



NANYANG  
TECHNOLOGICAL  
UNIVERSITY  
SINGAPORE

## Overseas Programmes (For MAE students only)



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## Exchange Coordinators - MAE

- **A/P Sridhar Idapalapati (Course matching)**  
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- **Ms. Thaiyanayagee d/o Venugopalan (Ms. Tiana) (Credit transfer)**  
Email: [THAIYANA@ntu.edu.sg](mailto:THAIYANA@ntu.edu.sg)

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# Exchange Programme Overview

Semester Exchange			Summer/Winter Exchange
GEM Explorer (Semester Exchange)	SUSEP (Local Exchange)	GEM Venturer (Virtual Education)	GEM Discoverer* (Short-term Programme)
Minimum CGPA Requirement: <b>3.3</b>	Minimum CGPA Requirement: <b>3.5</b>	Minimum CGPA Requirement: <b>3.3</b>	Minimum CGPA Requirement: <b>2.0</b>
Credit transfer up to <b>22AUs</b>	Credit transfer capped at normal NTU semester load	Credit transfer for <b>one</b> course only.	Credit transfer up to <b>6AUs</b> (No Core)

**Note:** Student must complete at least 1 semester of studies at the point of application and at least 2 semesters at the point of admission to the host institution.

\*Final Year Students intending to go for Summer/Winter Exchange should discuss with FYP Supervisor on your project plan **before** applying.



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## When to go for Semester Exchange?

### Admitted as Year 1 students

- Year 2 Semester 1
- Year 3 Semester 1
- Year 3 Semester 2 (Except ABP students\*)

### Admitted as Direct-Entry students

- Year 3 Semester 1
- Year 3 Semester 2

### Semester not allowed to go for semester exchange:

Year 2 Semester 2 - Due to MA2079 Engineering Innovation & Design (EID)

Year 4/ Final Year - Due to MA4079 Final Year Project (FYP)

\*ABP students need to start FYP and PI concurrently from Year 3 Semester 2.

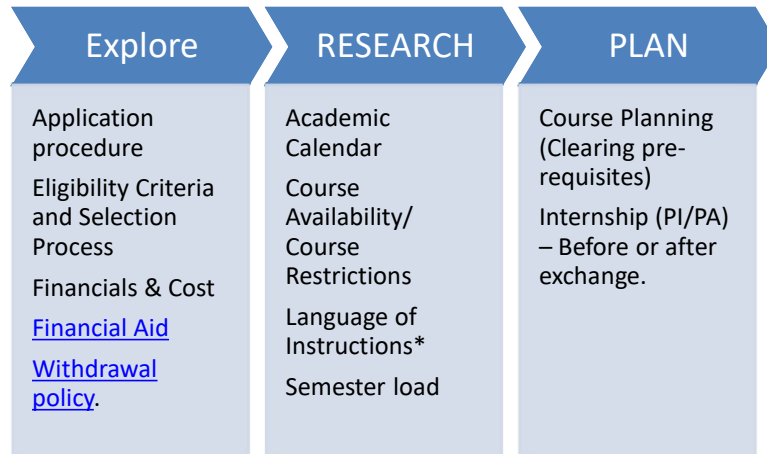
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## Before Applying for exchange..



\*Note: Students may be taking MSc-level courses because the undergraduate curriculum at some universities is taught in the local language.

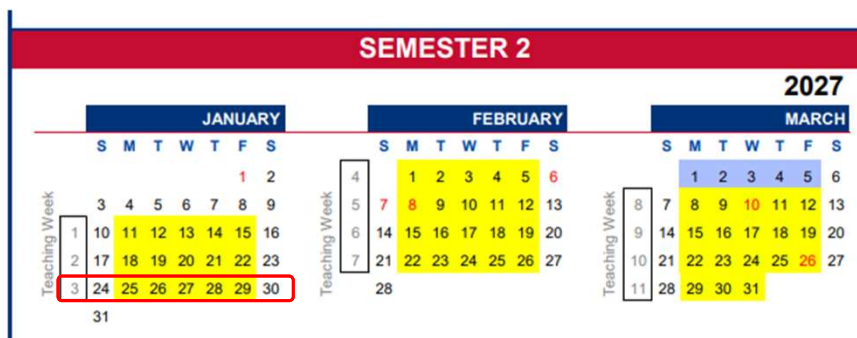
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## Things to watch out for... Academic Calendar

Students going for exchange in Semester 1 should join in the Semester no later than Week 3 of Semester 2.

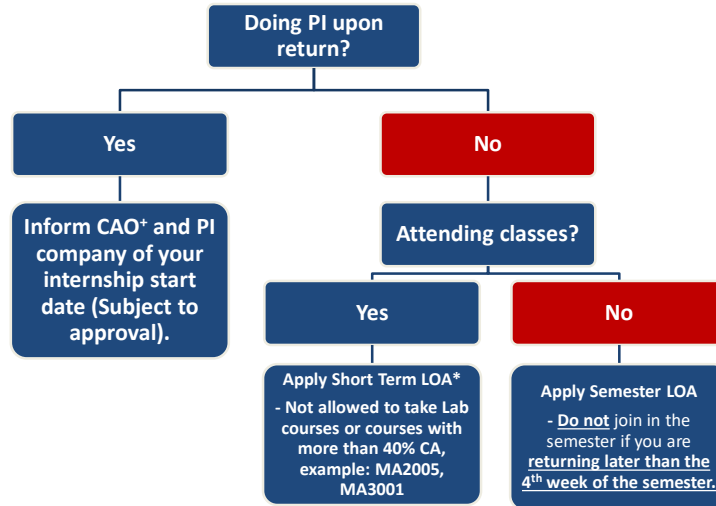


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## Returning to NTU...LATE(in Teaching Week 3)!



\*Email [mae\\_reg@ntu.edu.sg](mailto:mae_reg@ntu.edu.sg) if you encounter any course registration issues.  
+CAO email: [CAO\\_MAE@ntu.edu.sg](mailto:CAO_MAE@ntu.edu.sg)

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## Things to watch out for... Course Offerings

- MAE courses (especially core courses) are only offered in one Semester.

Course Code	Course Title	AU	Pre-Requisite	Offering Semester
MA3001	Machine Element Design	3	Having read MA2001, MA2002 and MA2005	Sem 1 & 2
MA3002	Solid Mechanics and Vibration	3	MA2001	Sem 1 & 2
MA3003	Heat Transfer	3	MA2007	Sem 1 & 2
MA3004	Mathematical Methods in Engineering	3	MH1810 & MH1811 or CY1203 or MH2812 or CY1602 or MH2810	Sem 1 & 2
MA3005/ MA3705	Control Theory / Aerospace Control Theory	3	Having read MA2006	Sem 1 & 2
MA3006	Fluid Mechanics	3	MA2003	Sem 1 & 2
MA3010	Thermodynamics & Heat Transfer	3	MA2003	Sem 1
MA3071	Engineering Experiments (ME)	1		Sem 1 & 2
MA3072	Engineering Experiments (AE)	1		Sem 1
MA3700	Aircraft Structures I	3	MA2001	Sem 1
MA3701	Aerodynamics	3	MA2003	Sem 1
MA3702	Aircraft Propulsion	3	MA2007	Sem 1
MA3703	Flight Dynamics	2	MA2701 & MA3705	Sem 1
MA3704	Aircraft Electrical Devices	3		Sem 1
MA4001	Engineering Design	4	Having Read MA3001	Sem 1 & 2
MA4002	Fluid Dynamics	3	MA3006	Sem 1 & 2

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## Things to watch out for...Language of instruction

- For **Core/Major PE**, the course should be taught in **English**, with assessments and examinations also in English.
- For language courses to be mapped as **BDE**, the course can be taught in non- English language.

Overview of ECTS subjects on Faculty of Mechanical Engineering

Academic year: 2018/2019

Code	Title	Credits	Language of Instruction	Semester	Contact
330-0101/01	Introduction to Mechanical Vibrations and Structural Dynamics	5	English	Winter	doc. Ing. III Poděšva, Ph.D.
330-0301/02	Statics	5	Czech, English	Summer	Ing. Mláda Hlaváčková, Ph.D.
330-0302/02	Dynamics I	5	Czech, English	Winter	Ing. Zoléněk Porubský, Ph.D.
330-0304/03	Technical Vibrations	5	Czech, English	Winter	doc. Ing. III Poděšva, Ph.D.
330-0305/02	Mechanics of Materials	5	Czech, English	Winter, Summer	Dr. Ing. Ludmila Adámková
330-0306/03	Mechanics of Materials 2	5	Czech, English	Summer	Dr. Ing. Ludmila Adámková
330-0309/02	FEM - ANSYS	2	Czech, English	Summer	Ing. Pavel Maršálek

Note: Students may be taking MSc-level courses because the undergraduate curriculum at some universities is taught in the local language.

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## Maximum AUs allowed for Credit Transfer – GEM Explorer Semester Exchange

- The minimum grade to be counted for credit(AU) transfer must be equivalent to a **Pass grade** at the host university.
- All Pass and Fail grades will be reflected in Degree Audits and transcripts.

Note: \*ABP will be dropped for students participating exchange in Year 3 Semester 2.

22AUs

- Applicable to all MAE students
- Including 1AU laboratory course (MA3071/MA3072)

24AUs

- Applicable to MAE ABP\*/DDP/Second major students only.
- Including 1AU laboratory course (MA3071/MA3072)

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## Course matching criteria



Match in content (approximately 75% match)



Number of contact hours (In-person lectures, tutorials and physical face-to-face labs will be counted only). For mapping to MA3071/MA3072, computer labs will not be considered.



The course must be examinable (e.g. exams, tests, projects etc)



The course should be taught in English, including assessments, except for BDE language courses, which can be in another language.

\*\*Students are discouraged from taking courses that are pitched at the postgraduate level

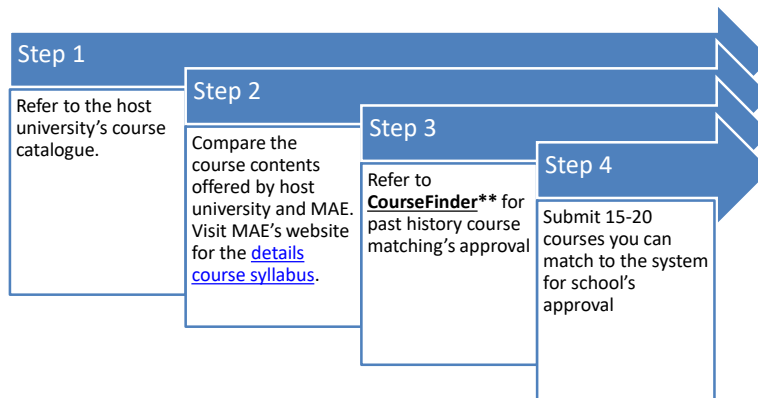
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## How to do course matching?



### Note:

- Approval will not be given to course matching for courses no longer offered in NTU.
- Student must obtain re-approval of courses that were in the CourseFinder. Not all approved course matchings found in the CourseFinder will be approved again as the School is constantly reviewing the curriculum.
- \*\*[Studentlink](#) > Academic Services > Undergraduate > GEM Explorer CourseFinder

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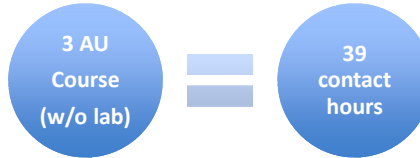


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## Course matching – Contact hours

- For a BDE with contact hours <39 hrs, the AUs granted may be reduced.
- For BDE with contact hours >39 hrs, the maximum number of AU granted remains as 3 AUs



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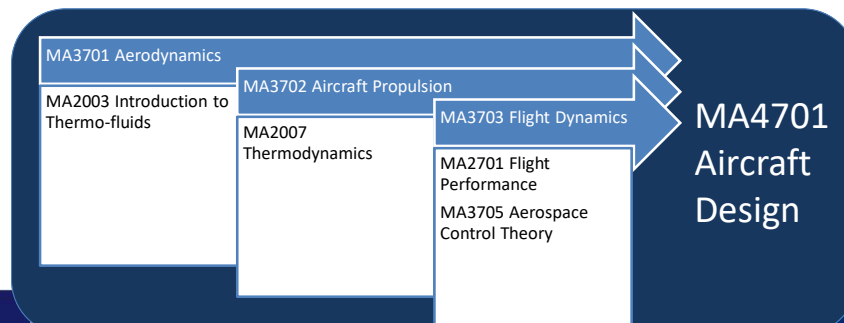
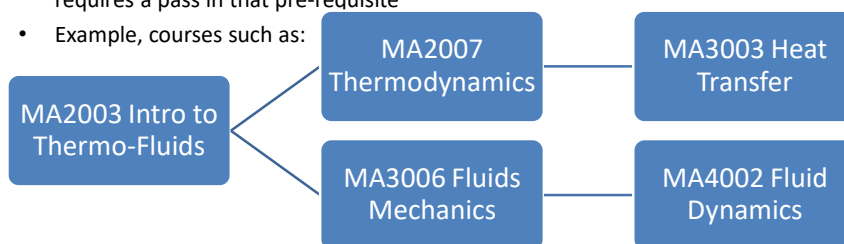


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## Course matching – Pre-requisites

- **NOT** allowed to take any pre-requisite concurrently with another course that requires a pass in that pre-requisite
- Example, courses such as:



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## Course matching – Major PE

- Students who attend an overseas exchange can take Major PE regardless of the offering semester in MAE. (refer to MA48XX courses in the course curriculum page), provided all the necessary pre-requisites are met.
- Students participating in exchange in Year 2 cannot take MPE during their exchange, as MPEs are considered as Year 4 courses and students are only allowed up to one year ahead, provided all the pre-requisites of the course have been met.

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## AERO students specializing in Mechanical Engineering

- AERO students specializing in Mechanical Engineering should **NOT** take the following courses on exchange:

### AERO: Specialisation in Mechanical Engineering

(NOTE: All courses must be graded – S/U option cannot be used, and cannot read the courses during exchange.)

MECHANICAL ENGINEERING		COURSE TYPE				
COURSE CODE	COURSE TITLE	AE	ME (Mainstream)	ME (Design)	ME (RMS)	ME (IMS)
MA3704	Aircraft Electrical Devices	Core	Not offered to Mechanical Student.			
MA2002	Theory of Mechanism	BDE				
MA2009	Introduction to Electrical Circuits & Electronic Devices	BDE				
MA3001	Machine Element Design	BDE				
MA4002	Fluid Dynamics	BDE				

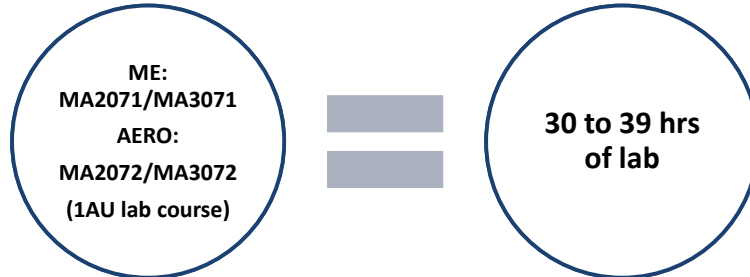
- Courses listed on the above **must be graded**. Details can be found on the MAE website.

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## How to do LAB course matching?



- A maximum of 1 laboratory course is allowed for credit transfer.
- Courses with physical face-to-face lab components may be considered for mapping lab course. Only 1 lab course matching is required in the course matching system. Without double counting, a **minimum of 30 lab hours** is required for approval. **Computer labs will not be counted.**

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## How to do LAB course matching?

<a href="#">MA3071</a>	ENGINEERING EXPERIMENTS (ME)	62643,41731,62716	Mechanical Vibrations, Geometrical metrology and machine testing, Digital Control Systems	-	Core	1	Approved	<a href="#">Subject to success</a> <small>(Click to get this request for auto processing)</small>
------------------------	------------------------------	-------------------	---	---	------	---	----------	--

Course Contents/Syllabus : Mechanical Vibrations (62643): 20 hrs + Geometrical metrology and machine testing (41731): 13 hrs + Digital Control Systems (62716) +15 hrs

URL for Course Info :-

Total Number of Contact Hours for the entire course :48

Prescribed Text Books & Chapters Covered :-

Mode of Assessment :-

Number of credits awarded by host university to the course :-

Teaching Staff Details: Danilo Quagliotti Email: danqua@mek.dtu.dk

Language of instruction of this course :: English

Semester in which student will take/read this course :: 2

Student's remarks :-

**Total Lab hours =  
No. of lab sessions X  
No. of lab hours per  
session**

**Note: Physical face-to-face labs (computer labs will not be considered)**

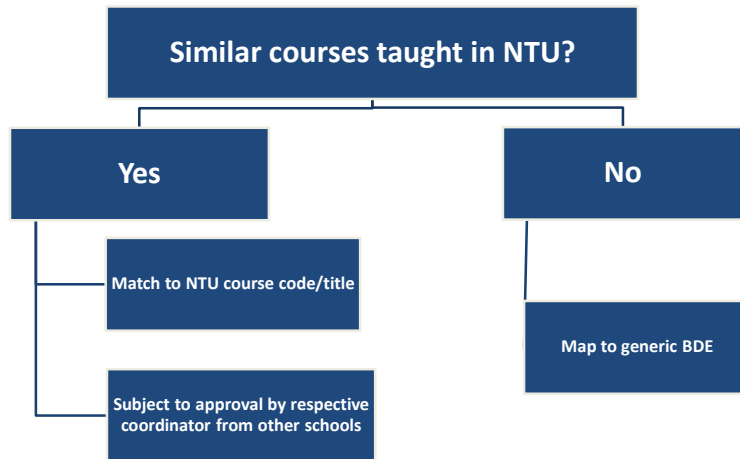
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## Course matching – BDE



Students should match overseas courses to specific NTU courses (wherever possible), instead of mapping to generic categories such as BDE.

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## Course matching – Minor Programmes

- Seek prior approval (by written endorsement or email) from the School offering the Minor.
- MAE Exchange Coordinators should be copied in all correspondences.

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## Example of a good course-matching submission:

**Course Contents/Syllabus** : The overall aim is to provide the students an understanding of: - process dynamics - the operation and application of simple feedforward and feedback control - how measurements and actuators can be connected in a process plant The course should thus provide the student the ability to design single input - single output (SISO) control systems for chemical and biotechnical processes with continuous and batchwise operation.

**URL for Course Info** : <http://www.kurs.er.dtu.dk/xxxx.aspx?menulanguage=en-gb>

**Total Number of Contact Hours for the entire course** : Lecture= 26 hours, Tutorial= 13 hours, Laboratory/ Project Work = 13 hours

**Prescribed Text Books & Chapters Covered** : :Seborg D.E., Edgar T.F., Mellichamp D.A. (2004) Process Dynamics and Control (2nd edition), John Wiley & Sons. Or Seborg D.E., Edgar T.F., Mellichamp D.A. and Doyle F.J. (2011) Process Dynamics and Control (3rd edition), John Wiley & Sons.

**Mode of Assessment** : Quizzes; Design Projects; Final Exam

**Number of credits awarded by host university to the course** :5

**Note:** Course matching submission with incomplete or incorrect details/information will be rejected.

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## Courses not allowed to read during exchange

Students are not allowed to course match or take following courses in exchange:

- ICC – Common Core/ Care, Serve, Learn/ Professional Series course (i.e. CC0001, ML0004, HW0288 etc)
- Online courses with no physical lecture/tutorial

Note: Second-year students are not allowed to read final-year courses in exchange

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## Examinations/ CAs

- All examinations (Main, Supplementary or otherwise) offered by the host university will have to be taken at the host university, not in NTU.
- If you fail the course, you will have to retake the course in NTU.
- Requests/ Appeals to sit for host university's exams in NTU will not be entertained.
- Early Examination Request at the host university or any other special requests are subject to approval by the host university and NTU.
- Transcripts must indicate all courses that have been read, including any failed courses.

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## AU Projection

- Students must submit the AU Projection list within the deadline mentioned on the E-Notification from OAS. Finalization of AU projection **only after you confirm all your registered courses at the host university.** You can only submit this once.
- Please **do not** submit credit transfer until you have received your official transcript (with University's seal and signature)

Sent: Tuesday, 1 October 2019 11:20 AM

To:

Cc: ug\_outbound <[ug\\_outbound@ntu.edu.sg](mailto:ug_outbound@ntu.edu.sg)>

Subject: Action needed for confirmation of courses registered at the host university - GEM Explorer AY 2019 S1

Dear student

We hope you have finalized your course registration at the host university. Please log in your GEM Explorer application to confirm the courses you registered at the host university.

[https://sso.wis.ntu.edu.sg/webex88/owa/sso\\_redirect.asp?i=1&app=https://wis.ntu.edu.sg/pls/lms/instep\\_stud\\_subj\\_reject\\_notice](https://sso.wis.ntu.edu.sg/webex88/owa/sso_redirect.asp?i=1&app=https://wis.ntu.edu.sg/pls/lms/instep_stud_subj_reject_notice)

1. Select a sign-up profile to begin
2. Click to finalize your list of approved course-matching records
3. Select the courses that you have registered
4. Select purpose of finalizing : AU projection
5. Check the list carefully and submit

We appreciate your prompt action by 07-OCT-2019. We wish you a fruitful study experience.

Regards  
Office of Academic Services

CONFIDENTIALITY: This email is intended solely for the person(s) named and may be confidential and/or privileged. If you are not the intended recipient, please delete it, notify us and do not copy, use, or disclose its contents.  
Towards a sustainable earth: Print only when necessary. Thank you.

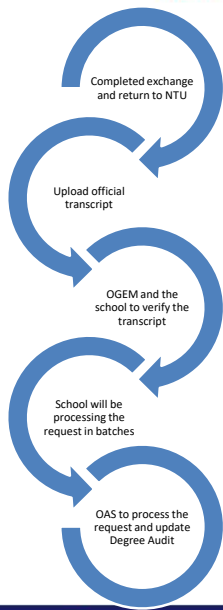
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## Returning to NTU - Credit Transfer



Exchange Period	Batch 1	Batch 2
Semester 1	End February	End May
Semester 2/ Special Term	End August	End October

- Credit transfer requests are processed in batches. Follow the above timeline.
- **All students should upload and initiate the credit transfer for exchange in the following semester upon return to NTU.** Click [here](#) for steps on credit transfer.
- If you have taken a pre-requisite course during exchange, your credit transfer will not be completed in time for your course registration in NTU. **Example:** Read MA3001 Machine Element Design overseas and intending to read MA4001 Engineering Design in the coming semester.
- Please download and email the completed [pre-requisite waiver form](#) to [mae\\_reg@ntu.edu.sg](mailto:mae_reg@ntu.edu.sg) stating the course you want to read and the pre-requisites which you have completed overseas before the course registration period.

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## Contact Information

School of MAE



Website:

<https://www.ntu.edu.sg/mae/admissions/current-students/undergraduate/student-exchange>

OGEM

**GEM Explorer/ SUSEP Exchange**

[GEM-Explorer@ntu.edu.sg](mailto:GEM-Explorer@ntu.edu.sg)

**GEM Discoverer**

[gemdiscoverer@ntu.edu.sg](mailto:gemdiscoverer@ntu.edu.sg)

**GEM VEnturer**

[GEM-VEnturer@ntu.edu.sg](mailto:GEM-VEnturer@ntu.edu.sg)

Website:

<https://www.ntu.edu.sg/education/student-exchanges/gem-explorer>

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**Thank you!**

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