Entering Class of 2015

DEGREE REQUIREMENTS FOR UNDERGRADUATE STUDENTS

College of Engineering, Seoul National University

Course Classification



 Credited as Major Electives for Dept. of Mechanical and Aerospace Engineering Major Courses for College of Engineering & College of Natural Sciences, Below Designated 10 Subjects for Department of Business Administration

 251.101 Principles of Management, 251.204A Intermediate Accounting 1, 251.205 Principles of Accounting, 251.209 Organizational Behavior, 251.215 Organization Structure, 251.301 Financial Management, 251.303 Human Resource Management, 251.322 Contemporary Management Theories, 251.321 Marketing Management, 251.322 International Business Management

II Credit Requirements



★ Double Majors, Minors, Interdisciplinary Majors, Combined Minors and Student-designed Minors

- ※ Academic Rules in SNU Article 83 (Credits to earn)
 - ① Students are allowed to earn credits when they receive a D− or above for a course. Students must obtain above 2.0 in overall GPA & GPA for Major Courses (including Double majors, Minors, interdisciplinary majors, combined minors and student-designed minors) to graduate
- ※ Academic Rules in SNU Article 7 (Credits per semester)
 - ① Maximum 18 credits per semester are alloeded to take.
 - 2 Maximum 21 Credits per semester are allowded to take for students who received GPA 3.3 or higher for the Previous 2 semesters each.
- ※ Academic Rules in College of Engineering Students must take 3 courses conducted in Foreign Language including 1 Major course (Excluding 'College English')

GE Course Requirements

GE		Minimum 40 Credits					
Categories	Areas	Required courses [YrSem.] Credits			Comments		
Academic Foundations	Critical Thinking and Writing	[1-2] College Writing: Process & 3 Structure					
	Foreign Languages	1-1,2] 2 courses or more 4-6			• Students with a TEPS score of 900 and below upon matriculation must take at least one English course.		
	Mathematical Sciences	[1-1] Calculus 1 or Honor Calculus and Practice 1	3	3			
		[1-2] Calculus 2 or Honor Calculus and Practice 2	3	3			
		[2-1] Engineering Mathematics 1	3	3			
		[2-2] Engineering Mathematics 2	3	3			
	Natural Sciences	[1-1] (Honor) Physics 1, Physics Lab. 1	Z	1	• Students taking (Honor)		
		[1-2] (Honor) Physics 2, Physics Lab. 2	2	1			
		[1-1,2] 4 Credits or more from among Chemistry 1·2, Biology 1·2, Chemistry, Biology, (Statistics), Chemistry Lab. 1·2, Biology Lab. 1·2, Chemistry Lab., Biology Lab., Statistics Lab.	4		 Physics 1, 2, Chemistry 12, Biology 1.2, Chemistry, Biology, (Statistics) must take corresponding labs concurrently. Students who didn't complete Physics 1,2 in High school may take Foundation of Physics 1, 2 instead of Physics 1, 2. Note that Physics Lab.1, 2 must be taken concurrently with the corresponding courses. 		
	Computer and Information Science	[2-1] Digital Computer Concept and Practice	3				
Worlds of Knowledge	Language and Literature						
	Culture and Art		*(3) 6 *(3)		 Minimum 6 Credits in at least 2 out of 5 areas(Language and Literature, Culture and Art History and 		
	History and Philosophy						
	Politics and Economy				Philosophy, Politics and		
	Humans and Society				Economy, mumans and Society)		
	Nature and Technology				* Refer to the information		
	Life and Environment						

st Numbers in brackets indicate semester scheduling recommendations.

- * For students entered in 2014 and thereafter, the required 3 credits in 'Courses for Entrepreneurship' can be substituted with courses in 'Humans and Society' from <Worlds of Knowledge>, and the required 3 credits in 'Courses for Creativity' can be substituted with courses in 'Culture and Art' from <Worlds of Knowledge>.
- ※ Although (Statistics), (Statistics Lab.) are included in Mathematical Sciences, they are counted towards Natural Sciences credit requirements.
- When students are exempt from taking 'Fundamentals of Computer System, Digital Computer Concept and Practice', they are recognized as fulfilling the minimum credit requirements in Academic Foundations (Computer and Information Science) even when the students did not earn the required credits. Regardless, students must meet the minimum general education credit requirements.
- Aside from the above General Education requirements, the students entered in 2013 and thereafter must earn 3 credits from both 'Courses for Entrepreneurship' and 'Courses for Creativity', which are designated by College of Engineering, totaling 6 credits. (Students must consult with the department about the requirement)

Group	Subjects			
Subjects for Entrepreneurship	GE)046.018Technology and EnterpriseGE)054.027Entrepreneurship and EconomyGE)046.017Technology and EconomyGE)054.025Engineering Ethics and LeadershipGE)054.028Patent and Technology EntrepreneurshipMajor)400.212Technology and EntrepreneurshipMajor)400.025Modern Technology and Ethical ThinkingMajor)400.513History of Engineering and TechnologyMajor)400.213Innovation and Creativity PracticeMajor)M2177.000100Management for Engineers			
Subjects for Creativity	 GE) 054.019 A Glance at Korean Contemporary Urbanism and Architecture GE) 054.021 Creativity and Design GE) 054.022 Technology and Art: Exhibit Art Engineering GE) 054.020 The Science of Sound, and Experience of Music Instrument Design and Evantation 400.018 Creative Engineering Design Major) 400.318 Digital Art Engineering Major) 406.549 Creative Technology Intelligence Major) 406.324A Creative Thinking for Engineers 	aluation		

IV Major Course Requirements in Mechanical Engineering

	Recommended Tracks for Undergraduate Majors in Mechanical Engineering					
Yr./Sem	Spring Semester	Fall Semester				
1 st		400.018 Creative Engineering Design				
2 nd	M2794.001000* Solid Mechanics*	400.003 Engineering Mathematics 3				
	M2794.001100* Thermodynamics* (446.202A)	M2794.001400 Mechanics and Design (446.203A)				
		M2794.001200* Dynamics*				
		M2794.001300* Fluid Mechanics*				
3 rd	M2794.001500* Mechanical Engineering Lab. 1* (446.302) or Mechanical Engineering Lab. 2* (446.304) Mechanical Engineering Lab. 2*	M2794.001500* Mechanical Engineering Lab. 1* M2794.001600* or M2794.001600* Mechanical Engineering Lab. 2*				
	M2794.001700* (446.303A) Mechanical Product Design*	M2794.001800* (446.305B) Materials and Manufacturing Processes*				
	M2794.001900 Mechanical Vibrations (446.307C)	M2794.002100 Theories of Control System (446.310)				
	M2794.002000 (446.308A) Applied Fluid Mechanics	M2794.002200 Applied Thermodynamics (446.311A)				
	M2794.002300 Internal Combustion Engines	M2794.002400 CAD/CAM (446.326A) CAD/CAM				
	M2794.002500 (446.328) System Analysis in Mechanical Engineering	M2794.002900 MEMS in Mechanical Engineering (446.355)				
	M2794.002600 (446.343) Heat Transfer					
	M2794.002700 Introduction to Robot Engineering					
	M2794.002800 (446.353) Introduction to Sensors					
	Required 1 Subject from among below 4 Extradepartu 400.015 Introduction to Industrial Engineering, 400.019 400.020 Introduction to Materials Science and Engine Engineering	mental Courses A Introduction to Electrical and Computer Engineering, ering, 400.023 Introduction to Chemical and Biological				
4 th	M2794.003000 (446.401A) Computer Simulation and Design	M2794.003100 Mechatronics System Design and Laboratory				
	M2794.003200 Environmental Thermodynamics	M2794.003300 (446.406) Automotive Engineering				
	M2794.003600 (446.427A) Optimal Design	M2794.003400 (446.414A) Optimal Design of Energy Systems				
	M2794.003700 (446.451) Introduction to Sound System Engineering	M2794.003500 (446.422A) Micro Manufacturing				
	M2794.003800 (446.453) Flow and Design	M2794.003900 (446.464) Flow in Life Systems				
	M2794.004000 (446.467) Micro-nano Mechanics	M2794.004300 (446.472) Mechanical System Design Project 2				
	M2794.004200 (446.471) Mechanical System Design Project 1	M2794.004400 Integrated Mechanical Design and Analysis (446.475)				
	M2794.004500 (446.476A) Management in Mechanical Engineering 1	M2794.004600 (446.477) Management in Mechanical Engineering 2				
		$\binom{\text{M2794.004700}}{(446.478)}$ Biomechanics and its Applications in Mechanical Engineering				

STOUL NATIONAL UNIVERSITY DEPARTMENT OF MECHANICAL & AEROSPACE ENGINEERING

- Recommended Tracks for Undergraduates in Mechanical Engineering are applied to Students admitted in and after 2014. Students admitted in or before 2013 must follow the previous Recommended Tracks.
- X Course Requirements for Mechanical Engineering
- ① Students must take 400.018 Creative Engineering Design
- ② Students must take 1 Subject from below 4 Extradepartmental Courses
 - 400.015 Introduction to Industrial Engineering
 - 400.019A Introduction to Electrical and Computer Engineering
 - 400.020 Introduction to Materials Science and Engineering
 - 400.023 Introduction to Chemical and Biological Engineering

③ Students must take 3 Subjects from below 6 Subjects.

- M2794.001400(446.203A) Mechanics and Design
- M2794.002500(446.328) System Analysis in Mechanical Engineering
- M2794.002600(446.343) Heat Transfer
- M2794.004000(446.467) Micro-nano Mechanics
- M2794.003100(446.402B) Mechatronics System Design and Laboratory
- M2794.002000(446.308A) Applied Fluid Mechanics
- ④ Students must take M2794.004200(446.471) Mechanical System Design Project 1, M2794.004300(446.472) Mechanical System Design Project 2. (1 subject per semester)
- ⑤ Students must follow Regulations for Dept. of in Mechanical & Aerospace Engineering

The above Course Requirements apply to Students admitted in 2014, Students admitted in or before 2013 must follow the previous Requirements.

Course Requirements for Double Majors & Course Requirements for Minor : Students must follow Regulations for Dept. of in Mechanical & Aerospace Engineering or Major in Mechanical Engineering. V

Major Course Requirements in Aerospace Engineering

Yr./Sem	Spring Semester		Fall Semester			
1 st Yr.			400.018	Creative Engineering Design		
2 nd Yr.	M2795.008600*	Solid Mechanics in Aerospace Engineering 1*	M2795.001800* (446.323A)	Aerodynamics*		
	M2795.002000*	Aerospace Thermodynamics*	M2795.002100*	Dynamics*		
	M2795.002200*	Introduction to Aerospace Engineering*	M2795.008700	Solid Mechanics in Aerospace Engineering 2		
3 rd Yr.	M2795.002300* (446.321)	Compressible Fluid Flow*	M2795.002500* (446.340)	Jet Propulsion*		
	M2795.002600* (446.341)	Principles of Flight Vehicle Control*	M2795.002400* (446.322)	Mechanics of Aerospace Structures*		
	M2795.002700*	Aerospace Engineering Lab. 1*	M2795.002800*	Aerospace Engineering Lab. 2*		
	M2795.002900 (446.324)	Aircraft and Spacecraft Vibrations	M2795.003300 (446.357)	Aerospace Sensor Systems		
	M2795.003100	Linear Algebra for Aerospace Engineering	M2795.003400 (446.358)	Introductory Engineering Probability		
	M2795.003200 (446.325)	Space Dynamics				
	Required 1 Subject from among below 4 Extradepartmental Courses - 400.015 Introduction to Industrial Engineering, 400.019A Introduction to Electrical and Computer Engineering, 400.020 Introduction to Materials Science and Engineering, 400.023 Introduction to Chemical and Biological Engineering					
4 th Yr.	M2795.003000	Aerospace Combustion	M2795.003800 (446.432)	Aircraft Conceptual Design		
	M2795.003700 (446.435)	Noise Engineering	M2795.004500 (446.452)	Flight Dynamics and Control		
	M2795.003600	Viscous Fluid Flow	M2795.003500	Fundamentals of Computational Fluid Dynamics		
	M2795.004100 (446.479)	Micro and Nanotechnology for Aerospace Systems	M2795.003900	Spacecraft Mission Analysis and Design		
	M2795.004400 (446.456)	High Energy Thermofluid Dynamics	M2795.004200	Applied Mathematics for Aerospace Engineering		
	M2795.008300	Computational Structural Analysis	M2795.004300 (446.439)	Rocket Propulsion		
	M2795.004700	Artificial Satellite Engineering	M2795.004600 (446.433B)	Air Traffic Control and Navigation System		
	M2795.008200 (446.455)	Helicopter Engineering	M2795.004800	Telecommunications and Sensing		
	M2795.004900 (446.473A)	Integrated Design of Aerospace System 1	M2795.005000 (446 474A)	Integrated Design of Aerospace System 2		

Recommended Tracks for Undergraduate Majors in Aerospace Engineering

SEOUL NATIONAL UNIVERSITY DEPARTMENT OF MECHANICAL & AEROSPACE ENGINEERING

- ※ Recommended Tracks for Undergraduates in Mechanical Engineering are applied to Students admitted in and after 2014. Students admitted in or before 2013 must follow the previous Recommended Tracks.
- * Course Requirements for Aerospace Engineering
- ① Students must take 400.018 Creative Engineering Design
- 2 Students must take 1 Subject from below 4 Extradepartmental Courses
- 400.015 Introduction to Industrial Engineering
- 400.019A Introduction to Electrical and Computer Engineering
- 400.020 Introduction to Materials Science and Engineering
- 400.023 Introduction to Chemical and Biological Engineering
- ③ Students must take M2795.002700 Integrated Design of Aerospace System 1, M2795.002800 Integrated Design of Aerospace System 2.
- ④ Students must follow Regulations for Dept. of in Mechanical & Aerospace Engineering or Major in Mechanical Engineering.

The above Course Requirements apply to Students admitted in 2014, Students admitted in or before 2013 must follow the previous Requirements.

X Course Requirements for Double Majors & Course Requirements for Minor : Students must follow Regulations for Dept. of in Mechanical & Aerospace Engineering or Major in Mechanical Engineering.

