

List of Graduate Courses Available to Undergraduate-level International Exchange Students <For 1Q, 2Q of the 2021–2022 Academic Year>

As of April 12th, 2021

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 8th–June 9th, 2Q: June 10th–August 7th

Major / Course Category	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Graduate major in Mathematics	MTH.A405	Advanced topics in Algebra A1	Naito Satoshi	1Q	Students are supposed to be familiar with linear algebra and basic (undergraduate) algebra.
Graduate major in Mathematics	MTH.A406	Advanced topics in Algebra B1	Naito Satoshi	2Q	Students are supposed to be familiar with linear algebra and basic (undergraduate) algebra.
Graduate major in Mathematics	MTH.B405	Advanced topics in Geometry A1	Gomi Kiyonori	1Q	proficiency in basic topology and algebra
Graduate major in Mathematics	MTH.B406	Advanced topics in Geometry B1	Gomi Kiyonori	2Q	proficiency in basic topology and algebra
Graduate major in Mathematics	MTH.C405	Advanced topics in Analysis A1	Kagei Yoshiyuki	1Q	Basics of Lebesgue integral theory and functional analysis.
Graduate major in Mathematics	MTH.C406	Advanced topics in Analysis B1	Kagei Yoshiyuki	2Q	Basics of Lebesgue integral theory and functional analysis. Students are assumed to take "Advanced topics in Analysis A1" in the previous quarter.
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	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.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.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.C452	Biophysics I	Hayashi Nobuhiro	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	Jinnouchi Osamu	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	Yamaguchi Masahide	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.A411	Advanced Earth and Space Sciences B	Okuzumi Satoshi, Nakamoto Taishi	1Q	
Graduate major in Earth and Planetary Sciences	EPS.A418	Advanced Earth and Space Sciences E	Ohta Kenji	1Q	
Graduate major in Earth and Planetary Sciences	EPS.A424	Advanced Earth and Space Sciences H	Ueno Yuichiro, Gilbert Alexis Romai	2Q	
Graduate major in Mechanical Engineering	MEC.C431	Mechanics of Composite Materials	Todoroki Akira	2Q	
Graduate major in Mechanical Engineering	MEC.C432	Structural Integrity Assessment	Mizutani Yoshihiro	1Q	
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	1Q	
Graduate major in Mechanical Engineering	MEC.F431	Computational Fluid Dynamics	Xiao Feng, Aoki Takayuki, Onishi Ryo	2Q	
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	1Q	
Graduate major in Systems and Control Engineering	SOE.I401	Advanced Course of Measurement and Signal Processing	Hara Seiichiro	1Q	
Graduate major in Systems and Control Engineering	SCE.M401	Numerical Analysis of Heat Transfer and Fluid Flow	Kosaka Hidenori	2Q	
Graduate major in Systems and Control Engineering	SCE.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 of quantum mechanics and electronic properties of solids.
Graduate major in Electrical and Electronic Engineering	EEE.D411	Semiconductor Physics	Yamada Akira	2Q	Basic knowledge of quantum mechanics and electronic properties of solids.

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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 in quantum mechanics and electromagnetism is preferable.
Graduate major in Electrical and Electronic Engineering	EEE.D451	Bipolar Transistors and Compound Semiconductor Devices	Miyamoto Yasuyuki	1Q	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)
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.P451	Plasma Engineering	Akatsuka Hiroshi, Okino Akitoshi	1Q	
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, Kake Yasuharu, Yamaguchi Masahiro, Nakamoto Takumichi, Kaneko Hirohiko, Oki 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 of discrete mathematics and probability and statistics
Graduate major in Information and Communications Engineering	ICT.H409	Optics in Information Processing	Yamaguchi Masahiro	2Q	Basic knowledge of calculus, linear algebra, probability 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 skills 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	Aoki Hirotsuka, Xiuzhu Gu	2Q	Ability to discuss 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.M401	Applied Diffraction Crystallography in Metals and Alloys	Nakamura Yoshio, Fujii Toshiyuki	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.M406	Advanced Microstructure Design of Non-ferrous Materials	Kumai Shinji, Muraishi Shinji, Kobayashi Equo	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.M409	Thermodynamics for Phase Equilibria	Sone Masato, Tahara Masaki	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.M410	Deformation and Strength of Solids	Onaka Susumu, Terada Yoshihiro	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.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.P401	Organic Optical Materials physics	Ishikawa Ken	2Q	Students need knowledge equivalent to the course content of MAT.P302 "Optics".
Graduate major in Materials Science and Engineering	MAT.P416	Soft Materials Chemistry	Sagara Yoshimitsu	2Q	Fundamental knowledge on organic chemistry is needed.
Graduate major in Chemical Science and Engineering	CAP.A425	Advanced Biofunctional Chemistry I	Tanaka Katsunori	1Q	Knowledge of synthetic and bioorganic chemistry is required.
Graduate major in Chemical Science and Engineering	CAP.A426	Advanced Biofunctional Chemistry II	Tanaka Katsunori	2Q	Knowledge of synthetic and bioorganic chemistry is required.
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	1Q	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.
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.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, Kubo Shoichi	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.

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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.T401	Analysis on Continuous Systems	Nishibata Shinya, Miura Hideyuki, Umehara Masaaki, Murofushi Toshiaki, Suzuki Sakie	1Q	
Graduate major in Mathematical and Computing Science	MCS.T409	Applied Functional Analysis	Miura Hideyuki, Nishibata Shinya, Umehara Masaaki, Murofushi Toshiaki, Suzuki Sakie	2Q	
Graduate major in Mathematical and Computing Science	MCS.T418	Practical Parallel Computing	Endo Toshio	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, Nakatogawa Hitoshi, Fujita Naonobu, Kano Fumi	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.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, Ouyama Shoichi, Tsukamoto Yoshitaru, Yamazaki Tetsuho, Murata Ryo, Nani Satoshi, Shiozaki Takahiro	1Q	
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	Wjeyewickrema 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	
Graduate major in Civil Engineering	CVE.C401	Mechanics of Geomaterials	Kitazume Masaki	1Q	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.G401	Aquatic Environmental Science	Yoshimura Chihiro	2Q	
Graduate major in Global Engineering for Development, Environment and Society	GEG.E411	Atmospheric Environment in Megacities	Kanda Manabu, Inagaki Atsushi, Varquez Alvin Christopher Galang	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.E413	Geospatial data analysis for environment studies	Varquez Alvin Christopher Galang	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.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 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, Tago Teruoki, Ihara Manabu, Wada Hiroyuki	1Q	
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	
Graduate major in Energy Science and Engineering	ENR.A403	Interdisciplinary principles of energy devices 1	Hagihara Makoto, Hanamura Katsunori, Fujita Hideaki, Suekane Tetsuya, Mori Shinsuke, Okawa Seiji	1Q	
Graduate major in Energy Science and Engineering	ENR.A404	Interdisciplinary principles of energy devices 2	Wada Hiroyuki, Yamada Akira, Miyajima Shinsuke, Kitamura Fusao, Otomo Junichiro, Hirayama Masaaki	2Q	
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	Arai Hajime, Kitamura Fusao, Hirayama Masaaki	1Q	Basic class for electrochemistry beginner.
Graduate major in Energy Science and Engineering	ENR.H404	Advanced Electrochemistry II	Arai Hajime, Kitamura Fusao, Hirayama Masaaki	2Q	Advanced class for those studied "Advanced Electrochemistry I" or equivalent.
Graduate major in Energy Science and Engineering	ENR.H405	Advanced Inorganic Materials Chemistry I	Waki Keiko, Hirayama Masaaki	1Q	
Graduate major in Energy Science and Engineering	ENR.H406	Advanced Inorganic Materials Chemistry II	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.I420	Advanced Lecture on Crystal Structure and Correlation with Properties of Solids	Yashima Masatomo	1Q	
Graduate major in Energy Science and Engineering	ENR.J405	Microstructure Evolution and Diffusion in Metals	Kimura Yoshisato, Nakada Nobuo	2Q	Students are required to have fundamental knowledge of metallurgy, particularly of phase diagrams and diffusion.
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	

