

# Graduate Certificate in Sciences (Defence)

## 1 Duration of program

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

## 2 Admission requirements

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) shall:

a have qualified for a degree from the University of Adelaide in a discipline related to the proposed field of study or for a degree of another institution accepted for the purpose by the Faculty as equivalent

*and*

b have had at least 18 months' employment experience in a defence-related 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), a person who does not qualify for admission to the program under rule 2.1 above, but has given evidence satisfactory to the Faculty of fitness to undertake work for the degree.

2.3 Status, exemption and credit transfer

A candidate may not present for credit towards the award any course which has been presented as part of the requirements for any other award of this University or other institution, or which in the opinion of the Faculty is substantially similar to such course.

## 3 Assessment and examinations

3.1 There shall be four classifications of pass in any course for the Graduate Certificate in Sciences (Defence): Pass with High Distinction, Pass with Distinction, Pass with Credit, and Pass. Courses passed with a conceded pass classification may not be counted towards the requirements for the award of Graduate Diploma in Sciences (Defence).

3.2 A candidate shall not be eligible to attend for examination unless any prescribed coursework has been completed to the satisfaction of the teaching staff concerned.

3.3 A candidate who fails in a course and desires to take the course again shall again attend the course and satisfactorily do such written and practical work as the teaching staff concerned may prescribe, unless specifically exempted therefrom after written application to the Faculty for such exemption.

3.4 A candidate who has twice failed any course may not enrol for that course again except by special permission of the Faculty and then only under such conditions as may be prescribed.

3.5 For the purpose of this Rule, a candidate who is refused permission to sit for the assessment for a given course, or who without a reason accepted by the Faculty fails to attend all or part of the assessment, shall be deemed to have failed that course.

## 4 Qualification requirements

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

a a core course to the value of 3 units

b courses to the value of 9 units taken from those listed under Group B or 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 Solving .....	3
Group B: Defence technology stream	
DEFSCI 7005 Principles of Control Systems .....	3
DEFSCI 7006 Antennas and Propagation .....	3
DEFSCI 7007 Principles of RF Engineering .....	3
DEFSCI 7010 Beamforming and Array Processing .....	3
DEFSCI 7011 Adaptive Signal Processing .....	3
DEFSCI 7029 Kalman Filtering and Tracking .....	3
DEFSCI 7035 Detection, Estimation and Classification .....	3
DEFSCI 7041 Image Sensors and Processing .....	3
DEFSCI 7070 Introduction to Computational Electromagnetics .....	3
DEFSCI 7203 Photonics IV-D .....	3
DEFSCI 7204 Photonics III-D .....	3
DEFSCI 7205 Experimental Methods IVD .....	3

DEFSCI 7207 Sonar Sensors and System .....	3
DEFSCI 7211 Radar Principles & Systems: An Introduction .....	3
DEFSCI 7212 Introduction to Electronic Defence Systems .....	3
DEFSCI 7534 Computational Physics .....	3

Note: Special conditions apply to choosing courses with a Photonics theme. There is a preferred sequence within these courses - please refer to Course Planner.

Group C: Information and communication technology stream

DEFSCI 7000 Cognitive Science: Minds, Brains and Computers .....	3
DEFSCI 7002 Distributed Systems .....	3
DEFSCI 7003 Artificial Intelligence .....	3
DEFSCI 7019 Statistics in Engineering .....	3
DEFSCI 7028 Information Theory .....	3
DEFSCI 7035 Detection, Estimation and Classification .....	3
DEFSCI 7042 Computer Networks and Applications .....	3
DEFSCI 7044 Adaptive Business Intelligence .....	3
DEFSCI 7060 Computer Vision .....	3
DEFSCI 7061 Evolutionary Computation .....	3
DEFSCI 7070 Introduction to Computational Electromagnetics .....	3
DEFSCI 7092 Mobile and Wireless Networks .....	3
DEFSCI 7336 Human Factors .....	3
DEFSCI 7337 Foundations of Perception and Cognition.....	3
DEFSCI 7338 Perception and Cognition .....	3

4.2.2 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 courses). Other relevant courses may be presented towards the requirements of the Graduate Certificate in Sciences (Defence), with the approval of the Faculty.

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 Council, on the recommendation of the Board in each case, may vary any of the provisions of the Academic Program Rules for any particular award.