

Course Number	Course Name	Instru- ctional Type	Credit s	stand- ard regist- ration year	Term	Meeting Days, Per- iod etc.	Classro- om	Instructor	Course Overview	Remarks
OATW111	Practical Data Science	1	2.0	1, 2	SprAB	Thu3, 4	7A103	Moritsugu Shuichi, ITO Hiroyoshi, Yoshikane Fuyuki	According to recent studies, the demand in society for data scientists with broad experience in data analysis is increasing. The initial units will focus on the relation among data science, basic mathematics and statistics, aiming at the application to computational algebraic statistics. In the middle units, we will focus on hypothesis testing for actual data and the theory of decision-making based on the predictions. In the last units, students will learn methods of analysis on the basis of informetric data. In particular, the sample-size dependency of informetric indicators will also be discussed.	Open in even number academic years. Identical to 01MBB06 and 01MBB19. face-to-face See Course Number OATW121 for English Syllabus
OATW112	Machine Learning and Pattern Recognition	1	2.0	1, 2	SprAB	Thu1, 2	7A210	Wakabayashi Kei, Yu Haitao	This course aims at enabling students to develop an understanding of the fundamental principles and practical use of machine learning. The course is designed to examine supervised and unsupervised learning methods based on neural networks and Bayesian models for essential techniques in data science such as image recognition, document classification and clustering. The course is made up of a series of lectures - focusing on fundamental principles (linear algebra and probability theory). Hands-on exercises are also provided to understand the practical use of different machine learning methods (e.g., pattern recognition of images and text data). The course also introduces a broad range of practical techniques, e.g., data mining applications and parallel computing methods for large scale data.	Open in even number academic years. Identical to 01MBB20. face-to-face (partially online) See Course Number OATW122 for English Syllabus
OATW113	Media Design	1	2.0	1, 2	FallAB	Tue5, 6	7A210	Kim Sangtae, Ochiai Yoichi, Fushimi Tatsuki	From the knowledge of art, design and technical expressions in media, students understand the mechanism of information design, and learn techniques of real world oriented interaction and infographics through hardware production and software production. In recent years, the real world oriented interaction has attracted attention from the industry due to the spread of information devices such as smart phones and wearable terminals, and the content creator is required to design the contents for such ubiquitous display and communication tools by applying the concept of infographics. In this course, based on the graphic design method, students cultivate the skill that they can discuss about visual expression, perform an exhibition as an application of their knowledge, and acquire the skills to use in real world such as making visuals related to it and making captions.	Open in even number academic years. Identical to 01MBB07 and 01MBB12. Online (partially face-to-face) See Course Number OATW123 for English Syllabus
OATW114	Visualization	1	2.0	1, 2	FallAB	Tue1, 2		Tokii Maki, Fujisawa Makoto	Visualization is one of the most important technologies for visually representing complex datasets -- from scientific/medical experiments, physics simulations to everyday human activity, etc. Visualized media via the use of computer graphics techniques could enable the users gain a deeper understanding of the data. This course will discuss the fundamentals and applications of visualization, including scientific visualization technologies for scientific data and information visualization technologies for social data. 3-D user interfaces and augmented reality for operating visualized media will be also covered in this course.	Open in even number academic years. Identical to 01MBB09 and 01MBC04. Online (Asynchronous) See Course Number OATW124 for English Syllabus

OATW115	Biological and Life Informatics	1	2.0	1, 2					A course designed to teach informatic aspects of life. Measurement and modelling, data storage, analysis and representation of biological phenomena are discussed, focusing on genetic information, information processing in living organisms, brain activity and physiological signals. Specifically, bioinformatics methods to treat biological information, systems biology approach to model living organisms, physiological signal processing, auditory system and its modeling, and media art with physiological information are explained. Informatic principles and approaches in modern biology will also be discussed with related biological processes.	Open in odd number academic years. Identical to O1MBB08. face-to-face See Course Number OATW125 for English Syllabus
OATW116	Kansei and Cognitive Information	1	2.0	1, 2					This course examines human kansei and cognitive activities as a prerequisite for studying media science. The course consists of lectures on: (1) Basics and application of computational modelling and knowledge representation of human cognition, in particular, of rational and analytic processes, (2) Psychological methodology and results of object recognition and movement learning related to interface design, and, (3) The relation of kansei information to creative activity and their evaluation criteria. Application of such kansei, cognitive, and biokinematic information to design inspiration and product development will also be discussed.	Open in odd number academic years. Identical to O1MBB10. face-to-face (partially online) See Course Number OATW126 for English Syllabus
OATW117	Structured Data	1	2.0	1, 2	Fall IAB	Mon1, 2		Suzuki Nobutaka, Nakai Hisashi	This course covers the processing methods for structured data. First, we will provide the basic concepts of regular expression and automaton that are required for processing structured data. Second, we will present the methods for syntactic analysis of structured data. Third, we will present query languages for XML, such as XPath and XQuery. Then we will provide the methods for managing data written in markup languages, e.g., semistructured database. Finally, we will present the basic notion of graph data search and graph schema.	Open in even number academic years. Identical to O1MBA09 and O1MBB01. Online (Asynchronous) See Course Number OATW127 for English Syllabus
OATW11A	Information Access	1	2.0	1, 2	Fall IAB	Sat3, 4		Seki Yohei, Morishima Atsuyuki	Information access technologies to large amount of data is the key in big data era and becomes significant more and more. We will lecture information access technologies in information retrieval, data management and integration, and natural language processing fields with new trends. We will introduce front line topics such as collective intelligence and co-creation intelligence in WWW, crowdsourcing, and information integration in social media. The students will solidify understanding in state of the art technologies, social application, and future direction in this research field.	Course location: Tokyo Campus: Special subjects for Media Science, Teacher Training Course, Interdisciplinary Foundation Courses No duplicated entry with OAS0704 Identical to O1MBE12. Online (Asynchronous) . Online (Synchronous)
OATW121	Practical Data Science	1	2.0	1, 2					According to recent studies, the demand in society for data scientists with broad experience in data analysis is increasing. The initial units will focus on the relation among data science, basic mathematics and statistics, aiming at the application to computational algebraic statistics. In the middle units, we will focus on hypothesis testing for actual data and the theory of decision-making based on the predictions. In the last units, students will learn methods of analysis on the basis of informetric data. In particular, the sample-size dependency of informetric indicators will also be discussed.	Classes are offered in Japanese in even-years and in English in odd-years, respectively: Special subjects for Media Science Open in odd number academic years. Lecture is conducted in English. face-to-face See Course Number OATW111 for Japanese Syllabus

OATW122	Machine Learning and Pattern Recognition	1	2.0	1, 2						<p>This course aims at enabling students to develop an understanding of the fundamental principles and practical use of machine learning. The course is designed to examine supervised and unsupervised learning methods based on neural networks and Bayesian models for essential techniques in data science such as image recognition, document classification and clustering. The course is made up of a series of lectures - focusing on fundamental principles (linear algebra and probability theory). Hands-on exercises are also provided to understand the practical use of different machine learning methods (e.g., pattern recognition of images and text data). The course also introduces a broad range of practical techniques, e.g., data mining applications and parallel computing methods for large scale data.</p>	<p>Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Media Science; Teacher Training Course Open in odd number academic years. Lecture is conducted in English. face-to-face (partially online) See Course Number OATW112 for Japanese Syllabus</p>
OATW123	Media Design	1	2.0	1, 2						<p>From the knowledge of art, design and technical expressions in media, students understand the mechanism of information design, and learn techniques of real world oriented interaction and infographics through hardware production and software production. In recent years, the real world oriented interaction has attracted attention from the industry due to the spread of information devices such as smart phones and wearable terminals, and the content creator is required to design the contents for such ubiquitous display and communication tools by applying the concept of infographics. In this course, based on the graphic design method, students cultivate the skill that they can discuss about visual expression, perform an exhibition as an application of their knowledge, and acquire the skills to use in real world such as making visuals related to it and making captions.</p>	<p>Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Media Science Open in odd number academic years. Lecture is conducted in English. Online (partially face-to-face) See Course Number OATW113 for Japanese Syllabus</p>
OATW124	Visualization	1	2.0	1, 2						<p>Visualization is one of the most important technologies for visually representing complex datasets -- from scientific/medical experiments, physics simulations to everyday human activity, etc. Visualized media via the use of computer graphics techniques could enable the users gain a deeper understanding of the data. This course will discuss the fundamentals and applications of visualization, including scientific visualization technologies for scientific data and information visualization technologies for social data. 3-D user interfaces and augmented reality for operating visualized media will be also covered in this course.</p>	<p>Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for media science; Teacher Training Course Open in odd number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW114 for Japanese Syllabus</p>
OATW125	Biological and Life Informatics	1	2.0	1, 2	SprAB	Mon3, 4	7A210	Maeshiro Tetsuya		<p>A course designed to teach informatic aspects of life. Measurement and modelling, data storage, analysis and representation of biological phenomena are discussed, focusing on genetic information, information processing in living organisms, brain activity and physiological signals. Specifically, bioinformatics methods to treat biological information, systems biology approach to model living organisms, physiological signal processing, auditory system and its modeling, and media art with physiological information are explained. Informatic principles and approaches in modern biology will also be discussed with related biological processes.</p>	<p>Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for media science; Teacher Training Course Open in even number academic years. Lecture is conducted in English. face-to-face See Course Number OATW115 for Japanese Syllabus</p>

OATW126	Kansei and Cognitive Information	1	2.0	1, 2	SprAB	Tue5, 6	7A205	Morita Hiromi, Lee Seung Hee, 飯野 なみ	This course examines human kansei and cognitive activities as a prerequisite for studying media science. The course consists of lectures on: (1) Basics and application of computational modelling and knowledge representation of human cognition, in particular, of rational and analytic processes, (2) Psychological methodology and results of object recognition and movement learning related to interface design, and, (3) The relation of kansei information to creative activity and their evaluation criteria. Application of such kansei, cognitive, and biokinematic information to design inspiration and product development will also be discussed.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Media Science Open in even number academic years. Lecture is conducted in English. face-to-face (partially online) See Course Number OATW116 for Japanese Syllabus
OATW127	Structured Data	1	2.0	1, 2					This course covers the processing methods for structured data. We provide the following two topics. The first topic includes the basic concepts of regular expression and automaton that are required for processing structured data, and the methods for syntactic analysis of structured data. The second topic includes query languages for XML, such as XPath and XQuery, the methods for managing data written in markup languages, e.g., semistructured database, and the basic notion of graph data search and graph schema.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Media Science; Teacher Training Course Open in odd number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW117 for Japanese Syllabus
OATW131	Analysis of Knowledge and Information	1	2.0	1, 2					This course introduces the concepts of knowledge and their formation and acquisition methods. The initial units discuss the concept of knowledge. After having seen the definition of knowledge as justified true belief and its criticism (the Gettier problem etc.), we argue about the sharing of knowledge in light of theories of meaning from the viewpoint of relativism and its criticism. The subsequent units introduce three ways of thinking about knowledge formation from the viewpoint of embodied cognition and discuss them in light of recent research trends. The last units introduce methods of knowledge representation and acquisition based on informetric models, focusing on the interrelations between knowledge, information and data.	Open in odd number academic years. Identical to O1MBA01 and O1MBA02. face-to-face (partially online). Online (Asynchronous) See Course Number OATW141 for English Syllabus
OATW132	Information Practices	1	2.0	1, 2	SprAB	Mon5, 6	7A204	Yu Haitao, Matsubaya shi Mamiko	'Information practices' is a new concept involving human information interaction, and is discussed among various area, from information behaviour research in Library and Information Science to Human Computer Interaction in Computer Science. The concept focused on the understanding of interaction, considering broader context (e.g., social context of users) than conventional information behaviour researches. In this course, students learn the historical background of information practices research, which is originated with the traditional information seeking and retrieval research, user model of information search based on log analysis and laboratory experiment, and the methods of modelling and predicting search engine user behaviour, as well as their evaluation.	Open in even number academic years. Identical to O1MBA06 and O1MBA07. face-to-face See Course Number OATW142 for English Syllabus

OATW133	Recommendation Systems	1	2.0	1, 2					Various aspects of recommender systems such as methods, implementation, evaluation and problems will be introduced. More specifically, representative recommendation methods such as user-based collaborative filtering, item-based collaborative filtering (association rules), content-based filtering (which represents contents of items as various numericals), knowledge-based recommendation (which requires users to show their interests) and hybrid recommendation based on machine learning using various information will be introduced. How to measure appropriateness of recommendation i.e. notion of precision, recall, novelty or serendipity for users will also be shown.	Open in odd number academic years. Identical to 01MBB03. Online (Asynchronous) See Course Number OATW143 for English Syllabus
OATW134	Human Computer Interaction	1	2.0	1, 2					This course provides lectures on Human-Computer Interaction (HCI). Basics of HCI for realizing natural interaction, and brief overview of design, implementation, and evaluation methodologies for building interactive systems are explained. Technological elements for intelligent systems such as user interface (UI), robotics, computer vision and recognition are in the scope. The course also touches on recent research advancement in social computing for supporting and augmenting human communication and information sharing.	Open in odd number academic years. Identical to 01MBB11 and 01MBC16. face-to-face See Course Number OATW144 for English Syllabus
OATW135	Communication Behavior	1	2.0	1, 2					This course discusses interpersonal communication via quantitative survey approach. Students are expected to learn how various media usage influences interpersonal communication and selective behaviors. This course will introduce the history and development of various media, namely: (1) from mass media to social media, and (2) their effects on users' identity formation, (3) language use, (4) perception of communication media and interpersonal relationships especially social support networks. Through this course, students will be able to acquire basic skills to understand existing body of research studies conducted both within and outside of Japan.	Open in odd number academic years. Identical to 01MBA11. face-to-face See Course Number OATW145 for English Syllabus
OATW136	Community Analysis	1	2.0	1, 2	Fall IAB	Fri 3, 4	7A205	Goto Yoshihiro, Teruyama Junko	Information and knowledge are produced, activated and communicated in interactions between/among different communities when they come together, part, clash or influence one another. In this course, students will learn the basic theories of community research and review existing literature based on qualitative research of community categories such as ethnicity, locality and language. Furthermore, students will learn how information and knowledge within communities are generated/received/modified based on specific member attributes when interactions occur in community centers, libraries, schools, clinics and local communities.	Open in even number academic years. Identical to 01MBC10. face-to-face See Course Number OATW146 for English Syllabus
OATW137	Digital Humanities	1	2.0	1, 2					Digital Humanities is aimed at obtaining knowledge that could not be obtained by traditional methods by applying digital technology to human literary materials. The course provides lectures on text encoding for the resources of the text, iconography analysis to consider the culture and society of the time created from a drawing, and document analysis to apply natural language processing techniques to historical documents. The course explains a method of mapping descriptions of old maps and old documents to geographic information systems. The course introduces the International Image Interoperability Framework (IIIF) which is the standard for easily distributing image files.	Open in odd number academic years. Identical to 01MBC02 and 01MBC03. face-to-face See Course Number OATW147 for English Syllabus

OATW138	Intellectual Property and Information Security	1	2.0	1, 2	SprAB	Mon1,2		Sakaguchi Tetsuo, Takara Kouya, Murai Maiko	This course aims at examining various emerging legal issues in the context of the current networked society - by looking into various statutes and court cases concerning information. The course will provide an overview of selective laws on the internet and other related topics in Japan - i.e., including: Copyright Act, Unfair Competition Prevention Act, Acts on the Protection of Personal Information and other related laws, etc. From a viewpoint of information ethics, having a regard to laws is expected in order to protect social norms. This course aims at building a basic understanding on laws regarding information, e.g., how to develop better legal systems and law cases, with the aim to deepen the knowledge from a wide range of perspectives. This course will also provide technical aspects of information security and intellectual property.	Open in even number academic years. Identical to O1MBA03 and O1MBA04. Online (Asynchronous) See Course Number OATW148 for English Syllabus
OATW13A	Analysis of Knowledge and Information	1	2.0	1, 2	SprAB	Fri7,8		Yokoyama Mikiko, Matsubara Masaki, Yoshikane Fuyuki	This course introduces the concepts of knowledge and their formation and acquisition methods. The initial units discuss the concept of knowledge. After having seen the definition of knowledge as justified true belief and its criticism (the Gettier problem etc.), we argue about the sharing of knowledge in light of theories of meaning from the viewpoint of relativism and its criticism. The subsequent units introduce three ways of thinking about knowledge formation from the viewpoint of embodied cognition and discuss them in light of recent research trends. The last units introduce methods of knowledge representation and acquisition based on informetric models, focusing on the interrelations between knowledge, information and data.	Course location: Tokyo Campus, ; Special subjects for Information Interaction; Teacher Training Course No duplicated entry with OATW131 face-to-face (partially online). Online (Asynchronous)
OATW13B	Human Computer Interaction	1	2.0	1, 2	FallB	Intensive		Mikawa Masahiko, Inoue Tomoo	This course provides lectures on Human-Computer Interaction (HCI). Basics of HCI for realizing natural interaction, and brief overview of design, implementation, and evaluation methodologies for building interactive systems are explained. Technological elements for intelligent systems such as user interface (UI), robotics, computer vision and recognition are in the scope. The course also touches on recent research advancement in social computing for supporting and augmenting human communication and information sharing.	Course location: Tokyo Campus; Special subjects for Information Interaction; Teacher Training Course No duplicated entry with OATW134 Identical to O1MBE11. 11/30, 12/1, 12/7, 12/8, 12/14, 12/15 face-to-face
OATW13C	Digital Humanities	1	2.0	1, 2	FallAB	Tue7,8		Uda Norihiko, Waki Toshihito, Takahashi Yona	Digital Humanities is aimed at obtaining knowledge that could not be obtained by traditional methods by applying digital technology to human literary materials. The course provides lectures on text encoding for the resources of the text, iconography analysis to consider the culture and society of the time created from a drawing, and document analysis to apply natural language processing techniques to historical documents. The course explains a method of mapping descriptions of old maps and old documents to geographic information systems. The course introduces the International Image Interoperability Framework (IIIF) which is the standard for easily distributing image files.	Course location: Tokyo Campus; Special subjects for Information Interaction No duplicated entry with OATW137 Identical to O1MBE03. Online (Asynchronous)

OATW13D	Intellectual Property and Information Security	1	2.0	1, 2	SprAB	Sat5, 6		Sakaguchi Tetsuo, Takara Kouya, Murai Maiko	This course aims at examining various emerging legal issues in the context of the current networked society - by looking into various statutes and court cases concerning information. The course will provide an overview of selective laws on the internet and other related topics in Japan - i.e., including: Copyright Act, Unfair Competition Prevention Act, Acts on the Protection of Personal Information and other related laws, etc. From a viewpoint of information ethics, having a regard to laws is expected in order to protect social norms. This course aims at building a basic understanding on laws regarding information, e.g., how to develop better legal systems and law cases, with the aim to deepen the knowledge from a wide range of perspectives. This course will also provide technical aspects of information security and intellectual property.	Course location: Tokyo Campus; Special subjects for information interaction; Teacher Training Course No duplicated entry with OATW138 Online (Asynchronous)
OATW141	Analysis of Knowledge and Information	1	2.0	1, 2	SprAB	Fri1, 2	7A210	Yokoyama Mikiko, Matsubara Masaki, Yoshikane Fuyuki	This course introduces the concepts of knowledge and their formation and acquisition methods. The initial units discuss the concept of knowledge. After having seen the definition of knowledge as justified true belief and its criticism (the Gettier problem etc.), we argue about the sharing of knowledge in light of theories of meaning from the viewpoint of relativism and its criticism. The subsequent units introduce three ways of thinking about knowledge formation from the viewpoint of embodied cognition and discuss them in light of recent research trends. The last units introduce methods of knowledge representation and acquisition based on informetric models, focusing on the interrelations between knowledge, information and data.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Information Interaction; Teacher Training Course No duplicated entry with OATW13A Open in even number academic years. Lecture is conducted in English, face-to-face (partially online). Online (Asynchronous) See Course Number OATW131 for Japanese Syllabus
OATW142	Information Practices	1	2.0	1, 2					'Information practices' is a new concept involving human information interaction, and is discussed among various area, from information behaviour research in Library and Information Science to Human Computer Interaction in Computer Science. The concept focused on the understanding of interaction, considering broader context (e.g., social context of users) than conventional information behaviour researches. In this course, students learn the historical background of information practices research, which is originated with the traditional information seeking and retrieval research, user model of information search based on log analysis and laboratory experiment, and the methods of modelling and predicting search engine user behaviour, as well as their evaluation.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Information Interaction; Teacher Training Course Open in odd number academic years. Lecture is conducted in English, face-to-face See Course Number OATW132 for Japanese Syllabus
OATW143	Recommendation Systems	1	2.0	1, 2	FallAB	Fri1, 2		Tsuji Keita, Matsumura Atsushi	Various aspects of recommender systems such as methods, implementation, evaluation and problems will be introduced. More specifically, representative recommendation methods such as user-based collaborative filtering, item-based collaborative filtering (association rules), content-based filtering (which represents contents of items as various numericals), knowledge-based recommendation (which requires users to show their interests) and hybrid recommendation based on machine learning using various information will be introduced. How to measure appropriateness of recommendation i.e. notion of precision, recall, novelty or serendipity for users will also be shown.	Classes are offered in Japanese in odd-years and in English in even-years, respectively; Special subjects for Information Interaction; Teacher Training Course Open in even number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW133 for Japanese Syllabus

OATW144	Human Computer Interaction	1	2.0	1, 2	FallAB	Tue3, 4	7A210	Mikawa Masahiko, Inoue Tomoo	This course provides lectures on Human-Computer Interaction (HCI). Basics of HCI for realizing natural interaction, and brief overview of design, implementation, and evaluation methodologies for building interactive systems are explained. Technological elements for intelligent systems such as user interface (UI), robotics, computer vision and recognition are in the scope. The course also touches on recent research advancement in social computing for supporting and augmenting human communication and information sharing.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Information Interaction: Teacher Training Course No duplicated entry with OATW13B Open in even number academic years. Lecture is conducted in English. face-to-face See Course Number OATW134 for Japanese Syllabus
OATW145	Communication Behavior	1	2.0	1, 2	SprAB	Tue5, 6	7A208	Toshimori Atsushi, Ye Shaoyu	This course discusses interpersonal communication via quantitative survey approach. Students are expected to learn how various media usage influences interpersonal communication and selective behaviors. This course will introduce the history and development of various media, namely: (1) from mass media to social media, and (2) their effects on users' identity formation, (3) language use, (4) perception of communication media and interpersonal relationships especially social support networks. Through this course, students will be able to acquire basic skills to understand existing body of research studies conducted both within and outside of Japan.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Information Interaction: Teacher Training Course Open in even number academic years. Lecture is conducted in English. face-to-face See Course Number OATW135 for Japanese Syllabus
OATW146	Community Analysis	1	2.0	1, 2					Information and knowledge are produced, activated and communicated in interactions between/among different communities when they come together, part, clash or influence one another. In this course, students will learn the basic theories of community research and review existing literature based on qualitative research of community categories such as ethnicity, locality and language. Furthermore, students will learn how information and knowledge within communities are generated/received/modified based on specific member attributes when interactions occur in community centers, libraries, schools, clinics and local communities.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for information interaction: Teacher Training Course Open in odd number academic years. Lecture is conducted in English. face-to-face See Course Number OATW136 for Japanese Syllabus
OATW147	Digital Humanities	1	2.0	1, 2	FallAB	Thu1, 2	7A210	Uda Norihiko, Waki Toshihito	Digital Humanities is aimed at obtaining knowledge that could not be obtained by traditional methods by applying digital technology to human literary materials. The course provides lectures on text encoding for the resources of the text, iconography analysis to consider the culture and society of the time created from a drawing, and document analysis to apply natural language processing techniques to historical documents. The course explains a method of mapping descriptions of old maps and old documents to geographic information systems. The course introduces the International Image Interoperability Framework (IIIF) which is the standard for easily distributing image files.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for information interaction No duplicated entry with OATW13C Open in even number academic years. Lecture is conducted in English. face-to-face See Course Number OATW137 for Japanese Syllabus

OATW148	Intellectual Property and Information Security	1	2.0	1, 2					<p>This course aims at examining various emerging legal issues in the context of the current networked society - by looking into various statutes and court cases concerning information. The course will provide an overview of selective laws on the internet and other related topics in Japan - i.e., including: Copyright Act, Unfair Competition Prevention Act, Acts on the Protection of Personal Information and other related laws, etc. From a viewpoint of information ethics, having a regard to laws is expected in order to protect social norms. This course aims at building a basic understanding on laws regarding information, e.g., how to develop better legal systems and law cases, with the aim to deepen the knowledge from a wide range of perspectives. This course will also provide technical aspects of information security and intellectual property.</p>	<p>Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Information Interaction: Teacher Training Course No duplicated entry with OATW13D Open in odd number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW138 for Japanese Syllabus</p>
OATW151	Cultural History of Library and Media	1	2.0	1, 2	SprAB	Fri5, 6	Yoshida Yuko, Murata Koji	<p>This course introduces the history of libraries as the knowledge and information infrastructure and a history of books and other information media from the perspective of learning from history. Firstly the course overview from ancient media such as clay tablet and papyrus to parchment and codex, and Gutenberg printing press. Secondly, the course examines a history of libraries from monastic libraries and scriptoria to modern libraries in the 19th century in mainly Europe and America as well as Japanese libraries and media.</p>	<p>Open in even number academic years. Identical to O1MBA05 and O1MBC17. Online (Asynchronous) See Course Number OATW161 for English Syllabus</p>	
OATW153	Library Management	1	2.0	1, 2				<p>This course enables students to develop an understanding of the different approaches to effective organizational/operational management, as well as administrations, with special emphasis on public libraries.</p> <p>This course examines various management theories, principles, concepts, techniques in business administration. Challenges and limitations of applying such management theories for running the library as a nonprofit organization will also be addressed. In addition, students will also develop a basic understanding of the following: (1) social role, (2) policy, (3) legal system, (4) human resource management, (5) service planning and evaluation, (6) budget acquisition and financing, (7) public relations, (8) public-private partnerships, and (9) collaborations and partnerships with external partners for developing programs catered for early childhood education.</p>	<p>Open in odd number academic years. Identical to O1MBC11. Online (Asynchronous) See Course Number OATW163 for English Syllabus</p>	
OATW154	Scholarly Communication and Infrastructure	1	2.0	1, 2				<p>In this lecture, students learn the overview of scholarly communication and scholarly publishing system which supports the communication, and understand the current situation and some challenges of scholarly communication. In former part of the lecture, students learn the relationship between research practices and scholarly communication, and the new wave of scholarly communication (e.g. the change of scholarly journal, open access, open science.) In the latter part of the lecture, students learn scholarly publishing system which supports scholarly communication, such as business model of scholarly journals, research support services by academic libraries, and scholarly information network.</p>	<p>Open in odd number academic years. Identical to O1MBC14 and O1MBC15. face-to-face See Course Number OATW164 for English Syllabus</p>	

OATW155	Archives	1	2.0	1, 2	Fall AB	Mon5, 6	Shirai Tetsuya, Baryshev Eduard, Murata Koji	After the Great East-Japan Earthquake of 2011, archivists of Japan began to engage actively in the salvage and conservation of the historically important documents. Furthermore, as a result of the enforcement of the Public Records and Archives Management Act in 2011, the Japanese government has undertaken the task of organizing and preserving public documents. This course examines the peculiar features of archival science by introducing various examples of archival institutions, archival documents and professional practices of archivists both in Japan and the Western countries, and thereby offers students fundamental notions and information on archival institutions.	Open in even number academic years. Identical to 01MBC05 and 01MBC18. Online (Asynchronous) See Course Number OATW165 for English Syllabus
OATW156	Museum and Information Media	1	2.0	1, 2	Fall AB	Tue5, 6	Shirai Tetsuya, TERACHI Minako, LEE KANG	Museum is a media. It offers information and resembles to television (Umesao 1987). Since this statement, museum as a media is developing rapidly due to the expansion of the Internet. For both real and virtual museum, knowledge and understandings of information media has been definitely required. This lecture investigates the current activities and the overview of future from various viewpoints in consideration of the importance of video media literacy.	Open in even number academic years. Identical to 01MBC21 and 01MBC06. Online (Asynchronous) See Course Number OATW166 for English Syllabus
OATW157	Information Organization	1	2.0	1, 2				In this lecture, students will learn about organizing to utilize various information resources efficiently. They learn about information resource analysis and its metadata description, classification and identification methods, targeting information resources that are mainly provided and shared via a network such as WWW or digital library. This lecture also discusses practical metadata descriptions such as Linked Open Data, schema definitions, and ontologies using RDF Schema, OWL, SKOS, etc. for description. In addition, as methods of record identification for electronic information resources, the course explains the identification method using appropriate identifier, data cleaning and automatic identification method.	Open in odd number academic years. Identical to 01MBC05 and 01MBC07. face-to-face (partially online) See Course Number OATW167 for English Syllabus
OATW158	Media Education	1	2.0	1, 2				This lecture will comprehensively learn the following topics and provide models and practice related to these topics: school and public libraries in a lifelong-learning society, what learning environments from analog to digital including networks should be, and media usage, application and education in these environments. Specifically, this course will enable students' understanding of the concept of "media literacy," which requires the ability to collect, judge, create and communicate information effectively. It also focuses on the importance of media-based education and maintenance of learning environments, and the current state and future issues and includes discussions regarding further development.	Open in odd number academic years. Identical to 01MBC12 and 01MBC13. Online (Asynchronous) See Course Number OATW168 for English Syllabus
OATW159	Universal Services	1	2.0	1, 2	Fall AB	Fri5, 6	Donkai Saori, TAKEDA Masaki	This course focuses on universal services for building communities that are inclusive of people of all ages and races. First, the outline of universal services will be reviewed through the history and evolution of universal services. Then, the contemporary issues will be discussed, focusing on services for the elderly in a hyper-aged society. This is followed by a detailed description of services in support of dementia. The discussion will then proceed from the perspective of services for the disabled and cultural diversity. Finally, the aim is to develop the ability to plan and implement universal services in public places such as public libraries to guarantee access to information for people from diverse backgrounds.	Open in even number academic years. Online (Asynchronous) See Course Number OATW169 for English Syllabus

OATW15A	Cultural History of Library and Media	1	2.0	1, 2	SprAB	Tue7, 8	Yoshida Yuko, Murata Koji	This course introduces the history of libraries as the knowledge and information infrastructure and a history of books and other information media from the perspective of learning from history. Firstly the course overview from ancient media such as clay tablet and papyrus to parchment and codex, and Gutenberg printing press. Secondly, the course examines a history of libraries from monastic libraries and scriptoria to modern libraries in the 19th century in mainly Europe and America as well as Japanese libraries and media.	Course location: Tokyo Campus: In every year, classes are offered in Japanese; Special subjects for Library and Information Science No duplicated entry with OATW151 Online (Asynchronous)
OATW15C	Library Management	1	2.0	1, 2	SprAB	Sat3, 4	Ikeuchi Atsushi, Ohba Ichiro, Koizumi Masanori	This course enables students to develop an understanding of the different approaches to effective organizational/operational management, as well as administrations, with special emphasis on public libraries. This course examines various management theories, principles, concepts, techniques in business administration. Challenges and limitations of applying such management theories for running the library as a nonprofit organization will also be addressed. In addition, students will also develop a basic understanding of the following: (1) social role, (2) policy, (3) legal system, (4) human resource management, (5) service planning and evaluation, (6) budget acquisition and financing, (7) public relations, (8) public-private partnerships, and (9) collaborations and partnerships with external partners for developing programs catered for early childhood education.	Course location: Tokyo Campus: In every year, classes are offered in Japanese; Special subjects for Library and Information Science No duplicated entry with OATW153 Identical to O1MBE44. Online (Asynchronous)
OATW15D	Scholarly Communication and Infrastructure	1	2.0	1, 2	FallAB	Sat5, 6	Matsubayashi Mamiko, Nishikawa Kai	In this lecture, students learn the overview of scholarly communication and scholarly publishing system which supports the communication, and understand the current situation and some challenges of scholarly communication. In former part of the lecture, students learn the relationship between research practices and scholarly communication, and the new wave of scholarly communication (e.g. the change of scholarly journal, open access, open science.) In the latter part of the lecture, students learn scholarly publishing system which supports scholarly communication, such as business model of scholarly journals, research support services by academic libraries, and scholarly information network.	Course location: Tokyo Campus: In every year, classes are offered in Japanese; Special subjects for Library and Information Science No duplicated entry with OATW154 Identical to O1MBE02. face-to-face
OATW15E	Archives	1	2.0	1, 2	FallAB	Sat7, 8	Shirai Tetsuya, Baryshev Eduard, Murata Koji	After the Great East-Japan Earthquake of 2011, archivists of Japan began to engage actively in the salvage and conservation of the historically important documents. Furthermore, as a result of the enforcement of the Public Records and Archives Management Act in 2011, the Japanese government has undertaken the task of organizing and preserving public documents. This course examines the peculiar features of archival science by introducing various examples of archival institutions, archival documents and professional practices of archivists both in Japan and the Western countries, and thereby offers students fundamental notions and information on archival institutions.	Course location: Tokyo Campus: Special subjects for Library and Information Science No duplicated entry with OATW155 Identical to O1MBE32. Online (Asynchronous)
OATW15F	Museum and Information Media	1	2.0	1, 2	FallAB	Mon7, 8	Shirai Tetsuya, TERACHI Minako, LEE KANG, Mizushima Eiji	Museum is a media. It offers information and resembles to television (Umesao 1987). Since this statement, museum as a media is developing rapidly due to the expansion of the Internet. For both real and virtual museum, knowledge and understandings of information media has been definitely required. This lecture investigates the current activities and the overview of future from various viewpoints in consideration of the importance of video media literacy.	Course location: Tokyo Campus: Special subjects for Library and Information Science No duplicated entry with OATW156 Identical to O1MB50B. Online (Asynchronous)

OATW15G	Information Organization	1	2.0	1, 2	SprAB	Mon7, 8	Takaku Masao, Kato Makoto, Nagamori Mitsuharu	In this lecture, students will learn about organizing to utilize various information resources efficiently. They learn about information resource analysis and its metadata description, classification and identification methods, targeting information resources that are mainly provided and shared via a network such as WWW or digital library. This lecture also discusses practical metadata descriptions such as Linked Open Data, schema definitions, and ontologies using RDF Schema, OWL, SKOS, etc. for description. In addition, as methods of record identification for electronic information resources, the course explains the identification method using appropriate identifier, data cleaning and automatic identification method.	Course location: Tokyo Campus, Special subjects for Library and Information Science:Teacher Training Course No duplicated entry with OATW157 Online(Synchronous)
OATW15H	Media Education	1	2.0	1, 2	FallAB	Fri7, 8	Suzuki Kanae, Ono Haruki, Tsuji Keita	This lecture will comprehensively learn the following topics and provide models and practice related to these topics: school and public libraries in a lifelong-learning society, what learning environments from analog to digital including networks should be, and media usage, application and education in these environments. Specifically, this course will enable students' understanding of the concept of "media literacy," which requires the ability to collect, judge, create and communicate information effectively. It also focuses on the importance of media-based education and maintenance of learning environments, and the current state and future issues and includes discussions regarding further development.	Course location: Tokyo Campus: Special subjects for Library and Information Science No duplicated entry with OATW158 Identical to O1MBE21. Online(Asynchronous)
OATW15J	Universal Services	1	2.0	1, 2	FallAB	Thu7, 8	Donkai Saori, TAKEDA Masaki	This course focuses on universal services for building communities that are inclusive of people of all ages and races. First, the outline of universal services will be reviewed through the history and evolution of universal services. Then, the contemporary issues will be discussed, focusing on services for the elderly in a hyper-aged society. This is followed by a detailed description of services in support of dementia. The discussion will then proceed from the perspective of services for the disabled and cultural diversity. Finally, the aim is to develop the ability to plan and implement universal services in public places such as public libraries to guarantee access to information for people from diverse backgrounds.	Course location: Tokyo Campus: In every year, classes are offered in Japanese: Special subjects for Library and Information Science No duplicated entry with OATW159 Online(Asynchronous)
OATW161	Cultural History of Library and Media	1	2.0	1, 2				This course introduces the history of libraries as the knowledge and information infrastructure and a history of books and other information media from the perspective of learning from history. Firstly the course overview from ancient media such as clay tablet and papyrus to parchment and codex, and Gutenberg printing press. Secondly, the course examines a history of libraries from monastic libraries and scriptoria to modern libraries in the 19th century in mainly Europe and America as well as Japanese libraries and media.	Classes are offered in Japanese in even-years and in English in odd-years, respectively: Special subjects for Library and Information Science No duplicated entry with OATW15A Open in odd number academic years. Lecture is conducted in English. Online(Asynchronous) See Course Number OATW151 for Japanese Syllabus

OATW163	Library Management	1	2.0	1, 2	SprAB	Fri3, 4		<p>This course enables students to develop an understanding of the different approaches to effective organizational/operational management, as well as administrations, with special emphasis on public libraries.</p> <p>This course examines various management theories, principles, concepts, techniques in business administration. Challenges and limitations of applying such management theories for running the library as a nonprofit organization will also be addressed. In addition, students will also develop a basic understanding of the following: (1) social role, (2) policy, (3) legal system, (4) human resource management, (5) service planning and evaluation, (6) budget acquisition and financing, (7) public relations, (8) public-private partnerships, and (9) collaborations and partnerships with external partners for developing programs catered for early childhood education.</p>	<p>Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Library and Information Science No duplicated entry with OATW15C Open in even number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW153 for Japanese Syllabus</p>	
OATW164	Scholarly Communication and Infrastructure	1	2.0	1, 2	FallAB	Mon3, 4	7A210	<p>Matsubayashi Mamiko, Nishikawa Kai</p>	<p>In this lecture, students learn the overview of scholarly communication and scholarly publishing system which supports the communication, and understand the current situation and some challenges of scholarly communication. In former part of the lecture, students learn the relationship between research practices and scholarly communication, and the new wave of scholarly communication (e.g. the change of scholarly journal, open access, open science.) In the latter part of the lecture, students learn scholarly publishing system which supports scholarly communication, such as business model of scholarly journals, research support services by academic libraries, and scholarly information network.</p>	<p>Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Library and Information Science No duplicated entry with OATW15D Open in even number academic years. Lecture is conducted in English. face-to-face See Course Number OATW154 for Japanese Syllabus</p>
OATW165	Archives	1	2.0	1, 2					<p>After the Great East-Japan Earthquake of 2011, archivists of Japan began to engage actively in the salvage and conservation of the historically important documents. Furthermore, as a result of the enforcement of the Public Records and Archives Management Act in 2011, the Japanese government has undertaken the task of organizing and preserving public documents. This course examines the peculiar features of archival science by introducing various examples of archival institutions, archival documents and professional practices of archivists both in Japan and the Western countries, and thereby offers students fundamental notions and information on archival institutions.</p>	<p>Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Library and Information Science No duplicated entry with OATW15E Open in odd number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW155 for Japanese Syllabus</p>
OATW166	Museum and Information Media	1	2.0	1, 2					<p>Museum is a media. It offers information and resembles to television (Umesao 1987). Since this statement, museum as a media is developing rapidly due to the expansion of the Internet. For both real and virtual museum, knowledge and understandings of information media has been definitely required. This lecture investigates the current activities and the overview of future from various viewpoints in consideration of the importance of video media literacy.</p>	<p>Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Library and Information Science No duplicated entry with OATW15F Open in odd number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW156 for Japanese Syllabus</p>

OATW167	Information Organization	1	2.0	1, 2	SprAB	Thu5, 6	7A210	Takaku Masao, Kato Makoto, Nagamori Mitsuharu	In this lecture, students will learn about organizing to utilize various information resources efficiently. They learn about information resource analysis and its metadata description, classification and identification methods, targeting information resources that are mainly provided and shared via a network such as WWW or digital library. This lecture also discusses practical metadata descriptions such as Linked Open Data, schema definitions, and ontologies using RDF Schema, OWL, SKOS, etc. for description. In addition, as methods of record identification for electronic information resources, the course explains the identification method using appropriate identifier, data cleaning and automatic identification method.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Library and Information Science; Teacher Training Course No duplicated entry with OATW15G Open in even number academic years. Lecture is conducted in English. face-to-face (partially online) See Course Number OATW157 for Japanese Syllabus
OATW168	Media Education	1	2.0	1, 2	FallAB	Tue1, 2		Suzuki Kanae, Ono Haruki, Tsuji Keita	This lecture will comprehensively learn the following topics and provide models and practice related to these topics: school and public libraries in a lifelong-learning society, what learning environments from analog to digital including networks should be, and media usage, application and education in these environments. Specifically, this course will enable students' understanding of the concept of "media literacy," which requires the ability to collect, judge, create and communicate information effectively. It also focuses on the importance of media-based education and maintenance of learning environments, and the current state and future issues and includes discussions regarding further development.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Library and Information Science No duplicated entry with OATW15H Open in even number academic years. Lecture is conducted in English. Online (Asynchronous) See Course Number OATW158 for Japanese Syllabus
OATW169	Universal Services	1	2.0	1, 2					This course focuses on universal services for building communities that are inclusive of people of all ages and races. First, the outline of universal services will be reviewed through the history and evolution of universal services. Then, the contemporary issues will be discussed, focusing on services for the elderly in a hyper-aged society. This is followed by a detailed description of services in support of dementia. The discussion will then proceed from the perspective of services for the disabled and cultural diversity. Finally, the aim is to develop the ability to plan and implement universal services in public places such as public libraries to guarantee access to information for people from diverse backgrounds.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Library and Information Science No duplicated entry with OATW15J Open in odd number academic years. Lecture is conducted in English. Not open in academic year. Online (Asynchronous) See Course Number OATW159 for Japanese Syllabus
OATW211	Research Foundation	2	2.0	1	SprC	Mon/Thu 5, 6		Moritsugu Shuichi, Ochiai Yoichi, Suzuki Nobutaka, Nakai Hisashi, Kim Sangtae	Firstly, each research area and its features for theme setting, experiment methods, and publication methods of findings are presented. Secondly, students learn five themes in order, (1) documentation, (2) research ethics, (3) brainstorming, (4) cooperative work, (5) presentation, aiming at completing a master's thesis. Students learn the basic knowledge and skills to become a researcher by exercising several effective tools for conducting research.	In every year, classes are offered in Japanese; Methodological Foundation Courses No duplicated entry with OATW21A Identical to O1MBA53. Online (Asynchronous) Online (Synchronous)
OATW212	Research Foundation in Informatics	2	2.0	1	FallC	Mon/Thu 1, 2	Union Lecture Hall	Morishima Atsuyuki, Lee Seung Hee, Kim Sangtae, Kim SunKyoung	This course is the introduction to academic research and publishing in informatics. The goal is to acquire basic knowledge and skills required for researchers. It showcases some of the research projects in a variety of domains, and addresses some of the important topics in research activities, such as documentation, research ethics, brainstorming, collaboration, and presentation. We also show some of the useful tools for researchers.	In every year, classes are taught in English Lecture is conducted in English. face-to-face Hybrid

OATW213	Literature Survey	2	2.0	1	SprC	Tue/Fri 1, 2		Morita Hiromi, Lee Seung Hee, Ohba Ichiro, Seki Yohei, Murai Maiko	There has been a growing importance of efficiently and broadly finding and understanding relevant literature in a domain that is not your core area, due to the increase of interdisciplinary nature in research topics. Therefore, in this course, students will acquire literature survey skills in some of the areas in Informatics, and will learn major information sources and typical structure of academic articles, and finally, identify conferences and journals where students could aim to submit their work.	In every year, classes are offered in Japanese: Methodological Foundation Courses No duplicated entry with OATW21B Identical to O1MBA51. Online (Asynchronous)
OATW214	Literature Survey	2	2.0	1	FallC	Mon/Thu 5, 6		Maeshiro Tetsuya, Kim SunKyoung, Sakaguchi Tetsuo, Baryshev Eduard, Matsubara Masaki	There has been a growing importance of efficiently and broadly finding and understanding relevant literature in a domain that is not your core area, due to an increase of interdisciplinary nature in research topics. Therefore, in this course, students will acquire literature survey skills in some of the areas in Informatics, and will learn major information sources and typical structure of academic articles, and finally, identify conferences and journals where students could aim to submit their work.	In every year, classes are offered in English: Methodological Foundation Courses Identical to O1MBD52. Online (Asynchronous) Online (Synchronous)
OATW215	Survey and Data Analysis	2	2.0	1	FallC	Mon/Thu 3, 4	Union Lecture Hall	Goto Yoshihiro, Ikeuchi Atsushi, Tokii Maki, Ye Shaoyu	This course covers qualitative research, quantitative research, and data analysis. With lectures and group work, students are expected to learn how to plan and implement a survey and conduct data analysis. In addition to traditional data analysis methods, newly developed statistical methods will be presented, which will help understand characteristics of data from different view points.	In every year, classes are offered in Japanese: Methodological Foundation Courses No duplicated entry with OATW21C Identical to O1MBB51 and O1MBC51. Online (partially face-to-face)
OATW216	Survey and Data Analysis	2	2.0	1	SprC	Mon/Thu 3, 4	Union Lecture Hall	Yu Haitao, Kim SunKyoung, Teruyama Junko, Wakabayashi Kei	This course covers qualitative research, quantitative survey, and data analysis using a computer. With lectures and group work, students are expected to learn how to plan and implement a survey and conduct data analysis. In addition to traditional data analysis methods, newly developed statistical methods will be presented, which will help understand characteristics of data from different view points.	In every year, classes are offered in English: Methodological Foundation Courses Identical to O1MBD51. face-to-face
OATW217	Content Production and Development	2	2.0	1, 2	SprAB	Tue3, 4	7A210	Suzuki Kanae, Oshio Naohiro	研究やビジネスのプロモーション、来場来館が困難な利用者に対するオンライン・プレゼンテーションなど、映像による情報発信の重要性が高まっている。本授業では、オンラインで提供するデジタルコンテンツを自ら制作するための知識とスキルを習得する。各自が1作品ずつ映像を制作することを通じて企画・撮影・編集というコンテンツ制作の全工程に関する知識とスキルを学習する。映像を活用した新しいサービスやビジネスを創造する方法論について学習する。	毎年、日本語で開講:実践指導科目 face-to-face (partially online)
OATW218	Records and Information Management	2	2.0	1, 2	FallC	Mon/Thu 7, 8		Shirai Tetsuya, Asai Ryosuke, Shirakawa Emi	本科目は実践指導科目のひとつとして位置づけられる演習科目である。本演習では、日本の公文書館施設における記録情報（公文書や歴史資料及びそれらにかかわる情報）の管理や公文書館施設の運営方法をめぐって、担当教員が出した課題に対して受講者が解決方法を提案し、それらの検討を通じて公文書館の専門職員であるアーキビストとしての知見や資質を高めることを目的とする。	東京キャンパス開講: 毎年、日本語で開講:実践指導科目 Online (Asynchronous)
OATW21A	Research Foundation	2	2.0	1	SprC	Tue/Fri 7, 8		Moritsugu Shuichi, Ochiai Yoichi, Suzuki Nobutaka, Nakai Hisashi, Kim Sangtae	Firstly, each research area and its features for theme setting, experiment methods, and publication methods of findings are presented. Secondly, students learn five themes in order, (1) documentation, (2) research ethics, (3) brainstorming, (4) cooperative work, (5) presentation, aiming at completing a master's thesis. Students learn the basic knowledge and skills to become a researcher by exercising several effective tools for conducting research.	Course location: Tokyo Campus: In every year, classes are offered in Japanese: Methodological Foundation Courses No duplicated entry with OATW211 Identical to O1MBE52. Online (Asynchronous) Online (Synchronous)

OATW21B	Literature Survey	2	2.0	1	SprC	Mon/Thu 7, 8	Morita Hiromi, Lee Seung Hee, Ohba Ichiro, Seki Yohei, Murai Maiko	There has been a growing importance of efficiently and broadly finding and understanding relevant literature in a domain that is not your core area, due to the increase of interdisciplinary nature in research topics. Therefore, in this course, students will acquire literature survey skills in some of the areas in Informatics, and will learn major information sources and typical structure of academic articles, and finally, identify conferences and journals where students could aim to submit their work.	Course location: Tokyo Campus: In every year, classes are offered in Japanese; Methodological Foundation Courses No duplicated entry with OATW213 Identical to O1MBE53. Online (Asynchronous)
OATW21C	Survey and Data Analysis	2	2.0	1, 2	FallC	Tue/Fri 7, 8	Goto Yoshihiro, Ikeuchi Atsushi, Tokii Maki, Ye Shaoyu	This course covers qualitative research, quantitative research, and data analysis. With lectures and group work, students are expected to learn how to plan and implement a survey and conduct data analysis. In addition to traditional data analysis methods, newly developed statistical methods will be presented, which will help understand characteristics of data from different view points.	Course location: Tokyo Campus: In every year, classes are offered in Japanese; Methodological Foundation Courses No duplicated entry with OATW215 Identical to O1MBE13. Online (partially face-to-face)
OATW231	Research Design	2	2.0	1				This course aims to learn how to prepare research proposals based on research topics proposed by individual students. Students are expected to acquire these skills such as design and presentation of research proposal through discussions with lecturers and other students. Students understand the characteristics of academic writing in various specialized fields and acquire writing skills of the academic papers.	In every year, classes are offered in Japanese. If there are English-speaking students in the class, we will correspond to them individually. ; Practical Seminar Courses Not open in academic year.
OATW23A	Job Design	2	2.0	1	SprAB	Sat7, 8	Takaku Masao, Nagamori Mitsuharu, Yokoyama Mikiko	Develop a business improvement proposal that contributes to systematization, business development, and business improvement of the work based on experiences of their own specialized work. After presenting the interim proposal, improve the proposal based on advices from the lecturers.	Course location: Tokyo Campus: In every year, classes are offered in Japanese; Practical Seminar Courses Online (partially face-to-face). Online (Synchronous)
OATW251	Special Seminar in Informatics a	2	2.0	2	SprABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive advanced dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Others
OATW252	Special Seminar in Informatics b	2	2.0	2	FallABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Others
OATW253	Special Seminar in Informatics A	2	1.0	1	SprABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Others

OATW254	Special Seminar in Informatics B	2	1.0	1	FallABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Others
OATW255	Special Seminar in Informatics C	2	1.0	2	SprABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Others
OATW256	Special Seminar in Informatics D	2	1.0	2	FallABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Others
OATW257	Special Seminar in Informatics E	2	2.0	1	Sum Vac	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses. Only those who plan to complete early can take this course. Applicants need to apply for the Graduate Academic Affairs Section. Others
OATW258	Special Seminar in Informatics F	2	2.0	1	Spr Vac	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses. Only those who plan to complete early can take this course. Applicants need to apply for the Graduate Academic Affairs Section. Others
OATW259	Special Seminar in Informatics a	2	2.0	2	FallABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive advanced dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Course registration is done by Academic Affairs. Others

OATW260	Special Seminar in Informatics b	2	2.0	2	SprABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Course registration is done by Academic Affairs. Others
OATW261	Special Seminar in Informatics A	2	1.0	1	FallABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Course registration is done by Academic Affairs. Others
OATW262	Special Seminar in Informatics B	2	1.0	1	SprABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Course registration is done by Academic Affairs. Others
OATW263	Special Seminar in Informatics C	2	1.0	2	FallABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Course registration is done by Academic Affairs. Others
OATW264	Special Seminar in Informatics D	2	1.0	2	SprABC	by appointment	Uda Norihiko, Faculty of the Master's Program in Informatics	Students will receive dissertation guidance by academic advisors on the following research topics in the fields of media science, information interaction, and library and information science, to complete a master's thesis. (1) Theory and application of data utilization considering the nature of media (2) Theory and application on information use focusing on communication (3) Theory and application on the management of knowledge resources as social infrastructure	Research Seminar Courses Course registration is done by Academic Affairs. Others
OATW271	Global Research Seminar 1a	2	1.0	1	SprABC	by appointment	Mikawa Masahiko, Academic advisors for the Master's Program in Informatics	The purpose is of this course is to comprehensively acquire skills for presenting your work at international conferences. Students prepare presentation materials and have rehearsals for presentations. After that students make presentations at international conferences and participate related research presentations, and broaden their research scopes. After conferences students make a self-assessment by looking back on the presentation and make reports on other presentations they found it interesting. This class is offered for first year students.	Students will be designated by the main course instructor: (1) Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods: (2) Research Seminar Courses (Will not be counted as credits in completion requirements) Identical to O1MB156. Others

OATW272	Global Research Seminar Ib	2	1.0	1	FallABC	by appointment		Mikawa Masahiko, Academic advisors for the Master's Program in Informatics	The purpose is of this course is to comprehensively acquire skills for presenting your work at international conferences. Students prepare presentation materials and have rehearsals for presentations. After that students make presentations at international conferences and participate related research presentations, and broaden their research scopes. After conferences students make a self-assessment by looking back on the presentation and make reports on other presentations they found it interesting. This class is offered for first year students.	Students will be designated by the main course instructor: (1) Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods: (2) Research Seminar Courses (Will not be counted as credits in completion requirements) Identical to O1MB157. Others
OATW273	Global Research Seminar IIa	2	1.0	2	SprABC	by appointment		Mikawa Masahiko, Academic advisors for the Master's Program in Informatics	The purpose is of this course is to comprehensively acquire skills for presenting your work at international conferences. Students prepare presentation materials and have rehearsals for presentations. After that students make presentations at international conferences and participate related research presentations, and broaden their research scopes. After conferences students make a self-assessment by looking back on the presentation and make reports on other presentations they found it interesting. This class is offered for second year students.	Students will be designated by the main course instructor: (1) Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods: (2) Research Seminar Courses (Will not be counted as credits in completion requirements) Identical to O1MB158. Others
OATW274	Global Research Seminar IIb	2	1.0	2	FallABC	by appointment		Mikawa Masahiko, Academic advisors for the Master's Program in Informatics	The purpose is of this course is to comprehensively acquire skills for presenting your work at international conferences. Students prepare presentation materials and have rehearsals for presentations. After that students make presentations at international conferences and participate related research presentations, and broaden their research scopes. After conferences students make a self-assessment by looking back on the presentation and make reports on other presentations they found it interesting. This class is offered for second year students.	Students will be designated by the main course instructor: (1) Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods: (2) Research Seminar Courses (Will not be counted as credits in completion requirements) Identical to O1MB159. Others