



NANYANG
TECHNOLOGICAL
UNIVERSITY
SINGAPORE

Overseas Programmes (For MAE students only)



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Two contact routes to know before you go

Course matching before you leave; credit transfer after you return.

COURSE MATCHING

A/P Sridhar Idapalapati
Mr. Tan Wei Zhe

MSRIDHAR@ntu.edu.sg

TANWZ@ntu.edu.sg

Host-course choices, matching forms, submissions and academic approval before you leave.

CREDIT TRANSFER

Ms. Thaiyanayagee d/o
Venugopalan (Ms. Tiana)

THAIYANA@ntu.edu.sg

Everything after you return:
transcripts, credit transfer and AU
projection.

For course matching, copy both coordinators. For credit transfer, contact Ms. Tiana after you return.

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Four ways to go abroad

Start with the experience you want — full semester, short term, virtual or local — then check the CGPA bar and credit cap.

PROGRAMME	WHAT IT IS	MIN. CGPA	CREDIT TRANSFER CAP
GEM Explorer	Semester exchange	> 3.3	Up to 18 AUs
GEM Discoverer	Short-term programme	> 2.0	Winter: 3 AUs Summer: up to 6 AUs
GEM Venturer	Virtual education	> 3.3	One course only
SUSEP	Local semester exchange	> 3.5	Normal MAE semester load

SHARED ELIGIBILITY Complete at least one NTU semester when you apply, and two semesters before admission to the host university.

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When should I go on exchange?

You have four windows — all of them in Year 2 and Year 3.

YEAR 2 · SEM 1	YEAR 2 · SEM 2	YEAR 3 · SEM 1	YEAR 3 · SEM 2
Recommended Good exchange window. Plan your courses early.	Recommended Good exchange window. Plan your courses early.	Recommended Good exchange window. Plan your courses early.	Possible with planning Except ABP students who are due to start FYP and PI in this semester.

Year 1 and Year 4 are not options. MA2079 EID is compulsory in Year 1 Semester 2, and Year 4 is taken up by FYP and graduation.

Plan early: decide your internship semester first, then choose your exchange window around it.

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Before you apply

Three things to work through, in this order.

01 EXPLORE

Know what you are signing up for — eligibility, selection, costs and the withdrawal policy.

02 RESEARCH

Check the host university fits — calendar, course availability and language of instruction.

03 PLAN

Protect your graduation timeline — course matching, prerequisites, FYP and internship.

Start early. Almost every problem we see comes from planning too late.



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Be back by Week 3 of Semester 2

This applies to you if you go on exchange in Semester 1.



2028

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1														
2	3	4	5	6	7	8	4	1	2	3	4	5								
9	10	11	12	13	14	15	6	7	8	9	10	11	12	8	5	6	7	8	9	10
16	17	18	19	20	21	22	13	14	15	16	17	18	19	9	12	13	14	15	16	17
23	24	25	26	27	28	29	20	21	22	23	24	25	26	10	19	20	21	22	23	24
30	31						27	28	29					11	26	27	28	29	30	31

Teaching Week 1 starts on February 4th.

Miss it and you risk course registration problems. We will look at what to do about that next.

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Returning after Teaching Week 3?

What you need to do depends on your situation.

DOING PI

Tell CAO and your PI company your internship start date, subject to approval.

ATTENDING CLASSES

Apply for a Short Term LOA. Lab-heavy courses (i.e. MA2005, MA3001 etc) are not allowed.

NOT ATTENDING

Apply for a Semester LOA. Do not join the semester if you return after Week 4.

Course registration issues: mae-ug@ntu.edu.sg CAO: CAO_MAE@ntu.edu.sg

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Some core courses run only once a year

Miss one of these and you could delay your graduation.

OFFERED IN SEMESTER 1 ONLY

MA3010 Thermodynamics & Heat Transfer	MA3702 Aircraft Propulsion
MA3072 Engineering Experiments (AE)	MA3703 Flight Dynamics
MA3700 Aircraft Structures I	MA3704 Aircraft Electrical Devices
MA3701 Aerodynamics	

Check before you commit. Offerings change from year to year, so confirm against the current course listing on MAE website.

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Courses must be taught and assessed in English

There is one exception, and it only applies to language courses.

CORE AND MAJOR PE

English only.

Teaching, assessments and exams must all be conducted in English for the course to be matched.

LANGUAGE COURSES

Non-English is fine.

These can be mapped to BDE and may be taught in the local language.

Check before you match. Many host universities list courses that are taught in the local language, so confirm the language of instruction for every course.

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How many AUs you can transfer

GEM Explorer semester exchange.

18 AUs

All MAE students.

Includes 1 AU for a laboratory course (MA3071 or MA3072).

21 AUs

ABP, DDP and Second Major.

Also includes 1 AU for a laboratory course (MA3071 or MA3072).

You must pass to transfer. The grade must be at least a Pass at the host university to be appeared in your Degree Audit and transcript.

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Every matched course must meet four criteria

All four, not just one of them.

CONTENT About 70% content match with the NTU MAE course.

CONTACT HOURS In-person lectures, tutorials and physical labs only.

ASSESSMENT Must be examinable — exams, tests or formal projects.

LANGUAGE Taught and assessed in English, as we covered earlier.

Avoid postgraduate-level courses. They are strongly discouraged and rarely approved.

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Four steps to get your courses matched

Work through them in order.

01 REFER

Go to the host university's course catalogue.

02 COMPARE

Put their syllabus side by side with the NTU one.

03 CHECK

Look up past approvals in CourseFinder.

04 SUBMIT

Send your courses to us for the School's approval.

One hard rule. Courses no longer offered at NTU cannot be matched, whatever the host university offers.

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A 3 AU BDE needs 39 contact hours

Fewer hours can mean fewer AUs, so check before you match.

39 hours or more

You get the full 3 AUs.

Three AUs is the maximum. Extra contact hours beyond 39 do not earn you more.

Fewer than 39 hours

Your AUs may be reduced.

You could come home with fewer AUs than you planned for, so count the hours first.

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Clear your prerequisites before you go

A prerequisite cannot be taken at the same time as the course that needs it.

YEAR 2 FOUNDATION

MA2003 Intro to Thermo-Fluids
MA2007 Thermodynamics



YEAR 3 CORE

MA3701 Aerodynamics
MA3702 Aircraft Propulsion
MA3703 Flight Dynamics
MA3705 Aerospace Control Theory



YEAR 4 CORE

MA4701
Aircraft Design

Leave one outstanding and the chain stalls. You cannot take the dependent course when you return, which can push back your graduation.

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You can take a Major PE on exchange

Major Prescribed Electives are the MA48XX courses in the curriculum.

Any semester

The MAE offering semester does not apply.

You can match a Major PE even if NTU would not run it that semester.

Not in Year 2

Major PEs are Year 4 courses.

You may only read one year ahead, so a Year 2 exchange is too early.

Either way, prerequisites still apply. Clear them before you go, or the Major PE cannot be approved.

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AEROSPACE students!! Five courses you cannot read on exchange

Applies to Aerospace students on the Mechanical Engineering specialisation.

MA3704	Aircraft Electrical Devices	CORE
MA2002	Theory of Mechanism	BDE
MA2009	Introduction to Electrical Circuits and Electronic Devices	BDE
MA3001	Machine Element Design	BDE
MA4002	Fluid Dynamics	BDE

Take these at NTU, graded. The FGO option cannot be used, and they cannot be matched to a host university course.

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You can transfer one lab course

It maps to the 1 AU lab course: MA2071 or MA3071 for ME, MA2072 or MA3072 for Aerospace.

PHYSICAL LABS ONLY

The course must have a hands-on, face-to-face lab component.

AT LEAST 30 LAB HOURS

Count only the lab hours themselves, with no double counting.

ONE COURSE MAXIMUM

You can transfer credit for a single laboratory course, no more.

Computer labs do not count. Simulation and software sessions will not be approved as lab hours.

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How to count your lab hours

Take the numbers from the host university course page and work it out yourself.

Total lab hours = lab sessions × hours per session

12 × 3 = 36 hours

Clears the threshold.

Twelve weekly sessions of three hours each.

10 × 2 = 20 hours

Falls short of 30.

This one cannot be approved as a lab course.

Use lab hours only. If the course page gives one combined total, ask the host for the lab hours separately.

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A worked lab matching example

You can combine more than one host course to cover a single NTU lab course.

THE NTU COURSE MA3071 Engineering Experiments (ME) 1 AU lab course	62643 Mechanical Vibrations 20 hrs
	41731 Geometrical Metrology and Machine Testing 13 hrs
	62716 Digital Control Systems 15 hrs
	48 contact hours in total
Approved. Three host courses, taught in English, together covering the syllabus and clearing the hours.	

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Match to a specific NTU course if you can

A generic Broadening and Deepening Elective is the fallback, not the default.

FIRST CHOICE A named NTU course	ONLY IF THERE IS NO EQUIVALENT A generic BDE
Use the course code and title. If a similar course is taught here, match to it. Your transcript then shows exactly what you covered.	Map to the broad category. Use this only when nothing similar is taught at NTU. Do not reach for it to save time.
Matching another school's course? That school's course coordinator has to approve it, so allow extra time.	
Counting a course towards a Minor? Get written approval from that School before you go, and copy your MAE exchange coordinators.	

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What a good submission looks like

Five things every approved course-matching form gets right.

Incomplete or incorrect forms are rejected. Fill in every field before you submit.

Course contents in full	List the actual syllabus topics, not just the course title.
A working course link	Give the direct URL to the host university's official course page.
Contact hours split by type	Lecture 26, tutorial 13, laboratory 13. Break them out rather than lumping them together, if the information is available.
Prescribed textbooks	Name the authors, title, edition and year of each text.
Assessment and credits	Quizzes, design projects, final exam. 5 credits at the host university.

THE APPROVED 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.kurser.dtu.dk/xxxxx.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

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Three things you cannot read on exchange

These cannot be course matched, and they cannot be taken while you are away.

NOT TRANSFERABLE ICC and Professional Series

Interdisciplinary Collaborative Core, Care Serve Learn, and Professional Series courses.

Examples: CC0001, ML0004, HW0288. Read these at NTU.

NO CONTACT HOURS Online-only courses

Courses delivered entirely online, with no physical lecture or tutorial.

If there is nothing to attend on campus, it cannot be matched.

TOO EARLY Final-year courses in Year 2

Second-year students cannot read final-year courses on exchange.

This is the same one-year-ahead limit that applies to Major Prescribed Electives.

Check before you commit. If a host course falls into any of these, it will not be approved and you will have to find a replacement.

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Your exams happen at the host university

Plan your travel around the exam period, not the other way round.

WHERE YOU SIT THEM Sit them there, all of them

Main, supplementary or otherwise, every exam is taken at the host university.

Requests to sit a host university exam back in NTU will not be entertained.

An early examination request, or any other special arrangement, needs approval from both the host university and NTU.

IF YOU FAIL A fail follows you home

Fail a course abroad and you retake it at NTU.

There is no resit at the host university once you have returned.

Your transcript lists every course you read on exchange, failed ones included.

Check the host exam dates early. They may run later than you expect, and flights booked too early have caught students out.

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Do the AU projection in this order

Each step depends on the one before it. Skipping ahead creates rework.

STEP 1 Confirm your registration

Once you have actually registered at the host university, log in to GEM Explorer and confirm the courses you are reading.

STEP 2 Submit the AU projection

Finalise your approved course-matching list and submit it by the deadline in the e-notification from OAS.

STEP 3 Apply for credit transfer

Only after your official transcript arrives, with the original signature.

Do not submit for credit transfer early. Without the official signed transcript in hand, the application goes nowhere.

SAMPLE E-NOTIFICATION FROM OAS — DATES SHOWN ARE FROM A PAST CYCLE

Sent: Tuesday, 3 October 2019 11:20 AM
To:
Cc: ug_outbound <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://oas.wis.ntu.edu.sg/webex86/ony/coo_redirect.asp?7~1&app=https://wis.ntu.edu.sg/jhi/ims/instap_shel_sali_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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Start your credit transfer as soon as you are back

Requests are processed in batches, so missing a batch means waiting for the next one.

Exchange period	Batch 1 closes	Batch 2 closes
Semester 1	End February	End May
Semester 2 or Special Term	End August	End October

What you upload

Your official transcript from the host university, with the original signature.

When you start

In the semester you return. Do not wait until the deadline is close.

Questions on credit transfer: Ms. Tiana, THAIYANA@ntu.edu.sg. Step-by-step guide on the GEM Explorer credit transfer page.

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If you read a pre-requisite overseas, ask for a waiver

Credit transfer will not clear in time for the next course registration.

THE SITUATION

You read MA3001 Machine Element Design overseas and want to read MA4001 Engineering Design next semester.

STEP 1

Download the form

Get the pre-requisite waiver form from the MAE course registration page.

STEP 2

Fill it in properly

State the course you want to read and the pre-requisites you completed overseas.

STEP 3

Email it before registration

Email it to mae-ug@ntu.edu.sg, well before registration opens.

Do this early. Without the waiver the system will block you from registering for the follow-on course.

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Who to contact

Ask the right office first and you will get an answer in days, not weeks.

COURSE MATTERS MAE exchange coordinators

Course matching:
A/P Sridhar Idapalapati, MSRIDHAR@ntu.edu.sg and
Mr. Tan Wei Zhe, tanwz@ntu.edu.sg

Credit transfer: Ms. Tiana, THAIYANA@ntu.edu.sg .

APPLICATION AND PLACEMENT Office of Global Education and Mobility

GEM Explorer and SUSEP
GEM-Explorer@ntu.edu.sg

GEM Discoverer
gemdiscoverer@ntu.edu.sg

GEM Venturer
GEM-VEnturer@ntu.edu.sg

Plan early, ask early, and enjoy the semester away.

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Thank you!

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