

Programme:	MEng Aero & Astro - 3825			
Term:	2018-2019 Academic Session (201819)			
Area title:	5416-3 - Semester Abroad: S1 Part 3			
<b>Compulsory Modules</b>				<b>Taken when?</b>
<b>You must complete the following modules:</b>				
Module	Module Title	Credit	Core?	Semester/Term
FEEG 3003	Individual Project	30	Yes	Full Academic Year
FEEG 3005	Semester Abroad: Option 1 S1	60	No	Semester 1
<b>Optional Modules</b>				
<b>You must choose from the following modules:</b>				
Module		Credit	Semester/Term	
<b>Rule RULE P3 R1</b>				
	<b>In liaison with the lead for Semester Abroad all students must take, either here or abroad, the following modules (or their equivalents at the other institution)</b>			
SESA 3026	Aircraft Structural Design	15	Semester 2	
SESA 3029	Aerothermodynamics	15	Semester 1	
SESA 3030	Aerospace Control Design	15	Semester 1	
SESA 3040	Introduction to Aircraft Design	15	Semester 2	
<b>Rule RULE P3 R2</b>				
	<b>Select</b>			
	<b>Instead of SESA3040 students may take, either here or abroad, the following modules (or equivalents at the other institution)</b>			
SESA 3037	Concurrent Spacecraft Design	15	Semester 2	
SESA 3041	Spacecraft Systems Engineering and Design	15	Semester 1	
<b>Rule RULE P3 R3</b>				
	<b>Select</b>			
	<b>For each module equivalent to SESA3026, SESA3037 or SESA3040 taken abroad or deferred to Part 4, a theme specific module may be chosen from the list below:</b>			
FEEG 3011	Introduction to Turbulence and Mixing	15	Semester 2	
MANG 3049	Accounting and Finance for Engineers	15	Semester 2	
SESA 3033	Wing Aerodynamics	15	Semester 2	
SESM 3028	Biomaterials	15	Semester 2	
SESM 3029	Engineering Design with Management	15	Semester 2	
SESM 3032	Heat Transfer and Applications	15	Semester 2	

<b>Programme:</b>	MEng Aero & Astro - 3825			
<b>Term:</b>	2017-2018 Academic Session (201718)			
<b>Area title:</b>	5416-4 - Semester Abroad: S1 Part 4			
<b>Compulsory Modules</b>				
<b>You must complete the following modules:</b>				
Module	Module Title	Credit	Core?	Semester/Term
FEEG 6013	Group Design Project	45	Yes	Full Academic Year
<b>Optional Modules</b>				
<b>You must choose from the following modules:</b>				
<b>Module</b>		<b>Credit</b>	<b>Semester/Term</b>	
<b>Rule 1</b>				
	<b>Optional Modules</b>			
	If the module requirements shown for Part 3 were not met in Part 3 up to 30 CATS credits to be taken in Part 4 from the level 6 modules in liaison with the lead for Semester Abroad:			
	<b>Select 0 to 30 credits from this group:</b>			
SESA 3026	Aircraft Structural Design	15	Semester 2	
SESA 3029	Aerothermodynamics	15	Semester 1	
SESA 3030	Aerospace Control Design	15	Semester 1	
SESA 3037	Concurrent Spacecraft Design	15	Semester 2	
SESA 3040	Introduction to Aircraft Design	15	Semester 2	
SESA 3041	Spacecraft Systems Engineering and Design	15	Semester 1	
<b>Rule 2</b>				
	<b>Optional Modules</b>			
	If all module requirements for Part 3 can be met in Part 4 by taking less than 30 Credits from the list in rule 1 above, theme specific optional modules may be chosen instead up to a total of 30 CATS at level 6 modules overall in Part 4			
<b>Rule R2 G1</b>				
	<b>Level 6 - Optional Modules</b>			
	<b>You may select 0 to 30 credits from the following list of level 6 optional modules:</b>			
FEEG 3001	Finite Element Analysis in Solid Mechanics	15	Semester 1	
FEEG 3004	Human Factors in Engineering	15	Semester 1	
FEEG 3011	Introduction to Turbulence and Mixing	15	Semester 2	

MANG 3048	Management Science for Engineers	15	Semester 1	
MANG 3049	Accounting and Finance for Engineers	15	Semester 2	
SESA 3033	Wing Aerodynamics	15	Semester 2	
SESA 3038	Space Environment	15	Semester 2	
SESA 3039	Advanced Astronautics	15	Semester 1	
SESG 3024	Manufacturing and Materials	15	Semester 1	
SESM 3028	Biomaterials	15	Semester 2	
SESM 3030	Control and Instrumentation	15	Semester 1	
SESM 3031	Automobile Systems	15	Semester 1	
SESM 3032	Heat Transfer and Applications	15	Semester 2	
SESM 3033	Orthopaedic Biomechanics	15	Semester 1	
<b>Rule R2 G2</b>				
	<b>Level 7 - Optional Modules</b>			
	<b>Select at least 45 Credits from Level 7 Modules:</b>			
FEEG 6002	Advanced Computational Methods I	15	Semester 1	
FEEG 6004	Aeroacoustics	15	Semester 2	
FEEG 6005	Applications of CFD	15	Semester 1	
FEEG 6006	Systems Reliability	15	Semester 1	
FEEG 6007	Fuel Cells and Photovoltaic Systems 1	15	Semester 1	
FEEG 6008	Fuel Cells and Photovoltaic Systems 2	15	Semester 2	
FEEG 6009	Design Search and Optimisation (DSO) - principles, parameterizations and case studies	15	Semester 2	
FEEG 6010	Advanced Finite Element Analysis	15	Semester 2	
SESA 6059	Spacecraft Structural Design	15	Semester 1	
SESA 6061	Turbulence: Physics and modelling	15	Semester 1	
SESA 6064	Aircraft Structures	15	Semester 2	
SESA 6066	Biological Flow	15	Semester 2	
SESA 6067	Flow Control	15	Semester 1	
SESA 6071	Spacecraft Propulsion	15	Semester 2	
SESA 6072	Race Car Aerodynamics	15	Semester 2	
SESA 6073	Powered Lift	15	Semester 2	
SESA 6074	Hypersonic & High Temperature Gas Dynamics	15	Semester 2	
SESA 6075	Aircraft Propulsion	15	Semester 1	
SESA 6076	Spacecraft Orbital Mechanics and Control	15	Semester 2	
SESA 6077	Aeroelasticity	15	Semester 1	
SESG 6036	Advanced Control Design	15	Semester 2	
SESG 6039	Composites Engineering Design and Mechanics	15	Semester 1	
SESG 6040	Failure of Materials and Components	15	Semester 2	
SESG 6042	Microstructural Engineering for Transport Applications	15	Semester 1	
SESG ----	Any level NQF7 module in subject SESG ("Engineering Science")		Show Electives	
SESM 6032	Sustainable energy systems, resources and usage	15	Semester 1	
SESM 6037	Automotive Propulsion	15	Semester 2	
SESM 6038	Computational methods in biomedical engineering	15	Semester 2	
SESS 6067	Renewable energy from environmental flows	15	Semester 2	