Programme Regulations: Academic Year 2022/2023

Joint Degree Programme between Singapore Institute of Technology (SIT) and Newcastle University (NU) leading to a Bachelor of Engineering with Honours in Mechanical Design and Manufacturing Engineering

Programme Code: 1416U

1. The programme consists of 180 credits. One credit at SIT is equivalent to two credits at Newcastle University.

2. The programme is taught over eight trimesters.

3. On successful completion of the programme students will receive a joint award from Newcastle University and Singapore Institute of Technology.

4. The joint programme is assessed on an A-F letter grade and associated 5.0 - 0 grade point scale.

5. A D Grade with corresponding grade point of 1.0 is a pass grade.

6. Students have a 5-year maximum candidature to complete their programme. Students will have a maximum of one re-sit for examinations/re-submission for continuous assessment and one re-module attempt per module, unless a successful Personal Extenuating Circumstances (PEC) application is made.

7. Students should attain at least a 2.0 Cumulative GPA (CGPA) after each trimester in order to maintain good academic standing.

   After each study trimester and/or consecutive trimester, the joint Board of Examiners will track the academic standing of students with CGPA < 2.0 and issue the students with the following:

   - Academic Warning – in any study trimester, CGPA < 2.0
   - Academic Probation – in the next consecutive study trimester, CGPA < 2.0
   - Academic Termination – in the 3rd consecutive study trimester, CGPA < 2.0

8. Students obtaining an F grade or grade point of 0 in any module will be entitled to one resit/re-submission as of right.

   If the failed module is a pre-requisite for a higher-level module, the student will not be able to take the higher-level module until the pre-requisite of the previous module has been met.

   If the student fails the re-sit, a single re-module attempt will be offered at the next available opportunity.

9. Students obtaining an F grade undertaking a re-sit/re-submission attempt will have their grade point capped at 1.00 for the calculation of the CGPA

10. Students obtaining a D+/D or F grade have the option to undertake a re-module attempt and the grade point will be capped at 2.00 for the calculation of the CGPA.

    For students who have a number of D+/D/F grades the Board of Examiners should see their complete profile for the academic year to ensure that the Board has the full information to allow them to make

an informed decision on whether or not to allow progression to the next trimester or require the student to pause their studies to improve their situation. This will also allow the Board to see where students have used up their one single re-sit and one single re-module attempt after which they will be unable to progress on the programme.

Candidates will normally undertake the following programme of study:

Year 1

Module Code	Module Title	Module Type	ECTS Credits	FHEQ Level	Trimester	Module Lead
UDE1001	Introduction to Design Innovation	Compulsory	2	N.A	1	Joint SIT (1 credit) NU (1 credit)
UDC1001	Digital Competency Essentials	Compulsory	2	N.A	1	SIT
ENG1001	Engineering Mathematics 1	Compulsory	6	4	1	SIT
ENG1010	Engineering Graphics	Compulsory	6	4	1	SIT
MME1221	Engineering Statics and Dynamics	Compulsory	6	4	1	Joint SIT (2 credits) NU (4 credits)
MME1251	Circuits and Digital Electronics	Compulsory	6	4	1	SIT
MME3201A	Integrated Work Study Programme (Career Skills)	Compulsory	0	N.A	1	SIT
UCS1001	Critical Thinking & Communications	Compulsory	4	N.A	2	SIT
ENG1002	Engineering Mathematics 2	Compulsory	6	4	2	Joint SIT (3 credits) NU (3 credits)
MME1262	Materials for Sustainable Design and Manufacturing	Compulsory	6	4	2	NU
MME1222	Mechanics of Materials	Compulsory	6	4	2	SIT
MME1271	Fundamentals of Thermofluids	Compulsory	6	4	2	Joint SIT (4 credits) NU (2 credits)
UDE2001	Interdisciplinary Design Innovation	Compulsory	4	N.A	3	Joint SIT (1 credit) NU (3 credits)
USI2001	Social Innovation Project	Compulsory	3	N.A	3	SIT
MME2281	Project Management for Engineers	Compulsory	3	5	3	NU
MME2231	Applied Programming	Compulsory	6	5	3	NU

Year 2

Module Code	Module Title	Module Type	ECTS Credits	FHEQ Level	Trimester	Module Lead
MME2221	Design of Mechanical Systems	Compulsory	6	5	1	NU
MME2211	Engineering Systems Modelling and Simulation	Compulsory	6	5	1	NU
MME2232	Industrial Automation with Data Analytics	Compulsory	6	5	1	Joint SIT (3 credits) NU (3 credits)
MME2251	Electro-Mechanical Systems Technology	Compulsory	6	5	1	SIT
MME2261	Advanced Materials and Manufacturing Technologies	Compulsory	6	5	1	NU
MME2262	Lean Manufacturing and Six Sigma	Compulsory	6	5	2	SIT
MME2271	Applications of Thermofluids	Compulsory	6	5	2	Joint SIT (4 credits) NU (2 credits)
MME2252	Industrial Control Systems	Compulsory	6	5	2	NU
General Manufacturing						
MME3231	Industrial Internet-Of-Things (IIOT)	Compulsory	6	6	2	SIT
MME3261	Digital Manufacturing	Compulsory	6	6	2	NU
Microelectronics						
MME3241	Semiconductor Processing	Elective	6	6	2	SIT
MME3242	Process Control for Semiconductor Manufacturing	Elective	6	6	2	SIT
MME3201B	Integrated Work Study Programme (IWSP, Work Attachment)	Compulsory	10	N.A	3	Joint SIT (5 credits) NU (5 credits)

Year 3

Module Code	Module Title	Module Type	Credits	FHEQ Level	Trimester	Module Lead
MME3201B	Integrated Work Study Programme (IWSP, Work Attachment)	Compulsory	10	N.A	1	Joint SIT (5 credits) NU (5 credits)
MME3291	Capstone Project	Compulsory	4	6	1	Joint NU (2 credits) SIT (2 credits)
MME3291	Capstone Project	Compulsory	6	6	2	Joint NU (3 credits) SIT (3 credits)
MME3281	Finance, Law & Standards for Engineers	Compulsory	6	6	2	NU
General Manufacturing						
MME3251	Robotics	Elective	6	6	2	NU
MME3262	Smart Manufacturing Systems	Elective	6	6	2	SIT
Microelectronics						
MME3243	Fabrication Engineering	Elective	6	6	2	SIT
MME3244	Semiconductor Devices and Characterisations	Elective	6	6	2	SIT

Students will undertake the Overseas Immersion Programme (OIP) in Year 1, Trimester 3 with focus to work on their Interdisciplinary Design Innovation (UDE2001) and Social Innovation Project (USI2001).

Assessment methods

Details of the assessment pattern for each module are explained in the module profile.

1. Degree classification

Degree classifications are based upon all 180 credits and the Cumulative GPA attained by students at the end of the programme.

All modules contribute the final awards and all years of study contribute equally.

Full details of the classifications and how these are calculated can be found in the SIT-NU Joint Academic Guide.