

英語による開講科目一覧 Classes in English

	講義コード Course Code	開設科目名 Course Title	設置学部・研究科 Faculty/Graduate School Program	授業概要 Course Summary
1	0124201	日本語 F I (1)	JapaneseF1 Common Education	This course is designed for beginner students in the study of the Japanese language. Students will be introduced to reading, writing, and speaking modern Japanese. The fundamentals of grammar, pronunciation, vocabulary and conversation will be established if students take Japanese F I and F II.
2	0124202	日本語 F I (2)	JapaneseF1 Common Education	This course is designed for beginner students in the study of the Japanese language. Students will be introduced to reading, writing, and speaking modern Japanese. The fundamentals of grammar, pronunciation, vocabulary and conversation will be established if students take Japanese F I and F II.
3	0124301	日本語 F II (1)	JapaneseF2 Common Education	This course is designed for the students who attended Japanese F I. Students will be introduced to reading, writing, and speaking modern Japanese. The fundamentals of grammar, pronunciation, vocabulary and conversation will be established if students take Japanese F I and F II.
4	0124302	日本語 F II (2)	JapaneseF2 Common Education	This course is designed for the students who attended Japanese F I. Students will be introduced to reading, writing, and speaking modern Japanese. The fundamentals of grammar, pronunciation, vocabulary and conversation will be established if students take Japanese F I and F II.
5	0136321	パサージュ (2 4 A)	Passage Common Education	(Theme) The World Population (Expertise of the lecturer) Mathematical Biology The world population has reached 7.8 billion in 2020 and it still continues to grow in size. It increases simply because we have more birth than death in the world. Japanese population, on the other hand, has started to decrease in the past decade. It is very important to understand and forecast how human population will change in size, not only for academic interests, but also for practical issues related to economy, politics, social problems, etc. We need to understand human demography to make our life better in future. In this lecture, we overview history of the world population and learn simple mathematics that can be used to better understand and foresee the world population in future. Lecture is given in English. Getting used to listening, answering, and thinking in English is another purpose of this lecture.
6	0136323	パサージュ (4 0 A)	Passage Common Education	Theme: Planetary Atmospheric Science (惑星大気科学)  Expertise of the lecturer: Planetary Science, Earth Science  Course Aims: This course introduces the foundations of planetary atmospheric science to students taking this course. It also enhances the development of students' skill in making a basic conversation in English.
7	0146605	日本文化と地域社会A	Aspects of Traditional Culture in Contemporary Japanese Society A Common Education	Aiming to train internationally active pro-Japan female leaders, this course provides students from overseas universities with opportunities to understand and experience both traditional and modern Japanese culture. Students will study and experience both traditional and modern Japanese culture through many lectures and various field work as well as interactions with NWU students, and will discuss the unique and universal aspects of Japanese culture by comparing it with their own culture.
8	0146616	日本文化と地域社会C(1)	Aspects of Traditional Culture in Contemporary Japanese Society C(1) Common Education	Aiming to train internationally active pro-Japan female leaders, this course provides students from overseas universities with opportunities to understand and experience both traditional and modern Japanese culture. Students will study and experience both traditional and modern Japanese culture through many lectures and interactions with NWU students, and will discuss the unique and universal aspects of Japanese culture by comparing it with their own culture. This course is conducted online and on-demand.
9	0146618	日本文化と地域社会C(2)	Aspects of Traditional Culture in Contemporary Japanese Society C(2) Common Education	Aiming to train internationally active pro-Japan female leaders, this course provides students from overseas universities with opportunities to understand and experience both traditional and modern Japanese culture. Students will study and experience both traditional and modern Japanese culture through many lectures and interactions with NWU students, and will discuss the unique and universal aspects of Japanese culture by comparing it with their own culture. This course is conducted online and on-demand.
10	0146625	Modern Japanese Literature and Media A	Modern Japanese Literature and Media A Common Education	This course provides students with a general survey of modern Japanese literature from late 19th to mid-20th century. Through the analysis of major works it examines how Japanese literature has evolved during this period. Particular attention is given to its interconnectedness with cinema and other media.
11	0146635	Modern Japanese Literature and Media B	Modern Japanese Literature and Media B Common Education	This course provides students with a general survey of modern Japanese literature from mid-20th century until today. Through the analysis of major works it examines how Japanese literature has evolved during this period. Particular attention is given to its interconnectedness with cinema and other media.
12	0146640	Japanese Culture and History A	Japanese Culture and History A Common Education	This course focuses on the process of modernization in Japan and examines Japan's encounter with the international scene. The first semester provides a broad overview of Japanese history from the Meiji Restoration to the Great Kanto Earthquake. The cultural introduction to the period will focus on literary works, but the students will peruse a wide range of other sources also (literary and cultural criticism, news paper articles, manga, films, etc.). These sources will be examined in their historical, social, literary and cultural contexts from a comparative perspective.
13	0146650	Japanese Culture and History B	Japanese Culture and History B Common Education	This course focuses on the process of modernization in Japan and examines Japan's encounter with the international scene. The second semester provides a broad overview of Japanese history from the Great Kanto Earthquake to the beginning of the 'bubble'. The cultural introduction to the period will focus on literary works, but the students will peruse a wide range of other sources also (literary and cultural criticism, news paper articles, manga, films, etc.). These sources will be examined in their historical, social, literary and cultural contexts from a comparative perspective.
14	0146660	Contemporary Japanese Society A	Contemporary Japanese Society A Common Education	This class introduces the contemporary Japanese society for international students. Packed with explanations and dynamic images, it ranges from the popular culture to the latest trend.
15	0146670	Contemporary Japanese Society B	Contemporary Japanese Society B Common Education	This class reinvents Contemporary Japanese society for the international students. Classes are developed to pop cultural genres, with attention to the star, idols, and urban subcultural genres — Otakus, Gals, Lolitas, and Cosplay.
16	0146680	Traditional Japanese Culture A	Traditional Japanese Culture A Common Education	In this class we deal with the general information needed for studying in Japan. In the early part of the class, I explain the various themes concerning Japan such as the religion and the history. In the latter part, we investigate the characteristics of Japanese mind through the classic Japanology works. For the time being, I'd like to read "Iki no kozo" by Kuki Shuzo. I'd like to introduce the discussion between students who take the course and compare the respective cultures.
17	0146690	Traditional Japanese Culture B	Traditional Japanese Culture B Common Education	In this class we deal with the Japanese thought history, especially focusing on how the Japanese first awareness of modern Western civilization was.
18	0146700	Global Studies and Communication A	Global Studies and Communication A Common Education	This class is intended as an intermediate-level communication course for students preparing to study abroad. Specifically, the course will focus on developing the communication and listening skills so important in today's world. Each week the students will be given many opportunities to practice using English in a variety of situations. Pair, group and individual activities focusing on National Geographic video clips will inspire students to talk about their experiences as they learn about the world. An important component of the course is communication with overseas ESL instructors via Skype. The course will be limited to 24 students.
19	0146710	Global Studies and Communication B	Global Studies and Communication B Common Education	This class is intended as an intermediate-level communication course for students preparing to study abroad. Specifically, the course will focus on developing the communication and listening skills so important in today's world. Each week the students will be given many opportunities to practice using English in a variety of situations. Pair, group and individual activities focusing on National Geographic video clips will inspire students to talk about their experiences as they learn about the world. An important component of the course is communication with overseas ESL instructors via Skype. The course will be limited to 24 students.

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20	0152548	キャリアデザイン・ゼミナールB (Career Design SeminarB)	Common Education	NWU Study Abroad Progam (New Zealand). A short-term English training course, conducted at Lincoln University located in historical Christchurch. During this one-month intensive course, students will cultivate their English abilities, with a particular focus on academic English, under the assumption that the students will go on to study abroad at an English-speaking university. There will also be opportunities to participate as an exhibitor in local events introducing Japanese culture to attendees, as well as those to volunteer in event management. Individuals wishing to participate in these events will be obliged to attend a course that is held later on entitled "Cross-cultural communication and peace-building." Concrete details regarding the outline of the course will be given by the International Exchange Center during an explanatory meeting held in July.	
21	0152558	キャリアデザイン・ゼミナールB (Career Design SeminarB)	Common Education	NWU Study Abroad Program (Philippines). At the English language school QQ English, located on the Philippines' Cebu Island, intensive training will be conducted to improve practical English skills, with a particular focus on speaking ability. Concrete details regarding the outline of the course will be given by the International Exchange Center during an explanatory meeting held in April.	
22	0152559	キャリアデザイン・ゼミナールB (Career Design SeminarB)	Common Education	NWU Study Abroad Program (Thailand). English public speaking and presentation training will be conducted at the Chiang Mai University Language Institute, a distinguished national university in northern Thailand. Students will work to acquire the ability to confidently express their ideas in English during academic presentations, presentations related to their future jobs, or other such opportunities. Internships at local hotels, schools, and children's homes will also be conducted. Concrete details regarding the outline of the course will be given by the International Exchange Center during an explanatory meeting held in October.	
23	2001315	日本文化研究 B	Study on Japanese Cultures B	Faculty of Letters	This course is designed for students from partner/non-partner universities. This course offers introductory Japanese history classes and classes on modern Japanese culture. This course is conducted online. Students will have opportunities to communicate with students in NWU. Also, this course is jointly conducted with Cross-cultural Exchange Seminar (course number: 2001320) .
24	2001320	異文化交流演習	Seminar on Cross-cultural Exchanges	Faculty of Letters	この授業は、本学が奈良女子大学短期プログラム協定を結ぶ大学からの留学生を対象に実施する文学部短期プログラムにおいて、本学文学部の学生が留学生とプログラム期間中の活動をともにすることにより、異文化に関する理解を深めることとともに多くの文化遺産を抱える奈良や日本についてより深く理解することを目的とする。事前事後学習では英語を主な対象言語とし、プログラム期間中に留学生と円滑にコミュニケーションを取ることができるよう準備を行う。 This course is open only to students in Faculty of Letters. The course will be conducted jointly with students from partner universities during the winter short-term program. Students will gain a greater understanding of different cultures, with specific emphasis on Japanese culture and Nara. Students will learn English before the program to communicate with students from partner universities.
25	2052040	イギリス文学テキスト論講読Ⅱ	Readings in English Literature 2	Faculty of Letters	出版当時は評価されなかったものの近現代に高い評価を得るに至ったEmily BronteのWuthering Heights (1847年初版)を通読する。毎回の授業ではテキストの2章～3章 (20ページ前後)を読み、物語の展開と登場人物について理解するとともに、作品の手法・構造とその効果に注目し、作品のテーマについて考察を深めていく。授業は英語で行い、英語により議論を深めていく。 The course deals with Emily Bronte's Wuthering Heights (first published in 1847), the work which was largely ignored by the author's contemporaries but was reappraised and recognized by modernist writers and critics. Each class deals with 2-3 chapters (around 20 pages) and discusses the plot, the characters, the techniques and their effects, and the coherent themes of the work. All class activities are to be conducted in English..
26	2052050	イギリス文学テキスト論講読B	Readings in English Literature B	Faculty of Letters	出版当時は評価されなかったものの近現代に高い評価を得るに至ったEmily BronteのWuthering Heights (1847年初版)を通読する。毎回の授業ではテキストの2章～3章 (20ページ前後)を読み、物語の展開と登場人物について理解するとともに、作品の手法・構造とその効果に注目し、作品のテーマについて考察を深めていく。授業は英語で行い、英語により議論を深めていく。 The course deals with Emily Bronte's Wuthering Heights (first published in 1847), the work which was largely ignored by the author's contemporaries but was reappraised and recognized by modernist writers and critics. Each class deals with 2-3 chapters (around 20 pages) and discusses the plot, the characters, the techniques and their effects, and the coherent themes of the work. All class activities are to be conducted in English..
27	2052290	イギリス地域文化論講読Ⅰ	Readings in English Literature and Culture 1	Faculty of Letters	Emphasizing Great Britain, and the relation between it and Japan, this course aims to enable students to better understand their own cultural patterns and those of others, with special focus on how differing cultural practices and traditions can lead to conflict and cross-cultural communication problems. It is hoped that students will develop a deeper insight into their own communicative behaviors so be better prepared to meet the demands of a global cultural network.
28	2052300	イギリス地域文化論講読A	Readings in English Literature and Culture A	Faculty of Letters	Emphasizing Great Britain, and the relation between it and Japan, this course aims to enable students to better understand their own cultural patterns and those of others, with special focus on how differing cultural practices and traditions can lead to conflict and cross-cultural communication problems. It is hoped that students will develop a deeper insight into their own communicative behaviors so be better prepared to meet the demands of a global cultural network.
29	2052320	イギリス地域文化論講読Ⅱ	Readings in English Literature and Culture 2	Faculty of Letters	To introduce a basic knowledge of the history, society, and culture of Great Britain, in cross-cultural comparison with Japan. Readings on a wide range of topics bearing on Japanese and British culture will enable students to enrich their English language skills, the better to communicate Japanese culture to English-speaking global citizens and to understand how the latter communicate their culture. The other goal is to make students aware of how Japanese culture is perceived by outsiders and to look at their own country, language, and culture from a new perspective.
30	2052330	イギリス地域文化論講読B	Readings in English Literature and Culture B	Faculty of Letters	To introduce a basic knowledge of the history, society, and culture of Great Britain, in cross-cultural comparison with Japan. Readings on a wide range of topics bearing on Japanese and British culture will enable students to enrich their English language skills, the better to communicate Japanese culture to English-speaking global citizens and to understand how the latter communicate their culture. The other goal is to make students aware of how Japanese culture is perceived by outsiders and to look at their own country, language, and culture from a new perspective.
31	2052360	アメリカ地域文化論講読Ⅰ	Readings in American Literature and Culture 1	Faculty of Letters	To introduce a basic knowledge of the history, society, and culture of the United States, emphasizing its cross-cultural relations with Japan in the fields of business, education, mass media, music, and literature. This course aims to enable students to better understand their own cultural patterns and those of others, with special focus on how differing cultural practices and traditions can lead to conflict and cross-cultural communication problems. It is hoped that students will develop a deeper insight into their own communicative behaviors, and so be better prepared to meet the demands of a global culture.
32	2052370	アメリカ地域文化論講読A	Readings in American Literature and Culture A	Faculty of Letters	To introduce a basic knowledge of the history, society, and culture of the United States, emphasizing its cross-cultural relations with Japan in the fields of business, education, mass media, music, and literature. This course aims to enable students to better understand their own cultural patterns and those of others, with special focus on how differing cultural practices and traditions can lead to conflict and cross-cultural communication problems. It is hoped that students will develop a deeper insight into their own communicative behaviors, and so be better prepared to meet the demands of a global culture.
33	2052390	アメリカ地域文化論講読Ⅱ	Readings in American Literature and Culture 2	Faculty of Letters	授業の到達目標及びテーマ To introduce a basic knowledge of the history, society, and culture of the United States, in cross-cultural comparison with Japan. Readings on a wide range of topics bearing on Japanese and American culture will enable students to enrich their English language skills, the better to communicate Japanese culture to English-speaking global citizens and to understand how the latter communicate their culture. The other goal is to make students aware of how Japanese culture is perceived by outsiders and to look at their own country, language, and culture from a new perspective.
34	2052400	アメリカ地域文化論講読B	Readings in American Literature and Culture B	Faculty of Letters	授業の到達目標及びテーマ To introduce a basic knowledge of the history, society, and culture of the United States, in cross-cultural comparison with Japan. Readings on a wide range of topics bearing on Japanese and American culture will enable students to enrich their English language skills, the better to communicate Japanese culture to English-speaking global citizens and to understand how the latter communicate their culture. The other goal is to make students aware of how Japanese culture is perceived by outsiders and to look at their own country, language, and culture from a new perspective.
35	2052570	英語コミュニケーションAⅠ	Communication in English A1	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.

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36	2052580	英語コミュニケーションA	Communication in English A	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.
37	2052600	英語コミュニケーションA II	Communication in English A2	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.
38	2052610	英語コミュニケーションB	Communication in English B	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.
39	2052640	英語コミュニケーションB I	Communication in English B1	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.
40	2052650	英語コミュニケーションC	Communication in English C	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.
41	2052670	英語コミュニケーションB II	Communication in English B2	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.
42	2052680	英語コミュニケーションD	Communication in English D	Faculty of Letters	In rotating pairs and small groups, students will increase their fluency in speaking and comprehending everyday English by drawing on their own experience in connection with readings (handouts, digital documents, websites, etc.) on a variety of subjects. Students will write weekly journal entries (100 words minimum) in response to their readings and in preparation for talking with classmates.
43	2052710	英語コミュニケーションC I	Communication in English C1	Faculty of Letters	The primary goal of this course is the development of communication and presentation skills in English. Through a variety of activities, students work towards expressing themselves competently in English and developing effective techniques for speaking in front of a group. In this way, students become more confident speakers and enjoy sharing their ideas in English.
44	2052720	英語コミュニケーションE	Communication in English E	Faculty of Letters	The primary goal of this course is the development of communication and presentation skills in English. Through a variety of activities, students work towards expressing themselves competently in English and developing effective techniques for speaking in front of a group. In this way, students become more confident speakers and enjoy sharing their ideas in English.
45	2052740	英語コミュニケーションC II	Communication in English C2	Faculty of Letters	The primary goal of this course is the development of English communication skills and awareness of global connections. Through a variety of activities, students work towards expressing themselves competently in English. Authentic listening, reading and visual materials on real-world topics stimulate students to speak out and exchange ideas. In this way, students become more effective at communicating and collaborating in English.
46	2052750	英語コミュニケーションF	Communication in English F	Faculty of Letters	The primary goal of this course is the development of English communication skills and awareness of global connections. Through a variety of activities, students work towards expressing themselves competently in English. Authentic listening, reading and visual materials on real-world topics stimulate students to speak out and exchange ideas. In this way, students become more effective at communicating and collaborating in English.
47	2052780	英語コミュニケーションD I	Communication in English D1	Faculty of Letters	This course will be focused on American television news broadcasts. In class we will watch recent news broadcasts and engage in group/class discussions on related themes. Listening, vocabulary building and dialogue work will also be included. Regular homework assignments including accessing current news will be an integral part of the course.
48	2052790	英語コミュニケーションG	Communication in English G	Faculty of Letters	This course will be focused on American television news broadcasts. In class we will watch recent news broadcasts and engage in group/class discussions on related themes. Listening, vocabulary building and dialogue work will also be included. Regular homework assignments including accessing current news will be an integral part of the course.
49	2052810	英語コミュニケーションD II	Communication in English D2	Faculty of Letters	This course will be focused on authentic American television news broadcasts. In class we will watch recent news broadcasts and engage in group/class discussions on related themes. Listening, vocabulary building and dialogue work will also be included. Regular homework assignments including accessing current news will be an integral part of the course.
50	2052820	英語コミュニケーションH	Communication in English H	Faculty of Letters	This course will be focused on authentic American television news broadcasts. In class we will watch recent news broadcasts and engage in group/class discussions on related themes. Listening, vocabulary building and dialogue work will also be included. Regular homework assignments including accessing current news will be an integral part of the course.
51	5650700	多文化共生論	Multicultural Society	Faculty of Human Life and Environment	This humanities based course will focus on multiculturalism and society. A comparative analysis of several legal case studies will be used to examine cultural diversity and our differing attitudes on a variety of important issues. Students will explore the ideas of culture and multiculturalism through an analysis of Japanese and American society, and in particular, a number of subcultures that contribute to the fabric and identity of each nation.
52	5650750	Multicultural Society	Multicultural Society	Faculty of Human Life and Environment	This humanities based course will focus on multiculturalism and society. A comparative analysis of several legal case studies will be used to examine cultural diversity and our differing attitudes on a variety of important issues. Students will explore the ideas of culture and multiculturalism through an analysis of Japanese and American society, and in particular, a number of subcultures that contribute to the fabric and identity of each nation.
53	7002500	数理生態学概論	Mathematics in ecology	Graduate School(M)	生態系において生物集団が示す様々な現象に関する数理モデリングについて論じる。個体群動態に関する代表的な数理モデルを紹介し、モデルの数理的解析や計算機シミュレーション実装について解説する。注目する系を数理の立場から概観してより深く理解する枠組みについて論じる。 This course introduces mathematical models in ecology. Concept of mathematical modeling and its analysis with simulations will be given.
54	7212100	分子病態学特論B	Special Course in Molecular Pathology B	Graduate School(M)	受講生各自に、個別具体的地域の自然地理学にかかわる国内外の研究論文の内容紹介をもらい、それについて討議を行う。その中で発見した課題に関して、各自が行った文献調査やフィールド調査の結果を報告してもらい、更に討議を行う。 We discuss the contents of domestic and foreign research articles on physical geography in specific area. Students must report the results of their own literature reviews and field surveys.
55	7212300	食安全学特論A	Special Course in Food Safety A	Graduate School(M)	This course aims to enable students who have acquired the basic knowledge on environmental problems to analyze the cause and the impact of the problems by using various tools.
56	7430710	自然地理学演習B	Seminar in Physical Geography B	Graduate School(M)	The starting-point for the course will be medieval angelology, as an intermediate zone between human and divine worlds. It will then examine how these elaborately formulated spiritual existences are invoked and transformed in works by Edmund Spenser, John Donne and John Milton, such as 'Epithalamium', 'Aire and Angels' and 'Paradise Lost'. The second focus will be on the concept of the green world in the early modern period, and the restorative power of herbs and other forms of vegetation, as dramatised in Shakespeare's 'Midsummer Night's Dream'. It will then examine the association of flowers with the power of wise women in Ophelia in 'Hamlet' and Perdita in 'A Winter's Tale', and the abuse of that secret knowledge by the witches in 'Macbeth'. It will conclude with more general consideration of the relation of medicine and magic in a pre-scientific worldview. The third area of discussion will be the work of Edgar Allan Poe, firstly his short stories such as "Ligeia" and 'House of Usher', secondly his critical essays and poetry, especially 'The Raven', and thirdly the diverse influence of his aesthetic of mystery and imagination on later writers. The course is intended to combine attention to historical context and large-scale cultural narratives with close analysis to specific works, with particular attention to issues of gender.

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57	7431110	気水圏環境学特論A	Special Course in Environment Studies on Atmosphere and Hydrosphere A Graduate School(M)	The starting-point for the course will be medieval angelology, as an intermediate zone between human and divine worlds. It will then examine how these elaborately formulated spiritual existences are invoked and transformed in works by Edmund Spenser, John Donne and John Milton, such as 'Epithalamium', 'Aire and Angels' and 'Paradise Lost'. The second focus will be on the concept of the green world in the early modern period, and the restorative power of herbs and other forms of vegetation, as dramatised in Shakespeare's 'Midsummer Night's Dream'. It will then examine the association of flowers with the power of wise women in Ophelia in 'Hamlet' and Perdita in 'A Winter's Tale', and the abuse of that secret knowledge by the witches in 'Macbeth'. It will conclude with more general consideration of the relation of medicine and magic in a pre-scientific worldview. The third area of discussion will be the work of Edgar Allan Poe, firstly his short stories such as "Ligeia" and 'House of Usher', secondly his critical essays and poetry, especially 'The Raven', and thirdly the diverse influence of his aesthetic of mystery and imagination on later writers. The course is intended to combine attention to historical context and large-scale cultural narratives with close analysis to specific works, with particular attention to issues of gender.
58	7462500	イギリス言語文化論特論C I	Special Course in English Language and Culture C I Graduate School(M)	Intensive and extensive readings in Japan as seen by Americans (and, to a lesser extent, the United States as seen by Japanese). Readings, drawn from anthropology, literature, linguistics, journalism, psychology, history, etc., aim, through cross-cultural comparison with Japan, to deepen a basic knowledge of the history, society, and culture of the US and Japan. Students can also strengthen their English language skills, and gain new knowledge and awareness of their own country, language, and culture by studying descriptions of Japan as perceived by a wide range of Americans over the last 150 years.
59	7462550	イギリス言語文化論特論E	Special Course in English Language and Culture E Graduate School(M)	Intensive and extensive readings in Japan as seen by Americans (and, to a lesser extent, the United States as seen by Japanese). Readings, drawn from anthropology, literature, linguistics, journalism, psychology, history, etc., aim, through cross-cultural comparison with Japan, to deepen a basic knowledge of the history, society, and culture of the US and Japan. Students can also strengthen their English language skills, and gain new knowledge and awareness of their own country, language, and culture by studying descriptions of Japan as perceived by a wide range of Americans over the last 150 years.
60	7463100	アメリカ言語文化論演習A I	Seminar in American Language and Culture A I Graduate School(M)	Intensive and extensive readings in Japan as seen by Americans (and, to a lesser extent, the United States as seen by Japanese). Readings, drawn from anthropology, literature, linguistics, journalism, psychology, history, etc., aim, through cross-cultural comparison with Japan, to deepen a basic knowledge of the history, society, and culture of the US and Japan. Students can also strengthen their English language skills, and gain new knowledge and awareness of their own country, language, and culture by studying descriptions of Japan as perceived by a wide range of Americans over the last 150 years.
61	7463150	アメリカ言語文化論演習A	Seminar in American Language and Culture A Graduate School(M)	Intensive and extensive readings in Japan as seen by Americans (and, to a lesser extent, the United States as seen by Japanese). Readings, drawn from anthropology, literature, linguistics, journalism, psychology, history, etc., aim, through cross-cultural comparison with Japan, to deepen a basic knowledge of the history, society, and culture of the US and Japan. Students can also strengthen their English language skills, and gain new knowledge and awareness of their own country, language, and culture by studying descriptions of Japan as perceived by a wide range of Americans over the last 150 years.
62	7463200	アメリカ言語文化論演習A II	Seminar in American Language and Culture A II Graduate School(M)	情報衣環境学専攻教員の研究をオムニバス形式で紹介する。 Introduce the research of faculty members in Computer Science and Clothing Environment using omnibus format.
63	7463250	アメリカ言語文化論演習B	Seminar in American Language and Culture B Graduate School(M)	ランダムウォークやランダムグラフといった具体的な離散確率モデルを紹介し、これらの設定の下でどのような性質が成り立つかを、大数の法則や中心極限定理などの使い方に留意しながら説明する。講義の後半では確率論における最近の話題をいくつか選んで概観する。 The aim of this lecture is to introduce discrete probabilistic models, such as random walks and random graphs. We explain what properties can be established under these settings by using of the law of large numbers and the central limit theorem. In the second half of the lecture, we will review some recent topics in probability theory.
64	7610100	情報衣環境学論	Special Course in Computer Science and Clothing Environment Graduate School(M)	遷移金属錯体触媒を用いる有機合成反応は近年において益々発展を遂げており、最近では環境低負荷型反応や不活性な(反応性の低い)結合(C-H結合など)の直接的な官能基化反応などの開発に特に力が注がれている。本講義では、多彩な遷移金属錯体触媒反応について理解を深めるべく、有機遷移金属錯体の構造、配位子、素反応、触媒反応を理解するための基礎、各種触媒反応の概要について説明する。 Transition metal complex-catalyzed synthetic organic reactions have further blossomed in late years. More recently, the development of environmental-load reducing reactions and direct functionalization of inert bonds (such as C-H bonds) have been investigated intensively. In this lecture, the fundamentals to understand various catalytic reactions, such as structure of organotransition metal complexes, ligands, and elementary reactions will be explained. The principles of catalysis and overview of a variety of transition metal complex-catalyzed reactions will be also expositied.
65	7701100	確率論	Probability Theory Graduate School(M)	有機金属錯体を利用する有用な有機合成反応、特に環境低負荷型反応の開発は近年益々活発化している。本セミナーでは、それら有機合成反応に対する深い理解を得ることを目的として、反応開発または反応機構に関する原著論文、あるいは、新反応開発のための基礎となる有機金属錯体の合成、構造、反応性等に関する原著論文の最新のものを対象に取り上げて参加者全員の前で発表し、討論を行う。 Development of useful synthetic organic reactions by organometallic complexes, especially environmental load-reducing reactions, has been intensively investigated in recent years. The purpose of this seminar is to have a deep understanding of these synthetic organic reactions. The presenters pick up a latest original paper for development of reactions, reaction mechanisms, or, synthesis, structures, and reactivity of organometallic complexes which form the foundation of development of new reactions, and make a presentation and discuss the contents with other participants.
66	7731900	触媒機能化学	Chemistry of Functional Catalyst Graduate School(M)	有機金属錯体を利用する有用な有機合成反応、特に環境低負荷型反応の開発は近年益々活発化している。本セミナーでは、それら有機合成反応に対する深い理解を得ることを目的として、反応開発または反応機構に関する原著論文、あるいは、新反応開発のための基礎となる有機金属錯体の合成、構造、反応性等に関する原著論文の最新のものを対象に取り上げて参加者全員の前で発表し、討論を行う。 Development of useful synthetic organic reactions by organometallic complexes, especially environmental load-reducing reactions, has been intensively investigated in recent years. The purpose of this seminar is to have a deep understanding of these synthetic organic reactions. The presenters pick up a latest original paper for development of reactions, reaction mechanisms, or, synthesis, structures, and reactivity of organometallic complexes which form the foundation of development of new reactions, and make a presentation and discuss the contents with other participants.
67	7734700	有機合成化学セミナーB-I	Seminar in Synthetic Organic Chemistry B-I Graduate School(M)	COURSE DESCRIPTION This course aims to provide basic knowledge of Blastocystis organism and background of Blastocystis research as well as to recent molecular phylogentic or epidemiological research of Blastocystis organism. In addition, the aim is to deepen the understanding of how to approach their research by through discussing the published articles in their field of the international students.
68	7734800	有機合成化学セミナーB-II	Seminar in Synthetic Organic Chemistry B-II Graduate School(M)	COURSE DESCRIPTION This course aims to provide basic knowledge of integrative biology to international students by introducing research projects conducted by faculty members of Department of Biological Sciences. Topics include: reproductive physiology; mouse molecular genetics; animal and sensory physiology; plant physiology; plant molecular biology; population and community ecology; evolutionary ecology and systematics; ecology and evolution of plants; freshwater ecology and conservation.
69	7742800	生物科学特論C	Special Topics in Biological Sciences C Graduate School(M)	Each student summarizes and presents one chapter of "Community Ecology" written by P.J. Morin, and then all students discuss issues of the chapter.
70	7742900	生物科学特論D	Special Topics in Biological Sciences D Graduate School(M)	Each students summarize and present one chapter of "Community Ecology" edited by J.A. Verhoef and P.J. Morin (eds.), and then all student discuss issues.

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71	7749400	群集生態学演習Ⅰ	Graduate School(M)	Each student summarizes and presents a couple of papers that recently appeared in specific journals, and then all students discuss their topics.
72	7749500	群集生態学演習Ⅱ	Graduate School(M)	Each student summarizes and presents a couple of papers that recently appeared in specific journals, and then all students discuss their topics.
73	7749600	群集生態学演習Ⅲ	Graduate School(M)	<p>Course Aims</p> <p>This course deals with the basic concept and principles of atmospheric chemistry. The aim of this course is to help students acquire an understanding on characteristics of atmospheric minor species such as greenhouse gases and air pollutants.</p> <p>長寿命の温室効果気体である二酸化炭素・一酸化二窒素・フロンや、短寿命気候汚染物質と称されるメタン・オゾン・ブラックカーボン、およびそれらの前駆物質などの化学種について、それぞれの特性を講義する。それらの成分の地球規模分布とその季節変動や長期トレンドについて、観測データを中心に解説する。</p>
74	7749700	群集生態学演習Ⅳ	Graduate School(M)	This course introduces the foundations of meteorology to students taking this course.
75	7760000	地球大気環境科学特論Ⅰ	Graduate School(M)	This course introduces the role of light in the earth environment to students taking this course.
76	7760200	環境気象学特論Ⅰ	Graduate School(M)	<p>生物集団等が示す様々な現象に関する数理モデリングについて論じる。数理生物学の代表的なモデルについての原著論文を輪読すると同時に、そのモデルの解析や計算機シミュレーションを自ら行うことを通じ、注目する系を数理の立場から概観してより深く理解する枠組みについて論じる。</p> <p>Introduction to stochastic population dynamics will be given. We extend deterministic ODE models to stochastic models where population size is non-negative integer.</p>
77	7760300	環境気象学特論Ⅱ	Graduate School(M)	<p>生物集団等が示す様々な現象に関する数理モデリングについて論じる。数理生物学の代表的なモデルについての原著論文を輪読すると同時に、そのモデルの解析や計算機シミュレーションを自ら行うことを通じ、注目する系を数理の立場から概観してより深く理解する枠組みについて論じる。</p> <p>Introduction to mathematical and computational approaches to study population biology will be given.</p>
78	7760800	数理生命科学特論Ⅰ	Graduate School(M)	<p>Course Aims</p> <p>The course deals with the global warming that is one of the most significant global environmental problems by reading recent journal papers. It enhances the development of students' skill to read and understand scientific reports in English.</p> <p>地球温暖化問題のうち、特に温室効果気体に関する最近の出版物や原著論文を紹介し、それらの輪読と議論を行う。これによって、地球温暖化に関する大気科学的知見の全体像を理解する。</p>
79	7760900	数理生命科学特論Ⅱ	Graduate School(M)	<p>地球温暖化問題のうち、特に温室効果気体に関する最近の出版物や原著論文を紹介し、それらの輪読と議論を行う。</p> <p>Course Aims</p> <p>The course deals with the GHGs that may cause global warming problems by reading recent papers published in academic journals. It enhances the development of students' skill to read and understand scientific reports in English.</p>
80	7762600	地球大気環境科学セミナーⅠ	Graduate School(M)	<p>生物集団等が示す様々な現象に関する数理モデリングについて論じる。特にアルゴリズムとして記述される数理モデルの組み立て方ならびに解析方法について論じる。</p> <p>Introduction to mathematical and computational approaches to study population biology will be given.</p>
81	7762700	地球大気環境科学セミナーⅡ	Graduate School(M)	<p>生物集団等が示す様々な現象に関する数理モデリングについて論じる。特にアルゴリズムとして記述される数理モデルの組み立て方ならびに解析方法について論じる。</p> <p>Introduction to mathematical and computational approaches to study population biology will be given.</p>
82	7763400	数理生命科学セミナーⅠ	Graduate School(M)	The intent of this course is to develop in students an understanding of the mechanisms of environmental problems and to develop in students the critical thinking skills needed to quantitatively evaluate environmental issues across many different scales.
83	7763500	数理生命科学セミナーⅡ	Graduate School(M)	The intent of this course is to develop in students an understanding of the mechanisms of environmental problems and to develop in students the critical thinking skills needed to quantitatively evaluate environmental issues across many different scales.
84	7763800	生物地球化学セミナーⅠ	Graduate School(M)	This course deals with the basic concepts of global environmental problems. The aim of this course is to help students acquire an understanding on a variety of models that are used in global environmental problems.
85	7763900	生物地球化学セミナーⅡ	Graduate School(M)	This course aims to consider Japanese History, especially that of Nara Period, by discussing several topics; for example, the construction of the capital, the Kingship in ancient Japan, and the reception of Buddhism. The course combines lectures and visits to the Palace site inside of Heijokyo capital as well as related temples.
86	7764000	Introduction to global environment	Graduate School(M)	<p>Course overview:</p> <p>This course is intended to offer an overall view of the contemporary Japanese religion from the anthropological and sociological perspective. Although 80% of the Japanese people pray at shrines in the New Year's day and visit their ancestor's grave in spring, summer or autumn, only 20% of them believe in gods or deities. This fact summarizes the contemporary Japanese's religious situations: acceptance of religious culture and evasion of religion itself. You will have better understanding of the Japanese's religious attitudes and behaviors by visiting and discussing some of the urban or mountain established religion, folk and polytheistic belief, and new religious movements.</p>
87	7950210	Japanese History	Graduate School(M)	In this class on ethno-archeology, I will compare the results of anthropological research on native peoples in North America with the results of archeological surveys on indigenous people's living cultures.
88	7950310	Contemporary Japanese Religion	Graduate School(M)	We will compare and discuss the basic research methods of process archeology and the method of post-process archeology
89	8113500	比較民族文化論Ⅰ	Graduate School(D)	The Geisha
90	8113600	比較民族文化論Ⅱ	Graduate School(D)	This course aims to analyse modes of representation in Shakespeare and other modern English dramatists. We will examine the ways in which these authors address not only social issues of race, gender and class, but also fundamental emotions of desire, love and hate, focusing on their rhetoric. In this course, we will read recent criticism of drama from perspectives of language, history, psychology and gender, which will prompt participants to explore new aspects in literary texts.
91	8131200	欧米文化情報論Ⅱ	Graduate School(D)	This course aims to analyse modes of representation in Shakespeare and other modern English dramatists. We will examine the ways in which these authors address not only social issues of race, gender and class, but also fundamental emotions of desire, love and hate, focusing on their rhetoric. In this course, we will read recent criticism of dramas from perspectives of language, history, psychology and gender, which will prompt participants to explore new aspects in literary texts.
92	8131300	欧米表象文化論Ⅰ	Graduate School(D)	This course is a graduate-level seminar on the study of pragmatics. It is intended, in particular, to introduce students to the field of contrastive pragmatics, the study of how individual languages such as English and Japanese differ from and resemble one another in terms of their pragmatic characteristics. Through the reading of some recent (and not-so-recent) papers related to the topic, the course also offers students the opportunity to get familiar with contrastive linguistics in general.
93	8131400	欧米表象文化論Ⅱ	Graduate School(D)	This course is a graduate-level seminar on the study of how language form and language function are interrelated. It focuses in particular on syntax-pragmatics interface and is designed to cover a range of topics including form-function mismatch, the role of pragmatics in construction grammar, the discourse function of constructions, the distinction between grammar/code and pragmatics/inference. Through the reading of some recent (and not-so-recent) papers on the topics mentioned above, the course also offers students the opportunity to get a better sense of what a solid linguistic analysis is like.

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94	8131900	欧米言語表現論Ⅰ	European and American Linguistics and UsageⅠ Graduate School(D)	This class focuses on the cognitive-pragmatic aspect of language, and discusses human cognitive mechanisms operating behind our language uses: how human perception and cognition are reflected on our language uses; what kind of cognitive constraints are involved in them, etc. From the cognitive viewpoint of utterance interpretation processes, semantics and pragmatics are characterized by codes and inferences respectively. The target of analysis covers from lexical expressions to communication units beyond sentences, and the topics vary. This class updates the students' linguistic theoretical knowledge of semantics, pragmatics and cognitive linguistics and develops their abilities of analyzing linguistic data. The prospective students should attend the first class (1st Week). (ことばの認知語用論的側面に焦点を当て、人間の知覚や認識が言語にどのように反映され、どのような制約を課しているかという視点から、ことばの背景に働く認知メカニズムを論じる。言語学における意味論と語用論は、発話の認知処理プロセスの視点から、それぞれコードと推論によって特徴づけられる。分析対象の単位としては、語彙表現から文を超えたコミュニケーションに至るまで、多様な言語現象の意味論的・語用論的側面に注目し、最新の認知理論について論じる。注：初回授業時出席必須)
95	8132000	欧米言語表現論Ⅱ	European and American Linguistics and UsageⅡ Graduate School(D)	This class aims to develop students' abilities of analyzing a variety of linguistic data, by understanding and examining high-quality linguistic research papers published in international journals such as SCOPUS, with close attention to the latest trends in cognitive pragmatics. (認知(語用)理論の最新の動向に注意を払いながら、具体的な言語現象に関する言語学的文献を理解し検証することを通して効果的な分析方法を学び、言語分析を実践する。具体的な言語現象に関して、認知語用論的分析の国際ジャーナルレベルの文献を精読して理解し、検証・議論することを通して、言語の認知的分析の最新動向を把握しつつ、当該領域における言語分析の問題意識の在処を理解し、具体的なトピックについて認知語用論的言語分析を実践する。)
96	8132100	欧米言語分析論Ⅰ	European and American Linguistic AnalysisⅠ Graduate School(D)	Close critical analysis is at the heart of the study of literature. In this course we shall look at a selection of poetry and prose from the seventeenth to the eighteenth centuries, using key concepts and terms of the critical idiom.
97	8132200	欧米言語分析論Ⅱ	European and American Linguistic AnalysisⅡ Graduate School(D)	Close critical analysis is at the heart of the study of literature. In this course we shall look at a selection of poetry and prose from the nineteenth to the twentieth centuries, using key concepts and terms of the critical idiom.
98	8132500	イギリス言語文化情報論Ⅰ	English Language and CultureⅠ Graduate School(D)	The term "Gothic" has been used very liberally in recent years. It is almost impossible to find a definition that can be applied to all the stories and novels that today we call Gothic. The discussions of "traditional Gothic" may give us a more specific idea about what Gothic has to involve, for example, the setting of castles or monasteries, trips through mountains, appearances of banditti and ghosts, etc., but many of those broader Gothic stories do not have any of those. In this course, we will read some of those Gothic stories, Southern Gothic by Flannery O'Connor and Danish Gothic by Isak Dinesen. We will discuss whether we can find a common thread through all these stories, and whether Gothic labeling helps us understand those stories or prevent us from doing so.
99	8132600	イギリス言語文化情報論Ⅱ	English Language and CultureⅡ Graduate School(D)	American writer, Shirley Jackson, is known for her haunted house novel, which was made into movies twice and inspired a TV series. Her short stories, not necessarily supernatural, provide us sometimes surprising and chilling revelations about lives. Anglo-Irish writer, Elizabeth Bowen, has written is also noted for her ghost stories, but she has written ten novels, most notably about WWI. They both wrote a short story, called "The Daemon/Demon Lover," based on the folklore about a woman who reencounters her lover. We will examine each version of "The Demon Lover," as well as their short stories and novels.
100	8132900	アメリカ言語文化情報論Ⅰ	American Language and CultureⅠ Graduate School(D)	This course intends to explore the system of communication from the perspective of Conversation Analysis. Specific attention will be given to how the speaker's design of the utterance with the assumptions of the hearer's knowledge contributes to the achievement of interaction. We will deal with cross-linguistic studies to consider how the grammars affect the shapes of interaction.
101	8133000	アメリカ言語文化情報論Ⅱ	American Language and CultureⅡ Graduate School(D)	This course is intended to explore the relationship between grammar and social interaction. Using Conversation Analysis, we will discuss how a certain types of linguistic formulations (either lexical or constructional) are selected in a particular moment of talk-in-interaction. We will observe such practices in naturally occurring conversational data, and discuss them with regard to turn design, sequence organization and social activities. This class includes Data Sessions, where a member will bring data of her own interest and we will observe them from various perspectives.
102	8133700	談話分析論Ⅰ	Discourse StudiesⅠ Graduate School(D)	This course will introduce the latest topics in studies of Southeast Asia, South Asia or other tropical regions in Asia. Physical structure, historical background, socio-economic condition will be considered to understand the contemporary problems in Asian countries. The results of review work or field survey by students will also be presented and discussed for their better academic performances.
103	8133800	談話分析論Ⅱ	Discourse StudiesⅡ Graduate School(D)	受講生各自に、個別具体的地域の自然災害にかかわる国内外の研究論文の内容紹介をしてもらい、それについて討議を行う。その中で発見した課題に関して、各自が行った文献調査やフィールド調査の結果を報告してもらい、更に討議を行う。 We discuss the contents of domestic and foreign research articles on natural disasters in specific area. Students must report the results of their own literature reviews and field surveys.
104	8231200	アジア自然環境論演習	Seminar in Special Course on Asian Physical Environment Graduate School(D)	現実の都市空間に存在する権力の諸関係を、エスニシティ、ジェンダー、セクシュアリティをはじめ高齢者や障がい者といった社会的マイノリティの視点から読み解き、空間が相互関係性の産物であり社会的に構築されるものであることについての深い理解を促す。英語あるいは日本語の文献講読を中心とした演習形式の授業を中心に進めるが、受講生や教員の研究成果報告の場も設け、具体的事例を通じて都市空間のダイナミズムをめぐって議論を活発化させていきたい。 The aim of this class is to understand power relations that exist in urban space from the perspective of social minorities, such as ethnicity, gender, sexuality, the elderly and the disabled, and to promote a deep understanding of how space is a product of interrelationships and is socially constructed. We will take a form of exercises, mainly by reading English or Japanese literature, and will also set up a discussion for students and the teacher to report on their own research results. Through concrete examples, we hope to stimulate discussion on the dynamism which urban space produces.
105	8231400	地域自然災害論演習	Seminar in Regional Background on Natural Disaster Graduate School(D)	Research and report on social phenomena related to tourism culture, community development, etc., in relation to attendees' interests.
106	8233600	都市社会空間論演習	Seminar in Urban Social Geography Graduate School(D)	Research and report on social phenomena related to tourism culture, community development, etc., in relation to attendees' interests.
107	8234700	地域文化論	Regional Cultures Graduate School(D)	遷移金属錯体を用いた触媒反応開発の研究分野は目覚ましい発展を続けている。本講義では、主に最近の錯体触媒反応ならびに遷移金属錯体の反応性についての研究成果を例に挙げながら、新しい有機合成反応を実現するための遷移金属錯体触媒の設計指針について解説する。特に中心金属の種類と酸化数に着目する。 Transition metal complex-catalyzed synthetic organic reactions have further blossomed in recent years. In this lecture, the guideline for the design of transition metal complex catalysts to realize new synthetic organic reactions will be explained, focusing on the kind and oxidation number of central metals, by taking the recent research findings on catalytic reactions and reactivity of transition metal complexes as examples.
108	8234800	地域文化論演習	Seminar in Regional Cultures Graduate School(D)	錯体触媒設計論Ⅰでの講義内容に関連した、高水準の国際的学術雑誌に掲載された最新の原著論文(有機合成触媒反応あるいは遷移金属錯体の反応性に関する論文)をテーマとして取り上げ、その内容について受講者がプレゼンテーションを行い、参加者全員と討議を行う。 The presenters pick up latest original papers for catalytic synthetic organic reactions or reactivity of transition metal complexes related to the lecture of Design of Complex Catalysts I, published in high-level international academic journals, and make a presentation and discuss the contents with other participants.
109	8241210	生気候論	Bioclimatology Graduate School(D)	In this course, students will apply the knowledge gained in Quantum Mechanics in Chemistry I to perform calculational exercises that investigate chemical systems. Simultaneous enrollment in this course is a requirement for those enrolled in Quantum Mechanics in Chemistry I.
110	8312100	錯体触媒設計論	Design of Metal Complex Catalysts Graduate School(D)	In this lecture, recent examples of experimental studies for the biological molecule science, published in the international academic journal, are introduced. On the basis of the introduction, students perform practice. In addition, students perform practice of presentation of their results of the practices. After the presentation, students discuss about the presentations with assist of the teacher.

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111	8312200	錯体触媒設計論演習	Seminar in Design of Metal Complex Catalysts Graduate School(D)	This lecture provides advanced level understanding of control of cellular functions by intra-cellular signaling. This include expression and modification of regulatory proteins for transcriptional and translational control. Post-translational control and structural mechanisms of control will be discussed.
112	8314000	量子化学反応論演習	Seminar in Quantum Chemistry and Reaction Dynamics Graduate School(D)	This seminar provides practical skills to acquire advanced level understanding of control of cellular functions by intra-cellular signaling. This include expression and modification of regulatory proteins for transcriptional and translational control. Post-translational control and structural mechanisms of control will be discussed. Participants will present new research results related what they are currently investigating.
113	8318100	生体分子科学演習	Seminar in Bio-molecular Science Graduate School(D)	Instruct students to learn about the functions of individual cells, which are the basic units of life activity, and how to analyze them, through students' voluntary activities. In this exercise, we focus on established so-called cultured cells, which have produced various results so far. I provide research guidance on carrying out research projects based on the obtained results using cultured cells and analytical methods. I focuses on control mechanisms of signal transduction and transporting systems in cells, and teaches analytical methods for DNA, RNA, protein, and various protein modifications using homogeneous cell populations. They include biochemical and histochemical analytical methods.
114	8321100	生体機能制御論	Regulation of Biological Functions Graduate School(D)	In this subject, students will read literatures on responses of higher plants to environment and discuss on the knowledge (including facts, methods, and ideas) recently obtained in this research field from physiological, biochemical, and molecular biological points of view. Moreover, the students and the lecturer will discuss on the direction of the reserch that should be taken in the future.
115	8321200	生体機能制御論演習	Seminar in Regulation of Biological Functions Graduate School(D)	生物群集は、物理化学的環境、群集内のさまざまな種間関係、近接する群集などの影響を受け、複雑な様相を呈する。本講義では、最近の文献を基に、種間相互作用、間接効果、波及効果など生物群集を理解するうえで重要な基本的概念について論ずる。Please ask me for the English content.
116	8322400	植物形態形成調節論演習	Seminar in Regulation of Plant Morphogenesis Graduate School(D)	生物群集は、物理化学的環境、群集内のさまざまな種間関係、近接する群集などの影響を受け、複雑な様相を呈する。本授業では、種間相互作用、間接効果、波及効果など生物群集を理解するうえで重要な基本的概念について、自らの研究への適用の仕方を学ぶ。Please ask me for the English content.
117	8323400	細胞機能論演習	Seminar in Functional Biology of the Cell Graduate School(D)	The students will read and understand research papers on fiber materials, and discuss and debate their contents.
118	8323600	植物環境生理論演習	Seminar in Plant Environmental Physiology Graduate School(D)	The students will apply the methods they learned in the Intelligent Information Processing Theory course on data regarding human and living environments. They will themselves examine research and assessment methods, and carry out related discussions.
119	8323900	群集生態学論	Community Ecology Graduate School(D)	This class focuses on studies on cognitive and behavioral theories and practice. Students are required to review recent studies related to cognitive and behavioral therapies, and learn specific methodologies and approaches for their individual research themes. Further, students are encouraged to set their research themes, collect and analyze data, present and discuss their results.
120	8324000	群集生態学論演習	Seminar in Communitiy Ecology Graduate School(D)	The course is designed for zPh.D. students of Department of Mathematics and Physics of Fundamental Structures. We treat specific Examples of Stochastic differential equations ( population growth model with white noise, Black and Scholes formula, and some recent Stochastic models).
121	8333300	免疫生物学特論	Immunobiology Graduate School(D)	The aim of this lecture is to introduce fundamental probabilistic models of interacting particle systems, such as hydrodynamics in statistical physics and contact processes in biology. We explain how to analyse these random phenomena by using of the law of large numbers and the central limit theorem, and show probabilistic approaches to derive differential equations which govern macroscopic systems.
122	8333400	免疫生物学特論演習	Seminar in Immunobiology Graduate School(D)	This is an advanced course on "Mathematics on interacting particle systems". The aim of this course is to help students to acquire the methods of analyzing stochastic models, for example, lattice gas model, percolation and Ising model, and deriving differential equations which govern macroscopic systems.
123	8341400	アパレル素材分子論演習	Seminar in Molecular Science for Apparel Materials Graduate School(D)	Exercises for deeper understanding of Harmonic Analysis. (「調和解析学」の講義内容をより深く理解するための演習を行う。)
124	8344800	知能情報処理論演習	Seminar in Intelligent Information Processing Graduate School(D)	半単純リー環の構造と幾何について、特に、霧零軌道の幾何学と特異点についてのBrieskorn-Slodowy 理論をより具体的に理解するための演習をする。  This course provide the students with excercises on the geometry of semisimple Lie groups, especially the geometry of nilpotent orbits and singularities.
125	8345200	認知・行動理論演習	Seminar in Cognitive and Behavioral Theories Graduate School(D)	Having exercise to train abilities for experimental research of elementary particle physics: reading papers in the round lecture style, calculating key observable and estimating feasibility of new experiments.
126	8411800	確率現象解析学演習	Seminar in Stochastic Analysis Graduate School(D)	In this class, the students learn haw to represent knots and 3-dimensional manifolds, and learn about mathematical concepts, and invariant. They will obtain the sense to solve concrete geometric problems through such learning.
127	8412700	相互作用系の数学特論	Mathematics on interacting particle systems Graduate School(D)	A seminar on grand unified theories and string theories
128	8412800	相互作用系の数学特論演習	Seminar in Mathematics on interacting particle systems Graduate School(D)	Lectures will be given on key topics in low-dimensional topology, such as knot theory and graph theory. First, the basic concept of topology, and the basic concepts related to the fundamental group, homotopy group and homology group, which are important topological invariants, are explained. After that, we introduce knots and graph invariants that are defined using them, and describe the relationship between those invariants. The latest research results will be introduced, and unsolved problems and future prospects will be described. In addition, we aim to deepen our understanding of contact points and applications with other fields.
129	8413000	調和解析学演習	Seminar in Harmonic Analysis Graduate School(D)	Discuss on the contents learned in the Advanced Lecture on Low Dimensional Topology and deep the understanding of the contents through Exercises.
130	8413800	リー群の構造と幾何学演習	Seminar in Lie Groups and Geometry Graduate School(D)	This is an advanced course on the knot theory. Various topics and front-line researches on the field will be introduced in this course.
131	8414400	微細構造計測学演習	Seminar in Instrumentation for Measurement of Elementary Fine Structure Graduate School(D)	This is an advanced course on the knot theory. Various topics and front-line researches on the field will be discussed in this course, and students are supposed to present what they learned on the topics and what may be improved.
132	8414800	幾何的位相構造論演習	Seminar in Geometric Topology Graduate School(D)	In this class, we study the recent topics on condensed matter physics, such as quantum spin systems, molecular conductors, graphene and the related materials, and so on through group- discussion with reading text books and/or papers.
133	8415200	素粒子統一理論演習	Seminar in Unified Field Theory and String Theory Graduate School(D)	Exercise and some review for the lecture.
134	8415300	低次元位相幾何学特論	Advanced Lecture on Low Dimensional Topology Graduate School(D)	将来研究者を目指す学生に対し、将来必要となるであろう様々な能力を身につけさせるため、複合情報科学講座の複数教員が分担して、最先端の研究展開の現状を解説すると共に、英語論文の読み方、新しい情報処理技術などの様々なスキルについて講義を行う。 The aim of this course is to help students acquire the skills and knowledge needed to achieve a better performance in their reseach activities in reading a academic journal paper, utilizing a database of literature, and processing data on a computer.
135	8415400	低次元位相幾何学特論演習	Seminar in Advanced Lecture on Low Dimensional Topology Graduate School(D)	将来研究者を目指す学生に対し、将来必要となるであろう様々な能力を身につけさせるため、複合情報科学講座の複数教員が分担して、最先端の研究展開の現状を解説すると共に、英語論文の書き方、研究発表の仕方、新しい情報処理技術などの様々なスキルについて講義を行う。 The aim of this course is to help students acquire the skills and knowledge needed to achieve a better performance in their research activities in writing an academic journal paper, making an oral presentation, and utilizing the most advanced computer tools.

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136	8415500	結び目理論特論	Knot Theory	Graduate School(D)	数理的手法を用いた生物集団の構造ならびに進化に関する研究について論ずる。構造を持たない集団の個体群動態・進化動態に注目する。 Mathematical and computational approaches to study population and evolutionary dynamics in biology will be introduced and discussed. In this course, we focus on non-spatial population/evolutionary dynamics to study "non structured" populations.
137	8415600	結び目理論特論演習	Seminar in Knot theory	Graduate School(D)	数理生物学で用いられる様々なモデルを実際に解く演習である。 We learn to implement various mathematical models in biology and carry out and analyze simulation using a computer programming language. We also work on analyses of a large dataset generated from simulation models.
138	8422400	量子凝縮系の物性演習	Seminar in Quantum Condensed Matter Physics	Graduate School(D)	This course introduces atmospheric radiation to students taking this course.
139	8424400	保型表現論と代数演習	Seminar in Automorphic representation and Algebra	Graduate School(D)	This course deals with the basis of atmospheric radiation. It also enhances the development of students' skill in carrying out data analyses.
140	8431010	複合情報学特別講義Ⅰ	Special Seminar for Integrated Information Science I	Graduate School(D)	The students will read and understand research papers on fiber materials, and discuss and debate their contents.
141	8431020	複合情報学特別講義Ⅱ	Special Seminar for Integrated Information Science II	Graduate School(D)	The students will apply the methods they learned in the Intelligent Information Processing Theory course on data regarding human and living environments. They will themselves examine research and assessment methods, and carry out related discussions.
142	8432100	数理生物環境動態学特論	Special Lecture on Mathematical Modeling of Biology and Environmental Science	Graduate School(D)	An understanding of human multisensory perception mechanisms will foster the students' abilities to make appropriate designs for devices and environments involved in daily life. Illusions and multisensory interactive effects play a major role in design simplification and rationalization. We will consider the relationships between sensory information and daily life by analyzing research and product examples.
143	8432200	数理生物環境動態学特論演習	Seminar in Special Lecture on Mathematical Modeling of Biology and Environmental Science	Graduate School(D)	In this class on ethno-archeology, I will compare the results of anthropological research on native peoples in North America with the results of archeological surveys on indigenous people's living cultures.
144	8433900	大気放射伝達特論	Special Lecture on Atmospheric Radiative Transfer Theory	Graduate School(D)	We will compare and discuss the basic research methods of process archeology and the method of post-process archeology
145	8434000	大気放射伝達特論演習	Practice of Special Lecture on Atmospheric Radiative Transfer Theory	Graduate School(D)	The term "Gothic" has been used very liberally in recent years. It is almost impossible to find a definition that can be applied to all the stories and novels that today we call Gothic. The discussions of "traditional Gothic" may give us a more specific idea about what Gothic has to involve, for example, the setting of castles or monasteries, trips through mountains, appearances of banditti and ghosts, etc., but many of those broader Gothic stories do not have any of those. In this course, we will read some of those Gothic stories, Southern Gothic by Flannery O'Connor and Danish Gothic by Isak Dinesen. We will discuss whether we can find a common thread through all these stories, and whether Gothic labeling helps us understand those stories or prevent us from doing so.
146	8521200	繊維素材分子論演習	Fiber Material Molecules Seminar	Graduate School(D)	American writer, Shirley Jackson, is known for her haunted house novel, which was made into movies twice and inspired a TV series. Her short stories, not necessarily supernatural, provide us sometimes surprising and chilling revelations about lives. Anglo-Irish writer, Elizabeth Bowen, has written is also noted for her ghost stories, but she has written ten novels, most notably about WWI. They both wrote a short story, called "The Daemon/Demon Lover," based on the folklore about a woman who reencounters her lover. We will examine each version of "The Demon Lover," as well as their short stories and novels.
147	8522400	知能情報処理理論演習	Seminar in Intelligent Information Processing	Graduate School(D)	The Geisha
148	8522600	五感情報処理理論演習	Multisensory Informatics Seminar	Graduate School(D)	This course intends to explore the system of communication from the perspective of Conversation Analysis. Specific attention will be given to how the speaker's design of the utterance with the assumptions of the hearer's knowledge contributes to the achievement of interaction. We will deal with cross-linguistic studies to consider how the grammars affect the shapes of interaction.
149	8611070	民族考古学特論	advanced studies	Graduate School(D)	This course is intended to explore the relationship between grammar and social interaction. Using Conversation Analysis, we will discuss how a certain types of linguistic formulations (either lexical or constructional) are selected in a particular moment of talk-in-interaction. We will observe such practices in naturally occurring conversational data, and discuss them with regard to turn design, sequence organization and social activities. This class includes Data Sessions, where a member will bring data of her own interest and we will observe them from various perspectives.
150	8611080	民族考古学演習	Seminar in Ethnoarchaeology	Graduate School(D)	This class focuses on the cognitive-pragmatic aspect of language, and discusses human cognitive mechanisms operating behind our language uses: how human perception and cognition are reflected on our language uses; what kind of cognitive constraints are involved in them, etc. From the cognitive viewpoint of utterance interpretation processes, semantics and pragmatics are characterized by codes and inferences respectively. The target of analysis covers from lexical expressions to communication units beyond sentences, and the topics vary. This class updates the students' linguistic theoretical knowledge of semantics, pragmatics and cognitive linguistics and develops their abilities of analyzing linguistic data. The prospective students should attend the first class (1st Week). (ことばの認知語用論的側面に焦点を当て、人間の知覚や認識が言語にどのように反映され、どのような制約を課しているかという視点から、ことばの背景に働く認知メカニズムを論じる。言語学における意味論と語用論は、発話の認知処理プロセスの視点から、それぞれコードと推論によって特徴づけられる。分析対象の単位としては、語彙表現から文を超えたコミュニケーションに至るまで、多様な言語現象の意味論的・語用論的側面に注目し、最新の認知理論について論じる。注：初回授業時出席必須)
151	8613010	欧米比較文学論	Literature in English	Graduate School(D)	This class aims to develop students' abilities of analyzing a variety of linguistic data, by understanding and examining high-quality linguistic research papers published in international journals such as SCOPUS, with close attention to the latest trends in cognitive pragmatics. (認知(語用)理論の最新の動向に注意を払いながら、具体的な言語現象に関する言語学的文献を理解し検証することを通して効果的な分析方法を学び、言語分析を実践する。具体的な言語現象に関して、認知語用論的分析の国際ジャーナルレベルの文献を精読して理解し、検証・議論することを通して、言語の認知的分析の最新動向を把握しつつ、当該領域における言語分析の問題意識の在処を理解し、具体的なトピックについて認知語用論的言語分析を実践する。)
152	8613020	欧米比較文学論演習	Seminar in Literature in English	Graduate School(D)	This course is a graduate-level seminar on the study of pragmatics. It is intended, in particular, to introduce students to the field of contrastive pragmatics, the study of how individual languages such as English and Japanese differ from and resemble one another in terms of their pragmatic characteristics. Through the reading of some recent (and not-so-recent) papers related to the topic, the course also offers students the opportunity to get familiar with contrastive linguistics in general.
153	8613040	欧米文化表現論演習	Seminar in European and American Culture and Representation	Graduate School(D)	This course is a graduate-level seminar on the study of how language form and language function are interrelated. It focuses in particular on syntax-pragmatics interface and is designed to cover a range of topics including form-function mismatch, the role of pragmatics in construction grammar, the discourse function of constructions, the distinction between grammar/code and pragmatics/inference. Through the reading of some recent (and not-so-recent) papers on the topics mentioned above, the course also offers students the opportunity to get a better sense of what a solid linguistic analysis is like.
154	8613050	言語コミュニケーション論	Language and Communication	Graduate School(D)	Close critical analysis is at the heart of the study of literature. In this course we shall look at a selection of poetry and prose from the seventeenth to the eighteenth centuries, using key concepts and terms of the critical idiom.
155	8613060	言語コミュニケーション論演習	Seminar in Language and Communication	Graduate School(D)	Close critical analysis is at the heart of the study of literature. In this course we shall look at a selection of poetry and prose from the nineteenth to the twentieth centuries, using key concepts and terms of the critical idiom.
156	8613070	言語分析論	Linguistic Analysis	Graduate School(D)	This course aims to analyse modes of representation in Shakespeare and other modern English dramatists. We will examine the ways in which these authors address not only social issues of race, gender and class, but also fundamental emotions of desire, love and hate, focusing on their rhetoric. In this course, we will read recent criticism of drama from perspectives of language, history, psychology and gender, which will prompt participants to explore new aspects in literary texts.



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157	8613080	言語分析論演習	Seminar in Linguistic Analysis Graduate School(D)	This course aims to analyse modes of representation in Shakespeare and other modern English dramatists. We will examine the ways in which these authors address not only social issues of race, gender and class, but also fundamental emotions of desire, love and hate, focusing on their rhetoric. In this course, we will read recent criticism of dramas from perspectives of language, history, psychology and gender, which will prompt participants to explore new aspects in literary texts.
158	8613090	言語表現論	Language in Use Graduate School(D)	Research and report on social phenomena related to tourism culture, community development, etc., in relation to attendees' interests.
159	8613100	言語表現論演習	Seminar in Language in Use Graduate School(D)	Research and report on social phenomena related to tourism culture, community development, etc., in relation to attendees' interests.
160	8613110	イギリス文学分析論	Critical Analysis of English Literature Graduate School(D)	現実の都市空間に存在する権力の諸関係を、エスニシティ、ジェンダー、セクシュアリティをはじめ高齢者や障がい者といった社会的マイノリティの視点から読み解き、空間が相互関係性の産物であり社会的に構築されるものであることについての深い理解を促す。英語あるいは日本語の文献講読を中心とした演習形式の授業を中心に進めるが、受講生や教員の研究成果報告の場も設け、具体的事例を通じて都市空間のダイナミズムをめぐって議論を活発化させていきたい。 The aim of this class is to understand power relations that exist in urban space from the perspective of social minorities, such as ethnicity, gender, sexuality, the elderly and the disabled, and to promote a deep understanding of how space is a product of interrelationships and is socially constructed. We will take a form of exercises, mainly by reading English or Japanese literature, and will also set up a discussion for students and the teacher to report on their own research results. Through concrete examples, we hope to stimulate discussion on the dynamism which urban space produces.
161	8613120	イギリス文学分析論演習	Seminar in Critical Analysis of English Literature Graduate School(D)	受講生各自に、個別具体的地域の自然災害にかかわる国内外の研究論文の内容紹介をしてもらい、それについて討議を行う。その中で発見した課題に関して、各自が行った文献調査やフィールド調査の結果を報告してもらい、更に討議を行う。 We discuss the contents of domestic and foreign research articles on natural disasters in specific area. Students must report the results of their own literature reviews and field surveys.
162	8613130	イギリス文学表現論	Representation in English Literature Graduate School(D)	This course will introduce the latest topics in studies of Southeast Asia, South Asia or other tropical regions in Asia. Physical structure, historical background, socio-economic condition will be considered to understand the contemporary problems in Asian countries. The results of review work or field survey by students will also be presented and discussed for their better academic performances.
163	8613140	イギリス文学表現論演習	Seminar in Representation in English Literature Graduate School(D)	食と関わる様々な疾患を取り上げ、それらの病態が形成される分子的機序を学習する。特に、これまでの研究の展開および現在の研究の最先端を見渡し、今後の研究の方向性を展望したい。
164	8622070	地域文化論	Regional Cultures Graduate School(D)	食と関わる様々な疾患を取り上げ、それらの病態が形成される分子的機序を学習する。特に、これまでの研究の展開および現在の研究の最先端を見渡し、今後の研究の方向性を展望したい。
165	8622080	地域文化論演習	Seminar in Regional Cultures Graduate School(D)	This class focuses on studies on cognitive and behavioral theories and practice. Students are required to review recent studies related to cognitive and behavioral therapies, and learn specific methodologies and approaches for their individual research themes. Further, students are encouraged to set their research themes, collect and analyze data, present and discuss their results.
166	8622120	都市社会空間論演習	Seminar in Urban Social Geography Graduate School(D)	The students will read and understand research papers on fiber materials, and discuss and debate their contents.
167	8622180	地域自然災害論演習	Seminar in Regional Background on Natural Disaster Graduate School(D)	都市・屋外空間の微気象の形成メカニズムと改良するための対策技術の現状と課題を学ぶ。 受講生各自に、個別具体的地域の自然災害にかかわる国内外の研究論文の内容紹介をしてもらい、それについて討議を行う。その中で発見した課題に関して、各自が行った文献調査やフィールド調査の結果を報告してもらい、更に討議を行う。 We discuss the contents of domestic and foreign research articles on natural disasters in specific area. Students must report the results of their own literature reviews and field surveys.
168	8622200	アジア自然環境論演習	Seminar in Special Course on Asian Physical Environment Graduate School(D)	この講義は、博士後期課程における研究活動を行う際に必須となる研究倫理について学び、責任ある研究者として自立するための研究倫理並びに研究マネジメントの理解を深めることを目的とする。研究不正と研究マネジメントの実例を紹介するとともに、e-learning教材やアクティブラーニング要素を取り入れた議論を通じて理解を深める。 This course aims to introduce fundamental "ethics in research" that is now essential in all research activities. Students also learn practical research managements to better perform research activities.
169	8710030	食と病態論	Diet and Diseases Graduate School(D)	In this class, the students learn how to represent knots and 3-dimensional manifolds, and learn about mathematical concepts, and invariant. They will obtain the sense to solve concrete geometric problems through such learning.
170	8710040	食と病態論演習	Seminar in Diet and Diseases Graduate School(D)	Lectures will be given on key topics in low-dimensional topology, such as knot theory and graph theory. First, the basic concept of topology, and the basic concepts related to the fundamental group, homotopy group and homology group, which are important topological invariants, are explained. After that, we introduce knots and graph invariants that are defined using them, and describe the relationship between those invariants. The latest research results will be introduced, and unsolved problems and future prospects will be described. In addition, we aim to deepen our understanding of contact points and applications with other fields.
171	8723080	認知・行動理論演習	Seminar in Cognitive and Behavioral Theories Graduate School(D)	Discuss on the contents learned in the Advanced Lecture on Low Dimensional Topology and deep the understanding of the contents through Exercises.
172	8730140	繊維素材分子論演習	Fiber Material Molecules Seminar Graduate School(D)	This is an advanced course on the knot theory. Various topics and front-line researches on the field will be introduced in this course.
173	8740050	生気象論	Bioclimatology Graduate School(D)	This is an advanced course on the knot theory. Various topics and front-line researches on the field will be discussed in this course, and students are supposed to present what they learned on the topics and what may be improved.
174	8800040	研究倫理・研究マネジメントD	Research ethics・Research management D Graduate School(D)	半単純リー環の構造と幾何について、特に、霧零軌道の幾何学と特異点についてのBrieskorn-Slodowy 理論をより具体的に理解するための演習をする。  This course provide the students with exercises on the geometry of semisimple Lie groups, especially the geometry of nilpotent orbits and singularities.
175	8811020	幾何的位相構造論演習	Seminar in Geometric Topology Graduate School(D)	Exercise and some review for the lecture.
176	8811030	低次元位相幾何学特論	Advanced Lecture on Low Dimensional Topology Graduate School(D)	Exercises for deeper understanding of Harmonic Analysis. (「調和解析学」の講義内容をより深く理解するための演習を行う。)
177	8811040	低次元位相幾何学特論演習	Seminar in Advanced Lecture on Low Dimensional Topology Graduate School(D)	The aim of this lecture is to introduce fundamental probabilistic models of interacting particle systems, such as hydrodynamics in statistical physics and contact processes in biology. We explain how to analyse these random phenomena by using of the law of large numbers and the central limit theorem, and show probabilistic approaches to derive differential equations which govern macroscopic systems.
178	8811050	結び目理論特論	Knot Theory Graduate School(D)	This is an advanced course on "Mathematics on interacting particle systems". The aim of this course is to help students to acquire the methods of analyzing stochastic models, for example, lattice gas model, percolation and Ising model, and deriving differential equations which govern macroscopic systems.
179	8811060	結び目理論特論演習	Seminar in Knot theory Graduate School(D)	The course is designed for zPh.D. students of Department of Mathematics and Physics of Fundamental Structures. We treat specific Examples of Stochastic differential equations ( population growth model with white noise, Black and Scholes formula, and some recent Stochastic models).
180	8811120	リー群の構造と幾何学演習	Seminar in Lie Groups and Geometry Graduate School(D)	A seminar on grand unified theories and string theories
181	8811140	保型表現論と代数学演習	Seminar in Automorphic representation and Algebra Graduate School(D)	Having exercise to train abilities for experimental research of elementary particle physics: reading papers in the round lecture style, calculating key observable and estimating feasibility of new experiments.
182	8811180	調和解析学演習	Seminar in Harmonic Analysis Graduate School(D)	In this class, we study the recent topics on condensed matter physics, such as quantum spin systems, molecular conductors, graphene and the related materials, and so on through group- discussion with reading text books and/or papers.

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183	8811210	相互作用系の数学特論	Mathematics on interacting particle systems Graduate School(D)	遷移金属錯体を用いた触媒反応開発の研究分野は目覚ましい発展を続けている。本講義では、主に最近の錯体触媒反応ならびに遷移金属錯体の反応性についての研究成果を例に挙げながら、新しい有機合成反応を実現するための遷移金属錯体触媒の設計指針について解説する。特に中心金属の種類と酸化数に着目する。  Transition metal complex-catalyzed synthetic organic reactions have further blossomed in recent years. In this lecture, the guideline for the design of transition metal complex catalysts to realize new synthetic organic reactions will be explained, focusing on the kind and oxidation number of central metals, by taking the recent research findings on catalytic reactions and reactivity of transition metal complexes as examples.
184	8811220	相互作用系の数学特論演習	Seminar in Mathematics on interacting particle systems Graduate School(D)	遷移金属錯体を用いた触媒反応開発の研究分野は目覚ましい発展を続けている。本講義では、主に最近の錯体触媒反応ならびに遷移金属錯体の反応性についての研究成果を例に挙げながら、新しい有機合成反応を実現するための遷移金属錯体触媒の設計指針について解説する。特に配位子の立体的および電子的性質に着目する。  Transition metal complex-catalyzed synthetic organic reactions have further blossomed in recent years. In this lecture, the guideline for the design of transition metal complex catalysts to realize new synthetic organic reactions will be explained, focusing on the steric and electronic natures of ligands, by taking the recent research findings on catalytic reactions and reactivity of transition metal complexes as examples.
185	8811240	確率現象解析学演習	Seminar in Stochastic Analysis Graduate School(D)	錯体触媒設計論Iでの講義内容に関連した、高水準の国際的学術雑誌に掲載された最新の原著論文（有機合成触媒反応あるいは遷移金属錯体の反応性に関する論文）をテーマとして取り上げ、その内容について受講者がプレゼンテーションを行い、参加者全員と討論を行う。  The presenters pick up latest original papers for catalytic synthetic organic reactions or reactivity of transition metal complexes related to the lecture of Design of Complex Catalysts I, published in high-level international academic journals, and make a presentation and discuss the contents with other participants.
186	8812020	素粒子統一理論演習	Seminar in Unified Field Theory and String Theory Graduate School(D)	錯体触媒設計論IIでの講義内容に関連した、高水準の国際的学術雑誌に掲載された最新の原著論文（有機合成触媒反応あるいは遷移金属錯体の反応性に関する論文）をテーマとして取り上げ、その内容について受講者がプレゼンテーションを行い、参加者全員と討論を行う。  The presenters pick up latest original papers for catalytic synthetic organic reactions or reactivity of transition metal complexes related to the lecture of Design of Complex Catalysts II, published in high-level international academic journals, and make a presentation and discuss the contents with other participants.
187	8812040	素粒子実験物理学演習	Seminar in Experimental Particle Physics Graduate School(D)	In this course, students will apply the knowledge gained in Quantum Mechanics in Chemistry I to perform calculational exercises that investigate chemical systems. Simultaneous enrollment in this course is a requirement for those enrolled in Quantum Mechanics in Chemistry I.
188	8812160	量子凝縮系の物性演習	Seminar in Quantum Condensed Matter Physics Graduate School(D)	In this course, students will apply the knowledge gained in Quantum Mechanics in Chemistry II to perform calculational exercises that investigate chemical systems. Simultaneous enrollment in this course is a requirement for those enrolled in Quantum Mechanics in Chemistry II.
189	8821090	錯体触媒設計論I	Design of Metal Complex Catalysts I Graduate School(D)	In this lecture, recent examples of experimental studies for the biological molecule science, published in the international academic journal, are introduced. On the basis of the introduction, students perform practice. In addition, students perform practice of presentation of their results of the practices. After the presentation, students discuss about the presentations with assist of the teacher.
190	8821100	錯体触媒設計論II	Design of Metal Complex Catalysts II Graduate School(D)	In this lecture, recent examples of experimental studies for the biological molecule science, published in the international academic journal, are introduced. On the basis of the introduction, students perform practice. In addition, students perform practice of presentation of their results of the practices. After the presentation, students discuss about the presentations with assist of the teacher.
191	8821110	錯体触媒設計論演習I	Seminar in Design of Metal Complex Catalysts I Graduate School(D)	This lecture provides advanced level understanding of control of cellular functions by intra-cellular signaling. This include expression and modification of regulatory proteins for transcriptional and translational control. Post-translational control and structural mechanisms of control will be discussed.
192	8821120	錯体触媒設計論演習II	Seminar in Design of Metal Complex Catalysts II Graduate School(D)	This lecture provides advanced level understanding of control of cellular functions by extra-cellular signaling. This include expression and modification of regulatory proteins for transcriptional and translational control. Post-translational control and structural mechanisms of control will be discussed.
193	8821270	量子化学反応論演習I	Seminar in Quantum Chemistry and Reaction Dynamics I Graduate School(D)	This seminar provides practical skills to acquire advanced level understanding of control of cellular functions by intra-cellular signaling. This include expression and modification of regulatory proteins for transcriptional and translational control. Post-translational control and structural mechanisms of control will be discussed. Participants will present new research results related what they are currently investigating.
194	8821280	量子化学反応論演習II	Seminar in Quantum Chemistry and Reaction Dynamics II Graduate School(D)	This seminar provides practical skills to acquire advanced level understanding of control of cellular functions by extra-cellular signaling. This include expression and modification of regulatory proteins for transcriptional and translational control. Post-translational control and structural mechanisms of control will be discussed. Participants will present new research results related what they are currently investigating.
195	8821430	生体分子科学演習I	Seminar in Bio-molecular Science I Graduate School(D)	植物における形態形成の調節機構に関する最新の英語文献を輪読することにより、本研究分野に対する理解を深め、現在の問題点を抽出するとともに、今後めざすべき研究方向、アプローチについて議論する。  In this lecture, recent examples of experimental studies for the biological molecule science, published in the international academic journal, are introduced. On the basis of the introduction, students perform practice. In addition, students perform practice of presentation of their results of the practices. After the presentation, students discuss about the presentations with assist of the teacher.
196	8821440	生体分子科学演習II	Seminar in Bio-molecular Science Graduate School(D)	植物における形態形成の調節機構に関する最新の英語文献を輪読することにより、本研究分野に対する理解を深め、現在の問題点を抽出するとともに、今後めざすべき研究方向、アプローチについて議論する。  In this lecture, recent examples of experimental studies for the biological molecule science, published in the international academic journal, are introduced. On the basis of the introduction, students perform practice. In addition, students perform practice of presentation of their results of the practices. After the presentation, students discuss about the presentations with assist of the teacher.
197	8822010	生体機能制御論I	Regulation of Biological Functions I Graduate School(D)	Instruct students to learn about the functions of individual cells, which are the basic units of life activity, and how to analyze them, through students' voluntary activities.  In this exercise, we focus on established so-called cultured cells, which have produced various results so far. I provide research guidance on carrying out research projects based on the obtained results using cultured cells and analytical methods.  I focuses on control mechanisms of signal transduction and transporting systems in cells, and teaches analytical methods for DNA, RNA, protein, and various protein modifications using homogeneous cell populations. They include biochemical and histochemical analytical methods.
198	8822020	生体機能制御論II	Regulation of Biological Functions II Graduate School(D)	Instruct students to learn about the functions of individual cells, which are the basic units of life activity, and how to analyze them, through students' voluntary activities.  In this exercise, we focus on established so-called cultured cells, which have produced various results so far. I provide research guidance on carrying out research projects based on the obtained results using cultured cells and analytical methods.  I focuses on control mechanisms of signal transduction and transporting systems in cells, and teaches analytical methods for DNA, RNA, protein, and various protein modifications using homogeneous cell populations. They include biochemical and histochemical analytical methods.
199	8822030	生体機能制御論演習I	Seminar in Regulation of Biological Functions I Graduate School(D)	In this subject, students will read literatures on responses of higher plants to environment and discuss on the knowledge (including facts, methods, and ideas) recently obtained in this research field from physiological, biochemical, and molecular biological points of view. Moreover, the students and the lecturer will discuss on the direction of the reserch that should be taken in the future.

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200	8822040	生体機能制御論演習II	Seminar in Regulation of Biological Functions II Graduate School(D)	In this subject, students will read literatures on responses of higher plants to environment and discuss on the knowledge (including facts, methods, and ideas) recently obtained in this research field from physiological, ecological, and evolutionary points of view. Moreover, the students and the lecturer will discuss on the direction of the reserch that should be taken in the future.
201	8822110	植物形態形成調節論演習I	Seminar in Regulation of Plant Morphogenesis I Graduate School(D)	生物群集は、物理化学的環境、群集内のさまざまな種間関係、近接する群集などの影響を受け、複雑な様相を呈する。本講義では、最近の文献を基に、種間相互作用、間接効果、波及効果など生物群集を理解するうえで重要な基本的概念について論ずる。Please ask me for the English content.
202	8822120	植物形態形成調節論演習II	Seminar in Regulation of Plant Morphogenesis II Graduate School(D)	生物の保全や作物保護など、群集生態学とその応用に関する具体的な研究事例を取り上げて批判的に検討することによって、当該分野についての理解を深める。Please ask me for the English content.
203	8822190	細胞機能論演習I	Seminar in Functional Biology of the Cell I Graduate School(D)	生物群集は、物理化学的環境、群集内のさまざまな種間関係、近接する群集などの影響を受け、複雑な様相を呈する。本授業では、種間相互作用、間接効果、波及効果など生物群集を理解するうえで重要な基本的概念について、自らの研究への適用の仕方を学ぶ。Please ask me for the English content.
204	8822200	細胞機能論演習II	Seminar in Functional Biology of the Cell II Graduate School(D)	生物の保全や作物保護など、群集生態学とその応用に関する具体的な研究事例を取り上げて批判的に検討し、問題点を摘出する。さらに問題点の改善策を論議し、自らの研究への適用の仕方を学ぶ。Please ask me for the English content.
205	8822230	植物環境生理論演習I	Seminar in Plant Environmental Physiology I Graduate School(D)	This course deals with basic concepts and principles of land area environment monitoring with satellite data. It also enhance the development of students skill in satellite data handling and image processing.
206	8822240	植物環境生理論演習II	Seminar in Plant Environmental Physiology II Graduate School(D)	This course introduces atmospheric radiation to students taking this course.
207	8822250	群集生態学論I	Community Ecology I Graduate School(D)	This course introduces remote sensing of the lower atmosphere to students taking this course.
208	8822260	群集生態学論II	Community Ecology II Graduate School(D)	This course deals with the basis of atmospheric radiation. It also enhances the development of students' skill in carrying out data analyses.
209	8822270	群集生態学論演習I	Seminar in Community Ecology I Graduate School(D)	This course deals with the basis of remote sensing of the lower atmosphere. It also enhances the development of students' skill in carrying out data analyses.
210	8822280	群集生態学論演習II	Seminar in Community Ecology II Graduate School(D)	数理的手法を用いた生物集団の構造ならびに進化に関する研究について論ずる。構造を持たない集団の個体群動態・進化動態に注目する。 Mathematical and computational approaches to study population and evolutionary dynamics in biology will be introduced and discussed. In this course, we focus on non-spatial population/evolutionary dynamics to study "non structured" populations.
211	8823080	地球陸域リモートセンシング論演習	Seminar in Remote Sensing in Terrestrial Areas II Graduate School(D)	数理的手法を用いた生物集団の構造ならびに進化に関する研究について論ずる。特に、構造を持つ集団（例構造、空間構造など）の解析に注目する。 Mathematical and computational approaches to study population and evolutionary dynamics in biology will be introduced and discussed. In this course, we focus on "structured" populations (age/stage, spatial distribution, etc.).
212	8823090	地球環境気象論I	Lecture on Environmental Meteorology of Earth I Graduate School(D)	数理生物学で用いられる様々なモデルを実際に解く演習である。 We learn to implement various mathematical models in biology and carry out and analyze simulation using a computer programming language. We also work on analyses of a large dataset generated from simulation models.
213	8823100	地球環境気象論II	Lecture on Environmental Meteorology of Earth II Graduate School(D)	数理生物学で用いられる様々なモデルを実際に解く演習である。 We learn to implement various mathematical models in biology and carry out and analyze simulation using a computer programming language. We also work on analyses of a large dataset generated from simulation models.
214	8823110	地球環境気象論演習I	Practice of Lecture on Environmental Meteorology of Earth I Graduate School(D)	This course deals with the basis of atmospheric radiation. It also enhances the development of students' skill in carrying out data analyses.
215	8823120	地球環境気象論演習II	Practice of Lecture on Environmental Meteorology of Earth II Graduate School(D)	This course deals with the basis of remote sensing of the lower atmosphere. It also enhances the development of students' skill in carrying out data analyses.
216	8823130	数理生物学論I	Lecture on Mathematical Biology I Graduate School(D)	数理的手法を用いた生物集団の構造ならびに進化に関する研究について論ずる。構造を持たない集団の個体群動態・進化動態に注目する。 Mathematical and computational approaches to study population and evolutionary dynamics in biology will be introduced and discussed. In this course, we focus on non-spatial population/evolutionary dynamics to study "non structured" populations.
217	8823140	数理生物学論II	Lecture on Mathematical Biology II Graduate School(D)	集団（例構造、空間構造など）の解析に注目する。 Mathematical and computational approaches to study population and evolutionary dynamics in biology will be introduced and discussed. In this course, we focus on "structured" populations (age/stage, spatial distribution, etc.).
218	8823150	数理生物学論演習I	Exercise on Mathematical Biology I Graduate School(D)	数理生物学で用いられる様々なモデルを実際に解く演習である。 We learn to implement various mathematical models in biology and carry out and analyze simulation using a computer programming language. We also work on analyses of a large dataset generated from simulation models.
219	8823160	数理生物学論演習II	Exercise on Mathematical Biology II Graduate School(D)	数理生物学で用いられる様々なモデルを実際に解く演習である。 We learn to implement various mathematical models in biology and carry out and analyze simulation using a computer programming language. We also work on analyses of a large dataset generated from simulation models.