

IPSE UG Students Enrolled in Fall 2010 through 2017

Summary Table of Changes in IPSE Group C Courses Offered by Dept. of Modern Mechanical Engineering, School of Creative Sci. & Eng.

For Fall 2020 course registration periods

* You need to earn credits of Group C courses provided as "required", "elective required" or "elective" for your enrollment year. Please refer to column [A], [B], [C] or [D] here below **according to your enrollment year**. Also check the relevant pages of your enrollment year's Handbook.

[A] Curriculum for Students Enrolled in Fall 2010	[B] Curriculum for Students Enrolled in Fall 2011	[C] Curriculum for Students Enrolled in Fall 2012/ 2013/ 2014	[D] Curriculum for Students Enrolled in Fall 2015/ 2016/2017	Number of credits	Number of class hours per week (* a 90-minute long class (per week) is shown as 2 (hours) in the table below)								Current Course Availability by Your Enrollment Year				Note
					First year		Second year		Third year		Fourth year		O: available X: not available *: conditionally available (see Note section)				
					Fall sem.	Spring sem.	Fall sem.	Spring sem.	Fall sem.	Spring sem.	Fall sem.	Spring sem.	For students enrolled in 2010	For students enrolled in 2011	For students enrolled in 2012/ 2013/ 2014	For students enrolled in 2015/ 2016/2017	
Graduation Thesis A	Graduation Thesis A	Graduation Thesis A	Graduation Thesis A	3							⊙		O (required)	O (required)	O (required)	O (required)	
Graduation Thesis B	Graduation Thesis B	Graduation Thesis B	Graduation Thesis B	3								⊙	O (required)	O (required)	O (required)	O (required)	
-	Introduction to Computer Science	-	-	2	2	2							X	*	X	X	* originally allocated to fall semester of 1st year, but from spring 2013, CHANGED TO spring semester of 1st year. * Another class available from fall 2014; allocated to 1st year. * for fall semester 2015, there is only one class available. * for students enrolled in fall 2012, fall 2013, fall 2014 & fall 2015, this course replaced "Introduction to Computer Science (spring, 1st year)" classified as a Group B Required course from fall 2012.
-	Modeling	-	-	2		2							X	X	X	X	* course cancelled from spring 2014
-	-	-	Statics, Kinematics and Dynamics of Mechanisms	2	2								O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2016; allocated to 1st year. * originally allocated to spring semester of 1st year, but CHANGED TO fall semester of 1st year (available from fall 2016).
-	Visual Thinking	Visual Thinking	Visual Thinking	2		4							⊖ (elective required)	⊖ (elective required)	⊖ (elective required)	⊖ (elective required)	* new course available from spring 2012; allocated to 1st year. * course cancelled from spring 2017.
-	-	-	Modeling and Analysis of Dynamic Systems	2		2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2016; allocated to 1st year.

[A]	[B]	[C]	[D]	Number of credits	Number of class hours per week (* a 90-minute long class (per week) is shown as 2 (hours) in the table below)								Current Course Availability by Your Enrollment Year				Note	
					First year		Second year		Third year		Fourth year		O: available X: not available *: conditionally available (see Note section)					
					Fall sem.	Spring sem.	Fall sem.	Spring sem.	Fall sem.	Spring sem.	Fall sem.	Spring sem.	For students enrolled in 2010	For students enrolled in 2011	For students enrolled in 2012/ 2013/ 2014	For students enrolled in 2015/ 2016/2017		
Environmental Impact Assessment and Technology for Environment A	Environmental Impact Assessment and Technology for Environment A	Environmental Impact Assessment and Technology for Environment A	-	2			2							X	X	X	X	* course cancelled from fall 2012.
Mechanical Design A > Material Mechanics for Mechanical Design A	Mechanical Design A > Material Mechanics for Mechanical Design A	Mechanical Design A > Material Mechanics for Mechanical Design A	Mechanical Design A > Material Mechanics for Mechanical Design A	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* course name changed from fall 2016. * those who have already earned the credit of Mechanical Design A cannot take Material Mechanics for Mechanical Design A.
Fundamentals of Robotics A	Fundamentals of Robotics A	Fundamentals of Robotics A	Fundamentals of Robotics A	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	
Environmental Management A > Environmental Management	Environmental Management A > Environmental Management	Environmental Management A > Environmental Management	-	2			2							X	X	X	X	* course name changed (omitting "A") from fall 2011 * course cancelled from fall 2012
-	-	-	Control Systems	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2016; allocated to 1st year.
Environmental Management B > Thermodynamics > Engineering Thermodynamics	Environmental Management B > Thermodynamics > Engineering Thermodynamics	Environmental Management B > Thermodynamics > Engineering Thermodynamics	Engineering Thermodynamics	2			4							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* course name changed from spring 2012. * course name changed from spring 2013. * originally allocated to spring semester of 2nd year, but CHANGED TO fall semester of 2nd year (available from fall 2013). * number of class hours per week to be changed from 2 to 6 (from fall 2013). * those who have already earned the credit of Environmental Management B or Thermodynamics cannot take Engineering Thermodynamics.
Environmental Impact Assessment and Technology for Environment B	Environmental Impact Assessment and Technology for Environment B	Environmental Impact Assessment and Technology for Environment B	-	2			2							X	X	X	X	* course cancelled from spring 2013.
Mechanical Design B > Material Mechanics for Mechanical Design B	Mechanical Design B > Material Mechanics for Mechanical Design B	Mechanical Design B > Material Mechanics for Mechanical Design B	Mechanical Design B > Material Mechanics for Mechanical Design B	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* course name changed from spring 2016. * those who have already earned the credit of Mechanical Design B cannot take Material Mechanics for Mechanical Design B.
Fundamentals of Robotics B	Fundamentals of Robotics B	Fundamentals of Robotics B	Fundamentals of Robotics B	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	
-	Fluid Dynamics A	-	-	2			2							X	X	X	X	* course cancelled from fall 2012.
-	-	Fluid Dynamics	Fluid Dynamics	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2012; allocated to 2nd year. * course cancelled from spring 2017
-	-	-	Fluid Dynamics F	2			4							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2017; allocated to 2nd year.
-	Seminar A	Seminar A	Seminar A	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2012; allocated to 2nd year.
-	Mechatronics Laboratory A	Mechatronics Laboratory A	Mechatronics Laboratory A	2			4							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2012; allocated to 2nd year. * Not available for spring 2020.
-	Engineering Practice A	Engineering Practice A	Engineering Practice A	2			4							O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2012; allocated to 2nd year.

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					First year		Second year		Third year		Fourth year		O: available X: not available *: conditionally available (see Note section)					
					Fall sem.	Spring sem.	Fall sem.	Spring sem.	Fall sem.	Spring sem.	Fall sem.	Spring sem.	For students enrolled in 2010	For students enrolled in 2011	For students enrolled in 2012/ 2013/ 2014	For students enrolled in 2015/ 2016/2017		
-	-	-	Mechanical Design and Machining	2				2						O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2016; allocated to 2nd year. * Not available for spring 2017 * Not available for spring 2018 * Not available for spring 2019 * Not available for spring 2020
-	Fluid Dynamics B	-	-	2					2					X	X	X	X	* course cancelled from fall 2012.
-	Seminar B	Seminar B	Seminar B	2					2					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from fall 2012; allocated to 3rd year.
-	Mechatronics Laboratory B	Mechatronics Laboratory B	Mechatronics Laboratory B	2					4					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from fall 2013; allocated to 3rd year.
-	Engineering Practice B	Engineering Practice B	Engineering Practice B	2					4					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from fall 2012; allocated to 3rd year.
-	Image Engineering Fundamentals	Image Engineering Fundamentals	Image Engineering Fundamentals	2					2					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from fall 2015; allocated to 3rd year. * new course available from spring 2015; allocated to 3rd year.
-	Mechanical Engineering Laboratory A	Mechanical Engineering Laboratory A	Mechanical Engineering Laboratory A	2					4					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2013; allocated to 3rd year.
-	Seminar C	Seminar C	Seminar C	2					2					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2013; allocated to 3rd year.
-	Engineering Practice C	Engineering Practice C	Engineering Practice C	2					4					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2013; allocated to 3rd year.
-	-	-	Materials Science and Engineering for Space Craft	2					2					O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from spring 2016; allocated to 3rd year.
-	Mechanical Engineering Laboratory B	Mechanical Engineering Laboratory B	Mechanical Engineering Laboratory B	2							4			O (elective required)	O (elective required)	O (elective required)	O (elective required)	* new course available from fall 2013; allocated to 4th year.
Environmental Science A	Environmental Science A	Environmental Science A	Environmental Science A	2			2							O (elective required)	O (elective required)	O (elective required)	O (elective)	* for students enrolled in fall 2015, the credit to be earned from this course will be classified as a Group C Elective course (to be counted towards graduation)
Environmental Science B	Environmental Science B	Environmental Science B	Environmental Science B	2				2						O (elective required)	O (elective required)	O (elective required)	O (elective)	* for students enrolled in fall 2015, the credit to be earned from this course will be classified as a Group C Elective course (to be counted towards graduation) * this course is canceled in 2020.
-	Measurement and Instrumentation	Measurement and Instrumentation	Measurement and Instrumentation	2					2					O (elective required)	O (elective required)	O (elective required)	O (elective)	* new course available from fall 2014; allocated to 3rd year. * for students enrolled in fall 2015, the credit to be earned from this course will be classified as a Group C Elective course (to be counted towards graduation) * course cancelled in 2019.
-	-	-	Design and Control of Space Structures	2					2(Intens ive)					O (elective)	O (elective)	O (elective)	O (elective)	* new course available from fall 2016 as an intensive course; allocated to 3rd year.
-	-	-	Design Optimization of Space Structures	2					2(Intens ive)					O (elective)	O (elective)	O (elective)	O (elective)	* new course available from fall 2016 as an intensive course; allocated to 3rd year.

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Civil and Environmental Engineering A	Civil and Environmental Engineering A	Civil and Environmental Engineering A	Civil and Environmental Engineering A	2		2								O (elective)	O (elective)	O (elective)	O (elective)	* this course is canceled in 2019.
Soil Mechanics	Soil Mechanics	Soil Mechanics	Soil Mechanics	2			2							O (elective)	O (elective)	O (elective)	O (elective)	
Hydraulics A	Hydraulics A	Hydraulics A	Hydraulics A	2			2							O (elective)	O (elective)	O (elective)	O (elective)	
Materials and Structures A	Materials and Structures A	Materials and Structures A	Materials and Structures A	2			2							O (elective)	O (elective)	O (elective)	O (elective)	
Fundamentals of Urban Studies and Planning A	Fundamentals of Urban Studies and Planning A	Fundamentals of Urban Studies and Planning A	Fundamentals of Urban Studies and Planning A	2			2							O (elective)	O (elective)	O (elective)	O (elective)	* originally allocated to fall semester of 3rd year, but from fall 2012, CHANGED TO fall semester of 2nd year. * this course has become unavailable for fall semester, 2013. * this course has become available for fall semester, 2015.
Applied Mathematics for Engineers > Applied Mathematics for Civil and Environmental Engineers	Applied Mathematics for Engineers > Applied Mathematics for Civil and Environmental Engineers	Applied Mathematics for Engineers > Applied Mathematics for Civil and Environmental Engineers	Applied Mathematics for Civil and Environmental Engineers	2			2							O (elective)	O (elective)	O (elective)	O (elective)	* course name changed from spring 2014.
E-business, Technology, and Legal Affairs > Advanced Topics in Intellectual Property Rights, Technology and Legal Affairs	E-business, Technology, and Legal Affairs > Advanced Topics in Intellectual Property Rights, Technology and Legal Affairs	E-business, Technology, and Legal Affairs > Advanced Topics in Intellectual Property Rights, Technology and Legal Affairs	E-business, Technology, and Legal Affairs > Advanced Topics in Intellectual Property Rights, Technology and Legal Affairs	2			2	2						O (elective)	O (elective)	O (elective)	O (elective)	* course name changed from spring 2016. * those who have already earned the credit of E-business, Technology, and Legal Affairs cannot take Advanced Topics in Intellectual Property Rights, Technology and Legal Affairs. CHANGED TO spring semester of 2nd year. CHANGED TO fall semester of 2nd year from 2019.
Resources Processing and Recycling > Resources Recycling > Advanced Topics on Resources Recycling	Resources Processing and Recycling > Resources Recycling > Advanced Topics on Resources Recycling	Resources Processing and Recycling > Resources Recycling > Advanced Topics on Resources Recycling	Resources Processing and Recycling > Resources Recycling > Advanced Topics on Resources Recycling	2						2				O (elective)	O (elective)	O (elective)	O (elective)	* course name changed from fall 2015. * course name changed from spring 2016. * those who have already earned the credit of Resources Processing and Recycling or Resources Recycling cannot take Advanced Topics on Resources Recycling.
Earth and Environmental Science	Earth and Environmental Science	Earth and Environmental Science	Earth and Environmental Science	2						2				O (elective)	O (elective)	O (elective)	O (elective)	* Course cancelled.
Building Environment	Building Environment	Building Environment	-	2						2				X	X	X	X	* course cancelled from fall 2014.
-	-	-	Thermal Design of Space System	2						2				O (elective)	O (elective)	O (elective)	O (elective)	* new course available from spring 2017
-	-	-	Manufacturing of Space Structures	2							2			O (elective)	O (elective)	O (elective)	O (elective)	* new course available from spring 2017
-	-	-	Astroparticle Physics	2							2(Intensive)			O (elective)	O (elective)	O (elective)	O (elective)	* new course available from spring 2017 as an intensive course; allocated to 3rd year.
-	-	-	Lunar and Planetary Exploration and its Science	2							2(Intensive)			O (elective)	O (elective)	O (elective)	O (elective)	* new course available from spring 2017 as an intensive course; allocated to 3rd year.
Project Management	Project Management	Project Management	-	2							2			X	X	X	X	* course cancelled from spring 2014.