

## DOUBLE PROGRAM

### B.E.(Aerospace)/B.Ma.&Comp.Sc. with Mathematics Focus Academic Plan 2008

#### Year 1 - 24 units

<i>Term</i>	<i>Subject Area</i>	<i>Catalogue Number</i>	<i>Course Description</i>	<i>Units</i>
Sem 1	ELEC ENG	1009	Electrical and Electronic Engineering IA	3.0
Sem 1	CHEM ENG	1008	Engineering Computing	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	MECH ENG	1006	Design Graphics & Communication M	3.0
Sem 2	MECH ENG	1007	Engineering Mechanics - Dynamics	3.0
Sem 2	CHEM ENG	1009	Materials I	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 summer semester 2009 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	2018	Design Practice	4.0
Sem 1	APP MTH	2000	Differential Equations and Fourier Series	2.0
Sem 1	MECH ENG	2020	Materials and Manufacturing	3.0
Sem 1	MECH ENG	2021	Thermo-Fluids I	3.0
				<b>12.0</b>
Sem 2	MECH ENG	2019	Dynamics and Control I	3.0
Sem 2	MECH ENG	2011	Mechatronics IM	2.0
Sem 2	APP MTH	2009	Numerical Analysis and Probability Statistics	2.0
Sem 2	MECH ENG	2002	Stress Analysis and Design	3.0
Sem 2	APP MTH	2002	Vector Analysis and Complex Analysis	2.0
				<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	MECH ENG	3017	Sustainability & the Environment	2.0
Sem 1	MECH ENG	3025	Space Vehicle Design	2.0
Sem 1	MECH ENG	3031	Thermo-Fluids II	3.0
				<b>10.0</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	PHYSICS	2010	Space Science and Astrophysics II	4.0
				<b>10.0</b>
Level II or III Maths and Computer Science courses				4.0

## B.E.(Aerospace)/BMa.&Comp.Sc. with Mathematics Focus Academic Plan 2008

### 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	3020	Heat Transfer	2.0
				<b>2.0</b>
Sem 2	MECH ENG	3016	Aeronautical Engineering	2.0
				<b>2.0</b>
			Level III Maths and Computer Science courses	20.0

### 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	4035A	Aerospace Honours Project Level IV Part 1 <i>or</i> *	
Sem 1	MECH ENG	4051A	Aerospace Design Project Level IV Part 1 *	4.0
Sem 1	MECH ENG	4036	Aerospace Propulsion I	2.0
Sem 1	MECH ENG	4038	Engineering Management and Professional Practice	2.0
Sem 1	MECH ENG	4040	High-Speed Aerodynamics	2.0
Sem 1	MECH ENG	4062	Aircraft Design	2.0
				<b>12.0</b>
Sem 2	MECH ENG	4063	Advanced Topics in Aerospace Engineering	2.0
Sem 2	MECH ENG	4035B	Aerospace Honours Project Level IV Part 2 <i>or</i> *	
Sem 2	MECH ENG	4051B	Aerospace Design Project Level IV Part 2 *	4.0
				<b>6.0</b>
			Elective courses to the value of at least 6 units	6.0

\* 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	4011	Advanced Automatic Control (aerospace)	2.0
Sem 1	MECH ENG	4020	Advanced Vibrations (aerospace)	2.0
Sem 1	MECH ENG	4002	Combustion Technology and Emissions Control	2.0
Sem 1	APP MTH	4007	Computational Fluid Dynamics (Engineering) **	2.0
Sem 1	MECH ENG	4004	Engineering Acoustics	2.0
Sem 1	MECH ENG	4027	Robotics M	2.0
Sem 1	MECH ENG	4025	Topics in Welded Structures – Not offered in 2008	2.0
Sem 1	MECH ENG	4059	Finite Element Analysis of Structures	2.0
Sem 1	MECH ENG	4046	CFD for Engineering Applications	2.0
Sem 2	MECH ENG	4023	Advanced Topics in Fluid Mechanics	2.0
Sem 2	MECH ENG	4037	Aerospace Propulsion II	2.0
Sem 2	MECH ENG	4013	Air Conditioning	2.0
Sem 2	MECH ENG	4033	Mechanical Signature Analysis	2.0
Sem 2	MECH ENG	4003	Fracture Mechanics	2.0
Sem 2	MECH ENG	4024	Materials Selection & Failure Analysis	2.0
Sem 2	APP MTH	4043	Transform Methods and Signal Processing **	2.0
Sem 2	MECH ENG	4026	Environmental and Architectural Acoustics	2.0
Sem 2	MECH ENG	4057	Biomechanical Engineering	2.0
Sem 2	APP MTH	4003	Aerodynamics	2.0
Sem 2	MECH ENG	4061	Corrosion: Principles and Prevention	2.0

\* 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.

\*\* Not offered by the School of Mechanical Engineering

**Note pre-requisites, co-requisites or restrictions may be placed on courses (refer to 2008 Calendar or 2008 On-line Course Planner)**