

FORM B: FULL PROPOSAL

To establish or discontinue or change all curriculum items.

Complete this template first and then complete the required curriculum item templates.¹

1. DETAILS (COPY AND PASTE FROM CONCEPT PROPOSAL WHERE RELEVANT)

1.1. Proposal title	Bachelor of Engineering (Electrical and Electronic)(Honours)		
1.2. Academic lead	Professor John Roddick		
1.3. Other academic contact(s)	Dr Sherry Randhawa		
1.4. Brief summary of proposal. <i>If proposal includes more than one new or changed curriculum item, identify the <u>primary</u> curriculum activity that is driving the proposal</i>	We propose the merging of the Electrical and Electronic Engineering (EEE) specialisations of the Bachelor of Engineering (Honours) into one composite specialisation with the current stand-alone specialisations to be discontinued. The singular <i>electronic</i> rather than the current <i>electronics</i> is proposed as this is in line with the majority of other Australian programs. This change affects some undergraduate and postgraduate degrees, however the changes at the postgraduate level will be subject to a different proposal bundle. In summary, this proposal will: - Create a new specialisation within the BEng(Hons) – ○ Bachelor of Engineering (Electrical and Electronic)(Honours) - and discontinue the – ○ Bachelor of Engineering (Electronics) (Honours) ○ Bachelor of Engineering (Electrical) (Honours) ○ Bachelor of Engineering (Computer and Network Systems) (Honours) Note that because of outstanding applications and offers to international students for the Bachelor of Engineering (Computer and Network Systems) (Honours) this will be discontinued in 2022.		
1.5. Rationale for proposal	The separation of Electrical and Electronic is both a historical artefact of the development of engineering at Flinders (Electrical was developed later) and a desire to provide a distinctive offering compared to the University of Adelaide and the University of South Australia. However, it has been decided that this separation is hindering the recruitment of students. While the proposal creates a new Program of Study, there are no net new topics, no changes in admissions criteria and no impact on any of the existing students. Note that the Computer and Network Systems Engineering course has substantial commonality with the Electronics degree and is considered part of the EEE discipline, both by the College and by Engineers Australia.		
1.6. Administering college	SE	1.7. Teaching Program(s)	Engineering and Design
1.8. Locations	Tonsley, some first year at Bedford Park		
1.9. Discuss any anticipated additional resource requirements?	None		
1.10. Details of relevant Professional Accreditation or Recognition	Accreditation at the level of Professional Engineer for the Bachelor of Engineering (Electrical and Electronic) (Honours) will be sought. The current specialisations as separate degrees are fully accredited at the Professional Engineer level with Engineers Australia so it is anticipated there will be no issues with accreditation for the one specialisation. Engineers Australia reaccreditation visit is in April 2021.		
1.11. Details of relevant third-party arrangements (new or existing)	Dual pathways agreements with TAFE SE:1823:36; SC1823:01; SE1823:32; SE1823:31		

¹ If you are seeking to **establish** a new or **discontinue** an existing **Course, Course Specialisation, Major, Minor, Honours Program** or **Micro-credential**, you must first gain approval to proceed via a FORM A: CONCEPT PROPOSAL. Completing this template is the second step in the overall process.

1.12. Proposed implementation/phasing out timeframe	2021		
For new courses, course specialisations, micro-credentials only:			
1.13. How does new curriculum differ from existing curriculum offered by Flinders?	Broadly speaking, it doesn't. For the undergraduate award, the effect is bringing together existing curriculum without restricting student choice.		
1.14. Target market	Domestic undergraduates are the main target, but the course is available to International students		
1.15. Nature of funding	☒ Commonwealth supported	☐ Employer reserved funding	☐ RTP Domestic
	☐ Fee paying postgraduate	☐ International offshore	☐ RTP International
	☒ International onshore	☐ Other (specify):	

2. DETAILS OF NEW, CHANGED OR DISCONTINUED CURRICULUM ITEMS

(SKIP SECTIONS THAT ARE NOT APPLICABLE AND COPY AND PASTE FROM CONCEPT PROPOSAL WHERE RELEVANT)

You will need to complete a **Curriculum Item template** for each new/changed/discontinued curriculum item identified in below.

2.1 NEW CURRICULUM (COURSE, COURSE SPECIALISATION, MAJOR, MINOR, HONOURS PROGRAM, MICRO-CREDENTIAL)

Type of curriculum	Proposed name of new curriculum	Offered to onshore international students?	Will it replace an existing curriculum item? Provide details.	Will new topics be developed to support new curriculum?
Specialisation	Bachelor of Engineering (Electrical and Electronic)(Honours)	Yes	Yes – Bachelor of Engineering (Electrical)(Honours), Bachelor of Engineering (Electronics)(Honours), Bachelor of Engineering (Computer and Network Systems)(Honours)	No
[Select option]		[Yes/No]		[Yes/No]
[Select option]		[Yes/No]		[Yes/No]
[Select option]		[Yes/No]		[Yes/No]
[Select option]		[Yes/No]		[Yes/No]

2.2 EXISTING CURRICULUM TO BE CHANGED *Include name and code (where known)*

Bachelor of Engineering Science may require some changes
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2.3 EXISTING CURRICULUM TO BE DISCONTINUED *Include name and code (where known)*

Bachelor of Engineering (Electrical)(Honours) from 2021 Bachelor of Engineering (Electronics)(Honours) from 2021 Bachelor of Engineering (Computer and Network Systems)(Honours) from 2022
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3. ACADEMIC CONSULTATION

Name	Role	College
Professor Alistair Rendell	Vice President and Executive Dean	SE
A/Professor Kenneth Pope, Dr Nasser Asgari and other members of the EEE discipline	Various	SE
Professor Karen Burke da Silva	Dean (Education)	SE
		[Select college]

Name	Role	College
		[Select college]

3.1 Provide details of any issues raised during academic consultation.

There was general acknowledgement that this was a sensible development.

4. MARKET VIABILITY (EQT USE ONLY)

A Market Viability summary is required for establishing a new course, course specialisation, major, minor, Honours program, micro-credential. The Educational Quality team will request this from Recruitment when applicable.

Required – attached at end of this template	☒
Not required	☐

5. FINANCIAL CONSIDERATIONS

5.1. Highlight the main financial considerations for your proposal*

Since this award replaces existing awards with existing EFTSL and existing staff, it is difficult to adapt the financial viability template to reflect accurate figures. However, we entered the data as if it were a new course (using an average of 2019 and 2020 data for the old courses) and analysed the year five (steady state) figures only. This shows a healthy steady state balance.

*The completion of a [financial viability model](#) is mandatory if any new curriculum items (except topics) are being proposed. Contact the Business Partner in your college to support the completion of the model and attach the Final Report from the model to this template.

6. STUDENT CONSIDERATIONS

6.1. Provide a brief summary of transition or teaching out arrangements (does not require a detailed Transition Plan or Study Plans).

Since all existing study plans are subsumed in the new Program of Study, all current students can continue either in their current award or can elect to transfer to the new award. It is planned to email all 136 affected undergraduate students once the change is approved and those that wish to will be transferred in bulk. (There is an advantage to this approach in that we will have graduates earlier and, as EA requires graduates before full accreditation is conferred, we can thus apply for full accreditation earlier).

Note as stated above, we have a number of outstanding applications and offers to the Bachelor of Engineering (Computer and Network Systems) (Honours) and thus, since there are no costs involved, we are proposing a discontinuation date for this course of the end of 2021. The other two courses will start their discontinuation process at the end of 2020, and any current offers for 2021 commencement will need to be updated and re-issued for applicants to receive an offer to the new combined disciplines course.

6.2. Provide summary of student consultations/discussions and demonstrate how student perspectives have been taken into consideration for this proposal. When proposing to change the name, structure, duration or learning outcomes of any course to which students are currently admitted, it is mandatory to seek student feedback on the changes.

We aimed, primarily, to ensure that no students were disadvantaged and hence subsumed all current Programs of Study into the new award.

7. OTHER CONSIDERATIONS

7.1. Library requirements

There are no additional library implications for this change.

7.2. Online Learning and Teaching support requirements

There are no additional online learning or teaching support implications for this change.

7.3. How curriculum supports career-readiness for students. Include details of any stakeholder engagement.

The existing awards are already well received by industry and the new Program of Study preserves all the current pathways.

7.4. Relevance of this proposal to other colleges/impact on other colleges.

None.

8. THIRD PARTY AND WIL ARRANGEMENTS

8.1. Does this proposal involve a new third-party teaching arrangement?

No

8.2. If YES: provide details of relevant new or existing third-party arrangements. You will need to complete a Form P: Third Party Teaching Arrangement Partner Due Diligence.

8.3. Provide details of any new or existing WIL arrangements.

All engineering students undertake a 20 week work placement. This will not change in the merged award.

9. SUBMIT TEMPLATE(S)

You have now completed your sections. Next steps:

1. Complete **Form P: Third Party Teaching Arrangement Partner Due Diligence** (if required)
2. Complete **Financial Viability Model** and attach **Final Report** to this form if your proposal is to establish new or discontinue existing curriculum (except topics)
3. Complete separate **Curriculum Item templates** for all items identified in Section 2 to be established/discontinued/changed as part of this proposal.
4. Submit this **Form B: Full Proposal** with all required **Curriculum Item template(s)** to educational.quality@flinders.edu.au
5. EQT will coordinate completion of **Form Q: Market Viability summary** if required

10. STAKEHOLDER CONSULTATION (EQT USE ONLY)

10.1. Domestic recruitment advice	See market viability
10.2. International recruitment advice	See market viability
10.3. Domestic admissions advice	
10.4. International admissions advice	
10.5. WIL Coordinator advice	
10.6. Manager, Resource Scheduling Services advice	
10.7. College Manager, SAS advice	
10.8. College Manager, SAS advice - Other Colleges	
10.9. Senior Student Enrolment Officer advice	
10.10. IDS Student Systems Team advice	
10.11. International compliance advice	
10.12. Academic Developer advice (aims, outcomes, assessments)	

11. EDUCATIONAL QUALITY ADVICE (EQT USE ONLY)

11.1. EQT general comments	
11.2. Complies with AQF	
11.3. Complies with Higher Education Standards	
11.4. Complies with University policy	
11.5. Good practice curriculum models	
11.6. How will this proposal affect students?	
11.7. Implementation timeframe achievable?	
11.8. Other colleges for which this proposal is relevant	☐ BGL ☐ HASS ☐ NHS ☐ no impact to other colleges ☐ EPSW ☐ MPH ☐ SE
11.9. Summary of relevance to other colleges	
11.10. Approval level	[Select approval level]

12. BUNDLE INFORMATION (EQT USE ONLY)

	Reference #	Name of item
Proposal bundle number:	PB45	Bachelor of Engineering (Electrical and Electronic)(Honours)
Proposal Template(s) (CT):	CT-2228	Bachelor of Engineering (Electrical and Electronic)(Honours)
Curriculum Item Template(s) (CT):	CT-2229	Bachelor of Engineering (Electrical and Electronic)(Honours)
Other attachments:		

FORM D: NEW CURRICULUM ITEM: Course or Course Specialisation

Complete **FORM B: FULL PROPOSAL** template first and then complete required curriculum item template(s).

1. OVERVIEW

1.1 Implementation year	2021		
1.2 Implementation half year	First half year		
1.3 Title (150 chars max)	Bachelor of Engineering (Electrical and Electronic)(Honours)		
1.4 Proposed code (EQT use)	BENGEEH		
1.5 Short title (80 chars max)	Bachelor of Engineering (Electrical and Electronic)(Honours)		
1.6 Postnominals (30 chars max)	BEng (ElecElect)(Honours)		
1.7 Overview (introductory paragraph of Course Rule).	The Bachelor of Engineering (Electrical and Electronic) (Honours) is offered by the College of Science and Engineering. It requires four years of full-time study (or the equivalent part-time). Students who do not qualify but who have completed SACE Stage 2 (Year 12) General Mathematics or SACE Stage 1 Mathematics should consider the Bachelor of Engineering (Honours) - General Entry.		
1.8 Student type (select all that apply)	☒ Domestic ☒ Onshore international ☐ Offshore international		
1.9 Available for mid-year entry	Yes		
1.10 Field of Education (FoE) code and title (refer to Guide) ONE ONLY	031399 Electrical and Electronic Engineering and Technology n.e.c	Secondary FOE (double degrees only)	
1.11 Method of application	☒ SATAC ☐ University		
1.12 Course type	Course specialisation		
1.13 Level of study	Honours		
1.14 Award type	Honours - 4 years		
1.15 Award information (select if applicable)	☐ Exit only ☐ Double bachelor/ postgraduate degree ☐ Offshore degree ☐ Pathway ☐ Pathway transfer (third party) ☐ Dual award (third party) ☐ Nested course ☐ Dual pathway (third party)		
1.16 AQF level	8 Bachelor Honours Degree		
1.17 Unit value	144 units	If other:	
1.18 Standard full-time duration (yrs)	4		
1.19 Maximum time allowed (yrs) (if applicable)	[Select option]		
1.20 CRICOS (EQT use)			
1.21 Administering college	Science and Engineering		
1.22 Teaching Program	Engineering and Design		

2. FEES

Select all that apply	☒ Commonwealth supported ☐ Fee paying postgraduate ☐ RTP domestic	☒ International onshore ☐ International offshore ☐ RTP international	☐ Employer reserved place ☐ Employer reserved – fee paying ☐ Employer reserved – no fees
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3. INTAKES

Mode of delivery	Location	Offering name (EQ use)
Internal	Tonsley	
[Select option]	[Select option]	
[Select option]	[Select option]	
[Select option]	[Select option]	

4. AIMS AND LEARNING OUTCOMES

4.1 Aims - Consult with the [Academic Developer](#) aligned to your College to complete this section.

The course has been designed to provide graduates with:

- A strong foundation in both the theoretical and the practical aspects of engineering, particularly those relevant to the systematic development of electrical and electronic systems
- An awareness of social, economic, cultural and environmental aspects of electrical and electronic engineering
- An ability to critically analyse and evaluate information and solve problems
- An understanding of professional and ethical responsibilities and a commitment to them
- Well developed written and oral communication skills
- Structured Engineering Work experience
- The ability to work and interact professionally as an individual and as a member of multi-disciplinary teams
- An understanding of the need to undertake lifelong learning and the capacity to do so
- An ability to undertake a substantial research-oriented project
- Preparation for future management roles as professional engineers

4.2 Learning Outcomes - Consult with the [Academic Developer](#) aligned to your College to complete this section.

On completion of this course you will be able to:

1. Proficiently use professional skills and knowledge in the systematic development of complex electrical and electronic systems
2. Demonstrate a broad understanding of the electrical and electronic engineering discipline and a deeper understanding of some areas of electrical and electronic engineering
3. Apply their skills and knowledge in a professionally responsible manner
4. Communicate effectively with other engineers and the wider global community using a wide range of communication technologies
5. Work professionally as an individual and in a team
6. Understand and describe the processes through which current knowledge was developed
7. Develop engineering solutions appropriate to the social, political, international, economic and environmental contexts in which they are applied
8. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electrical and electronic engineering
9. Contribute successfully to project management
10. Plan and execute a research project, applying relevant methodologies and knowledge
11. Apply skills adopted through the thesis and advanced discipline topics to postgraduate level research or advanced industrial investigation

5. PROGRAM OF STUDY

Please provide proposed Program of Study at the end of this document using the [Program of Study template](#) (Section 15).

If including a **proposed new** Major/Minor/Honours Program in this Program of Study, please complete a **CURRICULUM ITEM: New Major, Minor, Honours Program**.

6. COURSES ASSOCIATED WITH PROPOSED NEW CURRICULUM

This table captures critical information that links your proposed new curriculum to any other proposed or existing course e.g. Honours, Exit Award, Double degree etc. Recording this information will improve the quality of our data and the student experience.

Type	Course code (if known)	Course name
Phasing out	BENGELH	Bachelor of Engineering (Electrical)(Honours)
Phasing out	BENGEGH	Bachelor of Engineering (Electronics)(Honours)
Phasing out	BENGNSH	Bachelor of Engineering (Computer and Network Systems) (Honours)
Pathway		Bachelor of Engineering (Honours) – General Entry

Type	Course code (if known)	Course name
Pathway	BENGHFE	Bachelor of Engineering (Honours) – Flexible Entry
Exit	BENGSC	Bachelor of Engineering Science
[Select option]		
[Select option]		
[Select option]		

7. ADMISSION REQUIREMENTS

Type	Description
Admission requirements	The minimum requirements for consideration for entry to all undergraduate courses are specified in detail in the University Entry Requirements.
Pre-requisites	Successful completion of either SACE Stage 2 (Year 12) Specialist Mathematics or Mathematical Methods or equivalent International Baccalaureate subjects.
Assumed knowledge	Knowledge of SACE Stage 2 (Year 12) Physics.
[Select option]	

8. THIRD PARTY ARRANGEMENTS (IF APPLICABLE) (ADD EXTRA LINES AS REQUIRED)

Type	Name of third-party	Details
Dual pathway	TAFE South Australia	Associate degree in Electrical Engineering/Bachelor of Engineering (Electrical)(Honours) SE:1823:36
Dual pathway	TAFE South Australia	Associate degree in Electronic Engineering/Bachelor of Engineering (Electrical)(Honours) SE:1823:32
Dual pathway	TAFE South Australia	Associate degree in Electronic Engineering/Bachelor of Engineering (Computer and Network Systems)(Honours) SC:1823:01
Dual pathway	TAFE South Australia	Associate degree in Electronic Engineering/Bachelor of Engineering (Electronic)(Honours) SE:1823:31
Dual pathway	TAFE South Australia	Associate degree in Electronic Engineering/Bachelor of Engineering (Robotics)(Honours) (SE:1823:34 – may not require updating)

9. KEY CURRICULUM ELEMENTS

Indigenous knowledge

Curricula with Indigenous Australian content	☒
Curricula in which the content is broadened by Indigenous comparative approaches	☐
Curricula in which the content is broadened with diverse Indigenous knowledge domains	☐
Curricula in which the content is broadened through a focus on the regeneration and transition of Indigenous knowledges	☐
Curricula in which the content encompasses both discipline – and Indigenous specific cultural content	☐
Curricula in which the content references Indigenous knowledges and Indigenous peoples' connection to country (lands, waters and sky)	☐
Curricula that prepares students for working with Indigenous people, their leaders and their representatives' structures/organisations	☒
Curricula in Indigenous languages that expressly address cross-cultural communication and develops intercultural skill sets	☐
Curricula in which the content is designed specifically for Indigenous students	☐
Curricula in which the content is designed to provide training in Indigenous Research Methodologies	☐
Curricula in which the content includes Indigenous histories and Indigenous viewpoints on social, cultural and historical matters	☐
Curricula in which the content draws directly on Indigenous voices as the primary source	☐
Curricula in which the content problematizes and broadens knowledge construction, reproduction and dissemination as a teaching and learning methodology for the inclusion of Indigenous knowledges	☐
Curricula in which the content centres a politics of Indigenous identity, agency and cultural action.	☐

Other:

☐

Internationalisation

Curricula with international content

☒

Curricula in which the content is broadened by internationally comparative approaches

☒

Curricula that prepares students for defined international professions

☒

Curricula in foreign languages

☐

Linguistics that explicitly address cross-cultural communication issues and provides training in intercultural skills

☐

Interdisciplinary courses such as area or regional studies that cover more than one country

☐

Curricula leading to internationally recognised professional qualifications

☐

Curricula leading to joint or combined degrees (i.e. with international studies or language studies)

☐

Curricula that provides opportunities for off shore experiences such as exchange, internships and study abroad programs.

☐

Curricula in which the content is designed specifically for international students

☐

Other:

☐

Innovation

INNO1001 is included as a CORE topic

☐

INNO1001 is included as an OPTION topic

☐

INNO1001, INNO2001 & INNO3001 are included in the overall Program of Study

☐

INNO topics are NOT included in the Program of Study

☒

Further details: Innovation is central to all engineering disciplines and innovation material has long been included in Flinders engineering awards. INNO content material is included in many ENGR topics.

10. PROFESSIONAL ACCREDITATION AND RECOGNITION

Type	Professional body name	Details	Start date	End date
Accreditation	Engineers Australia	Current degrees are fully accredited at the Professional level. It is assumed this merged award will be eligible for the same status.	2021 Anticipated	
[Select option]				

11. SUBMIT TEMPLATES

You have now completed all your sections. Next steps:

1. Make sure you have completed [Section 15: Program of Study](#)
2. Complete **Form B: Full Proposal template**
3. Complete separate **Curriculum Item templates** for any other items to be established/discontinued/changed as part of this proposal
4. Submit **Form B: Full Proposal template** with all required **Curriculum Item template(s)** to educational.quality@flinders.edu.au.
5. The Educational Quality Team will draft the Course Rule based on data you have provided and send to you for review.

12. INTERNAL COURSE ACCREDITATION (EQT USE ONLY)

12.1 Which Internal Course Accreditation (ICA) Group will this Course sit in? (Refer to [list](#))

Engineering

12.2 Initial approval date

12.3 Year course last reaccredited (or initial approval year)

12.4 Year accredited until

12.5 Year of next Internal Course Accreditation review

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13. AHEGS DATA (EQT TO DRAFT – ACADEMIC PROPOSER TO REVIEW)

13.1 Award details

Graduates have developed a comprehensive knowledge and practical industry-based experience in electrical and electronic engineering with a particular focus in their selected major to the level where they are prepared to practice as a Professional Engineer. They have an awareness of professional methodologies and research procedures relevant to electrical and electronic engineering and can apply relevant scientific, mathematical and engineering principles to creating solutions to complex electrical and electronic engineering problems.

13.2 AQF level detail

This qualification is an AQF Level 8 Bachelor Honours Degree.

13.3 Professional Accreditation details

TBA

14. ADMIN (EQT USE ONLY)

Award type for administration	BH4 Honours - 4 years
Publication title	Bachelor of Engineering (Electrical and Electronic)(Honours)
Proposal bundle reference number	PB45

15. PROGRAM OF STUDY

Program of Study Overview

E.g. To qualify for The Bachelor of Economics, a student must complete 108 units with a grade of P or NGP or better in each topic, according to the program of study below.

To qualify for the Bachelor of Engineering (Electrical and Electronic) (Honours) a student must complete 144 units with a grade of P or NGP or better in each topic, according to the program of study below. Students who have completed 108 units of the degree may choose to exit with a Bachelor of Engineering Science.

Not all topics are necessarily available in a given year.

Student progression rules

Program of Study structure builder (copy and paste extra tables if more than 3 years)

Year 1 Topics

Core topics

Code	Title	Units	Offered in
ENGR1201	Electronics	4.5	Second half year
ENGR1401	Professional Skills	4.5	Both halves of year
ENGR1711	Engineering Design	4.5	First half year
ENGR1721	Engineering Programming	4.5	Both halves of year
ENGR1722	Engineering Physics and Materials	4.5	Second half year
ENGR1732	Engineering Mechanics	4.5	First half year
MATH1121	Mathematics 1A	4.5	Both halves of year
MATH1122	Mathematics 1B	4.5	Both halves of year

Year 2 Topics

Core topics

Code	Title	Units	Offered in
COMP2711	Computer Programming 2	4.5	Both halves of year
ENGR2702	Electrical Circuits and Machines	4.5	Second half year
ENGR2711	Engineering Mathematics	4.5	First half year
ENGR2712	Automation and Industrial Control	4.5	Second half year
ENGR2722	Analysis of Engineering Systems	4.5	Second half year
ENGR2731	Electronic Circuits	4.5	First half year
ENGR2772	Sensors and Actuators	4.5	Second half year
			[Select option]

Option topics (add extra lines as required)

Plus 0 units of option topics selected from the following list:

Code	Title	Units
ENGR2xxx	Working in Secure and Sensitive Professions (Note 1)	0 units

Major/Minor/Honours Program units (add extra lines as required)

<i>Plus 4.5 units of Major Program</i>	4.5 units
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Year 3 Topics			
Core topics			
Code	Title	Units	Offered in
ENGR3704	Project Management for Engineering and Science	4.5	Second half year
ENGR3750	Workplace Preparation	0	First half year
			[Select option]
			[Select option]
			[Select option]
			[Select option]
			[Select option]
			[Select option]
Option topics (add extra lines as required)			
Plus 13.5 units of option topics selected from the following list:			
Code	Title	Units	
ENGR3700	Engineering Practicum (Note 2)	13.5 units	
ENGR3710	International Engineering Practicum (Note 2, 3)	13.5 units	
Major/Minor/Honours Program units (add extra lines as required)			
Plus 18 of Major Program		18 units	

Year 4 Topics			
Core topics			
Code	Title	Units	Offered in
ENGR7700A	Honours Thesis (4.5/18 units) (Note 4, 5)	4.5	Both halves of year
ENGR7700B	Honours Thesis (4.5/18 units)	4.5	Both halves of year
ENGR7700C	Honours Thesis (4.5/18 units)	4.5	Both halves of year
ENGR7700D	Honours Thesis (4.5/18 units)	4.5	Both halves of year
ENGR9742	Standards Ethics and Compliance	4.5	Second half year
			[Select option]
			[Select option]
			[Select option]
Major/Minor/Honours Program units (add extra lines as required)			
<i>Plus 13.5 of Major Program</i>		13.5 units	

Associated Majors
Advanced Electrical Engineering
Advanced Electronics Engineering

Computer and Network Systems Electronic Systems and Security
Associated Minor(s)
N/A
Associated Honours Program
Refer to embedded program
Micro-credential
N/A

Course Rule notes

1. Students are encouraged to complete ENGR2xxx Working in Secure and Sensitive Professions, however it is not compulsory.
2. With the permission of the Course Coordinator students may undertake [ENGR9405](#) Engineering Work Experience (4.5 units) plus 9 units of upper-level topics in place of [ENGR3700](#) Engineering Practicum or [ENGR3710](#) International Engineering Practicum. [ENGR9405](#) may be taken any time after the student has completed 63 units. Please see the topic coordinator for further details. Upper-level topics must be selected from COMP, ENGR, MATH and STAT topics at 2000-level and above.
3. [ENGR3710](#) International Engineering Practicum should be selected by those students intending to undertake their Practicum outside of Australia. Enrolment is subject to approval by the College which will consider the quality and appropriateness of the placement.
4. Students must undertake the Honours Thesis topics over a minimum of two semesters.
5. The honours grade awarded is determined in accordance with the University's Assessment Policy and Procedures and is calculated from the Weighted Average Mark of all topics at level 7000 and above taken as part of the degree as follows:
 - 85 ≤ WAM - Honours First Class (H1)
 - 75 ≤ WAM < 85 - Honours Second Class Division A (H2A)
 - 65 ≤ WAM < 75 - Honours Second Class Division B (H2B)
 - 50 ≤ WAM < 65 - Honours Third Class (H3)
 Where a student has satisfied all requirements for the course but has achieved a WAM of less than 50, the WAM will be deemed 50 for the purposes of calculating the honours classification.

16. COURSE RULE (EQT TO DRAFT– ACADEMIC PROPOSER TO REVIEW)

Overview

The Bachelor of Engineering (Electrical and Electronic) (Honours) is offered by the College of Science and Engineering. It requires four years of full-time study (or the equivalent part-time). Students who do not qualify but who have completed SACE Stage 2 (Year 12) General Mathematics or SACE Stage 1 Mathematics should consider the Bachelor of Engineering (Honours) - General Entry.

Admission Requirements

The minimum requirements for consideration for entry to all undergraduate courses are specified in detail in the University Entry Requirements. Successful completion of either SACE Stage 2 (Year 12) Specialist Mathematics or Mathematical Methods or equivalent International Baccalaureate subjects is normally required for entry. Knowledge of SACE Stage 2 (Year 12) Physics is assumed.

Course aims

The course has been designed to provide graduates with:

- A strong foundation in both the theoretical and the practical aspects of engineering, particularly those relevant to the systematic development of electrical and electronic systems
- An awareness of social, economic, cultural and environmental aspects of electrical and electronic engineering
- An ability to critically analyse and evaluate information and solve problems
- An understanding of professional and ethical responsibilities and a commitment to them
- Well developed written and oral communication skills
- Structured Engineering Work experience
- The ability to work and interact professionally as an individual and as a member of multi-disciplinary teams
- An understanding of the need to undertake lifelong learning and the capacity to do so
- An ability to undertake a substantial research-oriented project
- Preparation for future management roles as professional engineers

Learning outcomes

On completion of this course you will be able to:

1. Proficiently use professional skills and knowledge in the systematic development of complex electrical and electronic systems
2. Demonstrate a broad understanding of the electrical and electronic engineering discipline and a deeper understanding of some areas of electrical and electronic engineering
3. Apply their skills and knowledge in a professionally responsible manner
4. Communicate effectively with other engineers and the wider global community using a wide range of communication technologies
5. Work professionally as an individual and in a team
6. Understand and describe the processes through which current knowledge was developed
7. Develop engineering solutions appropriate to the social, political, international, economic and environmental contexts in which they are applied
8. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electrical and electronic engineering
9. Contribute successfully to project management
10. Plan and execute a research project, applying relevant methodologies and knowledge
11. Apply skills adopted through the thesis and advanced discipline topics to postgraduate level research or advanced industrial investigation

Program of study

To qualify for the Bachelor of Engineering (Electrical and Electronic) (Honours) a student must complete 144 units with a grade of P or NGP or better in each topic, according to the program of study below. Students who have completed 108 units of the degree may choose to exit with a Bachelor of Engineering Science.

Not all topics are necessarily available in a given year.

Core – Year 1 topics

36 units comprising:

ENGR1201 Electronics (4.5 units)
ENGR1401 Professional Skills (4.5 units)
ENGR1711 Engineering Design (4.5 units)
ENGR1721 Engineering Programming (4.5 units)
ENGR1722 Engineering Physics and Materials (4.5 units)
ENGR1732 Engineering Mechanics (4.5 units)
MATH1121 Mathematics 1A (4.5 units)
MATH1122 Mathematics 1B (4.5 units)

Core – Year 2 topics

31.5 units comprising:

COMP2711 Computer Programming 2 (4.5 units)
ENGR2702 Electrical Circuits and Machines (4.5 units)
ENGR2711 Engineering Mathematics (4.5 units)
ENGR2712 Automation and Industrial Control (4.5 units)
ENGR2722 Analysis of Engineering Systems (4.5 units)
ENGR2731 Electronic Circuits (4.5 units)
ENGR2772 Sensors and Actuators (4.5 units)

Option – Year 2 topics

Plus 0 units selected from:

ENGR2xxx Working in Secure and Sensitive Professions (0 units)¹

Major – Year 2 topics

4.5 units selected from the chosen Major

Core – Year 3 topics

4.5 units comprising:

ENGR3704 Project Management for Engineering and Science (4.5 units)

ENGR3750 Workplace Preparation (0 units)

Option – Year 3 topics

13.5 units chosen from the following:

ENGR3700 Engineering Practicum (13.5 units)²

ENGR3710 International Engineering Practicum (13.5 units)^{2,3}

Major – Year 3 topics

18 units selected from the chosen Major

Core – Year 4 topics

22.5 units comprising:

ENGR7700A Honours Thesis (4.5/18 units)^{4,5}

ENGR7700B Honours Thesis (4.5/18 units)

ENGR7700C Honours Thesis (4.5/18 units)

ENGR7700D Honours Thesis (4.5/18 units)

ENGR9742 Standards Ethics and Compliance (4.5 units)

Major – Year 4 topics

13.5 units selected from chosen Major

Majors

- Advanced Electrical Engineering
- Advanced Electronics Engineering
- Computer and Network Systems
- Electronic Systems and Security

Course Rule Notes

1. Students are encouraged to complete ENGR2xxx Working in Secure and Sensitive Professions, however it is not compulsory.
2. With the permission of the Course Coordinator students may undertake [ENGR9405](#) Engineering Work Experience (4.5 units) plus 9 units of upper-level topics in place of [ENGR3700](#) Engineering Practicum or [ENGR3710](#) International Engineering Practicum. [ENGR9405](#) may be taken any time after the student has completed 63 units. Please see the topic coordinator for further details. Upper-level topics must be selected from COMP, ENGR, MATH and STAT topics at 2000-level and above.
3. [ENGR3710](#) International Engineering Practicum should be selected by those students intending to undertake their Practicum outside of Australia. Enrolment is subject to approval by the College which will consider the quality and appropriateness of the placement.
4. Students must undertake the Honours Thesis topics over a minimum of two semesters.
5. The honours grade awarded is determined in accordance with the University's Assessment Policy and Procedures and is calculated from the Weighted Average Mark of all topics at level 7000 and above taken as part of the degree as follows:
85 ≤ WAM - Honours First Class (H1)
75 ≤ WAM < 85 - Honours Second Class Division A (H2A)
65 ≤ WAM < 75 - Honours Second Class Division B (H2B)
50 ≤ WAM < 65 - Honours Third Class (H3)

Where a student has satisfied all requirements for the course but has achieved a WAM of less than 50, the WAM will be deemed 50 for the purposes of calculating the honours classification.

Combined degrees

The Bachelor of Engineering (Electrical and Electronic)(Honours) may also be studied in a combined degrees program with another Bachelor degree in the College of Science and Engineering where the combination meets the requirements of the credit transfer policy.

FORM E: NEW CURRICULUM ITEM: New Major, Minor, Honours Program

Complete **FORM B: FULL PROPOSAL** template first and then complete required curriculum item template(s).

1. OVERVIEW

1.1 Implementation year	2021
1.2 Implementation half year	First half year
1.3 Proposed code (EQT use)	MAJ-ADVELENG
1.4 Title (150 chars max)	Advanced Electrical Engineering
1.5 Short title (80 chars max)	Advanced Electrical Engineering
1.6 Abbreviated title (30 chars max)	Advanced Electrical Engineering
1.7 Course component type	Major
1.8 Overview (introductory paragraph on Course Rule)	This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in electrical engineering.
1.9 Field of Education (FoE) code and title (refer to Guide) ONE ONLY	031301 Electrical Engineering
1.10 Level of study	Undergraduate
1.11 Unit value	36 units
1.12 Administering college	Science and Engineering
1.13 Teaching Program	Engineering and Design

2. ASSOCIATED COURSES AND COURSE SPECIALISATIONS

List all existing and proposed courses and course specialisations that will include this new major/minor/Honours Program in the Program of Study.

Code	Title
	Bachelor of Engineering (Electrical and Electronic)(Honours)

3. AIMS AND LEARNING OUTCOMES

3.1 **Educational aims** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

The major has been designed to provide graduates with:

- An advanced understand of both the theoretical and the practical aspects of electrical engineering
- An in-depth understanding of the tools and techniques used in electrical engineering.
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

3.2 **Learning Outcomes** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

On completion students will be able to :

1. Proficiently use professional skills and knowledge in the systematic development of complex electrical systems
2. Demonstrate a deeper understanding of electrical engineering and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electrical engineering

4. PROGRAM OF STUDY

Please provide proposed Program of Study at the end of this document using the [Program of Study template](#) at the end of this form.

To include this new curriculum item in an existing Course or Course Specialisation, complete a **FORM J: CHANGE CURRICULUM ITEM: Course, Course Specialisation, Course Component** template.

5. THIRD PARTY ARRANGEMENTS (ADD EXTRA LINES AS REQUIRED)

Arrangement type	Third party name	Details
[Select option]		

6. PROFESSIONAL ACCREDITATION AND RECOGNITION

Type	Professional body name	Details	Start date	End date
[Select option]				
[Select option]				

7. SUBMIT TEMPLATES

You have now completed all your sections. Next steps:

1. Make sure you have completed [the Program of Study](#) below.
2. Complete **Form B: Full Proposal template**
3. Complete other Curriculum Item template(s) for any other items to be established/discontinued/changed as part of this proposal including **New or Change Curriculum Item: Course and Course Specialisation template(s)** to include this major/minor/Honours program in a course).
4. Submit **Form B: Full Proposal template** (and associated attachments) and all required **Curriculum Item template(s)** to educational.quality@flinders.edu.au.

8. ADMINISTRATION (EQT USE ONLY)

Proposal bundle reference number	PB45
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9. PROGRAM OF STUDY

☒ Major (36 units) ☐ Minor (18 units) ☐ Honours Program (36 units)

Name of major/minor/honours program

Advanced Electrical Engineering

Program of Study Overview

E.g. To qualify for the Honours Program in Applied Linguistics a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below. Not all topics are necessarily available in a given year.

To qualify for the Major in Advanced Electrical Engineering a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below.

Program of Study structure builder

Core topics		
Code	Title	Units
ENGR2791	Electrical Engineering Principles	4.5
ENGR2861	Electromagnetics and Electromagnetic Waves	4.5
ENGR3711	Control Systems	4.5
ENGR3861	Electrical Energy Systems	4.5
ENGR7821	Electrical Power Systems	4.5
ENGR7762	Renewable Energy Systems	4.5
Option topics		
Plus 9 units of option topics selected from the following list:		
Code	Title	Units
ENGR7761	Image Processing	4.5
ENGR7xxx	Systems and Security in the Information Age	4.5
ENGR7812	Power Electronics	4.5
ENGR7851	Advanced Electronic Design	4.5
ENGR7961	Finite Element Methods	4.5
MATH7707	Optimisation	4.5
Micro-credential		

Course Rule notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

10. COURSE RULE (EQT TO DRAFT BASED ON TEMPLATE CONTENT)

Major – Advanced Electrical Engineering

To be read in conjunction with the program of study requirements for the

- Bachelor of Engineering (Electrical and Electronic)(Honours)

Overview

This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in electrical engineering.

Course aims

The major has been designed to provide graduates with:

- An advanced understand of both the theoretical and the practical aspects of electrical engineering

- An in-depth understanding of the tools and techniques used in electrical engineering.
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

Learning outcomes

On completion students will be able to:

1. Proficiently use professional skills and knowledge in the systematic development of complex electrical systems
2. Demonstrate a deeper understanding of electrical engineering and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electrical engineering

Program of study

To qualify for the Major in Advanced Electrical Engineering a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below.

Core – Year 2 topics

4.5 units comprising:

ENGR2791 Electrical Engineering Principles (4.5 units)

Core – Year 3 topics

18 units comprising:

ENGR2861 Electromagnetics and Electromagnetic Waves (4.5 units)

ENGR3711 Control Systems (4.5 units)

ENGR3861 Electrical Energy Systems (4.5 units)

ENGR7821 Electrical Power Systems (4.5 units)

Core – Year 4 topics

4.5 units comprising:

ENGR7762 Renewable Energy Systems(4.5 units)

Option – Year 4 topics

9 units selected from:

ENGR7761 Image Processing (4.5 units)

ENGR7812 Power Electronics (4.5 units)

ENGR7851 Advanced Electronic Design (4.5 units)

ENGR7961 Finite Element Methods (4.5 units)

ENGR7xxx Systems and Security in the Information Age (4.5 units)

MATH7707 Optimisation (4.5 units)

Course Rule Notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

FORM E: NEW CURRICULUM ITEM: New Major, Minor, Honours Program

Complete **FORM B: FULL PROPOSAL** template first and then complete required curriculum item template(s).

1. OVERVIEW

1.1 Implementation year	2021
1.2 Implementation half year	First half year
1.3 Proposed code (EQT use)	MAJ-ADVELECTENG
1.4 Title (150 chars max)	Advanced Electronic Engineering
1.5 Short title (80 chars max)	Advanced Electronic Engineering
1.6 Abbreviated title (30 chars max)	Advanced Electronic Engineering
1.7 Course component type	Major
1.8 Overview (introductory paragraph on Course Rule)	This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in electronic engineering.
1.9 Field of Education (FoE) code and title (refer to Guide) ONE ONLY	031303 Electronic Engineering
1.10 Level of study	Undergraduate
1.11 Unit value	36 units
1.12 Administering college	Science and Engineering
1.13 Teaching Program	Engineering and Design

2. ASSOCIATED COURSES AND COURSE SPECIALISATIONS

List all existing and proposed courses and course specialisations that will include this new major/minor/Honours Program in the Program of Study.

Code	Title
	Bachelor of Engineering (Electrical and Electronic)(Honours)

3. AIMS AND LEARNING OUTCOMES

3.1 **Educational aims** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

The major has been designed to provide graduates with:

- An advanced understand of both the theoretical and the practical aspects of electronic engineering
- An in-depth understanding of the tools and techniques used in electronic engineering
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

3.2 **Learning Outcomes** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

On completion students will be able to :

1. Proficiently use professional skills and knowledge in the systematic development of complex electronic systems
2. Demonstrate a deeper understanding of electronic engineering and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electronic engineering

4. PROGRAM OF STUDY

Please provide proposed Program of Study at the end of this document using the [Program of Study template](#) at the end of this form.

To include this new curriculum item in an existing Course or Course Specialisation, complete a **FORM J: CHANGE CURRICULUM ITEM: Course, Course Specialisation, Course Component** template.

5. THIRD PARTY ARRANGEMENTS (ADD EXTRA LINES AS REQUIRED)

Arrangement type	Third party name	Details
[Select option]		

6. PROFESSIONAL ACCREDITATION AND RECOGNITION

Type	Professional body name	Details	Start date	End date
[Select option]				
[Select option]				

7. SUBMIT TEMPLATES

You have now completed all your sections. Next steps:

1. Make sure you have completed [the Program of Study](#) below.
2. Complete **Form B: Full Proposal template**
3. Complete other Curriculum Item template(s) for any other items to be established/discontinued/changed as part of this proposal including **New or Change Curriculum Item: Course and Course Specialisation template(s)** to include this major/minor/Honours program in a course).
4. Submit **Form B: Full Proposal template** (and associated attachments) and all required **Curriculum Item template(s)** to educational.quality@flinders.edu.au.

8. ADMINISTRATION (EQT USE ONLY)

Proposal bundle reference number	PB45
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9. PROGRAM OF STUDY

☒ Major (36 units) ☐ Minor (18 units) ☐ Honours Program (36 units)

Name of major/minor/honours program

Advanced Electronic Engineering

Program of Study Overview

E.g. To qualify for the Honours Program in Applied Linguistics a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below. Not all topics are necessarily available in a given year.

To qualify for the Major in Advanced Electronic Engineering a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below.

Program of Study structure builder

Core topics		
Code	Title	Units
ENGR2721	Microprocessors	4.5
ENGR3701	Computer Organisation and Design	4.5
ENGR3711	Control Systems	4.5
ENGR3721	Signal Processing	4.5
ENGR3731	Communication Systems	4.5
ENGR7851	Advanced Electronic Design	4.5
Option topics		
Plus 9 units of option topics selected from the following list:		
Code	Title	Units
ENGR7731	Computer Architecture	4.5
ENGR7732	Instrumentation	4.5
ENGR7761	Image Processing	4.5
ENGR7762	Renewable Energy Systems	4.5
ENGR7xxx	Systems and Security in the Information Age	4.5
ENGR7812	Power Electronics	4.5
ENGR7961	Finite Element Methods	4.5
MATH7707	Optimisation	4.5
Micro-credential		

Course Rule notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

10. COURSE RULE (EQT TO DRAFT BASED ON TEMPLATE CONTENT)

Major – Advanced Electronic Engineering

To be read in conjunction with the program of study requirements for the

- Bachelor of Engineering (Electrical and Electronic)(Honours)

Overview

This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in electronic engineering.

Course aims

The major has been designed to provide graduates with:

- An advanced understand of both the theoretical and the practical aspects of electronic engineering
- An in-depth understanding of the tools and techniques used in electronic engineering.
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

Learning outcomes

On completion students will be able to:

1. Proficiently use professional skills and knowledge in the systematic development of complex electronic systems
2. Demonstrate a deeper understanding of electronic engineering and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electronic engineering

Program of study

To qualify for the Major in Advanced Electronic Engineering a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below.

Core – Year 2 topics

4.5 units comprising:

ENGR2721 Microprocessors

Core – Year 3 topics

18 units comprising:

ENGR3701 Computer Organisation and Design

ENGR3711 Control Systems

ENGR3721 Signal Processing

ENGR3731 Communication Systems

Core – Year 4 topics

4.5 units comprising:

ENGR7851 Advanced Electronic Design

Option – Year 4 topics

9 units selected from:

ENGR7731 Computer Architecture

ENGR7732 Instrumentation

ENGR7761 Image Processing

ENGR7762 Renewable Energy Systems

ENGR7812 Power Electronics

ENGR7961 Finite Element Methods

ENGR7xxx Systems and Security in the Information Age

MATH7707 Optimisation

Course Rule Notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

FORM E: NEW CURRICULUM ITEM: New Major, Minor, Honours Program

Complete **FORM B: FULL PROPOSAL** template first and then complete required curriculum item template(s).

1. OVERVIEW

1.1 Implementation year	2021
1.2 Implementation half year	First half year
1.3 Proposed code (EQT use)	MAJ-COMNETSYS
1.4 Title (150 chars max)	Computer and Network Systems
1.5 Short title (80 chars max)	Computer and Network Systems
1.6 Abbreviated title (30 chars max)	Computer and Network Systems
1.7 Course component type	Major
1.8 Overview (introductory paragraph on Course Rule)	This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in computer and network systems engineering.
1.9 Field of Education (FoE) code and title (refer to Guide) ONE ONLY	031305 Computer Engineering
1.10 Level of study	Undergraduate
1.11 Unit value	36 units
1.12 Administering college	Science and Engineering
1.13 Teaching Program	Engineering and Design

2. ASSOCIATED COURSES AND COURSE SPECIALISATIONS

List all existing and proposed courses and course specialisations that will include this new major/minor/Honours Program in the Program of Study.

Code	Title
	Bachelor of Engineering (Electrical and Electronic)(Honours)

3. AIMS AND LEARNING OUTCOMES

3.1 **Educational aims** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

The major has been designed to provide graduates with:

- A strong foundation in both the theoretical and the practical aspects of computer and network systems engineering
- An in-depth understanding of the tools and techniques used in computer and network systems engineering.
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

3.2 **Learning Outcomes** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

On completion students will be able to :

1. Proficiently use professional skills and knowledge in the systematic development of complex computer and network systems
2. Demonstrate a deeper understanding of computer and network systems engineering and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of computer and network systems engineering

4. PROGRAM OF STUDY

Please provide proposed Program of Study at the end of this document using the [Program of Study template](#) at the end of this form.

To include this new curriculum item in an existing Course or Course Specialisation, complete a **FORM J: CHANGE CURRICULUM ITEM: Course, Course Specialisation, Course Component** template.

5. THIRD PARTY ARRANGEMENTS (ADD EXTRA LINES AS REQUIRED)

Arrangement type	Third party name	Details
[Select option]		

6. PROFESSIONAL ACCREDITATION AND RECOGNITION

Type	Professional body name	Details	Start date	End date
[Select option]				
[Select option]				

7. SUBMIT TEMPLATES

You have now completed all your sections. Next steps:

1. Make sure you have completed [the Program of Study](#) below.
2. Complete **Form B: Full Proposal template**
3. Complete other Curriculum Item template(s) for any other items to be established/discontinued/changed as part of this proposal including **New or Change Curriculum Item: Course and Course Specialisation template(s)** to include this major/minor/Honours program in a course).
4. Submit **Form B: Full Proposal template** (and associated attachments) and all required **Curriculum Item template(s)** to educational.quality@flinders.edu.au.

8. ADMINISTRATION (EQT USE ONLY)

Proposal bundle reference number	PB45
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9. PROGRAM OF STUDY

☒ Major (36 units) ☐ Minor (18 units) ☐ Honours Program (36 units)

Name of major/minor/honours program

Computer and Network Systems

Program of Study Overview

E.g. To qualify for the Honours Program in Applied Linguistics a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below. Not all topics are necessarily available in a given year.

To qualify for the Major in Computer and Network Systems a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below.

Program of Study structure builder

Core topics		
Code	Title	Units
ENGR2881	Computer Networks	4.5
COMP3781	Cybersecurity	4.5
ENGR3721	Signal Processing	4.5
ENGR3701	Computer Organisation and Design	4.5
ENGR3821	Network Engineering	4.5
ENGR3731	Communication Systems	4.5
ENGR7731	Computer Architecture	4.5
Option topics		
Plus 4.5 units of option topics selected from the following list:		
Code	Title	Units
ENGR7732	Instrumentation	4.5
ENGR7761	Image Processing	4.5
ENGR7xxx	Systems and Security in the Information Age	4.5
ENGR7812	Power Electronics	4.5
ENGR7851	Advanced Electronic Design	4.5
ENGR7961	Finite Element Methods	4.5
MATH7707	Optimisation	4.5
Micro-credential		

Course Rule notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

10. COURSE RULE (EQT TO DRAFT BASED ON TEMPLATE CONTENT)

Major – Computer and Network Systems

To be read in conjunction with the program of study requirements for the

- Bachelor of Engineering (Electrical and Electronic)(Honours)

Overview

This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in computer and network systems engineering.

Course aims

The major has been designed to provide graduates with:

- A strong foundation in both the theoretical and the practical aspects of computer and network systems engineering
- An in-depth understanding of the tools and techniques used in computer and network systems engineering
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

Learning outcomes

On completion students will be able to:

1. Proficiently use professional skills and knowledge in the systematic development of complex computer and network systems
2. Demonstrate a deeper understanding of computer and network systems engineering and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of computer and network systems engineering

Program of study

To qualify for the Major in Computer and Network Systems, a student must complete 36 units with a grade of P or NGP or better in each topic according to the program of study below.

Core – Year 2 topics

4.5 units comprising:

ENGR2881 Computer Networks (4.5 units)

Core – Year 3 topics

18 units comprising:

COMP3781 Cybersecurity (4.5 units)

ENGR3701 Computer Organisation and Design (4.5 units)

ENGR3721 Signal Processing (4.5 units)

ENGR3731 Communication Systems (4.5 units)

Core – Year 4 topics

9 units comprising:

ENGR3821 Network Engineering (4.5 units)

ENGR7731 Computer Architecture (4.5 units)

Option – Year 4 topics

4.5 units selected from:

ENGR7732 Instrumentation (4.5 units)

ENGR7761 Image Processing (4.5 units)

ENGR7812 Power Electronics (4.5 units)

ENGR7851 Advanced Electronic Design (4.5 units)

ENGR7961 Finite Element Methods (4.5 units)

ENGR7xxx Systems and Security in the Information Age (4.5 units)

MATH7707 Optimisation (4.5 units)

Course Rule Notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

FORM E: NEW CURRICULUM ITEM: New Major, Minor, Honours Program

Complete **FORM B: FULL PROPOSAL** template first and then complete required curriculum item template(s).

1. OVERVIEW

1.1 Implementation year	2021
1.2 Implementation half year	First half year
1.3 Proposed code (EQT use)	MAJ-ELSYSEC
1.4 Title (150 chars max)	Electronics Systems and Security
1.5 Short title (80 chars max)	Electronics Systems and Security
1.6 Abbreviated title (30 chars max)	Electronics Systems & Security
1.7 Course component type	Major
1.8 Overview (introductory paragraph on Course Rule)	This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in electronic systems and security.
1.9 Field of Education (FoE) code and title (refer to Guide) ONE ONLY	031399 Electrical and Electronic Engineering and Technology n.e.c
1.10 Level of study	Undergraduate
1.11 Unit value	36 units
1.12 Administering college	Science and Engineering
1.13 Teaching Program	Engineering and Design

2. ASSOCIATED COURSES AND COURSE SPECIALISATIONS

List all existing and proposed courses and course specialisations that will include this new major/minor/Honours Program in the Program of Study.

Code	Title
	Bachelor of Engineering (Electrical and Electronic)(Honours)

3. AIMS AND LEARNING OUTCOMES

3.1 **Educational aims** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

The major has been designed to provide graduates with:

- A strong foundation in both the theoretical and the practical aspects of electronics systems and security
- An in-depth understanding of the tools and techniques used in electronics systems and security
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

3.2 **Learning Outcomes** - Consult with the [Academic Developer](#) aligned to your College to complete this section.

On completion students will be able to :

1. Proficiently use professional skills and knowledge in the systematic development of complex electronics systems and security
2. Demonstrate a deeper understanding of electronics systems and security and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electronics systems and security

4. PROGRAM OF STUDY

Please provide proposed Program of Study at the end of this document using the [Program of Study template](#) at the end of this form.

To include this new curriculum item in an existing Course or Course Specialisation, complete a **FORM J: CHANGE CURRICULUM ITEM: Course, Course Specialisation, Course Component** template.

5. THIRD PARTY ARRANGEMENTS (ADD EXTRA LINES AS REQUIRED)

Arrangement type	Third party name	Details
[Select option]		

6. PROFESSIONAL ACCREDITATION AND RECOGNITION

Type	Professional body name	Details	Start date	End date
[Select option]				
[Select option]				

7. SUBMIT TEMPLATES

You have now completed all your sections. Next steps:

1. Make sure you have completed [the Program of Study](#) below.
2. Complete **Form B: Full Proposal template**
3. Complete other Curriculum Item template(s) for any other items to be established/discontinued/changed as part of this proposal including **New or Change Curriculum Item: Course and Course Specialisation template(s)** to include this major/minor/Honours program in a course).
4. Submit **Form B: Full Proposal template** (and associated attachments) and all required **Curriculum Item template(s)** to educational.quality@flinders.edu.au.

8. ADMINISTRATION (EQT USE ONLY)

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9. PROGRAM OF STUDY

☒ Major (36 units) ☐ Minor (18 units) ☐ Honours Program (36 units)

Name of major/minor/honours program

Electronic Systems and Security

Program of Study Overview

E.g. To qualify for the Honours Program in Applied Linguistics a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below. Not all topics are necessarily available in a given year.

To qualify for the Major in Electronic Systems and Security a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below.

Program of Study structure builder

Core topics		
Code	Title	Units
ENGR3xxx	Electromagnetic Technologies, Systems and Security	4.5
ENGR2861	Electromagnetics and Electromagnetic Waves	4.5
ENGR3731	Communication Systems	4.5
ENGR3721	Signal Processing	4.5
ENGR7xxx	Systems and Security in the Information Age	4.5
Option topics		
Plus 13.5 units of option topics selected from the following list:		
Code	Title	Units
COMP2712	Heuristic Optimisation	4.5
ENGR7761	Image Processing	4.5
ENGR7762	Renewable Energy Systems	4.5
ENGR7812	Power Electronics	4.5
ENGR7851	Advanced Electronic Design	4.5
ENGR7961	Finite Element Methods	4.5
MATH7707	Optimisation	4.5
Micro-credential		

Course Rule notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

10. COURSE RULE (EQT TO DRAFT BASED ON TEMPLATE CONTENT)

Major – Electronic Systems and Security

To be read in conjunction with the program of study requirements for the

- Bachelor of Engineering (Electrical and Electronic)(Honours)

Overview

This major extends the Bachelor of Engineering (Electrical and Electronic) (Honours) to provide advanced study in electronic systems and security.

Course aims

The major has been designed to provide graduates with:

- A strong foundation in both the theoretical and the practical aspects of electronics systems and security
- An in-depth understanding of the tools and techniques used in electronics systems and security
- An ability to critically analyse and evaluate information and solve problems
- Further skills in their ability to undertake research-oriented and practical projects

Learning outcomes

On completion students will be able to:

1. Proficiently use professional skills and knowledge in the systematic development of complex electronics systems and security
2. Demonstrate a deeper understanding of electronics systems and security and its place in the broader discipline of electrical and electronic engineering
3. Engage in the process of continuing learning needed to retain the necessary level of professional skills and knowledge in the area of electronics systems and security

Program of study

To qualify for the Major in Electronic Systems and Security a student must complete 36 units with a grade of P or NGP or better in each topic, according to the program of study below.

Core – Year 2 topics

4.5 units comprising:

ENGR2861 Electromagnetics and Electromagnetic Waves (4.5 units)

Core – Year 3 topics

13.5 units comprising:

ENGR3721 Signal Processing (4.5 units)

ENGR3731 Communication Systems (4.5 units)

ENGR3xxx Electromagnetic Technologies, Systems and Security (4.5 units)

Option – Year 3 topics

4.5 units selected from:

COMP2712 Heuristic Optimisation (4.5 units)

ENGR7761 Image Processing (4.5 units)

ENGR7762 Renewable Energy Systems (4.5 units)

ENGR7812 Power Electronics (4.5 units)

ENGR7851 Advanced Electronic Design (4.5 units)

ENGR7961 Finite Element Methods (4.5 units)

MATH7707 Optimisation (4.5 units)

Core – Year 4 topics

4.5 units comprising:

ENGR7xxx Systems and Security in the Information Age (4.5 units)

Option – Year 4 topics

9 units selected from:

COMP2712 Heuristic Optimisation (4.5 units)

ENGR7761 Image Processing (4.5 units)

ENGR7762 Renewable Energy Systems (4.5 units)

ENGR7812 Power Electronics (4.5 units)

ENGR7851 Advanced Electronic Design (4.5 units)

ENGR7961 Finite Element Methods (4.5 units)

MATH7707 Optimisation (4.5 units)

Course Rule Notes

1. Students should complete all topics in their selected major. In exceptional circumstances, students may apply to the course coordinator to complete alternative topics where such a selection has a coherent engineering rationale.
2. With the permission of the Course Coordinator eligible students may enrol in Advanced Studies for Engineering.

FORM J: CHANGE/DISCONTINUE CURRICULUM ITEM: All items except topics

Course, Course Specialisation or Major, Minor, Honours Program, Micro-credential

Complete FORM B: FULL PROPOSAL template first and then complete required curriculum item template(s).

1. DETAILS

1.1 Curriculum item:	Code:	BENGELH BENGHE	Name:	Bachelor of Engineering (Electrical)(Honours) Bachelor of Engineering (Electronics)(Honours)
1.2 Change or Discontinue?	Discontinue			
1.3 Implementation year	2021			
1.4 Implementation half year	First half year			

2. COURSE RULE & PROGRAM OF STUDY CHANGES

Copy and paste the entire course rule from [HERE](#) and use revision tools to clearly mark up all proposed changes.

PASTE HERE

3. THIRD-PARTY ARRANGEMENTS

Arrangement type	Status	Third-party name	Arrangements
[Select option]	[Select option]		

4. OTHER CHANGES

4.1 Add/remove location. Provide details.	
4.2 Add/remove mode of delivery. Provide details.	
4.3 Other:	

5. ASSOCIATIONS WITH OTHER CURRICULUM ITEMS

This information ensures consideration of potential impacts to other curriculum items associated with the item being changed.

If changing a Course or Course specialisation, combined degree or double degree list all courses that are associated with this course and select the association type.

What type of association does the listed course have with the course being changed?	Course code (if known)	Course name
[Select option]		
[Select option]		
[Select option]		

If changing a Major, Minor, Honours Program or Micro-credential list all the courses that currently include this curriculum item

Course code (if known)	Course name

6. SUBMIT TEMPLATES

You have now completed all your sections. Next steps:

1. Complete **Form B: Full Proposal template**
2. Complete separate **Curriculum Item templates** for any other items to be established/discontinued/changed as part of this proposal
3. Submit **Form B: Full Proposal** with all required **Curriculum Item template(s)** to educational.quality@flinders.edu.au.

7. ADMIN (EQ USE ONLY)

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FORM J: CHANGE/DISCONTINUE CURRICULUM ITEM: All items except topics

Course, Course Specialisation or Major, Minor, Honours Program, Micro-credential

Complete FORM B: FULL PROPOSAL template first and then complete required curriculum item template(s).

1. DETAILS

1.1 Curriculum item:	Code: BENGNSH	Name: Bachelor of Engineering (Computer and Network Systems) (Honours)
1.2 Change or Discontinue?	Discontinue	
1.3 Implementation year	2022	
1.4 Implementation half year	First half year	

2. COURSE RULE & PROGRAM OF STUDY CHANGES

Copy and paste the entire course rule from [HERE](#) and use revision tools to clearly mark up all proposed changes.

N/A

3. THIRD-PARTY ARRANGEMENTS

Arrangement type	Status	Third-party name	Arrangements
[Select option]	[Select option]		

4. OTHER CHANGES

4.1 Add/remove location. Provide details.	
4.2 Add/remove mode of delivery. Provide details.	
4.3 Other:	

5. ASSOCIATIONS WITH OTHER CURRICULUM ITEMS

This information ensures consideration of potential impacts to other curriculum items associated with the item being changed.

If changing a Course or Course specialisation, combined degree or double degree list all courses that are associated with this course and select the association type.

What type of association does the listed course have with the course being changed?	Course code (if known)	Course name
[Select option]		

If changing a Major, Minor, Honours Program or Micro-credential list all the courses that currently include this curriculum item

Course code (if known)	Course name

6. SUBMIT TEMPLATES

You have now completed all your sections. Next steps:

1. Complete **Form B: Full Proposal template**
2. Complete separate **Curriculum Item templates** for any other items to be established/discontinued/changed as part of this proposal
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7. ADMIN (EQ USE ONLY)

Proposal bundle reference number:

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FORM K: CHANGE CURRICULUM ITEM: Topic

Complete **FORM B: FULL PROPOSAL** template first and then complete required curriculum item template(s).

To change Mode of Delivery or Topic Availability or Tuition Pattern - complete **FORM L: CHANGE TOPIC AVAILABILITIES** template

1. DETAILS

1.1 Topic	Code	ENGR2881	Title	Computer Networks
1.2 Type of change	Change			
1.3 Implementation year	2021			
1.4 Implementation half year	First half year			

2. CHANGES TO PUBLISHED INFORMATION - SKIP IF DISCONTINUING TOPIC

- Copy and paste the relevant published topic information from [HERE](#) and use revision tools to clearly mark up all proposed changes.
- If changing educational aims or learning outcomes, consult with the [Academic Developer](#) assigned to your College.
- If changing **existing requisites** then please track your changes in the topic information below.
- If you are adding **new requisites** to a topic that currently has none, please add your requisites in Section 3 below.

PASTE HERE

3. IF ADDING/CHANGING REQUISITES

Requisite Type and Definition	Current	Proposed
PRE-REQUISITES Are there criteria that must be met <u>before</u> a student can enrol in this topic e.g. - Topic A must be completed before enrolling in Topic B - Students must be admitted to Course XYZ to enrol in Topic A - X number of units must be completed before enrolling in Topic A* <i>*If proposing that "x number of units" must be completed prior to enrolment", please be specific i.e. from a specific degree, component, topic prefix, any topic in the university, a particular year level etc.</i>	1 1 of ENGR1762, COMP1001, COMP1002 2 COMP1102 - Computer Programming 1 3 ^ COMP2711 - Computer Programming 2 4 Admission into BENG CNSH-Bachelor of Engineering (Computer and Network Systems) (Honours) Must Satisfy: ((1 and 2) or (3 and 4))	1 1 of ENGR1762, COMP1001, COMP1002 2 COMP1102 - Computer Programming 1 3 ^ COMP2711 - Computer Programming 2 4 Admission into Bachelor of Engineering (Computer and Network Systems) (Honours) <u>4a Admission into xxxx – Bachelor of Engineering (Electrical and Electronic)(Honours)</u> Must Satisfy: ((1 and 2) or (3 and (4 <u>or</u> 4a)))
CONCURRENT PRE-REQUISITES Are there criteria that can be met either before a student can enrol in the topic or can also be met concurrently e.g. - Topic A must be completed before enrolling in Topic B OR - If Topic A has not been completed, then it may be studied at the same time as Topic B For a student to meet the prerequisite of studying topics concurrently, the enrolled topics <u>must have common study dates</u> (i.e. have the exact same study dates <u>or</u> the study dates for one topic must be fully contained within the study dates of the other topic).		
CO-REQUISITE TOPICS Are there criteria that <u>must</u> be met at the same time as enrolment in another topic e.g.		

Requisite Type and Definition	Current	Proposed
Topic A must be studied at the same time as Topic B so if student passes Topic A and fails Topic B, they will <u>not be</u> able to enrol in Topic B In order for topics to be studied at the same time, the co-requisite topic availabilities <u>must have some part of the study period in common</u> (dates must overlap).		
ANTI-REQUISITE TOPICS Is there criteria that precludes enrolment in a topic, irrespective of course e.g. Student may not enrol in Topic A if they have already completed Topic B. Generally, if topic B is recorded as an anti-requisite for topic A, then topic A will be recorded as an anti-requisite for topic B.		

4. CHANGES TO ASSESSMENT

Current assessment details

Type	Brief description	% of total marks	Assessed Topic Learning Outcomes	Hurdle task?
<i>e.g. Assignment</i>	<i>Individual essay. 2,000 words</i>	20%	1, 2, 4	No
<i>e.g. Case Study</i>	1. Group Case Study Report (30%) 2. Presentation (10%)	40%	3,4,5,6	Yes
[Select option]				[Yes/No]
[Select option]				[Yes/No]
[Select option]				[Yes/No]
[Select option]				[Yes/No]
[Select option]				[Yes/No]

Criteria for successful completion of the topic (from the SAMs):

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Proposed new assessment details

Type	Brief description	% of total marks	Assessed Topic Learning Outcomes	Hurdle task?
[Select option]				[Yes/No]
[Select option]				[Yes/No]
[Select option]				[Yes/No]

* The University's revised assessment policy (under development) will be recommending no more than 3 assessment items per topic. Each item may include sub-components.

Criteria for successful completion of the topic (to be included in SAMs)

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5. THIRD PARTY ARRANGEMENT CHANGES

Type	Status	Name of third-party	Details
[Select option]	[Select option]		

6. OTHER CHANGES

6.1 Field of Education (FOE)	
6.2 Add/remove location. Provide details.	
6.3 Grading type. Provide details.	
6.4 Other	

7. IF CHANGING TOPIC NAME OR REQUISITES (SKIP IF NOT APPLICABLE)

List all the known curriculum items that include this topic in their Program of Study:

Code (if known)	Title of Course, Course Specialisation, Major, Minor, Honours Program

8. SUBMIT TEMPLATES

You have now completed your sections. Next steps:

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9. ADMINISTRATION (EQT USE ONLY)

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