

# Semester Abroad Minor Aerospace Engineering 2017/18

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Faculty of Engineering and the Environment

# Semester Abroad Theme

- A single semester of Part III is spent abroad at one of our partner institutions
- All relevant teaching is in ENGLISH
- All courses are taken for credit and will be counted toward the UoS MEng degree
- Foreign grades are converted to UoS grades (this conversion is not strict and aimed at avoiding too extreme deviations from your previous grades)
- The MEng degree is awarded after 8 semesters, as usual
- Tuition at UoS simply continues and no further tuition costs should occur at the exchange institution
- For going to Europe there is a grant via the ERASMUS student mobility scheme (check blackboard site for details)
- Other small-scale scholarship options for non-ERASMUS exchanges might be available to you (details from UoS International Office)

# Semester Abroad Theme

- **Students must achieve ~60% in Part I and II to be eligible for the Semester Abroad scheme**
- You have to be nominated by UoS when applying to the exchange institution
- Present approved partner institutions for Semester 1 exchange:
  - Linköping University, Sweden (ERASMUS)
  - Pennsylvania State University, USA (non-ERASMUS)
  - Purdue University, USA (non-ERASMUS)
  - Technical University Delft, Netherlands (ERASMUS)
  - Politecnico di Milano, Italy (ERASMUS)
- For Semester 2 exchange:
  - ESTACA Paris, France (ERASMUS)
  - SUPAERO Toulouse, France (ERASMUS)
- Ad-hoc exchanges not permitted

# Integration into the MEng degree

- Regular Part III programme

Module Code	Module Title	ECTS Credit Points	Choice Type	Sem
FEEG3003	Individual Project (core)	15	C	1,2
SESA3028	Aircraft Design	15	T	1,2
SESA3030	Aerospace Control Systems	7.5	C	1
SESA3029	Aerothermodynamics	7.5	C	1
SESA3026	Aircraft Structural Design	7.5	C	2
	Option	7.5	T	1

- Depending on semester, suitable replacements for compulsory courses have to be found at the exchange university (decision rests with Study Abroad Faculty Officer)
- Missing courses become compulsory in Part IV
- Grades will be converted to UoS grades upon return
- The IP has to be completed in a single semester

# Regular exchange in Semester 1

Part III Modules at level 6 totalling 60 ECTS

Compulsory modules (C), Theme-specific modules (T), Optional modules (O)

Module Code	Module Title	ECTS Credit Points	Choice Type	Sem
FEEG3003	Individual Project (core)	15	C	2
FEEG3005	Semester Abroad module Option 1 (Semester 1)	30	C	1
SESA3026	Aircraft Structural Design	7.5	C	2
SESA3033	Wing Aerodynamics	7.5	T	2

**The semester abroad curriculum should include the equivalents of Aerothermodynamics, Aerospace Control Systems or Aircraft Design.**

Module Code	Module Title	ECTS Credit Points	Choice Type	Sem
FEEG6013	Group Design Project (core)	22.5	C	1,2
SESA3028 or SESA3029 + SESA3030	Aircraft Design <u>or</u> Aerothermodynamics <u>plus</u> Aerospace Control Systems	15	T	1,2
	Option	7.5	O	1/2
	Option	7.5	O	1/2
	Option	7.5	O	1/2
	Option	7.5	O	1/2
	Option	7.5	O	1/2

# Regular exchange in Semester 2

Part III Modules at level 6 totalling 60 ECTS

Compulsory modules (C), Theme-specific modules (T), Optional modules (O)

Module Code	Module Title	ECTS Credit Points	Choice Type	Sem
FEEG3003	Individual Project (core)	15	C	1
FEEG3006	Semester Abroad module Option 1 (Semester 2)	30	C	2
SESA3029	Aerothermodynamics	7.5	C	1
SESA3030	Aerospace Control Systems	7.5	C	1

**The semester abroad curriculum should include the equivalent of Aircraft Structural Design.**

Module Code	Module Title	ECTS Credit Points	Choice Type	Sem
FEEG6013	Group Design Project (core)	22.5	C	1,2
SESA3028	Aircraft Design	15	T	1,2
	Option	7.5	O	1/2
	Option	7.5	O	1/2
	Option	7.5	O	1/2
	Option	7.5	O	1/2
	Option	7.5	O	1/2

# Semester abroad at Linköping

- Regular ERASMUS exchange in Semester 1
- 1 places for AE
- Semester at Linköping is from Aug – Dec
- Typical past course choices have been (>30 ECTS listed)
  - **Swedish language course in August (mandatory)**
  - **Aircraft and Vehicle Design**
  - **Aircraft Conceptual Design**
  - Flight Mechanics
  - Introduction to Computational Mechanics
  - Optimisation
  - Probability and Statistics
- Note: You are coming into the 1<sup>st</sup> year of MSc Programme
- <http://www.liu.se/utbildning/pabyggnad/6MAER?l=en>
- [External application](#) deadline: 15 April 2017

# Semester abroad at PennState

- Regular non-ERASMUS exchange in Semester 1
- In the past 1 place AE but I am expecting at least 2 now
- Semester at PennState is from Aug - Dec
- Past course choices (15 credits = 30 ECTS) have been
  - **AERSP425 Theory of Flight and/or AERSP412 Turbulent Flow**
  - **AERSP413 Stability and Control of Aircraft**
  - AERSP313 Aerospace Analysis
  - ECON102 Microeconomics
- Be careful with 400 level modules and mandatory requirements!
- Online time table (if necessary use Fall 2016 as guideline):  
<http://schedule.psu.edu>
- [http://www.aero.psu.edu/ugradstud/Ugrad\\_Curr\\_Guide.pdf](http://www.aero.psu.edu/ugradstud/Ugrad_Curr_Guide.pdf)
- External application deadline: 15 March 2017



# Semester abroad at Purdue

- Regular non-ERASMUS exchange in Semester 1
- 1 place for AE + ME + Acoustical Engineering
- Semester at Purdue is from Aug - Dec
- Very compatible AE programme
  - AAE 33400 - Aerodynamics + Laboratory (3+1)
  - AAE 36400 - Control System Analysis + Laboratory (3+1)
  - AAE 33800 - Thermal Sciences (3)
  - AAE 35103 - Aerospace Systems Design (3)
  - Option
- Note: 1 US credit hour is worth 2 ECTS
- Online time table:  
[https://selfservice.mypurdue.purdue.edu/prod/bwckctlg.p\\_disp\\_dyn\\_ctlg](https://selfservice.mypurdue.purdue.edu/prod/bwckctlg.p_disp_dyn_ctlg)
- [https://engineering.purdue.edu/AAE/Academics/Undergrad/pos/Fall\\_2014\\_and\\_after\\_POS\\_guide.pdf](https://engineering.purdue.edu/AAE/Academics/Undergrad/pos/Fall_2014_and_after_POS_guide.pdf)
- External application deadline: 15 March 2017

# Semester abroad at TU Delft

- ERASMUS exchange with some forward tracking of Part IV options in Semester 1
- 4 places for AE only
- Semester at Delft is from Sep 1 – Jan 30 and separated into two parts
- AE thematic minors worth 30 ECTS – mixed Part III and IV
  - Airport of the Future
  - Spaceflight
  - Offshore wind energy (currently too few design)
  - Individual minor (not recommended)
- Gives the new opportunity of setting a thematic minor while still being classified as Semester Abroad student
- <http://www.tudelft.nl/en/study/undergraduates-bachelors/undergraduate-programmes/aerospace-engineering/degree-programme/minors-in-the-third-year/>
- External application deadline: end of May 2017

# Semester abroad at Politecnico di Milano

- Regular ERASMUS exchange in Semester 1
- 2 places for AE only
- Semester at Milano is from end of September – last week of January. But note that regular winter exams run until early March (this might be negotiable for international students)
- New partner
- Quite compatible AE programme
  - **ING-IND/06 Aerothermodynamics (10 ECTS) or Aerodynamics Of Helicopters (10 ECTS)**
  - **ING-IND/03 Flight Dynamics (10 ECTS)**
  - ING-IND/04 Spacecraft Structures (10 ECTS) or Aerospace Structures (10 ECTS)
  - ING-IND/03 Orbital Mechanics (10 ECTS)
- Note: You are coming into the 1st year of MSc Programme
- [Aeronautical Engineering curriculum](#) and [Space Engineering curriculum](#)
- [External application](#) deadline: early June 2017

# Semester abroad at ESTACA Paris

- Regular ERASMUS exchange in Semester 2
- About 4 places for AE + ME
- Semester at ESTACA is from Feb – Jun
- English programme at 30 ECTS is **preset** and includes
  - Computer Aided Engineering
  - Signal Processing
  - Computational Fluid Dynamics
  - Hydraulic systems
  - **Structural Design**
  - Technical project
  - Project management
  - French language and Culture
- <http://www.estaca.fr/en/programs/automotive-aeronautics-design-programme.html>
- <http://www.estaca.fr/send/3-publications/8-automotive-aeronautic-program.html>
- [External application](#) deadline: 15 October 2017

# Semester abroad at SUPAERO Toulouse

- Regular ERASMUS exchange in Semester 2
- About 4 places for AE only
- New programme
- Spring Semester in Aeronautical Engineering at SUPAERO is from Feb – Jun
- English programme at 30 ECTS is **preset**, each course at 6 ECTS, and includes
  - Aircraft design
  - Applied aerodynamics and propulsion
  - **Aircraft structures**
  - Representation, analysis and dynamic systems control
  - Introduction to French language, culture and to the aerospace industry in France
- <https://www.isae-supero.fr/en/admissions-en/ingenieur-isae-supero-msc-admissions/>
- [https://www.isae-supero.fr/IMG/pdf/aeronautical\\_spring\\_semester\\_\\_isae\\_supero.pdf](https://www.isae-supero.fr/IMG/pdf/aeronautical_spring_semester__isae_supero.pdf)
- External application deadline: presumably 15 October 2017

# Internal application process

- Things to consider before applying
  - Why do I want to do this?
  - What are the benefits?
  - What are the risks and potential problems?
  - What are the costs?
- Fill out the Internal Application Form and submit to [R.Deiterding@soton.ac.uk](mailto:R.Deiterding@soton.ac.uk) by 20<sup>th</sup> February 2017
- The quality of your internal application has an influence on the ranking. The selection is not made just on grades only.
- I will make an internal list and confirm with you within days
- By early March, you should have clarity for which exchange you are selected

# Preparing the external application after internal selection

- Check requirements (see links above)
- Go to BlackBoard -> Exchange & Study Abroad
- Download learning forms, insurance, risk assessment forms, etc.
  - ERASMUS forms for Linkoping, Delft, Milano, ESTACA, SUPAERO
  - Non-ERASMUS forms for PennState, Purdue
- Have learning form with course plan signed by Study Abroad Faculty Officer
- Prepare further required material (motivation letter, etc.)
- Obtain nomination letter (if required)
- Submit by external deadline (see above)
- *More details from International Office!*