List of Graduate Courses Available to Undergraduate-level International Exchange Students <For 3Q, 4Q of the 2020-2021 Academic Year>

As of August 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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3Q: September 30th-December 2nd, 4Q: December 3rd-February 10th

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	Kato Fumiharu	3Q	Undergraduate level knowledge of abstract algebra and basic algebraic geometry
Graduate major in Mathematics	MTH.A404	Advanced topics in Algebra D	Kato Fumiharu	4Q	Undergraduate level knowledge of abstract algebra and basic algebraic geometry
Graduate major in Mathematics	MTH.B403	Advanced topics in Geometry C	Kalman Tamas	3Q	multivariable calculus, undergraduate algebraic topology
Graduate major in Mathematics	MTH.B404	Advanced topics in Geometry D	Kalman Tamas	4Q	multivariable calculus, undergraduate algebraic topology
Graduate major in Mathematics	MTH.C403	Advanced topics in Analysis C	Onodera Michiaki	3Q	The knowledge of the geometry at finishing undergraduate 3rd year is required.
Graduate major in Mathematics	MTH.C404	Advanced topics in Analysis D	Onodera Michiaki	4Q	The knowledge of the geometry at finishing undergraduate 3rd year is required.
Graduate major in Mathematics	MTH.E432	Special lectures on advanced topics in Mathematics B	Undecided	3Q	Undergraduate level knowledge of abstract algebra and basic algebraic geometry
Graduate major in Mathematics	MTH.E434	Special lectures on advanced topics in Mathematics D	Ueda Kazushi	3Q	
Graduate major in Mathematics	MTH.E436	Special lectures on advanced topics in Mathematics F	Pozar Norbert	3Q	The knowledge of core courses at finishing undergraduate 3rd year is required.
Graduate major in Physics	PHY.C445	Surface Physics	Hashizume Tomihiro	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 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.C448	Light and Matter III	Notomi Masaya	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 Physics	PHY.C450	Quantum Theory of Electrons in Solids	Saito Susumu	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.C453	Biophysics II	Matsushita Michio	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.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.Q434	Field Theory II	Imamura Yosuke	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.Q435	Quantum Information	Tilma Todd	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 Physics	PHY.S440	Statistical Mechanics III	Sasamoto Tomohiro	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 Chemistry	CHM.B434	Advanced Course in Crystal Structure Science	Uekusa Hidehiro	4Q	
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.A420	Advanced Earth and Space Sciences F	Nakajima Junichi	3Q	
Graduate major in Earth and Planetary Sciences	EPS.A422	Advanced Earth and Space Sciences D	Yokoyama Tetsuya	4Q	
Graduate major in Mechanical Engineering	MEC.C433	Solid Dynamics	Inoue Hirotsugu	3Q	Knowledge of Fundamental Theory of Elasticity
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 Mechanical Engineering	MEC.E432	Properties of Solid Materials	Murakami Yoichi, Fushinobu Kazuyoshi	3Q	
Graduate major in Mechanical Engineering	MEC.E433	Advanced Thermal-Fluids Measurement	Kikura Hiroshige, Saito Takushi	4Q	
Graduate major in Mechanical Engineering	MEC.G432	Metalforming	Yoshino Masahiko, Ohtake Naoto	3Q	
Graduate major in Mechanical Engineering	MEC.G433	Joining	Sato Chiaki, Yamazaki Takahisa	4Q	
Graduate major in Mechanical Engineering	MEC.H432	Multibody Systems	Okuma Masaaki, Furuya Hiroshi	3Q	
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.H435	Machine Dynamics of Rigid Systems	Undecided	3Q	
Graduate major in Mechanical Engineering	MEC.J431	Ultra-precision Measurement	Yoshioka Hayato, Hatsuzawa Takeshi, Hara Seiichiro, Yoshida Takako	3Q	
Graduate major in Mechanical Engineering	MEC.M433	Space Systems Analysis A	Furuya Hiroshi	3Q	
Graduate major in Mechanical Engineering	MEC.M434	Space Robotics	Nakanishi Hiroki	4Q	
Graduate major in Systems and Control Engineering	SCE.A404	Nonlinear Dynamics	Nakao Hiroya	3Q	Elementary knowledge of mathematics and physics
Graduate major in Systems and Control Engineering	SCE.A405	Inverse Problems and Data Assimilation	Amaya Kenji	3Q	Students must have successfully completed linear algebra, basics of mathematics for engineering, computer programming

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Graduate major in Systems and Control Engineering	SCE.C401	System Identification and Estimation	Yamakita Masaki	3Q	Basic mathematical system modeling
Graduate major in Systems and Control Engineering	SCE.C451	Optimal Control	Hatanaka Takeshi	4Q	
Graduate major in Systems and Control Engineering	SCE.C452	Nonlinear and Adaptive Control	Hayakawa Tomohisa	3Q	Basic knowledge on linear system theory and transfer functions
Graduate major in Systems and Control Engineering	SCE.C453	Network Control Systems	Ishizaki Takayuki	4Q	Basic knowledge on linear system theory
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.I432	Acoustic Measurement Engineering	Hachiya Hiroyuki	3Q	
Graduate major in Systems and Control Engineering	SCE.I454	Computer Vision	Okutomi Masatoshi	4Q	
Graduate major in Systems and Control Engineering	SCE.S402	Fluid Robotics	Tsukagoshi Hideyuki	3Q	
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.D442	Special Seminar on Semiconductor Memory	Wakabayashi Hitoshi, Aoto Nahomi, Fujisawa Hiroki, Mikasa Noriaki, Uchiyama Shiro, Urabe Koji, Tanaka Tomoharu, Goda Akira, Nosaka Kota, Matsuhashi Hideki	3Q	
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	Undergraduate-level knowledge of power electronics is required.
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 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	3Q	Sufficient basic academic skills in information and communications
Graduate major in Information and Communications Engineering	ICT.A418	Human-Centric Information Systems II	Nagai Takehiro, Yamaguchi Masahiro, Koike Yasuharu, Shinozaki Takahiro, Nakamoto Takamichi, Kurosawa Minoru, Kumazawa Itsuo, Kaneko Hirohiko, Okumura Manabu, Suzuki Kenji, Holme Petter, Watanabe Yoshihiro, Motomura Masato	4Q	Sufficient basic academic skills in information and communications
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.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 academic skills in integrated circuits and algorithm
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 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.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 Industrial Engineering and Economics	IEE.D435	Computers in Sciety	Seaborn Katie	4Q	High English ability
Graduate major in Materials Science and Engineering	MAT.C412	Polymeric Biomaterials	Tsuge Takeharu, Hayashi Tomohiro	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.M412	Reliability and Durability of Metals and Alloys	Kobayashi Equo, Kobayashi Satoru, Kumai Shinji	3Q	
Graduate major in Materials Science and Engineering	MAT.M419	Microscopic characterization of solid materials	Chai Yaw Wang	4Q	
Graduate major in Materials Science and Engineering	MAT.M429	Ironmaking process for sustainable society	Koji Saito	4Q	
Graduate major in Materials Science and Engineering	MAT.P403	Soft Materials Physics	Vacha Martin	3Q	
Graduate major in Materials Science and Engineering	MAT.P404	Soft Materials Functional Physics	Hayamizu Yuhei	4Q	
Graduate major in Materials Science and Engineering	MAT.P414	Soft Materials Function	Michinobu Tsuyoshi	3Q	
Graduate major in Materials Science and Engineering	MAT.P422	Organic Materials Design	Ougizawa Toshiaki	3Q	
Graduate major in Materials Science and Engineering	MAT.P426	Thermal Properties of Materials	Morikawa Junko	4Q	
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.A425	Advanced Biofunctional Chemistry I	Tanaka Katsunori	4Q	Knowledge of bachelor level organic chemistry is desirable.

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Graduate major in Chemical Science and Engineering	CAP.C431	Chemical Engineering for Advanced Materials and Chemicals Processing II	Sekiguchi Hidetoshi, Okochi Mina, Yoshikawa Shiro	3Q	Knowledge of fundamental chemical engineering is desirable.
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.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.C441	Transport Phenomena and Operation	Yoshikawa Shiro	4Q	
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 Chemical Science and Engineering	CAP.C445	Advanced Topics of Chemical Science and Engineering	Undecided	4Q	
Graduate major in Chemical Science and Engineering	CAP.I417	Introduction to Chemical Engineering (Unit Operation)	Waki Keiko	3Q	
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.I435	Advanced Geochemistry	Toyoda Sakae, Yamada Keita	3Q	
Graduate major in Chemical Science and Engineering	CAP.I438	Functionalized Nano-Materials Chemistry I	Hara Masahiko, Nomura Junko	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.I446	Nano-Surface Chemistry and Advanced Devices	Hara Masahiko, Sven Ingebrandt, Hans-Juergen Karl Butt, Andreas Offenhaeusser	4Q	Fundamental knowledge of materials chemistry is desirable.
Graduate major in Mathematical and Computing Science	MCS.T410	Applied Probability	Miyoshi Naoto, Nakano Yumiharu	3Q	Basic knowledge of probability theory
Graduate major in Mathematical and Computing Science	MCS.T412	Information Visualization	Wakita Ken	4Q	
Graduate major in Mathematical and Computing Science	MCS.T419	Stochastic differential equations	Nakano Yumiharu, Miyoshi Naoto	4Q	
Graduate major in Computer Science	CSC.T431	Cyber-Physical Systems	Watanabe Takuo	3Q	Programming Languages, Operating Systems, Formal Language Theory, Methematical Logic, Computer Architecture
Graduate major in Computer Science	CSC.T433	Advanced Computer Architecture	Kise Kenji	4Q	Eligibility criteria or prerequisite knowledge, etc. Applicants should preferably have basic knowledge of computer architecture.
Graduate major in Computer Science	CSC.T434	International PBL Course on Software Project Management	Defago Xavier, Masuda Satoshi	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.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.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.A410	Advanced Neuroscience	Ichinose Hiroshi, Suzuki Takashi, Miyashita Eizo, Akama Hiroyuki	4Q	Acquisition of basics of advanced neuroscience.
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 Life Science and Technology	LST.B404	International Career Development Basics	Suzuki Takashi, Kobatake Eiry, Kume Shoen	3～4Q	
Graduate major in Architecture and Building Engineering	ARC.D401	History of Architecture	Stewart David-Butler	3Q	International students accepted to the Department of Architecture and Building Engineering
Graduate major in Architecture and Building Engineering	ARC.D423	Architectural Design Studio III	Yasuda Koichi, Okuyama Shinichi, Tsukamoto Yoshiharu, Yamazaki Taisuke, Murata Ryo, Nasu Satoshi, Shiozaki Taishin, Kawashima Norihisa, Katsuki Ayumi	4Q	International students accepted to the Department of Architecture and Building Engineering
Graduate major in Architecture and Building Engineering	ARC.D424	Theory of Architectural Space and Planning	Tsukamoto Yoshiharu	3Q	International students accepted to the Department of Architecture and Building Engineering
Graduate major in Architecture and Building Engineering	ARC.D446	Theory of Architectural Design II	Okuyama Shinichi, Shiozaki Taishin	3～4Q	International students accepted to the Department of Architecture and Building Engineering
Graduate major in Architecture and Building Engineering	ARC.D447	Architectural Theory for Urban Space	Tsukamoto Yoshiharu	4Q	International students accepted to the Department of Architecture and Building Engineering
Graduate major in Architecture and Building Engineering	ARC.D462	Architectural Behaviorology2	Tsukamoto Yoshiharu, Yasuda Koichi, Okuyama Shinichi, Stalder Laurent Jean	3～4Q	International students accepted to the Department of Architecture and Building Engineering
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.C402	Stability Problems in Geotechnical Engineering	Takahashi Akihiro, Kitazume Masaki, 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.D402	Transportation Network Analysis	Asakura Yasuo	3Q	
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	

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Graduate major in Civil Engineering	CVE.G403	Water Chemistry	Fujii Manabu	3Q	
Graduate major in Civil Engineering	CVE.M401	Civil Engineering Analysis	Hirose Sohichi, Bui Tinh Quoc	3Q	Programming skills are required.
Graduate major in Global Engineering for Development, Environment and Society	GEG.P411	Project Evaluation for Sustainable Society	Hanaoka Shinya	3Q	If the number of registered students exceeds a certain number (40), undergraduate-level students cannot register.
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	The number of the participants are limited and students of Major in Global Engineering for Development, Environement and Society (GEDES) are prioritized.
Graduate major in Global Engineering for Development, Environment and Society	GEG.S413	Science Media and Communication for Development, Environment and Society(地球環境共創のための科学メディアとコミュニケーション)	Kayoko Nohara, ANDREWS EDEN MARIQUIT, etc.	4Q	Students need to communicate interactively by video, microphone, etc on online courses.
Graduate major in Global Engineering for Development, Environment and Society	GEG.T414	Linear Wave Theory and Simulation(線形波動の理論とシミュレーション)	Jun-ichi Takada	3Q	Student should be familiar with vector analysis and partial differential equations.
Graduate major in Social and Human Sciences	SHS.M443	Graduate Lecture in Cognition, Mathematics and Information F1A	Yamamoto Hilofumi	3Q	The ability of the discussion in English is required.
Graduate major in Social and Human Sciences	SHS.S444	Graduate Lecture in Science, Technology and Society F1B	Bektas Yakup	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	3Q	
Graduate major in Energy Science and Engineering	ENR.A405	Interdisciplinary Energy Materials Science 1	Matsuda Akifumi, Ihara Manabu, Yoshimoto Mamoru, Nagai Keiji, Ueda Mitsutoshi	3Q	
Graduate major in Energy Science and Engineering	ENR.A406	Interdisciplinary Energy Materials Science 2	Matsumoto Hidetoshi, Ihara Manabu, Kimura Yoshisato, Nozaki Tomohiro	4Q	
Graduate major in Energy Science and Engineering	ENR.A406	Interdisciplinary Energy Materials Science 2	Matsumoto Hidetoshi, Ihara Manabu, Kimura Yoshisato, Inagi Shinsuke	4Q	
Graduate major in Energy Science and Engineering	ENR.A407	Energy system theory	Yamada Akira, Suekane Tetsuya, Okazaki Ken, Obara Toru, Ihara Manabu, Takahashi Fumitake, Kawabe Kenichi, Tokimatsu Koji	3Q	
Graduate major in Energy Science and Engineering	ENR.A407	Energy system theory	Yamada Akira, Suekane Tetsuya, Okazaki Ken, Obara Toru, Ihara Manabu, Takahashi Fumitake, Nanahara Toshiya, Tokimatsu Koji	3Q	
Graduate major in Energy Science and Engineering	ENR.A408	Economy of energy system	Tokimatsu Koji, Hanaoka Shinya, Nishikizawa Shigeo, Kajikawa Yuya, Goto Mika, Uchiyama Yoji	4Q	
Graduate major in Energy Science and Engineering	ENR.H411	Topics in Applied Electrochemistry	Kanno Ryoji, Kitamura Fusao, Waki Keiko, Hirayama Masaaki, Nakamura Jiro	4Q	
Graduate major in Energy Science and Engineering	ENR.H415	Introduction to Organic Electrochemistry	Tomita Ikuyoshi, Inagi Shinsuke	3Q	
Graduate major in Energy Science and Engineering	ENR.H450	Environmentally-Friendly Polymer Chemistry	Satoh Kotaro	4Q	
Graduate major in Energy Science and Engineering	ENR.I410	Optical properties of solids	Koshihara Shinya, Okimoto Yoichi	4Q	
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.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.K440	Advanced course of radiation transfer	Hanamura Katsunori	3Q	
Graduate major in Energy Science and Engineering	ENR.K450	Advanced course of combustion physics	Kosaka Hidenori, Tanahashi Mamoru et al.	3Q	The students are expected to have basic knowledge of thermodynamics and fluid mechanics.
Graduate major in Human Centered Science and Biomedical Engineering	HCB.M464	Introduction to Neural Engineering	Yagi Tohru	3Q	
Graduate major in Nuclear Engineering	NCL.B401	Radiation Biology and Medicine	Matsumoto Yoshihisa	3Q	
Graduate major in Nuclear Engineering	NCL.C401	Nuclear Fuel Cycle Engineering	Takeshita Kenji, Tsukahara Takehiko, Takao Koichiro	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, Takeshita Kenji, Takao Koichiro	3Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
Graduate major in Nuclear Engineering	NCL.C403	Nuclear Chemical Engineering	Takeshita Kenji, Kato Yukitaka	4Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
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.D406	Experiments for Nuclear Fuel Debris and Back-end Fuel Cycle B	Takeshita Kenji, 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, Sawada Tetsuo, Kondo Masatoshi	3Q	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	3Q	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 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.D409	Planning Theory	Sakano Tatsurou	3Q	
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.D471	Principles of Public Systems Design	Sakano Tatsurou	4Q	
Graduate major in Urban Design and Built Environment	UDE.P404	City/Transport Planning and the Environment	Muromachi Yasunori	3Q	

List of Graduate Courses Available to Undergraduate-level International Exchange Students <For 3Q, 4Q of the 2020-2021 Academic Year>

As of August 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.

3Q: September 30th-December 2nd, 4Q: December 3rd-February 10th

Major / Course Category	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Graduate major in Urban Design and Built Environment	UDE.S404	Passive-control Structures and Base-isolated Structures against Earthquakes	Sato Daiki, Kishiki Shoichi	4Q	
Graduate major in Urban Design and Built Environment	UDE.S405	Post-earthquake Damage Evaluation and Rehabilitation of Steel Structures	Kishiki Shoichi	4Q	
Graduate major in Urban Design and Built Environment	UDE.S406	Tensor Analysis for Building Structure	Motoyui Shojiro	4Q	
Breadth Course	LAW.X411	Study on Japanese Companies and Industries I	Sato Yuriko, Saito Hirofumi, Takemura Jiro, Shi Qinzhong	3Q	
Breadth Course	LAW.X417	Sustainable Engineering Technology	Takemura Jiro, Kobayashi Equo, Umemuro Hiroyuki, Kurabayashi Daisuke, Saito Reiko, Tokimatsu Koji, Yoshimura Chihiro, Yagi Tohru	4Q	
Breadth Course	LAW.X418	Communication Skills in Japanese Industries I	Takemura Jiro, Morikawa Junko, Kuwata Shigeki, Hayashi Miyuki, Akasaka Hiroki, Nakamura Takashi, Kitaguchi Yoshiaki	3Q	
Breadth Course	LAW.X423	Technology and Product in Context	Nohara Kayoko	4Q	
Breadth Course	LAW.X427	Our Sustainable Energy Future: Role of Business and Technology	Ota Eri, Murakami Rie, Ling Frank Hiroshi	3Q	
Breadth Course	LAW.X440	Advanced Course of Traditional Techonlogy and Intercultural Co-learning	Murakami Rie, Ota Eri, Watanabe Takashi, Kobayashi Equo, Matsuzaki Yuri, Kamura Kenshu	3Q	Undergraduate-level students need to register the course of Traditional Techonlogy and Intercultural Co-learning (LAW.X353)