

CONTENTS

| 1. Co | Courses offered in English | | | | | | | | |
|-------|---|-------|--|--|--|--|--|--|--|
| 1.0 | Courses Offered in English (1 st Semester) | 3 | | | | | | | |
| 1.1 | Syllabi of 1 st Semester | 4-32 | | | | | | | |
| 1.2 | Courses Offered in English (2 nd Semester) | 33 | | | | | | | |
| 1.3 | Syllabi of 2 nd Semester | 36-76 | | | | | | | |

2. Japanese Language Courses

| 2.0 Self-Assessment Sheet for Japanese Proficiency in English | 79 |
|--|----------|
| 2.1 Japanese Language Course List in English | 81 |
| 2.2 The Lists of Key Words for Fundamental Japanese Language in En | glish 83 |
| 2.3 Syllabi in English | 84-100 |
| (For Japanese Language Proficiency Test Level N5 – N4) | |
| | |
| 2.4 Self-Assessment Sheet for Japanese Proficiency in Japanese | 102 |
| 2.5 Japanese Language Course List in Japanese | 104 |
| 2.6 The Lists of Key Words for Fundamental Japanese Language in Japa | anese |
| | 106 |

| 2.7 Syllabi in Japanese 107- | 155 |
|------------------------------|-----|
|------------------------------|-----|

 Courses offered in English (1st Semester)

SATOMU Program: Courses Offered in English (1st Semester, Academic Year 2018)

| Faculty | Course Title | Original Course Number | SATOMU Course Number | Credit | Lecturer | Semester | Day | Period | Campus | Building | Room | Page# |
|--|---|------------------------------|----------------------------|--------|-------------------------------------|-----------------------------|------|--------|---|----------|---|-------|
| | Japanese Language and Society | X0010 | V5101 | 2 | Daniel Long | 1st Semester | Mon. | 1 | 'eriodCampusBuildingR1Minami-Osawa613Minami-Osawa512Minami-Osawa613Minami-Osawa613Minami-Osawa1113Minami-Osawa1115Minami-Osawa1115Minami-Osawa1115Minami-Osawa1116Minami-Osawa1111Minami-Osawa1114Minami-Osawa1114Minami-Osawa1114Minami-Osawa1111Minami-Osawa1111Minami-Osawa1111Minami-Osawa1112Minami-Osawa1111Minami-Osawa1112Minami-Osawa1112Minami-Osawa1111Minami-Osawa1112Minami-Osawa1112Minami-Osawa1112Minami-Osawa112Minami-Osawa112Minami-Osawa113Minami-Osawa114Minami-Osawa114Minami-Osawa114Minami-Osawa115Minami-Osawa114Minami-Osawa </td <td>402</td> <td>4</td> | 402 | 4 | |
| Faculty of Urban Liberal Arts | subm Convertibie Convertibie <thc< td=""><td>Minami-Osawa</td><td>5</td><td>443</td><td>5</td></thc<> | Minami-Osawa | 5 | 443 | 5 | | | | | | | |
| (4courses) | Seminar on Multicultural Education | F1246 | V5103 | 2 | Hiroyuki Nomoto | 1st Semester | Fri. | 2 | Minami-Osawa | 5 | 137 | 6 |
| | History of Japanese Film | - | V5104 | 2 | Kentaro Sudoh | 1st Semester | Thu. | 3 | Minami-Osawa | 6 | 307 | 7 |
| | Ecology | I429 | V5105 | 2 | Adam L Cronin | 1st Semester | Mon. | 2 | Minami-Osawa | 11 | uilding Room 6 402 5 443 5 137 6 307 1 302 11 202 11 103 11 103 11 202 11 103 11 202 11 103 11 201 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 11 103 12 105 Int.H 232 1 204 1 204 | 8 |
| | General Biochemistry | I385 | V5106 | 2 | Hiroyuki Kawahara Takashi Okamoto | 1st Semester | Tue. | 3 | Minami-Osawa | 11 | 202 | 9 |
| | General Developmental Biology | I0421 | V5107 | 2 | Kimiko Fukuda•Takatori Naohito | 1st Semester | Wed. | 5 | Minami-Osawa | 11 | 103 | 10 |
| | General Ecology | I0422 | V5108 | 2 | Adam L Cronin | 1st Semester | Mon. | 5 | Minami-Osawa | 11 | 103 | 11 |
| | General Molecular Biology | I0387 | V5109 | 2 | Kanae Ando | 1st Semester | Mon. | 4 | Minami-Osawa | 11 | 202 | 12 |
| Faculty of Science | Cell Biology (General education subject) | X0140 | V5110 | 2 | Nachito Takatori•Satomi Takeo | 1st Semester | Mon. | 6 | Minami-Osawa | 11 | 103 | 13 |
| Faculty of Science | Cell Biology (Specialized subject) | I392 | V5111 | 2 | Naohito Takator•Satomi Takeo | 1st Semester | Wed. | 1 | Minami-Osawa | 11 | 201 | 14 |
| (14courses) | General Biology I B | I0383 | V5112 | 2 | Aya Takahashi•Kimiko Fukuda | 1st Semester | Tue. | 4 | Minami-Osawa | 11 | 103 | 15 |
| | General Taxonomy | I0389 | V5113 | 2 | Katsuyuki Eguchi•Noriaki Murakami | 1st Semester | Wed. | 4 | Minami-Osawa | 11 | 103 | 17 |
| | Molecular Biology | I435 | V5114 | 2 | Takashi Okamoto•Tsunaki Asano | 1st Semester | Tue. | 1 | Minami-Osawa | 11 | 201 | 18 |
| | Special Lecture in Biology a | I434 | V5115 | 1 | Yoko Kakugawa | 2nd Half of 1st Semester | Thu. | 1 | Minami-Osawa | 11 | 103 | 19 |
| | Genetics | I423 | V5116 | 2 | Kouichiro Tamura•Aya Takahashi | 1st Semester | Fri. | 2 | Minami-Osawa | 11 | 103 | 20 |
| | Animal ecology and diversity | X0148 | V5117 | 2 | Adam L Cronin | 1st Semester | Tue. | 6 | Minami-Osawa | 6 | 402 | 21 |
| | Gene Science | I436 | V5118 | 2 | Takaomi Sakai∙Toshiro Aigaki | 1st Semester | Thu. | 2 | Minami-Osawa | 11 | 101 | 22 |
| Faculty of Urban Environmental Sciences (1course) | Introduction to Energy Chemistry | K465 | V5119 | 2 | Jacob Yan Mulyana | 1st Semester | Thu. | 1 | Minami-Osawa | 12 | 105 | 23 |
| | Cultural Psychology | - | V5120 | 2 | Shizu Koyanagi | 1st Semester | Tue. | 2 | Minami-Osawa | Int.H | 231 | 24 |
| | Introduction to Japanese Studies I | - | V5121 | 2 | Shizu Koyanagi, Lidia Sasaki et al. | 1st Semester | Mon. | 2 | Minami-Osawa | Int.H | 232 | 26 |
| International Center | Intercultural Communication and Interaction | X0145 | V5122 | 2 | Shizu Koyanagi | 1st Semester | Wed. | 5 | Minami-Osawa | 1 | 204 | 27 |
| (6 courses) | Sustainability Studies and Global Environmental Governance | - | V5123 | 2 | Lidia Sasaki | 1st Semester | Fri. | 2 | Minami-Osawa | Int.H | 232 | 29 |
| International Center (6 courses) | Global Mindset | X0034 | V5124 | 2 | Annette Karseras | 1st Semester | Tue. | 1 | Minami-Osawa | 6 | 402 | 30 |
| | Contemporary Japanese Society I | - | V5125 | 2 | Yoko Kumada | 1st Semester | Tue. | 4 | Minami-Osawa | 6 | 312 | 32 |

| Course Title | e | Japanese Language | and Society | | Cou Num | rse ıber | V 5 (X0 | 5 101)010) | Credit | 2 | |
|--|--|--|--|---|--|--|--|---|---|-------------------|--|
| Instructor | Dar | niel Long | 1st Semester | Ν | lon. | 1st P | eriod | Mi | nami-Osawa | ı | |
| Course Descr Theme | iption / | Using the Japane between language language behavio | se language as o and society to a r, language usag | lata, w answei ge, lan | ve will ex r questio guage ch | xamine ons rela nange a | the cor ting to nd lang | nplex rel language guage pol | ationships e variation, icy. | | |
| Knowledge & students can through the c Course Objec | Abilities acquire class, tives lule, | Upon completion methodologies, ar language and soci intricacies of the l from which to exa 1. Methods for stu 2. How many dial | of this course, y ad theoretical fra- ety. The course language and na mine their lang adying Japanese ects of Japanese | ou will amewo should ative J uage. e langu | have a rks one give no apanese age and | knowled uses to n-nativ speake Society | dge of t study t e speak ers a mo | he topics the relati ters a bet ore object | s, research onships betw cter grasp of cive viewpoin | veen the ıt | |
| Instruction M | Iethods | How to be polite in Japanese, and how that differs from politeness in other languages? What do we mean by Women's Language in Japanese, and what about men's language? What are the ways (pronunciation, vocabulary, grammatical formations, etc.) in which | | | | | | | | | |
| | | Japanese is changing? 6. Within Japanese and Without it: External (Societal) and Internal Factors in Language Change 7. Who speaks the "best Japanese", and why are language attitudes are important? 8. Why can't anyone give me a straight answer about where the Japanese language come | | | | | | | | | |
| | | 9. "Just between us gaijin" Japanese as a world language 10. I heard it through the grapevine. Rumors and Japanese. 11. Why is the Japanese writing system so complicated? 12. Do you spell it "romaii" or "romazi"? Language policy in Japan | | | | | | | | | |
| | | 12. Do you spen to roman or roman or roman is banguage policy in Japan 13. What's in a "namae"? The studies of people names and place names (toponymy) 14. Signs of the times: learning about Japanese language and society through signs and advertisements 15. Japanese of the future: Applying linguistic science to make predictions about | | | | | | | | | |
| Learning Act outside the C | ivities lassroom | 19. 5apanese of the future: Applying inguistic science to make predictions about language change 【授業外学習】毎回の授業後、http://nihongo.hum.tmu.ac.jp/~long/classes.htm で次回授 業のレジメ及び予習内容を提示するので、必ず事前に予習を行い、内容を把握した上で授業 に臨むこと。 Information about past and upcoming classes will be posted at http://nihongo.hum.tmu.ac.jp/~long/classes.htm and students will be ownered to review. | | | | | | | 回授 ⁵ 授業 view | | |
| Textbooks an References | d/or | past lessons and p Japanese Sociolin students should b | prepare for futur guistics Illustra ring their own o | re topi ted (I copies o | cs based コング& of the te: | on this 真田編 xtbook t | s mater 『社会言 to every | ial. 言語学図集 y class. | 〔』秋山書 店) | All | |
| Grade Evalua | ation Policy | active class partic final exam | ripation | | | | | | | | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | Office hours are M Questions should | Aonday 10:30 - 1 be addressed to | 2:00 o dlong | r by app (at mark | ointme c)tmu.a | nt. c.jp | | | | |
| Notice for Stu (Relevance to courses) | udents o other | Information about the class will be posted here: http://nihongo.hum.tmu.ac.jp/~long/classes.htm This class is designed to complement the course "The Japanese Language". They differ in that this class deals with the usage of Japanese in society, while this one with linguistic structure. The courses may be taken independently of one another, but it is highly recommend that students take both for a balanced understanding of the language. | | | | | | | | | |

| Course Title | Origin | s of Modern Japan | ese Literature P | art I | Cour Numb | rse ber | V5102 (F3633) | Credit | 2 |
|---|---|---|---|---|---|--|---|---|---|
| Instructor | Micł | nael Yasui | 1st Semester | Wed | . 3r | rd Period | Minam | i-Osawa Car | npus |
| Course Descr Theme | iption / | Discourse and Japanese Litera ideas in culture | Rhetoric in Er ature in English translate or fail | nglish th in order to transl | rough Ja to develoj late throu | apanese p debatir ıgh langu | Literature ng methods nage. | : Reading a s and discuss | about 3 how |
| Knowledge & students can through the c Course Objec | Abilities acquire class, tives | In this course, developing a n discussing Japa explore the con speak affects no expressed. Stud Literature, and | students will le nore Global Aw anese Literatur acept of neo-Wh ot only how infor ents will also de then attempt to | earn the vareness e. Throu orfianism rmation i evelop an understa | basic mo of Japar ugh discu a: basical s express sensibilit and how t | odes of d nese Cul assion ar lly how t sed but al ty of the chat trans | iscussion ture thround debate, the languation lso what in origins of slates in a | and debate ugh reading the course age one lear offormation ca Modern Japa global societ | while and will ns to an be anese y. |
| Course Sched Course Conte Instruction M | lule, ents and Iethods | Culture, History and Language. How Language Changes Us: Neo-Whorfianism. Metaphor≠幽玄 and Aesthetics≠侘び寂び. Interiors. (1) Discussion of the Concept. Interiors. (2) Discussion of Reading One. Confessions. (1) Discussion of the Concept. Confessions. (2) Discussion of Reading Two. Sickness. (1) Discussion of the Concept. Sickness. (2) Discussion of Reading Three O. The Child. (1) Discussion of Reading Three The Child. (2) Discussion of Reading Four. Violence. (1) Discussion of Reading Four. Violence. (2) Discussion of Reading Five. Repetition. (1) Discussion of the Concept. | | | | | | | |
| Learning Act outside the C | ivities lassroom | During the semes lite research activ | ter students wil vities, and to wor | l be aske rk with a | d to read partner t | two or th to comple | nree novels ete a projec | , to conducti et, | on |
| Textbooks an References | d/or | "Origins of Mod 行人の「定本 日 textbook to ever course. | ern Japanese Li 本近代文学の起 y class. Additior | terature. 源 」。All nal class r | " By Koj students naterials | jin Karat should b will be a | cani and Storing their nnounced | canley Fish. own copy of t throughout t | 柄谷 :he :he |
| Grade Evalua | ation Policy | y Participation 30 %, Reading and Research Notebooks 20, Presentation 30 %, De 20 %. | | | | | | | bates |
| How to conta instructor our classroom (C Hours) Notice for Stu (Relevance to courses) | n room 5 My e-ma | 13. My off il address | fice hours s is yasui | s will be Tu ●tmu.ac.jp | esday 4 th | | | | |

| Course Title | S | eminar on Multicul | tural Education | | Course Number | | V5103 (F1246) | Credit | 2 | | |
|--|--|--|--|--|--|--|---|---|---------------------------------|--|--|
| Instructor | Hiroy | uki Nomoto | 1st Semester | Fri. | 2nd F | eriod | Ν | linami-Osaw Campus | ra | | |
| Course Desc Theme | ription / | In this course, will analyze collec cultural and ethn education, multic to share the infor Zealand and recon institutions.(Opti- students will be p | English will be ctively the role o ic diversity, focu ultural educatio mation about m mmended to ma on) The exchang laced as a base | used bas f educati sing on s n or Ainu ulticultuu ke plan to ge activiti of this co | ically as a m on in realizir econd langua peoples' edu al and multi o visit overse es between f urse. | dium g the s ge acc cation ethnic us edu reign | for instru society wi uisition, . Student education cational students | action. Stude ith respect to bilingual s will be req n in USA or 2 and Japanes | ints) uired New se | | |
| Knowledge & students can through the Course Objec | & Abilities a acquire class, ctives | Students will have knowledges and abilities to organize community action and to make policy in order to live in peace with the people having different culture and language. Especially, it focuses on better understanding about educational issues related to foreign children or their language acquisition. | | | | | | | | | |
| Course Sche Course Cont Instruction I | dule, ents and Methods | [Content and method] This course will analyze community development and educational issues in the community with a high density of foreign residents, and educational practices related to multicultural education, bilingual education and Ainu peoples' education. | | | | | | | | | |
| | | [Syllabus Planning] Detail plan will be discussed by students themselves. 1. Orientation and introduction 2. Regarding multicultural education: problem-posing and discussion 3. Proposal on theme (1) multicultural education 4. Proposal on theme (2) bilingual education 5. Inviting guest speaker about Korean schools in Japan 6. Discussion on Korean schools 7. Report on education for foreign children 8. Report on multicultural education 10. Report on international schools 11. The case of Paulo Freire Community School 12. Visit to international school 13. Visit to international school 14. Current situation of Ainu people and education 15. Guest speaker: Ainu people | | | | | | | | | |
| Learning Act outside the (| tivities Classroom | [Out-of-class lea Students will be r preparation. Writing some repo | rning】 required to read orts will be requ | indicated ired | l papers or m | ateria | ls out of c | lass as | | | |
| Textbooks ar References Grade Evalu | nd/or ation Policy | Not in particular Active class partic Final written repo | cipation ort | | | | | | | | |
| How to conta instructor ou classroom (Hours) | act the utside the Office | Office hour is set on Wednesday 4th. Students are required to send e-mail to nomoto@tmu.ac.jp before. | | | | | | | | | |
| Notice for Students Overseas study visit is optional. (Relevance to other courses) Overseas study visit is optional. | | | | | | | | | | | |

| Course Title | | History of Japa | nese Film | | C N | ourse umber | V | 75104 | Credit | 2 |
|--|--|--|---|--|--|--|----------------------------------|--|--|--------------------------|
| Instructor | Kent | aro Sudoh | 1st Semester | Thur | s. | 3rd Peri | od | Minam | ii-Osawa Car | npus |
| Course Descr Theme | iption / | This course offers periods: Silent, Cl history, students culture and politic centuries Japan. | an overview of lassical, New Wa will think critica cs, and thought | Japanese ave and (ally about and tech | e film Conter t the r nology | history by nporary p relationshi 7, in the tw | erioo erioo ip be venti | mining i ds. In ret tween an ieth and | ts four main racing the fi rt and indust twenty-first | lm cry, |
| Knowledge & students can through the o Course Object | z Abilities acquire class, tives | The main goals o learning about i sensibility throug appreciate the con | f the course are ts social, cultu gh analyzing fi nplexity of inter | : (1) to bo ral and lms from rcultural | ecome histor diffe excha | e familiar rical conte ernt perio nge in cin | with exts; ds, ema | Japane (2) to genres a tic art. | se film histo refine one's ınd styles; (| ry by own (3) to |
| Course Scher Course Conte Instruction M | lule, ents and fethods | Introduction Silent Period: From Cinématographe to Pure Film Movement I Was Born But(1932, Ozu Yasujiro) Analysis & Discussion Classical Period (1): Arrival of Talkie Classical Period (2): World War II and Golden Age of Cinema Rashomon (1950, Kurosawa Akira) Analysis & Discussion New Wave Period: Social Transformation and Rise of Independent Cinema Death By Hanging (1968, Oshima Nagisa) Analysis & Discussion Contemporary Period: From Postmodern to Digital Cinema Tokyo Sonata (2008, Kurosawa Kiyoshi) Analysis & Discussion Conclusion and Final Exam | | | | | | | | |
| Learning Act outside the C | ivities lassroom | Students are requ | uired to see Japa | inese film | ıs mei | ntioned in | clas | s. | | |
| Textbooks an References | d/or | No textbook is re subject, students - Donald Richie, A - Alistair Phillip Routledge, 2007. - 四方田犬彦『日ス | equired for this are advised to r A <i>Hundred Years</i> os, Julian Strin 本映画史 110 年』 | course. ead: s <i>of Japan</i> nger(eds 、集英社 | Howe n <i>ese F</i> s), <i>Ja</i> 新書、 | ver, for a <i>Tilm</i> , Koda a <i>panese (</i> 2014 年。 | dee nsha <i>Ciner</i> | per und a USA, 2 <i>ma: Tex</i> a | erstanding o 012. <i>ts and Con</i> | of the <i>texts</i> , |
| Grade Evalu | ation Policy | Grading allocation - Attendance and - Final exam: 50% | n is as follows: active participa 6 | tion: 50% | , | | | | | |
| How to conta instructor ou classroom (C Hours) Notice for Stu (Relevance to courses) | ct the tside the Office udents o other | After the class or by appointment via email: kentarosudoh@gmail.com | | | | | | | | |

| Course Title | | Ecolog | у | | C N | lourse umber | V (| 75105 (1429) | Credit | 2 |
|--|--|---|---|--|--|--|--|---|--|--------------------|
| Instructor | Adan | n L Cronin | 1st Semester | Mon | l . | 2 | | Minam | i-Osawa Car | npus |
| Course Desc Theme | ription / | This course takes a behavioural and strategies are the | an integrated a l evolutionary po product of envir | pproach t erspectiv ronmenta | to exp e. We al, soc | lore a rang will explo ial, and ev | ge of re ho roluti | ecologic w differ ionary co | al principals ent life-histo ontext | from ry |
| Knowledge & students can through the Course Objec | & Abilities acquire class, ctives | Through presenta will develop and a optimising their f biology through d | ation of a wide ra appreciation for itness, and an a eductive logic. | ange of ex the mult bility to u | xampl itude use th | es and int of factors i is knowled | erac invol lge t | tive exer ved in o o infer d | cises, studer rganisms etails of a sp | ıts ecies' |
| Course Schedule, Course Contents and Instruction Methods1. Ecology, natural selection and behaviour 2. Hypothesis testing 3. Economics and optimisation 4. Evolutionary arms races 5. Competition 6. Living in groups 7. Sexual selection 8. Parental care 9. Mating systems 10. Sex allocation 11. Social behaviour 12. Cooperation 13. Altruism and conflict 14. Review lecture 15. Exam | | | | | | | | | | |
| Learning Act outside the C | tivities Classroom | Students will hav from kibaco and r Students will be g | e access to lectu ead them before given occasional | re notes class. tasks to | prior perfor | to lectures rm outside | and of cl | should lass duri | download the | ese ster |
| Textbooks ar References | nd/or | Lectures will be n take their own no appropriate to do Ecology (4th ed) b Biology, a Global J | nade available a tes during lectu so. This course by Davies et al (V Approach (Camp | s ppt file res and e will follow Wiley-Bla obell et al | s on F exercis w the ackwel l 10th | Kibaco, tho ses and sho text: An Ir II). Studen ed) chapto | ough ould ntrod ts m ers 5 | students bring ma luction to ay also v 51-53. | are expecte aterials o Behavioura vant to consu | d to 11 11t: |
| Grade Evalu | ation Policy | Evaluation will be class discussions. | e based on exam | results, | perfo | rmance in | exer | cises and | l participatio | on in |
| How to conta instructor ou classroom ((Hours) | act the utside the Office | There are not set office hours: please visit my office if you have any questions or send queries by email. | | | | | | | | |
| Notice for St (Relevance to courses) | udents o other | This course is for students with some knowledge in basic ecology and/or evolutionary biology. The course will be conducted entirely in English. | | | | | | | | |

| Course Title | | General Bioch | nemistry | | C Ni | ourse umber | V | 75106 (1385) | Credit | 2 |
|---|--|--|--|-----------|---------|----------------|------|------------------------|--------------|------|
| Instructor | Hiroyuki Takasl | Kawahara • hi Okamoto | 1st Semester | Tue | | 3rd Peri | od | Minam | ii-Osawa Cai | npus |
| Course Descr Theme | iption / | Biochemistry is th properties of entin understanding of components of the relates to physiolo protein structure will discuss about post-translational | properties of entire cells, and we will study these molecules to achieve a basic understanding of how life works. We will begin by investigating fundamental components of the cell: proteins, carbohydrates, lipids. Next we discuss metabolism as it relates to physiology and the concept of energy conservation. We will then focus on protein structure as it relates to enzymatic catalysis. In the later half of this class, we will discuss about machineries that govern gene expression, protein translation and post-translational modifications to control the behavior of proteins. | | | | | | | |
| Knowledge & students can through the c Course Objec | Abilities acquire lass, tives | How does life work? In this class, we'll start trying to understand this question by learning about the molecules and processes that comprise it. | | | | | | | | |
| Course Schedule, Course Contents and Instruction Methods (Tentative) | | Basics in biochemistry Carbohydrates: Structure and function I Carbohydrates: Structure and function II Lipids: Structure and function I Lipids: Structure and function II Proteins: Structure and function I Proteins: Structure and function II Mid-term exam and summarization Nucleotides and nucleic acids Transcription and RNA splicing Summary of previous classes. Discussion and Tutorial Post-translational modification Summary of previous classes. Discussion and Tutorial Final exam, review and Q&A | | | | | | | | |
| Learning Act outside the C | ivities lassroom | Homework or rev | iew quiz will be | given aft | er eac | h class. | | | | |
| Textbooks an References | d/or | Handout will be provided. Recommended textbook: Campbell, Biology, A Global Approach, 10th edition (Pearson, ISBN 978-1292008653) , Lehninger Biochemistry, 6th edition (W. H. Freeman and company, ISBN 978-1-4292-3414-6). | | | | | | | | |
| Grade Evalua | ation Policy | Class Attendance | /quiz 20%, MId-† | term exa | m 40% | 6, Final e | exan | n 40% | | |
| How to conta- instructor out classroom (C Hours) | ct the tside the Office | You can contact lecturer anytime. 8-320, okamoto-takashi@tmu.ac.jp, 9-481b, hkawa@tmu.ac.jp | | | | | | | | |
| Notice for Stu (Relevance to courses) | adents other | | | | | | | | | |

| Course Title | | General Developn | nental Biology | | C N | ourse umber | V (| 75107 10421) | Credit | 2 |
|---|--|--|--|--------------------------------------|----------------------------|----------------------------|---------------|--------------------------|--------------------------------|----------------|
| Instructor | Kimiko Fu N | kuda•Takatori Jaohito | 1st Semester | Wed | l. | 5th Peri | od | Minam | i-Osawa Car | npus |
| Course Desc Theme | eription / | A developing emb time until it gives focus on the conce | ryo begins as a s rise to a highly ept of vertebrate | single cel organize e developi | l, fert ed mul ment. | ilized egg, ticellular | bece anir | oming m nal. In th | ore complex iis course, w | with e will |
| Knowledge & students car through the Course Obje | & Abilities n acquire class, ctives | Learning goals: B 1) Give a general 2) Explain genera 3) Understand rol | e able to: description of w l principles and les of cells in de | hat deve basic con velopmen | lopme ncepts it. | nt is all al of develoj | bout pme | nt. | | |
| Course Sche Course Cont Instruction I | edule, cents and Methods | Read the textbook and decide "today's topic" before class. Teach your "today's topic" to other students in class. Submit "Learning inventory" after class. 1. Introduction to development 2. Basic concepts of development 3. Life cycles of vertebrates 4. Experimental techniques in developmental biology 5. Review discussion and problem solving sessions of 2~4 6. Axes formation 7. Establishment of the germ layers 8. Induction of the early nervous system 9. Somite development. 10. Review discussion and problem solving sessions of 6~9 11. Differentiation of Germ cells 12. Fertilization 13. Sex determination 14. Review discussion and problem solving sessions of 11~14 15. Final exam and discussion | | | | | | | :" to | |
| Learning Ac outside the (| tivities Classroom | Study of the assig no "lectures questions, discuss | gned chapters p " in the cl sion and present | rior to at assical se tation. | tenda: ense. (| nce is mai Class will | ndat be ce | ory. The entered c | re will be on asking | |
| Textbooks an References | nd/or | Principles of Deve Martinez Arias (C given. | elopment 5th Ed Oxford Universit | lition by l y Press) i | Lewis is usee | Wolpert, d d as a text | Cher bool | ryll Tickl x. Also, h | e, Alfonso andouts will | be |
| Grade Evalu | ation Policy | 30% will be given exam. Only stude allowed to take th | to teaching dur nts who have pa le final exam. | ring classe articipate | es. 209 d in n | % to after- nore than | clas 2/3 c | s invento of the cla | ory. 50% to fi sses will be | nal |
| How to conta instructor ou classroom (Hours) | act the utside the Office | Students can c (takatori-naohito) | ontact Dr. Fu l@tmu.ac.jp) for | ukuda (1 • personal | kokko l discu | @tmu.ac.jj Ission. | p) (| or Dr. | Takatori | |
| Notice for St (Relevance t courses) | r Students ce to other | | | | | | | | | |

| Course Title | | General E | cology | | C N | course umber | V (| 75108 10422) | Credit | 2 | |
|---|--|---|--|---|--------------------------------------|---|---------------------------------|---|--|-------------------|--|
| Instructor | Ada | n L Cronin | 1st Semester | Mor | 1. | 5th Peri | od | Minam | i-Osawa Car | npus | |
| Course Desc Theme | ription / | Ecology is the stu between organism range of different course we provide | dy of relationsh is and their env tools to underst an introduction | ips – betv ironment tand broa n to the fi | ween o . The .d-sca .eld of | organisms study of e le and sma ecology | and colog all-so | other or gy incorp cale relat | ganisms, and orates a wid ionships. In | d e this | |
| Knowledge & students car through the Course Obje | & Abilities a acquire class, ctives | This course provi- will establish a kn Ecosystems and F ecology is, how ec range of techniqu | les students wit nowledge base fo Invironments X ology can be stu es employed in o | th an intr or more a 142). Stu died at d ecology. | oduct dvanc dents ifferen | ion to the ced studies will devel nt levels, a | stud s in e op a und a | y of ecolo ecology (i n unders an overvi | ogy. This cou ncluding tanding of w ew of the wie | rse 'hat de | |
| Course Sche Course Cont Instruction I | dule, ænts and Methods | What is ecolog Evolution and The abiotic en The biotic env The biotic env The biotic env The biotic env Energy flux Food webs and Patterns in sp Molecular ecol Biogeography Evolutionary e Review lecture Exam | What is ecology? Evolution and ecology The abiotic environment: conditions and resources The abiotic environment: climate and the worlds biomes The biotic environment: lifecycles The biotic environment: niches and competition The biotic environment: spatial relationships and dispersal Energy flux Food webs and trophic ecology Patterns in species richness Molecular ecology Biogeography Evolutionary ecology Review lecture Exam | | | | | | | | |
| Learning Ac outside the (| tivities Classroom | Students will hav from kibaco and r Students will be g | Students will have access to lecture notes before lectures and should download these from kibaco and read them before class. Students will be given occasional tasks to perform outside of class during the semester | | | | | | | | |
| Textbooks an References | nd/or | The recommended ed.) published by Biology: a Global chapters 51-56. | d text book for th Wiley (ISBN: 97 Approach by Ca | his cours 78-0-470- mpbell e | e is Es 90913 t al 10 | ssentials o -3). Studer 0th ed. (ISI | f Eco nts r BN: | ology by nay also 978-1-29 | Begon et al (want to cons 2-00865-3) | 4th sult | |
| Grade Evalu | ation Policy | This course will b (20%). | e assessed base | d on resu | lts of a | an exam (8 | 80%) | and in-c | lass particip | ation | |
| How to conta instructor ou classroom (Hours) | act the utside the Office | There are not set office hours: please visit my office if you have any questions or send queries by email. | | | | | | | | | |
| Notice for St (Relevance t courses) | cudents o other | This course will be conducted entirely in English. Students are expected to be able to follow lessons in English and contribute to in-class discussion and question-and-answer sessions. | | | | | | | | | |

| Course Title | | General Molecular Biology Course V5109 Number (10387) Credit | | | | | | | 2 | | |
|---|--|---|--|---|---------------------------------------|--|----------------------------------|--|---|-------------------------|--|
| Instructor | Kar | nae Ando | 1st Semester | Mon | | 4th Peri | od | Minam | i-Osawa Caı | npus | |
| Course Desc Theme | ription / | This course is to p variation in living | provide students g organisms. | with the | basic | e principle | s of § | genes, he | eredity, and | | |
| Knowledge & students can through the Course Objec | & Abilities acquire class, ctives | At the end of this they do, (2) How t Topics include DN mutation and role expression. | course, student to analyze DNA, IA structure, rep es of mutation in | s will be a and (3) v olication a genetics | able to what c and re a, and | o describe can be lear ecombinat: molecular | (1) w rned ion, r r med | vhat gen from ger molecula chanisms | es are and w netic informa r mechanism s of gene | rhat ation. ns of | |
| Course Scher Course Cont Instruction N (Tentative) | dule, ents and Methods | DNA structure DNA replication Molecular meel Mutagens indu What mutation Gene expression Gene expression Review and minipartic mathematical structure Digital analysis Digital analysis Analyzing Gen Gene regulation Gene regulation Review and final | DNA structure DNA replication and recombination Molecular mechanisms of mutation Mutagens induce mutations What mutation tell us about gene function Gene expression: Transcription Gene expression: Translation Review and mid-term exam Digital analysis of DNA Digital analysis of DNA, cont. Analyzing Genomic Information Gene regulation Gene regulation, cont. Gene regulation, cont. Review and final exam | | | | | | | | |
| Learning Act outside the C | tivities Classroom | Homework or rev | iew quiz will be | given aft | er eac | h class. | | | | | |
| Textbooks ar References | nd/or | Hartwell, et al., C Campbell, Biology | enetics: From C y, A Global Appro | enes to (bach, 10t | Genon h edit | nes, 5th Eo ion (Pears | ditio onIS | n. SBN 978 [.] | 1292008653 |). | |
| Grade Evalu | ation Policy | Class attendance | and assignment | ; 30%, Mi | d-terr | n exam 35 | 5%, F | Final exa | m 35% | | |
| How to conta instructor ou classroom ((Hours) | act the atside the Office | Office hour: Wednesday afternoon, 1-2:30pm. Or, e-mail to k_ando@tmu.ac.jp for an appointment. | | | | | | | | | |
| Notice for St (Relevance to courses) | udents o other | | | | | | | | | | |

| Course Title | Cell | Biology (General ed | lucation subject) | | Course V Number (1 | | | 5 110)140) | Credit | 2 |
|---|--|--|---|---------------------------------|-------------------------------|---------------------|-----------------------|------------------------|-------------------------------|----------|
| Instructor | Naohito Ta | ıkatori ∙ Satomi Fakeo | 1st Semester | Μ | lon. | 6th P | eriod | Mi | nami-Osawa | ι |
| Course Descr Theme | iption / | The cell is the fur with core concept advanced courses | damental unit o s and definitions in other fields o | of life. s in cel f biolo | This intı 1 biology gy. | roducto , which | ry cour are ste | se will p pping-st | rovide studer ones to more | nts , |
| Knowledge & students can through the c Course Object | Abilities acquire lass, tives | At the end of this functions of each | course, student organelle and (3 | s will l) how | be able to cells are | o descri integra | ibe (1) s ated in | structure multicell | of a cell (2) ular organis | ms. |
| Course Sched Course Conte Instruction M | ule, nts and lethods | The World of the Cell 1. Introduction to Cells 2. Cells: The Fundamental Unit of Life 3. Chemical Components of Cells 4. Summary of previous classes. Discussion and Tutorial 5. Basic knowledges on DNA 6. Chromosomes: its structure and functions 7. Summary of previous classes. Discussion and Tutorial 8. Review and Mid-term exam 9. DNA Replication 10. DNA Repair 11. DNA Recombination 12. Summary of previous classes. Discussion and Tutorial 13. From DNA to Protein: How Cells Read the Genome 14. Summary of previous classes. Discussion and Tutorial 15. Review and Final exam | | | | | | | | |
| Learning Action outside the C | ivities lassroom | Classes will be ma textbooks etc.) wi | ainly discussion ll be necessary t | on eac o prod | ch week's uctively | s topic. partici | Prepar pate in | ation for the class | class (readin 3. | ng of |
| Textbooks and References | d/or | Powerpoint files a the Cell. For furth | and handouts wi her reading: Albo | ll be d erts, et | istribute t al., Ess | d. Refe ential (| erence: 1 Cell Bio | Becker et ology. | t al., The Wo | rld of |
| Grade Evalua | ation Policy | Participation in d | iscussion 30% | , Mid- | term exa | ım 35% | , Final | exam 35 | % | |
| How to contact instructor out classroom (O Hours) Notice for Stu (Relevance to courses) | ontact the or outside the n (OfficePlease schedule appointment prior to visiting the lab. takatori-naohito1[at]tmu.ac.jp change [at] to @or Students ice to other | | | | | | | | | |

| Course Title | | Cell Biology (Specia | alized subject) | | C N | ourse umber | V (| 75111 (1392) | Credit | 2 | |
|--|--|---|--|--|---|---|----------------------------------|---|--|--------------|--|
| Instructor | Naohito Ta | ıkatori • Satomi Fakeo | 1st Semester | Wed | | 1st Peri | od | Minam | ii-Osawa Car | npus | |
| Course Descr Theme | ription / | This course will p understand how of signaling mechan be given reading/v assignments in th | rovide students ells are organize ism. The first he viewing materia le classroom. | with con ed, with e alf of the ls before | cepts empha class the cl | and defini asis on int will be a fl ass and w | tions racel ippe ill ta | s in cell l llular tra d classro .ckle que | biology to hel officking and bom: students stions and | lp s will | |
| Knowledge & students can through the o Course Objec | a Abilities acquire class, ctives | At the end of this are trafficked, (2) | course, student how information | s will be an flows ir | able to the c | o describe cell, and (3 | (1) h 3) hov | now cellu w cells d | lar compone ivide. | nts | |
| Course Sched Course Conte Instruction M | dule, ents and Aethods | Cellular and Mole 1. Control of Gene 2. Control of Gene 3. Summary of pr 4. How Genes and 5. How Genes and 6. Modern Recom 7. Summary of pr 8. Mid-term exam 9. The Cell Divisi 10. The Cell Divisi 11. Summary of p 12. Sexual Reprod 13. Cellular Com 14. Summary of p 15. Review and Find Classes 1-7 will b | ecular Biology Expression: Re Expression: Po evious classes. I l Genomes Evolv binant DNA Tec evious classes. I on Cycle: Regulation Cycle: Mitos revious classes. luction and the nunities; Tissue revious classes. inal exam | egulation ost-transc Discussion ve: Mutat ve: Epige hnology Discussion atory fact sis and M Discussion Power of s, Stem (Discussion Discussion | of Tra criptio n and tion an netic f n and ors ceiosis on and Cells a on and con and | anscriptior nal regula Tutorial nd Repair factors Tutorial d Tutorial d Tutorial cics and Cancer d Tutorial eek's topic. | n tion r | | | | |
| Learning Act outside the C | ivities lassroom | Preparation for cl during class. | ass (reading of t | extbooks | etc.) | is necessa: | ry fo | r discuss | ion of topics | | |
| Textbooks an References | .d/or | Alberts et al., Ess class. For further Alberts et al., Mo | ential Cell Biolo reading and ref lecular Biology o | egy, 4th eo erence, of the Cel | dition. l, 5th | . Textbook Edition. | is re | equired f | or preparatio | on for | |
| Grade Evalu | ation Policy | Contribution to di | scussion during | class 30 | % , Mi | id-term ex | am : | 35%, Fin | al exam 35% |) | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | Please schedule a takatori-naohito1 change [at] to @ | Please schedule appointment prior to visiting the lab. takatori-naohito1[at]tmu.ac.jp, or aigaki-toshiro[at]tmu.ac.jp change [at] to @ | | | | | | | | |
| Notice for Str (Relevance to courses) | udents o other | | | | | | | | | | |

| Course Title | | General Biol | ogy I B | | N N | ourse umber | V5112 (I0383) | Credit | 2 | | |
|--|--------------------------------------|--|--|--|--|--|--|---|---------------------|--|--|
| Instructor | Aya Takal F | hashi • Kimiko ukuda | 1st Semester | Tue | • | 4th Peri | od Minam | ni-Osawa Ca | mpus | | |
| Course Descrij Theme | ption / | The cell is the bas about 4 billion yes beginning of your are expected to un activity at the mo followed by "Gener semester. | sic unit of life ar ars ago, and has learning as a fr nderstand how t lecular level bas eral Biology IIB" | id it is sn s changed reshman i he cell liv sed on ph c, which i | nall, fi to th n the ves. F ysics nvolve | ragile and e current v departmen or this, you and chemi es basic cel | complex. It various appe nt of Biologic 1 have to un stry. This co 1 biology, in | t has evolved arance. At th cal Science, y derstand cell urse will be the second | l ne you l | | |
| Knowledge & A students can a through the cl. Course Object | Abilities acquire ass, ives | This class involve biology analytical 1. To understand 2. To understand 3. To understand 4. To understand 5. To understand 6. To develop a p | s basic molecula ly. Followings a basic molecular activity of cells biological phen structures and basic mechanis roactive attitude | ar biology re details r biology. based or omenon o functions ms of bio e in class | of the of the physical solution of ma synthe and b | e cells to u e objectives ics and che d by molect ajor macro esis of mac become a se | nderstand v s. emical princ ular compou molecules in cromolecules elf-directed l | arious fields iple. nds. living organ s. earner. | of iisms. | | |
| Course Schedu Course Conter Instruction Me | ule, nts and ethods | First half (by Dr. 1 Why and how Various fields Similarity and Bioelements a Biological mole Enzyme reacti The structure Second half (by D Introduction; V Basic structur DNA Replicati Translation: fr Control of gen The evolution Comments and | Takahashi) you learn biolog of biology and th diversity in cel nd chemical bon ecules and their ons and free end and function of r. Fukuda) What is DNA? e of DNA on and repair from DNA to Ri rom RNA to prot e expression of the genome d final exam | y neir goals ls interacti ergy proteins NA ein | on in | solution | | | | | |
| Learning Activ outside the Cla | vities assroom | Repetitive text re | ading is require | d for und | ersta | nding espe | cially for the | e final exam. | | | |
| Textbooks and References | /or | Required text: Supplies: we way | Essential Cell l vill give you han | Biology fo douts if 1 | orth eo needeo | dition d. | | | | | |
| Grade Evaluat | tion Policy | Coursework will be weighted as follows:1. Class attendance/participation and assignments50%2. Final exam50%One can acquire credit when he/she gets more than 60%. | | | | | | | | | |
| How to contact the instructor outside the classroom (Office Hours)For any questions contact anytime with the instructors by e-mail or kibaco the instructor by e-mail or kib | | | | | | | baco. | | | | |

| Notice for Students (Relevance to other courses) | SUGGESTIONS FOR SUCCESS This course emphasizes on questioning- and thinking-based learning but not on knowledge-based learning. Some students who did well in high school courses and exams where memorizing information and knowledge were most important may find some difficulties in this course. Such students are recommended to learn a positive attitude first, which includes thinking and questioning in the class, and making a connection among new and old knowledge to understand a |
|--|---|
| | complex system in the cell. This class is for freshmen in the department of Biological Science. We recommend another General Biology class, "General Biology IA" for students belonging other departments and courses. |

| Course Title | | General Taxonomy Course V5113 Number (10389) Credit 2 | | | | | | | | |
|--|--|---|--|---|--|---|---------------------------------|--|--|------------|
| Instructor | Katsuyuki Mu | Eguchi • Noriaki urakami | 1st Semester | Wed | l. | 4th Peri | od | Minam | i-Osawa Car | npus |
| Course Desc Theme | ription / | Taxonomy and sy Biological Science important and ind taxonomy and phy organisms and bio | stematics are the s. In the modern dispensable. In t ylogenetic system ogeography will | e studies n system chis lectu matics as be introd | of bio atics, re, ba well luced. | odiversity, phylogene sic princip as biodive | and tic a oles a rsity | thus mo pproache and proce of the m | st basic field es are also edures in aajor groups | s in of |
| Knowledge & students can through the Course Objec | & Abilities a acquire class, ctives | Upon completion 1. Explain the bas 2. Explain the cer on parsimony crit 3. Recognize diver | of the class, stud sic principles of ntral concepts ar erion csity of the majo | dents wil taxonomy nd princip r groups | l be al y, clas ples of of org | ble to: sification a f phylogen ranisms | and etic | nomencla analysis, | ature especially b | ased |
| Course Sche Course Cont Instruction I | dule, ents and Methods | Introduction Cladistics and phylogenetic trees Phylogenetic inference with parsimony Phylogenetic analyses based on molecular data Reliability of the obtained tree Character evolution based on molecular tree Review and mid-term examination Plant diversity Fungi diversity Aims and needs of taxonomy Nomenclature and hierarchical classification Biological species concept and speciation in animals Diversity of animals Geographical distribution of animals Review and Final examination | | | | | | | | |
| Learning Act outside the (| tivities Classroom | Submission of rep required after eve | oort (A4 1 page) ery class. | , which w | as pro | epared at l | hom | e as hom | ework, is | |
| Textbooks ar References | nd/or | Baum, D.A and S Biology. Roberts a Reece J.B. et al. 2 CA. | mith, S.D. 2012. and Company Pu 1013. Campbell I | Tree Thi Iblishers, Biology. F | inking Gree Pearso | g. An Intro nwood Vil n Benjami | duct lage in C | tion to Pl , CO. ummings | nylogenetic 9, San Franci | isco, |
| Grade Evalu | ation Policy | Grades will be bas and final written | sed on class part examinations (8 | cicipation 60%). | . (20%) |) and your | ave | rage scor | e of the mid | term |
| How to conta instructor ou classroom ((Hours) | act the atside the Office | Office hour: Wedr | nesday 13:00 - 14 | 4:30 | | | | | | |
| Notice for St (Relevance to courses) | o other | | | | | | | | | |

| Course Title | | Molecular Biology Course V5114 Number (I435) Credit | | | | | | | | 2 | |
|---|---|---|--|--|---|---|--|----------------------------------|---|-------------|--|
| Instructor | Takashi Ok | amoto • Tsunaki Asano | 1st Semester | Tue | | 1st Perio | od M | inam | ni-Osawa Car | npus | |
| Course Desc Theme | ription / | In this course, we events during the | study and discu life cycle in ani | uss the m mals and | echanisr l plants. | ms in dev | velopme | ntal | and physiolo | ogical | |
| Knowledge & students car through the Course Obje | & Abilities 1 acquire class, actives | The first half (Ins molecular pathwa of body structures environmental st | structor: Tsunak ays for developm s and response (imuli. | i Asano) iental and physiolog | : In the o d physio gical, me | class, we ological e etabolic a | study a vents, in und beha | and o ncluo avior | liscuss about ling construc al) against | ; ;tion | |
| | | The second half (I developmental an flower formation (embryogenesis, se mechanisms in th | Instructor: Taka Id physiological (developmental eed formation, o lese events. | shi Okan events, ir phase cha ccurs. In | noto): Du ncluding ange), ga the class | uring life g seed gen ;ametoge: ss, we stu | e cycle in rminatio nesis, do idy and | n anş on, v ouble discu | giosperms, egetative gro e fertilization uss the | owth, 1, | |
| Course Sche Course Cont Instruction I | dule, ents and Methods | Animal body pl Extracellular m Insects as an ex Response/adaption Body color pattion Defense agains Convergence in Mid-exam and Body plan of pl Plant cells: To Seed germination Reproductive groups Reproductive Final-exam and | Animal body plans/Construction of body structures Extracellular matrix/Extra-cellular signaling Insects as an example of successful animal Response/adaptation against environments Body color patterns and associated genes Defense against pathogens Convergence in adaptations Mid-exam and summarization Body plan of plants Plant cells: Totipotency Seed germination Reproductive growth Reproductive growth Fertilization and seed formation | | | | | | | | |
| Learning Ac outside the (| tivities Classroom | | | | | | | | | | |
| Textbooks an References | nd/or | Mechanisms in Pl | lant Developme | nt, Black | well Pub | blishing: | Handoı | ıt wi | ll be provide | d. | |
| Grade Evalu | ation Policy | Class Attendance | /quiz 20%, MId- | term exa | m 40%, | Final e | xam 40 | % | | | |
| How to conta instructor ou classroom (Hours) | act the utside the Office | You can contact le Asano: 8-422, asa Okamoto: 8-320, c | You can contact lecturers anytime. Asano: 8-422, asano-tsunaki@tmu.ac.jp Okamoto: 8-320, okamoto-takashi@tmu.ac.jp | | | | | | | | |
| Notice for St (Relevance t courses) | tudents to other | | | | | | | | | | |

| Course Title | | Special Lecture | Special Lecture in Biology aCourse NumberV5115 (I434)Credit | | | | | | | 1 |
|--|--------------------------------------|---|--|--|---------------------------------------|----------------------------------|-------------|------------|--------------|-------|
| Instructor | Yoko | Kakugawa | 2nd Half of 1st Semester | Thu | | 1st Peri | od | Minam | ii-Osawa Car | npus |
| Course Descri Theme | ption / | In this class we le textbook chapters | arn the evolutio and recent pap | onary biol ers togetl | ogy or her. | n species a | ind s | peciation | ı by reading | some |
| Knowledge & students can a through the cl Course Object | Abilities acquire ass, ives | Students will be a | able to discuss th | ne proces | ses of | species di | vers | ification. | | |
| Course Sched Course Conter Instruction M | ule, nts and ethods | 1) What are speci 2) What barriers 3) Barriers to gen 4) What happens 5) Why do rates o 6) Uncovering hid 7) Review | es? What is the s to gene flow resu e flow: Keeping when newly form f speciation vary lden species. | genetic b ult in spe species a med spec: ? | asis o ciation part. ies con | f speciatio n? ne into co: | n? ntac | t? | | |
| Learning Action outside the Cl | vities assroom | Students are requ prepares some ha | uired to read som .nd-out material | ne textboo s for the | ok cha class. | pters and | pap | ers at ho | meThe instr | ucter |
| Textbooks and References | l/or | The instructer pre- | epares some har | nd-out ma | aterial | ls for the c | lass | | | |
| Grade Evalua | tion Policy | Essay 50%. Active chapters and pap | e participation 5 ers at home and | 0% (Stud give sho | lents a rt pres | are require sentations | ed to s) |) read soi | me textbook | |
| How to contact instructor out classroom (O Hours) | t the side the ffice | Yoko KAKUGA e-mail:kakugawa Wednesday 13:00 | 4WA Rm. 1 @tmu.ac.jp to 15:00. | .07, M | akino | Herba | riun | 1. | (ex.2723) | |
| Notice for Stu (Relevance to courses) | dents other | | | | | | | | | |

| Course Title | | Geneti | cs | | C Ni | ourse umber | V | /5116 (I423) | Credit | 2 |
|---|--|--|---|--|------------------------------------|---------------------------------------|----------------------|-------------------------------------|--|-----------------|
| Instructor | Kouichiro Ta |) Tamura • Aya kahashi | 1st Semester | Fri | | 2nd Peri | iod | Minam | ii-Osawa Cai | npus |
| Course Descr Theme | ription / | This course cover which focus on the evolution is regard which various fact students are exper- from the view of pro- to the genetic mathematics | which focus on the genetic mechanisms of organismal evolutionary genetics, evolution is regarded as the changes of genetic makeup of organismal population, on which various factors like mutation, natural selection and random drift have effects. The students are expected to learn how organismal evolution is elucidated at molecular level from the view of population and evolutionary genetics, and how these factors contribute to the genetic makeup of organismal populations. | | | | | | | |
| Knowledge & students can through the c Course Objec | z Abilities acquire class, ctives | By the end of the sequences and the and to understand changes at molect | course, the stud e factors contrib d how mutation ular and organis | lents show uted to th , natural smal leve | uld be hose cl select ls. | able to es hanges du ion and ra | tima ring indo | ite the ch the cour m drift c | nanges of DN rse of evoluti ontribute to | IA on the |
| Course Schedule, Course Contents and Instruction Methods 1. Comparative sequence analysis 1: Pattern of mutation (by KT) 2. Comparative sequence analysis 2: Pattern of natural selection (by KT) 3. Comparative sequence analysis 3: Detecting natural selection part 1 (by KT) 4. Neutral evolution and evolution by natural selection (by KT) 5. Comparative sequence analysis 4: Inference of phylogeny (by KT) 6. Comparative sequence analysis 5: Inference of ancestral sequence (by KT) 7. Molecular clock (by KT) 8. Review and exam (by KT) 9. Genetic variation (by AT) 10. Population size and between population divergence (by AT) 11. Detecting natural selection part 2 (by AT) 12. Detecting natural selection part 3 (by AT) 13. Quantitative trait inheritance (by AT) 14. Genetic process of speciation (by AT) 15. Review and exam (by AT) | | | | | | | | T) (by KT) y KT) | | |
| Learning Act outside the C | ivities Ylassroom | Students are expe Students should v | ected to review a work on assignm | and study aents give | mate en dur | rials relat ring the cla | ed to ass. |) the topi | c after each | class. |
| Textbooks an References | d/or | Handouts will be | provided during | g the class | s. | | | | | |
| Grade Evalu | ation Policy | Final grade will b final exams (50%) | e determined by). | y class pa | rticipa | ation/assig | gnm | ents (50% | %) and midte | rm, |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | Office hour is no anytime. | ot allocated, but | t student | s can | make ap | poir | itments | by email | |
| Notice for Stu (Relevance to courses) | udents o other | The students are recommended to take General Genetics 1 and General Genetics 2 in advance. | | | | | | | | |

| Course Title | | Animal ecology an | Animal ecology and diversityCourse NumberV5117 (X0148)Credit | | | | | | | 2 | |
|---|--|---|---|---|---|--|--|--|--|---------------------------------|--|
| Instructor | Adan | n L Cronin | 1st Semester | Т | 'ue. | 6th F | eriod | Mi | inami-Osawa | 1 | |
| Course Descr Theme | ription / | Animals exhibit r explain this diver are some animals these and other q | emarkable diver sity? Why are so found everywho uestions around | rsity of ome ar ere wh this t | form, b imals or ile other heme. | ehaviou groups s only e | ar and l s more exist in | ifestyles diverse t one plac | . How do we han others? ` e? We will ex | What plore | |
| Knowledge & students can through the Course Object | z Abilities acquire class, ctives | The aim of this co study of animal d course, students s regarding the nat | urse is to introd iversity and eco should be able to ural world of an | luce st logy, u) genei imals. | udents t sing a ca ate and | o biolog ise-stuc investi | gical con ly appr gate th | ncepts as oach. At eir own c | ssociated wit the end of th questions | h the le | |
| Course Schee Course Conte Instruction M | dule, ents and Aethods | Lessons will be structured around group work and open discussion built around three general themes. Students will collectively decide the specific topic of the next lecture each time, and prepare their own materials on the chosen topic to share in class. Thes materials will be combined into an 'information portfolio' on the topic of interest, whice will go into a complete information volume for the course each year. | | | | | | | | | |
| | | Each lecture will in the previous le animals, ecosyste discussion on the 'diversity' might e spiders in relation | have a specific f cture. The cours ms and diversity behaviour, ecolo examine why tro n to their ecolog | ocus d e will y. Lect ogy and pical r y. | etermine be struct ure subje l life-his eefs are | ed by st tured a ects und tory of so spec | round t round t der 'ani the pla tiose, or | (nomina hree prin mals' mig typus. A the vari | ations and vo nciple theme ght thus incl lecture unde ety of forms | tes) s: ude a er of | |
| | | Lecture outline: 1. Introduction 2 – 5: Animals 6 – 9: Ecosystems 11 – 13: Diversity 14 - 15: Synthesis | / open discussio | on | | | | | | | |
| Learning Act outside the C | tivities Classroom | Students will be semester | given occasiona | l tasks | to perf | orm ou | tside of | f class dı | aring the | | |
| Textbooks an References | ıd/or | Students are expected collective information material in class at text book, and as General biology to 978-1292008653) | ected to do their tion pool in clas and guidance on topics may rang ext books such a may be helpful. | own in s. The the un e wide s Cam | nformati lecturer se of info ly, a spe pbell's 'I | on colle will pr ormatio cific bo Biology: | ection a covide a n sourc ok is ur a globa | nd contr dditiona ces. Ther nlikely to al approa | ibute this to l relevant e is no specif be useful. ach' (ISBN | the ic | |
| Grade Evalu | ation Policy | Students will be a terms of building | graded based on each portfolio. | contri | butions | to lectu | res thr | oughout | the semester | r in | |
| How to conta instructor ou classroom (C Hours) | act the tside the Office | There are not set send queries by e | office hours: ple mail. | ase vis | it my of | fice if y | ou have | e any que | estions or | | |
| Notice for St (Relevance to courses) | udents o other | This course will be conducted in English. Students should prepare all materials in English and will have the opportunity to discuss among themselves and with the general class in English. | | | | | | | | | |

| Course Title | | Gene Scie | ence | | C Ni | ourse umber | 75118 (1436) | Credit | 2 | | | |
|---|---|--|--|-------------------------|-------------------|--------------------------|------------------------|-------------------------|----------------------|------|--|--|
| Instructor | Takaomi Sak | ai•Toshiro Aigaki | 1st Semester | Thu | | 2nd Peri | iod | Minam | i-Osawa Caı | npus | | |
| Course Desc Theme | ription / | The molecular gen Prof. Toshiro Aiga | netic basis of bio ki (Part1) and A | ological p Associate | henon Prof. ' | iena. Th Takaomi S | is le Saka | cture wil i (Part2) | l be taught k | у | | |
| Knowledge & students car through the Course Obje | & Abilities n acquire class, ctives | This lecture will p mechanisms of co | provide opportur mplex biological | nity to lea processe | arn ho es, suc | w to use g h as devel | enet opm | tics to un ent or be | derstand ehavior. | | | |
| Course Sche Course Cont Instruction | edule, cents and Methods | [Part1] 1. Genes and mut 2. Genetic manipu 3. Genetic manipu 4. Genetic dissect 5. Genetic dissect 6. Genetic interace 7. Disease models 8. Review and exa [Part2] 9. What is "Neurog 10-11. General rep 12-14. Neurogene 15. Neurogenetics | [Part1] 1. Genes and mutations 2. Genetic manipulation in model animals I 3. Genetic manipulation in model animals II 4. Genetic dissection of signal transduction pathways I 5. Genetic dissection of signal transduction pathways II 6. Genetic interaction 7. Disease models 8. Review and exam [Part2] 9. What is "Neurogenetics" ? 10-11. General remarks on circadian rhythms 12-14. Neurogenetics in circadian rhythms 15. Neurogenetics in animal behaviors | | | | | | | | | |
| Learning Ac outside the 0 | tivities Classroom | | | | | | | | | | | |
| Textbooks as References | nd/or | Handouts will be | distributed to st | udents ii | n class | ses. | | | | | | |
| Grade Evalı | ation Policy | Presentation and examinations 40% | discussion 30%, 6. | Quiz or | Repor | t submissi | ion 3 | 80%, Mid | term and fin | al | | |
| How to cont instructor of classroom (Hours) | act the utside the Office | e-mail. Particular office hour is not allocated, but students can make appointments by e-mail. | | | | | | | | | | |
| Notice for St (Relevance t courses) | It is advisable to take "General Genetics" before you take this course. In the second part of this course, there will be a quiz at the beginning of the every class. Thus, you should review the previous lecture. | | | | | | | | | | | |

| Course Title |] | Introduction to Ene | rgy Chemistry | | Co Nu | ourse ımber | V (| /5119 (K465) | Credit | 2 | | | |
|---|---------------------------------------|---|--|--|--|---|---|---|--|-----------------|--|--|--|
| Instructor | Jacob Y | an Mulyana | 1st Semester | Thur | s. | 1st Peri | od | Minam | i-Osawa Car | npus | | | |
| Course Descri Theme | ption / | The introduction and covers chemi and practical aspo | to energy chemi cal thermodyna ects of renewabl | istry cour mics, end e and nor | rse use ergy co 1-rene | es English onservatio wable ene | n as on p ergy | the medi rinciples sources. | um of instru , forms of ei | action nergy | | | |
| Knowledge & students can a through the c Course Object | Abilities acquire lass, ives | Students will energies Through prob sources that a Students will sustainable en | gain the unders lem-based learn re appropriate f be able to expre nergy and enviro | ing, stud for sustai ss their c onment in | of the f ents w nable pritical n discu | fundamen vill develo environm understa ussion and | ntal a p the ent indir l in v | aspects o e awaren ng of the writing | f chemical ess of energ concept of | y | | | |
| Course Sched Course Conte Instruction M | ule, nts and ethods | I. Knowledge 1) - 2) Chemical th 3) - 4) Chemical a 5) - 6) Nuclear en 7) Mid-term exam | wledge Chemical thermodynamics and energy conservation principles Chemical and electrochemical energy Nuclear energy H-term exam | | | | | | | | | | |
| | | II. Problem-based 8) Impact of fossil 9) Group activitie 10) - 11) The choid 12) Group activitie 13) Group activitie 14) Assignment set | I. Problem-based learning 3) Impact of fossil fuels on the environment a) Group activities I (0) - 11) The choices of renewable energy technologies (2) Group activities II, Writing assignment preparation I (3) Group activities III, Writing assignment preparation II (4) Assignment submission and evaluation | | | | | | | | | | |
| Learning Acti outside the Cl | vities assroom | Students revie exam Students mus prepare for gr | ew the lecture a t organize a tim oup assignment | fter the c le for extr s | lass fo a grou | or the hom up activiti | newo es oi | rk, quizz utside th | es and mid-t | to | | | |
| Textbooks and References | l/or | P. Atkins and (2010) R. L. Murray G. Boyle, Ren University Pr Useful websit | J. de Paula, Ph and K. E. Holbe ewable Energy l ess (2012) es, scientific jou | ysical Ch rt, Nucle Power for rnals and | emistr ar Ene Susta l hand | ry, 9th Ed ergy, 7th I linable Fu louts | l, Ox Ed, I ıture | ford Uni Elsevier (e, 3rd Ed | versity Press 2015) , Oxford | 5 | | | |
| Grade Evalua | tion Policy | Attendance (5 Homework an Mid-term exa Assignment (5) | %) d quizzes (5%) m (40%) 50%) | | | | | | | | | | |
| How to contac instructor out classroom (O Hours) | t the side the ffice | Monday 10:30 - 1: | 2:00 or by appoin | ntment: y | vmulya | ana@tmu. | ac.jr |) | | | | | |
| Notice for Stu (Relevance to courses) | dents other | Students must re lecture session. H be taken at the st | Students must review the lecture content after each delivery and prepare for the next ecture session. Homework assignments will be given after the session and quizzes will be taken at the start of the class. | | | | | | | | | | |

| Course Title | | Cultural Psychology Course Number V5120 Credit 2 | | | | | ology Course V5120 Credit | | | | | | | |
|--|---|--|--|---|--|---|----------------------------------|--|--|-------------------|--|--|--|--|
| Instructor | Shiz | u Koyanagi | 1st Semester | Tue | | 2nd Peri | iod | Minam | i-Osawa Ca | mpus | | | | |
| Course Descr Theme | iption / | Living in a different country gives you a lot of opportunities to enjoy new things including new friendships. At the same time, however, it sometimes gives you physical and psychological stress. During your study abroad in Japan, you may face some situations in which you are not functioning very well or you are frustrated with the interaction with the people from different culture. The reason for such feelings could be acculturative stress, in other words, culture shock. | | | | | | | | | | | | |
| Knowledge & students can through the o Course Objec | Abilities acquire class, tives | By the end of this class, you will learn and acquire; Basic theories for Cultural Psychology Knowledge and skills to manage cultural differences and your emotion Cultural norms in Japan and its background The course will help your adjustment to Japanese study sojourns with deeper understanding of culture. | | | | | | | | | | | | |
| Course Sched Course Conte Instruction M | lule, ents and Iethods | Introduction Communication model Culture and emotion Analyse your experiences 1 Cultural simulation, Understanding cultural norms Understanding intercultural communication, your emotional reaction and behaviour Mid-presentation 1 Mid-presentation 2 Analyse your experiences 2 Analyse your experiences 3 Cultural patterns and dimensions Analyse your experiences 4 In-group & out-group, sense of boundary Final presentation 1 | | | | | | | | iour | | | | |
| | | To understand yo psychological stat In the classes, par with the teacher a | ur emotion and te by a workshop rticipants are re and classmates. | such stre o style. quired to | ss, we shar | e look into e your exp | you eriei | r experie nces and | nces and emotion in J | lapan | | | | |
| Learning Act outside the C | ivities lassroom | Every week, you v your experiences. Also, you will be e project consisting | write reports on engaged to inves of presentation | analysis tigate so s and a fi | of cul me cu nal re | ltural norm Iltural norm eport. | ns ai ms c | nd your e of Japan a | emotion base as your own | ed on | | | | |
| Textbooks an References | d/or | Reading articles v • Meyer, E. (2014 Global Business • Davies, R. & Ik Japanese Cultu • Ting-Toomey, S New York. Oxfo Detail will be ann | will be chosen fr) The Culture M s. New York, Pul eno, O. (2002) T tre. Tuttle Publis . & Chung, C. L. rd University P tounced in the cl | om sever: Iap: Brea blic Affain he Japan shing. (2012). U ress. ass. | al ma .king rs. uese M Under | terials inc Through t Iind: Unde rstanding] | ludii he Ii ersta Intei | ng: nvisible I nding Co rcultural | Boundaries o ontemporary Communica | of , ,tion. | | | | |

| Grade Evaluation Policy | Participation (attendance, assignments, weekly reports, discussion and group works) = 60%, Presentation = 20%, Final report = 20%, |
|--|---|
| (Office Hours) | Office hour: Tue. & Wed. PM. Send an email in advance. <u>shizuwk@tmu.ac.jp</u> |
| Notice for Students (Relevance to other courses) | For the detailed instructions, you must attend the first day of the class. Depending on the number of students and their cultural backgrounds, the above contents may change. |

| Course Title | I | ntroduction to Japa | anese Studies I | | C Ni | ourse umber | 7 | 75121 | Credit | 2 |
|---|--|---|--|---|--|--|--------------------------------------|---|---|----------------|
| Instructor | S.Koyanagi | , L.Sasaki, et al. | 1st Semester | Mon | | 2nd Peri | iod | Minam | i-Osawa Car | npus |
| Course Descri Theme | iption / | In this course, you and Tokyo from ac In the 1st semeste (1)Japanese Natu (2)Ikebana(flower (3)Bureau of Wate For each topic, it 1. Lecture A lecture is provid knowledge of the 2. Field trip We visit places rel on the topic, you 3. Presentation an Based on the lectur | to exp topics hool tan Go ts; ialist o er to u ch suc | olore some s; overnment on the issu nderstand h as interv on and rea | exc t t the view | nd gives real situ or obser | you basic ation. Deper vation. | an | | |
| Knowledge & students can a through the cl Course Object | Abilities acquire lass, tives | Through this court Introductory knot or Tokyo. Deep insight int Comprehensive | rse, you will lean lowledge about t to Japanese cult understanding | rn and ac technolog ture. of the top | quire; y, min pics in | id-set, or s Japan an | socia ad To | l system kyo. | unique to Ja | ıpan |
| Course Sched Course Conter Instruction M | ule, nts and fethods | Introduction (A Lecture on Japa Field Trip on Japa Field Trip on Japa Lecture on Ikel Field Trip on Ikel Lecture on Bur Field Trip on B Presentation Overview Please note that I fieldworks are on provided on the fi | pril 9) anese Nature ar apanese Nature bana (flower ar eau of Waterwon ureau of Waterwon ectures and pres Saturday, Sund rst lesson. | nd Satoya and Sato angemen rrangeme rks Tokyo vorks Tok vorks Tok sentation ay, or no | ama yama t) Oha ant) Ol o Metr ayo Me are h class | ara School hara Schoo opolitan C etropolitar eld on Mo day. The d | ol Gove n Go nday | rnment vernmen y 2nd per led sched | t riod, and dule will be | |
| Learning Acti outside the Cl | vities lassroom | You are required would be necessar | to work on report ry to prepare for | rts and pr classes a | resent and fie | ation for t eldworks. | he t | opics. So | me readings | |
| Textbooks and References Grade Evalua | d/or tion Policy | References and m Participation (con Presentation = 25 Reports = 25% | in the | e class. nents) = 5(|)%, | | | | | |
| How to contact the instructor outside the classroom (Office Hours) | | | | | | | | | | |
| Notice for Stu (Relevance to courses) | idents other | For the detailed in The detail of the of participants. P admission tickets | nstructions, you lectures and fiel articipants mus , food, etc. | a must att ldworks i st bear th | end t l s subj ne cos | he first da lect to cha t of fieldw | y of nge vork | the class dependin s, such ຄ | on April 9th ng on the nu as transporta | mber ation, |

| Course Title | Intercul | tural Communicat | tion | Cou: Num | rse ber | V5122 (X0145) | | Credit | 2 | | | | |
|--|-----------------------------|--|--|---|---|--|--|---|--|--------------------|--|--|--|
| Instructor | Shizu | Koyanagi 1st Semester Wed. 5th Period Minami-Osawa | | | | | | | | | | | |
| Course Description | on / | What factors are in Let's explore the a To understand pra- interact with stud Also, this class and 1. The lectures with cultural contacts in 2. Group project we this class. Each get fieldworks. 3. Collaborative of classmates will be 4. Your active par- must work on task | important to con answers to the c actical intercult lents from differ lopts several dif from an interdis vith members fr roup investigate nline classes wi e conducted. ticipation in dis ks outside of cla | mmuni uestio ural co cent cu ferent asics th asciplina om dif es their th unir cussio ss hou | icate with ns in thi ommunic Iltural ba approach neories of ary viewy ferent cu r chosen versities ns and gr rs. | n peopl s class. ation, t ckgrounes: f interc point. lltural topic re overse: roup we | e from o chis clas ind. ultural backgro elated to as and/o orks are | other cul os offers commun o Japane or group e require | tures? opportunitie nication and the main tas ese society by works with d. To do so, y | s to ks of 7 | | | |
| Knowledge & Abi students can acq through the class Course Objective | ilities uire s, es | By the end of this class, you will learn and acquire; • Basic theories for intercultural communication and cultural contacts • Skills and competencies to communicate with people from different cultures • Perspectives or viewpoints from other cultures and in global society | | | | | | | | | | | |
| Course Schedule Course Contents Instruction Meth | , and nods | Introduction: Communication experiment What is culture? Group work / online class Discussion on selected topics What is communication? Group project : team up, select a topic and set your schedule Group project : designing your research methods Communication styles Group project : mid-presentation Understanding intercultural communication Discussion on selected topics Competences for intercultural communication and the global world Final presentation 1 Final presentation 2 Review | | | | | | | | | | | |
| Learning Activiti outside the Class | ies sroom | Most of group works will be conducted outside of the class hours. You are required to work on weekly reports and other tasks. | | | | | | | | | | | |
| Textbooks and/or References | <u>.</u> | Reading articles will be chosen from several materials including: Ting-Toomey, S. & Chung, C. L. (2012). Understanding Intercultural Communication. New York. Oxford University Press. Newspaper articles Detail will be announced in the class. | | | | | | | | | | | |
| Grade Evaluation | n Policy | Participation (attendance, assignments, discussion, group project and work) = 50% Presentation = 25% Final report = 25% | | | | | | | | | | | |

| How to contact the instructor outside the classroom (Office Hours) | For the detailed instructions, you MUST attend the first day of the class. This class will be conducted in global English and you must use English for communication. No specific English score will be required, however, English ability to read and communicate is essential. Your active involvements in the class, discussion, and group works are required. Depending on the number of students and their cultural backgrounds, the above contents may change. |
|---|--|
| Notice for Students (Relevance to other courses) | Tue. & Wed. PM. Send an email in advance. shizuwk@tmu.ac.jp |

| Course Title | Sustaina Governar | bility Studies and G nce | 75123 | Credit | 2 | | | | | | | |
|--|--|---|--|---|------------------------|-----------------------------------|---------------|--------------------|---|---------------|--|--|
| Instructor | Lid | ia Sasaki | 1st Semester | Fri. | | 2nd Peri | od | Minam | i-Osawa Car | npus | | |
| Course Descr Theme | ription / | An introduction to cross-disciplinary Society; it focuses century and on th tackling environm perspectives of th equity in dealing | An introduction to contemporary global environmental change, the course represents a cross-disciplinary systems approach to the complex inter-relations between Nature and Society; it focuses on the challenges to promote sustainable development in the 21 st century and on the need for a comprehensive vision and international cooperation in tackling environmental degradation. The course offers political, economic and social perspectives of the environmental crisis, as well as introducing issues of justice and equity in dealing with environmental conflicts. | | | | | | | | | |
| Knowledge & students can through the o Course Object | z Abilities acquire class, ctives | The course will enable students to: (1) grasp the complexity of Earth's environment as a system; (2) gain familiarity with systemic thinking and the cross-disciplinary approach; (3) gain awareness of the scale and severity of the global environmental crisis; (4) develop a responsible attitude as citizens of the global community and potential leaders in their field. | | | | | | | | | | |
| Course Schee Course Conte Instruction M | lule, ents and Iethods | The course will co 1. Introduction 2. Earth as a d 3. The Dynami 4. Carryin 5. Human 6. Limits f 7. Global 1 8. 9. 10. Pollution 11. 12. Global envir 13. Student 14. Student 15. Conclusion | The course will consist of lectures, class discussion and group work. Introduction Earth as a dynamic, complex system The Dynamics of Human- Environment Interactions 4. Carrying Capacity and Ecological Footprint 5. Human Dimensions of Global Environmental Change 6. Limits to Growth and the Sustainable Development Concept 7. Global Environmental Issues 8. Society and Resources 1 9. Society and resources 2 10. Pollution 11. Global Climate Change: Al Gore documentary 12. Global environmental governance 13. Student Presentations 1 14. Student Presentations 2 | | | | | | | | | |
| Learning Act outside the C | ivities Classroom | Students are expe Reading assignme Research notes or | ecting to prepare ents on relevant a environmental | e: topics issues in | the st | udent's h | ome | country | /region | | | |
| Textbooks an References | d/or | Wright RT 2007: Meadows D. Rand Al Gore (2005): An | Environmental Pearson Prentic ders J. (2004): L Publishing n Inconvenient 7 | Science: e Hall imits to C Fruth (DV | Towar Growth 7D) | rd a Sust The 30- ⁻ | taina Year | able Fut Update | ure, 10 th Ed . Chelsea Gre | ition, een | | |
| Grade Evalu | ation Policy | Final Presentatio | n: 70% , Class P | articipati | ion: 209 | %, Attend | lanc | e: 10% | | | | |
| How to conta instructor ou classroom (C Hours) Notice for Str (Relevance to courses) | ct the tside the Office udents o other | Office hours: Thu | rsday 10:30-12:(| 00 | | | | | | | | |

| Course Title | | CourseV5124Number(X0034) | | | | | 2 | | | | | |
|---|--|--|--|--|---|---------------------------------|---------------------------------|-------------------------------|--|------------------|--|--|
| Instructor | Anne | Г | Tue. 1st Period Minami-Osawa | | | | | | | | | |
| Course Descr Theme | ription / | What strikes you around you in Jap those differences vocabulary to des you can adapt acc an open mind as This course uses a and interpersonal your blind-spots a self- and other-aw discussion & simu communication th | What strikes you as different between the people you grew up with as a child, the people around you in Japan now, and the people in countries you might visit in the future? Are those differences personal, cultural or both? This "Global Mindset" course gives you a vocabulary to describe such differences and introduces a range of communication skills you can adapt according to the person, culture and situation. Please bring curiosity and an open mind as well as your texts ;-) This course uses a systems view of communication that combines both a comparative and interpersonal approach to help you develop your global mindset. Do you know where your blind-spots are?! We look at cultural values from different points of view to increase self- and other-awareness. Mini, interactive lectures combine with student-led discussion & simulations to build a practical understanding of intercultural communication theory and help make a global mindset intuitive. | | | | | | | | | |
| Knowledge & students can through the o Course Object | z Abilities acquire class, ctives | Students will gain raise their aware skills related to n intercultural com | n knowledge of k ness about their on-verbal comm munication situ | xey cul own a unicat ations | tural dir nd other ion and | nensior rs' prefe negotia | ns and o erences. tion of | communi Student meaning | cation styles s will also le in ambiguou | and arn us | | |
| Course Sched Course Conte Instruction M | dule, ents and Aethods | Global & Jocal culture [Journal brief], A-S-K, EQ-SQ-CQ-GQ Simulation: Barnga Practice (Rules 1) Barnga Practice (Rules 2), Simulation 1 Barnga. Debrief 1 Barnga, Acculturation, Simulation 2 Barna. Debrief 2 Barnga. High and low context communication styles, SADFISH Hi context & low context Teamwork. [Presentation brief], Brief: Bonus! Hofstede, Cultural dimensions Simulation: Bonus! Debrief: Individualism & collectivism, Power distance Presentations & discussion TEAMS 1-2 [Submit Caizen.PPT or journal] Nadeshiko Part 1, 3Trans-Hepburn, 6 Tips for intercultural translation Nadeshiko Part 2, Rank #1 groups & listening-beyond-words Rosemary: #5 Rank Parson's Regional clusters Debrief Feminine-masculine; task-relationship dimensions; Presentations & discussion TEAMS 3-4 [Submit Caizen.PPT or journal] Simulation: Paper Tower, KiNouBi 機能美, Dream Team votes. | | | | | | | | | | |
| Learning Act outside the C | civities Classroom | | | | | | | | | | | |
| Textbooks an References | ad/or | Students are resp References includ Brislin & Yoshida Hofstede Softwar Goleman (2006) S Inkson & Dobbs (Martin & Nakaya Erin Meyer The (Stortie Figuring I Trompenaars Rid | oonsible for down le: Improving Inte e of the Mind Social Intelligend Cultural Intellig uma Intercultura Culture Map Foreigners Out ing the Waves o | nloadin rcultu ce ence al Com f Cultu | ng PDF o ral Inter municat ure | course r ractions | nateria Context | ls from U s | JRLs provide | ed. | | |

| Grade Evaluation Policy | 30% Class Participation Your personal contribution to discussions and opening space proactively for others to contribute. (attendance alone will not secure a pass). 30% Individual journal entry per week to reflect on an aspect of Japan/other country's culture. Caizen reflections on assignments & simulations/classwork. 30% Group presentation minute presentation in teams to compare one aspect of Japanese society with that of another country using dimensions from one of the course modules. 15 minutes discussion facilitation. |
|---|---|
| | 10% Peer evaluation based on 'Dream Team' votes for global project |
| How to contact the instructor outside the classroom (Office Hours) | Students can meet with the teacher before most classes from 08:30 and by email (email provided during the first class). |
| Notice for Students (Relevance to other courses) | The course will be delivered mainly in English with some Japanese to support understanding. The course will enhance both native and non-native English speakers' verbal and nonverbal international communication skills. All students' will become more confident adapting their communication style appropriate to the cultural context. Non-native English Speakers: No minimum score in English is required but you must be willing to speak (not just read and write) in English each week so that you can participate actively during class activities. Native and fluent English speakers: You will be encouraged to use 'international English' suitable for people from a range of different cultural and linguistic backgrounds and English levels. |

| Course Title | | Contemporary Japa | nese Society I | | C N | lourse umber | 7 | 75125 | Credit | 2 | | |
|--|--|--|---|--|--|---|--|--|---|------------------|--|--|
| Instructor | Yoko | o Kumada | 1st Semester | Tue | | 4th Peri | od | Minam | i-Osawa Car | npus | | |
| Course Descr Theme | iption / | This course is discussion-based and deals with ongoing issues in Japan. Based mainly on anthropological, ethnological and sociological studies, various topics relating to the contemporary Japanese society will be explored. | | | | | | | | | | |
| Knowledge & students can through the c Course Objec | Abilities acquire lass, tives | Students will learn about Japan from various aspects, such as culture, history and politics. In this process, one will also have an opportunity to reconsider his/her own culture and society, as a proper comparison is the key to the comprehensive understanding of any society. Therefore, students are expected to provide knowledge on their local culture(s) or any culture they are familiar with. | | | | | | | | | | |
| Course Sched Course Conte Instruction M | lule, ents and Iethods | Introduction How do we reference Socialization Geographical Forms of Worf Educational statistics Gender stratistics Popular culture Civil society at 10. Reconsidering Reconsidering Gender and statistics Gondury presentation | each "Contempor and classification and Generation ek in Cultural Ca system in Japan ification and fan ure and everyday and friendly aut g the wartime: 2 exuality in Japa exuality in Japa exuality in Japa | cary Japa on in Japa aal Variat apitalism (Sugimo nily in Ja y life in J horitaria <i>The Chrys</i> on (1) : Th on (2) : A | anese an an (He cions i in Ja to) pan (S apan (santh santh santh case o | Society": M endry) n Japan (S pan (Sugi Sugimoto) (Sugimoto in Japan (<i>emum and</i> tory of sex f sexual ir | Meth Sugi moto) Sugi 1 the 1 the ual i ndus | odologic: moto))) ? <i>Sword</i> r ; ssues try | al issues low (1) (Bene low (2) (Bene | edict) edict) | | |
| Learning Act outside the C | ivities lassroom | All students are required to complete the assigned readings, to participate in group discussions and to give presentations. | | | | | | | | | | |
| Textbooks an References | d/or | Sugimoto, Yoshid Melbourne: Ca Benedict, Ruth, 2 Books (ISBN-1 Hendry, Joy, 2013 York: Routledg [Suggested readir Allison, Ann, 1994 Tokyo Hostess CL | Sugimoto, Yoshio, 2014, An Introduction to Japanese Society (Fourth Editate Melbourne: Cambridge University Press. (ISBN-10: 1107626676) Benedict, Ruth, 2006(1946) The Chrysanthemum and the Sword, New York: Mark Books (ISBN-10: 0618619593). Hendry, Joy, 2013, Understanding Japanese Society (Fourth Edition), London and Myork: Routledge. (ISBN-10: 0415679141) [Suggested readings] Allison, Ann, 1994, Nightwork: Sexuality, Pleasure, and Corporate Masculinity in a Tokyo Hostess Club, Chicago and London: University of Chicago Press (ISBN-10: | | | | | | | | | |
| Grade Evalu |)% % | | | | | | | | | | | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | The contact inform Office hours: Tue anytime via e-ma | nation (e-mail) e 16:15-17:15, E il. | will be pr Building | ovide 5, Roo | d in class. om 638, o | or by | ⁷ appoin | tment or | | | |
| Notice for Stu (Relevance to courses) | adents other | Details of assignm The details of the participants. | nents will be and lectures and to | nounced i pics are s | in clas subjec | ss. t to chang | e de | pending | on the numb | per of | | |

 Courses offered in English (2nd Semester)

SATOMU Program: Courses Offered in English (2nd Semester, Academic Year 2018)

| Faculty | Course Title | Original Course Number | SATOMU Course Number | Credit | Lecturer | Semester | Day | Period | Campus | Building | Room# | Page# |
|-----------------------------------|---|------------------------------|----------------------------|--------|---|-----------------------------|------|--------|--------------|----------|-------|-------|
| | The Japanese Language | X0003 | V5201 | 2 | Daniel Long | 2nd Semester | Mon. | 1 | Minami-Osawa | 6 | 402 | 36 |
| Faculty of Urban Liberal Arts | Origins of Modern Japanese Literature Part II | F3633 | V5202 | 2 | Michael Yasui | 2nd Semester | Wed. | 3 | Minami-Osawa | 5 | 443 | 37 |
| (4courses) | Seminar on Multicultural Education | F1246 | V5203 | 2 | Hiroyuki Nomoto | 2nd Semester | Fri. | 2 | Minami-Osawa | 5 | 137 | 38 |
| | History of Japanese Film | - | V5204 2 | | Kentaro Sudoh | 2nd Semester | Thu. | 2 | Minami-Osawa | 6 | 402 | 39 |
| Faculty of Law (1 courses) | Japanese Politics in Comparative Perspective | - | V5205 | 2 | Hirofumi Kawaguchi | 2nd Semester | Fri. | 5 | Minami-Osawa | 1 | 202 | 40 |
| | General Chemistry I | I0417 | V5206 | 1 | All faculty members of department of Chemistry et al. | 2nd Semester | Wed. | 5 | Minami-Osawa | 8 | 303 | 41 |
| | General Biology II B | I0384 | V5207 | 2 | Shin Haruta、Takatori Naohito | 2nd Semester | Tue. | 5 | Minami-Osawa | 11 | 103 | 42 |
| | General Physiology | I0390 | V5208 | 2 | Kanae Ando | 2nd Semester | Wed. | 4 | Minami-Osawa | 11 | 101 | 43 |
| | General Cell Biology | I0386 | V5209 | 2 | Toshiro Aigaki•Takaomi Sakai | 2nd Semester | Wed. | 5 | Minami-Osawa | 11 | 103 | 44 |
| | Biological Information | I437 | V5210 | 2 | Hiroyuki Kawahara | 2nd Semester | Mon. | 1 | Minami-Osawa | 11 | 103 | 45 |
| | General Evolutional Biology | I0430 | V5211 | 2 | Adam L Cronin | 2nd Semester | Mon. | 5 | Minami-Osawa | 11 | 103 | 46 |
| | General Genetics | I0388 | V5212 | 2 | Aya Takahashi•Kouichiro Tamura | 2nd Semester | Tue. | 4 | Minami-Osawa | 11 | 103 | 47 |
| | General Microbiology | 10360 | V5213 | 2 | Shigeki Ehira•Shin Haruta | 2nd Semester | Mon. | 4 | Minami-Osawa | 11 | 202 | 48 |
| | Developmental Biology | I424 | V5214 | 2 | Kimiko Fukuda•Naohito Takatori | 2nd Semester | Fri. | 2 | Minami-Osawa | 11 | 201 | 49 |
| | Human Biology | X0144 | V5215 | 2 | Kanae Ando | 2nd Semester | Mon. | 6 | Minami-Osawa | 11 | 103 | 50 |
| | Neuroscience | I391 | V5216 | 2 | Kanae Ando | 2nd Semester | Tue. | 1 | Minami-Osawa | 11 | 103 | 51 |
| Faculty of Science (23courses) | Biodiversity | I438 | V5217 | 2 | Noriaki Murakami | 2nd Semester | Wed. | 2 | Minami-Osawa | 11 | 201 | 52 |
| | Ecosystems and Environments | X0142 | V5218 | 2 | Vera Thiel•Marcus Tank | 2nd Semester | Wed. | 6 | Minami-Osawa | 11 | 103 | 53 |
| | Special Lecture in Biology b | 1397 | V5219 | 1 | Vera Thiel | 1st Half of 2nd Semester | Mon. | 2 | Minami-Osawa | 11 | 201 | 54 |
| | Special Lecture in Biology c | 1398 | V5220 | 1 | Marcus Tank | 2nd Half of 2nd Semester | Mon. | 2 | Minami-Osawa | 11 | 201 | 55 |
| | Special Lecture in Biology d | I395 | V5221 | 1 | Kanae Ando | 1st Half of 2nd Semester | Tue. | 2 | Minami-Osawa | 11 | 103 | 56 |
| | Special Lecture in Biology e | I396 | V5222 | 1 | Kanae Ando | 2nd Half of 2nd Semester | Tue. | 2 | Minami-Osawa | 11 | 103 | 57 |
| | Special Lecture in Biology f | I273 | V5223 | 1 | Kouichiro Tamura | 1st Half of 2nd Semester | Wed. | 1 | Minami-Osawa | 11 | 103 | 58 |
| | Special Lecture in Biology g | I345 | V5224 | 1 | Shin Haruta | 2nd Half of 2nd Semester | Wed. | 1 | Minami-Osawa | 11 | 103 | 59 |
| | Special Lecture in Biology h | I346 | V5225 | 1 | Toshiro Aigaki | 1st Half of 2nd Semester | Thu. | 2 | Minami-Osawa | 11 | 201 | 60 |
| | Special Lecture in Biology i | I347 | V5226 | 1 | Aya Takahashi | 2nd Half of 2nd Semester | Thu. | 2 | Minami-Osawa | 11 | 201 | 61 |
| | Special Lecture in Biology j | I431 | V5227 | 1 | Adam L Cronin | 1st Half of 2nd Semester | Fri. | 1 | Minami-Osawa | 11 | 103 | 62 |
| | Special Lecture in Biology k | I432 | V5228 | 1 | Adam L Cronin | 2nd Half of 2nd Semester | Fri. | 1 | Minami-Osawa | 11 | 103 | 63 |

SATOMU Program: Courses Offered in English (2nd Semester, Academic Year 2018)

| Faculty | Course Title | Original Course Number | SATOMU Course Number | Credit | Lecturer | Semester | Day | Period | Campus | Building | Room# | Page# |
|---------------------------------|--|------------------------------|----------------------------|--------|--|--------------|------|--------|--------------|----------|-------|-------|
| Esculty of Linhan Environmental | Regional Environmental Studies | - | V5229 | 2 | Toshio Kikuchi | 2nd Semester | Mon. | 5 | Minami-Osawa | 12 | 203 | 64 |
| Sciences | Tourism Theories and Practice | X0035 | V5230 | 2 | Naoi, Kikuchi, Shimizu, Kawahara, Numata, Okamura, Osawa, Hihara | 2nd Semester | Tue. | 1 | Minami-Osawa | 1 | 203 | 65 |
| (3courses) | Transport Planning and Management for Tourism Promotion | K423 | V5231 | 2 | Tetsuo Shimizu | 2nd Semester | Wed. | 1 | Minami-Osawa | 11 | 210 | 66 |
| Faculty of Systems Design | Experimental Photography | - | V5232 | 2 | Verl Adams | 2nd Semester | Tue. | 3 | Minami-Osawa | 6 | 310 | 68 |
| (2courses) | Introduction to Aerospace Engineering 2 | L0601 | V5233 | 2 | All faculty members of Department of Aeronautics and Astronautics | 2nd Semester | Fri. | 5 | Minami-Osawa | 1 | 109 | 69 |
| | Cultural Psychology | - | V5234 | 2 | ТВА | 2nd Semester | Tue. | 2 | Minami-Osawa | Int.H | 231 | 71 |
| | Intercultural Communication and Interaction | X0071 | V5235 | 2 | ТВА | 2nd Semester | Wed. | 5 | Minami-Osawa | 1 | 204 | 72 |
| International Center | Current Issues of Education in Japan | - | V5236 | 2 | Ikuko Okamura | 2nd Semester | Thu. | 3 | Minami-Osawa | Int.H | 231 | 73 |
| (6courses) | Introduction to Japanese Studies II | - | V5237 | 2 | Lidia Sasaki, Hiroyuki Kawahara et al. | 2nd Semester | Mon. | 2 | Minami-Osawa | Int.H | 232 | 74 |
| | Japanese Nature and Satoyama | - | V5238 | 2 | Lidia Sasaki | 2nd Semester | Fri. | 2 | Minami-Osawa | Int.H | 232 | 75 |
| | Contemporary Japanese Society II | - | V5239 | 2 | Masaya Shijo | 2nd Semester | Fri. | 3 | Minami-Osawa | 6 | 311 | 76 |
| Course Title | | The Japanese L | anguage | | Cou Num | rse Iber | V { (X(| 5 201 0003) | Credit | 2 |
|---|--|--|---|---|---|---|---|---|---|-------------------|
| Instructor | Da | niel Long | 2nd Semester | Ν | Ion. | 1st P | eriod | Mi | inami-Osawa | ı |
| Course Desc Theme | ription / | This course focuse morphology, synta | es on the structu ax and semantic | ure of t s. | he Japa | nese la | nguage | includin | g phonology, | |
| Knowledge & students car through the Course Obje | & Abilities a acquire class, ctives | Upon completion Japanese languag word formation an learn the general better grasp of the objective viewpoin | of this course, st ge, including the nd sentences str concepts of ling e workings of th nt from which to | tudent "rules ucture uistics e lang exam | s will ha o" which o. To this . The cou uage and ine the s | ove a kr govern end, st urse wil d native structur | nowledg Japano tudents Il give r e Japan re of the | e of the sese sound will also non-nativ lese spea eir langu | structure of t ds, pitch acce b be required ve speakers a kers a more age. | to |
| Course Sche Course Cont Instruction I | dule, ents and Methods | 1. Theories on the origin of the Japanese language 2. Some notable historical changes in the Japanese language 3. The phonetic inventory of Japanese, consonants and vowels 4. Phonological rules, phonotactic rules, and allophones 5. Pitch accent systems (dialect and standard) 6. Vocabulary subsystems 7. Word formation 8. Morphology and allomorphs 9. Semantics 10. Syntactic rules 11. Conversation and discourse analysis 12. The languages varieties of Okinawa 13. The Ainu language 14. Japanese language acquisition by foreigners: historical overview and interlang 15. Notable scholars of the Japanese language | | | | | | | | |
| Learning Ac outside the (| tivities Classroom | 【授業外学習】毎 業のレジメ及び予 に臨むこと。 Information abou http://nihongo.hu: past lessons and p | 回の授業後、htt 習内容を提示する t past and upcor m.tmu.ac.jp/~lor prepare for futu: | p://nih るので、 ning c ng/clas re topi | ongo.hu 必ず事 lasses w ses.htm cs based | m.tmu.。 前に予習 ill be po and stu on this | ac.jp/~l 雪を行い osted at udents s mater | ong/class 、内容を will be ex ial. | ses.htm で次 把握した上て spected to re | ⊡授 ₹授業 view |
| Textbooks an References Grade Evalu | nd/or uation Policy | This class will not active class partic multiple class qui final written exar | t use a textbook sipation zzes ns | but pr | ints will | be dist | tributed | l as nece | ssary. | |
| How to conta instructor ou classroom (Hours) | act the atside the Office | Office hours are I be addressed to d | Vlonday 10:30 - long(at mark)tm | 12:00 .u.ac.jj | or by ap | pointm | ent. | Questior | ns should | |
| Notice for St (Relevance t courses) | o other | identsThis class is designed to complement the course "Japanese Language and Society". They differ in that this class deals with linguistic structure, while that class with the usage of Japanese in society. The courses may be taken independently of one another, but it is highly recommend that students take both for a balanced understanding of the language. Information about the class will be posted on the website below. http://nihongo.hum.tmu.ac.jp/~long/classes.htm | | | | | | | | |

| Course Title | Origins | of Modern Japanes | se Literature Pa | urt II | C Ni | ourse umber | V52 (F36 | 02 33) | Credit | 2 | |
|--|--|--|--|---|---|--|---|---|---|---|--|
| Instructor | Mich | ael Yasui | 2nd Semester | Wed | -• | 3rd Peri | od M | Iinam | ii-Osawa Car | npus | |
| Course Descr Theme | ription / | Discourse and Japanese Litera ideas in culture | Rhetoric in En ture in English translate or fail | nglish th in order to transl | rough to dev late th | Japanes velop deba nrough lan | e Liter ting me guage. | ature ethods | E Reading a s and discuss | ibout i how | |
| Knowledge & students can through the c Course Objec | acquire acquire class, ctives | In this course, developing a n discussing Japa explore the con speak affects no expressed. Stud Literature, and | students will le nore Global Aw anese Literatur cept of neo-Wh t only how infor ents will also de then attempt to | earn the vareness e. Throu orfianisn rmation i evelop an understa | basic of Ja agh di a: bas s expr sensi and ho | modes of panese C iscussion ically hov ressed but bility of th ow that tra | discus culture and de v the la also wi ne origin unslates | sion a throu ebate, angua hat ir ns of 2 s in a | and debate ugh reading the course age one lear nformation c Modern Japa global societ | while and will ns to an be anese y. | |
| Course Sched Course Conte Instruction M | dule, ents and Aethods | 16. Mimicry and 17. Mimicry and 18. Allegories. (19. Allegories. (20. Buddhism at 21. Buddhism at 22. Isolation and 23. Isolation and 24. Escapism an 25. Escapism an 26. Mysticism at 27. Westernizatt 28. Westernizatt 29. Love. (1) 30. Love. (2) | Mimicry and Mimetic Misprision. (1) Discussion of the Concepts. Mimicry and Mimetic Misprision. (2) Discussion of Reading Seven. Allegories. (1) Discussion of the Concept. Allegories. (2) Discussion of Reading Eight. Buddhism and Fascism. (1) Discussion of the Concepts. Buddhism and Fascism. (2) Discussion of Reading Nine Isolation and the Orphan. (1) Discussion of Reading Ten. Escapism and the Floating World. (1) Discussion of the Concepts. Escapism and the Floating World. (2) Discussion of Reading Eleven. Mysticism as Narrative. Westernization. (1) Discussion of Concepts Westernization. (2) Discussion of Reading Twelve. Love. (1) Discussion of the Concepts Love. (2) Discussion of the Concepts | | | | | | | | |
| Learning Act outside the C | ivities lassroom | Two Additional Students will al | Novels will be a so be required to | assigned : o complet | for ou ze a pa | tside read artner-proj | ing three | ough side o | out the sem f class. | ester. | |
| Textbooks an References | d/or | "History and Re 復」。All studer Additional class | petition." Kojin nts should brin materials will b | Karatani g their o be annour | i and S own c nced tl | Seiji M. Li copy of th hroughout | ppet. 杯 le textb ; the cou | 丙谷行 book urse. | 人の「歴史と to every cla | 反 ss. | |
| Grade Evalua | ation Policy | Participation 30 20 %. | %, Reading and | Researc | h Not | ebooks 20 | , Prese | ntatio | on 30 %, De | bates | |
| How to conta instructor ou classroom (C Hours) Notice for Sta (Relevance to courses) | ct the tside the Office udents o other | My office is locate and 5 th period, or l | d in Building 5 i by appointment. | n room 5 My e-ma | 13. My il add | y office hou ress is yas | urs will ui●tmu | be Tu u.ac.jŗ | esday 4 th o. | | |

| Course Title | | Seminar on Multicul | tural Education | | C N | ourse umber | V (| 7 5203 F1246) | Credit | 2 |
|--|--|--|---|--|---|---|--|--|---|--------------------------------|
| Instructor | Hiro | yuki Nomoto | 2nd Semester | Fri. | | 2nd Peri | iod | Minam | i-Osawa Cai | npus |
| Course Desc Theme | ription / | In this course, will analyze collec- cultural and ethn education, multic to share the infor Zealand and reco- institutions.(Opti students will be p | English will be ctively the role of ic diversity, focu ultural educatio mation about m mmended to ma on) The exchang laced as a base | used bas of educati using on s on or Ainu ulticultur ke plan t ge activiti of this co | ically on in econd ral an o visit tes bet urse. | as a medi realizing t language les' educat d multieth overseas tween fore | um f the s acq tion. nnic educ ign | for instru ociety wi uisition, Student education cational students | action. Stude ith respect to bilingual s will be req n in USA or and Japanes | nts) uired New se |
| Knowledge & students can through the Course Object | & Abilities a acquire class, ctives | Students will make policy in or language. Especia to foreign children | have knowledge der to live in pea ally, it focuses or n or their langua | s and abi ace with t 1 better u age acqui | lities the pe nders sition | to organiz ople havin tanding ak | e con Ig di Dout | mmunity fferent cr educatio | action and t ulture and nal issues re | o lated |
| Course Sche Course Cont Instruction N | dule, cents and Methods | [Content and mo This course wil community with a multicultural edu | ethod] l analyze commu a high density of cation, bilingua | unity dev f foreign 1 l educatio | elopm reside on and | ent and eo nts, and eo d Ainu peo | duca duca ples | tional is tional pr ' education | sues in the ractices relat on. | ed to |
| | | [Syllabus Plann Detail plan will 16. Orientation for 17. Discussion on 18. Overseas stud peoples' education 19. Preparation for 20. Preparation for 21. Preparation for 23. Final discussi 24. Discussion for 25. Report on visi 26. Discussion on 27. Discussion on 28. Discussion on 29. Making repor 30. Final discussi | ing] be discussed by or second semest Ainu peoples' so ly visit related b or visit to multic or visit to biling or visit to biling or visit to indige or visit to Ainu p on for visit ' issuing the rep t out visit report report t | v students er chools or ilingual e cultural e ual educa nous peo peoples' e ort | s then unive educat ducat tion p ples' e ducat | nselves rsity tion, multi ion progra orogram ducation p ion progra | icult m prog m | ural edu ram | cation and A | inu |
| Learning Act outside the C | tivities Classroom nd/or | Students will be a preparation. Writing some rep Not in particular | required to read orts will be requ | indicated | l pape | ers or mate | erial | s out of c | lass as | |
| References | | | | | | | | | | |
| Grade Evalu How to conta instructor ou | act the act the atside the | Active class parti Final written rep Office hour is set | cipation ort ; on Wednesday | 4th. Stu | dents | are requi | red | to send | e-mail to | |
| classroom (Office Hours)nomoto@tmu.ac.jp before.Notice for Students (Relevance to other courses)Overseas study visit is optional. | | | | | | | | | | |

| Course Title | | History of Japa | nese Film | | C N | ourse umber | 7 | 75204 | Credit | 2 |
|---|---|--|--|---|---------------------------------------|---|--------------------------------|--|---|-----------------|
| Instructor | Kent | aro Sudoh | 2nd Semester | Thur | s. | 2nd Peri | iod | Minam | i-Osawa Car | npus |
| Course Descr Theme | ription / | This course offers periods: Silent, Cl history, students culture and politic centuries Japan. | an overview of lassical, New Wa will think critica cs, and thought | Japanese ave and (ally about and tech | e film Conter t the r nology | history by nporary p elationshi 7, in the tw | exa erioc ip be venti | mining i ls. In ret tween an leth and | ts four main racing the fil rt and indust twenty-first | lm ry, |
| Knowledge & students can through the o Course Object | z Abilities acquire class, ctives | The main goals of learning about its sensibility throug appreciate the con | the course are: social, cultural h analyzing film nplexity of inter | (1) to bec and histons from direcultural | come f orical iffernt excha | amiliar w contexts; t periods, g nge in cin | ith J (2) to genr ema | apanese o refine o es and st tic art. | film history one's own cyles; (3) to | by |
| Course Schee Course Conto Instruction M | dule, ents and Aethods | 1. Introduction and 2. Silent Period: From Cinématographe to Pure Film Movement ods 3. <i>I Was Born But</i>(1932, Ozu Yasujiro) 4. Analysis & Discussion 5. Classical Period (1): Arrival of Talkie 6. Classical Period (2): World War II and Golden Age of Cinema 7. <i>Rashomon</i> (1950, Kurosawa Akira) 8. Analysis & Discussion 9. New Wave Period: Social Transformation and Rise of Independent Cinema 10. <i>Death By Hanging</i> (1968, Oshima Nagisa) 11. Analysis & Discussion 12/ Contemporary Period: From Postmodern to Digital Cinema 13. <i>Tokyo Sonata</i> (2008, Kurosawa Kiyoshi) 14. Analysis & Discussion | | | | | | | | |
| Learning Act outside the C | ivities Classroom | Students are requ | aired to see Japa | inese film | is mei | ntioned in | clas | s. | | |
| Textbooks an References | d/or | No textbook is re subject, students - Donald Richie, A - Alistair Phillip Routledge, 2007. - 四方田犬彦『日云 | equired for this are advised to re A <i>Hundred Years</i> os, Julian Strin 本映画史 110 年』 | course. ead: s <i>of Japan</i> nger(eds 、集英社: | Howe nese F s),Ja 新書、 | ver, for a <i>Tilm</i> , Koda <i>apanese (</i> 2014 年。 | dee nsha <i>Cinei</i> | per unde a USA, 2 <i>ma: Tex</i> a | erstanding o 012. <i>ts and Com</i> | f the texts, |
| Grade Evalu | ation Policy | icy Grading allocation is as follows: - Attendance and active participation: 50% - Final exam: 50% | | | | | | | | |
| How to conta instructor ou classroom (C Hours) Notice for St (Relevance to courses) | Iow to contact the instructor outside the lassroom (Office Hours) After the class or by appointment via email: kentarosudoh@gmail.com Jotice for Students Relevance to other ourses) After the class or by appointment via email: kentarosudoh@gmail.com | | | | | | | | | |

| Course Title | Japan | anese Politics in Comparative Perspective Course Number V5205 Credit 2 umi Kawaguchi 2 nd Fri. 5th Period Minami-Osawa Campus | | 2 | | | | | | |
|--|---------------------------------------|--|--|--|---|--|---|---|--|--------------------|
| Instructor | Hirofun | ni Kawaguchi | 2nd Semester | Fri. | | 5th Peri | od | Minam | i-Osawa Car | npus |
| Course Descr Theme | iption / | This course introd international com bureaucrats, inter institutions, and will help students | luces students t parison. We wil rest groups, and (iii) the characte s understand var | o contem l learn (i) citizens) cristics of rious app | porary impo in Ja the p roach | y Japanese rtant acto panese po olicy-maki es in polit | e pol rs (e litics ing p ical s | itics thro .g., legis s, (ii) var process. 7 science. | ough lators, ious political This course a | l lso |
| Knowledge & students can through the c Course Objec | acquire acquire class, tives | Upon successful c (1) understand th advanced democra (2) critically evalu- the Japanese soci (3) assess strengt comparative polit (4) learn how to n | ompletion of thi e key difference acies. hate the respons ety to the major hs and weaknes ics. hake a persuasiv | s course, s and sim es of the challeng ses of diff ze argum | stude nilarit Japar es fac ferent ent th | ents will be ies betwee nese gover ing Japan approach rough gro | e abl en po nme es ir up d | e to: blitics in nt and v n Japane iscussion | Japan and or arious actors se politics an ns. | ther 5 in 1d |
| Course Sched Course Conte Instruction M | lule, ents and Iethods | Introduction Historical Ba Historical Ba Legislators Elections and Political Part Prime Minist Bureaucrats Interest Grout Media and Put Law and Politi Welfare Polici Gender and Fi Nuclear Polici Agricultural Fischedule and top | ckground I: Befo ckground II: Aft l Campaigns ies ers ups and Civil So ublic Opinion tics y Polical Particip y Policy pics subject to ch ally consist of st | ore WWII er WWII ciety pation nange in a tudents' p | accord | lance with itation foll | stu | dents' ur d by grou | derstanding up discussion | . I |
| Learning Act outside the C | ivities lassroom | will assign 40-70 the readings befor Students are requ the in-class prese | pages of reading re class. tired 4-hour read ntation in the w | gs for eac ding ever eek they | h sess y wee are as | ion. Stude k and add ssigned. | ents | are expe | cted to compo | lete n for |
| Textbooks an References Grade Evalua | d/or ation Policy | orAll readings will become available electronically.on PolicyClass Participation (30%), Presentations (30%), and Short Essays (40%) | | | | | | | | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | If you have any q be notified in clas | uestions, please s. | e contact | me vi | a email. N | Луе | mail add | lress will | |
| Notice for Stu (Relevance to courses) | udents o other | Though knowledg are no prerequis Japanese politics. | e of basic politi ites. Students | cal scien at any l | ce wil evel a | l help you are welco: | und me | lerstand if they | the course, are intereste | there ed in |

| Course Title | | General Che | mistry I | | C Ni | course umber | ٦ | V5206 (I0417) | Credit | 1 | | | |
|--|-------------------------------------|--|---|--------------------------------------|----------------------------|--|------------------------|--|---|-------|--|--|--|
| Instructor | All fac departme | eulty members of ent of Chemistry et al. | 2nd Semester | Wed | l. | 5th Peri | od | Minami | -Osawa Can | ipus | | | |
| Course Descr Theme | ription / | 英語を用いて、物理 This course provide organic/biochemical | 化学、有機・生物 s students the b chemistry, inor | 物化学、兼 asic intro ganic che | 無機化: oductio emistr | 学、分析化 on to physi ry and anal | 学の ical c ytica | 初歩を学ふ chemistry, al chemistr | vy in English | | | | |
| Knowledge & Abilities stuc acquire throu class, Course Objec | z lents can 1gh the 2tives | 英語による化学の初 Students will be abl | 歩の理解。 e to understand | basics of | f chem | nistry in Eı | nglis | h. | | | | | |
| Course Scheo Course Conto Instruction M | dule, ents and Iethods | 英語によって行われ ぶ。 英語が母国語でない また、英語を母国語。 とする。 | 語によって行われる講義であり、物理化学、有機・生物化学、無機化学、分析化学の初歩を学 。 語が母国語でない学生に対する化学分野での学術英語の習得のための講義である。 た、英語を母国語とする留学生で化学を専門としない学生で初歩の化学を学びたい学生も対象 する。 | | | | | | | | | | |
| | | Instructors will pro- organic/biochemical This class is also us speakers of English | vide students th chemistry, inor; eful as an introc | e basic ir ganic che luction o | ntrodu emistr f chen | action to th ry and anal nistry for fo | e ph ytica oreig | ysical cher al chemistr m students | nistry, ry in English s including n | ative | | | |
| Learning Act outside the C | ivities Classroom | 【授業外学習】担当 | 教員の指示に従う | うこと。 | | | | | | | | | |
| Textbooks an References | .d/or | プリントを配布する Handouts will be pr | ovided. | | | | | | | | | | |
| Grade Evalua Policy | ation | 出席と試験により評 Evaluated by class a | 価する。 attendance and | examina | tion | | | | | | | | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | 【オフィスアワー】 | 担当教員の指示に | こ従うこと | L o | | | | | | | | |
| Notice for Sta (Relevance to courses) | udents o other | | | | | | | | | | | | |

| Course Title | 9 | General Biol | ogy II B | | C N | ourse umber | V | /5207 10384) | Credit | 2 |
|---|---|---|--|--|--|---|------------------------------------|--|---|--------------|
| Instructor | Shin Haruta | , Takatori Naohito | 2nd Semester | Tue | | 5th Peri | od | Minam | ii-Osawa Car | npus |
| Course Desc Theme | cription / | General Biology I dealing with basic | B, IIB are the cl c knowledge in b | asses for biology at | the st the m | tudents of 10lecular (| biol (IB) | ogical sci and cell l | iences course evel (IIB). | 9, |
| Knowledge students can through the Course Obje | & Abilities n acquire class, ectives | The first half of th prokaryotes (bactor functions in eukar students will be g questions and ass | ne class deals wi eria and archae ryotic cells. The iven reading/vie ignments in the | ith phylog a) and th second h ewing ma classroo | geneti e seco alf of terials m. | c and phy nd half wi the class v s before th | siolc ith b will l ne cla | ogical div asic stru be a flipp ass and v | ersity of cture and ed classroon vill tackle | 1: |
| Course Sche Course Con Instruction | edule, tents and Methods | First half: Shin H 1. Habitats of prof. 2. Systematics of y 3. Prokaryotic cell 4. Energy metabo 5. Energy metabo 6. Element cycle of 7. Element cycle of 8. Conclusion and Second half: Naoh 9. Observing the of 10. Cell structure 11. Cell structure 12. Cell division (n 13. Cell-Cell signa 14. Evolution 15. Conclusion | aruta karyotes prokaryotes l structure lism (respiration lism (photosynt on Earth (carbor on Earth (nitrog examination hito Takatori cell: Principles o and function (p and function (m mitotic spindles aling | n, fermen hesis) h) en, sulfun f microsc lasma me hitochond) | tatior r, phos opy embra ria, cł | n) sphorus) .ne, cell wa nloroplast, | all, r , ER | nucleus) , cytoske | leton) | |
| Learning Ac outside the | ctivities Classroom | The students are | expected to revi | ew each l | ecture | e by readi | ng h | and-outs | or texts. | |
| Textbooks a References | nd/or | Hand-outs will be Books for reference Biology of the Cel (Madigan et al., P | provided in the ce: Essential Ce l (Alberts et al., learson Edu.) | class. ll Biology Garland | (Albe Sci.), | erts et al., Brock: Bio | Gar ology | land Sci. y of Micro |), Molecular porganisms | |
| Grade Evalı | uation Policy | Evaluation is mad also considered. The latter half of and final test. | le by the results the class will be | s of exam evaluate | . Prese | entation a contributio | and d | liscussion discussi | n in the class | s are ass |
| How to cont instructor o classroom (Hours) | act the utside the Office | Office hours; by a | ppointment thro | ough e-m | ail | | | | | |
| Notice for S (Relevance t courses) | This class is mainly for the freshmen of biological sciences course. levance to other rses) | | | | | | | | | |

| Course Title | | General Phy | vsiology | | C Ni | ourse umber | (| 75208 10390) | Credit | 2 | |
|--|--|--|---|---|---|--|---|---|---|-------------------------------|--|
| Instructor | Kar | nae Ando | 2nd Semester | Wed | | 4th Peri | od | Minam | i-Osawa Cai | npus | |
| Course Descr Theme | ription / | Multicellular orga organ, and system framework for un to human health experiences, this importance in the | anisms integrate n levels to susta derstanding hov in the modern w course will help ir lives. | e various in life. Th v their bo vorld. By students | eventa nis cou dies w applic to see | s in the bo urse will p york and fo ation of bi e exciteme | ody a rovie or de iolog ent o | at the mo de studer ealing wi ical conc f science | lecular, cellu nts a concept th issues rele epts to famil and its | ılar, Jual Əvant İal | |
| Knowledge & students can through the o Course Objec | z Abilities acquire class, ctives | At the end of this homeostasis, (2) t work together, an regulate their life | course, student he fundamental d (3) organizatio | s will be concepts on of plan | able to of hu it body | o describe man anat y and how | (1) l omy inte | oasic con and how ernal and | cept of v the body pa l external fac | rts ctors | |
| Course Schee Course Conte Instruction M | dule, ents and Aethods | Introduction, O Homeostasis an Skeletal system Muscular System The Plant Cell Life Cycle of Pl Digestive syste Review and Mi Cardiovascular Cardiovascular The Lymphati Immune Syste Respiratory Sy Urinary Syste Review and fit | Introduction, Organization and Regulation of Body Systems Homeostasis and Endocrine System Skeletal system Muscular Systems The Plant Cell and Body Life Cycle of Plants Digestive system Review and Mid-term exam Cardiovascular System: Heart and Blood Vessels Cardiovascular System: Blood The Lymphatic and Immune Systems Immune System (cont.) Respiratory System Review and final exam | | | | | | | | |
| Learning Act outside the C | ivities Classroom | Homework or rev | iew quiz will be | given aft | er eac | h class. | | | | | |
| Textbooks an References | ıd/or | Campbell, Biology Mader, Human B Levetin E, and M Other materials f | g, A Global Appro iology 14th editi cMahon K, Plan or in-class discu | oach, 10t on (McGa ts and So ssions m | h editi raw-H ociety ay be o | ion (Pears ill, ISBN (McGraw- distribute | onIS 978- Hill d. | SBN 978 [.] 1-259-25 , ISBN 9 | 1292008653 200-6) 7800735242: |) 21). | |
| Grade Evalu | ation Policy | Class participation&homework quiz 20% , Mid-term exam 40%, Final exam 40% | | | | | | | | | |
| How to conta instructor ou classroom (C Hours) | act the tside the Office | Wednesday after appointment. | rnoon, 1-2:30pn | n. Or, e | -mail | to k_and | do@t | zmu.ac.jp | for an | | |
| Notice for St (Relevance to courses) | udents o other | | | | | | | | | | |

| Course Title | | General Cell | Biology | | C Nu | ourse umber | V (| 75209 10386) | Credit | 2 | |
|--|--|---|---|--------------------------|-------------------|----------------------------|----------------|-------------------------|------------------------------|------------|--|
| Instructor | Toshiro Aiga | ki•Takaomi Sakai | 2nd Semester | Wed | | 5th Peri | od | Minam | ii-Osawa Cai | npus | |
| Course Desc Theme | ription / | Understanding m be taught by Prof | olecular and cel . Toshiro Aigaki | lular bas (Part1) a | es of b .nd As | iiological r sociate Pr | phen of. T | omena. 'akaomi i | This course Sakai (Part2 | will). | |
| Knowledge of students car through the Course Obje | & Abilities a acquire class, ctives | This lecture will p gene expression, a | provide opportur and signal trans | nity to lea duction i | arn str n neui | ructure an ral and no | ıd fu on-ne | nction of eural cell | eukaryotic c s in animals | ells, | |
| Course Sche Course Cont Instruction | edule, cents and Methods | [Part 1] 1. Structure and function of eukaryotic cells (TA) 2. Cell growth and size (TA) 3. Cell survival and death (TA) 4. Cell metabolism (TA) 5. Tumorigenesis 1 (TA) 6. Tumorigenesis 2 (TA) 7. Discussion and tutorial (TA) 8. Review and mid-term exam (TA) [Part 2] 9. Cells of the nervous system (TS) 10. Neurotransmission 1 (TS) 11. Neurotransmission 2 (TS) 12. Neurotransmission 3 (TS) 13. Gene expression in neurons (TS) 14. Brain and behavior (TS) 15. Review (TS) | | | | | | | | | |
| Learning Acoustic outside the o | tivities Classroom | | | | | | | | | | |
| Textbooks as References | nd/or | Handouts will be | distributed to st | udents in | n class | ses. | | | | | |
| Grade Evalu | ation Policy | Presentation and examinations 40% | Presentation and discussion 30%, Quiz or Report submission 30%, Midterm and final examinations 40%. | | | | | | | | |
| How to cont instructor or classroom (Hours) | act the utside the Office | Particular office h e-mail. | nour is not alloc | ated, but | stude | ents can m | nake | appoint | ments by | | |
| Notice for S (Relevance t courses) | Students e to other | | | | | | | | | | |

| Course Title | | Biological Info | ormation | | C Ni | lourse umber | V521 (I437 | . 0 .) | Credit | 2 |
|---|---|--|---|--|---|---|-----------------------------------|-------------------------|--|--------|
| Instructor | Hiroyul | xi Kawahara | 2nd Semester | Mon | | 1st Peri | od M | inam | ii-Osawa Cai | mpus |
| Course Descrip Theme Knowledge & J students can a through the cl Course Object | ption / Abilities acquire ass, ives | In this class, we we we have a second | vill discuss the b is class is to und ted by a series of ation will be a co | asic mec lerstand f protein ore of the | hanis how c synth discu | m of cell g ell division esis and d ssion. | rowth an n is cont egradati | nd di rolle ion e | vision. d. Since cell vent, machir | neries |
| Course Schedu Course Conter Instruction Me | ıle, nts and ethods | What is cell cy Discovery of m Mitosis promo Essential comp Protein synthe Protein degrad Summary disc G1/S-phase Cy Cyclin inhibito Protein degrad Protein degrad Intracellular Ubiquitin-deg Protein ubiqu Ubiquitin and Summary disc | ccle? hitosis promoting ting factor in yea ponents of mitos esis determines of dation determine ussion and exan yelin. fors and tumor su adation determine protein degrada pendent protein hitination. d protein quality scussion and exa | g factor. ast. is promo mitosis en es mitosis nination (uppressor nes the de tion mac degradat v control. mination | ting fa ntry. s exit. (1) 's. estiny hineri | actor. r of the cell ies. | l. | | | |
| Learning Activ outside the Cla | vities assroom | | | | | | | | | |
| Textbooks and References | /or | Essential Cell Bio 0853696470 | ology, Fourth edi | tion, Bru | .ce Alb | perts et al. | , Garlan | ıd Sc | ience. ISBN- | 10: |
| Grade Evalua | tion Policy | The score will de | marked by term | examina | itions | as well as | class at | tend | ance. | |
| How to contac instructor outs classroom (Of Hours) | t the side the fice | Office hour: every | Office hour: every Wednesday, 13:00-15:00 | | | | | | | |
| Notice for Stud (Relevance to courses) | dents other | | | | | | | | | |

| Course Title | | General Evolutional Biology Course Number V5211 Number (10430) Credit 2 | | | | | | | | |
|--|--|---|---|--|--|--|------------------------------|---|--|----------------------|
| Instructor | Adan | n L Cronin | 2nd Semester | Mon | l. | 5th Peri | od | Minam | i-Osawa Car | npus |
| Course Desc Theme | ription / | Ecology is intimated can respond to the drive evolution. In and ecology are co | ely tied with ev e ecological envi n this course, we onnected in an in | olution, a ronment, e explore ntroducto | as evol , and e the m ory cor | lutionary ecology for any ways ntext. | histo rms † in w | ory defind the selec which evo | es how organ tive forces wi lutionary bio | isms hich Jogy |
| Knowledge & students can through the Course Objec | & Abilities a acquire class, ctives | Students will deve appreciation of he ecology. Students perspective and h ecosystems we obt | elop an understa w knowledge of will learn how t ow to short and serve today. | anding of evolution o examin long-terr | basic hary p le ecol n proc | evolution processes is ogical pro- cesses com | ary s ess cess bine | biology, a sential to es from a e to produ | und an understand in evolutiona ice the | .ry |
| Course Sche Course Cont Instruction N | dule, ents and Methods | How does evolution work pt.1 How does evolution work pt.2 Phylogenetic reconstruction pt.1 Phylogenetic reconstruction pt.2 Microevolution pt.1 Microevolution pt.2 Species and speciation pt.1 Species and speciation pt.2 Macroevolution pt.1 Macroevolution pt.2 Evolution of sex pt.1 Evolution of vertebrates Review lecture Exam | | | | | | | | |
| Learning Act outside the C | tivities Classroom | Students will hav read them before Students will be semester | e access to lectu class. given occasiona | re notes : l tasks to | and sl | nould dow | nloa de of | d these f f class du | rom kibaco a uring the | nd |
| Textbooks ar References | nd/or | Campbell et al. Bi (particularly unit: 978-0-470-90913-3 978-0-393-93793-0 | ology: a Global s 4 and 8); Bego 3); Bergstrom an)) | Perspecti n et al. E nd Dugat | ive 10 ssenti in. Ev | th ed. (ISI als of Eco olution 2n | BN: s logy nd ec | 978-1-29 4th ed. (1. (ISBN: | 2-00865-3) ISBN: | |
| Grade Evalu | ation Policy | Assessment will be based on a written exam and in-class participation | | | | | | | | |
| How to conta instructor ou classroom (Hours) | act the utside the Office | There are not set send queries by en | office hours: ple nail. | ase visit : | my off | fice if you i | have | e any que | estions or | |
| Notice for St (Relevance to courses) | udents o other | This course will be conducted in English. Students should prepare all materials in English and will have the opportunity to discuss among themselves and with the general class in English. Students who took General Ecology II in 2017 should NOT take this course as there is significant overlap in material. | | | | | | | | |

| Course Title | | General Ge | netics | | C Nu | ourse umber | V (| /5212 10388) | Credit | 2 | | |
|--|---|--|--|-------------------------|--------------------|-----------------------------|----------------|------------------------|--------------------|--------|--|--|
| Instructor | Aya Takah T | ashi • Kouichiro amura | 2nd Semester | Tue | | 4th Peri | od | Minam | i-Osawa Car | npus | | |
| Course Descr Theme | iption / | This course covers including introduc | s topics in classi ctions to approa | cal, mode ches take | ern, ar en in e | nd current evolutiona | ; gen ry st | etics in e cudies. | eukaryotes, | | | |
| Knowledge & students can through the o Course Objec | z Abilities acquire class, tives | The students shou basic principles of | ald obtain basic evolution at th | knowledş e molecul | ge in g ar lev | enetics, a el. | nd s | hould als | so understan | d the | | |
| Course Sched Course Conte Instruction M | lule, ents and Iethods | Mendel to curre DNA and chron Chromosome st Evolutionary on Mutation and it Evolutionary ch Genetic variation Summary and e Genome, transc Methods for ge Structure of ht Virus genome Transcriptome Epigenetics (b) Summary and | Mendel to current genetics (by AT) DNA and chromosome (by AT) Chromosome structure and genes (by AT) Evolutionary origin of novel genes (by AT) Mutation and its consequences (by AT) Evolutionary changes of DNA sequences (by AT) Evolutionary changes of DNA sequences (by AT) Genetic variation within population (by AT) Summary and exam (by AT) Genome, transcriptome and proteome (by KT) Methods for genome analyses (by KT) Structure of human genome (by KT) Virus genome and transposable elements (by KT) Transcriptome (by KT) Epigenetics (by KT) Summary and exam (by KT) | | | | | | | | | |
| Learning Act outside the C | ivities llassroom | Students are expe Students should v | cted to review a vork on assignm | nd study ients give | mater en dur | rials relate ing the cla | ed to ass. | o the topi | c after each o | class. | | |
| Textbooks an References | d/or | Handouts will be | provided during | the class | 3. | | | | | | | |
| Grade Evalu | ation Policy | The mean score fr Students will be g | om the first and raded by class a | d the seco attendanc | nd ha ce, par | lf will be t ticipation | the f | inal grac signment | le. s, and exam | 5. | | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | Particular office h email. | our is not alloc | ated, but | stude | ents can m | ıake | appoint | ments by | | | |
| Notice for Stu (Relevance to courses) | udents 9 other | | | | | | | | | | | |

| Course Title | | General Micr | obiology | | Co Nu | ourse umber | 7 (| 75213 10360) | Credit | 2 |
|---|---|--|---|---|---|---|----------------------|-----------------------------------|---|--------------|
| Instructor | Shigeki Ehi | ra • Shin Haruta | 2nd Semester | Mon | l. | 4th Peri | od | Minam | i-Osawa Car | npus |
| Course Desc Theme | ription / | This course covers and function, gene animal, and plant | s topics in basic etics, physiology , and environme | microbio , ecology, ental mic | logy: n intera robiolo | nicrobiolo actions of ogy. | gical micr | l method oorganis | s, cell struct sms with hur | ure nan, |
| Knowledge & students can through the Course Obje | & Abilities a acquire class, ctives | By the end of this phylogeny, gene fu an ability to apply environmental com | course, student unctions, physio v this knowledge nservation, biot | s will be logy, and e to a var echnology | able to divers iety of v and s | o describe sity of mic fields, he so on. | mic croor alth | robiologi ganisms care, agr | cal methods, , and to deve iculture, fish | lop nery, |
| Course Sche Course Cont Instruction I | dule, ents and Methods | First half: Shigeki Ehira 1. Introduction to microbiology 2. Microbial genetics and genomics 3. Regulation of gene expression in bacteria 4. Environmental response in bacteria 5. Environmental acclimation in bacteria 6. Regulation of development in bacteria 7. Genetic engineering in bacteria 8. Conclusion and examination Second half: Shin Haruta 9. Microbial evolution and systematics 10. Metabolism of microorganisms 11. Metabolic diversity of microorganisms 12. Microbe-microbe interaction 13. Animal/plant-microbe interaction 14. Microbes in natural environments 15. Conclusion and examination | | | | | | | | |
| Learning Ac outside the (| tivities Classroom | The students are texts.Hand-outs v | expected to revi vill be provided | ew each l in the cla | ecture ss. | e by readii | ng h | and-outs | or | |
| Textbooks ar References | nd/or | Hand-outs will be Books for reference Biology of the Cel (Madigan et al., P | provided in the ce: Essential Ce l (Alberts et al., cearson Edu.) | class. ll Biology Garland | (Alber Sci.), 1 | erts et al., Brock: Bio | Garl ology | land Sci.) 7 of Micro |), Molecular oorganisms | |
| Grade Evalu | luation Policy Evaluation is made by the results of exam. Presentation and discussion in the class also considered. | | | | | | | n in the class | s are | |
| How to conta instructor ou classroom (Hours) | act the utside the Office | Office hours; by a | ppointment thro | ough e-ma | ail | | | | | |
| Notice for St (Relevance t courses) | Notice for Students (Relevance to other courses) | | | | | | | | | |

| Course Title | , | Developmenta | ıl Biology | | C N | 'ourse umber | 1 | /5214 (I424) | Credit | 2 |
|---|--|--|--|---|---|---|---|---|---|------------------------------|
| Instructor | Kimiko Fu T | ıkuda • Naohito akatori | 2nd Semester | Fri. | | 2nd Peri | iod | Minam | u-Osawa Car | mpus |
| Course Desc Theme | ription / | During embryonic important roles in unraveled how th regulatory mecha will aid you as a r discuss recent res obstacles were ov | e development, e 1 fate specification is cell-specific prinism of gene exp researcher in van earch on animation ercome. | expression on and m rotein exp pression. rious field l embryog | n of ko orpho pressi Unde ds of r genesi | ey proteins ogenesis. E on is regu erstanding esearch. I is to under | s in a Devel lated how n thi rstar | specific c lopmenta 1 through 7 this was is class, y 1d how ea | ells play ıl biologists ł ı study of s accomplish we will study ach problems | nave ed 7 and 8 and |
| Knowledge & students car through the Course Obje | & Abilities 1 acquire class, ectives | Understanding of mechanisms unde Logical thinking a | the function of arlying gene exp and problem-sol | key mole ression a ving abili | cules nd org ity rec | in embryo ganogenes quired for 1 | gene is. resea | esis and r arch. | nolecular | |
| Course Sche Course Cont Instruction | Each must read the assigned chapter from textbook and decide on a "top "questions" to discuss during the class. You will be asked to presend discuss your "topic" and "questions" during class. There will be sm be solved with your classmates. Submit "learning inventory" after the class. Cobe centered on asking questions, discussion and presentation. Invertebrate embryogenesis (Drosophila): Maternal factors Invertebrate embryogenesis (Drosophila): Identity of somites Summary of Drosophila development and discussion Invertebrate embryogenesis: C. elegant development Invertebrate embryogenesis: Sea urchin and tunicates Summary of previous two classes and discussion Regulation of gene expression Cell differentiation morphogenesis Summary of previous three classes and discussion Summary of previous three classes and discussion Grganogenesis Organogenesis | | | | | | | quot;topic" an present and ll be small qu class. Class v | nd iz to will | |
| Learning Ac outside the (| tivities Classroom | Study of the assig no "lectures | gned chapters pi " in the cl | rior to at assical se | tenda ense. | nce is mar | ndat | ory. Thei | e will be | |
| Textbooks an References | nd/or | Principles of Development 5th Edition by Lewis Wolpert, Cheryll Tickle, Alfor Martinez Arias (Oxford University Press) is used as a textbook. Also, handout given. | | | | | | | | be |
| Grade Evalu | ation Policy | 15% will be given 30% to after-class than 2/3 of the cla | to questions asl quiz. 40% to fir asses will be allo | xed durin 1al exam. 1 wed to ta | g clas Only ake th | sses. 15% t students e final exa | o dis who um. | scussion have par | and presenta rticipated in | ation. more |
| How to containstructor ou classroom (Hours) Notice for St | act the utside the Office tudents | Students can cont (kokko@tmu.ac.jp | act Dr. Takator:) for personal di | i (takator scussion. | ri-nao | hito1@tmu | 1.ac.; | jp) or Dr | . Fukuda | |
| courses) | o other | | | | | | | | | |

| Course Title | | Human Biol | ogy | | Cou Num | rse 1ber | V5 (X0 | 5215 0144) | Credit | 2 |
|--|--|---|---|--|--|---|---|---|---|--------|
| Instructor | Ka | nae Ando | 2nd Semester | Ν | lon. | 6th P | eriod | Mi | nami-Osawa | ι |
| Course Desc Theme | ription / | Better health is co health including of overwhelming am scientific thinking biology to help stu | entral to human liseases, treatm ount of informa g is critical. This idents to make i | happi ents, a tion co cours inform | ness. W and new prrectly, e will di ed healt | e are su technol knowin scuss so h decisi | urround logies. 7 g how c cientific ions. | led by ne Fo interp our bodie e knowled | ws related to ret such s work and dge in humai | n |
| Knowledge & students can through the Course Object | & Abilities acquire class, ctives | The goals of this of biology in health a arguments. | course are to pro and disease and | ovide s to dev | tudents elop skil | a found lls in sci | lation to ientific | o unders thinking | tand human and constru | cting |
| Course Schedule, Course Contents andTENTATIVE COURSE SCHEDULE:1. Course introduction1. Course introduction1. Instruction Methods2. Molecules that make our body3. The nervous system4. The skeletal system5. The muscular system5. The muscular system6. Genetics and human inheritance7. Human development and aging8. The endocrine system9. The blood10. The cardiovascular and lymphatic systems11. The respiratory system12. The urinary system13. The digestive system and nutrition14. The reproduction system15. Body defense mechanismsFORMAT:Human health issues related to those topics will be selected and assigned to stud Assigned students will prepare presentations to provide other students biologica knowledge related to the issues. The other students will listen to the talk, break small groups to discuss the issue, then share their thoughts with the whole class | | | | | | | | ned to studen s biological alk, break int rhole class. | ts. | |
| Learning Act outside the (| tivities Classroom | Students who are Other students ar | assigned to give re expected to re | e prese search | entations topics b | s need t before tl | o prepa he class | are them s for activ | outside of cla ve discussion | ass. |
| Textbooks ar References | nd/or | The lecture may u Suggested textboo | use news articles ok: Biology of Hu | s. Han umans | douts m : Concep | ay be gi ots, App | iven at lication | the lectu ns, and Is | res. ssues, 5th ed | ition. |
| Grade Evaluation Policy Class participation 50%, Presentation 50% | | | | | | | | | | |
| How to contact the instructor outside the classroom (Office Hours)Office hour: Wednesday afternoon, 1·2:30pm (room 9·478). Or, please e-mail to k_ando@tmu.ac.jp for an appointment.Notice for Students (Relevance to other courses)Relevance to other courses | | | | | | e-mail to | | | | |

| Course Title | | Neuroscie | ence | | C Nu | ourse umber | V | 75216 (1391) | Credit | 2 | |
|--|--------------------------------------|--|---|---|---|--|--|---|--|-----------------------------------|--|
| Instructor | Kar | nae Ando | 2nd Semester | Tue | | 1st Peri | od | Minam | i-Osawa Car | npus | |
| Course Descri Theme | ption / | This course will p organization of th cells: their structu between nerve cel system in mamma chemical control c | rovide students e nervous system rre, the propaga ls. (2) We will d als and their rel f the brain as th | the basic m. This co tion of ne iscuss de ationship ne bases c | intro ourse erve in velopr os to it of mot | duction to has three npulses an nent and o s function ivation, en | o the part nd tr orga us. (3 moti | structur ts: (1) we cansfer of nization b) we will on, learn | al and funct will study n f information of the nervou discuss the ing and men | ional erve 1 us nory. | |
| Knowledge & students can a through the cl Course Object | Abilities acquire ass, ives | At the end of this transferred from a nervous system in behavior. | course, student a nerve cell to an a mammal, and | s will be a nother ce (3) the ch | able to ll (2) c emica | o describe organizatio ls in the b | (1) ł on a orair | now infor nd functi 1 that cor | mation are ons of the ntrol animal | | |
| Course Sched Course Conter Instruction M | ule, nts and ethods | Neurons and G The Neuronal N The Neuronal N The Action Pote The Action Pote Synaptic Trans Synaptic Trans Review and mid Neurotransmit Neurotransmit The structure Chemical cont Chemical cont Review and fin | Neurons and Glia The Neuronal Membrane at Rest (1) The Neuronal Membrane at Rest (2) The Action Potential (1) The Action Potential (2) Synaptic Transmission (1) Synaptic Transmission (2) Review and mid-term exam Neurotransmitter Systems (1) Neurotransmitter Systems (2) The structure of the nervous system (1) The structure of the nervous system (2) Chemical control of the brain and behavior (1) Review and final exam | | | | | | | | |
| Learning Acti outside the Cl | vities assroom | Homework or revi | ew quiz will be | given aft | er eac | h class. | | | | | |
| Textbooks and References | l/or | Bear, Mark F., Ba Brain 3rd ed. Lipp | rry W. Connors, bincott Williams | and Micl & Wilkin | hael A ns, 20 | Paradiso 06. ISBN: | o. N€ 978 | euroscien 0781760 | ce: Explorin 034 | g the | |
| Grade Evalua | tion Policy | Attendance and Homework 20%, Mid-term exam 40%, Final exam 40% | | | | | | | | | |
| How to contact instructor out classroom (O Hours) | t the side the ffice | Office hour: Wedn for an appointmen | nesday afternoo nt. | n, 1-2:30 | pm. (|)r, e-mail | to ŀ | x_ando@t | mu.ac.jp | | |
| Notice for Stu (Relevance to courses) | dents other | | | | | | | | | | |

| Course Title | | Biodiver | sity | | C Nu | ourse umber | | /5217 (I438) | Credit | 2 | |
|--|--|--|--|--|---|--|-------------------------------|--|---|-----------|--|
| Instructor | Norial | i Murakami | 2nd Semester | Wed | | 2nd Peri | iod | Minam | ii-Osawa Car | npus | |
| Course Desc Theme | ription / | Biodiversity is on- genetics and evolu- higher plants and biodiversity will b | e of the main ta ationary biology fungi as well as e introduced. | rgets for . In this l s those or | moder ecture 1 evolu | rn taxonor e, recent ationary p | ny, p stuc roce | bhylogen lies on bi sses that | y, population odiversity of produce | | |
| Knowledge of students can through the Course Obje | & Abilities n acquire class, ctives | Upon completion 1. Explain how bio 2. Explain how im understanding 3. Explain why se biodiversity. 4. Recognize important of the second sec | of the class, stud odiversity of hig aportant DNA da of its evolutiona xual reproduction rtance of scient | dents wil her plant ata are fo ry origin on is imp ific under | l be ab ts and r reco ortant rstand | ole to: fungi are gnition of for produ ing of bioo | stuo biod actio dive | died now liversity n and ma rsity for t | and aintenance of its conservat | f ion. | |
| Course Sche Course Cont Instruction | edule, cents and Methods | Class schedule: 1. Introduction 2. Molecular phyle 3. Recognition of a 4. Cryptic species 5. Phylogeography 6. Phylogeography 7. Evolutionary si 8. Apogamy (Asex 9. Population gen 10. Endemic plan 11. Adaptive radia 12. Adaptive evolution 13. Comparative of 14. Future studies 15. Review and Final 15. Review and F | Class schedule: 1. Introduction 2. Molecular phylogeny of land plants 3. Recognition of cryptic species of ferns using molecular data and crossing experimen 4. Cryptic species of fungi and their specificity for host plants 5. Phylogeography of deciduous broad-leaved forests in Japan 6. Phylogeography of evergreen broad-leaved forests in Japan 7. Evolutionary significance of sexual reproduction 8. Apogamy (Asexual reproduction through spores) in ferns 9. Population genetical studies on self fertilization of ferns 10. Endemic plant species in the Ogasawara Islands and their conservation 11. Adaptive radiation of the wild plants in Ogasawara 12. Adaptive evolution in rheophytic plants 13. Comparative method based on molecular phylogenetic trees 14. Future studies on biodiversity of plants and fungi 15. Baview and Final examinationHandouts will be provided in the class | | | | | | | | |
| Learning Acoustic outside the | tivities Classroom | | | | | | | | | | |
| Textbooks a: References | nd/or | Handouts will be | provided in the | class. | | | | | | | |
| Grade Evalı | ation Policy | Grades will be based on class participation (20%) and your score of the final written examinations (80%). Submission of report (A4 1 page), which was prepared at home as homework, is required after every class. | | | | | | | | 1 | |
| How to cont instructor of classroom (Hours) | act the utside the Office | Office hour: Wedn | esday 13:00 - 14 | 1:30 | | | | | | | |
| Notice for S (Relevance t courses) | tudents to other | | | | | | | | | | |

| Course Title | | Ecosystems and En | vironments | | Cou Num | rse ıber | V 8 (X0 |)1 42) | Credit | 2 |
|---|--|--|--|---|---|--|---|---|--|----------------|
| Instructor | Vera Thiel | • Marcus Tank | 2nd Semester | V | /ed. | 6th P | Period | Mi | inami-Osawa | l |
| Course Descr Theme | ription / | In this class, we we environments, with global climate. All human population human activity or | vill explore how th a special focu l organisms affe n growth as well n regional and g | organ is on th ct and l as inc lobal e | isms infl ne huma change lustriali environm | uence a n impa- their er zation l ients. | and cha ct on th nvironn has led | nge ecos e environ tent, and to an inc | ystem nment and th l the strong creasing impa | ne act of |
| Knowledge & students can through the o Course Object | z Abilities acquire class, ctives | Students will be a how human activi changes in the en health and qualit | ble to identify a ity influences ec vironment (such y of living. | nd des osyste 1 as cli | scribe ho ms and a mate cha | w organ global c ange ar | nisms a limate, 1d pollu | ffects its as well a tion) affe | environmen as how the ects human l | t and ives, |
| Course Scher Course Conte Instruction M (Tentative) | dule, ents and Aethods | Introduction Population b Ecosystem d Biodiversity Nutrient cyc Pollution: ch Pollution: lig Urbanization Effects of ag Effects of fish Climate chan Climate chan Climate chan Summary, re Final exam. | to environment iology and hum ynamics and su and ecosystem s ling and human emicals and hor ght and noise n, habitat destru- riculture and st hing and aquacu- nge I - facts and nge II - effects nge III - solution eview, Q&A | al stud an pop ccessic service i impac mones action ock far alture cause | dies, pre oulation ; on es. Why o et and city ming s | vious k growth do we c: as ecos | nowled are? ystems | ge and co | ourse overvie | *W |
| Learning Act outside the C | ivities Vlassroom | Students are re Students will b and/or fill out wor Students will b presentation. Range of the assignment | equired to access e asked to read :ksheets. e asked to resea gnment(s) is exp | s and c throug urch sp plained | lownload gh specif ecific top in each | l study ied mat pics and class. | materia cerials b l prepa | al via Kil before cla re short i | baco. Iss, watch vio in-class | deos |
| Textbooks an References | .d/or | Pearson 'Environ By Richard T. Wri Additional source | mental Science: ight and Doroth s and websites y | Towar y F. Bo will be | ds a sus oorse introdue | tainabl ced dur | e future ing clas | e' Editior | ı 13E | |
| Grade Evalu | uation Policy Class attendance, participation (homework presentations and discussions) - 40% of the grade Final exam – 60% of the grade. | | | | | | | | the | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | Particular office h visit my office for A query by email (vthiel@tmu.ac.jp) | ours are not set a query or conce is also acceptab) / Dr. Marcus T | : Pleas ern. le. Ins ank (<u>n</u> | se make tructors: <u>ntank@tr</u> | an appo Instru <u>nu.ac.j</u> j | ointmeı ctor: Dı p) | ıt via e n :. Vera Tl | nail if you wa | int to |
| Notice for St (Relevance to courses) | Totice for Students Relevance to other purses) | | | | | | | | | |

| Course Title | | Special Lecture i | n Biology b | | C N | ourse umber | V | 75219 (1397) | Credit | 1 |
|---|--|---|---|--|-----------------------------|---------------------------------------|-------------------------|------------------------------------|--|--------------------|
| Instructor | Ve | ra Thiel | 1st Half of 2nd Semester | Mon | 1. | 2nd Peri | iod | Minam | i-Osawa Car | npus |
| Course Desc Theme | ription / | We will explore di ecology studies. C discussed. | fferent methods ultivation depen | to analy ndent and | ze mie d inde | crobial div pendent n | versi neth | ty as par ods will l | t of microbia pe introduceo | l d and |
| Knowledge & students can through the Course Object | z Abilities acquire class, ctives | At the end of this microbial diversit ecology studies, a methods for micro | course students y. The students nd discuss stren obial diversity a | will und will be al gths and nalyses. | lerstaı ble to . weak | nd differen understan messes of | nt mo nd ar the c | ethods u nd review lifferent | sed to analyz 7 recent micr approaches a | ze obial and |
| Course Schee Course Cont Instruction N | dule, ents and Aethods | Microbial diversity: Taxonomy, metabolism and phylogeny Cultivation based methods: CFU (colony forming units) and MPN (most probab number) Cultivation independent methods: Microscopic methods Cultivation independent methods: DNA based methods 1 - DNA fingerprinting methods Cultivation independent methods: DNA based methods 2 - DNA cloning and NG amplicon analyses Cultivation independent methods: DNA based methods 3 - Phylogenetic analyse Cultivation independent methods: DNA based methods 4 - Metagenomic sequer studies Summary and Exam | | | | | | | | e s ing |
| Learning Act outside the C | civities Classroom | Students are reading assign Students are reout by the instr | equired to read t ment is explaine equire to presen- uctor. | hrough t d in each t a resear | he spe class ch pa | ecified mat per. Paper | teria rs an | ls before d/or topi | class. Range cs will be giv | e of ven |
| Textbooks an References | nd/or | Brocks Biology of Internet. | Microorganism | s, Genera | l Micı | cobiology, ' | The | Prokaryo | otes, Handou | its, |
| Grade Evalu | ation Policy | In class participa * Students are ex | tion – 40% of the | e grade. pate in c | Exan lassro | n – 60% of om discus | the sion | grade. s * | | |
| How to conta instructor ou classroom ((Hours) | act the atside the Office | Particular office hours are not set. Please make an appointment via e mail if you want to visit my office for a query or concern. A query by email is also acceptable. | | | | | | | | |
| Notice for St (Relevance to courses | udents o other | | | | | | | | | |

| Course Title | | Special Lecture i | n Biology c | | C N | ourse umber | V | 75220 (1398) | Credit | 1 |
|--|--|--|--|---|---|---|----------------------------------|---|---|------------|
| Instructor | Mar | cus Tank | 2nd Half of 2nd Semester | Mon | 1. | 2nd Peri | iod | Minam | i-Osawa Car | npus |
| Course Descr Theme | ription / | In this course we phototrophic prok | will learn abou aryotes, their ta | t photosy axonomy, | vnthes evolu | is in proka tion and e | aryo colo | tes, the d gy. | lifferent grou | ıps of |
| Knowledge & students can through the o Course Objec | z Abilities acquire class, ctives | At the end of this bacteria, includin students will be a prokaryotes. The ecological importa | course students g the basic princ ble to distinguis students will kn ance of phototrop | will be a ciple and sh and ide oow about phy. | able to the di entify t the e | o understa fferent typ the different evolution o | nd th pes c ent g of ph | he photos of light en groups of otosynth | synthesis in nergy usages phototrophi esis and | . The c |
| Course Sched Course Conto Instruction N (Tentative) | dule, ents and Aethods | Phototrophy an Anoxygenic ver Carbon fixation Groups of photo Groups of photo Groups of photo Novel phototrop Summary and o Exam | d photosynthesi sus oxygenic ph i in chlorophotot otrophic bacteria otrophic bacteria otrophic bacteria phic bacteria discussion of ope | is in prok otosyntho trophic ba a I (Cyan a II (purp a III (gree en questie | aryot esis actria obacte ole bac en bac ons | es eria) eteria) eteria) | | | | |
| Learning Act outside the C | ivities llassroom | Students are requ reading assignme Brocks Biology of Internet. | iired to read thr nt is explained i Microorganisms | ough the in each cl s, Genera | specif lass.[7 ll Micr | fied mater `extbooks/I robiology, ' | ials Mate The | before cl erials] Prokaryc | ass. Range o otes, Handou | f ıts, |
| Textbooks an References | ıd/or | Brocks Biology of Internet. | Microorganisms | s, Genera | l Micı | cobiology, 7 | The | Prokaryo | otes, Handou | its, |
| Grade Evalu | ation Policy | Participation in cl | ass - 40% of the | e grade. | Fina | l exam – 6 | i0% (| of the gra | ade. | |
| How to conta instructor ou classroom ((Hours) | act the tside the Office | Particular office hours are not set. Please make an appointment via e mail if you want to visit my office for a query or concern. A query by email is also acceptable. | | | | | | | | |
| Notice for St (Relevance to courses) | udents o other | | | | | | | | | |

| Course Title | | Special Lecture i | n Biology d | | C N | lourse umber | V | /5221 (I395) | Credit | 1 | |
|--|--|--|--|--|--|--|---------------------------------------|--|---|------------------------|--|
| Instructor | Ka | nae Ando | 1st Half of 2nd Semester | Tue | ·. | 2nd Peri | iod | Minam | i-Osawa Car | npus | |
| Course Desc Theme | ription / | Our society is agin Recent studies rev pathogenesis of m will discuss curren and therapeutic s | ng, and the num vealed that accu any age-related nt understandir trategies. | ber of pa imulatior neurolog ng of mole | tients n of m gical d ecular | with age-a isfolded pr liseases su mechanis | asso otei ich a ms i | ciated dia ns may u Is Alzhein Inderlyin | seases is grov inderlie the mer's disease ng these dise | wing. ». We ases | |
| Knowledge & students can through the Course Obje | & Abilities a acquire class, ctives | This course aims age-related neuro didactic lectures a student presentat approaches to que | to introduce cur degenerative di and student pres ion followed by estions in neuros | rent knov seases. T sentation discussio science as | wledg he for . Lect on will s well | e underlyi mat of thia ures will i promote a as critical | ng t s cou ntro an u scie | he patho arse is a duce con nderstan entific thi | genesis of combination cepts, and ding of analy inking. | of ytical | |
| Course Sche Course Cont Instruction I (Tentative) | dule, ents and Methods | Age-related neuro 1. Introduction 2. Alzheimer's disc 3. Alzheimer's disc 4. Parkinson's disc 5. Parkinson's disc 6. Amyotrophic lat 7. Amyotrophic lat 8. Review & discut | Age-related neurodegenerative diseases . Introduction 3. Alzheimer's disease (lecture) 3. Alzheimer's disease (student presentation) Parkinson's disease (lecture) 9. Parkinson's disease (student presentation) 3. Amyotrophic lateral sclerosis (lecture) 7. Amyotrophic lateral sclerosis (student presentation) 5. Review & discussion | | | | | | | | |
| Learning Ac outside the (| tivities Classroom | Reading journal a required. | rticles for discu | ssion and | l prep | aration for | r stu | ident pre | sentation wi | ll be | |
| Textbooks ar References | nd/or | Reading materials | s including prim | nary liter | ature | will be dis | strib | uted in t | he class. | | |
| Grade Evalu | ation Policy | Class participatio | n 30%, Presenta | ation 30% | ő, Fina | al report 4 | 0% | | | | |
| How to conta instructor ou classroom (Hours) | act the utside the Office | Wednesday after appointment. | Wednesday afternoon, 1-2:30pm. Or, e-mail to k_ando@tmu.ac.jp for an appointment. | | | | | | | | |
| Notice for St (Relevance t courses) | o other | | | | | | | | | | |

| Course Title | | Special Lecture i | n Biology e | | C Nu | ourse umber | V | 75222 (1396) | Credit | 1 |
|--|---|---|--|--|--|---|---|--|--|--|
| Instructor | Kar | nae Ando | 2nd Half of 2nd Semester | Tue | | 2nd Peri | iod | Minam | i-Osawa Car | npus |
| Course Descr Theme | iption / | The human brain be the most comp molecular and cel and neurodevelop | is made of the b lex object in our lular mechanism mental disorder | oillions of known u ns underl rs. | cells iniversity in the second s | and trillio se. This co the develo | ons o ourse pme | f connect e aims to nt of the | tions and sai introduce nervous sys | d to tem |
| Knowledge & students can through the c Course Objec | Abilities acquire class, tives | This course aims learn in cell biolog knowledge underl The format of this Lectures will intro promote an under as critical scientif | to encourage stu gy, molecular bio ying the develop course is a com oduce concepts, standing of ana ic thinking. | idents to plogy and pment of bination and stud lytical ap | distill neuro the br of did ent pr oproac | and synt oscience, t rain and n actic lectu resentation hes to que | hesi: hrou euro ures n foll estio: | ze the in: igh discu developr and stud lowed by ns in neu | formation yo Ission of curr nental disord ent presenta discussion v Iroscience as | u vent ders. ttion. vill well |
| Course Sched Course Conte Instruction M (Tentative) | lule, ents and Iethods | Development of Nervous System and Related Disorders 1. Introduction: The genesis of neurons and connection 2. Polarity and segmentation (lecture) 3. Polarity and segmentation (student presentation) 4. Genesis and migration (lecture) 5. Genesis and migration (student presentation) 6. Determination and differentiation 7. Review and Exam | | | | | | | | |
| Learning Act outside the C | ivities lassroom | Reading journal a | rticles for discus | ssion and | prepa | aration for | r pre | sentation | n will be requ | uired. |
| Textbooks an References | d/or | Development of th Press; 3 edition, (2 Other reading ma | ne Nervous Syst 2015) 978-01237 terials includin | em by Sa 745392. g primary | nes D y litera | H, Reh TA ature will | A and be d | d Harris listribute | WA, Academ | ic s. |
| Grade Evalua | ation Policy | Class participatio | n 30%, Presenta | ation 30% | , Fina | ıl exam 40 |)% | | | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | Wednesday afternoon, 1-2:30pm. Or, e-mail to k_ando@tmu.ac.jp for an appointment. | | | | | | | | |
| Notice for Stu (Relevance to courses) | adents o other | | | | | | | | | |

| Course Title | 9 | Special Lecture | in Biology f | | Co Nu | ourse umber | | V5223 (I273) | Credit | 1 | |
|---|---|--|---|---|--|--|-----------------------|-------------------------------------|--|------------|--|
| Instructor | Kouic | hiro Tamura | 1st Half of 2nd Semester | Wed | l. | 1st Peri | od | Minam | i-Osawa Cai | mpus | |
| Course Dese Theme | cription / | This course cover | s the topic in ev | olutionar | y geno | omics of et | ıkar | yotes. | | | |
| Knowledge students car through the Course Obje | & Abilities n acquire class, ectives | By the end of the made up during t the genomes, and organisms. | course, the stud he course of evo how genome ev | lents shou lution, wi olution co | uld kno hat we ontribu | ow how ever ere the fac uted to the | ukar tors e ev | ryotic ger contribu olution o | nomes have b ated to make f eukaryotic | veen up | |
| Course Sche Course Con Instruction | edule, tents and Methods | Human genome Structure of hu Structure and e Structure and e Evolution of ge Evolution of ge NGS technolog Review and example | e projects uman genome evolution of euk evolution of euk nomes and evolu nomes and evolutions ies in evolutions | aryotic ge aryotic ge ution of o ution of o ary genon | enomes enomes rganis rganis nics | s 1 s 2 sms 1 sms 2 | | | | | |
| Learning Acoustic outside the | ctivities Classroom | | | | | | | | | | |
| Textbooks a References | nd/or | Handouts will be | provided during | ; the class | 5. | | | | | | |
| Grade Eval | uation Policy | Final grade will b | e determined by | v class par | rticipa | tion (10-3 | 80%) | and fina | l exams (70- | 90%). | |
| How to cont instructor o classroom (Hours) | act the utside the Office | | | | | | | | | | |
| Notice for S (Relevance courses) | tudents to other | The students are and Genetics (by This lecture is for from other univer required to take t | recommended t Tamura and Tal r students who rsity in principal his lecture. | o take Ge xahashi) cannot ta . Authori | eneral in adva ake Jaj zation | Genetics ance. panese lee from curr | 1, G ctur ricul | eneral G es and g um coorc | enetics 2 raduated linator is | | |

| Course Title | | Special Lecture i | n Biology g | | C Ni | ourse umber | V (| 75224 (1345) | Credit | 1 |
|---|---------------------------------------|---|---|--|--|--|--|---|---|-------------------------|
| Instructor | Shir | n Haruta | 2nd Half of 2nd Semester | Wed | | 1st Peri | od | Minam | i-Osawa Car | npus |
| Course Descri Theme | ption / | Environmental M This special lectur with basic knowle will be strongly er | icrobiology –Eco re is the classes edge in environn ncouraged to asl | ophysiolo for the st nental mi k question | gy and tudent crobio ns and | d Ecology- ts of biolog ology and 1 l express o | - gical micro opini | sciences obial eco ons. | course, deal logy. Studen | ing ts |
| Knowledge & students can a through the c Course Object | Abilities acquire lass, ives | The aims of this c microorganisms. You will also learn microbe-animal, a design and introd | ourse are to lea: You will also lea: n interspecies re and microbe-hur uce a research p | rn phylog rn the rol elationshi nan. By t oroject in | genetic le of m ps bet he enc enviro | c and phys nicroorgan tween mic d of the co onmental | sioloş isms robe urse micr | gical dive in natu: -microbe , student obiology | ersity of ral environm , microbe-pla ts are expect | lents. ant, ed to |
| Course Sched Course Conte Instruction M | ule, nts and ethods | Phylogenetic di Diversity of ene Physiological di Material cycles Ecology and eco Microbe-microb Interactions of Environmental | versity of Bacte ergy metabolism iversity on Earth ophysiology of pro- be interactions microbes with p biotechnology | ria and A rokaryote lants and | rchae es l anim | a nals | | | | |
| Learning Acti outside the Cl | vities assroom | Students are expe book) | ected to prepare | each lect | ure by | y reading t | texts | or resea | arch articles. | (Text |
| Textbooks and References | l/or | Hand-outs will be Books for reference | provided in the ce: Brock: Biolog | e class. gy of Micr | roorga | nisms (Ma | adiga | an et al., | Pearson Edu | ı.) |
| Grade Evalua | tion Policy | Evaluation will be also considered. | e based on a fina | al report. | Prese | ntation ar | nd di | scussion | in the class | are |
| How to contac instructor out classroom (O Hours) | t the side the ffice | By appointment through e-mail | | | | | | | | |
| Notice for Stu (Relevance to courses) | dents other | This lecture is for from other univer required to take t | ture is for students who cannot take Japanese lectures and graduated er university in principal. Authorization from curriculum coordinator is l to take this lecture. | | | | | | | |

| Course Title | | Special Lecture i | | C Nu | ourse umber | 7 | /5225 (I346) | Credit | 1 | |
|--|--|---|---|---|----------------------------|-------------------------------------|------------------------|-------------------------|------------------------------|------|
| Instructor | Tosh | iro Aigaki | 1st Half of 2nd Semester | Thu | | 2nd Peri | iod | Minam | i-Osawa Car | npus |
| Course Descr Theme | iption / | Breakthroughs in We will review the life sciences. | Life Sciences e processes of sci | ientific b | reaktł | nroughs a | nd d | iscoverie | s in the filed | of |
| Knowledge & students can through the c Course Objec | Abilities acquire lass, tives | To learn about sci To make a present To develop the abi | entific breakthro tation to introdu lity to discuss w | oughs an ice what rith your | d disc you in classr | overies in ivestigatee nates. | the d an | filed of li d what y | ife sciences. ou thought. | |
| Course Sched Course Conte Instruction M | ule, nts and lethods | Topics1. Introduction2. DNA, genes and genomes3. Immune system4. Oncogenes5. Fluorescent proteins6. RNA and gene expression7. Stem cells8. Discussion | | | | | | | | |
| Learning Action outside the C | ivities lassroom | | | | | | | | | |
| Textbooks and References | d/or | Handouts will be restricted to tho interests will be a | distributed at t se mentioned a lso included. | he begin above. T | ning o imely | of the clas topics a | ss. T nd | 'he topic those of | s are not student | |
| Grade Evalua | ation Policy | Presentations and Questions, comme Attendance (30%) | l reports (50%) ents and discuss | ions duri | ng the | e class hou | ır (2 | 0%) | | |
| How to contact instructor out classroom (C Hours) | ct the tside the Office | Particular office h e-mail. | our is not alloca | llocated, but students can make appointments by | | | | | | |
| Notice for Stu (Relevance to courses) | idents other | Topics are not res | tricted to those o | lescribed | above | e. | | | | |

| Course Title | 9 | Special Lecture in Biology i | | | | C N | Course Number | | 75226 (I347) | Credit | 1 |
|--|--|------------------------------|--|---|--|-------------------------|-------------------------|----------------|------------------------|-----------------------------|-------|
| Instructor | | Aya 7 | Fakahashi | 2nd Half of 2nd Semester | Thu | | 2nd Peri | iod | Minam | ii-Osawa Cai | npus |
| Course Desc Theme | cription / | | This course covers | s some current r | esearch t | opics | in evoluti | onai | y genetic | cs. | |
| Knowledge & Abilities students can acquire through the class, Course Objectives Course Schedule, | | | By the end of the and should be able | class, students s e to develop thei | should ur r own idd | nderst eas ar | and how r id opinion | resea s rel | arch proc ated to t | eeds in the f he topics. | ield |
| Course Sche Course Con Instruction | edule, tents and Methods | 1 | Following topics w 1. Genes involved 2. Evolution of ad. 3. Genes in conflic 4. Detecting weak 5. Genome-wide g 6. Comparative ge 7. Summary and e Students are expe- work.Handouts w | vill be discussed in speciation aptive traits at natural selection enetic mapping enomics exam exted to review a ill be provided d | in the cl on nd study uring the | ass: mate e class | rials relat s. | ced t | o the top | ics as out-of- | class |
| Learning Ac outside the | ctivities Classroo | m | | | | | | | | | |
| Textbooks a References | nd/or | | Handouts will be | provided during | the class | 3. | | | | | |
| Grade Evalu | uation Po | olicy | Final grade will b | e determined by | class att | tendai | nce/partici | ipati | on 40% a | and exam 60' | %. |
| How to cont instructor o classroom (Hours) | How to contact the nstructor outside the classroom (Office Hours)Particular office hour is not allocated, but students can make appointments by email. | | | | | | | ments by | | | |
| Notice for S (Relevance t courses) | tudents to other | | | | | | | | | | |

| Course Title | | Special Lecture | | C N | course umber | V | /5227 (I431) | Credit | 1 | | | |
|--|--|--|--|---------------------------|-----------------|------------------------|------------------------|------------------|-----------------------|-------|--|--|
| Instructor | Adan | n L Cronin | 1st Half of 2nd Semester | Fri. | | 1st Peri | od | Minam | ii-Osawa Car | mpus | | |
| Course Descr Theme | ription / | Many organisms live together in groups, and group-living conveys a wide range of benefits. Coordination of actions in group-living organisms represents a complex challenge, yet group-living species manage to achieve remarkable tasks, such as building complex structures, coordinated movements over long distances, and advanced decision making. Explaining how this is achieved is the focus of complex systems biology. | | | | | | | | | | |
| Knowledge & students can through the Course Objec | z Abilities acquire class, ctives | In this course we produce outcomes these tasks are ac interactions at the group. Studies of phenomena such development of ar | In this course we will explore how individuals in groups can coordinate activities to produce outcomes far exceeding that which any individual could do alone. In many cases these tasks are achieved with no distinct leadership or top-down control, but via interactions at the local level, which produce emergent phenomena at the level of the group. Studies of collective behaviour are important for understanding diverse phenomena such as movements of human crowds, telecommunication networks, and the development of artificial swarm intelligence. | | | | | | | | | |
| Course Schee Course Conte Instruction N | dule, ents and Aethods | Introduction to Advantages of g The wisdom of Student presen Collective beha Practical study Data analysis a | complex system groups the crowds tations - collectiviour in humans in collective mo and perspectives | ive behav s vements | iour and le | eadership | | | | | | |
| Learning Act outside the C | ivities llassroom | Students will be provided with material to read and/or prepare before the next lecture and are expected to do their own background research of appropriate recent literature. Students will be given occasional tasks to perform outside of class during the semester | | | | | | | | | | |
| Textbooks an References | ld/or | Collective Animal Other relevant lit | Behaviour (201 erature will be j | 0) by Day presented | vid J. l and | T. Sumpte discussed | er (IS in cl | SBN: 978 ass. | 30691148434 |). | | |
| Grade Evalu | ation Policy | Assessment will b the course and in- | e based on a wr class presentati | itten ass ions. | ignme | ent based o | on or | ie or mor | e component | ts of | | |
| How to conta instructor ou classroom ((Hours) | ict the tside the Office | There are not set send queries by en | There are not set office hours: please visit my office if you have any questions of send queries by email. | | | | | | | | | |
| Notice for St (Relevance to courses) | udents o other | nts ner This course will be conducted in English. Students should prepare all m in English and will have the opportunity to discuss among themselves a the general class in English. | | | | | | | naterials and with | | | |

| Course Title | | Special Lecture i | | C Ni | ourse umber | 7 | /5228 (I432) | Credit | 1 | | | | |
|--|--|---|--|--------------------------------------|----------------------------|---|------------------------|------------------------------|-----------------------|------|--|--|--|
| Instructor | Adan | n L Cronin | 2nd Half of 2nd Semester | Fri | | 1st Peri | od | Minam | i-Osawa Car | npus | | | |
| Course Descr Theme | iption / | This topic will exa and how interdisc or organisms. A pa explore organism | and how interdisciplinary approaches can be helpful for understanding the life-history or organisms. A particular focus will be on use of a range of different techniques to explore organism biogeography. | | | | | | | | | | |
| Knowledge & students can through the c Course Objec | Abilities acquire lass, tives | Students will gain in exploring a bro examine how thes of this interdepen biogeography and topic. | students will gain an appreciation for now an interdisciplinary approach can be helpful in exploring a broad range of questions in ecology and evolutionary biology. We will examine how these different fields of study overlap and review studies which make use of this interdependence. Students will develop a familiarity with recent literature on biogeography and how different approaches can help generate new insights into this topic. | | | | | | | | | | |
| Course Sched Course Conte Instruction M | lule, ents and Iethods | Interdisciplinary approaches and biogeography – an introduction Field-based approaches Literature discussion – field based approaches Experimental approaches Literature discussion – experimental approaches Molecular phylogenetic approaches Literature discussion – molecular phylogenetic approaches | | | | | | | | | | | |
| Learning Act outside the C | ivities lassroom | Students will be lecture.Relevant l Students will be semester | given materia iterature will be given occasiona | als to re e present l tasks to | ad ar ed and o perfo | nd/or prep 1 discussee orm outsic | oare d in le of | before class. class du | the next aring the | | | | |
| Textbooks an References | d/or | Relevant literatur | re will be preser | nted and | discus | sed in clas | 38. | | | | | | |
| Grade Evalua | ation Policy | Assessment will b part of the course | e based on pres | entations | s in cla | ass and a v | writt | ten assig | nment on on | e | | | |
| How to conta instructor ou classroom (C Hours) | ct the tside the Office | There are not set send queries by en | There are not set office hours: please visit my office if you have any questions or send queries by email. | | | | | | | | | | |
| Notice for Stu (Relevance to courses) | adents other | This course will be conducted in English. Students should prepare all materials in English and will have the opportunity to discuss among themselves and with the general class in English. | | | | | | | | | | | |

| Course Title | | Regional Environmental Studies | | | | | V | 75229 | Credit | 2 | | | |
|---|--|---|--|--|--|---|--|--|---|-------------------|--|--|--|
| Instructor | Tosh | io Kikuchi | 2nd Semester | Mor | 1. | 5th Peri | od | Minam | ii-Osawa Cai | npus | | | |
| Course Desc Theme | ription / | Agriculture and r century. The prese rather than the tr "commodification | century. The present rural space is characterized by the increased role of consumption rather than the traditional activity of production. This situation may be understood as "commodification of rural spaces". | | | | | | | | | | |
| Knowledge a students car through the Course Obje | & Abilities 1 acquire class, ctives | Thus this study so Japan from the vi how to make comp resources with ap | crutinizes the cl ewpoint of rura modification of 1 propriate use of | nanging p l commoc rural spac ' regional | oroces lificat ces an chara | s and char ion. Stude d how to r acteristics. | racte ents v nake | ristics of will be al e conserv | f rural spaces ole to unders vation of rura | s in tand 1 | | | |
| Course Sche Course Cont Instruction | edule, cents and Methods | Introduction Concept of Com Classification of Commodification | amodification in of Commodification on of Rural Space on of Rural Space on of Rural Space on of Rural Space on of Rural Space ion of Rural Space i | Rural Sp ion in Jap zes in Urk zes in Urk zes in Out zes in Ma zes in Mo aces with aces with aces as Ru aces as th of Rural | paces panes pan Au pan Fu ter Su Hinte rginal untain Devel ural R e Reg Space | e Rural Sp reas ringes burban An erland of U Areas of I nous Areas lopment of copment of cestructuri ulation Sy | reas Jrba: Urba f Tou f Tou f Inte ing sten | n Areas in Area urism and ensive Fa n betwee | d Recreation arming n | | | | |
| Learning Ac outside the (| tivities Classroom | | | | | | | | | | | | |
| Textbooks an References | nd/or | There is no textbo | ook. Handouts w | vill be dis | tribut | ed before | each | class. | | | | | |
| Grade Evalı | ation Policy | Comprehensive ev results of the test | valuation based /report. | on partic | cipatio | on to discu | ssio | ns durinț | g class and t | he | | | |
| How to containstructor of classroom (Hours) | act the utside the Office | Students are advised to have a good command of English, which is equivalent to TOEIC 600 or higher, in advance of taking this module. This course is especially designed for exchange students at Tokyo Metropolitan University, Tokyo University of Agriculture and Technology, Ibaragi University This course is delivered with English. | | | | | | | | | | | |
| Notice for St (Relevance t courses) | tudents to other | | | | | | | | | | | | |

| Course Title | | Tourism Theories and Practice | | | | rse 1ber | V5230 (X0035) | | Credit | 2 | | | | |
|---|--|---|--|--|--|--|---|-------------------------------------|----------------------------------|----------------|--|--|--|--|
| Instructor H | Vaoi、Kikuc Kawahara、 Okamura、 (| hi, Shimizu, Numata, Dsawa, Hihara | 2nd Semester | Г | `ue. | 1st P | Period | M | inami-Osawa | ı | | | | |
| Course Descr Theme | ption / | Tourism is a comp experiences that o visited environme tourism managen | Tourism is a composite of people, resources and businesses, which provides tourists with experiences that cannot be sought in their daily lives, and entails various impacts on visited environments. This module aims to offer students a scientific perspective of tourism management. | | | | | | | | | | | |
| Knowledge & students can through the c Course Object | Abilities acquire lass, :ives | Students will be able to understand definitions of tourism characteristics of tourists and resources measures to keep a good balance between tourism promotion and conservation with appropriate use of natural and cultural resources, transportation and information. | | | | | | | | | | | | |
| Course Sched Course Conte Instruction M | ule, nts and ethods | Introduction (N Concepts and d Characteristics Tourist demand Tourist demand Tourism resour Transport plan Community-bas History of Tour Rural developm Tourism and p Tourism and p Tourism and p Tourism and p Institutional s Management economies ,sustai The effects of Wrap-up Class methods: To questionnaire sur | Jaoi) efinitions of tou of tourists (Naoi) ces and their at ning and manag sed tourism (Ka ism Developmen nent and manag protected areas(ioresource man systems for tour challenges for t | rism (bi) tribute gement wahar nt(Oka ement Numat ageme ism bu burism a) nts on v etures. volved. | Naoi) es (Naoi) ; in touri ;a) in touri ta) nt(Osaw siness a business visitors' Some w |) ism (Sh 7a) nd mar s (e.g.,s evaluat rorks (ir | imizu) kuchi) hageme haring tion of d | nt(Hihar lestinatio vs, discu | ·a) ons (Naoi) ssions, and | | | | | |
| Learning Action outside the C | vities assroom | Students are requ | uested to unders | tand b | asic aca | demic t | ærms ir | n advanc | e of each lect | ure. | | | | |
| Textbooks and References | l/or | To be advised dur | ing the lectures | | | | | | | | | | | |
| Grade Evalua | tion Policy | To be based on a treference to lecture of the arguments. | erm-end paper res and past stu | (100%) dies, p | , which presenta | will be tion of c | evaluat concrete | ed in lig e cases, a | ht of the stru and the logics | cure, ality | | | | |
| How to contact the instructor outside the classroom (Office Hours)Students are advised to have a good command of English, which is equivalent to TOEIC 700 or higher, in advance of taking this module. Students who have questions regarding this module are requested to make an appointment with each lecturer.Notice for Students (Relevance to other courses)Relevance to other courses | | | | | | | valent to vho have ent with | | | | | | | |

| Course Title | Transpor Promotio | t Planning and Mar n | nagement for To | urism | C N | Course Tumber | V5 (K | 5231 (423) | Credit | 2 |
|---|--|---|---|--|----------------------------------|---|--------------------------------------|---|---|---------------------|
| Instructor | Tetsu | o Shimizu | 2nd Semester | Wed | l. | 1st Peri | od | Minam | i-Osawa Car | npus |
| Course Descri Theme | ption / | Transport system sustainable trans This course provi- methods which ha | is inevitable for port system req des knowledge e ave the most imp | r tourism uires fun specially portant r | prom dame on er oles in | notion in re ntal know ngineering, n the trans | egions ledge , econ sport j | and cit in varic omics a plannin | ties. Plannin ous study fiel nd managen g process. | g a lds. nent |
| Knowledge & students can a through the cl Course Object | Abilities acquire ass, ives | Students will be a making a transpo | able to acquire e rt system which | ngineers' 1 is inevit | sense able t | e and ideas to be a trar | s on p 1sport | process r t planne | nanagement er. | on |
| Course Schedu Course Conter Instruction Me | ule, nts and ethods | 【Course Content Part 1: Introducti 1)The reality of tr 2)The framework | cs] on to Transport ransport plannir of transport pla | Planning ng and ma nning an | g and anage d ma | Manageme ement nagement | ent | | | |
| | | Part 2: Understan 3)Transport policy 4)Cost structure f 5)Theory on fare/ | Part 2: Understanding of Transport System from Economical and Policy Aspec 3)Transport policy – business environment and regulation/deregulation 4)Cost structure for transport business 5)Theory on fare/toll setting | | | | | | | |
| | Part 3: Understanding of Transport System from Technological Aspec 6)Capacity in transport system 7)Transport network and facility design 8)Transport terminal design | | | | | | Aspect | | | |
| | | Part 4: Understan 9)Travel behavior 10)Travel behavio 11)Travel behavio | nding of Transpo ral analysis (1) oral analysis (2) oral analysis (3) | ort Syster | n fror | n Planninş | g Aspe | ect | | |
| | | Part 5: Presentat 12)Preparation(1) 13)Preparation(2) 14)Presentation 15)Summary -Fut | ion and Summa)) ture of Transpor | ry t Plannir | ng ang | l Managen | nent | | | |
| | | 【Teaching Metho We have interacti the last part of ea We also have a gr twelfth to the fift | od] ve classroom led ch lecture, stud oup work lectur eenth lecture slo | ctures fro ents are es with s ots. | m the reque urvey | e first till t sted to sub | he ele omit a n and | eventh l 1 feedba 1 presen | ecture slots. ck sheet. tation from t | In the |
| Learning Activ outside the Cl | vities assroom | 【Self-study】 Students are requ be uploaded in th None | uested to read de e kibaco system | esignated in advan | refer ice. | rences befo | re eac | ch lectu | re. Materials | s will |
| Textbooks and References | l/or To be introduced in the course. The course will be taught in powerpoint presentation based. Materials will be distributed before the lecture in the kibaco system. | | | | | | | | | |

| Grade Evaluation Policy | No year-end test will be undertaken. Quality of feedback sheet are a part of the grading (15%). Totally three intermediate written assignments will be given for the grading (60%). These assignments should be written either English or Japanese. As well, in the last part of the course, presentation will be requested for grading (25%). |
|---|--|
| How to contact the instructor outside the classroom (Office Hours) | There is no scheduled office hour, then please contact to lecturer for making appointment by e-mail (t-sim@tmu.ac.jp) if you have any inquiry. |
| Notice for Students (Relevance to other courses) | Students are advised to have a good command of English, which is equivalent to TOEIC 700 or higher, in advance of taking this course. |

| Course Title | 9 | Experimental P | hotography | | C Ni | ourse umber | V | 75232 | Credit | 2 | | | |
|--|--|--|--|--|--|---|-------|-----------|--------------|-------|--|--|--|
| Instructor | Ver | dams | 2nd Semester | Tue | | 3rd Peri | od | Minam | i-Osawa Car | npus | | | |
| Course Desc Theme | ription / | Japan is a world l This context prese photography. This approaches to pho techniques and m | This context presents students with a unique environment in which to explore photography. This class will offer students an opportunity to develop their own unique approaches to photography by encouraging them to experiment with different techniques and methods. | | | | | | | | | | |
| Knowledge of students car through the Course Obje | & Abilities n acquire class, ectives | By the end of the be used to creativ | By the end of the class students should have an understanding of how photography can be used to creatively interpret their environments and explore ideas. | | | | | | | | | | |
| Course Sche Course Cont Instruction | edule, cents and Methods | Class Int Basics of History of Tokyo Ph Street Ph Photogra Class Fie Individua Presenta Student 1 How to F Prelimin Post-Proof Final Presenta Conclusion * Note: This state | roduction, Wha Photography (E of Photography otography photography phic Techniques eld Photography al Field Work tion and Critiqu Experimental Pl ind Your Focus ary Presentation duction and Pho esentation and Con schedule is subje | t is Expen Bring Can (Bring C (Bring C (Bring C and Deve and Deve n and Cri toshop Critique o ect to cha | riment nera to amera d Worl hic Pro elop Yo tique of Worl nge. | tal Photog o Class) a to Class) k oposals our Work of Work k | raph | ny? | | | | | |
| Learning Acoustic outside the | tivities Classroom | Students will be e improving their p | expected to spend hotographic skil | d time ou lls and te | tside o chniqu | of the class ues. | sroo | m taking | photograph | s and | | | |
| Textbooks a: References | nd/or | There is no textbo their work. | ook for this class | s. Studen | ts will | be expect | ed to | o researc | h precedents | s for | | | |
| Grade Evalı | ation Policy | Attendance / Part Photographic Wor | cicipation / Prepa rk: 60% | aredness: | 40% | | | | | | | | |
| How to cont instructor of classroom (Hours) Notice for St (Relevance t courses) | act the utside the Office tudents to other | For office appointments, please contact. Email: adams.tmu@gmail.com *Students must have their own camera that they can use during the class. *This class will be taught in English. | | | | | | | | | | | |

| Course Titl | е | Introduct | ion to Aerospace En | ngineering 2 | | Course Number | | V5233 (L0601) | Credit | 2 |
|---|--------------------------------|---|---|---|--|---|---|---|--|--------------------------|
| Instructor | K.I | M.Asai, T.Ta Kitazono, H.T T.Sakurai, H. H.Sahara, M | gawa, N.Watanabe, akegahara, A.Inasawa, Kojima, N.Takeichi, .Kanazaki, T.Ushio | 2nd Semester | Fri. | | 5th Peri | od Minan | ni-Osawa Ca | mpus |
| Course Des Theme | scrip | tion / | Aerospace engined only our social act technologies are d relevant specialist introduce basic in technologies those | ering and techno civities but also livided into the f ts in Department troductory expla- e are actively stu | ologies an our indiv following at of Aero anation b udied. | re nov idual six th nauti out als | vadays pop daily life. nemes and cs and Ast so commen | oular and im Aerospace er each theme ronautics. W t on the late | portant in no ngineering a is explained le not only st state-of-th | ot nd by ne-art |
| Knowledge students ca through the Course Obj | & A an ac e cla ectiv | bilities equire ss, ves | The following six - Aerodynamic - Structures ar - Propulsion Sy - Guidance, Co - Systems Desi - Space Utiliza Students can obta in each theme. | themes of aeros s and Fluid Dyn nd Materials ystems ntrol and Dyna: gn Engineering tion Technology in not only intro | pace tech namics mics oductory | nolog know | ies will be ledge but a | lectured. also latest re | esearch activ | ities |
| Course Sch Course Con Instruction | edu iten Me | le, ts and thods | The contents of th (1) Aerospace Flui (2) Aerospace Flui (3) Aerospace Mat (4) Aerospace Stru (5) Aerospace Gui (6) Aerospace Gui (7) Aerospace Prop (8) Aerospace Prop (10) Aerospace Prop (10) Aerospace De (11) Aerospace De Engineering) (12) Space Applica (13) Facilities Tou (14) Summary and (15) Feedback from [Lecture style] Omnibus style: Ea | is lecture are as id Dynamics: Pa id Dynamics: Pa cerials Science acture Engineer dance and Cont dance and Cont pulsion : Part-1 pulsion : Part-2 pulsion : Part-3 sign Engineerin ations: Space Re r: Introduction d Discussion m professors wit ach professor wi | s follows art-1 art-2 ing rol : Part (Electric (Air Brea (Chemica ng : Part- ng : Part- emote Ser of six lab th respec Il lecture | (order -1 (Sp -2 (Fl Propu athing al Pro 1 (Spa 2 (Cor nsing, orator t to th t to th | r may be ch pacecraft D ight Dynar ulsion) g Propulsion pulsion an ace System nputer Aid Weather N ries ne students s in their n | hanged) : lynamics and nics, Air Tra n, Aerodyna d Rockets) ls, Small Sat led Design in Monitoring 5' reports research field | l Control) ffic Manage mic Sound) cellite Design n Aerospace d. | ment) 1) |
| Learning A outside the | ctiv Cla | ities ssroom | Students are high through the Inter | ly advised to stu net by themselv | udy the le es. | ecture | ed topics in | detail at th | e library and | ł |
| Textbooks a References | and/ | or | No specific textbo | oks are used. | | | | | | |

| Grade Evaluation Policy | The grade is determined by evaluating the contents of report: the validity and consistency of discussion, universality of assertion, and the number of attendance. The attendance to the facilities tour is mandatory. Grade evaluation weighting: report: 70%, attendance: 30%. |
|---|--|
| How to contact the instructor outside the | 【Office hours】 should contact each professor via email if needed. |
| classroom | |
| Notice for Students | [Relationship with other subjects] |
| (Relevance to other courses) | It is highly desired to have taken "Introduction to Aerospace Engineering 1". |

| Course Title | | Cultural Psychology | | | | ourse umber | I | 75234 | Credit | 2 |
|--|-------------------------------------|---------------------|------------------|-----------|---------|----------------|-----|-----------|-------------|------|
| Instructor | | TBA | 2nd Semester | TBA | A | TBA | | Minam | i-Osawa Car | npus |
| Course Descrip Theme | ption / | | | | | | | | | |
| Knowledge & A students can a through the cla Course Objecti | Abilities cquire ass, ives | | | | | | | | | |
| Course Schedu Course Conter Instruction Me | ule, ats and ethods | Detailed Informat | ion will be anno | ounced by | v the t | ime 2nd se | eme | ster star | ts. | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| Learning Activ outside the Cla | vities assroom | | | | | | | | | |
| Textbooks and References | /or | | | | | | | | | |
| Grade Evaluat | tion Policy | | | | | | | | | |
| Notice for Stud (Relevance to o courses) | dents other | | | | | | | | | |
| Course Title | Intercu | ltural Communication and Interaction | | ion | Cou Num | rse iber | V5235 (X0071) | | Credit | 2 | |
|---|---|--------------------------------------|-------------------|-------|----------------|------------------------|-------------------------|--------------------|--------|---|--|
| Instructor | | TBA | 2nd Semester | W | Wed. 5th Perio | | | eriod Minami-Osawa | | | |
| Course Description / Theme Knowledge & Abilities students can acquire through the class, Course Objectives Course Schedule, Course Schedule, Course Contents and Instruction Methods | | Detailed Informat | tion will be anno | unced | by the t | time 2 nd s | semes | ter start: | 5. | | |
| Learning Acti | vities | | | | | | | | | | |
| outside the Classroom | | | | | | | | | | | |
| Grade Evaluation Policy | | | | | | | | | | | |
| How to contact instructor out classroom (O Hours) Notice for Stu (Relevance to courses) | et the side the ffice dents other | | | | | | | | | | |

| Course Title | Cu | urrent Issues of Edu | acation in Japar | 1 | Course Number | | V | 75236 | Credit | 2 | |
|---|--|--|------------------|------|------------------|----------|----|-------|--------------|------|--|
| Instructor | Ikuko | o Okamura | 2nd Semester | Thur | s. | 3rd Peri | od | Minam | ii-Osawa Car | npus | |
| Course Description / Theme | | This course will require students to build up the action plans for improvement of Japanese education, which has suffered from some serious problems such as a decline in academic ability, bullying, lack of global mind etc Towards the goal, each student is expected to share their knowledge and wisdom about success and failure of their home-country education system with the others and contribute to active discussions among them for ideal solutions. | | | | | | | | | |
| Knowledge & Abilities students can acquire through the class, Course Objectives | | The students will have to understand deeply the followings through completion of the tasks; 1. Japanese society, culture, social structure, national character, etc. 2. Relationship between social problem and education environments 3. the way to find ideal solution by practice of comparative education 4. the differences among the education systems of each country | | | | | | | | | |
| Course Schedule, Course Contents and Instruction Methods | | Introduction of the course (Course overview and expectations) Educational system in Japan and other countries #1 | | | | | | | | | |
| Learning Action outside the C | ivities lassroom | We will go on some field trips to observe the actual Japanese education scenes. | | | | | | | | | |
| Textbooks and/or References | | "Japanese education in an era of Globalozation:Clture, politic and equity", Gary DeCoker and Christopher Bjork: Teachers College Columbia University(2013) "Education in contemporary Japan: Inequality and diversity", Kaori Okano, Motonori Tsuchiya: Cambridge University Press(1999) | | | | | | | | | |
| Grade Evalua | ation Policy | Class Participation (Attendance, Discussion and group work) 40% Presentation 30% Final Report 30% | | | | | | | | | |
| How to contact instructor out classroom (C Hours) Notice for Stu (Relevance to courses) | ct the tside the office adents other | Office Hour : Tuesday 15:00-16:00, #204 @International House . Please make a reservation by e-mail before coming.(e-mail: iokamura@tmu.ac.jp) | | | | | | | | | |

| Course Title | e I | ntroduction to Japa | nese Studies II | | C Ni | ourse umber | V5237 | Credit | 2 | | |
|---|---|--|--|-------------------------------------|--------------------------------|--|--|-------------------------------|--------------------|--|--|
| Instructor | L.Sasaki, H | . Kawahara et al. | 2nd Semester | | 2nd Period Minami-Osawa Campus | | | | | | |
| Course Description / Theme | | In this course, students will have opportunities to explore some exclusive aspects of Japan and Tokyo from an academic perspective. Each semester, we look into three key topics. Each topic contains three components: 1. Lecture A lecture is provided by a faculty member or a specialist on the issue, offering basic knowledge of the topic. 2. 1-day field trip We visit places relevant to the topic in order to understand the real situation. Depending on the topic, students will conduct some research such as interviews or observation. 3. Presentation and report Based on the lecture and fieldwork, students are required to submit one report per topic and give one presentation on the topic of their choice | | | | | | | | | |
| Knowledge students ca through the Course Obje | & Abilities n acquire e class, ectives | Through this course, you will learn and acquire: Knowledge about technology, mind-set, or social system unique to Japan or Tokyo. Comprehensive understanding of specific topics concerning Japan and Tokyo. Deeper insight into Japanese culture. | | | | | | | | | |
| Course Scho Course Con Instruction | edule, tents and Methods | 1. Introduction2. Lecture 1Edo: lessons in sustainability3. Field Trip 14. Lecture 2Tokyo's tourism resources: a reappraisal5. Field Trip 26. Lecture 3Japanese traditional fermentation technology7. Field Trip 38. Student Presentations 19. Student Presentations 2; overview and conclusionsPlease note that lectures and presentation are held on Monday 2nd period, and fieldwork is conducted on Saturday, Sunday, or no-class days.The detailed schedule will be provided at the introductory session (first day of class). | | | | | | | | | |
| Learning Adoutside the | ctivities Classroom | Fieldwork: 1 day field trip to some location relevant to the topic, where students directly observe the reality in the field and conduct surveys/interviews. | | | | | | | | | |
| Textbooks a References | nd/or | References and ot | her reading ma | terials wi | ll be p | provided ir | ı class. | | | | |
| Grade Evaluation Policy Participation (attendance, contribution, assignments) = 50% Presentation = 25% Reports = 25% | | | | | % | | | | | | |
| How to contact the instructor outside the classroom; office hoursDr. Sasaki: office hours Thursday 10:00-12:00 (by appointment only) e-mail: lisasaki@tmu.ac.jp Dr. Kawahara: office hours Thursday 10:00-12:00 (by appointment only) e-mail: <u>hkawa@tmu.ac.jp</u> | | | | | | 7) | | | | | |
| Notice for S (Relevance courses) | tudents to other | For detailed instr Lectures and field Participants will etc. | uctions, student lwork are subjec bear the cost of | s must a et to chan fieldwork | ttend ge dej , such | the first d pending or a as transp | ay of class. 1 the number portation, add | of participa mission ticke | nts. ets, food, | | |

| Course Title | ġ. | Japanese Nature a | | C N | Course Number V5238 Credit | | | | | | | |
|---|-------------|--|--|--------|-------------------------------|----------|---------------------|--|-------------|------|--|--|
| Instructor |] | Lidia Sasaki | 2nd Semester | Fri. | | 2nd Peri | iod Minami-Osawa Ca | | i-Osawa Car | npus | | |
| Course Description / Theme | | An introduction uses a cross-disc diversity of the J cultural perspect their ecology and in the use of sa recreation etc) an Satoyama Initiati the world. | An introduction to Japanese traditional farming systems and landscapes, the course uses a cross-disciplinary systems approach to focus on the regional environmental diversity of the Japanese archipelago. The course offers ecological, socio-economic and cultural perspectives on the origins and evolution of traditional satoyama landscapes, their ecology and the vital functions and services they provide. It reviews recent trends in the use of satoyama as multi-functional rural space (environmental education, recreation etc) and efforts for its conservation. Special reference is made to the UN Satoyama Initiative and examples of satoyama-like sustainable farming systems around the world. | | | | | | | | | |
| Knowledge & Abilities students can acquire through the class, Course Objectives | | The course will en interactions; (2) g approach; (3) und conservation. | The course will enable students to: (1) grasp the complexity of human-environmental interactions; (2) gain familiarity with systemic thinking and the cross-disciplinary approach; (3) understand the role traditional farming systems play in environmental conservation. | | | | | | | | | |
| Course Schedule, Course Contents and Instruction Methods | | The course will course1.Introductio2.Japan: natu3.Japan: soci4.What is sati5.Ecological fi6.Historical course7.Current sit8.Field trip9.Satoyama ai10.Satoyama ai11.UN Satoya12.UN Satoya13.Students' in14.Students' in15.Conclusion | Introduction Japan: natural environmental diversity Japan: socio-demographic features What is satoyama? H. Miyazaki <my neighbor="" totoro=""> (DVD)</my> Ecological foundations of Satoyama; ecosystem services Historical development of Japanese farming&forestry systems and satoyama Current situation of Satoyama (case studies) Field trip Satoyama as multifunctional rural spaces 1: conservation Satoyama as multifunctional rural spaces 2: education, recreation UN Satoyama Initiative: a global approach 1 UN Satoyama Initiative: a global approach 2 (international case studies) Students' individual presentations & class discussion 1 Students' individual presentations & class discussion 2 | | | | | | | | | |
| Learning Activities outside the Classroom | | Field trip Reading assignn Watching 2 sate | Field trip Reading assignments; short research notes on topics relevant to the course Watching 2 satoyama-related documentaries (NHK 1999, 2004) | | | | | | | | | |
| Textbooks and/or References | | Takeuchi K(2001) Miyazaki H. (198 NHK (2004): Sate | Takeuchi K(2001): Satoyama – The Traditional Rural Landscape of Japan. Miyazaki H. (1988): Totoro (DVD) NHK (2004): Satoyama: Japan's secret garden. (DVD) | | | | | | | | | |
| Grade Evalu | uation Poli | cy Based on: Final | Based on: Final Presentation: 70%, Class Participation: 20%, Attendance: 10% | | | | | | | | | |
| How to contact the instructor outside the classroom (Office Hours) Notice for Students (Relevance to other courses) | | Office hours: Thu | Office hours: Thursday 10:30-12:00 | | | | | | | | | |

| Course Title | Contemporary Japanese Society II | | | | Course Number | V | 75239 | Credit | 2 | | |
|--|----------------------------------|---|---|---|--|----|----------|----------|---|--|--|
| Lecturer | М | asaya Shijo 2 rd Semester F | | | ay 3 rd Period Minami-Osawa Campus | | | | | | |
| Subject Teaching Policy Theme | | This course involves an examination and a discussion of socio-cultural topics pertinent to contemporary Japanese Society. By looking into various aspects of Japanese life, this is an opportunity that will allow us to comprehend the meaning of cultural/social diversity of human society. Students are also needed to be well prepared for a discussion by completing each reading assignments before every class. | | | | | | | | | |
| Knowledge & skills students can obtain through the class, objective of the course | | This is a discussion-based course in which topics are prepared by the instructor. Each student is assigned to conduct a presentation in front of the class followed by a class discussion. Students will and are expected to require skills to explain the Japanese culture/society, and also one's original society, based on an academic analysis. | | | | | | | | | |
| Schedule and of course | contents | Introduction How do we rea The Japanese The Japanese The Japanese The Japanese The Japanese The Japanese Diversity and Minority Group Varieties in W Ainu and Okir A New Role for "Indigenous" i "Indigenous" i Group present Conclusion | ach "Contempora Mind(1) Mind(2) Mind(3) Unity in Educat ups: Ethnicity an ork and Labor in nawan People in r Japanese Fath n Japan(1) n Japan(2) cations | cion in Ja d Discrir n Japan Japan ters in Ja | nese Society": M pan nination in Japa pan | an | dologica | l issues | | | |
| Text or referer | nce books | Sugimoto, Yoshio, 2014, An Introduction to Japanese Society (Fourth Edition), Melbourne: Cambridge University Press. (ISBN-10: 1107626676) Hendry, Joy, 2013, Understanding Japanese Society (Fourth Edition), London and New York: Routledge. (ISBN-10: 0415679141) Davis, Roger and Osamu Ikeno, 2002, The Japanese Mind: Understanding Contemporary Japanese Culture, Tuttle Publishing. (ISBN-10: 0804832951) | | | | | | | | | |
| Performance Evaluation | | Attendance/Class participation15%Feedback paper at the end of each class 30%Presentation15%Final Report40% | | | | | | | | | |
| Remarks | | Assignments and a presentation schedule are explained during the class. | | | | | | | | | |

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