

Course Number	Course Name	Credits	Standard Academic Year	Course Offering Term	Weekday and Period	Classroom	Instructor	Course Overview	Remarks	Availability for Non-Degree Student (CREDITED AUDITORS)	Application Conditions, Remarks	Course Offering School/College
1290011	Learning and Ethics of Research	1.0	1	Fall/AB	Wed2	3A213	Hideki Kakeya	This course introduces fundamental concepts related to learning and research activities in a university, from an ethics point of view. In particular, it includes the following topics: definition of science, research methodology, research misconduct, mentor and advisor, responsible authorship, peer review and publication, data management, collaborative research, conflict of interests, whistleblowing and obligation to protect the public.	Lectures are conducted in English.	△	It depends on decision of the class instructor	
1390121	Introduction to Life and Environmental Sciences	1.0	1	Sum Vac	Intensive	2B309	DeMar Taylor	This course gives a broad overview of current topics and issues in the fields of Life and Environmental Sciences	For students in Interdisciplinary Program in Life and Environmental Sciences			
1A90081	Food and Forest	1.0	1, 2	Fall/AB	Mon2	2B507	Seung Won Kang	This course introduces crop plants, domestic animals and trees and their products in relation to culture, society, economy and environment.	JTP Lectures are conducted in English. JTP			
1F90011	Social nature	1.0	3, 4	Spr/AB	Fri3		Thomas Parkner	Understanding coupled natural/environmental and human systems is fundamental to the quest for sustainability. But, what is "nature" or "environment", or what are environmental issues? In this lecture, nature, environment, and environmental issues are discussed as a social construct subject to changing perceptions. To bridge the gap between natural and social students, theories and concepts from both, natural sciences and social sciences, are presented, which are relevant for human-environment interaction research. Climate change as a current threat is discussed from the natural science perspective as well as from deeply entrenched social worldviews to explore a complex environmental problem from a cross-disciplinary perspective.	JTP			
2107173	Basic Physical Education Karate	0.5	1	Fall/AB	Thu1	Multi-Purpose Dojo	Masaki Fumoto	The purpose of this class is to understand the relation between one's own mind and body, between one's opponent's mind and body, and their interaction, using basic Karate techniques. Basic Karate techniques, including suitable breathing methods, coordination of Karate basic techniques with footwork, and Kata (Karate form), will be taught in this class.	1 elements by gender (contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2108173	Basic Physical Education Gymnastics	0.5	1	Fall/AB	Thu1	Gymnastics Stadium	Mariko Kanaya	Through the events of apparatus gymnastics and artistic gymnastics, students will acquire skills according to ability and understand about movements under the theme of "feel yourself".	1 elements by gender (contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2110133	Basic Physical Education Japanese Archery	0.5	1	Fall/AB	Thu1	Japanese Archery Training Hall	Makinori Matsuo	In this class you will be able to learn the basic of Kyudo. While shooting on short and middle distance you will have a chance to learn about safety rules, be able to shoot quite well, and experience other parts of Kyudo, like competition.	1 elements by gender (equipment) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2115173	Basic Physical Education Judo	0.5	1	Fall/AB	Thu1	Judo Dojo	Hirotaoka Okada	The purpose of this instruction is to learn fundamental skills of judo and to understand the fascination of judo through doing safety Randori with using some basic technique.	1 elements by gender (contact) elements by gender (other) 6-course 女子は 通着の下にTシャツを着用すること	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2117133	Basic Physical Education Swimming	0.5	1	Fall/AB	Thu1	Indoor Pool	Miwako Homma	Understanding and improving various swimming skills. Students will be experienced basic strokes, water polo, snorkeling, and importance and value of aquatic sports will be understood through the classes.	1 elements by gender (wear) elements by gender (contact) elements by gender (special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2123173	Basic Physical Education Dance	0.5	1	Fall/AB	Thu1	Dance Hall	Yonezawa Mayuko	In this class, learns how to use basic body of the dance and gets on various music and move a body. In addition, aims at the making of healthy body by yoga and stretch through a class.	1 elements by gender (contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2140153	Basic Physical Education Fitness Training	0.5	1	Fall/AB	Thu1	2nd Training Area	Hirokazu Matsuo	Emphasis will be on maintenance of good health and understanding of relationship between physical fitness and health promotion. Acquisition of methods of resistance training, jogging and stretching shall also be addressed for lifelong good health.	1 elements by gender (contact) 6-course Details will be announced.	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2143173	Basic Physical Education Bodywork	0.5	1	Fall/AB	Thu1	2nd Multi-Purpose Dojo	Toshihiro Kato	We will do the following exercises. (1) Core Training (2) Stretching (3) Self-massage (4) Breathing technique Sharpen your senses. Increases resistance to stress. And enjoy the exercise itself.	1 6-course 男女の区別なくペアワーク(トレーニング)の補助やスポーツマッサージ等が行われることがあります。ペアワークが苦手な方は単独で行うことができます。ペアの組み方は自由です。奇数の場合は3人組になることもあります。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2148173	Basic Physical Education Refresh Movements	0.5	1	Fall/AB	Thu1	Gymnastics Area	Aya Horiguchi	In this lesson, you learn mind and body through gymnastics and acquire knowledge and fundamental exercise ability to enjoy sports with friends. Through this lesson, we will cultivate a spirit of challenge by challenging the activities that have never experienced, such as "G-ball" (light-gymnastics ball) and "Wheel gymnastics", gym wheels movement. The teacher who is Japanese national athlete in Wheel gymnastics will take classes by taking advantage of their experiences.	1 elements by gender (contact) elements by gender (special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2113173	Basic Physical Education Soccer	0.5	1	Fall/AB	Thu1	1st Soccer Field	Masaaki Koide	Understand the principles of soccer in order to play and enjoy games. While acquiring the basic skills of "Ball control", "Passing" and "dribbling" the ball, learn the importance of moving in cooperation with the teammate.	11 elements by gender (contact) elements by gender (special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2121173	Basic Physical Education Softball	0.5	1	Fall/AB	Thu1	Baseball Field	Takeshi Kaneda	Emphasis will be on fundamentals, and the way to enjoy playing game. Understanding and improvement of health and fitness shall also be addressed by playing softball.	11 elements by gender (contact) elements by gender (special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	

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2122153	Basic Physical Education Table Tennis	0.5	1	Fall/AB	Thu	3rd Gymnasium	Yuki Nonaka	Learn the basic techniques of Table Tennis from its essence, while at the same time deepening the understanding of the movements applicable to different types of sports. Through various practice methods and minigames, learn also about relevant aspects of sports, such as communications and sportsmanship.	Indoor shoes should be brought without fail. Be sure to wear sportswear. Accept experienced students. However, the level of this class is targeted at beginners. 実務経験教員 elements by gender (contact) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2125173	Basic Physical Education Tennis	0.5	1	Fall/AB	Thu	Taigee Tennis Hardcourts	Hajime Ohmori	Acquiring fundamental skills of tennis. Manner, rule, and values of sports shall also be learned through playing tennis.	11 elements by gender (special rule/pair/team) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2135153	Basic Physical Education Badminton	0.5	1	Fall/AB	Thu	1st Gymnasium	Ohika Tanifuji	Understanding the principles of badminton in order to play and enjoy games. History, manner, rule, and values of sports shall also be learned through playing games.	11 elements by gender (special rule/pair/team) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2136193	Basic Physical Education Volleyball	0.5	1	Fall/AB	Thu	Volleyball Gymnasium	Nakaba Akiyama	This course is designed to learn fundamental skills (pass, serve, game play), rules, and team work.	11 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2137133	Basic Physical Education Handball	0.5	1	Fall/AB	Thu	Handball Field	Eiko Yamada	Learn a way of the situation solution in individuals, and the group. In addition, develop ability for coordination, through various movements with ball.	11 elements by gender (special rule/pair/team) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2141133	Basic Physical Education Flag Football	0.5	1	Fall/AB	Thu	SEKISHO Field	Tsuyoshi Matsumoto	Through a modified game from flag football, we learn a basic skill and tactics. Furthermore, we deepen understanding about the communication and leadership for team activity.	11 elements by gender (special rule/pair/team) 0-course 各チームの男女数が均等になるように男女混合チームを作ります。ゲームにおいては、女子特別ルールを規定し、全員が積極的にゲームに関与できるように工夫を行います。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2107173	Basic Physical Education Karate	0.5	1	Fall/AB	Thu	1st Multi-Purpose Dojo	Masaki Fumoto	The purpose of this class is to understand the relation between one's own mind and body, between one's opponent's mind and body, and their interaction, using basic Karate techniques. Basic Karate techniques, including suitable breathing methods, coordination of Karate basic techniques with Footwork, and Kata (Karate form), will be taught in this class.	1 実務経験教員 elements by gender (contact) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2108173	Basic Physical Education Gymnastics	0.5	1	Fall/AB	Thu	Gymnastics Stadium	Mariko Kanaya	Through the events of apparatus gymnastics and artistic gymnastics, students will acquire skills according to ability and understand about movements under the theme of "feel yourself".	1 elements by gender (contact) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2110133	Basic Physical Education Japanese Archery	0.5	1	Fall/AB	Thu	Japanese Archery Training Hall	Makinori Matsuo	In this class you will be able to learn the basic of Kyudo. While shooting on short and middle distance you will have a chance to learn about safety rules, be able to shoot quite well, and experience other parts of Kyudo, like competition.	1 elements by gender (equipment) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2115173	Basic Physical Education Judo	0.5	1	Fall/AB	Thu	Judo Dojo	Hirotaoka Okada	The purpose of this instruction is to learn fundamental skills of judo and to understand the fascination of judo through doing safety Randori with using some basic technique.	1 実務経験教員 elements by gender (contact) elements by gender (other) 0-course 女子は 道着の下にTシャツを着用すること	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2117133	Basic Physical Education Swimming	0.5	1	Fall/AB	Thu	Indoor Pool	Miwako Homma	Understanding and improving various swimming skills. Students will be experienced basic strokes, water polo, snorkeling, and importance and value of aquatic sports will be understood through the classes.	1 実務経験教員 elements by gender (wear) elements by gender (contact) elements by gender (special rule/pair/team) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2123173	Basic Physical Education Dance	0.5	1	Fall/AB	Thu	Dance Hall	Yonezawa Mayuko	In this class, learns how to use basic body of the dance and gets on various music and move a body. In addition, aims at the making of healthy body by yoga and stretch through a class.	1 実務経験教員 elements by gender (contact) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2140153	Basic Physical Education Fitness Training	0.5	1	Fall/AB	Thu	2nd Training Area	Hirokazu Matsuo	Emphasis will be on maintenance of good health and understanding of relationship between physical fitness and health promotion. Acquisition of methods of resistance training, jogging and stretching shall also be addressed for lifelong good health.	1 elements by gender (contact) 0-course Details will be announced. 体か測定の評価に際して、男女で基準値が異なる	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2143173	Basic Physical Education Bodywork	0.5	1	Fall/AB	Thu	2nd Multi-Purpose Dojo	Toshihiro Kato	We will do the following exercises. (1) Core Training (2) Stretching (3) Self-massage (4) Breathing technique Sharpen your senses. Increases resistance to stress. And enjoy the exercise itself.	1 0-course 男女の区別なくペアワーク(トレーニング)の補助やスゴーツマッサージ等が行われることがあります。ペアワークが苦手な方は単独で行うことができます。ペアの組み方は自由です。奇数の場合は3人組になることもあります。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2148173	Basic Physical Education Refresh Movements	0.5	1	Fall/AB	Thu	Gymnastics Area	Aya Horiguchi	In this lesson, you learn mind and body through gymnastics and acquire knowledge and fundamental exercise ability to enjoy sports with friends. Through this lesson, we will cultivate a spirit of challenge by challenging the activities that have never experienced, such as "G-ball" (giant-gymnastics ball) and "Wheel gymnastics" (gym wheels movement). The teacher who is Japanese national athlete in Wheel gymnastics will take classes by taking advantage of their experiences.	1 実務経験教員 elements by gender (contact) elements by gender (special rule/pair/team) 0-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	

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2113173	Basic Physical Education Soccer	0.5	1	Fall/AB	Thu1	1st Soccer Field	Masaaki Koido	Understand the principles of soccer in order to play and enjoy games. While acquiring the basic skills of "Ball control", "Passing" and "dribbling" the ball, learn the importance of moving in cooperation with the teammate.	II 実務経験教員 elements by gender(contact) elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2121173	Basic Physical Education Softball	0.5	1	Fall/AB	Thu1	Baseball Field	Takeshi Kaneda	Emphasis will be on fundamentals, and the way to enjoy playing game. Understanding and improvement of health and fitness shall also be addressed by playing softball.	II elements by gender(contact) elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2122153	Basic Physical Education Table Tennis	0.5	1	Fall/AB	Thu1	3rd Gymnasium	Yuki Nonaka	Learn the basic techniques of table tennis from its essence, while at the same time deepening the understanding of the movements applicable to different types of sports. Through various practice methods and minigames, learn also about relevant aspects of sports, such as communications and sportsmanship.	Indoor shoes should be brought without fail. Be sure to wear sportswear. Accept experienced students. However, the level of this class is targeted at beginners. 実務経験教員 elements by gender(contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2125173	Basic Physical Education Tennis	0.5	1	Fall/AB	Thu1	Taigee Tennis Hardcourts	Hajime Ohmori	Acquiring fundamental skills of tennis. Manner, rule, and values of sports shall also be learned through playing tennis.	II elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2135153	Basic Physical Education Badminton	0.5	1	Fall/AB	Thu1	1st Gymnasium	Chika Tanifuji	Understanding the principles of badminton in order to play and enjoy games. History, manner, rule, and values of sports shall also be learned through playing games.	II elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2136193	Basic Physical Education Volleyball	0.5	1	Fall/AB	Thu1	Volleyball Gymnasium	Nakaba Akiyama	This course is designed to learn fundamental skills (pass, serve, game play), rules, and team work.	II 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2137133	Basic Physical Education Handball	0.5	1	Fall/AB	Thu1	Handball Field	Eiko Yamada	Learn a way of the situation solution in individuals, and the group. In addition, develop ability for coordination, through various movements with ball.	II elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2141133	Basic Physical Education Flag Football	0.5	1	Fall/AB	Thu1	SEKISHO Field	Tsuyoshi Matsumoto	Through a modified game from flag football, we learn a basic skill and tactics. Furthermore, we deepen understanding about the communication and leadership for team activity.	II elements by gender(special rule/pair/team) 6-course 各チームの男女数が均等になるように男女混合チームを作ります。ゲームにおいては、女子特別ルールを設定し、全員が積極的にゲームに関与できるように工夫を行います。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2211203	Applied Physical Education Kendo	0.5	2	Spr/AB	Fri2		Takahiro Nabeyama	To begin practicing with Kendo armor also known as bogu to basic fundamental level, as well as learning Kendo etiquette to improve one's mind and body.	elements by gender(equipment) elements by gender(contact) elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2213243	Applied Physical Education Soccer	0.5	2	Spr/AB	Fri2		Masaaki Koido	Understand the fundamentals of football skills / tactics. Also, learn what kind of scene of the game it is effective to use them, and realize the enjoyment of the game more.	実務経験教員 elements by gender(contact) elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2214203	Applied Physical Education Shooting Sports	0.5	2	Spr/AB	Fri2		Hitoshi Saga	To know self-condition of physical fitness and mental health with the individual or group activities on Archery and Kyudo (Japanese traditional style of bow shooting), and also to accept the various values of sport or its cultural aspects.	Both of Archery and Kyudo are played outdoor field. Lefty player is available on Archery but not on Kyudo. 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2215223	Applied Physical Education Judo	0.5	2	Spr/AB	Fri2		Hiroaki Hiraoka	Emphasis will be on understandings of characteristics of Judo, types of waza, and history of Judo. Let's enjoy safe randori and game by acquiring basic waza!	elements by gender(contact) elements by gender(other) 6-course 女子は、道着の下にTシャツを着用すること	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2216263	Applied Physical Education Jog and walk	0.5	2	Spr/AB	Fri2		Yasushi Enomoto	Allows students to develop/improve their ability to enjoy sports and enhances their health promotion through walking and jogging.	6-course Need running shoes	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2217263	Applied Physical Education Swimming	0.5	2	Spr/AB	Fri2		Hideki Takagi	Understanding and improving self health and fitness with swimming. Various types of water sports will be achieved, swimming, water polo, diving, skin diving, synchronized swimming, and swim with clothes on.	elements by gender(wear) elements by gender(contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2221263	Applied Physical Education Softball	0.5	2	Spr/AB	Fri2		Takaaki Nara	We will deepen our understanding of softball techniques and strategies, and hone our skills so that we may succeed on the playing field. Both in practice and regular season games, we will learn teamwork, cooperation and leadership.	elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	

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2222263	Applied Physical Education Table Tennis	0.5	2	SprAB	Fri2		Shintaro Ando	Deepen your knowledge of sports activities. Through a unique practice method, understanding the technical skills related to various sports scenes by pursuing one sport more deeply. Also work on applied mini-games.	Indoor shoes should be brought without fail. Be sure to wear sportswear. Accept experienced students. However, the level of this class is targeted at beginners. 実務経験教員 elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2233203	Applied Physical Education New Sports	0.5	2	SprAB	Fri2		Taketoshi Saito	*New sports* subjects are not to implement major sports, but to experience various sports events. For example, Flying Disc, Marking, Indiana, G-ball, Ground Golf, Potanque, Long jump rope, and so on.	Classroom will be announced later. Details will be announced.	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2234263	Applied Physical Education Basketball	0.5	2	SprAB	Fri2		Yoshihito Nakaso	Acquiring fundamentals, understanding offense and defense principles and team play from both playing and coaching perspective. Health, fitness, and skills of jumping, running, and throwing shall also be enhanced for enjoyable lifetime by playing basketball.	elements by gender (equipment) elements by gender (contact) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2240263	Applied Physical Education Fitness Training	0.5	2	SprAB	Fri2		Toshinobu Kawai	Understand the significance of health and physical fitness, and do training with a combination of resistance training and aerobic exercise.	実務経験教員 elements by gender (other) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2241263	Applied Physical Education Flag Football	0.5	2	SprAB	Fri2		Hirokazu Matsuo	We understand the tactical knowledge and skill of flag football through a passing game and learn the strategy depending on the situation of the team practically.	G-course Details will be announced.	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2245223	Applied Physical Education Outing Sports	0.5	2	SprAB	Fri2		Akihiro Sakamoto	The goals of this class are 1) to acquire the basic skills for outdoor group activity: initiative games, 2) to understand the knowledge of that, 3) to acquire the ability of problem solving, and to gain the insight for self, other and natural environment through the outdoor activity. The class of Spring AB is held in the Yasei no Mori.	elements by gender (contact) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2248243	Applied Physical Education Refresh Movements	0.5	2	SprAB	Fri2		Kiyonao Hasegawa	Exercise bouncing in the Swiss ball. Exercise to rotation by the wheel gymnastics. Through a new experience, to refresh the mind and body.	elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2211213	Applied Physical Education Kendo	0.5	2	FallIAB	Fri2	Kendo Dojo	Takahiro Nabeyama	To wear the Kendo armor or bogu, being able to perform techniques where you strike based on your opponent's reaction and to become in sync with your opponent to improve the mind and body.	elements by gender (equipment) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2213253	Applied Physical Education Soccer	0.5	2	FallIAB	Fri2	1st Soccer Field	Masaaki Koide	In addition to the technique of handling the ball itself, understand the movement when not holding a ball. Improve the ability to enjoy haggling with opponents in the game.	実務経験教員 elements by gender (contact) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2214213	Applied Physical Education Shooting Sports	0.5	2	FallIAB	Fri2	Archery Training Hall	Hitoshi Saga	To know self-condition of physical fitness and mental health with the individual or group activities on Archery and Kyudo (Japanese traditional style of bow shooting), and also to accept the various values of sport or its cultural aspects.	Both of Archery and Kyudo are played outdoor field. Lefty player is available on Archery but not on Kyudo. G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2215233	Applied Physical Education Judo	0.5	2	FallIAB	Fri2	Judo Dojo	Hiroaki Hiraoka	Emphasis will be on understandings of characteristics of Judo, types of waza, and history of Judo. Let's enjoy safe randori and game by acquiring basic waza!	elements by gender (contact) elements by gender (other) G-course 本字は 通着の下にTシャツを着用すること	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2216273	Applied Physical Education Jog and walk	0.5	2	FallIAB	Fri2	Athletic Field	Yasushi Enomoto	Allows students to develop/improve their ability to enjoy sports and enhances their health promotion through walking and jogging.	G-course Need running shoes	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2217273	Applied Physical Education Swimming	0.5	2	FallIAB	Fri2	Indoor Pool	Hideki Takagi	Understanding and improving self health and fitness with swimming. Various types of water sports will be achieved, swimming, water polo, diving, skin diving, synchronized swimming, and swim with clothes on.	elements by gender (wear) elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2221273	Applied Physical Education Softball	0.5	2	FallIAB	Fri2	Baseball Field	Takaaki Nara	We will deepen our understanding of softball techniques and strategies, and hone our skills so that we may succeed on the playing field. Both in practice and regular season games, we will learn teamwork, cooperation and leadership.	elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2222273	Applied Physical Education Table Tennis	0.5	2	FallIAB	Fri2	3rd Gymnasium	Shintaro Ando	Along with the deepening of knowledge on sports or time, it enhances the ability to enjoy the results of activities. After understanding techniques related to various sports scenes, practice in a variety of forms together with games and technical exercises, and develop a free idea about game sports.	Indoor shoes should be brought without fail. Be sure to wear sportswear. Accept experienced students. However, the level of this class is targeted at beginners. 実務経験教員 elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	

Course Number	Course Name	Credits	Standard Academic Year	Course Offering Term	Weekday and Period	Classroom	Instructor	Course Overview	Remarks	Availability for Non-Degree Student (CREDITED AUDITORS)	Application Conditions, Remarks	Course Offering School/College
2233213	Applied Physical Education New Sports	0.5	2	Fall/AB	Fri/2		Taketoshi Saito	"New sports" subjects are not to implement major sports, but to experience various sports events. Various sports events are Flying Disc, G-ball, Ground Golf, Petanque, Universal-toboggan, Bound Tennis, Double Dutch, Kin-Ball, etc. and so on.	Classroom will be announced later. G-course Details will be announced.	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2234273	Applied Physical Education Basketball	0.5	2	Fall/AB	Fri/2	Basketball Courts	Yoshihito Nakaso	Acquiring fundamentals, understanding offense and defense principles and team play from both playing and coaching perspective. Health, fitness, and skills of jumping, running, and throwing shall also be enhanced for enjoyable lifetime by playing basketball.	elements by gender (equipment) elements by gender (contact) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2240273	Applied Physical Education Fitness Training	0.5	2	Fall/AB	Fri/2	2nd Training Area	Toshinobu Kawai	Understand the significance of health and physical fitness, and do training with a combination of resistance training and aerobic exercise.	実務経験教員 elements by gender (other) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2241273	Applied Physical Education Flag Football	0.5	2	Fall/AB	Fri/2	SEKISHO Field	Hirokazu Matsuo	日本フラグフットボール協会公式規則に準じたゲームを通して、フラグフットボールに関する戦術的知識や技能の実践力を高め、ゲームパフォーマンスの向上を目指す。	G-course Details will be announced.	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2245233	Applied Physical Education Outing Sports	0.5	2	Fall/AB	Fri/2	Practice Field for Outdoor Activities	Akihiro Sakamoto	The class of Fall/AB use Canadian canoe as the teaching materials. The goals of this class are 1) to acquire the basic skills for outdoor group activity, 2) to understand the knowledge of that, 3) to acquire the ability of problem solving, and to gain the insight for self, other and natural environment through the Canadian canoe. The class is held in Lake Anakubo Iike.	elements by gender (contact) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2248253	Applied Physical Education Refresh Movements	0.5	2	Fall/AB	Fri/2	Gymnastics Area	Kiyonao Hasegawa	Exercise bouncing in the Swiss ball. Exercise to rotation by the wheel gymnastics. Through a new experience, to refresh the mind and body.	elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2207243	Applied Physical Education Karate	0.5	2	Spr/AB	Thu/2		Masaki Fumoto	The purpose of this class is to understand the relation between one's own mind and body, between one's opponent's mind and body, and their interaction, using basic Karate techniques. Basic Karate techniques, including suitable breathing methods, coordination of Karate basic techniques with footwork, Kata, and Kumite will be taught in this class.	実務経験教員 elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2214243	Applied Physical Education Shooting Sports	0.5	2	Spr/AB	Thu/2		Hitoshi Saga	To know self-condition of physical fitness and mental health with the individual or group activities on Archery and Kyudo (Japanese traditional style of bow shooting), and also to accept the various values of sport or its cultural aspects.	Both of Archery and Kyudo are played outdoor field. Lefty player is available on Archery but not on Kyudo. G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2215243	Applied Physical Education Judo	0.5	2	Spr/AB	Thu/2		Koji Komata	understanding the principle of the Judo techniques and lean the martial arts through experience.	elements by gender (contact) elements by gender (other) G-course 女子は 道着の下にシャツを着用すること	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2217223	Applied Physical Education Swimming	0.5	2	Spr/AB	Thu/2		Miwako Homma	Understanding swimming techniques and improving swimming skills. Learning various aquatic skills like basic swimming, Japanese traditional swimming, synchronised swimming, water polo, life saving and snorkeling etc.	実務経験教員 elements by gender (wear) elements by gender (contact) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2221243	Applied Physical Education Softball	0.5	2	Spr/AB	Thu/2		Takeshi Kaneda	Emphasis will be on fundamentals, and the way to enjoy playing game. Understanding and improvement of health and fitness shall also be addressed by playing softball.	elements by gender (contact) elements by gender (special rule/pair/team) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2222203	Applied Physical Education Table Tennis	0.5	2	Spr/AB	Thu/2		Yuki Nonaka	Deepen your knowledge of sports activities through table tennis. By using a unique practice method to deepen the pursuit of one type of sports, the students will understand the techniques related to various types of sports. Practice mini games as well.	実務経験教員 elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2223243	Applied Physical Education Dance	0.5	2	Spr/AB	Thu/2		Yonezawa Mayuko	In this class, learns how to use basic body of the dance and gets on various music and move a body. In addition, aim at the making of healthy body by yoga and stretch through a class.	実務経験教員 elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2225263	Applied Physical Education Tennis	0.5	2	Spr/AB	Thu/2		Hajime Ohmori	Acquiring fundamental skills of tennis. Manner, rule, and values of sports shall also be learned through playing tennis.	G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2234203	Applied Physical Education Basketball	0.5	2	Spr/AB	Thu/2		Toshihiro Otaka	Learning individual tactics (Beat the Defense & Get the Ball Offense). Understanding the characteristic of basketball, and Playing game with individual tactics.	elements by gender (equipment) elements by gender (contact) G-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	

Course Number	Course Name	Credits	Standard Academic Year	Course Offering Term	Weekday and Period	Classroom	Instructor	Course Overview	Remarks	Availability for Non-Degree Student (CREDITED AUDITORS)	Application Conditions, Remarks	Course Offering School/College
2235203	Applied Physical Education Badminton	0.5	2	SprAB	Thu2		Chika Tanifuji	Understanding the principles of badminton in order to play and enjoy games. History, manner, rule, and values of sports shall also be learned through playing games.	elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2236243	Applied Physical Education Volleyball	0.5	2	SprAB	Thu2		Nakaba Akiyama	This course is designed to learn fundamental skills (pass, serve, spike, block, game play), rules, basic strategies, and team work.	6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2240243	Applied Physical Education Fitness Training	0.5	2	SprAB	Thu2		Hirokazu Matsuo	Emphasis will be on maintenance of good health and understanding of relationship between physical fitness and health promotion. Acquisition of methods of resistance training, jogging and stretching shall also be addressed for lifelong good health.	elements by gender(other) 6-course Details will be announced. 体力測定の評価に関して、男女で基準値が異なる	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2241223	Applied Physical Education Flag Football	0.5	2	SprAB	Thu2		Tsuyoshi Matsumoto	We understand the tactical knowledge and skill of flag football through a passing game and learn the strategy depending on the situation of the team practically.	elements by gender(special rule/pair/team) 6-course 各チームの男女数が均等になるように男女混合チームを作ります。ゲームにおいては、女子特別ルールを設定し、全員が積極的に関与できるように工夫を行います。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2242243	Applied Physical Education Bodywork	0.5	2	SprAB	Thu2		Toshihiro Kato	We will do the following exercises. (1) Core Training (2) Stretching (3) Self-massage (4) Breathing technique. Sharpen your senses. Increases resistance to stress. And enjoy the exercise itself.	6-course 男女の区別なくペアワーク(トレーニングの補助やスポーツマッサージ等)が行われることがあります。ペアワークが苦手な方は単独で行うことができます。ペアの組み方は自由です。奇数の場合は3人組になることもあります。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2207253	Applied Physical Education Karate	0.5	2	FallAB	Thu2	1st Multi-Purpose Dojo	Masaki Fumoto	The purpose of this class is to understand the relation between one's own mind and body, between one's opponent's mind and body, and their interaction, using basic Karate techniques. Basic Karate techniques, including suitable breathing methods, coordination of Karate basic techniques with footwork, Kata, and Kumite will be taught in this class.	実務経験教員 elements by gender(contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2214253	Applied Physical Education Shooting Sports	0.5	2	FallAB	Thu2	Archer Training Hall	Hitoshi Saga	To know self-condition of physical fitness and mental health with the individual or group activities on Archery and Kyudo (japanese traditional style of bow shooting), and also to accept the various values of sport or its cultural aspects.	Both of Archery and Kyudo are played outdoor field. Lefty player is available on Archery but not on Kyudo. 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2215253	Applied Physical Education Judo	0.5	2	FallAB	Thu2	Judo Dojo	Koji Komata	Understanding the principle of the Judo techniques and learn the martial arts through experience.	elements by gender(contact) elements by gender(other) 6-course 女子は 道着の下にTシャツを着用すること	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2217233	Applied Physical Education Swimming	0.5	2	FallAB	Thu2	Indoor Pool	Miwako Homma	Understanding swimming techniques and improving swimming skills. Learning various aquatic skills like basic swimming, Japanese traditional swimming, synchronised swimming, water polo, life saving and snorkeling etc.	実務経験教員 elements by gender(wear) elements by gender(contact) elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2221253	Applied Physical Education Softball	0.5	2	FallAB	Thu2	Baseball Field	Takeshi Kaneda	Emphasis will be on fundamentals, and the way to enjoy playing game. Understanding and improvement of health and fitness shall also be addressed by playing softball.	elements by gender(contact) elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2222213	Applied Physical Education Table Tennis	0.5	2	FallAB	Thu2	3rd Gymnasium	Yuki Nonaka	Upon deepening knowledge concerning sports activities and understanding techniques applicable to different types of sports, apply the acquired knowledge and skills to games and technical practices and develop free thinking on sports activities.	実務経験教員 elements by gender(contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2223253	Applied Physical Education Dance	0.5	2	FallAB	Thu2	Dance Hall	Yonezawa Mayuko	In this class, learns how to use basic body of the dance and gets on various music and move a body. In addition, aims at the making of healthy body by yoga and stretch through a class.	実務経験教員 elements by gender(contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2225273	Applied Physical Education Tennis	0.5	2	FallAB	Thu2	Taigai Tennis Hardcourts	Hajime Ohmori	More advanced skills will be introduced, including smash, lob, topspine service, strategies and more.	6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2234213	Applied Physical Education Basketball	0.5	2	FallAB	Thu2	Basketball Courts	Toshihiro Otaka	Learning individual tactics (Beat the Defense & Get the Ball Offense). Understanding the characteristic of basketball, and Playing game with individual tactics.	elements by gender(equipment) elements by gender(contact) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2235213	Applied Physical Education Badminton	0.5	2	FallAB	Thu2	1st Gymnasium	Chika Tanifuji	Understanding the principles of badminton in order to play and enjoy games. History, manner, rule, and values of sports shall also be learned through playing games.	elements by gender(special rule/pair/team) 6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	

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2236253	Applied Physical Education Volleyball	0.5	2	Fall/AB	Thu2	Volleyball Gymnasium	Nakaba Akiyama	This course is designed to learn fundamental skills (pass, serve, spike, block, game play), rules, basic strategies, and team work.	6-course	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2240253	Applied Physical Education Fitness Training	0.5	2	Fall/AB	Thu2	2nd Training Area	Hirokazu Matsuo	Emphasis will be on maintenance of good health and understanding of relationship between physical fitness and health promotion. Acquisition of methods of resistance training, jogging and stretching shall also be addressed for lifelong good health.	elements by gender (other) 6-course Details will be announced. 体力測定の評価に際して、男女で基準値が異なる	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2241233	Applied Physical Education Flag Football	0.5	2	Fall/AB	Thu2	SEKISHO Field	Tsuyoshi Matsumoto	Emphasis is on further tactical/positional patterns and consideration for team shape/formations. Larger playing areas are gradually introduced, and as before, students take part in game formats on a regular basis.	elements by gender (special rule/pair/team) 6-course 各チームの男女数が均等になるように男女混合チームを作ります。ゲームにおいては、女子特別ルールを設定し、全員が積極的にゲームに関与できるように工夫を行います。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
2243253	Applied Physical Education Bodywork	0.5	2	Fall/AB	Thu2	2nd Multi-Purpose Dojo	Toshihiro Kato	We will do the following exercises: (1) Core Training (2) Stretching (3) Self-massage (4) Breathing technique. Sharpen your senses. Increases resistance to stress. And enjoy the exercise itself.	6-course 男女の区別なくペアワーク(トレーニングの補助やスポーツマッサージ等)が行われることがあります。ペアワークが苦手な方は単独で行うことができます。ペアの組み方は自由です。奇数の場合は3人組になることもあります。	△	Only students who want to obtain a teacher's license in Japan and who have not completed physical education credits can register. It may not always be possible to take the desired courses, because there is a limit on the number of students.	
6190101	Information Literacy (Lectures)	1.0	1	Fall/A	Tue3,4	3A405	Simona Mirela Vasilache	This course teaches basic knowledge of computers, the Internet and the social positioning of computers. Students learn how computer systems are made, about the structure of the Internet, information security, as well as intellectual property rights and information ethics.	For Students in English Program. Lectures are conducted in English.	△	It depends on decision of the class instructor	
6490102	Information Literacy (Exercises)	1.0	1	Fall/B	Tue3,4	3D207	Simona Mirela Vasilache	This course teaches fundamental skills for computer use. By using computers to create documents and presentations, disseminate information on the Internet and share information, students acquire basic information utilization skills.	For Students in English Program. Lectures are conducted in English.	△	It depends on decision of the class instructor	
6590102	Data Science	2.0	1	Spr/AB	Tue3,4		Simona Mirela Vasilache	This course teaches students about basic concepts of data science and fundamental techniques for data collection, management and analysis. Students will acquire practical methods for data utilization. Through concrete examples from data science, they will also develop an understanding of how data is used in society.	For Students in English Program. Lectures are conducted in English.	△	It depends on decision of the class instructor	
4004013	Workshops on Japanese-style Painting	1.0	1-4	Spr/AB	Mon4,5		Toshiaki Hodozuka	"Washa (reproduction)," the embodiment of the saying "to understand the past is to know the present," is a practical skill that is essential for studying Japanese painting. In this course, you will use materials such as sumi (black ink) and Japanese brushes to study various techniques and methods of washu, and experience the charm of expression through ink sketching as seen in the "National Treasure - Chouju-giga" (Scrolls of Frolicking Animals). In addition, the content of this course will be planned individually according to students' levels and interests.	Participation is limited to 30 persons.			
4005013	Workshops on Sculpture	1.0	1-4	Fall/AB	Tue2,3	practice room of Art & Design I	Hisaaki Ohara, Shinji Miyasaka	The goal of this course is to produce a statue of head made of clay using a model. It also aims to develop fundamental abilities of expression in three-dimensional format grasped through actual production.	人数制限あり			
BE11011	International Social Studies I	2.0	1	Fall/AB	Thu4,5		Edson Ioshiaqui Urano	The aim of this course is to provide the basic understanding of the major trends on international migration. Taking as a background the growing process of globalization, central themes in migratory studies such as South-North migration, refugee issues, skilled workers and migration to Japan will be discussed.	Limited to 35 students. Lectures are conducted in English. JTP	△	It depends on decision of the class instructor	School of Social and International Studies
BE11021	International Social Studies II	2.0	1	Spr/AB	Thu3,4		Katsunori Seki	The course introduces students to the fundamental of international relations and international political economy. The course begins with an overarching framework to study international politics and international political economy. The course covers a wide range of topics including causes of war, domestic politics and war, international institutions and war, civil war and terrorism, international trade, international financial relations, international monetary relations, and development. All students are expected to actively participate in the classroom discussion.	equivalent to "International Studies II" in 2010 Lectures are conducted in English. 主専攻必修科目 JTP	△	It depends on decision of the class instructor	School of Social and International Studies
BE21131	Introduction to Programming	2.0	1, 2	Fall/AB	Fri3,4		Simona Mirela Vasilache	This course is focused on helping students acquire fundamental programming notions. Some of the topics that will be covered include starting programming from "penpaper", pseudocode, algorithms, data types, basic control structures etc.	Lectures are conducted in English. JTP 6-course The number of students is limited to 35. (equivalent to "Introduction to Information Processing" in 2010-2012)	△	It depends on decision of the class instructor	School of Social and International Studies
BE21171	Law and Society in Japan	1.0	2-4					This course is to provide an introduction to law and to the Japanese legal system. The topics covered by this course include the development of Japanese law, the basic structure of Japanese law, criminal and civil law of Japan and future prospects of Japanese law and legal system.	Identical to BE20081. Lectures are conducted in English. Not open in 2020. JTP 6-course This course is available only for students who acquired the credit of Introduction to Law. The number of students is limited to 20-25.	△	It depends on decision of the class instructor	School of Social and International Studies
BE21181	Sociology of Contemporary Japan	2.0	1, 2					The aim of this course is to analyze the social and economic changes in Japan, with particular focus on changes in the nature of work in society and its implications in Contemporary Japanese society, including complex issues such as migration, foreign workers, ageing society, job hunting, working poor and inequality.	Limited to 35 students. Identical to BE11871. Lectures are conducted in English. Not open in 2020. JTP 6-course Equivalent to "Social Issues in Contemporary Japan (BE21181)"	△	It depends on decision of the class instructor	School of Social and International Studies
BE21201	International Economics	2.0	2	Spr/AB	Thu3,4		Yoshinori Kurokawa	This course will introduce students to basic international economic theories and their applications to real world data mainly about Japan's international trade and finance. I will emphasize the usefulness of basic international economic theories in understanding international economic issues. This course does NOT require BGS1061 Introductory Microeconomics or BGS1081 Intro-Intermediate Macroeconomics as a prerequisite. In class, I will explain all necessary background to understand this course.	Limited to students in the School of Social and International Studies. Identical to BGS1071. Lectures are conducted in English.	△	Depends on if there is a margin for the number of students or classrooms	School of Social and International Studies

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BE21231	Intro-Intermediate Macroeconomics	2.0	2	Fall/AB	Wed1.2		Hisahiro Naito	This course covers the basic concepts in macroeconomics. Topics include the IS-LM model, aggregate demand, aggregate supply and the Phillips curve, monetary and fiscal policy, rational expectations, real business cycle models, micro foundations, and long-run economic growth.	Identical to BG51081. Lectures are conducted in English, JTP	△	Depends on if there is a margin for the number of students or classrooms	School of Social and International Studies
BE21241	Media Politics	2.0	1-3	Fall/AB	Mon1.2		Leslie Tkach Kawasaki	How does the media, in all its various formats, interact with politics? From "traditional" media, such as newspapers and television, to new media formats including websites, blogs and social media channels, in this course, students will examine the intersection between media and politics from historical, theoretical, topic-based, and consumer/producer perspectives.	JTP Identical to BG51161. Lectures are conducted in English.	△	Depends on if there is a margin for the number of students or classrooms	School of Social and International Studies
BE21371	Introduction to Law	2.0	1.2	Spr/AB	Tue5.6		Serena Franco	This course aims to make students get comprehensive introduction to Jurisprudence or legal studies. It addresses the character and contents of each field in Jurisprudence through practical and case examples.	This course is available only for students who acquired the credit of Introduction to Social Sciences. The number of students is limited to 30-35. Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Social and International Studies
BE21381	Introduction to Political Science	2.0	1.2					This course introduces students to the fundamental of political science. The goal of this course is to be familiar with major concepts and theories that we often use in empirical political science research. To this end, this course covers a wide range of topics including modern states, political regime, political institutions, political violence, and identity politics. Another goal of this course is to improve your critical thinking skill. I encourage you to move from memorizing factual knowledge to evaluating explanations and interpretations of a variety of political phenomena you observe. Of course, having accurate factual knowledge is important, but it is only the basis with which you start a journey of looking for rigorous explanations of what is happening in the world today.	Lectures are conducted in English. Not open in 2020. 6-course Equivalent to "Politics and Society (BE21381)"	△	It depends on decision of the class instructor	School of Social and International Studies
BE21511	Academic Discussion Seminar	2.0	1.2	Fall/AB	Wed3.4		Simona Mirela Vasilache	The goal of this course is to engage students in active discussions on various contemporary topics, ranging from politics, economics, science to culture, entertainment etc. The students will be encouraged to express and defend their opinions openly and actively, as well as propose issues to be debated.	Lectures are conducted in English. 6-course The number of students is limited to 30. Students who received the credits from Academic Discussion Seminar II in AY2018 and earlier cannot register.	△	It depends on decision of the class instructor	School of Social and International Studies
BE21831	Quantitative Methods for Social Sciences	2.0	1.2	Fall/AB	Thu3.4		Katsunori Seki	This course introduces students to the fundamental of causal inference that constitutes the core of quantitative social sciences today. The course is divided into three parts: (1) conceptual discussion of causal inference, (2) elementary statistical theory, and (3) programming with statistical software. We are using a free software, R, which has been widely used by both scientists and major multinational corporations including Google.	Lectures are conducted in English. 6-course The number of students is limited to 20. Priorities are given to students from the College of Social Sciences and the College of International Studies.	△	It depends on decision of the class instructor	School of Social and International Studies
BE21871	Monetary Economics	2.0	3.4					This course deals with the monetary theory and policy in the context of modern economies. It addresses the role and definition of money in the economy, the microeconomic and macroeconomic aspects of money, the demand for money, the supply of money and interest rates, monetary policy making and instruments of monetary policy, and central banking at theoretical and practical levels. The course equips students with the skills to understand the operation of modern economies and the main monetary aggregates of an economy over time and across countries and its implications on economic welfare indicators.	Lectures are conducted in English. Not open in 2020. JTP 6-course			School of Social and International Studies
BE22021	Japan and the World	2.0	2-4	Fall/AB	Mon3.4		Liang Pan	This course focuses on the history of Japan's domestic politics and foreign relations from the end of the Second World War till the end of 1970s.	Open in an even number year. Identical to BG1961. Lectures are conducted in English, JTP			School of Social and International Studies
BE22031	Japanese Foreign Policy	2.0	2-4					This course examines the historical background of modern Japan's foreign policymaking from early 1890s till the end of the Second World War (1945). Main emphasis of the lectures will be placed on the interaction between Japanese domestic politics and foreign affairs.	Open in an odd number year. Identical to BG1911. Lectures are conducted in English, JTP			School of Social and International Studies
BE22051	Public Policy	2.0	2-4	Spr/AB	Thu1.2		Edson Ioshiaqui Urano	The objective of this course is to provide students with basic knowledge to understand public policies, with special focus on the role of economic and social policies in society.	Limited to 35 students. Identical to BG11461. Lectures are conducted in English, JTP 6-course	△	It depends on decision of the class instructor	School of Social and International Studies
BE22071	International Politics	2.0	2-4	Fall/AB	Tue5.6		Takafumi Ohtomo	This course examines various theories and cases to understand the dynamics of international politics.	Identical to BG1121. Lectures are conducted in English, JTP			School of Social and International Studies
BE22081	Political Philosophy	2.0	2-4	Spr/AB	Tue5.6		Charles Edward Covell	This course provides an introduction to the work of the classic thinkers who belong to the Western tradition in political philosophy, and in this to meet the basic educational needs of students specializing in the various areas of politics, law and economics. It is recognized that political philosophy is often held to be a subjecting that presents major difficulties for students. Accordingly, it is proposed to make the review of Western political thinkers as simple as possible and to focus attention on the explanation of the most fundamental of the terms and concepts in Western political thought.	Identical to BG1171. Lectures are conducted in English, JTP			School of Social and International Studies
BE22101	Comparative Public Administration	2.0	2-4	Fall/AB	Tue5.6		Charles Edward Covell	The purpose of this course is to provide a general introduction to the structure of government and public administration through detailed consideration of the case of the United Kingdom. The emphasis throughout will be on bringing out the first principles underlying the basic machinery of government and public administration, and on doing this in such a way as to make these principles comprehensible to students with only a limited background in the field of comparative public administration.	Identical to BG11271. Lectures are conducted in English, JTP			School of Social and International Studies
BE22141	Japanese Politics	2.0	2-4	Spr/AB	Tue5.6		Katsunori Seki	The objective of this course is to help students better understand Japanese politics using the tools and theories of political science. The target of this course is advanced undergraduate students who would like to study Japanese politics in a rigorous manner and/or who would like to study Political Science using Japan as a case. To this end, this course covers a variety of topics including Japanese party politics, policymaking, political institutions, corruption, and gender and politics, during the fairly stable "1955 System" of Liberal Democratic Party dominance as well as the more recent and turbulent Heisei era. Students are expected to develop substantive knowledge of contemporary Japan. Moreover, students are expected to understand and critically evaluate the various tools and theories that are used to explain Japanese politics.	Open in an even number year. Lectures are conducted in English. 6-course Students who completed "Fundamentals of Japanese Studies (BE21101)" in AY2018 cannot register.	△	It depends on decision of the class instructor	School of Social and International Studies

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BE22151	Democratization	2.0	2-4					The objective of this course is to help students better understand democratization using the tools and theories of political science. The target of this course is advanced undergraduate students (1) who would like to study questions related to democracy and dictatorship and (2) who would like to write the graduation thesis in this area of research. To this end, this course covers a variety of topics including the concept and topology of political regime, democratic transition, democratic consolidation, varieties of dictatorships, democracy and development, resource curse, and orientalism. Moreover, students are expected to understand and critically evaluate the various theories that are used to explain democratization.	Open in an odd number year. Lectures are conducted in English. Not open in 2020. 6-course Students who completed "Democratization (BE22131)" in AY2019 cannot register.	△	It depends on decision of the class instructor	School of Social and International Studies
BE22221	Japanese Economy	2.0	2-4	Fall/AB	Mon5, 6		Yoshinori Kurokawa	The main purpose of this course is to understand basic historical facts about the Japanese Economy. We analyze those facts both empirically and theoretically and relate most Japanese issues to those in the U.S. The goal of this course for Japanese students is to explain to foreign people about the Japanese economy in English, and that for international students is to be more interested in Japan. As a prerequisite, this course requires BS1061 Introductory Microeconomics and BS1071 International Economics, or equivalent.	Identical to BC11881. Lectures are conducted in English. JTP	△	Depends on if there is a margin for the number of students or classrooms	School of Social and International Studies
BE22231	Econometrics	2.0	2-4	Spr/AB	Tue1, 2		ZHENGFEI YU	This course is an introduction to econometrics. We will begin with the linear regression model and its estimation and inference. Then we will cover linear models with endogeneity, linear panel models, limited dependent variables, and models used in program evaluations. This course prerequisites Introductory Statistics.	Identical to BC12061. Lectures are conducted in English. JTP			School of Social and International Studies
BE22241	Economic History	2.0	2-4	Fall/AB	Mon3, 4		Hidenao Takahashi	This course will provide an introduction of economic history. Main topics of the course are economic growth and globalization.	Identical to BB41541. Lectures are conducted in English.			School of Social and International Studies
BE22251	Comparative Economics	2.0	2-4	Fall/AB	Mon3, 4		Yoko Tanaka	This course provides an overview on the labor relations from comparative view. Particularly focusing the precise atypical work, the changing structure of labor forms and its problems would be examined and discussed.	Course in 2020 Open in an even number year. Identical to BB41381 and BC11891. Lectures are conducted in English. JTP Identical with "Comparative Study."			School of Social and International Studies
BE22261	Development Economics	2.0	2-4	Spr/AB	Tue4, 5		Mari Minowa	This course is an introduction to development economics, covering both theoretical and empirical research related to development. The course will cover many of the key topics in development: poverty and inequality, industrialization, rural sector development, human capital, governance and institution, among others.	Identical to BB41421 and BC12731. Lectures are conducted in English. JTP			School of Social and International Studies
BE22271	International Trade	2.0	2-4					As the economy becomes more globalized, it is becoming necessary to study the basic mechanism of international trade and its impact on welfare. In this course, we first study the concept of comparative advantage and study why countries will be engaged in international trade. Then, we study the impact on welfare by using several models. (The Ricardian, Heckscher-Ohlin and Specific Factor Model). Then, we study the monopoly model and its implication for international trade theory. In addition, we discuss the impact of international factor movement such as immigration and foreign direct investment.	Open in an odd number year. Identical to BB41601, BC11411, and FH25051. Lectures are conducted in English. JTP			School of Social and International Studies
BE22321	Statistics	2.0	2	Fall/AB	Tue1, 2		ZHENGFEI YU	This course is a formal introduction to Statistics. No prior knowledge of probability and statistics is required as all concepts will be developed from the ground up. We will cover a range of topics including descriptive statistics, basics of probability, random variables, distribution and density functions, sampling distributions, point estimation, confidence intervals, and hypothesis testing. If time allows, a preview of the regression analysis will be provided. The details of regression analysis will be covered in Introductory Econometrics, which is a continuation of this course.	2016年度までのBC12031「統計科学」の単位を取得した者は履修不可。 Identical to BC51181. Lectures are conducted in English. JTP			School of Social and International Studies
BE22401	Transnational Social Policy	2.0	2-4					Globalization has brought many changes in social life, including increasing flows of financial resources, goods and persons among the new challenges these changes pose to governments and civil society is the need to create new social agenda and to develop social policies. The aim of this course is to discuss these challenges for the 21st Century from a transnational perspective	Biennial Course (offered in odd years) Open in an odd number year. Identical to BB11861 and BC11471. Lectures are conducted in English. JTP 6-course	△	It depends on decision of the class instructor	School of Social and International Studies
BE22451	Social Development	2.0	2-4	Fall/AB	Wed1, 2		Midori Matsushima	People's well-being cannot be achieved by economic growth alone, and the important role of social development has become widely recognised in international development practice. This course is offered for students firstly to increase understandings of why and how social development became a main stream of development by learning historical background and development theory. Secondly, we focus on some key concept and practice including human development, capability approach, participatory approach, and social capital. In the latter half of the course, we learn social development in relation to important development topics namely, poverty, human capital, labour and employment, micro finance, social protection, and human rights and human security. With some examples of on-going development programmes, students will discuss significance and applications of social development in practical field, and how we can improve development programmes towards sustainable development.	Open in an even number year. Identical to BC12221. Lectures are conducted in English. JTP Course in 2020, Biennial Course (offered in odd years)			School of Social and International Studies
BE22471	Globalization and Development	2.0	2-4	Fall/AB	Tue/Fri2		Nathan Gilbert Guimpo	This course examines the politics of development in the era of globalization, exploring major issues and problems being encountered and confronted by the developing countries in the contemporary period. There will be lectures, videos, discussions and debates on globalization theory, major development issues, politics in the developing world, and the impact of globalization on developing countries.	Identical to BC11351. Lectures are conducted in English. JTP 6-course	△	It depends on decision of the class instructor	School of Social and International Studies
BE22491	European Legal History	1.0	3, 4	Spr/AB	Intensive		Miyasaka Wataru	This course provides students with introductory overview of European Legal History. This year I would like to focus on the ancient Roman Law, which is the basis of legal systems not only in European continent countries, but also in many countries all over the world influenced from the former countries.	Students who have earned credits of BB21581 or BB28761 are not permitted to take this class. Open in an even number year. Identical to BB28771. Lectures are conducted in English. 4/18, 4/19, 5/9, 5/10 4/18 : 1-2 period, 4/19 : 3-4 period, 5/9 : 1-3 period, 5/10 :			School of Social and International Studies
BE22501	Linguistic Anthropology	2.0	2-4	Spr/AB	Tue1, 2		Risako Ide	An introduction to linguistic anthropology, this course explores the theories, concepts and case studies that help us understand the dynamic relationship between language, culture, and society. Based on the class lecture and classroom discussions based on the reading assignments, we will try to understand the idea that	1項目のみ3403教室で実施 Identical to BC11511. Lectures are conducted in English. JTP (Former "Anthropological Linguistics")			School of Social and International Studies
BE22521	International Education	2.0	2-4	Spr/AB	Tue3, 4		Masako Shibata	This course invites both overseas and Japanese students. The major purpose of the course is to enable students to learn about issues and current trends in educational studies in international perspectives. It deals with themes, such as development, colonial legacy and global interaction, in education.	Identical to BC12241. Lectures are conducted in English. JTP			School of Social and International Studies

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BE22551	Outline of Japanese Education	2.0	2-4	Fall/AB	Tue3,4		Masako Shibata	This course is offered to students who are interested in the historical development of Japanese education. The course looks at the processes of the foundation of the Japanese education system and the formation of a modern state in Japan. Special reference is made to the past and present dimensions of patterns of the cross-national transfer of policy for education. Thus international and comparative perspectives are welcome throughout the course.	Identical to BC12251. Lectures are conducted in English, JTP			School of Social and International Studies
BE22581	Sociology of Migration	2.0	2-4	Fall/AB	Thu1,2		Edson Ioshiaqui Urano	This course aims to analyze international migration focusing on key themes for understanding this social phenomenon. To this end, topics such as gender and migration, transnational communities, migration policies will be addressed through a sociological and multidisciplinary perspective.	Limited to 30 students. Open in an even number year. Lectures are conducted in English, 6-course Biennial Course (offered in even years)	△	It depends on decision of the class instructor	School of Social and International Studies
BE22711	Global Society and Criminology	2.0	2-4	Fall/AB	Thu5,6		Chihoko Morita	This course is an introduction to criminology and the criminal justice system in Japan. The course also discusses the effect of globalization on criminal justice policies in Japan.	Open in even years. This course is available only for students who acquired the credits of Introduction to Law and Law and Society in Japan. Lectures are conducted in English, JTP	△	It depends on decision of the class instructor	School of Social and International Studies
BE22801	Economic Growth	1.0	2-4	Spr/AB	Wed6		Masako Ikefuji	This course introduces students to the introductory theory of economic growth, mainly, the Solow Model, necessary for understanding the concept and determinants of economic growth. The goal of this course is to give the students skills to apply the basic theory and competences to discuss various issues related to economic growth.	Identical to BC41551. Lectures are conducted in English, JTP 6-course			School of Social and International Studies
BE22821	History of Economic Thought	2.0	2-4	Fall/AB	Thu5,6		Abu Girma Moges	The course is about the history, philosophy and evolution of economic ideas and thoughts. We review critically the different schools of economic thoughts from the classical to the modern schools to provide students with a comprehensive understanding of the origin, evolution, arguments, and philosophy of economics and the economists behind such powerful ideas.	Identical to BC16021. Lectures are conducted in English, JTP	△	It depends on decision of the class instructor	School of Social and International Studies
BE22851	Mathematical Economics	2.0	2-4	Spr/AB	Mon5,6		Masako Ikefuji	This course introduces students to the most fundamental analytical tools of mathematics for economics. It provides the necessary skills and training to use mathematical approach in economic analysis. The goal of this course is to give the students skills to apply the mathematical methods to solution of economics problems.	Identical to BC41561 and BC16011. Lectures are conducted in English, JTP	△	It depends on decision of the class instructor	School of Social and International Studies
BE22861	Health Economics	2.0	2-4	Spr/AB	Thu5,6		Abu Girma Moges	Health Economics is an applied economics course that analyzes issues in health, medical care and health finance. The demand for health and medical care services and the economic behavior of health service providers and the operation of health insurance markets are analyzed with economic tools of analysis and perspectives. The role of the government sector in the provision, regulation and financing of health care services are addressed within the context of health sector policies both in developed and developing countries.	Identical to BC12921. Lectures are conducted in English, JTP	△	It depends on decision of the class instructor	School of Social and International Studies
BE22871	Contemporary Issues in Developing Countries	2.0	2-4	Fall/AB	Fri4,5		Yuko Nakano	The goal of this course is to understand contemporary and important economic and social issues in developing countries. We also analyze statistical data related to the topics.	Identical to BC41401 and BC12121. Lectures are conducted in English, JTP			School of Social and International Studies
BE22901	Economic Development	2.0	2-4	Fall/AB	Thu3,4		Malik Abdul Mohammad	This course gives an overview of modern development economics, i.e. economics of low-income, developing and emerging economies. The course will discuss key concepts and issues of economic development especially how tools of macroeconomics, microeconomics, econometrics, international trade, etc. are applied to understanding the problems of development, and how data and empirical evidence can shed light on conflicting views and questions about the process of development.	Identical to BC12091. Lectures are conducted in English, JTP			School of Social and International Studies
EG02011	Physics	1.0	1	Fall/AB	Thu4	2C407	Marcos Antonio das Neves, Mito Kokawa	Introduction to physics for life and environmental sciences. Basic areas of mechanics, thermodynamics, and waves will be covered.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG02021	Mathematics	1.0	1	Fall/AB	Fri5	2G205	Ahamed Tofael	Introduction to mathematics for life and environmental sciences covers application of calculus using applied differentiation and integration, logarithmic and exponential functions, first order differential equations, matrix and probability. This course emphasizes to solve problems related to life and environmental sciences using a wide array of mathematical solutions.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG02031	Statistics	1.0	2	Fall/C	Tue2 Fri1	2C102 2D202-203	Louis John Irving	Introduction to statistics for life and environmental sciences.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG02041	Advanced Mathematics	1.0	2	Spr/AB	Thu6		Ahamed Tofael	In this course, students will have a short review of applied calculus and introduces with the advanced mathematics sections like geometrical meaning of differential equations, solution of ordinary and partial differential equations, numerical analysis and Laplace transformation. These advanced mathematical skills will be invaluable to them to interpret the concepts of modeling of real world problems related to life and environmental sciences.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG02111	Introduction to Biology I	1.0	1	Fall/AB	Fri3	2C102	Louis John Irving, DeMar Taylor	Introduction to biochemistry and cytology.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG02211	Chemistry I	1.0	1	Fall/A	Tue/Fri6	2D303	Seung Won Kang	Introduction to general chemistry for life and environmental sciences.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG02221	Chemistry II	1.0	1	Fall/B	Tue/Fri6	2D303	Seung Won Kang	Introduction to general chemistry for life and environmental sciences.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG02231	Chemistry III	1.0	1	Fall/C	Tue4 Thu5	2D303	Seung Won Kang	Introduction to general chemistry for life and environmental sciences.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG50011	World Food and Agriculture	1.0	1	Fall/AB	Fri2	2C102	Seung Won Kang	This course introduces crop plants, domestic animals and their production in the world, in relation to economic and environmental issues.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG50031	Cell Structure and Function	1.0	2,3	Fall/AB	Fri5	2B309	DeMar Taylor	Lectures and discussions will concentrate on cell structure and function as related to 1) membranes, 2) mitochondria, 3) chloroplasts, 4) intracellular transport, 5) cell communication, 6) cell cycle and 7) cell communities.	Use English Textbook Identical to EC31251. Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG50041	Biochemistry	2.0	2,3	Spr/AB	Thu4,5		Keiji Kimura, Miyako Kusano, Daisuke Hagiwara, Yuko Shimada, Hiromi Yanagisawa	Advanced biochemistry covers a wide area including molecular cell biology, molecular genetics, biotechnology, metabolism, and relates all current biological sciences. In this year, experts of three major classes of the organisms (microorganisms, plants, animals) give lectures from the professional points of view. This course provides an introduction to biochemistry for the undergraduates who are able to learn basic to applied knowledge of life and environmental sciences.	Lectures are conducted in English, JTP			School of Life and Environmental Sciences
EG50091	Disease Vector Biology	1.0	3	Fall/AB	Fri1	2D206	DeMar Taylor	Agricultural production of both animals and plants is greatly affected by the transmission of diseases through arthropod vectors. This course will provide a better understanding of arthropod disease vectors and the diseases they transmit.	Identical to EC31261. Lectures are conducted in English, JTP			School of Life and Environmental Sciences

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EG60041	Animal Production	1.0	3, 4	SprAB	Thu3		Atsushi Tajima	Animal production and grain production are two of the most important human inventions. In the present lecture, basic concepts of domestic animals production, i.e. animal husbandry, animal reproduction and animal nutrition will be covered.	Same as EG31081 Lectures are conducted in English.			School of Life and Environmental Sciences
EG60051	Biotechnology in Domestic Animals	1.0	3, 4					The aim of the course is to provide basic information on the current status of biotechnology in domestic animals.	Open in an odd number year. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60061	Animals and Animal Products in Human Life	1.0	3, 4	FallAB	Thu2	2B309	Yuji Miyaguchi	This course aims to provide an understanding on the basic principles of human-animal relationship. Topics on how animal and animal products contribute to the human life will be discussed.	Open in an even number year. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60071	Food Functionality	1.0	3, 4	FallC	Tue5, 6	2G407	Hiroko Isoda, Myra Orlina Villareal	Lectures will cover the topics in advanced food functionality including anti-cancer, anti-allergy, anti-stress, anti-obesity, neuronal regulation, melanogenesis regulation and the bioavailability of functional food factors.	Same as EG31391 Lectures are conducted in English.			School of Life and Environmental Sciences
EG60101	Soil Science	2.0	3, 4	FallB	Intensive	2G304	Maki Asano	Fundamental aspects of soils with regard to their genesis, physicochemical properties, management and the related environmental issues will be lectured, and the discussion on some selected topics will be treated as more advanced understanding of present status of soils in the changing world.	Same as EG32161 Lectures are conducted in English. Lectures are Conducted in English.			School of Life and Environmental Sciences
EG60111	Environmental Ecological Engineering	1.0	3	FallAB	Wed3	2C410	Nakao Nomura	Lecture covers eco-engineering technologies to restore deteriorated environments including following major existing issues: 1) Rehabilitation of enclosed water bodies in terms of water and sediment quality improvement, 2) Biomass energy as a renewable energy and its effect on reduction of green house gas emission, 3) Impact of aquacultural industries on coastal environment including mangrove forest.	嶺南領域科目「環境」 Identical to EG32111. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60121	Food Process Engineering	1.0	3, 4	SprAB	Wed3		Marcos Antonio das Neves, Mito Kokawa	This course introduces basic principles of fluid flow, heat transfer, and mass transfer phenomena, along with the application of these principles to the unit operations most commonly used in food processing, such as thermal processing, cooling, freezing, centrifugation, filtration, drying, size reduction and emulsification.	Same as EG42021 Lectures are conducted in English.			School of Life and Environmental Sciences
EG60161	Environmental Colloid Engineering	1.0	3, 4	FallB	Thu2, 3	2G204	Yasuhiro Adachi	Applications of colloid and interface science to environmental issue and its basis are given. Focus will be placed on the flocculation which is important to control water quality.	Lectures are conducted in English.			School of Life and Environmental Sciences
EG60191	Biomass Conversion	2.0	3, 4	SprAB Sum Vac	Intensive	2C403	Yingnan Yang	This course is designed to help you develop and understanding of the complex processes of biomass conversion. Lectures and discussions will focus on biomass sources, biomass conversion technology and process.	Limited to 630 students. Open in an even number year. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60222	Seminar in Agrobiological and Forestry	2.0	3, 4	Sum Vac	Intensive		Ryo Ohsawa	This seminar focuses on Agrobiological or Environmental sciences, aiming at providing the latest achievement of these science fields. A student studies the method of accessing suitable information, and also will be requested to reflect them for own research through a seminar.	Lectures are conducted in English.			School of Life and Environmental Sciences
EG60232	Seminar in Applied Biological Chemistry	2.0	3, 4					The purpose of the course is to introduce and discuss the applied life sciences related to biochemistry of plant molecules, molecular and developmental biology, biology for gene regulations, ecological molecular microbiology, biomimetic chemistry, bioreaction engineering.	Open in an odd number year. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60252	Seminar in Agricultural Economics and Sociology	2.0	3, 4	Annual	by appointment		Hisato Shuto	This course aims to introduce the present issues of agricultural and forestry economics, and discuss the roles of rural society, farm management and forestry planning.	Students who are supervised by faculties in the Course of Agriculture and Forestry Social Sciences are eligible to enroll. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60272	Seminar in Quantitative Food Economics	2.0	2, 3	FallAB	Thu5, 6	2D204, 2G205	Hisato Shuto	Exercises in estimation of food production and consumption based on economic theories, and discussions are performed to analyze the factors controlling supply and demand of foods.	Lectures are conducted in English.			School of Life and Environmental Sciences
EG60282	Seminar in International Agrobiological Resource Sciences	2.0	3, 4	FallAB	Intensive	2L503	Yingnan Yang	This course aims to provide information for resource plants and animals, methods and examples of field survey, and effective use for agriculture and industry.	13:30-21:30 Limited to 630 students. Open in an even number year. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60361	Microbiology	1.0	2, 3	FallC	Thu3, 4	2G205	Shinichi Andrew Utada	This lecture will introduce you basic microbiology including: 1. Diversity of microorganisms 2. Cell-structures 3. Metabolisms 4. Genetics 5. Their use in our life	Lectures are conducted in English.			School of Life and Environmental Sciences
EG60401	Economics of Resource and Environment	2.0	3, 4	SprAB	Thu3, 4		Hisato Shuto, Satoshi Tachibana	Lectures will cover the topics in agricultural economy and resource and environment including forest.	Open in an even number year. Lectures are conducted in English.			School of Life and Environmental Sciences
EG60411	Biomaterial Science	1.0	3, 4	FallAB	Tue2	2G205	Toshiharu Enomae, Akiko Nakagawa-Izumi	Fundamentals and applications of paper science and papermaking engineering will be given and they cover chemical structures of polysaccharides constituting fibers, pulping methods for extracting fibers from wood, papermaking technology such as beating, forming, calendaring and coating, and geometrical, mechanical, optical, water-related properties of paper as well as latest research topics.	Lectures are conducted in English.			School of Life and Environmental Sciences
EG60421	Soil and Water Bio-Engineering	1.0	3	FallA	Intensive		Wenfeng Tan, 龚彦 中村	Engineering aspect of soil and water will be given on the basis of the knowledge of colloid and interface science. Emphasis will be placed on the solid-liquid separation technology by membrane and flocculation. A topic of application of microbiology, such as activated sludge method will be included.	It is recommended to take EG60161 together with this subject due to complementarity. EG60491 will also be helpful to understand this subject. Lectures are conducted in English. 10/8, 15, 22, 29			School of Life and Environmental Sciences
EG60453	Environmental and Colloid Engineering Laboratory	1.0	3, 4	FallABC	Intensive		Motoyoshi Kobayashi	Students learn the fundamental and applications of colloidal and environmental engineering through the experiments.	It is desirable for participants to take "Introduction of Colloid and Interface Science" or "Environmental Colloid Engineering" beforehand or at the same time. Students need to make a contact with the instructor (kobayashi.moto.fpu@tsu.kuba.ac.jp) before registration (9:00-17:00). Students who had taken EG60473 is not allowed. Lectures are conducted in English. 11/7, 14, 12/5, 19, 1/9	△	Depends on if there is a margin for the number of students or classrooms	School of Life and Environmental Sciences
EG60491	Elementary Applied Thermodynamics	1.0	2, 3	SprAB	Mon4		Yasuhiro Adachi	Thermodynamics is one of most fundamental subject when biological and environmental issues are treated. In this lecture, the elementary thermodynamics will be explained with an orientation toward an application in life and environmental science. Lecture will start the concept of equilibrium system with an example of Brownian motion. It will be followed by the first and the second law of thermodynamics. Thermodynamic function, the concept of Gibbs free energy, chemical potential. Many example will be cited from the field of Colloid and Interface Science. Those, who want to join the lecture of environmental colloid engineering are strongly recommended to join this lecture.	Lectures are conducted in English.			School of Life and Environmental Sciences

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E660511	Practical Plant Biotechnology	1.0	3, 4	SprAB	Thu5		Chiaki Matsukura, Hiroshi Ezura, Tohru Ariizumi	Plant cell, tissue and organ cultures for crop improvement will be introduced as conventional biotechnologies. The current status of genetically modified (GM) crops and the genome editing technology will be introduced.	same as EC31231 and E660021. A G30-student who had taken E660021 is not allowed. Lectures are conducted in English.			School of Life and Environmental Sciences
E660551	Water Resources Management Engineering	1.0	3, 4	SprABC	Intensive		Atsushi Ishii	This lecture aims to provide a fundamental understandings of water resources by giving introductory hydraulics and hydrology, natures of river flow, water use in various sectors with a special focus on irrigation, water resources development and management, hydrologic statistics, as well as institutional system for water.	Lectures are conducted in English.			School of Life and Environmental Sciences
E660561	Water Environmental Management Technology	1.0	3	SprC	Intensive		Nakao Nomura	Lecture covers ecological technologies to restore water environments in enclosed water bodies with deteriorated sediment and water quality. Lecture also covers a case study of Lake Kasumigaura Water Renovation Project where several research studies was performed to rehabilitate water environment in large scale.	横断領域科目「環境」特別聴講学生(CiCプロジェクト参加学生を含む)のみ履修可。Cross-disciplinary subjects 「Environment」 Limited to Exchange Student (Tokubetsu Chokogakusei) including CiC Project. Lectures are conducted in English.			School of Life and Environmental Sciences
E660571	Introduction to Industrial Ecology	1.0	3	SprAB	Tue2		Helmut Friedrich Yabar Mostacero	One of the biggest challenges our societies face is how to decouple economic growth from environmental pressure within the limits of the earth's carrying capacity. The highly inefficient use of natural resources from extraction to final disposal produces wastes and releases to air, water and soil. This course addresses the mechanisms and tools necessary to overcome this challenge through the introduction to Industrial Ecology (IE). Industrial ecology focuses on promoting industrial activities similar to processes in nature. This is achieved by optimizing energy and material resource use while minimizing and/or avoiding waste and pollution release. The course will outline the tools to achieve this goal including resource use optimization through the 3R Initiative proposed by Japan, Life Cycle Assessment, and Material Flow Analysis. The course will also address the technical and management aspects of the concept including Environmental Management Systems, Cleaner Production and Design for Environment. At the end of the course the student will develop analytical skills and learn the tools necessary to design and implement solutions to the current production and consumption patterns.	Lectures are conducted in English.			School of Life and Environmental Sciences
E660581	Animal Cell Culture Technology	1.0	3	SprAB	Fri3		Nakao Nomura	Lectures cover basic knowledge about animal cell culture (cell cycle, growth factors, extra-cellular matrixes, cancer cells) as well as application of cultured animal cells (hybrid artificial organ, production of monoclonal antibodies, alternative for experimental animals). Lectures also provides basic information about biotechnological approach for setting up animal cell bioreactors.	Identical to EC32071.			School of Life and Environmental Sciences
E660591	Food and Nutritional Chemistry I	1.0	3, 4	FallIAB	Fri5	2C410	Hitoshi Miyazaki	The aims of this course are to understand i) structure-function relationship of gastrointestinal tract, ii) functions of food constituents such as carbohydrates, lipids, proteins, and vitamins, iii) mechanisms of their digestion and absorption, iv) relation of lifestyle-related disease with nutrition intake, and v) relation of exercise with nutrition intake.	Same as EC32241 G30 Students who had received credits from E660081 are not allowed. Open in an even number year. Lectures are conducted in English.			School of Life and Environmental Sciences
E660601	Food and Nutritional Chemistry II	1.0	3, 4					The aims of this course are to understand i) physiological functions of nutrients such as carbohydrates, lipids, and proteins, ii) regulation of their metabolism, iii) relation of metabolic syndrome with exercise, overnutrition, and biological clock.	Same as EC32241 G30 Students who had received credits from E660081 are not allowed. Open in an odd number year. Lectures are conducted in English.			School of Life and Environmental Sciences
E660611	International Agricultural and Forestry Policies I	1.0	3, 4	SprC	Intensive		英樹 萩原, 真康 浅井, 久人 首藤	Lectures will cover the topics in policies for agriculture, food, forestry, and environmental management related to agriculture and forestry in the world.	G30 students who had received credits from E660201 are not allowed. Open in an even number year. Identical to EC34281. Lectures are conducted in English. 実務経験教員			School of Life and Environmental Sciences
E660621	International Agricultural and Forestry Policies II	1.0	3, 4					Lectures will cover the topics in policies for agriculture, food, forestry, and environmental management related to agriculture and forestry in the world.	G30 students who had received credits from E660201 are not allowed. Open in an odd number year. Identical to EC34381. Lectures are conducted in English.			School of Life and Environmental Sciences
E660641	Precision Agriculture Technology	1.0	2, 3	SprAB	Fri5		Ahamed Tofael	Lectures will cover the topics of precision agricultural technology. Recent advancements in the agricultural field of automation, satellite remote sensing, and GIS. The Bigdata analytics, IoT in agriculture and machine learning systems are used in medium to large scale of agricultural production. The outdoor agricultural mechanization to indoor plant growth monitoring and machinery utilization are the core subjects of this course. Through this course students will get exposure of large satellite remote sensing systems for agriculture, UAV-based crop monitoring and IoT advancements in agriculture.	Lectures are conducted in English.			School of Life and Environmental Sciences
E660651	Organic Chemistry	3.0	2	Annual	Tue1	2C107	Mikio Kajiyama	Basic structure and reactions of organic compounds are explained on the electronic theory.	Lectures are conducted in English.			School of Life and Environmental Sciences
E660663	Fundamental Environmental Engineering Laboratory	1.0	2	Sum Vac	Intensive	2D110-1	Ryozo Noguchi, Motoyoshi Kobayashi, Marcos Antonio das Neves, Takeshi Mizunoya, Helmut Friedrich Yabar Mostacero, Motoo Utsumi, Zhongfang Lei, Hiroshi Ohi, Akiko Nakagawa-Izumi, Toshiharu Enomae, Mikio Kajiyama, Yasuhisa Adachi, Atsushi Ishii, Zhen Ya Zhang, Yingnan Yang	水, 土, 環境, 森林, 大気などの生産環境やバイオマス, 食品などの生物資源を対象として, これらの特性を明らかにする諸理論, 試験, 計測, 解析のための基礎的手法を理解・習得する。また実験を通じて, 環境工学的なアプローチや科学技術研究における問題の発見とその解決のための実践的能力を養成する。 This course aims to provide basic concepts of environmental engineering necessary to analyze various phenomena present in environments, biomass, or bioresources.	平成22年度以前の「計測工学実験 (EC23113)」に相当。EC23113または EC23123を履修済みの者は履修できない。 Identical to EC23133.	△	Depends on if there is a margin for the number of students or classrooms	School of Life and Environmental Sciences

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EG70013	Laboratory Work in Basic Geoscience	1.0	1				Atsushi Ikeda, Shigehiro Fujino, Akio Yamashita, Kohei Tanaka, Tsutomu Yamanaka, Hiroshi Tanaka, Kei Ikehata, Atsushi Kyono, Masanori Kurosawa, Teruyuki Maruoka, Chiaki Akiyama	Relevant tools and methods to study Earth's environment are the main topic of this lecture. Students are asked to participate in and carry out hand-on exercise in various geoscientific analyses.	Lectures are conducted in English.			School of Life and Environmental Sciences
EG70021	Introduction to Geoenvironmental Science	1.0	1	Fall IAB	Fri 2		Masaaki Kureha, Tsuyoshi Hattanjiri, Takehiro Morimoto, Hiroshi Tanaka, Michiaki Sugita, Norikazu Matsuoka, Hiroaki Kato	Earth's environment is the main topic of this lecture. Emphasis is on the geoscientific aspects and features in the atmosphere, hydrosphere, topography, and human society among others are discussed.	Lectures are conducted in English.			School of Life and Environmental Sciences
EG70031	Introduction to Earth Evolution Science	1.5	1	Fall IABC	Wed 5		Yoji Arakawa, Kohtaro Ujiie, Yuji Yagi, Yoshihito Kamata, Toshiaki Tsunogae, Atsushi Kyono, Shigehiro Fujino, Teruyuki Maruoka	This lecture introduces 4.6 billion years evolution of the earth, mainly focusing on the evolution of solid earth, and the birth and evolution of life.	Students, who attended EG70011, are not permitted. Lectures are conducted in English.			School of Life and Environmental Sciences
EG90211	Natural Hazards	1.0	2, 3	Fall IAB	Fri 1			This lecture overviews various natural hazards and their triggers, reviews historical and recent hazards and explores future prediction and mitigation against possible hazards.	Offered in odd number years. Lectures are conducted in English. G-course			School of Life and Environmental Sciences
EG91011	Lecture on Geographical Information Systems	1.0	2, 3	Fall IAB	Thu 1		Takehiro Morimoto, Akio Yamashita, Chiaki Akiyama	This course introduces fundamentals of Geographical Information Systems and its application to geography.	Offered in even number years. Lectures are conducted in English.			School of Life and Environmental Sciences
EG91101	Meteorology & Climatology	1.5	2, 3	Spr ABC	Wed 1		Hiroshi Tanaka, Mio Matsuueda, Yoichi Kamae, Mariko Harada	Elementary course about the general circulation of the atmosphere and the energy budget, mechanism of climate and climate change, weather forecasting and precipitation, interactions of the atmospheric environment and human activities.	Offered in even number years. Students, who attended EG91031, are not permitted. Lectures are conducted in English.			School of Life and Environmental Sciences
EG91141	Human and Regional Geography	1.5	2, 3	Fall IABC	Thu 4		Kenichi Matsui, Keisuke Matsui, Jun Tsutsumi, Tomoko Kubo	This course introduces subjects and fundamentals of the human and regional geography by presenting actual examples of Japan and other regions of the world. Following the introduction of basic concepts of human geography, features of various regions will be explained from viewpoints of rural, urban, commercial, political, religious, recreational and ethnic geographies.	Students, who attended EG80011, are not permitted. Lectures are conducted in English.			School of Life and Environmental Sciences
EG91161	Process Geomorphology	1.0	2, 3	Spr AB	Fri 4			This lecture focuses on physical processes that create and maintain landforms. Tectonic, glacial, fluvial and coastal processes, and weathering as well as mass movements are mainly discussed.	Offered in odd number years. Prerequisite: Introduction to Geoenvironmental Science, Introduction to Earth Evolution Science, or permission by teacher. Priority for Geoscience English program students. Students, who attended EG91131, are not permitted. Lectures are conducted in English.			School of Life and Environmental Sciences
EG91171	Basic Analysis of Environmental Dynamics	1.5	2, 3	Spr ABC	Tue 5		Yuichi Onda, Bunkei Matsushita, Hiroaki Kato, Junko Takahashi	This lecture provides basic knowledge for analyzing environmental dynamics. In addition, the present state of environmental problems and its analysis methods are discussed.	Offered in even number years. Lectures are conducted in English.			School of Life and Environmental Sciences
EG92011	Mineralogy & Petrology	1.0	2, 3	Fall IAB	Wed 3		Yoji Arakawa, Toshiaki Tsunogae, Masanori Kurosawa, Atsushi Kyono, Kei Ikehata	This lecture provides basic knowledge for various minerals and rocks in the earth's surface and interior. Main purposes are to learn classification, basic principles and processes of the formations of the minerals and rocks (mainly igneous and metamorphic rocks) in the earth.	Offered in even number years. Lectures are conducted in English.			School of Life and Environmental Sciences
EG92021	Inorganic Geochemistry	1.0	2, 3	Spr AB	Tue 2		Teruyuki Maruoka	This lecture provides basic principles and quantitative methods of geochemistry in order to gain a better understanding of Earth's surface phenomena.	Offered in odd number years. Lectures are conducted in English.			School of Life and Environmental Sciences
EG92031	Paleontology & Stratigraphy	1.0	2, 3	Fall IAB	Tue 2		Sachiko Agematsu, Yoshihito Kamata, Shigehiro Fujino, Kohei Tanaka	This lecture provides basic knowledge for sedimentology and paleontology and historical geology. Main purposes are to learn interrelationship between life and environment of geological time.	Offered in even number years. Lectures are conducted in English.			School of Life and Environmental Sciences
EG92041	Applied Structural Geology	1.0	2, 3	Fall IAB	Tue 4		Yuji Yagi, Kohtaro Ujiie	Structural geology with emphasis on its application side is the main topics of this lecture.	Offered in odd number years. Lectures are conducted in English.			School of Life and Environmental Sciences
EG90161	Topics on Geoscience B	1.0	3, 4	Fall IC	Intensive			This course introduces knowledge and recent developments on specific topic(s) in Geoscience.	Offered in 2021. Priority for Geoscience English program students. Students other than English program by permission of instructor. Up to 20 students. Lectures are conducted in English.			School of Life and Environmental Sciences
FJ20004	Linear Algebra I	3.0	1	Fall IABC	Wed 4, 5	3A213	Xiao-Min Tong	This course introduces the basic ideas of vector, matrix and their operations and how to solve linear equations using matrices and vectors. The primary goal of this course is to understand the systems of linear equations, classifications of matrices and their applications. Although most of the problems can be solved without Mathematica, you are encouraged to solve the homework using the software once you know how to solve the problems. The course is a prerequisite for "Linear Algebra II"	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ20014	Linear Algebra II	3.0	1	Spr ABC	Wed 4, 5		Sonia Sharmin	Following "Linear Algebra I", "Linear Algebra II" will also concentrate on the basics of linear algebra. Emphasis will be given to topics that will be useful in other disciplines, such as determinants, eigenvalues, positive definite matrices, Fourier series and the Fast Fourier Transform. Some homework problems may require you to use a program such as MATLAB or Mathematica, an important tool for numerical linear algebra. No previous programming experience is required.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering

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FJ20104	Calculus I	4.0	1	Fall/AB	Tue1,2 Thu5,6	3A311	Nobyuki Sano	This course along with the subsequent course "Calculus II" introduces the basic tools of calculus and develops their technical competence. The primary goal of this course is to understand the concept and to build up a working ability of various mathematical manipulations such as derivatives, integrals, differential equations, parametric representations, polar coordinates, etc. This is efficiently achieved by visualization, numerical and graphical experimentations and, thus, students are required to be acquainted with Mathematica (or similar ones) during the course as working exercises and homework problems. This course as well as "Calculus II" provides a core and practical knowledge required for many scientific courses you shall take hereafter in the IDE program.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ20114	Calculus II	4.0	1	Spr/AB	Tue5,6 Thu5,5	3A311	Nobyuki Sano	Following the "Calculus I", this course also introduces the basic tools of calculus and develops their technical competence, namely, differential equation, infinite series, vector calculus, spherical coordinate system, and partial derivatives etc. This is achieved again by visualization, numerical and graphical experimentations and, thus, students are required to be acquainted with Mathematica (or similar ones) during the course as working exercises and homework problems. This course as well as "Calculus I" provides a core and practical knowledge required for many scientific courses you shall take hereafter in the IDE program.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ20201	Probability and Statistics	2.0	1	Fall/C	Tue/Thu1,2	3A213	Monirul Muhammad Islam	This course introduces basics of probability theory and statistics. This course will be mainly oriented to interpret physical problems in engineering and natural sciences through application of probability theory and statistics. Evaluation will be done through class quiz, homework on regular basis, and final examinations.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ22004	Electromagnetism I	3.0	2	Fall/ABC	Wed2,3	3A214	Toshiaki Hattori	This course introduces the basic ideas of electromagnetism. The course is a prerequisite for "Electromagnetism II".	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ22014	Electromagnetism II	3.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ25101	Electrical Circuit	2.0	2	Fall/AB	Tue5,6	3A212	Toru Takahashi, Hirotsugu Osawa	A lecture is given on basic knowledge and analysis methods of electrical and electronic circuits, including linear passive elements, sinusoidal alternating current and complex number, impedance and admittance, resonant circuits, mutual induction circuits, bridge circuits, filters, general circuit theorems, and AC power.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ26004	Mechanics I	2.0	1	Fall/AB	Mon5,6	3A213	Akihiro Matsuda	Primary goals of Mechanics I is to develop students' ability to (i) analyze problems in a simple and logical manner and (ii) apply basic principles to find their solutions. This course reviews such fundamental concepts as coordinate, time, mass, force and energy for a particle. The students are required to solve exercises and work on homework assignments.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ26014	Mechanics II	2.0	1	Spr/AB	Mon5,6		Masamichi Kawai, Gaku Shoji	Following "Mechanics I", "Mechanics II" will also concentrate on the basics of mechanics. Emphasis will be given to topics that will be useful in other disciplines, such as systems of particles, statistics and dynamics of rigid body and principles about analytical vector mechanics.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ26104	Thermodynamics I	2.0	2	Fall/AB	Tue3,4	3A213	Akiko Kaneko	Thermodynamics is one of the essential physics to discuss energy conservation for engineer in various fields. The aim of this lecture is to master the basics of the first and second laws of thermodynamics. The specific goal is to be able to appropriately express the first law of thermodynamics for the system, to be able to discuss changes in entropy based on the second law of thermodynamics, and to combine these basic matters. The heat efficiency of the heat engine can be derived.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ26114	Thermodynamics II	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ10001	Complex Analysis	3.0	2	Fall/ABC	Tue1,2	3A214	Monirul Muhammad Islam	This course introduces theories for functions of a complex variable. Students will acquire skill to use complex derivatives function, to have knowledge about integration in the complex plane, use of Cauchy integral theorem, power series, to evaluate complicated real integrals via residue calculus etc.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ10101	Applied Mathematics	3.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ11001	Engineering Ethics	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ11101	Introduction to Interdisciplinary Engineering I	1.0	1	Fall/AB	Tue5	3A214	Tsutomu Maruyama	This course discusses issues relevant to Engineering Systems and aims to help students grasp general concepts involved in this field of study.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ11111	Introduction to Interdisciplinary Engineering II	1.0	1	Spr/AB	Tue1		Muneaki Hase, Kiyoto Matsuishi	This course discusses issues relevant to Engineering Sciences and aims to help students grasp general concepts involved in this field of study.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12001	Modern Physics	3.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ15001	System Modeling	2.0	2, 3	Spr/AB	Wed1,2		Noriyuki Hori	This course introduces fundamental concepts and techniques in building linear, time-invariant, state-space models of typical engineering systems, including translational and rotational mechanical systems, electrical and electronic circuits, thermal systems, fluid systems, and transducers. Analogies are drawn among these systems in different energy domains based on such concept as the across and the through variables, as well as their energy storages and dissipaters. Response characteristics of standard first and second-order systems are explained, as a prelude to control system designs.	Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ15101	Electronic Circuits	2.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12101	Statistical Physics I	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12111	Statistical Physics II	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12121	Statistical Physics III	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12201	Quantum Mechanics I	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12221	Quantum Mechanics III	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12301	Advanced Electromagnetism I	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12311	Advanced Electromagnetism II	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12321	Advanced Electromagnetism III	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12401	Solid State Physics I	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12411	Solid State Physics II	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ12421	Solid State Physics III	1.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ15011	Control Systems I	2.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ15021	Control Systems II	2.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
FJ16001	Fluid Dynamics I	3.0	-					Lectures are conducted in English. Not open in 2020.	Lectures are conducted in English. Not open in 2020.	△	It depends on decision of the class instructor	School of Science and Engineering
HE33081	International Infectious Diseases	1.0	3	Spr/AB	Intensive		Kaoru Takeuchi, Mizuho Fukushima	In the modern world certain infectious diseases have become human threats, by spreading in a short period of time, with more morbidity and severity. In this course, important international infectious diseases are explained on the aspects from microbiology, clinical medicine and disease control.	医療科学専生に限る 4/8-6/30 この期間内(掲示参照) Details will be announced.	△	Only for regular students	School of Medicine and Health Sciences
HE40052	Research Seminar	4.0	3	Annual	by request		Emiko Noguchi	The students will select their theme from a variety of fields in medical sciences based on their own interests, and participate in research seminar and actual research activity in the laboratory.	Offered exclusively for students in the Medical Scientists Program Lectures are conducted in English.			School of Medicine and Health Sciences
HE40091	Topics in Medical Sciences II	1.0	4	Spr/AB	Tue4		Koji Hisatake, Kiong Ho	This course provides students with the opportunity to make presentations and discussions on medical science topics.	医療科学類国際医療科学専攻学生に限る Lectures are conducted in English.			School of Medicine and Health Sciences

Course Number	Course Name	Credits	Standard Academic Year	Course Offering Term	Weekday and Period	Classroom	Instructor	Course Overview	Remarks	Availability for Non-Degree Student (CREDITED AUDITORS)	Application Conditions, Remarks	Course Offering School/College
HE40131	Clinical Hematology	2.0	3	Fall/AB	Intensive			血液の組成、血液の生理的機能、血球の産生とその調節機構、造血因子および造血幹細胞などについて教授する。主要な血液疾患の病理生理とその診断のための血液学的検査法の原理と手法、血球の形態学的検査の原理と手法について教授する。白血球の病理的診断(AB分類)、リンパ腫の病理的診断法を教授する。	Students should obtain permission of the instructor before taking this course. This course will not be provided in 2020. Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Medicine and Health Sciences
HE40141	Coagulation and Fibrinolysis	1.0	3	Fall/C	Intensive			血液の凝固・線溶系の生理的機構を教授し、その失調に伴う出血傾向や血栓症に関する基本的検査法について教授する。凝固・線溶系の検査法の原理と手法、血小板の機能検査の原理と手法について教授する。	Students should obtain permission of the instructor before taking this course. This course will not be provided in 2020. Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Medicine and Health Sciences
HE40151	Clinical Pathophysiology	2.0	3	Fall/AB	Tue/Thu, 4, 5		Yuichi Aita	様々な疾患についての病理生理について詳細に教授する。またそれらの病態と各種臨床検査の成績との関連について解説し、様々な病態において変化する血液酵素などの成分の変動の仕組みを理解させる。患者からもたらされる臨床検査の情報をいかに的確に診断や治療に応用したら良いのか、基本的なものの考え方を十分理解させる。	Students should obtain permission of the instructor before taking this course. This course will not be provided in 2020. Lectures are conducted in English.	△	It depends on decision of the class instructor	School of Medicine and Health Sciences
HE40161	Topics in Vascular Biology	1.0	3, 4	Fall/AB	Intensive		Hiroshi Yanagisawa, YOSHITO YAMASHIRO	To provide basic knowledge and understanding of vascular biology, ranging from normal vascular development and physiology to molecular mechanisms of vascular diseases, as well as novel diagnostic and therapeutic approaches. The course aims to solicit active participation of students in lectures and journal clubs.	医療科学系学生に限る Lectures are conducted in English. 10/1-12/15 予定 (後日提示)			School of Medicine and Health Sciences
HE40252	Research Seminar	4.0	3	Annual	by request		Emiko Noguchi	指導教員の指導のもとにテーマを設定して研究を行う。これにより医学研究遂行に必要な基礎的技術の修得および問題解決能力の体得を図る。	国際医療科学専攻G30コース学生に限る。 Lectures are conducted in English.			School of Medicine and Health Sciences
HE40263	Seminar on Medical Sciences	1.0	3	Annual	by request		Emiko Noguchi	医学に関する演習課題について主体的に調査、解答を行い、医学の理解をさらに深める。	国際医療科学専攻G30コース学生に限る。 Lectures are conducted in English.			School of Medicine and Health Sciences
HE40273	Graduation Research	8.0	4	Annual	by request		Emiko Noguchi	指導教員の指導のもとにテーマを設定して研究を行う。これにより医学研究遂行に必要な基礎的技術の修得および問題解決能力の体得を図る。	国際医療科学専攻G30コース学生に限る。 Lectures are conducted in English.			School of Medicine and Health Sciences