

Graduate Certificate in Sciences (Defence Signal and Information Processing)

1 Duration of program

Except with the permission of the Faculty, the Graduate Certificate in Sciences (Defence Signal and Information Processing) shall be completed in a minimum of one semester or a maximum of four semesters.

2 Admission

2.1 Except as provided for in 2.2 below an applicant for admission to the program of study for the Graduate Certificate in Sciences (Defence Signal and Information Processing) shall have:

a qualified for an Honours award from the University of Adelaide in Mathematics, Physics or in Electrical and Electronic Engineering; or a Bachelor award that includes a major in either Mathematics or Physics, or for a degree accepted for the purpose by the Faculty as equivalent

and

b some experience in the Defence industry.

2.2 The Faculty may, in exceptional circumstances and subject to such conditions (if any) as it may see fit to impose in each case, accept as a candidate for the Graduate Certificate in Sciences (Defence Signal and Information Processing) a person who does not qualify for admission to the program under rule 2.1 above but who has given evidence satisfactory to the Faculty of fitness to undertake work for the degree.

2.3 Status, exemption and credit transfer

2.3.1 No candidate will be permitted to count towards an award any two courses which, in the opinion of the Faculty, contains a substantial amount of the same material; furthermore no course or portion of a course may be counted twice towards an award.

2.3.2 Candidates may present courses offered by other universities from a register of approved courses maintained by the Board of Studies, but the total value of these external courses must not exceed 6 units (including the core course).

3 Assessment and examination

Academic progress

If in the opinion of the Board of Studies a candidate for the degree is not making satisfactory progress, the Faculty may terminate the candidature.

4 Qualification requirements

To qualify for the Graduate Certificate in Sciences (Defence Signal and Information Processing) a candidate shall satisfactorily complete courses to the value of 12, including:

- a a core course to the value of 3 units from Group A
- b courses to the value of 6 units taken from those listed under Group B
- c a course to the value of 3 units selected from Group B or Group C.

4.2 Academic program

4.2.1 Group A: Core course

This course is offered by the University of South Australia

Systems Engineering for Complex Problem Solving3

Group B:

DEFSCI 7010 Beamforming and Array Processing3

DEFSCI 7011 Adaptive Signal Processing3

DEFSCI 7012 Multisensor Data Fusion3

DEFSCI 7029 Kalman Filtering and Tracking3

DEFSCI 7035 Detection, Estimation and Classification3

DEFSCI 7036 Introduction to Discrete Linear Systems3

DEFSCI 7041 Image Sensors & Processing3

DEFSCI 7211 Radar Principles & Systems: An Introduction3

Group C:

DEFSCI 7015 Mathematical Coding & Cryptology3

DEFSCI 7024 Specialised Studies A3

DEFSCI 7025 Specialised Studies B3

DEFSCI 7026 Specialised Studies C3

DEFSCI 7030 Error Control Coding3

DEFSCI 7031 Mobile Communications3

DEFSCI 7037 Signal Synthesis and Analysis*	3
DEFSCI 7038 Specialised Studies D	3
DEFSCI 7039 Satellite Communications	3
DEFSCI 7060 Computer Vision	3

*DEFSCI 7037 cannot be presented with DEFSCI 7063

Specialised Studies may consist of directed readings or approved short courses as approved by the Faculty. The content and assessment of these courses will be determined in each case by the academic coordinator of the course in consultation with the student's supervisor and the student.

4.2.2 Students who are required to undertake preliminary work will normally enrol in one of the following courses:

SIP 7027A/B Qualifying Studies in Mathematics Part 1 & 2	12
SIP 7028 Qualifying Studies in Mathematics	12

On satisfactory completion of this work the student will proceed to study as outlined in 4.1 above.

4.2.3 The availability of all courses is conditional on the availability of staff and facilities, and sufficient enrolments.

4.3 Unacceptable combination of courses

No candidate will be permitted to count towards an award any course, together with any other course, which, in the opinion of Board of Studies, contains a substantial amount of the same material; and no course or portion of a course may be counted twice towards an award.

4.4 Graduation

Subject to Chapter 89 of the Statutes, candidates who have satisfied the requirements for any award of the University shall be admitted to that award.

5 Special circumstances

When in the opinion of the Board of Studies special circumstances exist, the Board in each case may vary any of the provisions of the Academic Program Rules for any particular award.