

## DOUBLE PROGRAM

### B.E.(Aerospace)/B.Ma.&Comp.Sc with Comp.Sc Focus. Academic Plan 2009

#### Year 1 – 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	COMP SCI	1008	Computer Science IA	3.0
Sem 1	MECH ENG	1102	Intro to Aerospace Engineering	3.0
Sem 1	MATHS	1011	Mathematics IA * <i>or</i>	
Sem 1	MATHS	1013	Mathematics IMA *	3.0
Sem 1	C&ENVENG	1010	Engineering Mechanics - Statics	3.0
				<b>12.0</b>
Sem 2	COMP SCI	1009	Computer Science IB	3.0
Sem 2	MECH ENG	1007	Engineering Mechanics - Dynamics	3.0
Sem 2	MECH ENG	1006	Design Graphics & Communication	3.0
Sem 2	MATHS	1012	Mathematics IB * <i>or</i>	
Sem 2	MATHS	1011	Mathematics IA *	3.0
				<b>12.0</b>

\* Students who have undertaken SACE Stage 2 Specialist Maths will be required to enrol in Mathematics IA followed by Mathematics IB.

\* Students who have not taken SACE Stage 2 Specialist Maths will be required to enrol in Mathematics IMA followed by Mathematics IA and Mathematics IB. It is strongly recommended that students should enrol in Mathematics IB in the following summer semester to complete the requirements at Level 1. The satisfactory completion of Mathematics IMA is in addition to the normal requirements of the B.E. Plan but a requirement for students who do not have SACE Stage 2 Specialist Maths. Enrolment in summer will enable students to complete the program in the minimum amount of time.

#### Year 2 - 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	MECH ENG	2100	Design Practice	3.0
Sem 1	MATHS	2201	Engineering Maths I	3.0
Sem 1	MECH ENG	2021	Thermo-Fluids I	3.0
Sem 1	ELEC ENG	1009	Electrical and Electronic Engineering IA	3.0
Sem 1	MECH ENG	2501	Mech Eng Level 2 Prac	
				<b>12.0</b>
Sem 2	MECH ENG	2019	Dynamics and Control I	3.0
Sem 2	MATHS	2202	Engineering Maths II	3.0
Sem 2	MECH ENG	2002	Stress Analysis and Design	3.0
Sem 2	CHEM ENG	1009	Materials I	3.0
Sem 2	MECH ENG	2502	Mech Eng Level 2 Prac	
				<b>12.0</b>

#### Year 3 – 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	MECH ENG	3026	Aerospace Materials and Structures	3.0
Sem 1	COMP SCI	2000	Computer Systems	3.0
Sem 1	COMP SCI	2004	Data Structures and Algorithms	3.0
Sem 1	MECH ENG	3100	Aeronautical Eng	3.0
Sem 1	MECH ENG	3501	Mech Eng Level 3 Prac	
				<b>12.0</b>
Sem 2	MECH ENG	3027	Engineering Systems Design & Communication	3.0
Sem 2	MECH ENG	3028	Dynamics and Control II	3.0
Sem 2	MECH ENG	2101	Mechatronics IM (includes Workshop Practice)	3.0
Sem 2	MECH ENG	3104	Space Vehicle Design	3.0
Sem 2	MECH ENG	3502	Mech Eng Level 3 Prac	
				<b>12.0</b>

## B.E.(Aerospace)/BMa.&Comp.Sc with CompSc Focus. Academic Plan 2009

### Year 4 – 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	MECH ENG	3102	Heat Transfer & Thermodynamics	3.0
Sem 2	MECH ENG	3101	Applied Aerodynamics	3.0
Level III Maths & Computer Science courses (this is a focus not a major sequence but with a slight overload a major may be obtained. See the Program Rules or Advisory Notes below for a major sequence in Computer Science or Faculty Office Program Advisers.				<b>18.0</b>

### Year 5 - 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	MECH ENG	4129A	Aerospace Honours Project Level IV Part 1 <i>or</i> *	<b>12.0</b>
Sem 1	MECH ENG	4128A	Aerospace Design Project Level IV Part 1 *	
Sem 1	MECH ENG	4106	Aerospace Propulsion	
Sem 1	MECH ENG	4108	Aircraft Design	
Sem 1	MECH ENG	3105	Sustainability & the Environment	
Sem 1	MECH ENG	4501	Mech Eng Level 4 Prac	
Sem 2	MECH ENG	4129B	Aerospace Honours Project Level IV Part 2 <i>or</i> *	<b>9.0</b>
Sem 2	MECH ENG	4128B	Aerospace Design Project Level IV Part 2 *	
Sem 2	MECH ENG	4100	Advanced Topics in Aerospace Engineering	
Sem 2	MECH ENG	4116	Engineering Management & Quality Systems	
Sem 2	MECH ENG	4502	Mech Eng Level 4 Prac	
Mechanical Elective courses to the value of at least 3 units				

\* Students accepted into the Honours stream will take Aerospace Honours Project Level IV and other students will take Aerospace Design Project Level IV.

### ELECTIVES \*

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	MECH ENG	4118	Finite Element Analysis of Structures	3.0
Sem 1	MECH ENG	4111	CFD for Engineering Applications	3.0
Sem 2	MECH ENG	4104	Advanced Topics in Fluid Mechanics	3.0
Sem 2	MECH ENG	4107	Airconditioning	3.0
Sem 2	MECH ENG	4122	Mechanical Signature Analysis	3.0
Sem 2	MECH ENG	4120	Fracture Mechanics	3.0
Sem 2	MECH ENG	4121	Materials Selection & Failure Analysis – Not offered in 2009	3.0

\* Not all electives are offered each year. Information as to which courses are to be offered in a given year will be available at the time of enrolment. With the approval of the Head of the School of Mechanical Engineering, courses offered by other schools within the University may be included in the selection of electives. Of the four electives chosen, three must be those offered by the School of Mechanical Engineering.

**Note pre-requisites, co-requisites or restrictions may be placed on courses (refer to On-line Course Planner)**

Continuing students should check the rules for the single program at <http://www.adelaide.edu.au/calendar/ug/eng/> The double program of B.E.(Aerospace) and B. Mathematical and Computer Sciences requires students to pass all coursework (96 units) relating to the single program of B.E.(Aerospace) and a further 24 new units of Mathematics and Computer Science coursework. A Computer Science focus requires students to present Computer Systems and Data Structures and Algorithms at Level 2 and a further 18 units of Level 3 Maths and Computer Science coursework that may contain Computer Science coursework. To major in Computer Science students must present another Level 2 Computer Science course which is 3 units surplus to this program and 12 of the 18 units at Level 3 must contain Computer Science courses, that includes COMPSCI 3006 Software Engineering and Project. A major is not a requirement of the Maths and Computer Science program but students may wish to undertake a major.

Students with questions relating to the requirements listed above are encouraged to seek program advice from the Engineering, Computer and Mathematical Sciences Faculty Office ([ecms\\_office@adelaide.edu.au](mailto:ecms_office@adelaide.edu.au))