Department of Mechanical and Energy Engineering

Program of Mechanical Engineering for International Students (2021)

I. Introduction

Oriented to future development of mechanical engineering, the Department of Mechanical and Energy Engineering (MEE) of Southern University of Science and Technology (SUSTech) aims at becoming a world-leading center for engineering education and research. The disciplines of the department include innovative design and advanced manufacturing, robotics and automation, and new energy engineering with research focus on intelligent manufacturing, advanced forming and additive manufacturing, precision machining, robotics and automation, and energy engineering. There are three teaching and practice platforms in our department: advanced manufacturing, innovative design, and automation, robotics and artificial intelligence. We focus on educating two types of engineering talents: the academic talents who has solid science foundation in research, interdisciplinary perspective and experience, and good humanistic understanding, insight into engineering problems; and the innovative talents with strong engineering leadership for solving important engineering problems.

II. Objectives and Learning Outcomes

The program integrates general education and mechanical engineering education and provides students a solid science foundation and rich innovative-practical courses and hand-on training in mechanical engineering. The program aims to develop its students into future leaders in mechanical engineering with broad and solid fundamental knowledge of mechanical engineering, outstanding ability in engineering practice, independent thinking, integrated application of engineering knowledge, innovation capability, humanistic understanding, and global vision.

Graduates of the program will be equipped with the following knowledge, capability, and accomplishment.

1. Master basic science theories, including mathematics, physics, mechanics, materials, electronics and computer science, management science, etc.
2. Master the content knowledge of mechanical engineering, its theory, technology and the frontier development of the industry, scientific research methods, engineering design and manufacturing methods, and the knowledge of the latest development of the related fields.
3. Be able to use innovative thinking to understand, analyze and solve problems independently.

4. Develop the international vision and skills of cross-cultural communication and collaboration.
5. Acquire effective communication and leadership skills in multi-disciplinary teams.
6. Develop rigorous and realistic attitude towards science and research, engagement in pursuing excellence and commitment to serve humanity.
7. Have humanistic and social science literacy, social responsibility and engineering ethics.

Develop the awareness of independent learning and develop the ability of lifelong learning.

III. Study Length and Graduation Requirements

Study length: 4 years

Degree conferred:

The minimum credit requirement for graduation: 142 credits (not including English courses);

Category	Module	Minimum Credit Requirement
General Education (GE) Required Courses (48 credits)	Science	28
	Physical Education	4
	Chinese Languages & Culture	16
General Education (GE) Elective Courses (13 credits)	Humanities	4
	Social Sciences	4
	Arts	2
	Science	3
Major Course (81 credits)	Major Foundational Courses	27
	Major Core Courses	26
	Major Elective Courses	15
	Internship and Undergraduate Thesis / Projects	13
Total (not including English courses)		142

IV. Discipline

Mechanical Engineering (080201)

V. Main Courses

Fundamental Courses of Engineering: CAD and Engineering Drawing, Fundamentals of Electric Circuits, Ordinary Differential Equations B, Engineering Materials - Science, Processing and Design, Mechanics of Materials, Engineering Mechanics I – Statics and Dynamics, Engineering Fluid Mechanics, Engineering Thermodynamics or Heat Transfer, Dynamics and Vibration, Fundamentals of Control Engineering, etc.

Fundamental Courses of Mechanical Engineering: Fundamentals of Mechanical Design, Fundamentals of Manufacturing, Robot Modeling and Control, Fundamentals of Energy Engineering, etc.

Core Courses of Mechanical Engineering: Innovative Design Theory and Practice,

Fundamentals of Precision Machining, Additive Manufacturing and Design, Advanced Manufacturing Systems, Pattern Recognition, Artificial Intelligence, Machine Learning, Actuation System for Robotics, Sensors and Actuators, Mechatronic Systems, Fundamental of fuel cell, New energy system, etc.

VI. Practice-Based Courses

Engineering Training, Experiments, Course Projects, Production Practice, Innovation and Entrepreneurship, Comprehensive Training for Engineers, etc.

VII. Pre-requisites for Major Declaration

Major Declaration Time	Course Code	Course Name	Prerequisite
Declare major at the end of First Year	MA101B	Calculus I A	NA
	MA102B	Calculus II A	MA101BA
	PHY103B	General Physics B (I)	NA
	PHY105B	General Physics B (II)	PHY103B
	MA107A	Linear Algebra A*	NA
	CS102B	Introduction to Computer Programming B*	NA
	CH101B	General Chemistry B*	NA
	PHY104 B	Experiments of Fundamental Physics*	NA
	Notes: 1. At least one of those four courses (marked with *) should be passed. 2. The above courses are the minimum requirements. The high-level courses are also acceptable.		
Declare major at the end of Second Year	MA102B	Calculus II A	MA101BA
	PHY105B	General Physics B (II)	PHY103B
	MA107A	Linear Algebra A	NA
	CS102B	Introduction to Computer Programming B	NA
	ME102	CAD and Engineering Drawing	NA
	ME103	Awareness Practice of Manufacturing Engineering	NA
	EE104	Fundamentals of Electric Circuits	MA101B, MA107A or MA107B
	MAE203B	Engineering Mechanics I – Statics and Dynamics	MA107B
	MA201b	Ordinary Differential Equation B	MA102B
	Notes: The above courses are the minimum requirements. The high-level courses are also acceptable.		

VIII. Requirements for GE Required Courses

(I) Science Module

Course Code	Course Name	Credit	Lab Credits	Hours/week	Term	Instruction Language	Prerequisite	Dept
MA101B	Calculus I A	4		4	1/Fall	E	NA	MATH
MA102B	Calculus II A	4		4	1/Spr	E	Calculus I A	MATH
MA107A	Linear Algebra A	4		4	2/Fall	E	NA	MATH
PHY103B	General Physics B (I)	4		4	2/Spr	E	NA	PHY
PHY105B	General Physics B (II)	4		4	3/Fall	E	General Physics B (I)	PHY
CH101B	General Chemistry B	3		3	1/Spr/Fall	E	NA	CHEM
CS102B	Introduction to Computer Programming B	3	1	4	1/Spr/Fall	E	NA	CSE
PHY104B	Experiments of Fundamental Physics	2	2	4	1/Spr/Fall	E	NA	PHY
Total		**28**	**3**	**31**				

(II) Physical Education

Course Code	Course Name	Credits	Hours/week	Terms	Instruction language	Prerequisite	Dept.
GE131	Physical Education I	1	2	Fall	C	NA	PE Center
GE132	Physical Education II	1	2	Spr	C	NA	
GE231	Physical Education III	1	2	Fall	C	NA	
GE232	Physical Education IV	1	2	Spr	C	NA	
GE331	Physical Education V	0	2	Fall	C	NA	
GE332	Physical Education Ⅵ	0	2	Spr	C	NA	
Total		4	12				

GE131、GE132、GE231、GE232、GE331、GE332 are required PE courses offered by Center For Physical Education. Students are required to select a specific sport program each semester. Student who meets the exemption conditions stated in "SUSTech Physical Education Course Exemption Regulation" can apply for exemption from GE331 and GE332.

(III) Chinese Languages & Culture

Course Code	Course Name	Credit	Hours/week	Term	Language Instruction	Prerequisite	Dept.
CLE008	Elementary Chinese I	2	4	1/Fall	B	NA	CLE
CLE009	Elementary Chinese II	2	4	1/Spr	B	CLE008	
CLE027	Intermediate Chinese I	2	4	2/Fall	B	CLE009	
CLE028	Intermediate Chinese II	2	4	2/Spr	B	CLE027	
CLE031	Advanced Chinese I	2	4	3/Fall	B	CLE028	
CLE032	Advanced Chinese II	2	4	3/Spr	B	CLE031	
CLE033	Chinese Culture	2	2	Spr/Fall	B/E	NA	CLE/ HUM/ SSC
CLE034	Chinese History	2	2	Spr/Fall	B/E	NA	

(IV) English Language

Students will undertake the English Placement Test and be placed into three levels according to the result of the test and their performance in the National College Entrance Exam. Students at different levels are required to take the courses with a different credit value in total.

Level A: 8 credits; SUSTech English III, English for Academic Purposes and 2-credit CLE elective course

Level B: 12 credits; SUSTech English II, SUSTech English III, English for Academic Purposes, and 2-credit CLE elective course

Level C: 14 credits; SUSTech English I, SUSTech English II, SUSTech English III, and English for Academic Purposes.

List of English Language Courses

Course Code	Course Name	Credit	Hours/week	Language Instruction	Prerequisite	Dept	Notes
CLE021	SUSTech English I	4	4	E	NA	CLE	Required
CLE022	SUSTech English II	4	4	E	CLE021		
CLE023	SUSTech English III	4	4	E	CLE022		
CLE030	English for Academic Purposes	2	2	E	CLE023		
/	(at least one 2-credit CLE elective course)	2	2	E	CLE030		Level A & B Required

（VI）Requirements for GE Elective Courses

(I) Students are required to complete 4 credits for the Humanities Module and Social Sciences Module respectively, and 2 credits for the Music and Art Module. (Information about the available courses and the instruction language will be announced before the course selection session)

(II) Students are required to complete 3 credits for Science Module.

Course Code	Course Name	Credit	Lab Credits	Hours / week	Term	Language Instruction	Prerequisite	Dept
MSE102	Frontier Seminars in Materials Science and Engineering	1		1	Spr	1/ Spr	NA	MSE
BIO102B	Introduction to Life Science	3		3	Spr &Fall	1/ Spr &Fall	NA	BIO
BIO104	General Biology Laboratory	2	2	4	Spr &Fall	1 Spr &Fall	BIO102B	BIO
PHYS001	Open Physics Laboratory I	1	1	8	Smr	1/Smr		PHY
MA109	Advanced Linear Algebra	4		4	Fall	2/ Fall	MA107A	MATH
MA212	Probability and Statistics	3		3	Fall	2/ Fall	MA102A or MA102B	MATH
PHY201-15	Physics Laboratory II	2	2	4	Fall	2/ Fall	PHY103B	PHY
PHY221	Open Physics Laboratory II	1	1	2	Fall	2/ Fall		PHY
MA206	Mathematics Modelling	3		3	Spr	2/Spr	MA201a or MA201b	MATH
Total		**20**	**6**	**32**				

X. Major Course Arrangement

Table 1: Major Required Course (Foundational and Core Courses)

Course Category	Course Code	Course Name	Credit	Lab Credits	Hours / week	Term	Advised term to take the course	Instruction language	Prerequisite	Dept.
Major Foundational Courses	ME102	CAD and Engineering Drawing	3	1.5	4.5	Fall/ Spr/ Smr	1/Spr or 1/Smr	B/E	NA	MEE
	EE104	Fundamentals of Electric Circuits	2		2	Fall/ Spr	1/ Spr or 2/Fall	C/E	MA101B, MA107B	EE
	ME103	Awareness Practice of Manufacturing Engineering	3	2	5	Fall/ Spr /Smr	1/Smr	B/E	NA	MEE
	ME261	Engineering Materials - Science, Processing and Design*	3		3	Spr	2/Spr	B/E	PHY105B, CH101B	MEE
	MSE001	Fundamentals of Materials Science and Engineering*	3		3	Fall/ Spr	2/ Fall	E	PHY105B, CH101A	MSE
	MAE203B	Engineering Mechanics I – Statics and Dynamics	3		3	Fall	2/ Fall	E	MA107B	MAE
	MA201b	Ordinary Differential Equation B	4	1	5	Fall/ Spr	2/Spr	B	MA102B	MATH
	MAE202	Mechanics of Materials**	3		3	Spr	2/Spr	E	MA107A, MA102B	MAE
	MAE207	Engineering Fluid Mechanics	3		3	Fall/ Spr	3/ Fall	B	MA102B	MAE
	MAE305	Engineering Thermodynamics***	3		3	Fall	2/ Fall	B	MA102B	MAE
	MAE308	Heat Transfer***	3		3	Spr	3/Spr	E	MA102B	MAE
	Total		33	4.5	37.5					
Notes: *Must complete one of the following courses, ME261 Engineering Materials - Science, Processing and Design or MSE001Fundamentals of Materials Science and Engineering. ** Students who select MSE213 Mechanics of Materials-B can be identified as MAE202 Mechanics of Materials. *** Must complete one of the following courses, MAE305 Engineering Thermodynamics or MAE308 Heat Transfer. The above courses are the minimum requirements. The high-level courses are also acceptable.										
Major Core Courses	ME303	Fundamentals of Machine Design	3	1	4	Fall/ Spr	3/Fall	B/E	ME102, MAE203B, MAE202	MEE
	ME307	Fundamentals of Control Engineering	3	0.5	3.5	Fall/ Spr	3/ Fall	B/E	EE104	MEE
	ME301	Dynamics and Vibration*	3	1	4	Fall/ Spr	3/Spr	B/E	MAE203B, MA201b	MEE
	ME313	Product Design Practice	3	1	4	Spr	3/Spr	B/E	ME303 or ME331 or ME306	MEE
	ME302	Fundamentals of Manufacturing	3		3	Fall/ Spr	3/Spr	B/E	ME103, ME303	MEE
	ME308	Advanced Manufacturing Practice	2	2	4	Fall	4/Fall	B/E	ME302	MEE

	ME304	Fundamentals of Energy Engineering**	3	0.5	3.5	Fall/ Spr	3/Spr	B/E	Me261 or MSE001, MAE207 or MAE305 or MAE308	MEE
	ME331	Robot Modeling and Control**	3		3	Fall/ Spr	3/Fall	B/E	MAE203B	MEE
	ME453	Fundamentals of Precision Machining**	3	1	4	Fall	4/Fall	B/E	ME261 or MSE001	MEE
	Total		26	6	32					
	Notes: *MAE314 Theory of Vibration can be identified as ME301 Dynamics and Vibration. ** Must complete one of the following courses, ME304 Fundamentals of Energy Engineering, ME331 Robot Modeling and Control, ME453 Fundamentals of Precision Machining. The above courses are the minimum requirements. The high-level courses are also acceptable.									
	The following courses are for students in the direction of Innovative Design and Advanced Manufacturing. The minimum credit requirement is 6 credits. The extra credits can be identified as the module of MEE Major Elective Courses.									
	ME310	Fundamentals of Measurement Technology	3		3	Spr	3/Spr	B/E	ME307	MEE
	ME405	Innovative Design Theory and Practice	3	1	4	Fall	4/Fall	B/E	ME303, ME313	MEE
	ME462	Additive Manufacturing and Design	3		3	Fall	4/Fall	B/E	ME302	MEE
	ME451	Advanced Manufacturing Systems	3		3	Spr	4/Spr	B/E	ME302	MEE
	Total		12	1	13					
	The following courses are for students in the direction of Robotics and Automation. The minimum credit requirement is 6 credits. The extra credits can be identified as the module of MEE Major Elective Courses. Notes: * Must complete one of the following courses, EE423-14 Pattern Recognition, CS303B Artificial Intelligence B, CS405 Machine Learning， ME336 Collaborative Robot Learning ,ME338 Machine Learning for Engineering. ** Must complete one of the following courses, ME321 Sensors and Actuators, ME322 Actuation System for Robotics.									
	EE423-14	Pattern Recognition*	3	1	4	Fall	3/ Fall	B	MA107A, EE205, MA212	EE
	CS303B	Artificial Intelligence B*	3	1	4	Fall	3 Fall	B	CS102B, CS203B, MA212	CS
	CS405	Machine Learning*	3	1	4	Fall	4/ Fall	B	MA107A, MA212	CS
	ME336	Collaborative Robot Learning*	3	1	4	Spr	3/Spr	E	ME306 or ME331	MEE
	ME338	Machine Learning for Engineering*	3		3	Fall	4/Fall	B	MA212、CS102B、MA107A	MEE
	ME321	Sensors and Actuators**	3	1	4	Spr	2/Spr	E	EE104	MEE
	ME322	Actuation System for Robotics**	3	1	4	Fall	3/Fall	E	MA102B	MEE
	ME333	Mechatronic Systems	3	1	4	Fall / Spr	3/ Spr	E	ME331	MEE
	ME424	Modern Control and Estimation	3		3	Fall	4/ Fall	E	ME307	MEE
	Total		27	7	34					
	The following courses are for students in the direction of New Energy Engineering. The minimum credit requirement is 6 credits. The extra credits can be identified as the module of MEE Major Elective Courses. Notes： *MSE334 Introduction to Energy Materials and MSE336 Experiments for Energy Materials must study in the same semester according to the requirements of MSE.									
	ME485	Fundamental of fuel cell	3		3	Fall	4/Fall	B/E	ME304	MEE

	ME483	New energy system	3		3	Spr	4/ Spr	B/E	ME304	MEE
	MSE334	Introduction to Energy Materials*	2		2	Spr	3/Spr	E	MSE001	MSE
	MSE336	Experiments for Energy Materials*	1	1	2	Spr	3/Spr	E	MSE001	MSE
	MSE320	Introduction to Photovoltaics and Photo-thermal	3		3	Spr	3/Spr	B	PHY105B, MSE205 EE201	MSE
	Total		12	1	13					
Practice-based Courses	ME491	Practice	3	3	6				NA	MEE
	ME492	Innovation and Entrepreneurship: Practice and Principles	2	2	4				NA	MEE
	ME493	Senior Project*	8	8	16	Spr	4/Spr		NA	MEE
	Total		13	13	26					
Notes: *Students who have completed Comprehensive Design Ⅰ&Ⅱ (COE491 & COE492) are not required to take the Senior Project (ME493).										

Table 2: Major Elective Courses

Course Code	Course Name	Credits	Lab Credits	Hours / week	Term	Advised term to take the course	Instruction language	Prerequisite	Dept.
ME112	Introduction to Matlab	2	1	3	Spr	1/Spr	E	NA	MEE
ME232	Prolegomenon to Robotics	3		3	Spr	1/Spr	E	NA	MEE
ME262	Introduction to Soft Matter	3		3	Spr	1/Spr	E	NA	MEE
MEE5002	Fundamentals and practices of project management	3		3	Fall	2/Fall	C	NA	MEE
ME211	Advanced Graphics and Computer Aided Design	2	1	3	Fall	2/Fall	E	ME102	MEE
ME111	Prolegomenon to Engineering	3	1	4	Fall	2/Fall	B	NA	MEE
MEE5116	Advanced Kinematics and Dynamics of Mechanisms	3		3	Spr	3/Spr	B	ME306 or ME331	MEE
ME314	Finite Element Theory and Its Engineering Applications	3		3	Spr	3/Spr	E	MAE202, MA107A	MEE
Total		**22**	**3**	**25**					
Notes: The minimum requirement for graduation in this Engineering Foundation Major Elective Courses module is three credits.									
MES300	Awareness Practice of Mechanical Engineering	1	1	2	Smr	1/ Smr	B	NA	MEE
ME354	Manufacturing Process Simulation and Data Analysis	2	1	3	Fall	3/Fall	B	ME103	MEE
MEE5304	Frontiers in Hybrid Manufacturing Processes	3		3	Fall	3/Fall	B	ME302	MEE
ME364	3D Printing of Functional Soft Materials: Fundamentals, Engineering and Applications	3		3	Fall	3/Fall	B	MSE001 or ME261	MEE
ME361	Fundamentals of Additive Manufacturing of Metals	3		3	Spr	3/Spr	B	MSE001 or ME261	MEE
MEE5108	Microrobotics	3		3	Spr	3/Spr	C	ME307	MEE
MEE5107	Microfabrication and Microsystems	3		3	Spr	3/Spr	C	ME307	MEE
MEE5211	Fundamental and Application of Advanced Composite Materials	3		3	Spr	3/Spr	B	PHY105B	MEE
MEE5210	Microstructure Characterization and Analysis	3		3	Spr	3/Spr	B	CH101B, PHY105B	MEE
MEE5405	Solar Thermal Energy Utilization Technologies	3		3	Spr	3/Spr	E	MA102B	MEE
ME332	Robot Operating System	3	1	4	Spr	3/Spr	B	CS102B	MEE
MEE5103	Walking Robot	3	0.5	3.5	Spr	3/Spr	C	ME306 or ME331	MEE
MEE5215	Flexible and Wearable Electronics: Design and	3		3	Spr	3/Spr	E	ME261 or MSE001	MEE

	Fabrication Techniques								
MEE5406	Principle and technology of energy storage	3		3	Spr	3/Spr	C	NA	MEE
MEE5205	Failure Analysis and Fracture Mechanics of Engineering Materials	3		3	Fall	4/Fall	B	MSE305 or MAE202	MEE
MEE5105	Fundamentals of Engineering Optimization	3		3	Fall	4/Fall	E	MA102B、MA107B	MEE
MEE5110	Soft Robotics	3		3	Fall	4/Fall	B	ME303	MEE
MEE5115	Autonomous Robitc Systems	3		3	Fall	4/ Fall	E	MA107A, MA212	MEE
MEE5214	Fundamental Physics of Soft Matter	3		3	Fall	4/Fall	E	PHY105B、MA101B	MEE
MEE5216	Soft Functional Materials and 4D Printing	3		3	Fall	4/Fall	E	NA	MEE
MEE5218	Engineering structure analysis and properties	3		3	Fall	4/Fall	E	NA	MEE
MEE5407	Principle of solar to electricity and solar photochemistry conversion	3		3	Fall	4/Fall	E	NA	MEE
MEE5305	Fundamentals and Applications of Plasma	3		3	Spr	4/Spr	B	ME302	MEE
MEE5308	Physical and chemical machining	3		3	Spr	4/Spr	B	ME302	MEE
Total		**69**	**3.5**	**72.5**					

Notes:

1. The minimum requirement for graduation in this module of MEE Major Elective Courses is 9 credits.
2. In addition to the above courses, students should also study optional courses under the guidance of tutor, with a minimum of 3 credits. Optional courses should be mathematics or engineering courses and similar courses shall not be counted twice

Table 3: Overview of Practice-Based Courses

Course Code	Course Name	Credits	Lab Credits	Hours / week	Term	Advised term to take the course	Instruction language	Prerequisite	Dept.
ME102	CAD and Engineering Drawing	3	1.5	4.5	Fall/Spr/ Smr	1/Spr or 1/Smr	B/E	NA	MEE
ME103	Awareness Practice of Manufacturing Engineering	3	2	5	Fall/Spr /Smr	1/Smr	B/E	NA	MEE
MA201b	Ordinary Differential Equation B	4	1	5	Fall/Spr	2/Spr	B	MA102B	MATH
ME303	Fundamentals of Machine Design	3	1	4	Fall/Spr	3/Fall	B/E	ME102, MAE203B, MAE202	MEE
ME307	Fundamentals of Control Engineering	3	0.5	3.5	Fall/Spr	3/ Fall	B/E	EE104	MEE
ME301	Dynamics and Vibration	3	1	4	Fall/Spr	3/Spr	B/E	MAE203B, MA201b	MEE
ME313	Product Design Practice	3	1	4	Spr	3/Spr	B/E	ME303 or ME331 or ME306	MEE
ME308	Advanced Manufacturing Practice	2	2	4	Fall	4/Fall	B/E	ME302	MEE
ME304	Fundamentals of Energy Engineering	3	0.5	3.5	Fall/Spr	3/Spr	B/E	Me261 or MSE001, MAE207 or MAE305 or MAE308	MEE
ME405	Innovative Design Theory and Practice	3	1	4	Fall	4/Fall	B/E	ME303, ME313	MEE
EE423-14	Pattern Recognition	3	1	4	Fall	3/ Fall	B	MA107A, EE205, MA212	EE
CS303B	Artificial Intelligence B	3	1	4	Fall	3 Fall	B	CS102B, CS203B, MA212	CS
CS405	Machine Learning	3	1	4	Fall	4/ Fall	B	MA107A, MA212	CS
ME336	Collaborative Robot Learning	3	1	4	Spr	3/Spr	E	ME306 or ME331	MEE
ME321	Sensors and Actuators	3	1	4	Spr	2/Spr	E	EE104	MEE
ME322	Actuation System for Robotics	3	1	4	Fall	3/Fall	E	MA102B	MEE
ME333	Mechatronic Systems	3	1	4	Fall / Spr	3/ Spr	E	ME331	MEE
MSE336	Experiments for Energy Materials	1	1	2	Spr	3/Spr	E	MSE001	MSE
ME112	Introduction to Matlab	2	1	3	Spr	1/Spr	E	NA	MEE
ME211	Advanced Graphics and Computer Aided Design	2	1	3	Fall	2/Fall	E	ME102	MEE
ME111	Prolegomenon to Engineering	3	1	4	Fall	2/Fall	B	NA	MEE
MES300	Awareness Practice of Mechanical Engineering	1	1	2	Smr	1/ Smr	B	NA	MEE
ME354	Manufacturing Process Simulation and Data	2	1	3	Fall	3/Fall	B	ME103	MEE

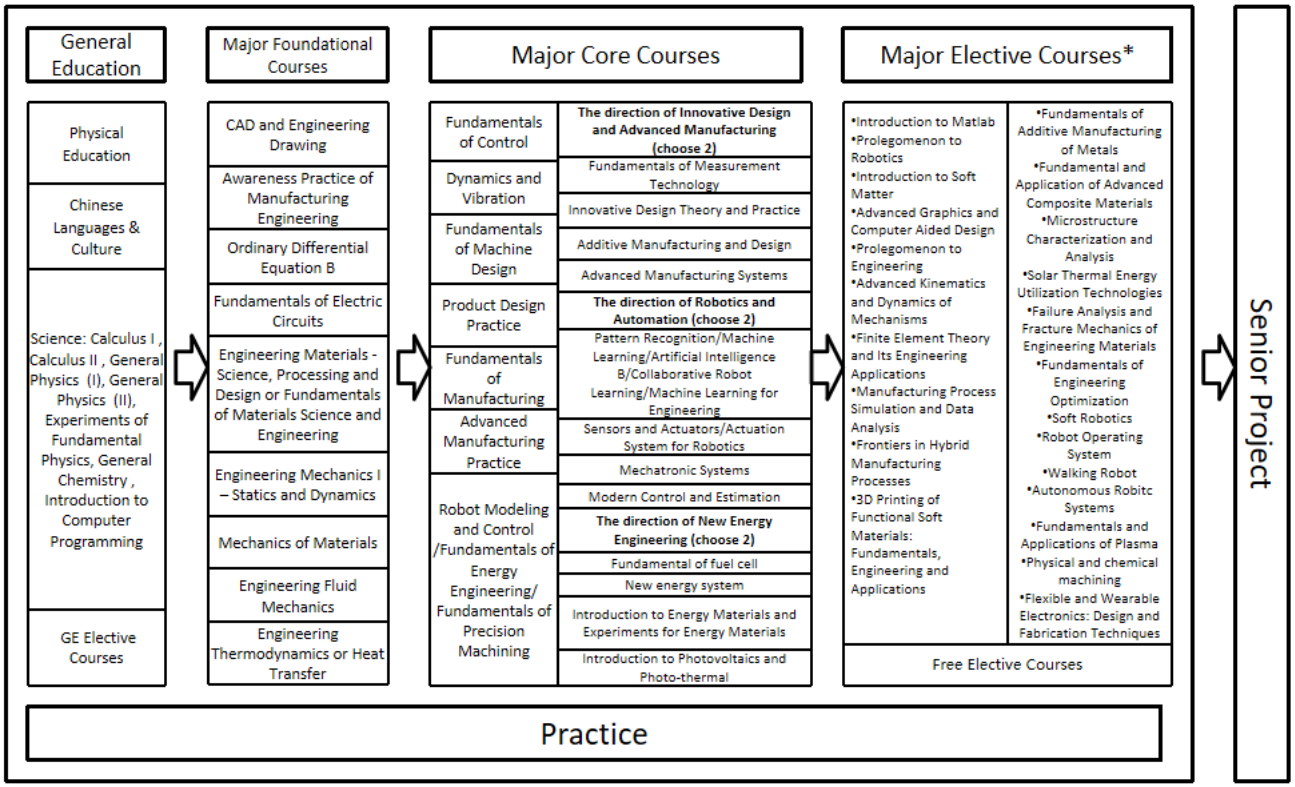
	Analysis								
ME332	Robot Operating System	3	1	4	Spr	3/Spr	B	CS102B	MEE
MEE5103	Walking Robot	3	0.5	3.5	Spr	3/Spr	C	ME306 or ME331	MEE
ME491	Practice	3	3	6				NA	MEE
ME492	Innovation and Entrepreneurship: Practice and Principles	2	2	4				NA	MEE
ME493	Senior Project	8	8	16	Spr	4/Spr		NA	MEE
Total		**81**	**39**	**120**					

Table 4: Overview of Course Hours and Credits

Course Category	Total Course Hours	Total Credits	Credit Requirements	Percentage of the Total*
General Education (GE) Required Courses (not including English courses)	1136	48	48	33.80%
General Education (GE) Elective Courses			13	9.15%
Major Foundational Courses	600	33	27	19.01%
Major Core Courses	1472	77	26	18.31%
Major Elective Courses	1560	91	15	10.56%
Research Projects, Internship and Undergraduate Thesis/Projects	416	13	13	9.15%
Total (not including English courses)	5184	262	**142**	100%

***** Percentage of the total= Credit requirements of each line / Total credit requirements

Curriculum Structure of Mechanical Engineering



Notes*: Major Elective Courses only list some courses, all courses are detailed in the program