General Information for FDDP Students from the College of Design and Engineering
(from AY2021/22 cohort onwards)

- Students are required to complete a total of 82 units at NUS i.e. 52 units of Common Curriculum courses (does not include Integrated Project) + 30 units of Major requirements. These 82 units do not include the additional preparatory courses that FDDP students are required to take.
- Of the 82 units, students are expected to complete a minimum of 80 units prior to their departureto France for their Yr 3 and Yr 4 studies.
- 30 units of Major requirements comprise 2 units of Engineering Core (EG2401A) and 28 units of Major Programme requirements. Please refer to the recommended study plan of your respective Engineering discipline for more details (Note: The courses listed under the Major Program requirements in the recommended study plan are those which are recommended by the Department. The students, however, have the freedom to choose other courses from the basketof Major Programme courses offered by the Department to fulfil the 28 units).
- Students are allowed to take no more than 36 units of workload per semester including the FDDPpreparatory courses.
- Students are exempted from doing Internship at NUS. Most of the French partners have an internship component in their curriculum.
- Students are exempted from taking courses under the Modelling & Simulation basket. Any of the courses taken under the Modelling and Simulation basket (in Sem 1 of Yr 1 or at any other point) would not be counted towards the 82 units of BEng requirements (82 units do not include the additional preparatory courses that FDDP students are required to take).
- Students are exempted from taking Integrated Project as part of their BEng requirements.
- Students are required to take Masters by Research (and not by coursework).
- 5-6 months prior to return from France, the overseas students will be reminded to submit their application for Masters by Research. Students are expected to self-contact the academic staff they wish to work with for their Masters thesis.

For curriculum-specific queries, please approach the respective Department contacts:

Department	Name	Email
Biomedical Engineering	Ms Melinda Loo	bieloosy@nus.edu.sg
Chemical and Biomolecular Engineering	Ms Ng Ai Mei	chengam@nus.edu.sg
Civil and Environmental Engineering	Ms Christina Lim	ceelccc@nus.edu.sg
Computer Engineering	Ms Low Mun Bak	comlowmb@nus.edu.sg
Electrical Engineering	Ms Elyn Yip	eleylye@nus.edu.sg
Engineering Science	Ms Yit Li Ling	llyit@nus.edu.sg
Industrial and Systems Engineering	Mr Steven Chiang	isecth@nus.edu.sg
Materials Science and Engineering	Ms Karen Ho	msehslk@nus.edu.sg
Mechanical Engineering		enquire_me@nus.edu.sg

For administrative enquiries, please email Ms Nikki Chiang (nikkicyc@nus.edu.sg).

Recommended study plan in NUS for Biomedical Engineering students from AY2021/22 cohort onwards

Common Curriculum (52units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GER1000 Quantitative Reasoning	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
BN1111 Engineering Principles and Practice I	Year 1 Sem 1	4
BN2111 Engineering Principles and Practice II	Year 1 Sem 2	4
BN2301 Biochemistry and Biomaterials for Bioengineers	Year 2 Sem 1	4
BN2403 Fundamentals of Biosignals and Bioinstrumentation	Year 2 Sem 1	4
BN2201 Quantitative Physiology for Bioengineers	Year 2 Sem 1	4
BN2102 Bioengineering Data Analysis	Year 2 Sem 2	4
BN2204 Fundamentals of Biomechanics	Year 2 Sem 2	4
	Total units	**82**

Recommended study plan in NUS for Computer Engineering students from AY2021/22 cohort onwards

Common Curriculum (52units)

Pillar	Course Code and Name	Units
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GEA1000 Quantitative Reasoning	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30units)

Engineering Core (2 units)

Course Code and Name	Recommended Yr/Sem	Units
EG2401A Engineering Professionalism		2

Major Programme (28 units)

CG1111A Engineering Principles and Practice I	Year 1 Sem 1	4
CG2111A Engineering Principles and Practice II	Year 1 Sem 2	4
CS1231 Discrete Structures	Year 2 Sem 1	4
CS2040C Data Structures and Algorithms	Year 2 Sem 1	4
CG2023 Signals & Systems	Year 2 Sem 2	4
EE2026 Digital Design	Year 2 Sem 2	4
CG2027 Transistor-level Digital Circuits (pre-req: CG1111A)	Year 2 Sem 2 or upon return from France	2
CG2028 Computer Organization (pre-req: CS1010 and EE2026)	If EE2026 can be completed before 4th semester,student can take CG2028 in 4th semester, otherwise to take upon return from France	2
	Total units	**82**

Recommended study plan in NUS for Chemical Engineering students from AY2021/22 cohort onwards

Common Curriculum (52units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GER1000 Quantitative Reasoning	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
CN1101A Chemical Engineering Principles and Practice I	Year 1 Sem 1	4
CN2102 Chemical Engineering Principles and Practice II	Year 1 Sem 2	4
CN2103 Mass & Energy Balance	Year 2 Sem 1	4
CN2104 Chemical Engineering Thermodynamics	Year 2 Sem 1	4
CN2105 Reaction Engineering	Year 2 Sem 2	4
CN2106 Fluid Mechanics & Heat Transfer	Year 2 Sem 2	4
CN3103 Mass Transfer and Separation Processes	Year 2 Sem 2	4
	Total units	**82**

Recommended study plan in NUS for Civil Engineering students from AY2021/22 cohort onwards

Common Curriculum (52units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GER1000 Quantitative Reasoning	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
CE1103 Principles of Structural and Geotechnical Engineering	Year 1 Sem 1	4
CE2155 Principles of Structural Mechanics and Materials	Year 1 Sem 2	4
CE2134 Fluid Mechanics	Year 2 Sem 1	4
CE3116 Foundation Systems for Urban Infrastructure	Year 2 Sem 1	4
CE3155A Structural Behaviour	Year 2 Sem 2	2
CE3155B Structural Modelling	Year 2 Sem 2	2
CE3165 Concrete Design for Urban Infrastructure	upon return from France	4
CE3166 Steel Design for Urban Infrastructure	upon return from France	4
	Total units	**82**

Recommended study plan in NUS for Electrical Engineering students from AY2021/22 cohort onwards

Common Curriculum (52units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GEA1000 Quantitative Reasoning with Data	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
EE1111A Electrical Engineering Principles & Practice I	Year 1 Sem 1	4
EE2111A Electrical Engineering Principles & Practice II	Year 1 Sem 2	4
EE2012 Analytical Methods in ECE	Year 2 Sem 1	4
EE2027 Electronics Circuits	Year 2 Sem 1	4
EE2022 Electrical Energy Systems	Year 2 Sem 1	4
EE2023 Signals & Systems	Year 2 Sem 2	4
EE2026 Digital Design OR EE2028 Microcontroller Programming and Interfacing	Year 2 Sem 2	4
EE Outer cores / Technical Electives - Optional (strongly encouraged)		
	Total units	**82**

Recommended study plan in NUS for Environmental Engineering students from AY2021/22 cohort onwards

Common Curriculum (52units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GER1000 Quantitative Reasoning	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
ESE2101 Environmental Engineering Principles & Practices	Year 1 Sem 1	4
ESE2001 Environmental Challenges in the Anthropocene	Year 2 Sem 1	4
ESE2000 Chemistry for An Environmentally Sustainable Future	Year 2 Sem 1	4
ESE3101 Resource Management and Circular Economy	Year 2 Sem 2	4
ESE3201 Air Quality in Changing Environment	upon return from France	4
ESE3301 Microbiology in Natural and Built Environment	Year 2 Sem 2	4
ESE3401 Sustainable Urban Water Technology	upon return from France	4
	Total units	**82**

Recommended study plan in NUS for Engineering Science students from AY2021/22 cohort onwards

Common Curriculum (52units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GEA1000 Quantitative Reasoning	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30 units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
ESP1111 Engineering Principles In-Action	Year 1 Sem 1	4
ESP2107 Numerical Methods and Statistics	Year 1 Sem 1	4
ESP2111 Sensor System Electronics	Year 1 Sem 2	4
ESP2110 Design Project 2	Year 1 Sem 2	4
ESP2106 Principles of Continua	Year 2 Sem 1	4
ESP3903 Major Design Project 2	Year 2 Sem 2	4
Choose ONE of the following:		
PC2020 Electromagnetics for Electrical Engineers	Year 2 Sem 2	4
ME2121 Engineering Thermodynamics & Heat Transfer		
EE2023 Signals and Systems		
	Total units	**82**

Recommended study plan in NUS for Industrial and Systems Engineering students from AY2021/22 cohort onwards

Common Curriculum (52 units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	IE1111R Industrrial & Systems Engineering Principles & Practice I	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30 units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
IE1111R Industrial & Systems Engineering Principles and Practice I[#]	Year 1 Sem 1	
IE2111 Industrial & Systems Engineering Principles and Practice II	Year 1 Sem 2	4
ST2334 Probability and Statistics	Year 1 Sem 2	4
IE2110 Operations Research I	Year 2 Sem 1	4
IE2100 Probability Models with Applications	Year 2 Sem 2	4
IE3101 Statistics for Engineering Applications	Year 2 Sem 1	4
IE3110R Simulation	Year 2 Sem 1	4
CS2040 Data Structures and Algorithms	Year 2 Sem 1	4
	Total units	**82**

- IE1111R is double counted to fulfill both ISE major and the data literacy pillar

Recommended study plan in NUS for Mechanical Engineering students from AY2021/22 cohort onwards

Common Curriculum (52units)		
Pillar	**Course Code and Name**	**Units**
Singapore Studies	Students may read any course from the curated list of courses as approved by the NUS General Education Committee for these 3 pillars.	4
Cultures and Connections		4
Communities and Engagement		4
Critique and Expression	ES2531 Critical Thinking & Writing	4
Digital Literacy	CS1010E Programming Methodology	4
Data Literacy	GEA1000 Quantitative Reasoning with Data	4
Design Thinking	DTK1234 Design Thinking	4
Maker Space	EG1311 Design and Make	4
Systems Thinking	IE2141 Systems Thinking and Dynamics	4
Artificial Intelligence	EE2211 Introduction to Machine Learning	4
Sustainable Futures	EG2501 Liveable Cities	4
Creating Narratives	To be announced	4
Project Management	PF1101 Fundamentals of Project Management	4

Major Requirements (30units)		
Engineering Core (2 units)		
Course Code and Name	**Recommended Yr/Sem**	**Units**
EG2401A Engineering Professionalism		2
Major Programme (28 units)		
ME2102 Engineering Innovation and Modelling	Year 1 Sem 1	4
ME2112 Strength of Materials	Year 1 Sem 2	4
ME2134 Fluids Mechanics I	Year 1 Sem 2	4
ME2121 Engineering Thermodynamics and Heat Transfer	Year 2 Sem 1	4
ME2162 Manufacturing Processes	Year 2 Sem 1	4
ME2115 Mechanics of Machines	Year 2 Sem 2	4
ME2142 Feedback Control Systems	Year 2 Sem 2	4
	Total units	**82**