

List of Graduate Courses Available to Undergraduate-level International Exchange Students <For 1Q, 2Q of the 2020-2021 Academic Year>

As of June 12 2020

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.
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**1Q: April 4th-June 12th, 2Q: June 13th-August 9th**

Major / Course Category	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Graduate major in Mathematics	MTH.A401	Advanced topics in Algebra A	Mizumoto Shin-Ichiro	1Q	To be announced
Graduate major in Mathematics	MTH.A402	Advanced topics in Algebra B	Mizumoto Shin-Ichiro	2Q	To be announced
Graduate major in Mathematics	MTH.B401	Advanced topics in Geometry A	Gomi Kiyonori	1Q	To be announced
Graduate major in Mathematics	MTH.B402	Advanced topics in Geometry B	Gomi Kiyonori	2Q	To be announced
Graduate major in Mathematics	MTH.C401	Advanced topics in Analysis A	Tanabe Masaharu	1Q	To be announced
Graduate major in Mathematics	MTH.C402	Advanced topics in Analysis B	Tanabe Masaharu	2Q	To be announced
Graduate major in Mathematics	MTH.E433	Special lectures on advanced topics in Mathematics C	Nakajima Hiraku	2Q	To be announced
Graduate major in Mathematics	MTH.E444	Special Lecture on Science in English (Mathematics 6)	MCSHANE,Gragory	1Q	To be announced
Graduate major in Physics	PHY.C439	Physics of Magnetic Materials	Satoh Takuya	2Q	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.C441	Crystal Physics	Satoh Takuya	<del>1Q</del> →2Q (Intensive in summer time)	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.C442	Superfluidity	Okuma Satoshi	1Q	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.C443	Superconductivity	Okuma Satoshi	2Q	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	<del>1Q</del> →After 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.C447	Light and Matter II	Kanamori Hideto	2Q	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.F430	Hadron Physics	Jido Daisuke	1Q	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.F431	Cosmology	Suyama Teruaki	1Q	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.F436	Advanced Particle Physics	Kuze Masahiro	2Q	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.F437	Advanced Nuclear Physics	Nakamura Takashi, Fujioka Hiroyuki	2Q	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.P410	Basic Writing in Physics	Tilma Todd	1~2Q	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.P411	Basic Presentation in Physics	Shi Jie	1~2Q	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.Q433	Field Theory I	Ito Katsushi	2Q	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.Q438	Quantum Mechanics of Many-Body Systems	Saito Susumu	1Q	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.A410	Advanced Earth and Space Sciences A	Nakamoto Taishi	1Q	
Graduate major in Earth and Planetary Sciences	EPS.A411	Advanced Earth and Space Sciences B	Okuzumi Satoshi, Sato Bunei, Nakamoto Taishi	1Q	
Graduate major in Earth and Planetary Sciences	EPS.A418	Advanced Earth and Space Sciences E	Ohta Kenji, Yokoyama Tetsuya, Ueno Yuichiro, Nakajima Junichi	1Q	
Graduate major in Earth and Planetary Sciences	EPS.A421	Advanced Earth and Space Sciences G	Ogawa Yasuo, Kanda Wataru	2Q	
Graduate major in Earth and Planetary Sciences	EPS.A422	Advanced Earth and Space Sciences D	Yokoyama Tetsuya	<del>1Q</del> →After 3Q	
Graduate major in Earth and Planetary Sciences	EPS.A424	Advanced Earth and Space Sciences H	Ueno Yuichiro, Yokoyama Tetsuya, Ohta Kenji	2Q	
Graduate major in Mechanical Engineering	MEC.C431	Mechanics of Composite Materials	Todoroki Akira	<del>2Q</del> →Cancel	Mechanics of materials, Theory of Elasticity and Plasticity, Strength and fracture of materials
Graduate major in Mechanical Engineering	MEC.C432	Structural Integrity Assessment	Mizutani Yoshihiro	<del>1Q</del> →2Q	
Graduate major in Mechanical Engineering	MEC.D431	Advanced Sound and Vibration Measurement	Matsumura Shigeki	1Q	
Graduate major in Mechanical Engineering	MEC.E431	Thermodynamics of Nonequilibrium Systems	Murakami Yoichi, Okuno Yoshihiro	<del>1Q</del> →2Q	
Graduate major in Mechanical Engineering	MEC.F431	Computational Fluid Dynamics	Xiao Feng, Aoki Takayuki	2Q	Prerequisite: fundamental knowledge of fluid mechanics and numerical methods
Graduate major in Mechanical Engineering	MEC.G431	Mechanical Processing	Yoshioka Hayato, Tanaka Tomohisa, Hirata Atsushi	2Q	
Graduate major in Mechanical Engineering	MEC.H431	Advanced Mechanical Elements	Iwatsuki Nobuyuki	<del>1Q</del> →2Q	
Graduate major in Systems and Control Engineering	SCE.I401	Advanced Course of Measurement and Signal Processing	Hara Seiichiro	1Q	Having basic knowledge of measurement and signal processing is preferable.
Graduate major in Systems and Control Engineering	SCE.M401	Numerical Analysis of Heat Transfer and Fluid Flow	Kosaka Hidenori	2Q	

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Graduate major in Systems and Control Engineering	SOE.M402	Modeling of Bio-Systems I	Nakashima Motomu, Kurabayashi Daisuke, Miyazaki Yusuke	2Q	
Graduate major in Electrical and Electronic Engineering	EEE.C441	VLSI Technology I	Wakabayashi Hitoshi, Kakushima Kuniyuki	1Q	
Graduate major in Electrical and Electronic Engineering	EEE.D401	Fundamentals of Electronic Materials	Nakagawa Shigeki, Sugahara Satoshi	1Q	Basic knowledge on quantum mechanics and electronic properties is required.
Graduate major in Electrical and Electronic Engineering	EEE.D431	Fundamentals of Light and Matter I	Kajikawa Kotaro, Munekata Hiro, Ito Haruhiko	1Q	Completion of courses on quantum mechanics and electromagnetism is preferable.
Graduate major in Electrical and Electronic Engineering	EEE.D451	Bipolar Transistors and Compound Semiconductor Devices	Miyamoto Yasuyuki	1Q	Undergraduate-level knowledge on electronic devices, analog electronic circuits and semiconductor physics (Equivalent to 200s and 300s-level courses on those subjects at Tokyo Tech) is required.
Graduate major in Electrical and Electronic Engineering	EEE.P412	Power electronics circuits and systems	Fujita Hideaki	2Q	It is required to understand the knowledge taught in the undergraduate power electronics course.
Graduate major in Electrical and Electronic Engineering	EEE.S401	Advanced Electromagnetic Waves	Hirokawa Jiro, Tomura Takashi	1Q	The undergraduate-level knowledge is required on electromagnetism and electromagnetic wave.
Graduate major in Electrical and Electronic Engineering	EEE.S451	Wireless Communication Engineering	Sakaguchi Kei, Tran Gia Khanh	2Q	The fundamentals on signal & systems are prerequisite.
Graduate major in Information and Communications Engineering	ICT.A406	Human-Centric Information Systems I	Nakayama Minoru, Koike Yasuharu, Yamaguchi Masahiro, Nakamoto Takamichi, Kaneko Hirohiko, Obi Takashi, Hasegawa Shoichi	2Q	Sufficient basic academic skills in information and communications
Graduate major in Information and Communications Engineering	ICT.C401	Modern Cryptography	Ogata Wakaha	1Q	Completion of courses in discrete mathematics and statistics
Graduate major in Information and Communications Engineering	ICT.H409	Optics in Information Processing	Yamaguchi Masahiro	2Q	Basic knowledge of mathematics such as calculus, linear algebra, probability theory and statistics, and Fourier analysis
Graduate major in Information and Communications Engineering	ICT.H411	Basic Sensation Informatics	Kaneko Hirohiko, Kashino Makio, Nagai Takehiro	2Q	Sufficient basic academic skills in information and communications
Graduate major in Information and Communications Engineering	ICT.I408	Analog Integrated Circuits	Takagi Shigetaka	2Q	Sufficient basic academic knowledge in electric circuits, linear circuits and linear electronic circuits
Graduate major in Information and Communications Engineering	ICT.I425	Parallel and Reconfigurable VLSI Computing	Nakahara Hiroki	2Q	Sufficient basic academic skills in information and communications
Graduate major in Information and Communications Engineering	ICT.S407	Wireless Signal Processing	Fukawa Kazuhiko	2Q	Completion of courses in linear algebra, calculus, probability and statistics
Graduate major in Industrial Engineering and Economics	IEE.C431	Applied Statistical Analysis	Miyakawa Masami	1Q	
Graduate major in Industrial Engineering and Economics	IEE.C432	Applied Cognitive Ergonomics	Itoh Kenji, Aoki Hiroataka	2Q	Ability to discuss and engage in group work in English
Graduate major in Industrial Engineering and Economics	IEE.D432	Financial Statement Analysis and Valuation	Nagata Kyoko	1Q	Basic knowledge of accounting and corporate finance. Ability to discuss, create a report and engage in group work in English
Graduate major in Materials Science and Engineering	MAT.C402	Quantum Physics in Optical Response of Materials	Nakamura Kazutaka	2Q	Students need knowledge of quantum mechanics equivalent to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.C407	Advanced Course of Nano-Bionics	Ikoma Toshiyuki	1Q	Students need knowledge of materials science equivalent to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.M405	Advanced Microstructure Design of Ferrous Materials	Kobayashi Satoru, Takeyama Masao	2Q	Students need knowledge of metallurgy equivalent to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.M408	Quantum Statistical Mechanics	Nakatsuji Kan, Kajihara Masanori, Gohda Yoshihiro	1Q	Students need knowledge of metallurgy equivalent to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.M419	Microscopic characterization of solid materials	Chai Yaw Wang	1Q	Students need knowledge of metallurgy equivalent to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.M426	Transport Phenomena at High Temperature - Momentum and Heat Flow -	Hayashi Miyuki, Kawamura Kenichi, Susa Masahiro, Kobayashi Yoshinao, Ueda Mitsutoshi	2Q	Students need knowledge of metallurgy equivalent to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.M427	Transport Phenomena at High Temperature - Flow of charged particles in solid -	Kawamura Kenichi, Hayashi Miyuki, Susa Masahiro, Kobayashi Yoshinao, Ueda Mitsutoshi	2Q	Students need knowledge of metallurgy equivalent to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.P401	Organic Optical Materials physics	Ishikawa Ken	2Q	
Graduate major in Materials Science and Engineering	MAT.P402	Soft Materials Physical Chemistry	Ouchi Yukio	2Q	Students need knowledge of physical chemistry to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.P413	Soft Materials Functional Chemistry	Hayakawa Teruaki	1Q	Students need knowledge of organic chemistry and polymer chemistry to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Materials Science and Engineering	MAT.P421	Organic Materials Functional Design	Asai Shigeo	1Q	Students need knowledge of physical chemistry and organic materials properties to that of fourth-year undergraduates at Tokyo Tech and need to consult with the lecturer when attending this course first.
Graduate major in Chemical Science and Engineering	CAP.A461	Advanced Solid State Chemistry I	Ohtomo Akira	1Q	Knowledge of fundamental solid-state chemistry is needed.
Graduate major in Chemical Science and Engineering	CAP.A465	Advanced Bioinorganic Chemistry I	Kuwata Shigeki	1Q	Knowledge of inorganic, organic, and coordination chemistry is required.
Graduate major in Chemical Science and Engineering	CAP.A466	Advanced Bioinorganic Chemistry II	Kuwata Shigeki	2Q	Knowledge of inorganic, organic, and coordination chemistry is required.
Graduate major in Chemical Science and Engineering	CAP.C411	Chemical Engineering for Advanced Materials and Chemicals Processing I	Kubouchi Masatoshi, Tago Teruoki, Ihara Manabu	1Q	Knowledge of fundamental chemical engineering is desirable.
Graduate major in Chemical Science and Engineering	CAP.C412	Process Systems Engineering	Matsumoto Hideyuki	1Q	Knowledge of fundamental chemical engineering is desirable.
Graduate major in Chemical Science and Engineering	CAP.C421	Advanced Energy Transfer Operation	Sekiguchi Hidetoshi	2Q	Knowledge of fundamental chemical engineering is desirable.
Graduate major in Chemical Science and Engineering	CAP.C423	Computational Fluid Dynamics	Okawara Shinichi	2Q	Fundamental knowledge of fluid dynamics and transport phenomena is needed.
Graduate major in Chemical Science and Engineering	CAP.C424	Advanced Reaction Process Engineering	Tago Teruoki	2Q	Knowledge of fundamental chemical engineering is desirable.

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Graduate major in Chemical Science and Engineering	CAP.C425	Advanced Bioprocess Engineering	Okochi Mina	2Q	Knowledge of fundamental chemical engineering is desirable.
Graduate major in Chemical Science and Engineering	CAP.I405	Environmental Chemistry	Toyoda Sakae, Yamada Keita	1Q	Fundamental knowledge of general chemistry is desired.
Graduate major in Chemical Science and Engineering	CAP.I407	Introduction to Chemical Engineering (Basics)	Yamaguchi Takeo, Tamaki Takanori	1Q	
Graduate major in Chemical Science and Engineering	CAP.I416	Catalysis for the Environmental Issues	Motokura Ken, Manaka Yuichi	2Q	Fundamental knowledge on organic chemistry, inorganic chemistry, physical chemistry
Graduate major in Chemical Science and Engineering	CAP.I419	Analytical Techniques for Environmental Chemistry	Toyoda Sakae, Yamada Keita	2Q	Fundamental knowledge of general chemistry is desired.
Graduate major in Chemical Science and Engineering	CAP.I420	Advanced Supramolecular Science	Fukushima Takanori, Yoshizawa Michito	2Q	Fundamental knowledge on organic chemistry, inorganic chemistry, physical chemistry
Graduate major in Chemical Science and Engineering	CAP.I426	Introduction to Polymer Science	Tomita Ikuyoshi, Imaoka Takane	1Q	
Graduate major in Chemical Science and Engineering	CAP.I427	Introduction to Polymer Chemistry	Tomita Ikuyoshi, Yamamoto Kimihisa	2Q	
Graduate major in Chemical Science and Engineering	CAP.I436	Introduction to Polymer Physical Properties I	Imaoka Takane, Nagai Keiji	2Q	
Graduate major in Chemical Science and Engineering	CAP.P411	Advanced Polymer Synthesis	Ishizone Takashi	1Q	
Graduate major in Chemical Science and Engineering	CAP.P422	Advanced Polymer Properties	Tokita Masatoshi	2Q	Knowledge of fundamental polymer chemistry and physics is required.
Graduate major in Chemical Science and Engineering	CAP.P433	Introduction to Polymer Physical Chemistry	Furuya Hidemine, Tokita Masatoshi	1Q	
Graduate major in Mathematical and Computing Science	MCS.T402	Mathematical Optimization: Theory and Algorithms	Fukuda Mitsuhiro, Yamashita Makoto	2Q	
Graduate major in Mathematical and Computing Science	MCS.T403	Statistical Learning Theory	Watanabe Sumio	2Q	
Graduate major in Mathematical and Computing Science	MCS.T406	Distributed Systems	Shudo Kazuyuki, Endo Toshio	2Q	
Graduate major in Mathematical and Computing Science	MCS.T415	Topics on Mathematical and Computing Science B	Larangeira Mario, Tanaka Keisuke	1Q	
Graduate major in Mathematical and Computing Science	MCS.T416	Logic and Computation	Kashima Ryo, Nishizaki Shin-Ya	1Q	
Graduate major in Computer Science	CSC.T422	Mathematical Theory of Programs	Nishizaki Shin-Ya	1Q	
Graduate major in Computer Science	CSC.T438	Distributed Algorithms	Defago Xavier	1Q	
Graduate major in Computer Science	CSC.T439	Augmented Reality	Itoh Yuta	1Q	
Graduate major in Life Science and Technology	LST.A401	Molecular and Cellular Biology	Kimura Hiroshi, Iwasaki Hiroshi, Yamaguchi Yuki, Wakabayashi Ken-Ichi, Aizawa Yasunori	1Q	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.
Graduate major in Life Science and Technology	LST.A403	Biophysics	Kobatake Eiry, Ueno Takafumi, Kamachi Toshiaki, Mie Masayasu, Asakura Noriyuki	1Q	When the number of registered students exceeds the capacity of the classroom, exchange students may not be accepted.
Graduate major in Life Science and Technology	LST.A404	Cell Physiology	Tachibana Kazunori, Nakamura Nobuhiro, Nakatogawa Hitoshi, Suzuki Takashi, Kato Akira	2Q	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.
Graduate major in Life Science and Technology	LST.A411	Biomolecular Engineering	Fukui Toshiaki, Ueda Hiroshi, Hirota Junji, Ohta Hiroyuki, Kitaguchi Tetsuya	2Q	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.
Graduate major in Architecture and Building Engineering	ARC.D401	History of Architecture	Stewart David-Butler	1Q → 2Q	
Graduate major in Architecture and Building Engineering	ARC.D402	Architectural Preservation and Renovation	Fujita Yasuhiro	1Q	When the number of registered students exceeds the capacity, exchange students may not be accepted because we will see the historic buildings in this course.
Graduate major in Architecture and Building Engineering	ARC.D421	Architectural Design Studio I	Yasuda Koichi, Okuyama Shinichi, Tsukamoto Yoshiharu, Yamazaki Taisuke, Murata Ryo, Nasu Satoshi, Shiozaki Taishin, Kawashima Norihisa	1Q → 2Q	
Graduate major in Architecture and Building Engineering	ARC.D441	Passive Solar Design	Murata Ryo	1Q	
Graduate major in Architecture and Building Engineering	ARC.D443	Structural Planning in Architecture	Takeuchi Toru	2Q	
Graduate major in Architecture and Building Engineering	ARC.P441	Theories in Urban Analysis and Planning I	Saio Naoko	2Q	
Graduate major in Civil Engineering	CVE.A401	Introduction to Solid Mechanics	Wijeyewickrema Anil	1Q	
Graduate major in Civil Engineering	CVE.A403	Analysis of Vibrations and Elastic Waves	Hirose Sohichi	2Q	Completion of courses in calculus and complex function theory is preferable.
Graduate major in Civil Engineering	CVE.B401	Water Resource Systems	Kanae Shinjiro	1Q → Cancel	
Graduate major in Civil Engineering	CVE.C401	Mechanics of Geomaterials	Kitazume Masaki, Kasama Kiyonobu	1Q → Cancel	Basic knowledge of soil mechanics is required.
Graduate major in Civil Engineering	CVE.C403	Geo-environmental Engineering	Takekura Jiro	2Q	Basic knowledge of civil and environmental engineering is required.
Graduate major in Civil Engineering	CVE.D401	Mathematical Modeling of Individual Choice Behavior	Fukuda Daisuke	1Q	
Graduate major in Civil Engineering	CVE.F431	Maintenance of Infrastructure	Iwanami Mitsuyasu	2Q	

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Graduate major in Civil Engineering	CVE.G401	Aquatic Environmental Science	Yoshimura Chihiro	2Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.E404	Technologies for Energy and Resource Utilization	Takahashi Fumitake	1Q	The number of the participants are limited and students of Major in Global Engineering for Development, Environment and Society (GEDES) are prioritized.
Graduate major in Global Engineering for Development, Environment and Society	GEG.E411	Atmospheric Environment in Megacities	Kanda Manabu, Inagaki Atsushi, Varquez Alvin Christopher	1Q	The number of the participants are limited and students of Major in Global Engineering for Development, Environment and Society (GEDES) are prioritized.
Graduate major in Global Engineering for Development, Environment and Society	GEG.E421	Energy&Environment-1	Tokimatsu Koji, Takahashi Fumitake, Cross Jeffrey Scott	2Q	The number of the participants are limited and students of Major in Global Engineering for Development, Environment and Society (GEDES) are prioritized.
Graduate major in Global Engineering for Development, Environment and Society	GEG.S401	Environmental Policy	Murayama Takehiko, Nishikizawa Shigeo	1Q	The number of the participants are limited and students of Major in Global Engineering for Development, Environment and Society (GEDES) are prioritized.
Graduate major in Global Engineering for Development, Environment and Society	GEG.T413	Basic Behaviormetrics: Theory and Methods	Takahashi Fumitake	2Q	The number of the participants are limited and students of Major in Global Engineering for Development, Environment and Society (GEDES) are prioritized.
Graduate major in Social and Human Sciences	SHS.M441	Graduate Lecture in Cognition, Mathematics and Information S1A	Yamagishi Kimihiko	1Q	
Graduate major in Social and Human Sciences	SHS.M448	Developmental Psychology	Yamagishi Kimihiko	1Q	
Graduate major in Social and Human Sciences	SHS.M449	Educational Psychology	Yamagishi Kimihiko	1Q	
Graduate major in Social and Human Sciences	SHS.M461	Graduate Methodologies in Cognition, Mathematics and Information S1	Inohara Takehiro	1~2Q	
Graduate major in Social and Human Sciences	SHS.P441	Graduate Lecture in Politics, Law and Administration S1A	Kaneko Hironao	1Q	
Graduate major in Energy Science and Engineering	ENR.A401	Interdisciplinary scientific principles of energy 1	Shimura Masayasu, Ihara Manabu, Wada Hiroyuki	1Q	For students in Ookayama Campus.
Graduate major in Energy Science and Engineering	ENR.A401	Interdisciplinary scientific principles of energy 1	Shimura Masayasu, Ihara Manabu, Wada Hiroyuki	1Q	For students in Suzukakedai Campus
Graduate major in Energy Science and Engineering	ENR.A402	Interdisciplinary scientific principles of energy 2	Arai Hajime, Ihara Manabu, Okimoto Yoichi	2Q	For students in Ookayama Campus.
Graduate major in Energy Science and Engineering	ENR.A402	Interdisciplinary scientific principles of energy 2	Arai Hajime, Yamada Akira, Kitamura Fusao, Hirayama Masaaki, Koshihara Shinya, Wada Hiroyuki	2Q	For students in Suzukakedai Campus
Graduate major in Energy Science and Engineering	ENR.A403	Interdisciplinary principles of energy devices 1	Hagiwara Makoto, Hanamura Katsunori, Fujita Hideaki, Suekane Tetsuya, Mori Shinsuke, Okawa Seiji	1Q	For students in Ookayama Campus.
Graduate major in Energy Science and Engineering	ENR.A403	Interdisciplinary principles of energy devices 1	Hagiwara Makoto, Suekane Tetsuya, Okuno Yoshihiro, Nagasaki Takao	1Q	For students in Suzukakedai Campus
Graduate major in Energy Science and Engineering	ENR.A404	Interdisciplinary principles of energy devices 2	Wada Hiroyuki, Ihara Manabu, Miyajima Shinsuke, Sasabe Takashi, Hirayama Masaaki	2Q	For students in Ookayama Campus.
Graduate major in Energy Science and Engineering	ENR.A404	Interdisciplinary principles of energy devices 2	Wada Hiroyuki, Yamada Akira, Miyajima Shinsuke, Kitamura Fusao, Kanno Ryoji, Hirayama Masaaki	2Q	For students in Suzukakedai Campus
Graduate major in Energy Science and Engineering	ENR.B431	Recent technologies of fuel cells, solar cells batteries and energy system	Ihara Manabu, Yamada Akira, Hirayama Masaaki, Miyajima Shinsuke	2Q	
Graduate major in Energy Science and Engineering	ENR.H403	Advanced Electrochemistry I	Kanno Ryoji, Arai Hajime, Kitamura Fusao, Hirayama Masaaki	1Q	
Graduate major in Energy Science and Engineering	ENR.H404	Advanced Electrochemistry II	Kanno Ryoji, Arai Hajime, Kitamura Fusao, Hirayama Masaaki	2Q	Mainly based on exercise. Knowledge of basic electrochemistry required.
Graduate major in Energy Science and Engineering	ENR.H405	Advanced Inorganic Materials Chemistry I	Kanno Ryoji, Waki Keiko, Hirayama Masaaki	1Q	
Graduate major in Energy Science and Engineering	ENR.H406	Advanced Inorganic Materials Chemistry II	Kanno Ryoji, Waki Keiko, Hirayama Masaaki	2Q	
Graduate major in Energy Science and Engineering	ENR.H410	Topics in Properties of Semiconductors	Wada Hiroyuki, Waki Keiko	1Q	
Graduate major in Energy Science and Engineering	ENR.H420	Introduction to Photochemistry I	Shishido Atsushi, Wada Hiroyuki	1Q	
Graduate major in Energy Science and Engineering	ENR.H430	Introduction to Photochemistry II	Nagai Keiji, Shishido Atsushi	2Q	Knowledge of mechanics and electromagnetics equivalent to high school-level physics
Graduate major in Energy Science and Engineering	ENR.J420	Advanced Lecture on Crystal Structure and Correlation with Properties of Solids	Yashima Masatomo	2Q	
Graduate major in Energy Science and Engineering	ENR.J406	Organic Electronic Materials Physics	Mori Takehiko	1Q	
Graduate major in Energy Science and Engineering	ENR.J407	Soft Materials Design	Matsumoto Hidetoshi	2Q	
Graduate major in Energy Science and Engineering	ENR.K430	Advanced course of turbulent flow and control	Tanahashi Mamoru, Shimura Masayasu	1Q	
Graduate major in Energy Science and Engineering	ENR.L401	Mechanical-to-electrical energy conversion	Fujita Hideaki	1Q	Knowledge of mechanics and electromagnetics equivalent to high school-level physics
Graduate major in Energy Science and Engineering	ENR.L410	Introduction to Photovoltaics	Miyajima Shinsuke	2Q	The students are expected to have basic knowledge of semiconductors. (p-type, n-type, Fermi level etc...)
Graduate major in Nuclear Engineering	NCL.N402	Nuclear Reactor Theory I	Obara Toru, Nishiyama Jun	1Q	Knowledge of differential and integral equations including vector calculus
Graduate major in Nuclear Engineering	NCL.N405	Nuclear Reactor Thermal-hydraulics	Kato Yukitaka, Kikura Hiroshige, Kondo Masatoshi, Sawada Tetsuo, Takahashi Hideharu	1Q	
Graduate major in Nuclear Engineering	NCL.N406	Nuclear Reactor Theory II	Obara Toru, Nishiyama Jun	2Q	Knowledge of differential and integral equations including vector calculus
Graduate major in Nuclear Engineering	NCL.N407	Nuclear Safety Engineering	Kikura Hiroshige, Sagara Hiroshi, Ujita Hiroshi, Hirose Makoto	2Q	

List of Graduate Courses Available to Undergraduate-level International Exchange Students <For 1Q, 2Q of the 2020-2021 Academic Year>

As of June 12 2020

**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 4th-June 12th, 2Q: June 13th-August 9th**

Major / Course Category	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Graduate major in Nuclear Engineering	NCL.O401	Nuclear Non-proliferation and Security	Sagara Hiroshi, Hayashizaki Noriyosu, Kikuchi Masahiro	2Q	
Graduate major in Artificial Intelligence	ART.T454	Advanced Topics in Artificial Intelligence S	Machida Motoya, Alexander Shibakov, Suzumura Toyotaro	1~2Q	
Graduate major in Artificial Intelligence	ART.T457	Workshop on Building Advanced Computer Network	Yamamura Masayuki	2Q	
Graduate major in Urban Design and Built Environment	UDE.E402	GIS and Digital Image Processing for Built Environment	Matsuoka Masashi	1Q	
Graduate major in Urban Design and Built Environment	UDE.E403	Introduction to Atmospheric Urban Environment	Okaze Tsubasa	2Q	
Graduate major in Urban Design and Built Environment	UDE.E404	Basic Engineering on Thermal Environment	Asawa Takashi	2Q	
Graduate major in Urban Design and Built Environment	UDE.P402	Theory of Regional Planning and Process	Yai Tetsuo	<del>1Q</del> →Cancel	
Graduate major in Urban Design and Built Environment	UDE.S402	Nonlinear Behavior of Concrete and Concrete Members	Kono Susumu, Nishimura Koshiro	1Q	
Graduate major in Urban Design and Built Environment	UDE.S431	Basics of Stochastic Process for Earthquake Engineering	Morikawa Hitoshi	1Q	Your own environemnt for numerical calculations and skills for program coding is required. Any kinds of programing language are accepted.
Graduate major in Urban Design and Built Environment	UDE.S433	Introduction on Theory of Earthquake Ground Motion	Yamanaka Hiroaki	1Q	
Graduate major in Urban Design and Built Environment	UDE.S434	Safe Built Environment I	Satoh Toshiaki, Suzuki Kojiro	1Q	
Breadth Course	LAW.X412	Study on Japanese Companies and Industries II	Sato Yuriko, Saito Hirofumi, Takemura Jiro	<del>4Q</del> →2Q	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 Course	LAW.X416	Modern Japan	Hara Masahiko, Kamiya Itaru, Olaf Karthaus	2Q	Lectures are carried out in English.
Breadth Course	LAW.X419	Communication Skills in Japanese Industries II	Takemura Jiro, Morikawa Junko, Akasaka Hiroki, Kuwata Shigeki, Hayashi Miyuki, Nakamura Takashi, Kitaguchi Yoshiaki	<del>4Q</del> →2Q	
Breadth Course	LAW.X425	Global Leadership Practice	Ota Eri	2Q	
Breadth Course	LAW.X429	Multicultural Collaboration and Leadership	Ota Eri, Murakami Rie, Nguyen Dung Minh	2Q	