Tokyo Tech Course Information to Help Develop Your Study Plan

a. Master's and doctoral students can take numerous courses offered at the graduate level.

b. Fourth-year undergraduate students can take courses for undergraduates (almost all of which are conducted in Japanese) and courses for graduates open to exchange students (conducted in English). Before applying to this program, be sure to carefully check the below URL on the latest information regarding course timetables and syllabi, and the list of courses after the second page from the previous year which details available graduate courses conducted in English, and confirm that your study plan matches course availability and that there will be no scheduling conflicts. Please note that the Course list will be updated approximately two weeks before the start of the semester.

c. Second- and third-year undergraduate students can take only undergraduate courses mostly conducted in Japanese. Any courses conducted in English in the 100 and 200 levels cannot be taken.

d. Students may take Japanese language courses at any level and are not allowed to take language classes other than Japanese.

Reference:
Graduate Timetables - 2022 Fall Semester (3rd and 4th Quarter)
https://www.titech.ac.jp/english/student/students/life/graduate-timetables

Undergraduate Timetables - 2022 Fall Semester (3rd and 4th Quarter)
https://www.titech.ac.jp/english/student/students/life/undergraduate-timetables

Tokyo Tech OCW (Syllabi)
http://www.ocw.titech.ac.jp/index.php?lang=EN&_gl=1*1mn4i5d*_ga*MTA4NTkyNDAz
MC4xNjU2MjkyMTQ3*_ga_VKBJ61GEPE*MTY2NzE3NjM3OC41MTEuMS4xNjY3MTc
4NjgxLjAuMC4w

List of Graduate Courses available to Final year Undergraduate-level International Exchange Students
Please see the second and subsequent pages.

As of October 2022

Eligibility for Acceptance

・Students must be final year undergraduates or at an equivalent level.

・Students must meet the specific criteria for each course defined by the instructor and indicated in the final column of the table.

・Students must be enrolled on an appropriate exchange program that allows access to these courses.

NOTE: TAKING ANY GRADUATE-LEVEL COURSE (400-LEVEL OR HIGHER) THAT IS NOT ON THIS LIST IS　NOT PERMITTED UNDER ANY CIRCUMSTANCE. EVEN IF THE COURSE INSTRUCTOR INDIVIDUALLY APPROVES YOUR ENROLLMENT, YOUR REGISTRATION FOR SUCH A COURSE WILL BE REJECTED.

3Q: September 29th-December 5th, 4Q: December 6th-February 11th

Major / Course Category	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Graduate major in Mathematics	MTH.A403	Advanced topics in Algebra C	Purkait Soma	3Q	Undergraduate-level knowledge of abstract algebra and number theory
Graduate major in Mathematics	MTH.A404	Advanced topics in Algebra D	Purkait Soma	4Q	Undergraduate-level knowledge of abstract algebra and number theory
Graduate major in Mathematics	MTH.B403	Advanced topics in Geometry C	Masai Hidetoshi	3Q	Undergraduate-level knowledge of topology and abstract algebra
Graduate major in Mathematics	MTH.B404	Advanced topics in Geometry D	Masai Hidetoshi	4Q	Undergraduate-level knowledge of topology and abstract algebra
Graduate major in Mathematics	MTH.C403	Advanced topics in Analysis C	Sakamoto Shota	3Q	Undergraduate-level knowledge of functional analysis and differential equations
Graduate major in Mathematics	MTH.C404	Advanced topics in Analysis D	Sakamoto Shota	4Q	Undergraduate-level knowledge of functional analysis and differential equations
Graduate major in Physics	PHY.F432	Astrophysics	Dotani Tadayasu	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
Graduate major in Physics	PHY.S440	Statistical Mechanics III	Sasamoto Tomohiro	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
Graduate major in Physics	PHY.C450	Quantum Theory of Electrons in Solids	Ishizuka Hiroaki	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
Graduate major in Physics	PHY.C446	Light and Matter I	Kozuma Mikio	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
Graduate major in Physics	PHY.C444	Quantum Transport	Fujisawa Toshimasa	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
Graduate major in Physics	PHY.C449	Laser Physics	Somiya Kentaro	4Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
Graduate major in Earth and Planetary Sciences	EPS.A413	Advanced Earth and Space Sciences C	Sato Bunei	3Q	
Graduate major in Earth and Planetary Sciences	EPS.A422	Advanced Earth and Space Sciences D	Yokoyama Tetsuya	4Q	
Graduate major in Earth and Planetary Sciences	EPS.A428	Advanced Earth and Space Sciences K	Ozaki Kazumi	4Q	
Graduate major in Earth and Planetary Sciences	EPS.A429	Advanced Earth and Space Sciences L	Gilbert Alexis Romai	3Q	
Graduate major in Mechanical Engineering	MEC.G433	Joining	Sato Chiaki, Yamazaki Takahisa	4Q	
Graduate major in Mechanical Engineering	MEC.M434	Space Robotics	Nakanishi Hiroki	4Q	Knowledge of fundamental robotics
Graduate major in Mechanical Engineering	MEC.H433	Mechatronics Device and Control	Yamaura Hiroshi	4Q	
Graduate major in Mechanical Engineering	MEC.H434	Advanced Course of Actuator Engineering	Suzumori Koichi, Yoshida Kazuhiro	3Q	
Graduate major in Mechanical Engineering	MEC.C433	Solid Dynamics	Inoue Hirotsugu	3Q	Knowledge of Fundamental Theory of Elasticity
Graduate major in Mechanical Engineering	MEC.E432	Properties of Solid Materials	Murakami Yoichi, Fushinobu Kazuyoshi	3Q	
Graduate major in Mechanical Engineering	MEC.G432	Metalforming	Yoshino Masahiko, Ohtake Naoto	3Q	as listed in syllabus
Graduate major in Mechanical Engineering	MEC.M433	Space Systems Analysis A	Furuya Hiroshi	3Q	
Graduate major in Mechanical Engineering	MEC.E433	Advanced Thermal-Fluids Measurement	Kikura Hiroshige, Saito Takushi	4Q	
Graduate major in Mechanical Engineering	MEC.U431	Automotive Structural System Engineering A	Yamaura Hiroshi, Inaba Kazuaki	3~4Q	Intensive course with irregular schedule (11:00-14:00, 5 days x 3 weeks). Please make a contact with Prof. Kosaka & Assoc. Prof. Inaba before registration. (Prof. Kosaka, kosaka.h.aa@m.titech.ac.jp; Assoc. Prof. Inaba, inaba.k.ag@m.titech.ac.jp)
Graduate major in Mechanical Engineering	MEC.U432	Automotive Comfort Mechanics Engineering A	Yamakita Masaki, Hanamura Katsunori	3~4Q	
Graduate major in Mechanical Engineering	MEC.U433	Advanced Production Engineering A	Suzuki Sadami, Yoshino Masahiko, Takahashi Kunio	3~4Q	
Graduate major in Mechanical Engineering	MEC.U434	Advanced Internal Combustion Engine Engineering and Future Power Train A	Kosaka Hidenori, Hanamura Katsunori, Hirai Shuichiro	3~4Q	
Graduate major in Mechanical Engineering	MEC.D433	Self-excited vibration	Nakano Yutaka	3Q	Students must have knowledge about vibration analysis method for one degree of freedom system and multi degree of freedom system.
Graduate major in Systems and Control Engineering	SCE.C401	System Identification and Estimation	Yamakita Masaki	3Q	
Graduate major in Systems and Control Engineering	SCE.I432	Acoustic Measurement Engineering	Hachiya Hiroyuki	3Q	
Graduate major in Systems and Control Engineering	SCE.S402	Fluid Robotics	Tsukagoshi Hideyuki	3Q	
Graduate major in Systems and Control Engineering	SCE.C452	Nonlinear and Adaptive Control	Hayakawa Tomohisa	3Q	
Graduate major in Systems and Control Engineering	SCE.C451	Optimal Control	Hatanaka Takeshi	4Q	
Graduate major in Systems and Control Engineering	SCE.A405	Inverse Problems and Data Assimilation	Amaya Kenji	3Q	

Graduate major	Code	Course	Instructor	Quarter	Notes
Graduate major in Systems and Control Engineering	SCE.C453	Network Control Systems	Ishizaki Takayuki	4Q	
Graduate major in Systems and Control Engineering	SCE.I454	Computer Vision	Okutomi Masatoshi	4Q	
Graduate major in Systems and Control Engineering	SCE.I402	Advanced Course of Sensing System Theory	Ohyama Shinji	4Q	
Graduate major in Systems and Control Engineering	SCE.I404	Automobile Transportation System and Environmental Impact	Sato Susumu	4Q	
Graduate major in Systems and Control Engineering	SCE.I433	Intelligent Communication and Social Interaction	Nakadai Kazuhiro, Itoyama Katsutoshi	3Q	
Graduate major in Electrical and Electronic Engineering	EEE.S411	Guided Wave Circuit Theory	Nishikata Atsuhiro, Aoyagi Takahiro	3Q	Knowledge of electromagnetism is required.
Graduate major in Electrical and Electronic Engineering	EEE.D421	Imaging Materials	Iino Hiroaki	3Q	
Graduate major in Electrical and Electronic Engineering	EEE.D441	Information Storage Engineering	Nakagawa Shigeki, Takamura Yota	4Q	
Graduate major in Electrical and Electronic Engineering	EEE.P402	Control and analysis of power and motor drive systems	Fujita Hideaki	3Q	Undergraduate-level knowledge of electric machinery is required.
Graduate major in Electrical and Electronic Engineering	EEE.P413	Power electronics application to power systems	Hagiwara Makoto	3Q	
Graduate major in Electrical and Electronic Engineering	EEE.P414	Power electronics control and analysis	Fujita Hideaki	4Q	It is required to understand the knowledge taught in the undergraduate power electronics course.
Graduate major in Information and Communications Engineering	ICT.A413	Communications and Computer Engineering II	Takahashi Atsushi, Nakahara Hiroki, Takagi Shigetaka, Nakamoto Takamichi, Isshiki Tsuyoshi, Motomura Masato, Hara Yuko, Yu Jaehoon, Sasaki Hiroshi	3Q	Sufficient basic academic skills in information and communications
Graduate major in Information and Communications Engineering	ICT.S414	Advanced Signal Processing (ICT)	Yamada Isao	3Q	Basic knowledge of linear algebra, multivariate calculus, complex analysis, Fourier analysis and digital signal processing
Graduate major in Information and Communications Engineering	ICT.I419	VLSI Layout Design	Takahashi Atsushi	4Q	Sufficient basic academic skills in integrated circuits and algorithm
Graduate major in Information and Communications Engineering	ICT.H416	Statistical Theories for Brain and Parallel Computing	Kumazawa Itsuo	3Q	Basic knowledge of linear algebra
Graduate major in Information and Communications Engineering	ICT.A418	Human-Centric Information Systems II	Nagai Takemiro, Yamaguchi Masahiro, Koike Yasuharu, Nakamoto Takamichi, Kumazawa Itsuo, Kaneko Hironiko, Okumura Manabu Suzuki Kenji, Motomura Masato, Slavakis Konstantinos, Shinozaki Takahiro, Kurosawa Minoru, Watanabe Yoshihiro, Yoshimura Natsue, Nakatani Momoko	4Q	Sufficient basic academic skills in information and communications
Graduate major in Information and Communications Engineering	ICT.H421	Medical Imaging Systems	Nakamura Kentaro, Tabaru Marie, Obi Takashi	4Q	Acquisition of basics of Fourier transform and electrical circuits
Graduate major in Information and Communications Engineering	ICT.H422	Computational Brain	Koike Yasuharu, Yoshimura Natsue	4Q	Sufficient basic knowledge of machine learning
Graduate major in Information and Communications Engineering	ICT.I415	VLSI System Design	Isshiki Tsuyoshi	3Q	Acquisition of basics of logic circuits, electrical circuits and integrated circuits
Graduate major in Industrial Engineering and Economics	IEE.D434	Corporate Finance and Governance	Inoue Kotaro, Kimura Yosuke	3Q	This course requires intensive class participation. Thus, only students who have sufficient knowledge in finance and statistics and can participate in class discussion in the classroom can register.
Graduate major in Industrial Engineering and Economics	IEE.D435	Computers in Society	Seaborn Katie	4Q	This course requires intensive class participation. Thus, only students with a high level of English who can participate in the classroom can register.
Graduate major in Materials Science and Engineering	MAT.P414	Soft Materials Function	Michinobu Tsuyoshi	3Q	
Graduate major in Materials Science and Engineering	MAT.P404	Soft Materials Functional Physics	Hayamizu Yuhei	4Q	Fundamental knowledge on chemical physics and quantum physics are needed.
Graduate major in Materials Science and Engineering	MAT.P403	Soft Materials Physics	Vacha Martin	3Q	
Graduate major in Materials Science and Engineering	MAT.M402	Characterization of Nanomaterials	Sone Masato, Sannomiya Takumi	4Q	
Graduate major in Materials Science and Engineering	MAT.P422	Organic Materials Design	Ougizawa Toshiaki	3Q	To master the fundamentals of polymer structure and physical properties at the undergraduate level.
Graduate major in Materials Science and Engineering	MAT.M412	Reliability and Durability of Metals and Alloys	Kobayashi Equo, Kobayashi Satoru	3Q	
Graduate major in Materials Science and Engineering	MAT.C412	Polymeric Biomaterials	Tsuge Takeharu, Hayashi Tomohiro	3Q	
Graduate major in Materials Science and Engineering	MAT.P426	Thermal Properties of Materials	Morikawa Junko	4Q	
Graduate major in Materials Science and Engineering	MAT.C416	Advanced Course of Nano-Particles Science	Miyauchi Masahiro, Yamaguchi Akira, Tokudome Hiromasa	3Q	Fundamental knowledge on inorganic ceramics materials is needed.
Graduate major in Materials Science and Engineering	MAT.M430	Quantum theory of metals	Nakatsuji Kan, Gohda Yoshihiro	3Q	
Graduate major in Chemical Science and Engineering	CAP.A423	Advanced Organic Synthesis I	Ito Shigekazu	3Q	Knowledge of bachelor level organic chemistry is desirable.
Graduate major in Chemical Science and Engineering	CAP.A424	Advanced Organic Synthesis II	Ito Shigekazu	4Q	Knowledge of bachelor level organic chemistry is desirable.
Graduate major in Chemical Science and Engineering	CAP.I438	Functionalized Nano-Materials Chemistry I	Hara Masahiko	3Q	Fundamental knowledge of materials chemistry is desirable.
Graduate major in Chemical Science and Engineering	CAP.I445	Functionalized Nano-Materials Chemistry II	Hara Masahiko	4Q	Fundamental knowledge of materials chemistry is desirable.
Graduate major in Chemical Science and Engineering	CAP.I417	Introduction to Chemical Engineering (Unit Operation)	Tanaka Masayoshi	3Q	
Graduate major in Chemical Science and Engineering	CAP.C432	Physico-Chemical Property Analysis in Chemical Engineering	Taniguchi Izumi	3Q	Fundamental knowledge of chemical engineering and transport phenomena is required.
Graduate major in Chemical Science and Engineering	CAP.I423	Advanced Organic Materials Chemistry	Fukushima Takanori, Shoji Yoshiaki	3Q	
Graduate major in Chemical Science and Engineering	CAP.I416	Catalysis for the Environmental Issues	Yokoi Toshiyuki, Motokura Ken, Manaka Yuichi	3Q	
Graduate major in Chemical Science and Engineering	CAP.C441	Transport Phenomena and Operation	Yoshikawa Shiro	4Q	Fundamental knowledge of chemical engineering and transport phenomena is required.
Graduate major in Chemical Science and Engineering	CAP.I435	Advanced Geochemistry	Toyoda Sakae, Yamada Keita	3Q	
Graduate major in Chemical Science and Engineering	CAP.C433	Phase Equilibrium Analysis in Chemical Engineering	Shimoyama Yusuke	3Q	Fundamental knowledge of chemical engineering and separation operation is required.
Graduate major in Chemical Science and Engineering	CAP.C443	Advanced Reaction-Separation Process	Tago Teruoki, Shimoyama Yusuke	4Q	Fundamental knowledge of chemical reaction engineering and separation operation and process is required.
Graduate major in Mathematical and Computing Science	MCS.T410	Applied Probability	Miyoshi Naoto, Nakano Yumiharu	3Q	
Graduate major in Mathematical and Computing Science	MCS.T416	Logic and Computation	Kashima Ryo	4Q	
Graduate major in Mathematical and Computing Science	MCS.T419	Stochastic differential equations	Nakano Yumiharu, Miyoshi Naoto	4Q	

Graduate major	Code	Course title	Instructor(s)	Quarter	Notes
Graduate major in Mathematical and Computing Science	MCS.T412	Information Visualization	Wakita Ken	4Q	
Graduate major in Mathematical and Computing Science	MCS.T420	Additive and nonadditive measure theories	Murofushi Toshiaki	4Q	elementary naive set theory
Graduate major in Computer Science	CSC.T431	Cyber-Physical Systems	Watanabe Takuo	3Q	
Graduate major in Computer Science	CSC.T433	Advanced Computer Architecture	Kise Kenji	4Q	Required: Computera architecture and switching circuit theory
Graduate major in Computer Science	CSC.T442	Internet Applications	Ohta Masataka	4Q	
Graduate major in Life Science and Technology	LST.A406	Molecular Developmental Biology and Evolution	Kume Shoen, Kawakami Atsushi, Tanaka Mikiko, Kajikawa Masaki, Nikaido Masato	3Q	
Graduate major in Life Science and Technology	LST.A408	Computational Biology	Itoh Takehiko, Yamada Takuji, Kitao Akio	3Q	
Graduate major in Life Science and Technology	LST.A409	Physical Biology of the Cell	Hayashi Nobuhiro, Murakami Satoshi, Taguchi Hideki, Tokunaga Makio, Ishii Yoshitaka	4Q	Acquisition of basics of physical chemistry.
Graduate major in Life Science and Technology	LST.A407	Science of Metabolism	Hirasawa Takashi, Shiraki Nobuaki, Yamamoto Naoyuki, Kato Akira	3Q	Undergraduate-level basic knowledge of biochemistry, molecular biology and cell biology.
Graduate major in Life Science and Technology	LST.A410	Advanced Neuroscience	Ichinose Hiroshi, Suzuki Takashi, Miyashita Eizo, Akama Hiroyuki, Nonomura Keiko	4Q	Acquisition of basics of advanced neuroscience.
Graduate major in Life Science and Technology	LST.B404	International Career Development Basics	Suzuki Takashi, Kobatake Eiry, Kume Shoen, Aizawa Yasunori, Mcglynn Shawn	3〜4Q	
Graduate major in Life Science and Technology	LST.A421	Functional Life Science	Nakamura Nobuhiro, Orihara Kanami, Koshikawa Naohiko, Hoshino Ayuko, Ogura Shunichiro	4Q	Acquisition of basics of biochemistry, molecular biology and genome biology.
Graduate major in Architecture and Building Engineering	ARC.D422	Architectural Design Studio II	Yasuda Koichi, Okuyama Shinichi, Tsukamoto Yoshiharu, Yamazaki Taisuke, Murata Ryo, Nasu Satoshi, Shiozaki Taishin	3Q	
Graduate major in Architecture and Building Engineering	ARC.D424	Theory of Architectural Space and Planning	Tsukamoto Yoshiharu, Didier Faustino	3Q	
Graduate major in Architecture and Building Engineering	ARC.D446	Theory of Architectural Design II	Okuyama Shinichi, Shiozaki Taishin	3〜4Q	Only for students in Department of Architecture and Building Engineering
Graduate major in Architecture and Building Engineering	ARC.D447	Architectural Theory for Urban Space	Tsukamoto Yoshiharu	3Q	
Graduate major in Architecture and Building Engineering	ARC.D462	Architectural Behaviorology	Tsukamoto Yoshiharu, Yasuda Koichi, Okuyama Shinichi	3〜4Q	
Graduate major in Civil Engineering	CVE.M401	Civil Engineering Analysis	Hirose Sohichi	3Q	Programming skills are required.
Graduate major in Civil Engineering	CVE.A402	Nonlinear Solid Mechanics	Wijeyewickrema Anil	4Q	Basic knowledge of solid mechanics is required.
Graduate major in Civil Engineering	CVE.A431	Fracture Control Design of Steel Structures	Sasaki Eiichi	4Q	
Graduate major in Civil Engineering	CVE.F432	Principles of Construction Management	Hasegawa Atsushi, Matsukawa Keisuke, Hiraishi Kazuaki, Maeda Yasuyoshi, Koizumi Yukihiro, Takesue Naoki, Maki Kotaro	3〜4Q	
Graduate major in Civil Engineering	CVE.G402	Environmental Statistics	Yoshimura Chihiro	4Q	
Graduate major in Civil Engineering	CVE.C402	Stability Problems in Geotechnical Engineering	Takahashi Akihiro, Takemura Jiro	3Q	Basic knowledge of soil mechanics is required.
Graduate major in Civil Engineering	CVE.C431	Physical Modeling in Geotechnics	Takemura Jiro, Takahashi Akihiro	3〜4Q	Basic knowledge of civil engineering and geotechnical engineering is required.
Graduate major in Civil Engineering	CVE.G403	Water Chemistry for Environmental Engineering	Fujii Manabu	3Q	
Graduate major in Civil Engineering	CVE.D405	Transportation Science and Simulation	Seo Toru	4Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.P452	Project Design & Management F	Tokimatsu Koji, Kinouchi Tsuyoshi, Murayama Takehiko, Nakamura Takashi, Sato Yuriko, Nishikizawa Shigeo, Takahashi Fumitake, Itsukushima Rei, Suwanteep Kultip	4Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.S402	The economics and systems analysis of environment, resources and technology	Tokimatsu Koji	4Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.E411	Atmospheric Environment in Megacities	Kanda Manabu, Varquez Alvin Christopher Galang	4Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.T414	Linear Wave Theory and Simulation	Takada Jun-Ichi	3Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.S413	Science Media and Communication for Global Development of Environment and Society	Nohara Kayoko, Andrews Eden Mariquit , Salani Giorgio	3Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.S414	Emerging Insights in Science and Art	Hara Masahiko, Heather Barnett, Nohara Kayoko	4Q	
Graduate major in Social and Human Sciences	SHS.S444	Graduate Lecture in Science, Technology and Society F1B	Bektas Yakup	4Q	
Graduate major in Social and Human Sciences	SHS.L419	Special Lecture on Advanced Topics in Social and Human Sciences FA	Bektas Yakup	3Q	
Graduate major in Social and Human Sciences	SHS.L420	Special Lecture on Advanced Topics in Social and Human Sciences FB	De Ferranti Hugh	4Q	
Graduate major in Energy Science and Engineering	ENR.A405	Interdisciplinary Energy Materials Science 1	Matsuda Akifumi, Ihara Manabu, Mori Takehiko, Maeda Kazuhiko, Ueda Mitsutoshi, Shimizu Ryota	3Q	
Graduate major in Energy Science and Engineering	ENR.A406	Interdisciplinary Energy Materials Science 2	Matsumoto Hidetoshi, Ihara Manabu, Kimura Yoshisato, Nozaki Tomohiro, Shimizu Ryota	4Q	
Graduate major in Energy Science and Engineering	ENR.A407	Energy system theory	Suekane Tetsuya, Yamada Akira, Obara Toru, Kawabe Kenichi, Tokimatsu Koji, Otomo Junichiro	3Q	
Graduate major in Energy Science and Engineering	ENR.A408	Economy of energy system	Tokimatsu Koji, Hanaoka Shinya, Nishikizawa Shigeo, Kajikawa Yuya, Goto Mika, Eto Ryo	4Q	
Graduate major in Energy Science and Engineering	ENR.J408	Energy Conversion Ceramics Materials	Miyauchi Masahiro, Matsuda Akifumi, Yamaguchi Akira, Yasuda Kouichi, Matsushita Sachiko, Isobe Toshihiro, John David Baniecki	4Q	
Graduate major in Energy Science and Engineering	ENR.K450	Advanced course of combustion physics	Kosaka Hidenori, Tanahashi Mamoru, Shimura Masayasu	3Q	
Graduate major in Energy Science and Engineering	ENR.K440	Advanced course of radiation transfer	Hanamura Katsunori	3Q	
Graduate major in Energy Science and Engineering	ENR.H411	Topics in Applied Electrochemistry	Arai Hajime, Hirayama Masaaki	4Q	
Graduate major in Energy Science and Engineering	ENR.H415	Introduction to Organic Electrochemistry	Inagi Shinsuke	3Q	
Graduate major in Energy Science and Engineering	ENR.J401	Advanced Metal Physics	Shi Ji, Nakamura Yoshio	3Q	
Graduate major in Energy Science and Engineering	ENR.J402	Physical Chemistry for High Temperature Processes -Thermodynamics-	Susa Masahiro, Kobayashi Yoshinao, Kawamura Kenichi, Hayashi Miyuki, Ueda Mitsutoshi	3Q	Students are required to have basic knowledge about the first, second and third law of thermodynamics.
Graduate major in Energy Science and Engineering	ENR.A405	Interdisciplinary Energy Materials Science 1	Matsuda Akifumi, Ihara Manabu, Ueda Mitsutoshi, Shimizu Ryota	3Q	

Graduate major in Energy Science and Engineering	ENR.A406	Interdisciplinary Energy Materials Science 2	Matsumoto Hidetoshi, Ihara Manabu, Kimura Yoshisato, Inagi Shinsuke, Shimizu Ryota	4Q	
Graduate major in Energy Science and Engineering	ENR.I410	Optical properties of solids	Koshihara Shinya, Okimoto Yoichi	4Q	The students are expected to have basic knowledge of electromagnetism.
Graduate major in Energy Science and Engineering	ENR.H450	Environmentally-Friendly Polymer Chemistry	Satoh Kotaro	4Q	Students are expected to have fundamental knowledge of polymer chemistry and polymer synthesis.
Graduate major in Engineering Sciences and Design	ESD.F403	UX / Interaction Design	Nishida Yoshifumi, Oono Mikiko	3Q	
Graduate major in Engineering Sciences and Design	ESD.F404	Affective Engineering / Emotional Design	Kahlon Yuval, Fujii Haruyuki	3Q	
Graduate major in Engineering Sciences and Design	ESD.D404	Design of Medical and Welfare Device	Hijikata Wataru	3Q	
Graduate major in Human Centered Science and Biomedical Engineering	HCB.M464	Introduction to Neural Engineering	Yagi Tohru	3Q	
Graduate major in Nuclear Engineering	NCL.D406	Experiments for Nuclear Fuel Debris and Back-end Fuel Cycle B	Tsukahara Takehiko, Takao Koichiro, Nakase Masahiko	4Q	Students must have enough knowledge of nuclear chemistry and chemical engineering. You need registration as a radiation worker (LANE Category A)
Graduate major in Nuclear Engineering	NCL.N409	Nuclear Energy Systems	Kikura Hiroshige, Kato Yukitaka, Kondo Masatoshi, Harada Takuya, Takasu Hiroki, Uchibori Akihiro	3Q	Student must have enough knowledge of nuclear reactor thermal-hydraulics and nuclear safety.
Graduate major in Nuclear Engineering	NCL.D402	Experiments for Materials related to Decommissioning B	Yoshida Katsumi, Hubarevich Hanna, Takasu Hiroki	4Q	Student must have enough knowledge of nuclear materials. You need registration as a radiation worker (LANE Category A)
Graduate major in Nuclear Engineering	NCL.C401	Nuclear Fuel Cycle Engineering	Tsukahara Takehiko, Takao Koichiro, Harada Takuya, Takasu Hiroki	3Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
Graduate major in Nuclear Engineering	NCL.C402	Radioactive Waste Management and Disposal Engineering	Tsukahara Takehiko, Takao Koichiro, Nishihara Kenji	3Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
Graduate major in Nuclear Engineering	NCL.C403	Nuclear Chemical Engineering	Kato Yukitaka, Harada Takuya, Takasu Hiroki	4Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
Graduate major in Nuclear Engineering	NCL.B401	Radiation Biology and Medicine	Matsumoto Yoshihisa	3Q	
Graduate major in Nuclear Engineering	NCL.D407	Experiment on Thermalhydraulic and Severe Accident Engineering	Kikura Hiroshige, Endo Gen, Kondo Masatoshi, Sagara Hiroshi, Takahashi Hideharu	4Q	Student must have enough knowledge of nuclear reactor thermal-hydraulics and nuclear safety.
Graduate major in Nuclear Engineering	NCL.N411	Innovative Nuclear Systems Design Project	Obara Toru, Nishiyama Jun	3〜4Q	Student must have enough knowledge of nuclear physics, nuclear reactor theory, nuclear materials, nuclear reactor thermal-hydraulics, nuclear safety and nuclear energy systems.
Graduate major in Artificial Intelligence	ART.T459	Natural Language Processing	Tokunaga Takenobu	3Q	
Graduate major in Artificial Intelligence	ART.T462	Complex Networks	Murata Tsuyoshi	4Q	
Graduate major in Artificial Intelligence	ART.T465	Sparse Signal Processing and Optimization	Ono Shunsuke	3Q	Required: Linear algebra, differential and integral analysis, probability theory, statistics, and programming experience on MATLAB/Python Recommended: Functional analysis, numerical calculation
Graduate major in Artificial Intelligence	ART.T466	3D Computer Vision	Kanezaki Asako	4Q	Required: Basic knowledge of linear algebra and programming experience on Python
Graduate major in Urban Design and Built Environment	UDE.D408	History of Cities and Urban Planning	Fujita Yasuhito	4Q	
Graduate major in Urban Design and Built Environment	UDE.D448	Architectural Awareness & Design	Nasu Satoshi	4Q	
Graduate major in Urban Design and Built Environment	UDE.S406	Tensor Analysis for Building Structure	Motoyui Shojiro	4Q	
Graduate major in Urban Design and Built Environment	UDE.P404	City/Transport Planning and the Environment	Muromachi Yasunori	3Q	Basics of Transport Planning, Urban Planning, and Traffic Engineering
Graduate major in Earth-Life Science	ELS.C403	Earth-Life Science C	Ida Shigeru, Genda Hidenori, Hernlund John William, Kurokawa Hiroyuki	3Q	
Graduate major in Earth-Life Science	ELS.C431	Research development project for Earth-Life Science M	Sekine Yasuhito, Fujishima Kosuke, Nakamura Ryuhei	1〜4Q	
Graduate major in Earth-Life Science	ELS.C432	Communicating Earth-Life Science to theWorld M	Hernlund John William, Mcglynn Shawn, Heenatigala Thilina	3Q	
Global awareness and other breadth courses	LAW.X411	Study on Japanese Companies and Industries I	Sato Yuriko, Shi Qinzhong, Takemura Jiro	3Q	
Global awareness and other breadth courses	LAW.X417	Sustainable Engineering Technology	Takemura Jiro, Kobayashi Equo, Umemuro Hiroyuki, Tokimatsu Koji, Yoshimura Chihiro, Yagi Tohru, Ota Eri, Murakami Rie, Furuya Hidemine	4Q	
Global awareness and other breadth courses	LAW.X414	Technical Management for Sustainable Engineering	Kobayashi Yoshinao, Hanaoka Shinya, , Sato Hiroshi, Hatta Toshiyuki, Peter Wesp	4Q	
Global awareness and other breadth courses	LAW.X418	Communication Skills in Japanese Industries I	Takemura Jiro, Morikawa Junko, Kuwata Shigeki, Hayashi Miyuki, Nakamura Takashi, Wakabayashi Hitoshi, Kitaguchi Yoshiaki	3Q	
Global awareness and other breadth courses	LAW.X423	Technology and Product in Context	Nohara Kayoko, Salani Giorgio	4Q	
Global awareness and other breadth courses	LAW.X427	Our Sustainable Energy Future: Role of Business and Technology	Ota Eri, Murakami Rie, Ling Frank Hiroshi	3Q	
Global awareness and other breadth courses	LAW.X429	Multicultural Collaboration and Leadership	Ota Eri, Murakami Rie, Nguyen Dung Minh	4Q	
Global awareness and other breadth courses	LAW.X431	Advanecd Co-learning Course for Global Scientists and Engineers 1	Murakami Rie, Ota Eri	3〜4Q	Students have to regist "LAW.X301 Overseas Training for Global Scientists and Engineers 1A" as a set.
Global awareness and other breadth courses	LAW.X432	Advanecd Co-learning Course for Global Scientists and Engineers 2	Murakami Rie, Ota Eri, Ananda Kumara	4Q	
Global awareness and other breadth courses	LAW.X441	Tohoku Co-learning Camp (Leadership Course)	Kawashima Saho,Yamaura Hiroshi	4Q	
Global awareness and other breadth courses	LAW.X430	Study abroad for Global Scientists and Engineers	Ota Eri, Murakami Rie	3〜4Q	

・Japanese courses

Please check the following web site of Japanese courses.

http://js.ila.titech.ac.jp/~web/japanese.html

For those attending classes remotely from home countries:
If you are currently not in Japan, please check the availability of textbooks (click here to check the designated textbook for each class <http://js.ila.titech.ac.jp/~web/courselist.html>) beforehand.
If the textbooks are not available in your country, please choose and reserve classes from among AOS (Attend from overseas) classes
<http://js.ila.titech.ac.jp/~web/courselist.html>, or the ones for which no textbook is specified.
Students who are in Japan or will be entering Japan can also take AOS classes.
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