

Master of Sciences (Defence)

These Program Rules should be read in conjunction with the University's policies (<http://www.adelaide.edu.au/policies>).

1 Duration

Except with the permission of the Faculty, the Master of Sciences (Defence) shall be completed in a minimum of three semesters or a maximum of twelve 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 Master of Sciences (Defence) shall have:

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

and

b had at least 18 months employment experience in a defence-related industry

or

c qualified for a Graduate Certificate or Graduate Diploma in Sciences (Defence).

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 Master of 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

2.3.1 A candidate may not present for credit towards the degree 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. However, candidates may, on written application to the Faculty, be granted permission to substitute core courses for an alternative course.

2.3.2 A candidate who has passed courses offered by other universities from a register of approved courses maintained by the Board of Studies, may, on written application to the Faculty, be granted status as the Faculty shall determine, to a maximum aggregate value of twelve (12) units.

2.4 Articulation with other awards

2.4.1 A candidate who has been enrolled for the Graduate Certificate or Graduate Diploma in Sciences (Defence) at the University of Adelaide and who has not been awarded the Graduate Certificate or Graduate Diploma shall, on written application, be permitted to transfer all equivalent courses towards the Masters degree.

3 Assessment and examinations

3.1 There shall be four classifications of pass in any course for the Master of 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 degree of Master of 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 there from 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 Master of Sciences (Defence), a candidate shall satisfactorily complete courses to the value of 36 units including:

a core courses to the value of 6 units from Group A

b courses to the value of 18 units taken from those listed under Group B or C

c a Research Project to the value of 12 units.

4.2 Academic program

4.2.1 Group A: Core courses

Both of these courses are offered by the University of South Australia:

Research Methods in a Multidisciplinary Environment	3
Systems Engineering for Complex Problem Solving	3
Group B: Defence technology stream	
ELEC ENG 7082 Principles of Control Systems	3
ELEC ENG 7055 Antennas and Propagation	3
ELEC ENG 7033 Principles of RF Engineering.....	3
ELEC ENG 7017 Beamforming and Array Processing	3
ELEC ENG 7015 Adaptive Signal Processing.....	3
ELEC ENG 7002 Kalman Filtering and Tracking.....	3
ELEC ENG 7071 Detection, Estimation and Classification	3
ELEC ENG 7060 Image Sensors and Processing	3
ELEC ENG 7070 Electromagnetic Simulations.....	3
PHYSICS 7010 Non-Linear Optics	3
PHYSICS 7540 Optics and Photonics	3
PHYSICS 7007 Fourier Techniques and Applications.....	3
ELEC ENG 7065 Sonar Sensors and Systems	3
ELEC ENG 7059 Radar Principles & Systems: An Introduction	3
ELEC ENG 7001 Introduction to Electronic Defence Systems.....	3
PHYSICS 7534 Computational Physics	3

Note: special conditions apply to choosing courses with a Photonics theme. There is a preferred sequence within these courses, and candidates should seek guidance on their enrolment pattern. Electromagnetics III contains material that is assumed knowledge in the remaining courses, and should be taken by candidates without this specialist undergraduate Physics background. Further Photonics options may become available.

Group C: Information and communication technology stream

DEFSCI 7000 Cognitive Science: Minds, Brains and Computers	3
COMP SCI 7076 Distributed Systems	3
COMP SCI 7059 Artificial Intelligence	3
STATS 7053 Statistics in Engineering3	
ELEC ENG 7071 Detection, Estimation and Classification	3
COMP SCI 7039 Computer Networks and Applications	3
COMP SCI 7005 Adaptive Business Intelligence.....	3
COMP SCI 7022 Computer Vision	3
COMP SCI 7093 Evolutionary Computation.....	3
COMP SCI 7092 Mobile and Wireless Networks.....	3
ELEC ENG 7070 Electromagnetic Simulations.....	3
PSYCHOL 7336 Human Factors	3
PSYCHOL 6022 Foundations of Perception and Cognition	3
PSYCHOL 6027 Perception and Cognition.....	3

Research Project

DEFSCI 7016 A/B Master of Sciences (Defence) Research Project.....	12
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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 12 units (including the core courses in Group A). Other relevant courses may be presented towards the requirements of the Master of Sciences (Defence) with the approval of the Faculty.

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

4.3 Unacceptable combinations of courses

No candidate will be permitted to count towards an award any course, together with any other course, which, in the opinion of the Committee, 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.