) and be recommended to take MATH1004. Sample enrolment plan on following page:
## Non-Confidential

<table>
<thead>
<tr>
<th>Year 1 S1</th>
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<th>2019 proposed</th>
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<td>ENGG1111 6</td>
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<td>MATH1002 3</td>
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<td>ENGP1000 0</td>
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<tr>
<td></td>
<td>BUSS1000 6</td>
<td>BUSS1000 6</td>
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<table>
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</thead>
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<td>CIVL1802 6</td>
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<tr>
<td></td>
<td>GEOL1501 3</td>
<td>GEOL1501 3</td>
<td></td>
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<tr>
<td></td>
<td>MATH1023 6</td>
<td>MATH1023 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MATH1005 3</td>
<td>MATH1004 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BUSS1030 6</td>
<td>BUSS1030 6</td>
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<tr>
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<tr>
<td></td>
<td>MATH2061 6</td>
<td>MATH2061 6</td>
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<tr>
<td></td>
<td>ENGG1801 6</td>
<td>ENGG1801 6</td>
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</tr>
<tr>
<td></td>
<td>BUSS2000 6</td>
<td>BUSS1020 6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year 2 S2</th>
<th>2018</th>
<th>2019 proposed</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>CIVL2100 6</td>
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<td>CIVL2812 6</td>
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</tr>
<tr>
<td></td>
<td>CIVL1810 6</td>
<td>CIVL1810 6</td>
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<tr>
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<td>Commerce elec</td>
<td>6</td>
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</tbody>
</table>

## ATTACHMENTS

Attachment 1: Minor Course Amendment proposal Combined Bachelor of Engineering Honours degree
Minor Course Amendment Proposal

Faculty: Engineering & IT

Contact person: Christine Lacey (x40678)

1. **Name of award course**
   Bachelor of Engineering(Honours)/Bachelor of Commerce

2. **Purpose of proposal**
   In the combined BE(Hons)/BCom, there are mutual prohibitions between the core BE(Hons) unit MATH1005 Statistics and the core BCom unit BUSS1020 Quantitative Business Analysis, both of which cover key statistical concepts. Until recently, this has been managed by exempting these students from BUSS1020 and advising them to take MATH1005.

   The School of Business has indicated that, in response to student feedback and also to changes to the content of MATH1005, this unit alone is not considered an adequate prerequisite for subsequent quantitative units in the BCom. It has therefore been approved by the FEIT Faculty Board that from 2019 BE(Hons)/BCom students will instead take BUSS1020 and be exempted from MATH1005. As per the BE(Hons) combined degree resolutions, the Faculty Board may approve, based on appropriate academic justification, a list of approved unit alternatives.

   Because BUSS1020 is 6 cp, while MATH1005 is 3 cp, students will be recommended to take MATH1004 Discrete Mathematics in Year 1 to fill the 3 cp “gap”.

   Prior to this change, BE(Hons)/BCom students could not undertake the Professional Accounting program, as BUSS1020 is an accreditation requirement for this program. As BE(Hons)/BCom students will now take BUSS1020, the combined BE(Hons) resolutions will be amended such that the prohibition on this program is removed.

3. **Details of amendment**
   Appendix 1: Bachelor of Engineering Honours Combined Degree Resolutions
   Appendix 2: Bachelor of Engineering Honours core unit handbook table

4. **Transitional arrangements**
   The change to the resolutions will apply from 2019. Students who commenced in 2018 and have done appropriate units for the Professional Accounting program will be permitted to undertake this program.

5. **Other relevant information**
   This change has been in consultation with the School of Business.

6. **Signature of Dean**
   
   [Signature]
   26/6/18
Bachelor of Engineering Honours combined degrees

Bachelor of Engineering Honours combined degrees
Bachelor of Engineering Honours combined degrees
Bachelor of Engineering Honours combined degrees
Bachelor of Engineering Honours and Bachelor of Arts
Bachelor of Engineering Honours and Bachelor of Commerce
Bachelor of Engineering Honours and Bachelor of Science
Bachelor of Engineering Honours and Bachelor of Design in Architecture

Bachelor of Engineering Honours and Bachelor of Laws
Bachelor of Engineering Honours and Bachelor of Project Management

These resolutions must be read in conjunction with applicable University By-laws, Rules and policies including (but not limited to) the University of Sydney (Coursework) Rule 2014 (the 'Coursework Rule'), the Coursework Policy 2014, the Resolutions of the Faculty, the University of Sydney (Student Appeals against Academic Decisions) Rule 2006 (as amended), the Academic Honesty in Coursework Policy 2015 and the Academic Honesty Procedures 2016. Up to date versions of all such documents are available from the Policy Register: http://sydney.edu.au/policies.

Course Resolutions

1 Course codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Course title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHENGART</td>
<td>Bachelor of Engineering Honours and Bachelor of Arts</td>
</tr>
<tr>
<td>BHENGCOM</td>
<td>Bachelor of Engineering Honours and Bachelor of Commerce</td>
</tr>
<tr>
<td>BHENGDAR</td>
<td>Bachelor of Engineering Honours and Bachelor of Design in Architecture</td>
</tr>
<tr>
<td>BHENGLAW</td>
<td>Bachelor of Engineering Honours and Bachelor of Laws</td>
</tr>
<tr>
<td>BHENGPFRM</td>
<td>Bachelor of Engineering Honours and Bachelor of Project Management</td>
</tr>
<tr>
<td>BHENGSCI</td>
<td>Bachelor of Engineering and Bachelor of Science</td>
</tr>
</tbody>
</table>

2 Attendance Pattern

(1) The attendance pattern for the following programs is full-time only. The attendance pattern for all other Bachelor of Engineering Honours combined courses is full time or part time.
(a) Bachelor of Engineering Honours and Bachelor of Design in Architecture
(b) Bachelor of Engineering Honours and Bachelor of Laws
(2) Part time students must still satisfy appropriate enrolment progression and are subject to the same degree time limits as full time students. International students are required to follow the enrolment pattern as specified by their visa. The Faculty strongly recommends full time enrolment as the preferred option for all undergraduate students unless exceptional circumstances exist.

3 Streams

(1) Completion of a stream is a requirement of the Bachelor of Engineering Honours and students in combined degrees are subject to the stream requirements in the Bachelor of Engineering Honours course resolutions.
(2) Students in the Bachelor of Engineering Honours combined degrees can change the stream of the Bachelor of Engineering Honours portion of their combined degree in accordance with the same requirements specified in the Bachelor of Engineering Honours resolutions.
(3) Flexible First Year
Students gaining entry to any of the Bachelor of Engineering Honours combined degrees may also choose to undertake the Flexible First Year program under the same requirements as specified in the Bachelor of Engineering Honours resolutions.
(4) Within the Bachelor of Engineering Honours and Bachelor of Design in Architecture, the Bachelor of Engineering Honours is available only in the Civil Engineering stream. For all other Bachelor of Engineering Honours combined degrees, the streams available for the Bachelor of Engineering Honours are listed under the course resolution for the Bachelor of Engineering Honours.
(5) The Bachelor of Science degree is available in the following streams:
(a) Health
(b) Medical Science
(c) Dalyell
(6) The Bachelor of Arts degree is available in the following streams:
(a) Dalyell
(7) The Bachelor of Commerce degree is available in the following streams:
(a) Dalyell
Bachelor of Engineering Honours combined degrees

(8) Completion of a stream is not a requirement of the Bachelor of Science, the Bachelor of Arts, or the Bachelor of Commerce. The requirements for the completion of each stream are as specified in Table A for the relevant degree, or, in the case of the Dalyell stream, Table S of the Shared Pool for Undergraduate Degrees.

(9) Candidates wishing to transfer between streams should contact the Student Centre. Candidates who qualify for the Dalyell stream may complete that stream while also completing another stream.

4 Cross-Faculty Management

(1) Candidates in the combined Engineering and Law courses will be under the general supervision of the Faculty of Engineering and Information Technologies until the end of the semester in which they complete the requirements for the Bachelor of Engineering Honours. They will then be under the supervision of the University of Sydney Law School. Candidates in all other combined degree programs will be under the general supervision of the Faculty of Engineering and Information Technologies for the duration of the combined program.

(2) The Dean of the Faculty of Engineering and Information Technologies and the Dean of the Faculty hosting the associated combined program shall jointly exercise authority in any matter concerned with the combined course not otherwise dealt with in these resolutions.

5 Admission to Candidate

(1) Admission to these degrees is on the basis of a secondary school leaving qualification such as the NSW Higher School Certificate (including national and international equivalents), tertiary study or an approved preparation program. English language requirements must be met where these are not demonstrated by sufficient qualifications taught in English. Special admission pathways are open for mature aged applicants who do not possess a school leaving qualification, educationally disadvantaged applicants and for Aboriginal and Torres Strait Islander applicants. Applicants are ranked by merit and offers for available places are issued according to the ranking. Details of admission policies are found in the Coursework Rule.

(2) Admission to the Dalyell stream requires achievement of a minimum tertiary admission rank (ATAR) set by the Board of Interdisciplinary Studies or above in or equivalent standard.

6 Requirements for Award

(1) To qualify for the award of the combined degree:

(a) For all Bachelor of Engineering Honours combined degrees except the Bachelor of Engineering Honours and Bachelor of Laws, a candidate must complete 240 credit points and satisfy any additional requirements specified in the following clauses.

(b) For the Bachelor of Engineering Honours and Bachelor of Laws combined degree, a candidate must complete 288 credit points and any additional requirements specified in the following clauses.

(c) Where the requirements specified in the following clauses account for less than the total required credit, candidates must complete additional units of study (not including general electives) from the relevant Bachelor of Engineering Honours specialist stream table subject to any conditions specified in that table as may be necessary to satisfy the requirements of the degree.

For the Bachelor of Engineering Honours component of a combined degree:

(a) The units of study that may be taken for the Bachelor of Engineering Honours component of the combined degree are set out in the tables of units of study for the Bachelor of Engineering Honours single degree;

(b) Except where varied by other clauses of these resolutions, all candidates must complete a minimum of 144 credit points comprising:

(i) 36 credit points from the Engineering Core Table, including all required units;

(ii) 108 credit points from the Engineering Stream Core Table pertaining to the specialist stream being undertaken, including all required units;

(iii) 12 credit points of units of study taken from Table A of the degree in which the candidate is enrolled; and

(iv) a major (48 credit points) or a 3-year program with an embedded major (except for the Professional Accounting Program) from the Faculty Board may approve, based on appropriate academic justification, a list of approved unit alternatives. These alternatives specify, for particular Engineering stream / combined degree combinations, units within the normal requirements for the Bachelor of Engineering Honours component of the combined degree that can be replaced by specified alternative units that would form part of the normal program for single degree students in that stream.

For the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce component of a combined degree:

(a) The units of study that may be taken are set out in Table A for the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce degrees, and Table S and Table O of the Shared Pool for Undergraduate Degrees.

(b) In these resolutions Table A refers to Table A of the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce according to the degree in which the candidate is enrolled as a component of one of the combined degrees, (respectively) Bachelor of Engineering Honours and Bachelor of Arts, Bachelor of Engineering Honours and Bachelor of Science, or Bachelor of Engineering Honours and Bachelor of Commerce; Table S and Table O refers to Table S and Table O as stated here.

(c) Candidates must complete 96 credit points in the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce, and Table S and Table O refers to Table S and Table O as stated here.

(i) any required degree core units as set out in Table A of the degree in which the candidate is enrolled; and

(ii) a major (48 credit points) or a 3-year program with an embedded major (except for the Professional Accounting Program) provided that the requirements of Table A of the degree in which the candidate is enrolled are met; and

(iii) 12 credit points of units of study in the Open Learning Environment as listed in Table O; and

(iv) where appropriate, additional electives from Table A of the degree in which the candidate is enrolled or Table S;

(v) if enrolled in a stream, complete the requirements for the stream as specified in Table A of the degree in which the candidate is enrolled.

For the Bachelor of Design in Architecture component of a combined degree:

(a) Candidates must complete 96 credit points of units of study from the Bachelor of Engineering Honours (Civil) and Bachelor of Design in Architecture - Architecture Table.

(5) For the Bachelor of Laws component of a combined degree candidates must complete 144 credit points of Law units of study taken from the University of Sydney School of Law Undergraduate Table, comprising:

(a) 102 credit points of compulsory units of study; and

(b) 42 credit points of elective units of study, of which a maximum of 36 credit points are taken from Part 1 and a minimum of 6 credit points are taken from Part 2.

(c) Students may apply to take up to a maximum of 24 credit points of LAWS6000/JURS6000 units of study as electives of study: enrolment in LAWS6000/JURS6000 units of study will be subject to availability and any unit pre-requisites or assumed knowledge, which may include relevant industry experience or prior specialist study.

(i) enrolment in LAWS6000/JURS6000 units is only permitted after a candidate has completed 96 credit points towards the Bachelor of Laws;

(ii) students may only enrol in LAWS6000/JURS6000 units listed in the Bachelor of Laws Elective units of study Table.

For the Bachelor of Project Management component of a combined degree:

(a) Candidates must complete 96 credit points comprising:

(i) 84 credit points of core units as set out in the Bachelor of Project Management Unit of Study Table from theStream Electives in the candidate's Bachelor of Engineering Honours Stream
7 Majors and Programs
(1) For the Bachelor of Engineering Honours component of a combined degree:
   (a) The conditions for awarding of a major, and the majors available, are the same as for the Bachelor of Engineering Honours degree.
   (b) Where a candidate wishes to complete a major, and that major requires completion of additional credit points beyond the standard requirements, then such enrolment will be allowed for the first major to be completed, up to 24cp in total, provided the candidate utilises all allowed elective components in satisfying the requirements of the major.
(2) For the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce component of a combined degree:
   (a) Completion of a major or a program which contains a major from Table A of the degree in which the candidate is enrolled is a requirement.
   (b) The majors and programs available and requirements for completing the majors and programs are as specified in Table A of the degree in which the candidate is enrolled.

8 Requirements for Honours
(1) Honours in the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce is available to meritorious candidates as part of the combined degree with the Bachelor of Engineering Honours by enrolling in the Bachelor of Advanced Studies and taking an embedded honours component, after completing 240 credit points and satisfying requirements for the combined degree.
(2) For candidates completing the Bachelor of Arts, Bachelor of Commerce or Bachelor of Science in a combined degree with the Bachelor of Engineering Honours and also completing an embedded honours component in the Bachelor of Advanced Studies, the requirement in the Bachelor of Advanced Studies for completion of a second major shall be deemed to be met by the 144 credit points of Engineering units specified in 6 (2) above.
(3) The grade of honours awarded on the basis of an embedded component in the Bachelor of Advanced Studies will be determined by an honours mark calculated from work in the embedded honours component as specified in the relevant faculty resolutions and degree resolutions for the honours component taken and Table A for the degree in which the candidate was enrolled as a component of the combined degree.

9 Award of the Degrees
(1) Candidates will be awarded a separate testamur for the Bachelor of Engineering Honours and for the partner bachelor degree.
(2) Candidates who successfully complete the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce component as specified in 6 (3) and also complete an embedded honours component with the Bachelor of Advanced Studies shall be awarded the Bachelor of Advanced Studies separately with honours in the appropriate discipline.
(3) Candidates for the Bachelor of Arts, Bachelor of Science or Bachelor of Commerce with an embedded honours component in the Bachelor of Advanced Studies with honours who do not meet the requirements for honours but who meet the requirement for the pass degree, may be awarded the relevant degrees for which they fulfill requirements at pass level.
(4) The award grades, and the criteria for the grades, are as defined in the resolutions for the constituent degrees.
(5) Candidates for the award of the Bachelor of Design in Architecture (Honours) who do not meet the requirements, and who have not already graduated, will be awarded the Bachelor of Design in Architecture pass degree.
(6) The Bachelor of Laws can be awarded in the grades of either Pass or Honours. Honours in the Bachelor of Laws is awarded in First Class or Second Class in accordance with the resolutions of the Bachelor of Laws.

10 Course Transfer
(1) For the Bachelor of Engineering Honours combined with Bachelor of Arts, Bachelor of Science, Bachelor of Design in Architecture and Bachelor of Project Management, a candidate may abandon the combined program and elect to complete either the Bachelor of Engineering Honours or the associated combined degree in accordance with the resolutions governing that degree.
(2) For the Bachelor of Engineering Honours combined with Bachelor of Laws, a candidate may withdraw from the combined degree program and elect to transfer to the Bachelor of Engineering Honours, by written application to the Faculty of Engineering and Information Technologies, and complete the requirements in accordance with the resolutions governing that degree at the time of transfer. Candidature in the Bachelor of Laws will cease in these circumstances.
(3) For the Bachelor of Engineering Honours combined with Bachelor of Commerce a candidate may abandon the combined program and elect to complete either the Bachelor of Engineering Honours or the Bachelor of Commerce in accordance with the resolutions governing that degree. Transfer from a combined degree to the Bachelor of Commerce is also conditional on the student having met the entry requirements of the Bachelor of Commerce in force at the time of their enrolment in the combined degree.
(4) Completion of the abandoned degree in the future will require a new application for admission to that course and completion in accordance with the resolutions governing that degree.
(5) A candidate who has enrolled in the Bachelor of Advanced Studies to complete requirements for an embedded honours component or a stream may abandon the Bachelor of Advanced Studies and return to the combined degree.

11 Progression Rules
(1) General progression rules for the combined degrees are covered by the resolutions of the Faculty of Engineering and Information Technologies.
(2) Candidates in a combined law program:
   (a) must successfully complete LAWS1006 Foundations of Law before enrolling in any other Bachelor of Laws units of study;
   (b) except with permission of the Dean of the University of Sydney Law School, candidates must complete the requirements for the Bachelor of Engineering Honours before proceeding to Year Five of the Bachelor of Laws.
(3) Progression within the Dalyell Stream
   (a) With the permission of the Dalyell coordinator, candidates in the Dalyell Stream may attempt units at higher levels than the usual sequence.
   (b) Candidates must achieve an Annual Average Mark at a level determined by the Board of Interdisciplinary Studies in each year of study or over for each 48 credit-point block to continue in the Dalyell Stream. Candidates who do not maintain an Annual Average Mark at the level determined by the Board of Interdisciplinary Studies may continue in any other stream into which they were admitted, major, program or minor but will not remain in the Dalyell Stream.
(4) Progression within the Bachelor of Science (Medical Science) Stream
   Students in this stream will be required to meet the progression requirements for the stream.

12 Transitional Provisions
(1) These resolutions apply to students who commenced their candidature on or after 1 January 2018.
(2) Students who commenced their candidature prior to 1 January 2018 may:
   (a) complete the requirements in accordance with the resolutions governing their candidature immediately prior to these changes; or
   (b) where approved by the Faculty, elect to proceed under these resolutions provided appropriate programs of study can be identified.
   For the Bachelor of Science, Bachelor of Commerce and Bachelor of Arts, transitional arrangements will be as specified in the relevant set of resolutions.
Bachelor of Engineering Honours Core Unit Table

Candidates for the Bachelor of Engineering Honours are required to complete a total of not less than 192 credit points, consisting of the following:

1. 36 credit points of Engineering Core units of study, as set out below;
2. 108 credit points of Stream Core units of study from the relevant Bachelor of Engineering Honours stream table;
3. 48 credit points of Stream Specialist units of study.

Candidates intending to complete a major (optional for the Bachelor of Engineering Honours) must complete a minimum of 24 credit points from the table of units of study for that major.

Maths Units of Study

Candidates for the Bachelor of Engineering Honours must complete all Maths units of study listed below.

Math units of study offered by the Faculty of Science shown in the tables can be replaced by an equivalent advanced level unit, subject to prerequisite conditions (as required by the Faculty of Science) being met. Students considering doing advanced options should seek advice from their school before enrolling.

MATH1021 Calculus Of One Variable

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
<th>Credit Points</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>A HSC Mathematics Extension 1. Students who have not completed HSC Extension 1 Mathematics (or equivalent) are strongly advised to take the Extension 1 Mathematics Bridging Course (offered in February). N MATH1011 or MATH1901 or MATH1906 or MATH1111 or ENVX1001 or MATH1001 or MATH1921 or MATH1931</td>
<td>3</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

MATH1002 Linear Algebra

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
<th>Credit Points</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>A HSC Mathematics or MATH1111. Students who have not completed HSC Mathematics (or equivalent) are strongly advised to take the Mathematics Bridging Course (offered in February). N MATH1012 or MATH1014 or MATH1902</td>
<td>3</td>
<td>Summer</td>
</tr>
</tbody>
</table>

MATH1023 Multivariable Calculus and Modelling

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
<th>Credit Points</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>A HSC Mathematics Extension 1. Students who have not completed HSC Extension 1 Mathematics (or equivalent) are strongly advised to take the Extension 1 Mathematics Bridging Course (offered in February). N MATH1013 or MATH1903 or MATH1907 or MATH1003 or MATH1923 or MATH1933</td>
<td>3</td>
<td>Semester 2</td>
</tr>
</tbody>
</table>

MATH1005 Statistical Thinking with Data

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
<th>Credit Points</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>A HSC Mathematics. Students who have not completed HSC Mathematics (or equivalent) are strongly advised to take the Mathematics Bridging Course (offered in February). N MATH1015 or MATH1905 or STAT1021 or STAT1022 or ECMT1010 or ENVX1001 or ENVX1002 or BUSS1020</td>
<td>3</td>
<td>Semester 2</td>
</tr>
</tbody>
</table>

Professional Engagement Program

Candidates for the Bachelor of Engineering Honours must complete the Professional Engagement Program units of study.

ENGP1000 Professional Engagement Program 1

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
<th>Credit Points</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>N ENGG4000 OR ENGG5217</td>
<td>0</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

ENGP2000 Professional Engagement Program 2

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
<th>Credit Points</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>P ENGP1000 24 cp of Engineering units N ENGG4000 OR ENGG5217</td>
<td>0</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

ENGP3000 Professional Engagement Program 3

<table>
<thead>
<tr>
<th>Units</th>
<th>Description</th>
<th>Credit Points</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>P ENGP2000 72 cp of Engineering units N ENGG4000 OR ENGG5217</td>
<td>0</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>

Candidates must enrol in ENGP1000 in their first semester of study.

Thesis Units of Study

Candidates must complete either the two thesis units of study (12 credit points) or the Major Industrial Project.
belonging to the stream in which they are enrolled.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMME4111</td>
<td>Thesis A</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMME4112</td>
<td>Thesis B</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG4811</td>
<td>Thesis A</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG4812</td>
<td>Thesis B</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIVL4022</td>
<td>Thesis A</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIVL4023</td>
<td>Thesis B</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC4712</td>
<td>Thesis A</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC4713</td>
<td>Thesis B</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMME4010</td>
<td>Major Industrial Project</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHNG4203</td>
<td>Major Industrial Project</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC4714</td>
<td>Major Industrial Project</td>
<td>24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Integrated Engineering Units of Study**

Candidates for the Bachelor of Engineering Honours must complete all Integrated Engineering units of study.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGG1111</td>
<td>Integrated Engineering 1</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGG2111</td>
<td>Integrated Engineering 2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Core Unit Exceptions

#### Any BE Honours stream combined with Commerce

Candidates enrolled in the BE Honours (any stream) in a combined degree with Commerce are exempt from MATH1005 Statistical Thinking with Data. Candidates must enrol in the core Bachelor of Commerce unit:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSS1020 Quantitative Business Analysis</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Candidates are recommended to enrol in the following unit in place of MATH1005:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH1004 Discrete Mathematics</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Aeronautical stream combined degree with Commerce or Law

Candidates enrolled in BE Honours (Aeronautical) in a combined degree with Commerce or Law are exempt from the Integrated Engineering units and must instead enrol in 12 credit points from the following Aeronautical Advanced Specialist units:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AERO4260 Aerodynamics 2</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AERO4360 Aerospace Structures 2</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AERO4560 Flight Mechanics 2</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Mechanical stream combined degree with Commerce or Law

Candidates enrolled in BE Honours (Mechanical) in a combined degree with Commerce or Law are exempt from the Integrated Engineering units and must instead enrol in 12 credit points from the following Mechanical Specialist units:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
<th>Semester 1</th>
<th>Semester 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMME5101 Energy and the Environment</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMME5202 Computational Fluid Dynamics</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMME5271 Computational</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit Points</td>
<td>Prerequisites</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>---------------</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>AMME5310</td>
<td>Engineering Tribology</td>
<td>6</td>
<td>A (AMME2302 OR AMME9302) AND (AMME2301 OR AMME9301) AND (MECH3261 OR MECH9261)</td>
</tr>
<tr>
<td>AMME5510</td>
<td>Vibration and Acoustics</td>
<td>6</td>
<td>P (AMME2301 OR AMME9301) AND (AMME2200 OR AMME2261 OR AMME9261) AND (AMME2500 OR AMME9500)</td>
</tr>
<tr>
<td>AMME5520</td>
<td>Advanced Control and Optimisation</td>
<td>6</td>
<td>A Strong understanding of feedback control systems, specifically in the area of system modelling and control design in the frequency domain. P AMME3500 OR AMME5501 OR AMME9501</td>
</tr>
<tr>
<td>AMME5912</td>
<td>Crash Analysis and Design</td>
<td>6</td>
<td>A Computer Aided Drafting, Basic FEA principles and Solid Mechanics</td>
</tr>
<tr>
<td>MECH4460</td>
<td>Mechanical Design 3</td>
<td>6</td>
<td>A ENGG1802, AMME2301, AMME2500, MECH3361 P MECH2400 and MECH3460</td>
</tr>
<tr>
<td>MECH5255</td>
<td>Air Conditioning and Refrigeration</td>
<td>6</td>
<td>A Students are expected to be familiar with the basic laws of thermodynamics, fluid mechanics and heat transfer. P MECH3260 OR MECH9260 OR MECH5262 N MECH4255</td>
</tr>
<tr>
<td>MECH5265</td>
<td>Combustion</td>
<td>6</td>
<td>A Students are expected to be familiar with the basic laws of thermodynamics, fluid mechanics and heat transfer. P (MECH3260 AND MECH3261) OR MECH5262 OR MECH9260</td>
</tr>
<tr>
<td>MECH5275</td>
<td>Renewable Energy</td>
<td>6</td>
<td>A The student will need a sound background in advanced level fluid mechanics, thermodynamics and heat transfer. In particular, students should be able to analyse fluid flow in turbomachinery; perform first and second law thermodynamic analysis of energy conversion systems, including chemically reacting systems; and perform advanced level calculations of conductive and convective and radiative heat transfer, including radiative spectral analysis. P (MECH3260 AND MECH3261) OR (AERO3260 AND AERO3261) OR (MECH5262 AND MECH5261) OR (MECH9260 AND MECH9261) OR (AERO9260 AND AERO9261). Students claiming to have prerequisite knowledge based on study at other institutions must contact the unit of study coordinator before enrolling in this unit and may be required to sit a pre-exam to demonstrate that they have the necessary knowledge and skills to undertake this advanced level unit.</td>
</tr>
<tr>
<td>MECH5310</td>
<td>Advanced Engineering Materials</td>
<td>6</td>
<td>P (AMME2301 OR AMME9301) AND (AMME2302 OR AMME1362 OR AMME9302) AND (MECH3362 OR MECH9362) N MECH4310</td>
</tr>
</tbody>
</table>

**Mechatronic stream combined degree with Commerce or Law**

Candidates enrolled in BE Honours (Mechatronic) in a combined degree with Commerce or Law are exempt from the Integrated Engineering units and must instead enrol in 12 credit points from the following Mechatronic Advanced Specialist units:
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Points</th>
<th>Prerequisites</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMME4710</td>
<td>Computer Vision and Image Processing</td>
<td>6</td>
<td>P MTRX3700 OR MECH4720 OR MECH5720</td>
<td>Semester 2</td>
</tr>
<tr>
<td>AMME5520</td>
<td>Advanced Control and Optimisation</td>
<td>6</td>
<td>A Strong understanding of feedback control systems, specifically in the area of system modelling and control design in the frequency domain. P AMME3500 OR AMME5501 OR AMME9501</td>
<td>Semester 1</td>
</tr>
<tr>
<td>AMME5790</td>
<td>Introduction to Biomechatronics</td>
<td>6</td>
<td>A A good practical knowledge in mechanical and electronic engineering; adequate maths and applied maths skills; background knowledge of physics, chemistry and biology; Some programming capability, MATLAB, C, C++; able to use common software tools used by engineers including CAD and EDA packages. P MECH3921 OR MTRX3700 OR AMME5921 N AMME4790</td>
<td>Semester 2</td>
</tr>
<tr>
<td>MECH5720</td>
<td>Sensors and Signals</td>
<td>6</td>
<td>A Strong MATLAB skills</td>
<td>Semester 2</td>
</tr>
<tr>
<td>MTRX5700</td>
<td>Experimental Robotics</td>
<td>6</td>
<td>Knowledge of statics and dynamics, rotation matrices, programming and some electronic and mechanical design experience is assumed. P (AMME3500 OR AMME5501 OR AMME9501) AND MTRX3700.</td>
<td>Semester 1</td>
</tr>
</tbody>
</table>
Author: Christine Lacey, Curriculum Team Leader, Faculty of Engineering and Information Technologies

Reviewer/Approver: David Lowe, Associate Dean (Education), Faculty of Engineering and Information Technologies

Paper title: Combined Bachelor of Engineering (Honours) and Bachelor of Arts unit substitution for Aeronautical, Mechanical and Mechatronic streams

Purpose:
To implement a unit substitution for the Combined Bachelor of Engineering (Honours) and Bachelor of Arts for Aeronautical, Mechanical and Mechatronic streams to ensure that the Engineering streams meet accreditation requirements.

RECOMMENDATION

That the Undergraduate Studies Committee recommends that the Academic Board note:

a) The core unit substitution for the Combined Bachelor of Engineering (Honours) and Bachelor of Arts in the Aeronautical, Mechanical and Mechatronic streams approved by the FEIT Faculty Board.

EXECUTIVE SUMMARY

The FEIT Faculty Board has approved core unit substitutions for the following combined degrees/streams:

- Bachelor of Engineering Honours (Aeronautical)/Bachelor of Arts
- Bachelor of Engineering Honours (Mechanical)/Bachelor of Arts
- Bachelor of Engineering Honours (Mechatronic)/Bachelor of Arts

This was necessitated by the BA component of the combined degree having increased from 84 cp to 96 cp from 2018. As per the BE(Hons) combined degree resolutions, the Faculty Board may approve, based on appropriate academic justification, a list of approved unit alternatives.

ATTACHMENTS

Attachment 1: Minor Course Amendment - Combined Bachelor of Engineering Honours/Bachelor of Arts (Aeronautical, Mechanical, Mechatronic streams)
Minor Course Amendment Proposal

Faculty: Engineering & IT

Contact person: KC Wong (x12347), Christine Lacey (x40678)

1. Name of award course
   Bachelor of Engineering Honours (Aeronautical)/Bachelor of Arts
   Bachelor of Engineering Honours (Mechanical)/Bachelor of Arts
   Bachelor of Engineering Honours (Mechatronic)/Bachelor of Arts

2. Purpose of proposal
   This proposal relates to relevant clause of the combined degree resolutions is 6 (2) (c):
   The Faculty Board may approve, based on appropriate academic justification, a list of
   approved unit alternatives. These alternatives specify, for particular Engineering stream /
   combined degree combinations, units within the normal requirements for the Bachelor of
   Engineering Honours component of the combined degree that can be replaced by specified
   alternative units that would form part of the normal program for single degree students in that
   stream.

   The following alternative unit arrangements are proposed for combined degree students
   enrolled in the Aeronautical, Mechanical and Mechatronic Engineering programs combined
   with the Bachelor of Arts. This is necessary due to recent changes in which increase the BA
   component in the combined BE/BA from 84 cp to 96 cp from 2018.

   Under current resolutions, Aeronautical, Mechanical and Mechatronic Engineering programs
   have been able to be combined with partner degrees in Arts, Commerce, Law, Project
   Management, and Science without compromise of the minimum requirements for their
   specialist outcomes. Typically, this has been done by keeping a minimum requirement for
   Senior Advanced Stream Elective units of 12 cp as required for accreditation. This was
   accommodated in the programs by having exemptions from core units of the single degree
   where outcomes could be achieved specifically in the combined degree or were available
   more broadly in the remainder of the program. The outcomes of the Aeronautical, Mechanical
   and Mechatronic Engineering programs have been reviewed on many occasions by industry
   panels and accreditation teams and are considered the minimum necessary to achieve the
   stated skills required from these degree streams. The most recent industry reviews where
   held over the 2012, 2013 to 2014 period just prior to the 2014 accreditation visit, and
   subsequently over 2015 and 2017 period. Reports and minutes of meetings are available on
   request.

   This proposal is similar to the exceptions approved by the Faculty Board in August 2015 for
   Aeronautical, Mechanical, and Mechatronic Engineering in BE/BCom and BE/LLB, where 12
   cp of Advanced Stream Specialist Electives were approved in place of 12 cp of Integrated
   Engineering. In order to maintain this 12 cp Advanced Stream Specialist Elective requirement,
   it is proposed that a set of approved unit alternatives/exemptions are put in place for combined
   BE/BA degree students in the Aeronautical, Mechanical and Mechatronic programs in order to
   maintain the required level of outcomes under the current structure. Unlike BE/BCom and
   BE/LLB programs, it is difficult to be assured of learning outcomes related to Integrated
   Engineering in the BA program, hence the need to seek approval for Aeronautical,
   Mechanical, and Mechatronic Engineering programs in BE/BA to be exempt from 12 cp of
   stream core units to accommodate the 12 cp of Stream Advanced Specialist Electives
   required for professional accreditation.
3. Details of amendment

<table>
<thead>
<tr>
<th>Degree/Stream</th>
<th>Core units to be exempted</th>
<th>Replacement units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEHons/BA (Aeronautical)</td>
<td>AERO1560 Introduction to Aerospace Engineering AMME2261 Fluid Mechanics 1 AMME2262 Thermal Engineering 1</td>
<td>AMME2200 Introductory Thermofluids</td>
</tr>
<tr>
<td>BEHons/BA (Mechanical)</td>
<td>MECH1560 Introduction to Mechanical Engineering AMME2261 Fluid Mechanics 1 AMME2262 Thermal Engineering 1</td>
<td>AMME2200 Introductory Thermofluids</td>
</tr>
<tr>
<td>BEHons/BA (Mechatronic)</td>
<td>MTRX1701 Introduction to Mechatronic Engineering ELEC3204 Power Electronics and Applications</td>
<td>Nil</td>
</tr>
</tbody>
</table>

The recommended alternates are shown in the above table. In the cases of Aeronautical and Mechanical Engineering, the proposed core Units removed from the BE/BA programs are not necessarily replaced directly. AERO1560 and MECH1560 are Year 1 Introductory units, which the learning outcomes from are to be facilitated through the rest of their enrolled programs. AMME2200 Introductory Thermofluids combines the basic content of AMME2261 Fluid Mechanics 1 and AMME2262 Thermal Engineering 1 in a more succinct manner, currently being offered to Biomedical and Mechatronic Engineering programs. Whilst not ideal, AMME2200 should provide the minimal pre-requisite knowledge for subsequent units.

For Mechatronic Engineering, the proposed core Units removed from the BE/BA programs are not directly replaced, but the learning outcomes are to be facilitated through the rest of their enrolled program. MTRX1701 is a Year 1 introductory unit, which the learning outcomes from are to be facilitated through the rest of the students’ enrolled programs. The learning outcome from ELEC3204 will be facilitated through other core MTRX units in the program.

4. Transitional arrangements
The change will apply for students commencing from 2018 onward. The small number of students in these streams who commenced in 2018 will be managed on a case by case basis to ensure they can complete their program.

5. Other relevant information
N/A

6. Signature of Dean

[Signature] 26/6/18