

2021 Master's Program in Informatics (2021.9.14 updated)

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW111	Practical Data Science	1	2.0	1・2	春AB	木3,4		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. Students will learn both basic theories in statistics and practical data analysis, aiming at social value creation. In the subsequent units, students will learn theories and methods of analysis on the basis of informetric data. Furthermore, the nature of informetric data and sample-size dependency of statistical measures will also be discussed.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Media Science Identical to O1MBB06 and O1MBB19. Online (Asynchronous)
OATW112	Machine Learning and Pattern Recognition	1	2.0	1・2	春AB	木1,2		Wakabayashi Kei, Hasegawa Hidehiko	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.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Media Science; Teacher Training Course Identical to O1MBB20. Hybrid or Others 1st Online Synchronous, 2nd-10th Online Asynchronous
OATW113	Media Design	1	2.0	1・2	秋AB	火5,6		Kim Sangtae, Ochiai Yoichi	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.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Media Science Identical to O1MBB07 and O1MBB12. Online (Synchronous)
OATW114	Visualization	1	2.0	1・2	秋AB	火1,2		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.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for media science; Teacher Training Course Identical to O1MBB09 and O1MBC04. Online (Asynchronous)

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW115	Biological and Life Informatics	1	2.0	1・2	春AB	月3,4		Maeshiro Tetsuya, Terasawa Hiroko	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.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for media science; Teacher Training Course Identical to O1MBB08. Online (Synchronous)
OATW116	Kansei and Cognitive Information	1	2.0	1・2	春AB	火5,6		Hiraga Yuzuru, Lee Seung Hee, Morita Hiromi	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 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 Identical to O1MBB10. Hybrid or Others 1st-7th Online Asynchronous, 8th-10th Online Synchronous
OATW117	Structured Data	1	2.0	1・2	秋AB	月1,2		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.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Media Science; Teacher Training Course Identical to O1MBA09 and O1MBB01. Online (Asynchronous)
OATW11A	Information Access	1	2.0	1・2	秋AB	土3,4		Satoh Tetsuji, 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 Identical to O1MBE12. Hybrid or Others 1st Online Synchronous, 2nd-10th Online Asynchronous
OATW131	Analysis of Knowledge and Information	1	2.0	1・2	春AB	金1,2		Nakayama Shin-ichi, Yokoyama Mikiko	This course introduces the concepts of knowledge and their extraction methods. The initial units discuss the concept 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 will focus on the methods of knowledge representation and their characteristics by analyzing the structures of knowledge. Special focus will be given to examining the interrelations between knowledge, information and data from the viewpoint of affordance concept. Methods of information and data acquisitions, and of knowledge extractions are also introduced.	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Information Interaction; Teacher Training Course Identical to O1MBA01 and O1MBA02. Hybrid or Others 1st-5th Online Asynchronous, 6th-10th Online Synchronous

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OATW132	Information Practices	1	2.0	1・2	春AB	月5, 6		Joho Hideo, Yu Haitao, Matsubayashi 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.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Information Interaction; Teacher Training Course Identical to O1MBA06 and O1MBA07. Online (Synchronous)
OATW133	Recommendation Systems	1	2.0	1・2	秋AB	金1, 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 Identical to O1MBB03. Online (Asynchronous)
OATW134	Human Computer Interaction	1	2.0	1・2	秋AB	火3, 4		Inoue Tomoo, Mikawa Masahiko	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 Identical to O1MBB11 and O1MBC16. Online (Asynchronous)
OATW135	Communication Behavior	1	2.0	1・2	春AB	火5, 6		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 Identical to O1MBA11. Online (Synchronous)
OATW136	Community Analysis	1	2.0	1・2	秋AB	金3, 4	ユニオ ン講義 室	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.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for information interaction; Teacher Training Course Identical to O1MBC10. Online (Synchronous)

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW137	Digital Humanities	1	2.0	1・2	秋AB	木1,2		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 Identical to O1MBCO2 and O1MBCO3. Online (Synchronous)
OATW138	Intellectual Property and Information Security	1	2.0	1・2	春AB	月1,2		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.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Information Interaction; Teacher Training Course Identical to O1MBAO3 and O1MBAO4. Online (Asynchronous)
OATW13A	Analysis of Knowledge and Information	1	2.0	1・2	春AB	金7,8		Nakayama Shin-ichi, Yokoyama Mikiko	This course introduces the concepts of knowledge and their extraction 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 will focus on the methods of knowledge representation and their characteristics by analyzing the structures of knowledge. Special focus will be given to examining the interrelations between knowledge, information and data from the viewpoint of affordance concept. Methods of information and data acquisitions, and of knowledge extractions are also introduced.	Course location: Tokyo Campus. ; Special subjects for Information Interaction; Teacher Training Course Hybrid or Others 1st-5th Online Asynchronous, 6th-10th Online Synchronous
OATW13B	Human Computer Interaction	1	2.0	1・2	秋B	集中		Inoue Tomoo, Mikawa Masahiko	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 Identical to O1MBE11. 12/4-12/5, 12/11-12/12, 12/18-12/19 Online (Asynchronous) 12/4 (Sat) 3, 4, 5 12/5 (Sun) 3, 4, 5 12/11 (Sat) 3, 4, 5, 6 12/12 (Sun) 3, 4, 5 12/18 (Sat) 3, 4, 5 12/19 (Sun) 3, 4, 5, 6

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW13C	Digital Humanities	1	2.0	1・2	秋AB	火7,8		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.	Course location: Tokyo Campus; Special subjects for Information Interaction Identical to O1MBE03. Online (Synchronous)
OATW13D	Intellectual Property and Information Security	1	2.0	1・2	春AB	土5,6		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 Online (Asynchronous)
OATW151	Cultural History of Library and Media	1	2.0	1・2	春AB	金5,6		Mizoue Chieko, Donkai Saori, Watanuki Toyoaki	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 Identical to O1MBA05 and O1MBC17. Hybrid or Others 1st-5th, 7th-10th Online Asynchronous, 6th face-to-face at 7A105
OATW152	Public Services	1	2.0	1・2	春AB	火1,2		Yoshida Yuko, Sannami Chihomi	This course discusses information services for public from the two phases of a specific community and social system focusing on empowerment of participants/users. In the first half, this course deals with lifelong learning activities and examines public libraries as system for access to information, media and culture through a perspective of community, social justice and liberal multiculturalism. In the second half, you learn about the practical theory and method through the process of planning, decision, examination, manual preparation, public relations, preparation, implementation and evaluation of the place for technical communication.	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Library and Information Science Identical to O1MBA10 and O1MBC09. Hybrid or Others 1st-4th Online Asynchronous, 5th Online Synchronous, 6th-10th Online Asynchronous

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OATW153	Library Management	1	2.0	1・2	春AB	金3, 4		Ikeuchi Atsushi, Ohba Ichiro, Koizumi Masanori	<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>	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Library and Information Science Identical to 01MBC11. Online (Asynchronous)
OATW154	Scholarly Communication and Infrastructure	1	2.0	1・2	秋AB	月3, 4	7C103	Itsumura Hiroshi, Matsubayashi Mamiko	<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 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>	Classes are offered in English in even-years and in Japanese in odd-years, respectively; Special subjects for Library and Information Science Identical to 01MBC14 and 01MBC15. face-to-face
OATW155	Archives	1	2.0	1・2	秋AB	月5, 6		Shirai Tetsuya, Enomae Toshiharu, Baryshev Eduard	<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>	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Library and Information Science Identical to 01MBC05 and 01MBC18. Online (Asynchronous)
OATW156	Museum and Information Media	1	2.0	1・2	秋AB	火5, 6		Tsuji Yasuaki, SHIRAISHI Nobuko, MIYAMOTO Seiji	<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>	Classes are offered in Japanese in even-years and in English in odd-years, respectively; Special subjects for Library and Information Science Identical to 01MBC21 and 01MBC06. Online (Asynchronous)

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OATW157	Information Organization	1	2.0	1・2	春AB	木5,6		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 Identical to O1MBB05 and O1MBC07. Online (Synchronous)
OATW158	Media Education	1	2.0	1・2	秋AB	火1,2		Suzuki Kanae, 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 Identical to O1MBC12 and O1MBC13. Online (Asynchronous)
OATW15A	Cultural History of Library and Media	1	2.0	1・2	春AB	火7,8		Mizoue Chieko, Donkai Saori, Watanuki Toyoaki	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; Special subjects for Library and Information Science Hybrid or Others 1st-7th, 9th-10th Online Asynchronous, 8th face-to-face
OATW15B	Public Services	1	2.0	1・2	春AB	木7,8		Yoshida Yuko, Sannami Chihomi	This course discusses information services for public from the two phases of a specific community and social system focusing on empowerment of participants/users. In the first half, this course deals with lifelong learning activities and examines public libraries as system for access to information, media and culture through a perspective of community, social justice and liberal multiculturalism. In the second half, you learn about the practical theory and method through the process of planning, decision, examination, manual preparation, public relations, preparation, implementation and evaluation of the place for technical communication.	Course location: Tokyo Campus; Special subjects for Library and Information Science Identical to O1MB52B. Hybrid or Others 1st-9th Online Asynchronous, 10th Online Synchronous

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW15C	Library Management	1	2.0	1・2	春AB	±3,4		Ikeuchi Atsushi, Ohba Ichiro, Koizumi Masanori	<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>	Course location: Tokyo Campus; Special subjects for Library and Information Science Identical to OIMBE44. Online (Asynchronous)
OATW15D	Scholarly Communication and Infrastructure	1	2.0	1・2	秋AB	±5,6		Itsumura Hiroshi, Matsubayashi Mamiko	<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 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>	Course location: Tokyo Campus; Special subjects for Library and Information Science Identical to OIMBE02. Online (Synchronous)
OATW15E	Archives	1	2.0	1・2	秋AB	±7,8		Shirai Tetsuya, Enomae Toshiharu, Baryshev Eduard	<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>	Course location: Tokyo Campus; Special subjects for Library and Information Science Identical to OIMBE32. Online (Asynchronous)
OATW15F	Museum and Information Media	1	2.0	1・2	秋AB	月7,8		Tsuji Yasuaki, SHIRAISHI Nobuko, MIYAMOTO Seiji	<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>	Course location: Tokyo Campus; Special subjects for Library and Information Science Identical to OIMB50B. Online (Asynchronous)

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW15G	Information Organization	1	2.0	1・2	春AB	月7,8		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 Online (Synchronous)
OATW15H	Media Education	1	2.0	1・2	秋AB	金7,8		Suzuki Kanae, 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 Identical to OIMBE21. Online (Asynchronous)
OATW211	Research Foundation	2	2.0	1	春C	月・木 5,6		Moritsugu Shuichi, Ochiai Yoichi, Tsuji Yasuaki, Nakai Hisashi, Watanuki Toyoaki	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 Identical to OIMBA53. Hybrid or Others 3rd-4th Online Synchronous, 5th-10th Online Asynchronous
OATW213	Literature Survey	2	2.0	1	春C	火・金 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 Identical to OIMBA51. Online (Asynchronous)
OATW214	Literature Survey	2	2.0	1	秋C	月・木 5,6		Maeshiro Tetsuya, Yu Haitao, Hiraga Yuzuru, Yoshikane Fuyuki, Hiraki Takefumi	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 OIMBD52. Lecture is conducted in English. Hybrid or Others 1st-6th Online Asynchronous, 7th-10th, Online Synchronous

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW215	Survey and Data Analysis	2	2.0	1	秋C	月・木 3, 4		Goto Yoshihiro, Suzuki Kanae, Tokii Maki, Hasegawa Hidehiko, Ye Shaoyu	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 Japanese: Methodological Foundation Courses Identical to 01MBB51 and 01MBC51. Hybrid or Others 1st Online Asynchronous, 2nd Online Synchronous, 3rd Online Asynchronous, 4th Online Synchronous, 5th-9th Online Asynchronous, 10th Online Synchronous
OATW216	Survey and Data Analysis	2	2.0	1	春C	月・木 3, 4		Yu Haitao, Teruyama Junko, Wakabayashi Kei, ITO Hiroyoshi	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 01MBD51. Lecture is conducted in English. Online (Synchronous)
OATW21A	Research Foundation	2	2.0	1	春C	火・金 7, 8		Moritsugu Shuichi, Ochiai Yoichi, Tsuji Yasuaki, Nakai Hisashi, Watanuki Toyoaki	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; Methodological Foundation Courses Identical to 01MBE52. Hybrid or Others 1st-2nd Online Asynchronous, 3rd-4th Online Synchronous, 5th-10th Online Asynchronous
OATW21B	Literature Survey	2	2.0	1	春C	月・木 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; Methodological Foundation Courses Identical to 01MBE53. Online (Asynchronous)
OATW21C	Survey and Data Analysis	2	2.0	1・2	秋C	火・金 7, 8		Goto Yoshihiro, Suzuki Kanae, Tokii Maki, Hasegawa Hidehiko, Ye Shaoyu	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.	Course location: Tokyo Campus; Methodological Foundation Courses Identical to 01MBE13. Hybrid or Others 1st Online Asynchronous, 2nd Online Synchronous, 3rd Online Asynchronous, 4th Online Synchronous, 5th-9th Online Asynchronous, 10th Online Synchronous

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW231	Research Design	2	2.0	1	秋C	火・金 1,2		Satoh Tetsuji, Terasawa Hiroko, Yoshida Yuko	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 Hybrid or Others 1st-6th Online Synchronous, 7th Online Synchronous and Asynchronous, 8th Online Asynchronous, 9th Online Synchronous and Asynchronous, 10th Online Asynchronous
OATW23A	Job Design	2	2.0	1	春AB	土,7,8		Takaku Masao, Shirai Tetsuya, Takara Kouya	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.	In every year, classes are taught in Japanese; Course location: Tokyo Campus; Practical Seminar Courses Online (Synchronous)
OATW251	Special Seminar in Informatics a	2	2.0	2	春ABC	応談		Satoh Tetsuji, 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 doctoral 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
OATW252	Special Seminar in Informatics b	2	2.0	2	秋ABC	応談		Satoh Tetsuji, 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
OATW271	Global Research Seminar 1a	2	1.0	1	春ABC	応談		Itsumura Hiroshi, 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.	Students will be designated by the main course instructor; Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods; Will not be counted as credits in completion requirements; Research Seminar Courses Identical to O1MB156.

Course Number	Course Name	Instructional Type	Credits	standard registration year	Term	Meeting Days, Period etc.	Classroom	Instructor	Course Overview	Remarks
OATW272	Global Research Seminar 1b	2	1.0	1	秋ABC	応談		Itsumura Hiroshi, 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.	Students will be designated by the main course instructor: Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods; Will not be counted as credits in completion requirements; Research Seminar Courses Identical to O1MB157.
OATW273	Global research seminar 11a	2	1.0	2	春ABC	応談		Itsumura Hiroshi, 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.	Students will be designated by the main course instructor: Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods; Will not be counted as credits in completion requirements; Research Seminar Courses Identical to O1MB158.
OATW274	Global Research Seminar 11b	2	1.0	2	秋ABC	応談		Itsumura Hiroshi, 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.	Students will be designated by the main course instructor: Priority applications to "University of Tsukuba Study Abroad Support Program" are available up to twice during the two years of standard enrollment periods; Will not be counted as credits in completion requirements; Research Seminar Courses Identical to O1MB159.