List of Graduate Courses Available to Undergraduate-level International Exchange Students <For the 2018-2019 Academic Year>

As of April 2018

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.

1Q: April – early June, **2Q:** mid-June – early Aug., **3Q:** late Sept. – late Nov., **4Q:** early Dec. – early Feb.

Major / Course Category	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc. （左欄「受講要件」を英訳したもの）
Mathematics	MTH.A403	Advanced topics in Algebra C	Shane Kelly	3	(Contents to be announced)
Mathematics	MTH.A404	Advanced topics in Algebra D	Shane Kelly	4	(Contents to be announced)
Physics	PHY.P410	Basic Writing in Physics	Tilma Todd	1,2	TOEFL iBT : Reading – minimum 15 Listening – minimum 15 Speaking – not necessary Writing – minimum 17 を満たす学生を受け入れる
Physics	PHY.P411	Basic Presentation in Physics	Shi Jie	3,4	TOEIC scores of at least 550 (the minimum requirement for graduation from Tokyo Tech's regular undergraduate program)
Chemistry	CHM.A435	Current Chemistry I	Undecided	1,2	
Chemistry	CHM.A436	Current Chemistry II	Undecided	3,4	
Earth and Planetary Sciences	EPS.C428	Cutting Edge Topics in Earth and Planetary Sciences A	Okuzumi Satoshi	1	Students who are accepted by the academic supervisors in the Department of Earth and Planetary Sciences
Earth and Planetary Sciences	EPS.C429	Cutting Edge Topics in Earth and Planetary Sciences B	Okuzumi Satoshi	2	Students who are accepted by the academic supervisors in the Department of Earth and Planetary Sciences
Earth and Planetary Sciences	EPS.C430	Cutting Edge Topics in Earth and Planetary Sciences C	Okuzumi Satoshi	3	Students who are accepted by the academic supervisors in the Department of Earth and Planetary Sciences
Earth and Planetary Sciences	EPS.C431	Cutting Edge Topics in Earth and Planetary Sciences D	Okuzumi Satoshi	4	Students who are accepted by the academic supervisors in the Department of Earth and Planetary Sciences
Mechanical Engineering	MEC.C432	Structural Integrity Assessment	Mizutani Yoshihiro	1	
Mechanical Engineering	MEC.C433	Solid Dynamics	Inoue Hirotsugu	3	
Mechanical Engineering	MEC.D431	Advanced Sound and Vibration Measurement	Matsumura Shigeki	1	
Mechanical Engineering	MEC.D433	Self-excited vibration	Nakano Yutaka	3	
Mechanical Engineering	MEC.E431	Thermodynamics of Nonequilibrium Systems	Murakami Yoichi, Okuno Yoshihiro	1	Undergraduate-level international exchange students who are considering to be enrolled in this course first need to contact the lecturer of this course for an interveiw. Based on his/her interest and eagerness in learning the subjects of this course and the level of the achademic knowledge, the permission will be judged.
Mechanical Engineering	MEC.E433	Advanced Thermal-Fluids Measurement	Kikura Hiroshige, Saito Takushi	4	

Mechanical Engineering	MEC.F431	Computational Thermo-Fluid Dynamics	Horiuti Kiyosi, Xiao Feng	2	
Mechanical Engineering	MEC.G431	Mechanical Processing	Yoshioka Hayato, Hirata Atsushi, et al.	2	
Mechanical Engineering	MEC.G432	Metalforming	Yoshino Masahiko, Ohtake Naoto	3	
Mechanical Engineering	MEC.G433	Joining	Sato Chiaki, Yamazaki Takahisa	4	
Mechanical Engineering	MEC.H431	Advanced Mechanical Elements	Iwatsuki Nobuyuki	1	
Mechanical Engineering	MEC.H432	Multibody Systems	Okuma Masaaki, Furuya Hiroshi	2	
Mechanical Engineering	MEC.H433	Mechatronics Device and Control	Yamaura Hiroshi	3	
Mechanical Engineering	MEC.H434	Advanced Course of Actuator Engineering	Suzumori Koichi, Yoshida Kazuhiro	3	
Mechanical Engineering	MEC.J431	Ultra-precision Measurement	Sasajima Kazuyuki, Hatsuzawa Takeshi, et al.	3	
Mechanical Engineering	MEC.J432	Mechanism and Control for Ultra-precision Motion	Shinshi Tadahiko	4	
Mechanical Engineering	MEC.L431	Human Brain Functions and Their Measurements	Yoshida Takako	3	
Mechanical Engineering	MEC.L432	Human-Centered Design	Mougenot Celine	4	
Mechanical Engineering	MEC.M433	Space Systems Analysis A	Furuya Hiroshi	3	
Mechanical Engineering	MEC.M434	Space Robotics	Nakanishi Hiroki	4	
Mechanical Engineering	MEC.U431	Automotive Structural System Engineering A	Yamaura Hiroshi, Okuma Masaaki, et al.	3,4	
Mechanical Engineering	MEC.U432	Automotive Comfort Mechanics Engineering A	Yamakita Masaki, Hanamura Katsunori, et al.	3,4	
Mechanical Engineering	MEC.U433	Advanced Production Engineering A	Suzuki Sadami, Yoshino Masahiko, et al.	3,4	
Mechanical Engineering	MEC.U434	Advanced Internal Combustion Engine Engineering and Future Power Train A	Kosaka Hidenori, Hanamura Katsunori, et al.	3,4	
Mechanical Engineering	MEC.U436	Combustion Engineering	Hirai Shuichiro, Kosaka Hidenori	3,4	
Mechanical Engineering	MEC.U441	Automotive Structural System Engineering B	Yamaura Hiroshi, Okuma Masaaki, et al.	3,4	
Mechanical Engineering	MEC.U442	Automotive Comfort Mechanics Engineering B	Yamakita Masaki, Hanamura Katsunori, et al.	3,4	
Mechanical Engineering	MEC.U443	Advanced Production Engineering B	Yoshino Masahiko, Suzuki Sadami, et al.	3,4	
Mechanical Engineering	MEC.U444	Advanced Internal Combustion Engine Engineering and Future Power Train B	Kosaka Hidenori, Hanamura Katsunori, et al.	3,4	
Mechanical Engineering	MEC.U447	Advanced Material Science and Engineering B	Ohtake Naoto	3,4	
Systems and Control Engineering	SCE.A404	Nonlinear Dynamics	Nakao Hiroya	3	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.A405	Inverse Problems and Data Assimilation	Amaya Kenji	3	Applicants may be subject to acceptance decision on an individual basis.

Systems and Control Engineering	SCE.C401	System Identification and Estimation	Yamakita Masaki	3	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.C402	Robust Control	Fujita Masayuki	1	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.C452	Nonlinear and Adaptive Control	Hayakawa Tomohisa	3	Standard knowledge of control engineering at the undergraduate level; transfer functions, Laplace transform, and state-space realization.
Systems and Control Engineering	SCE.C453	Network Control Systems	Hayakawa Tomohisa	4	Basic knowledge of dynamical systems theory and differential equations.
Systems and Control Engineering	SCE.I401	Advanced Course of Measurement and Signal Processing	Hara Seiichiro	1	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.I402	Advanced Course of Sensing System Theory	Ohyama Shinji	2	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.I432	Acoustic Measurement Engineering	Hachiya Hiroyuki	3	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.I454	Computer Vision	Okutomi Masatoshi	4	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.M401	Numerical Analysis of Heat Transfer and Fluid Flow	Kosaka Hidenori	2	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.M402	Modeling of Bio-Systems I	Nakashima Motomu, Kurabayashi Daisuke	2	Applicants may be subject to acceptance decision on an individual basis.
Systems and Control Engineering	SCE.S402	Fluid Robotics	Tsukagoshi Hideyuki	3	Applicants may be subject to acceptance decision on an individual basis.
Electrical and Electronic Engineering	EEE.D401	Fundamentals of Electronic Materials	Nakagawa Shigeki, Sugahara Satoshi	1	Basic knowledge of quantum mechanics and electronic properties of solids.
Electrical and Electronic Engineering	EEE.D441	Information Storage Engineering	Shiroishi Yoshihiro	4	
Electrical and Electronic Engineering	EEE.D451	Bipolar Transistors and Compound Semiconductor Devices	Miyamoto Yasuyuki	1	Graduate-level knowledge of electronic devices, analog electronic circuits and semiconductor physics (Equivalent to 200s and 300s-level courses in those subjects at Tokyo Tech)
Electrical and Electronic Engineering	EEE.P401	Electric Power and Motor Drive System Analysis	Fujita Hideaki	2	Undergraduate-level knowledge of electric machinery is required.
Electrical and Electronic Engineering	EEE.P411	Advanced Course of Power Electronics	Fujita Hideaki, Hagiwara Makoto	3	Undergraduate-level knowledge of power electronics is required.
Electrical and Electronic Engineering	EEE.S401	Advanced Electromagnetic Waves	Hirokawa Jiro	1	The undergraduate-level knowledge is required on electromagnetism and electromagnetic wave.
Electrical and Electronic Engineering	EEE.S411	Guided Wave Circuit Theory	Mizumoto Tetsuya	3	The fundamentals of electromagnetism and electromagnetic wave transmission are prerequisite.
Electrical and Electronic Engineering	EEE.S451	Wireless Communication Engineering	Sakaguchi Kei	2	The fundamentals on signal & systems are prerequisite.
Information and Communications Engineering	ICT.A402	Communications and Computer Engineering I	Uyematsu Tomohiko, Ogata Wakaha, et al.	1	Sufficient basic academic skills in information and communications
Information and Communications Engineering	ICT.A406	Human-Centric Information Systems I	Koike Yasuharu, Yamaguchi Masahiro, et al.	2	Sufficient basic academic skills in information and communications
Information and Communications Engineering	ICT.A413	Communications and Computer Engineering II	Takagi Shigetaka, Nakamoto Takamichi, et al.	3	Sufficient basic academic skills in information and communications
Information and Communications Engineering	ICT.A418	Human-Centric Information Systems II	Yamaguchi Masahiro, Koike Yasuharu, et al.	4	Sufficient basic academic skills in information and communications
Information and Communications Engineering	ICT.I415	VLSI System Design	Isshiki Tsuyoshi	3	Acquisition of basics of logic circuits, electrical circuits and integrated circuits
Information and Communications Engineering	ICT.S407	Wireless Signal Processing	Fukawa Kazuhiko	2	Completion of courses in linear algebra, caluculus, probability and statistics

Information and Communications Engineering	ICT.S414	Advanced Signal Processing (ICT)	Yamada Isao	3	Basic knowledge of linear algebra, multivariate calculus, complex analysis, Fourier analysis and digital signal processing
Information and Communications Engineering	ICT.I425	Parallel and Reconfigurable VLSI Computing	Nakahara Hiroki	2	Sufficient basic academic skills in information and communications
Industrial Engineering and Economics	IEE.C432	Applied Cognitive Ergonomics	Itoh Kenji, Aoki Hirotaka	2	Ability to discuss and engage in group work in English
Industrial Engineering and Economics	IEE.D432	Financial Statement Analysis and Valuation	Nagata Kyoko	1	Basic knowledge of accounting and corporate finance. Ability to discuss, create a report and engage in group work in English
Industrial Engineering and Economics	IEE.D433	Corporate Transformation	Senoo Dai	4	Basic knowledge about Business Administration.
Industrial Engineering and Economics	IEE.D434	Corporate Finance and Governance	Inoue Kotaro	3	Participants should understand basic finance theory such as CAPM.
Materials Science and Engineering	MAT.M419	Microscopic characterization of solid materials	Chai Yaw Wang	1,4	Knowledge equivalent to that of third-year undergraduates at Tokyo Tech's metals courses
Materials Science and Engineering	MAT.M420	Metal Science on Development of Aircraft Engine Materials	Naka Shigehisa	3	Knowledge equivalent to that of third-year undergraduates at Tokyo Tech's metals courses
Materials Science and Engineering	MAT.P403	Soft Materials Physics	Vacha Martin	3	
Materials Science and Engineering	MAT.P404	Soft Materials Functional Physics	Hayamizu Yuhei	4	
Materials Science and Engineering	MAT.P463	Advanced Course in Surface Properties of Organic Materials A	Mori Takehiko, Ouchi Yukio, et al.	1	
Materials Science and Engineering	MAT.P464	Advanced Course in Surface Properties of Organic Materials B	Mori Takehiko, Ouchi Yukio, et al.	2	
Materials Science and Engineering	MAT.P465	Advanced Course in Physical Properties of Organic Materials A	Kikutani Takeshi, Morikawa Junko, et al.	3	
Materials Science and Engineering	MAT.P466	Advanced Course in Physical Properties of Organic Materials B	Kikutani Takeshi, Morikawa Junko, et al.	4	
Chemical Science and Engineering	CAP.A421	Advanced Design of Organic Reaction Processes I	Mikami Koichi	1	The credit of Advanced Organic Chemistry III (Organic Synthesis) is needed.
Chemical Science and Engineering	CAP.A422	Advanced Design of Organic Reaction Processes II	Mikami Koichi	2	The credit of Advanced Organic Chemistry III (Organic Synthesis) is needed.
Chemical Science and Engineering	CAP.C411	Chemical Engineering for Advanced Materials and Chemicals Processing I	Kubouchi Masatoshi, Tago Teruoki, et al.	1	Knowledge of fundamental chemical engineering is desireble.
Chemical Science and Engineering	CAP.C423	Computational Fluid Dynamics	Okawara Shinichi	2	Fundamental knowledge of fluid dynamics and transport phenomena is needed.
Chemical Science and Engineering	CAP.C431	Chemical Engineering for Advanced Materials and Chemicals Processing II	Sekiguchi Hidetoshi, Okochi Mina	3	Knowledge of fundamental chemical engineering is desireble.
Chemical Science and Engineering	CAP.C441	Transport Phenomena and Operation	Yoshikawa Shiro	4	
Chemical Science and Engineering	CAP.C443	Advanced Reaction-Separation Process	Tago Teruoki, Shimoyama Yusuke	4	Fundamental knowledge of chemical reaction engineering and separation operation and process is needed.
Chemical Science and Engineering	CAP.I438	Functionalized Nano-Materials Chemistry I	Hara Masahiko, Nomura Junko	3	
Chemical Science and Engineering	CAP.I445	Functionalized Nano-Materials Chemistry II	Hara Masahiko	4	
Chemical Science and Engineering	CAP.I473	Nanotechnology and Nanoscience	Hara Masahiko, Hayashi Tomohiro	1,2	
Mathematical and Computing Science	MCS.T402	Mathematical Optimization: Theory and Algorithms	Fukuda Mituhiro, Yamashita Makoto	3	
Mathematical and Computing Science	MCS.T403	Statistical Learning Theory	Watanabe Sumio, Kabashima Yoshiyuki	2	

Mathematical and Computing Science	MCS.T406	Distributed Systems	Shudo Kazuyuki, Endo Toshio	2	
Mathematical and Computing Science	MCS.T408	Discrete, Algebraic and Geometric Structures I	Suzuki Sakie, Terashima Yuji et al	4	
Mathematical and Computing Science	MCS.T410	Applied Probability	Miyoshi Naoto, Nakano Yumiharu	3	
Mathematical and Computing Science	MCS.T415	Topics on Mathematical and Computing Science B	Larangeira Mario, Bernardo Machado David et al	1	
Mathematical and Computing Science	MCS.T416	Logic and Computation	Kashima Ryo, Nishizaki Shinya	1	
Mathematical and Computing Science	MCS.T419	Stochastic differential equations	Nakano Yumiharu, Miyoshi Naoto	4	
Computer Science	CSC.T431	Advanced System Software	Watanabe Takuo	3	
Computer Science	CSC.T433	Advanced Computer Architecture	Kise Kenji	4	
Computer Science	CSC.T434	International Project for System Development	Defago Xavier	4	
Computer Science	CSC.T438	Distributed Algorithms	Defago Xavier	1	Applicants should preferably have basic knowledge of discrete mathematics, algorithms and data structures, concurrency or operating systems, and some programming experience.
Artificial Intelligence	ART.T454-01	Advanced Topics in Artificial Intelligence AE	Suzumura Toyotaro, Machida Motoya, et al.	1,2	Fundamental graph algorithms; consent of instructor
Artificial Intelligence	ART.T457	Workshop on Building Advanced Computer Network	Yamamura Masayuki, Itoh Yuta	2	
Artificial Intelligence	ART.T462	Complex Networks	Murata Tsuyoshi	4	
Artificial Intelligence	ART.T464	Information Organization and Retrieval	Fujii Atsushi	4	
Life Science and Technology	LST.A401	Molecular and Cellular Biology	Iwasaki Hiroshi, Kimura Hiroshi, et al.	1	Acquisition of basics of molecular biology and cell biology. When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Life Science and Technology	LST.A403	Biophysics	Ueno Takafumi, Kobatake Eiry, et al.	1	When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Life Science and Technology	LST.A404	Cell Physiology	Komada Masayuki, Tachibana Kazunori, et al.	2	Undergraduate-level basic knowledge of cell biology. When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Life Science and Technology	LST.A406	Molecular Developmental Biology and Evolution	Kume Shoen, Kawakami Atsushi, et al.	3	When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Life Science and Technology	LST.A407	Science of Metabolism	Hirasawa Takashi, Shiraki Nobuaki, et al.	3	Undergraduate-level basic knowledge of biochemistry, molecular biology and cell biology.
Life Science and Technology	LST.A408	Computational Biology	Sakurai Minoru, Itoh Takehiko, et al.	3	When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Life Science and Technology	LST.A409	Physical Biology of the Cell	Murakami Satoshi, Taguchi Hideki, et al.	4	Acquisition of basics of physical chemistry. When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Life Science and Technology	LST.A410	Advanced Neuroscience	Ichinose Hiroshi, Suzuki Takashi, et al.	4	Acquisition of basics of neuroscience. When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Life Science and Technology	LST.A411	Biomolecular Engineering	Fukui Toshiaki, Ueda Hiroshi, et al.	2	Undergraduate-level basic knowledge of molecular biology and genetic engineering. When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Architecture and Building Engineering	ARC.D401	History of Architecture	Stewart David-Butler	1	International students accepted to the Department of Architecture and Building Engineering

Architecture and Building Engineering	ARC.D402	Architectural Preservation and Renovation	Yamazaki Taisuke	1	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D421	Architectural Design Studio I	Yasuda Koichi, Okuyama Shin-Ichi, et al.	1	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D422	Architectural Design Studio II	Yasuda Koichi, Okuyama Shin-Ichi, et al.	3	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D423	Architectural Design Studio III	Yasuda Koichi, Okuyama Shin-Ichi, et al.	4	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D424	Theory of Architectural Space and Planning	Tsukamoto Yoshiharu	3	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D441	Passive Solar Design	Murata Ryo	1	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D444	Architectural Detail	Yasuda Koichi, Okuyama Shin-Ichi, et al.	2	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D445	Theory of Architectural Design Ⅰ	Yasuda Koichi, Okuyama Shin-Ichi, et al.	4	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D446	Theory of Architectural Design II	Okuyama Shin-Ichi, Shiozaki Taishin	3	International students accepted to the Department of Architecture and Building Engineering
Architecture and Building Engineering	ARC.D447	Architectural Theory for Urban Space	Tsukamoto Yoshiharu	4	International students accepted to the Department of Architecture and Building Engineering
Civil Engineering	CVE.A401	Introduction to Solid Mechanics	Wijeyewickrema Anil	1	
Civil Engineering	CVE.A402	Nonlinear Solid Mechanics	Wijeyewickrema Anil	4	Basic knowledge of solid mechanics is required.
Civil Engineering	CVE.A403	Analysis of Vibrations and Elastic Waves	Hirose Sohichi	2	Completion of courses in calculus and complex function theory is preferable.
Civil Engineering	CVE.A431	Fracture Control Design of Steel Structures	Sasaki Eiichi	4	
Civil Engineering	CVE.B401	Water Resource Systems	Kanae Shinjiro	1	
Civil Engineering	CVE.C401	Mechanics of Geomaterials	Kitazume Masaki, Kasama Kiyonobu	1	Basic knowledge of soil mechanics is required.
Civil Engineering	CVE.C402	Stability Problems in Geotechnical Engineering	Takahashi Akihiro, Kitazume Masaki, et al.	3	Basic knowledge of soil mechanics is required.
Civil Engineering	CVE.C403	Geo-environmental Engineering	Takemura Jiro	2	Basic knowledge of civil and environmental engineering is required.
Civil Engineering	CVE.C431	Physical Modeling in Geotechnics	Takemura Jiro, Takahashi Akihiro	3,4	Basic knowledge of civil engineering and geotechnical engineering is required.
Civil Engineering	CVE.D401	Mathematical Modeling of Individual Choice Behavior	Fukuda Daisuke	1	
Civil Engineering	CVE.D402	Transportation Network Analysis	Asakura Yasuo	3	
Civil Engineering	CVE.D403	Transportation Economics	Fukuda Daisuke	4	
Civil Engineering	CVE.F431	Maintenance of Infrastructure	Iwanami Mitsuyasu	2	
Civil Engineering	CVE.F432	Principles of Construction Management	Matsukawa Keisuke, Hasegawa Atsushi, et al.	3,4	
Civil Engineering	CVE.G401	Aquatic Environmental Science	Yoshimura Chihiro	2	
Civil Engineering	CVE.G402	Environmental Statistics	Yoshimura Chihiro	4	

Civil Engineering	CVE.G403	Water Chemistry	Fujii Manabu	3	
Civil Engineering	CVE.M401	Civil Engineering Analysis	Hirose Sohichi, Bui Tinh Quoc	3	Programming skills are required.
Global Engineering for Development, Environment and Society	GEG.E404	Technologies for Energy and Resource Utilization	Yoshikawa Kunio	1	
Global Engineering for Development, Environment and Society	GEG.E411	Atmospheric Environment in Megacities	Kanda Manabu, Inagaki Atsushi, et al.	1	
Global Engineering for Development, Environment and Society	GEG.E421	Energy&Environment-1	Tokimatsu Koji, Yoshikawa Kunio, et al.	2	
Global Engineering for Development, Environment and Society	GEG.I401	Sustainable Development and Integrated Management	Takada Jun-Ichi, Yamaguchi Shinobu	1	
Global Engineering for Development, Environment and Society	GEG.S401	Environmental Policy	Murayama Takehiko, Nishikizawa Shigeo	1	
Global Engineering for Development, Environment and Society	GEG.S402	The economics and systems analysis of environment, resources and technology	Tokimatsu Koji	4	
Global Engineering for Development, Environment and Society	GEG.T413	Basic Behaviormetrics: Theory and Methods	Takahashi Fumitake	2	
Social and Human Sciences	SHS.M441	Graduate Lecture in Cognition, Mathematics and Information S1A	Yamagishi Kimihiko	1	
Social and Human Sciences	SHS.M442	Graduate Lecture in Cognition, Mathematics and Information S1B	Inohara Takehiro	2	
Social and Human Sciences	SHS.M461	Graduate Methodologies in Cognition, Mathematics and Information S1	Inohara Takehiro	1,2	
Social and Human Sciences	SHS.P441	Graduate Lecture in Politics, Law and Administration S1A	Kaneko Hironao	1	
Social and Human Sciences	SHS.S444	Graduate Lecture in Science, Technology and Society F1B	Bektas Yakup	4	
Urban Design and Built Environment	UDE.S402	Nonlinear Behavior of Concrete and Concrete Members	Kono Susumu	1	
Urban Design and Built Environment	UDE.S431	Basics of Stochastic Process for Earthquake Engineering	Morikawa Hitoshi	1	Environment and skill of numerical calculation are required.
Urban Design and Built Environment	UDE.S435	Earthquake and Tsunami Disaster Reduction	Morikawa Hitoshi	3	
Technology and Innovation Management	TIM.B418	Strategic Management of Technology I	Miyazaki Kumiko	1	
Technology and Innovation Management	TIM.B419	Strategic Management of Technology II	Miyazaki Kumiko	2	
Technology and Innovation Management	TIM.C412	Innovation System I	Miyazaki Kumiko	3	
Technology and Innovation Management	TIM.C413	Innovation System II	Miyazaki Kumiko	4	
Energy Science and Engineering	ENR.A401-01	Interdisciplinary scientific principles of energy 1	Ihara Manabu, Yamada Akira, et al.	1	
Energy Science and Engineering	ENR.A401-02	Interdisciplinary scientific principles of energy 1	Yamaguchi Takeo, Shishido Atsushi, et al.	1	
Energy Science and Engineering	ENR.A402-01	Interdisciplinary scientific principles of energy 2	Ihara Manabu, Okimoto Yoichi	2	
Energy Science and Engineering	ENR.A402-02	Interdisciplinary scientific principles of energy 2	Yamada Akira, Arai Hajime, et al.	2	
Energy Science and Engineering	ENR.A403-01	Interdisciplinary principles of energy devices 1	Hanamura Katsunori, Fujita Hideaki, et al.	1	

Energy Science and Engineering	ENR.A403-02	Interdisciplinary principles of energy devices 1	Suekane Tetsuya, Okuno Yoshihiro, et al.	1	
Energy Science and Engineering	ENR.A404-01	Interdisciplinary principles of energy devices 2	Ihara Manabu, Sasabe Takashi, et al.	2	
Energy Science and Engineering	ENR.A404-02	Interdisciplinary principles of energy devices 2	Yamada Akira, Kitamura Fusao, et al.	2	
Energy Science and Engineering	ENR.A405-01	Interdisciplinary Energy Materials Science 1	Nozaki Tomohiro, Okimoto Yoichi, et al.	3	
Energy Science and Engineering	ENR.A405-02	Interdisciplinary Energy Materials Science 1	Nozaki Tomohiro, Kimura Yoshisato, et al.	3	
Energy Science and Engineering	ENR.A406-01	Interdisciplinary Energy Materials Science 2	Nozaki Tomohiro, Matsumoto Hidetoshi, et al.	4	
Energy Science and Engineering	ENR.A406-02	Interdisciplinary Energy Materials Science 2	Nozaki Tomohiro, Ihara Manabu, et al.	4	
Energy Science and Engineering	ENR.B431	Recent technologies of fuel cells, solar cells butteries and energy system	Ihara Manabu, Yamada Akira, et al.	2	
Energy Science and Engineering	ENR.H407	Advanced Solid State Chemistry Oriented for Energy and Environment Issues I	Wada Yuji	3	
Energy Science and Engineering	ENR.H418	Inorganic Materials Science	Kanno Ryoji, Hirayama Masaaki	3,4	
Energy Science and Engineering	ENR.H419	Organic Electrode Process	Inagi Shinsuke	3,4	
Energy Science and Engineering	ENR.J401	Advanced Metal Physics	Shi Ji, Nakamura Yoshio	3	
Energy Science and Engineering	ENR.J402	Physical Chemistry for High Temperature Processes -Thermodynamics-	Susa Masahiro, Kobayashi Yoshinao, et al.	3	Students are required to have basic knowledge about the first, second and third law of thermodynamics.
Energy Science and Engineering	ENR.K440	Advanced course of radiation transfer	Hanamura Katsunori, Satoh Isao	3	
Energy Science and Engineering	ENR.L401	Mechanical-to-electrical energy conversion	Fujita Hideaki	1	Knowledge of mechanics and electromagnetics equivalent to high school-level physics
Energy Science and Engineering	ENR.L410	Introduction to Photovoltaics	Miyajima Shinsuke	2	The students are expected to have basic knowledge of semiconductors. (p-type , n-type, Fermi level etc…)
Engineering Sciences and Design	ESD.C401	Design Theories	Fujii Haruyuki	1	
Engineering Sciences and Design	ESD.D401	Material Selection for Engineering Design	Inaba Kazuaki, Mizutani Yoshihiro	2	
Engineering Sciences and Design	ESD.D402	Materials Modeling and Simulation for Engineering Design	Inaba Kazuaki, Wijeyewickrema Anil	4	
Engineering Sciences and Design	ESD.F403	UX / Interaction Design	Seno dai, Park Jae Hyun	2	
Engineering Sciences and Design	ESD.F404	Affective Engineering / Emotional Design	Fujii Haruyuki	3	
Human Centered Science and Biomedical Engineering	HCB.M464	Introduction to Neural Engineering	Yagi Tohru	3	
Nuclear Engineering	NCL.A404	Application of Accelerators and Radiation	Oguri Yoshiyuki, Katabuchi Tatsuya	2	Knowledge of basics in atomic physics, nuclear physics and radiation physics
Nuclear Engineering	NCL.B401	Radiation Biology and Medicine	Matsumoto Yoshihisa	3	
Nuclear Engineering	NCL.C403	Nuclear Chemical Engineering	Takeshita Kenji, Kato Yukitaka	4	
Nuclear Engineering	NCL.N401	Basic Nuclear Physics	Oguri Yoshiyuki, Chiba Satoshi, et al.	1	Knowledge of basic quantum mechanics

Nuclear Engineering	NCL.N402	Neutron Transport Theory	Obara Toru, Nishiyama Jun	1	Knowledge of differential and integral equations including vector calculus
Nuclear Engineering	NCL.N405	Nuclear Reactor Thermal-hydraulics	Kato Yukitaka, Kikura Hiroshige, et al.	1	
Nuclear Engineering	NCL.N406	Nuclear Reactor Theory	Obara Toru, Nishiyama Jun	2	Knowledge of differential and integral equations including vector calculus
Nuclear Engineering	NCL.N407	Nuclear Safety Engineering	Kikura Hiroshige, Sagara Hiroshi	2	
Nuclear Engineering	NCL.N409	Nuclear Energy Systems	Kikura Hiroshige, Kato Yukitaka, et al.	3	
Nuclear Engineering	NCL.O401	Nuclear Non-proliferation and Security	Sagara Hiroshi, Hayashizaki Noriyosu	3	
English Language Courses	LAE.E461-01	Academic Writing in English 13	Anno Mariko	1	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E461-02	Academic Writing in English 13	De Ferranti Hugh	1	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E461-03	Academic Writing in English 13	Undecided	1	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E461-04	Academic Writing in English 13	Undecided	1	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E462-01	Academic Writing in English 14	Anno Mariko	2	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E462-02	Academic Writing in English 14	De Ferranti Hugh	2	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E462-03	Academic Writing in English 14	Undecided	2	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E462-04	Academic Writing in English 14	Undecided	2	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E463-01	Academic Writing in English 15	De Ferranti Hugh	3	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E463-02	Academic Writing in English 15	De Ferranti Hugh	3	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E463-03	Academic Writing in English 15	David Pinkney	3	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E463-04	Academic Writing in English 15	Undecided	3	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E464-01	Academic Writing in English 16	De Ferranti Hugh	4	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E464-02	Academic Writing in English 16	De Ferranti Hugh	4	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
English Language Courses	LAE.E464-03	Academic Writing in English 16	David Pinkney	4	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.

English Language Courses	LAE.E464-04	Academic Writing in English 16	Undecided	4	Graduate students will receive priority if enrollment is limited. Whether or not the student has sufficient academic ability to enroll shall be determined by the instructor.
Breadth Courses	LAW.X402	Introduction to EdTech: Online Courses	Cross Jeffrey Scott	1	enrollment limted to 15 students due to group work, on-seat available basis
Breadth Courses	LAW.X403	Introduction to EdTech: Video-Making	Cross Jeffrey Scott	2	enrollment limted to 15 students due to group work, on-seat available basis
Breadth Courses	LAW.X407	Fieldwork Skills Fall	Hope Tom	3	Ability to discuss in English
Breadth Courses	LAW.X411	Study on Japanese Companies and Industries I	Sato Yuriko, Hope Tom, et al.	3	Due to the capacity of a bus used in study tours, number of students is limited to 47. YSEP students and master course regular students have priority in participation.
Breadth Courses	LAW.X412	Study on Japanese Companies and Industries II	Sato Yuriko, Takemura Jiro	1	Due to the capacity of a bus used in study tours, number of students is limited to 47. YSEP students and master course regular students have priority in participation.
Breadth Courses	LAW.X414	Technical Management for Sustainable Engineering	Kobayashi Yoshinao, Hanaoka Shinya	3	
Breadth Courses	LAW.X416	Modern Japan	Hara Masahiko	2	
Breadth Courses	LAW.X417	Sustainable Engineering Technology	Takemura Jiro, Kobayashi Equo, et al.	4	should attend two days satellilte seminar in the end of Feb.
Breadth Courses	LAW.X418	Communication Skills in Japanese Industries I	Takemura Jiro, Morikawa Junko, et al.	3	
Breadth Courses	LAW.X419	Communication Skills in Japanese Industries II	Takemura Jiro, Morikawa Junko, et al.	1	
Breadth Courses	LAW.X421	Global Leadership Training	Ota Eri	4	