Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP1801E
講義名[日本語(英語)] / Class Name： Numerical Analysis Method and Practice
担当者（フルネーム）/ Course instructor (Full Name)：USHIYAMA Tomoki, HARADA Daisuke and Rasmy Mohamed／牛山　朋來, 原田　大輔, Rasmy Mohamed
学期・曜日・時限 / Term・Day・Period： Fall, Winter 秋、冬
単位数/ Credits：2

1 Course Description and Attainment target

This course provides general knowledge of the numerical analysis method and basic computer programming skills of Fortran90 to develop the ability to analyze problem-related data to solve water-related problems. Computer programming skills are required in the other elective courses, such as “Practice on Integrated Flood Analysis System (IFAS)”, “Practice on GIS and Remote Sensing Technique”, and “Practice on Open Channel Hydraulics”. However, this course provides basic understanding and skills in the use and application of the programming languages. In addition to Fortran, Python is introduced which is now popular for handling data files, etc.

[Course Goals]

The aim is to understand the numerical analysis methods. In addition, students should be able to understand, modify and create computer programs to solve water problems using the basic techniques of the computer languages listed below.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with expertise in disaster management policies

(2) Ability to conduct policy analysis for problem-solving based on academic analysis from multiple perspectives with a wide range of knowledge on disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

2 Course Outline (Course Topics)

Week

1 ：Introduction of Computer Programming with Fortran90

２：Variables, Arithmetic Calculation
３：Program Structure (if)
４：I/O Statement
５：Program Structure (do loop)
６：Arrays (vectors)
７：Arrays (matrix)
８：Procedures and Structured Programming (subroutine, function)
９：Hydrologic Application Exercise (1) Tank model
１０：Numerical approximations in hydrological application Exercise (2)
１１：Advanced Hydrologic modeling (RRI algorithm and structures)
１２：Introduction to Python
１３：Application of Python (1)
１４：Application of Python (2)
１５：Application of Python (3)
１６：Quiz

[Themes]
Students will learn the basic components and operations of programming using Fortran 90 (and Python), create their own examples to check their operation, and create similar example programs by themselves in the assignments after each class. After that students will learn numerical analysis method using the programming skills they have got.

[Out-of- class learning]
After each class students further lean the use of algorithms and functions by creating, executing, and checking the results of the programs similar to the one learned in the class. The results will be discussed between students in the next class.

３ Grading
Quiz (50%), Assignment reports (50%)
If a report is late for the deadline, it will be not evaluated.
A: Good understanding of basics of the Fortran 90 programming techniques and be able to make numerical analysis using them.
B: Understanding of basics of the Fortran 90 programming techniques and be able to make numerical analysis using them.
C: Understanding of basics of the Fortran 90 programming techniques and be able to use them to create basic programs.

D: Understand the minimum methods of Fortran 90 programming techniques and be able to use them to create basic programs.

E: Do not understand the minimum methods of Fortran 90 programming techniques and are unable to create programs using them.

4 Textbooks

Reference: Fortran95/2003 for Scientists and Engineers (Third Ed.), by Stephen J. Chapman, McGraw-Hill,

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2000E
講義名[日本語(英語)] / Class Name：Disaster Management Policies A: from Regional and Infrastructure Aspect
担当者（フルネーム）/ Course instructor (Full Name)：知花　武佳　日比野　直彦 / CHIBANA Takeyoshi, HIBINO Naohiko
学期・曜日・時限 / Term・Day・Period：秋学期 /Fall/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

This course deals with the various aspects of disaster management policies from the viewpoint of infrastructure development. It emphasizes understanding the mechanism of natural disasters and measures against it. The course consists of four parts:

I) Introductory lecture to overlook disaster management policies
II) Lectures in specialized fields on practical measures against natural disasters
III) Site-visiting in central Tokyo
IV) Presentations by students and overall discussions
The 3rd and 4th are jointly managed with DMP(B).

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP)
2. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies.
3. Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice.
4. Ability to identify an issue, analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them.
5. Ability to play an active role as a balanced leader based on a deep understanding of different values and systems in a global society.

[Course Goals]

Students will gain a broad understanding of key disaster management concepts, including policies and institutions, technical measures, and characteristics of natural dynamics.

2. Course Outline：

Ⅰ.

1. Characteristics of Natural Disasters

Ⅱ. Disaster Management in Individual Fields (by various experts)

2. Heavy Rain, Snow and Other Disasters in Road Systems, etc.

3. Flood Management in Japan 1

4. Flood Management in Japan 2

5. Wind and Rain Disaster Management in Railway Operation

6. Japan Railway and Natural Disaster

7.Coastal Disaster Management

8. Flood Disaster and Poverty

Ⅲ. Site-Based Study in Tokyo Metropolitan District

9. Site-Based Study 1) (Together with DMP(B))

10. Site-Based Study 2) (Together with DMP(B))

11. Site-Based Study 3) (Together with DMP(B))

Ⅳ. Presentations and Discussion

12. Esquisse (Presentation Workshop) (Together with DMP(B))

13. Presentation and Discussion 1) (Together with DMP(B))

14. Presentation and Discussion 2) (Together with DMP(B))

15. Presentation and Discussion 3) (Together with DMP(B))

[Out-of-class Learning]

Students are expected to read the materials provided in advance and familiarize themselves with the lecture content prior to attending class.

3. Grading：.

Final Group Presentation and Contribution to Discussion (70%)

Final Report (30%)

[Evaluation Criteria]

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Necessary materials will be provided by instructors.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

   ☐ Allow

7. Note：

   Exclude site visits from the audience.

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2010E
講義名[日本語(英語)] / Class Name：Disaster Management Policies B: from Urban and Community Aspect
担当者（フルネーム）/ Course instructor (Full Name)：片山　耕治 / KATAYAMA Koji
学期・曜日・時限 / Term・Day・Period：秋学期 /Fall/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

This course aims to provide a broad understanding of disaster risk management, policies related to urban, housing and community aspects. It emphasizes application of appropriate and practical measures, reflecting social, economic and environmental conditions of each country. This course also attempts to discuss the following issues;

- Basic issues of the disaster management policies
- Lessons from the past large disasters in the world
- Urban Disaster risk management policy in Japan
- Policies and regulations to secure building safety

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP)

2. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies
3. Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice
4. Ability to identify an issue, analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them
5. Ability to play an active role as a balanced leader based on a deep understanding of different values and systems in a global society.

[Course Goals]

Students will gain a broad understanding of key disaster management concepts, including the use of tools for data management and analysis, policy development, and risk communication.

2. Course Outline：

1. Disasters in the World, Basics of Disaster Risk Management
2. Lessons from 2011 Tohoku and 1995 Kobe ,Basics of Disaster Risk Management, Development of disaster risk management

3. Urban disaster risk management policy, Building / housing policy and disaster management
4. Special Lecture "Augmented Reality disaster management training"
5. Special Lecture "Weather and Disasters"
6. Special Lecture "No code App"
7. Special Lecture "Sediment-related Disasters"
8. Special Lecture "OpenStreetMap"
9. Esquisse (Presentation Workshop) (Together with DMP(A))
10. Presentation and Discussion 1) (Together with DMP(A))
11. Presentation and Discussion 2) (Together with DMP(A))
12. Presentation and Discussion 3) (Together with DMP(A))
13. Site-Based Study 1) (Together with DMP(A))
14. Site-Based Study 2) (Together with DMP(A))
15. Site-Based Study 3) (Together with DMP(A))

[Out-of-class learning]

Students are expected to read the materials provided in advance and familiarize themselves with the lecture content prior to attending class.

3. Grading：

Final Presentation(70%) and Contribution to Discussion(30%)

[Evaluation Criteria]

Student’s achievement of the Course Goals is:

Outstanding:	A
Superior:	B
Satisfactory:	C
Minimum acceptable:	D
Below the acceptable level:	E

4. Textbooks and References (4-1:Required 4-2:Others)

Necessary materials will be provided by instructors

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

Allow

7. Note：

Site visits are restricted to enrolled course students and are not open to the audience.

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2800E
講義名[日本語(英語)] / Class Name：Hydrology
担当者（フルネーム）/ Course instructor (Full Name)： MIYAMOTO Mamoru, KOIKE Toshio, TANAKA Shigenobu
学期・曜日・時限 / Term・Day・Period：秋、冬 /Fall, Winter/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

Water is a key which makes a bridge between the socio benefit areas including agriculture and forestry, health, energy and human settlement and the geophysical and bio-geochemical water cycle processes in atmosphere, land and oceans. To establish a physical basis on water cycle, this course aims to introduce important roles of water in climatological and meteorological processes and the basic concepts of hydrology including understanding, observing and modeling of hydrologic processes. Statistic approach, river planning, and climate change adaptation are introduced as advanced facets of hydrology.

[Course Goals]

This course requires students to understand various hydrological processes as well as governing equations for describing surface flow and stream flow. Students also are required to understand runoff modeling, statistical analysis, and climate change which are needed for water-related disaster management.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(3) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

2. Course Outline：

1. Water Cycle and Climate System
    1) Hydrology, creating environmental diversity in the world (Koike)
    2) Water cycle as a part of the climate system (Koike)
2. Hydrological Processes; Observation and Modeling
    1) Atmosphere-land interaction
    2) Soil moisture
    3) Surface flow

4) Stream flow
5) Groundwater
6) Runoff modeling
7) Basin hydrological processes

3.Water Resources Planning and Management

1) Statistical hydrology 1 (Tanaka)
2) Statistical hydrology 2 (Tanaka)
3) Statistical hydrology 3 (Tanaka)
4) River planning (Koike)
5) Climate change adaptation (Koike)
6) Operational hydrology

[Out-of-class Learning]

After the lecture, review the content and ask questions if any. Students can learn about the basics of phenomena in each hydrological process by searching lecture materials and related research papers, which will support their research.

3. Grading：

Students will deepen their understanding of the hydrological phenomena and its system through lectures and the final examination and will be graded from A to D or E depending on the depth of their understanding.

[Evaluation Criteria]

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

4-2 Roland B.Stull: An Introduction to Boundary Layer Meteorology, KLUWER ACADEMIC PUBLISHERS.

4-2 J.R.Holton: An Introduction to Dynamic Meteorology, Academic Press.

4-2 Wilfried Brutsaert: Hydrology: An Introduction, Cambridge University Press

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2810E
講義名[日本語(英語)] / Class Name：Hydraulics
担当者（フルネーム）/ Course instructor (Full Name)：原田　大輔 / HARADA Daisuke
学期・曜日・時限 / Term・Day・Period：秋、冬 /Fall, Winter/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

All flows formed in water environments such as river channels, irrigation channels, lakes and seas are subjected to conservation laws of mass, momentum and energy, and are described by means of partial differential equations. This course aims to obtain knowledge on water flows formed in river channels and flood plains, and discusses methods to evaluate such flows. Special attention are paid on open channel flow.

[Course Goals]

This course requires students to understand basic concepts for the theory of hydraulics including governing equations which describes the nature of water flows. Describing of water surface profile under various conditions are particularly important for the planning of disaster management.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(4) Ability to identify an issue, analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

2. Course Outline：

1. Basic mathematical tools
   - Partial differential equation (1)
   - Integral of the Partial differential equation (2)

2. Governing equations for water flow -Conservation principles
   - Mass conservation law (3)
   - Momentum conservation law (4)
   - Energy conservation law (5)

3. Open channel flows
   - Velocity profile and friction law (6)
   - Governing equations for open channel flow (7)
   - Water surface profile (8)

4. Flood waves

- Flow and wave (9)
- Dynamic wave, diffusive wave, kinematic wave (10)

5. Flows over flood plains
- Modeling of depth-integrated flows with various obstacles (11)

6. Transportation of substances (Mass conservation equations)
- Convective diffusion equation (12)
- Dispersion equation (13)

7. Similarity principle (14)

8. Examination and discussions (15)

[Out-of-class Learning]

After the lecture, review the content and ask questions if any. Students can learn about the basics of phenomena in each hydraulics by searching lecture materials and related research papers, which will support their research.

3. Grading：

50 points for reports and short quizzes

50 points for the examination

[Evaluation Criteria]

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

4-1 Required

Egashira, S. (2016): Hydraulics, Lecture Note

4-2 Others

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2821E
講義名[日本語(英語)] / Class Name：Disaster Risk Reduction for Hydroclimatic Extremes
担当者（フルネーム）/ Course instructor (Full Name)：KOIKE Toshio／小池　俊雄
学期・曜日・時限 / Term・Day・Period：Fall, Winter 秋、冬
単位数/ Credits：2

1. Course Description and the Learning Objectives：
This course addresses the question of how we can reduce the risks of hydro-climatological extremes, such as floods, which are being exacerbated by climate change. It introduces the recent conceptual developments of "risk", "resilience" and "sustainability" and their reflection in UN policies on "Development and Environment" and "Disaster Risk Reduction". Japan provides a useful example of the evolution of the concepts and their implementation, including governance, legislation and finance. In this course, the history of trials and errors and updates will be presented and discussed.

[Course Goals]
This course enables students to develop and share adequate capacity and science-based knowledge for informed cross-sectoral decision-making among all stakeholders to improve resilience to hydro-climatological extremes under climate change and to build a sustainable society.

[Related Diploma Policy (DP)]
Disaster Management Policy Program (DMP):
1. Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
2. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies
3. Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice
4. Ability to identify an issue, analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them
5. Ability to play an active role as a balanced leader based on a deep understanding of different values and systems in a global society

2. Course Outline：
(1) Occurrence of disaster (four classes)
   1) What is disaster risk?

2) PAR model and ACCESS model
3) Impacts of Climate Change
4) Disaster management cycle

(2) Conceptual evolution of UN policies (four classes)
1) Development and Environment
2) Disaster Risk Reduction
3) Climate Change Mitigation and Adaptation
4) Integrated Management

(3) Japan's experiences (four classes)
1) Conventional river management before the 20th century
2) The river management evolution in the 20th century
3) Updated river management in the 21st century
4) Strengthening sustainability and resilience by all

(4) International cooperation (three classes)
1) Science-based cooperation
2) Multilateral cooperation
3) Bilateral cooperation

[Out-of-class Learning]
After the lecture, review the content and ask questions if any. Students can learn about the basics of water resources management and river engineering by searching lecture materials and related research papers, which will support their research.

3. Grading：
Students will deepen their understanding of the hydrological phenomena and its system through lectures and the final examination and will be graded from A to D or E depending on the depth of their understanding.

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks： (4-1:Required 4-2:Others)

4-1: Required

- Ben Wisner, Piers Blaikie, Terry Cannon and Ian Davis: At Risk -natural hazards, people's vulnerability and disasters- (Routledge, London & NY, 2004)
- Kuniyoshi Takeuchi: Integrated Flood Risk Management – Basic Concepts and the Japanese Experience (Routledge, London & NY, 2023)
- UNESCO IWRM guidelines steering committee, IWRM Guidelines at River Basin Level: Part 1-1 Principles, 2-1 Part 2-1 Coordination, 2-2 Flood Management, 2-3 Irrigation. (UNESCO, 2009)

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2871E
講義名[日本語(英語)] / Class Name：Geography on Flood Disaster Management
担当者（フルネーム）/ Course instructor (Full Name)：NAGUMO Naoko and SUGAI Toshihiko
学期・曜日・時限 / Term・Day・Period：NAGUMO Naoko and SUGAI Toshihiko
単位数/ Credits：2

1. Course Aims and Objectives

The characteristics of river basins are developed over a long period of time by both the natural conditions inherent to rivers and the social and economic activities by human. One of the goals of Geography is to elucidate these characteristics of river basins and to assist in fostering more desirable relationships with rivers, such as flood control, water use, and environmental conservation measures. From this perspective, students in this lecture will learn the methods of geographical regional analysis and understand that there are regional differences in the characteristics of rivers, hydraulic and hydrological phenomena in river basins, and human settlement patterns. Furthermore, students will study the history of rivers and human interactions with them, and grasp the importance of flood control, water use, and environmental conservation measures adapted to the characteristics of each river basin.

[Course Goals]

This course aims to enable students to create maps and conduct regional analysis using geographic information, as well as to be able to explain geographic characteristics of their individual study area. Additionally, understanding the importance of flood control, water use, and environmental conservation measures which are tailored to the characteristics of each river basin is also one of the goals of this lecture.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

2. Course Topics and Methods

1: Introduction

Development of geographical concepts

2: Interpretation of Geographic Information (1)

Basics of map representation and map reading

3: Interpretation of Geographic Information (2)

Use of topographic maps

4: Interpretation of Geographic Information (3)

Aerial photograph and satellite image interpretation

5: Regional analysis using geographic information (1)

Description of regional characteristics

6: Regional analysis using geographic information (2)

Role of mapping and land measurement

7: Excursion

Excursion to the Geospatial Information Authority

8: Fluvial systems and fluvial processes (1) (Prof. Sugai)

Earth system and hydrological system

9: Fluvial systems and fluvial processes (2) (Prof. Sugai)

River morphology, process, and floodplain geomorphology

10: Fluvial systems and fluvial processes (3) (Prof. Sugai)

Fluvial responses to climate changes

11: Fluvial systems and fluvial processes (4) (Prof. Sugai)

Fluvial responses to tectonic and anthropogenic changes

12: Development of river basins and alluvial plains (1)

Sediment transportation and flooding of sediment in a river basin

13: Development of river basins and alluvial plains (2)

Civilization in alluvial plains

14: Development of river basins and alluvial plains (3)

Development of rivers and its challenges

15: Summary of the class

[Out-of-class Learning]

Students are required to review the lecture materials distributed in class and their own lecture notes both before and after the lecture. Additionally, they must submit assignments by the deadline, and search for and read related research papers according to their individual interests.

3. Grading

Students are required to deepen their understanding of geography through lectures, class exercises and

assignments as well as examination. The grade will be evaluated based on class exercises and assignments (40%) and exams (60%).

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks
4-1 Required
In this course, no textbook is specified.
4-2 Others
Fryirs, K.A. and Brierley, G.J. (2013) Geomorphic Analysis of River Systems: An Approach to Reading the Landscape, First Edition, Blackwell Publishing.
Leopold, L.B., Wolman, M.G., Miller, J.P. (2020) Fluvial Processes in Geomorphology, Second Edition, Dover Publications.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing; Allow or Not Allow
Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2891E
講義名[日本語(英語)] / Class Name：Hydrological Modeling for Water and Sediment Disaster Management under Climate Change
担当者（フルネーム）/ Course instructor (Full Name)：Rasmy Mohamed, SAYAMA Takahiro and HARADA Daisuke／Rasmy Mohamed, 佐山　敬洋, 原田　大輔
学期・曜日・時限 / Term・Day・Period： Fall, Winter 秋、冬
単位数/ Credits：2

1 Course aims & objectives

The hydrologic model is a simplified representation of an existing hydrologic system that helps water resources comprehension, assessment, forecasting, management, and mitigation.

[Course Goals]

The objective of this course is to introduce a theoretical background of hydrological processes, and concepts of model developments, and provide the necessary skills for undertaking hydrological flow, flood inundation, and sediment-related simulations and analysis in poorly gauged basins under climate change using the state-of-the-art global information and technologies.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to understand hydrological, hydrodynamic, and sediment processes and their modelling

(2) Ability to execute, analyze, and visualize the outputs from Rainfall-Runoff-Inundation (RRI) modeling, Rainfall-Sediment-Runoff (RSR) modeling, and Water and Energy Budget Rainfall-Runoff-Inundation (WEB-RRI) modeling at different scales

(3) Ability to understand climate change scenarios and selection and bias-correction of climate model outputs to be used for hydrological modeling under various climate projection scenarios.

2 Course Topics

1：Basics of Flood Hazard Models
2：Rainfall-Runoff-Inundation modeling (1) Data preparation
3：Rainfall-Runoff-Inundation modeling (2) Running model
4：Rainfall-Runoff-Inundation modeling (3) Command User Interface
5：Rainfall-Runoff-Inundation modeling (4) Parameter setting
6：Rainfall-Runoff-Inundation modeling (5) Analysis of simulation results
7：Rainfall-Runoff-Inundation modeling (6) Advanced model settings

8：Introduction to Rainfall-Sediment-Runoff (RSR) (1) processes modeling
9：Rainfall-Sediment-Runoff (RSR) (2) model setup and simulation
10: Water and Energy flux estimation in Modified Simple Biosphere Model 2 (SiB2)
11: Water and Energy Budget Rainfall-Runoff-Inundation (WEB-RRI) modeling
12: Introduction to climate model, scenarios, and projections
13: Climate model selection using Data Integration Analysis System (DIAS)
14: Statistical downscaling of climate model outputs (1)
15: Application of climate model outputs in hydrological model
16: Final Exam

[Out-of-class Learning]
Study the lecture notes, manuals, and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can also learn about hydrological and sediment transport processes and their modelling by searching lecture notes and related research papers online, and prepare themselves for their research objectives.

3 Grading
Students will enhance their understanding of hydrological and sediment transport processes and modelling through lectures, hands-on training, assignments, and examinations, and they will be graded from A to E depending on the depth of their understanding.

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E
65% points for assignment reports
35% points for the final examination
Remarks: The late submission of the reports and assignments will not be evaluated.

4 Textbooks
4-1 Required Material made by the instructors
4-2 Others

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP2901E
講義名[日本語(英語)] / Class Name：Crisis and Risk Management
担当者（フルネーム）/ Course instructor (Full Name)：OHARA Miho／大原　美保
学期・曜日・時限 / Term・Day・Period：Fall, Winter 秋、冬
単位数/ Credits：2

1. Course Description and the Learning Objectives：
For achieving flood disaster risk reduction, both risk management and crisis management is essential. Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) defines four priority for action. Among these priorities, “Priority 1: Understanding disaster risk” and “Priority 2: Strengthening disaster risk governance to manage disaster risk” are the basis of disaster risk reduction. In addition, “Priority3: Investing in disaster risk reduction for resilience” is related to risk management while “Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better”” is related to crisis management. Based on SFDRR, This course aims to provide the basic understanding of crisis and risk management. The measures implemented in Japan for these priorities for action are also introduced. Necessary governance and communication to achieve these priorities are also explained.

[Course Goals]
This course requires students to understand both risk management and crisis management defined as priorities for action by SFDRR. Students are required to understand measures implemented in Japan including their history of establishment and revisions in addition to understand necessary governance and communication with related stakeholders to achieve these priorities. Students are also required to obtain the skill of making a plan of risk management and crisis management, conducting risk assessment for designing preventive investment and implement necessary measures for achieving appropriate risk management and crisis management following to SFDRR.

[Related Diploma Policy (DP)]
Disaster Management Policy Program (DMP):
(1) Ability to making a plan of risk management and crisis management
(2) Ability to conducting risk assessment for designing preventive investment
(3) Ability to implement necessary measures for achieving appropriate risk management and crisis management
(4) Ability to design necessary governance and communication with related stakeholders

2. Course Outline：

1. Introduction: Framework of SFDRR and four priorities for action
2. Understanding Risk (SFDRR-Priority1)
3. Understanding Risk (SFDRR-Priority1)
4. Risk Governance (SFDRR-Priority2)
5. Methodology for assessing socio-economic impact (SFDRR-Priority 3)
6. Methodology for assessing socio-economic impact (SFDRR- Priority 3)
7. Example of assessing direct impact (SFDRR- Priority 3)
8. Example of assessing indirect impact (SFDRR- Priority 3)
9. Disaster information dissemination in Japan (SFDRR-Priority 4)
10. Disaster information dissemination in Asia, Dr. Minami (SFDRR- Priority 4)
11. Emergency response /Timeline (SFDRR- Priority 4)
12. Risk finance and impact on Business sector (SFDRR- Priority 4)
13. Risk-based land use management (SFDRR- Priority 4)
14. Build Back Better (SFDRR- Priority 4)
15. Presentation, discussion, and evaluation

[Out-of-class Learning]

After the lecture, review the content and ask questions if any. Students can learn about the examples of risk management and crisis management by searching lecture materials and related research papers, which will support their research.

3. Grading：

Students will deepen their understanding of t risk management and crisis management through lectures and the final examination and will be graded from A to D or E depending on the depth of their understanding.

[Evaluation Criteria]

Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks： (4-1:Required 4-2:Others)

At Risk: Natural Hazards, People's Vulnerability and Disasters, Piers Blaikie, 2003.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3000E
講義名[日本語(英語)] / Class Name：Earthquake Hazard Assessment A
担当者（フルネーム）/ Course instructor (Full Name)：Dr. Hiroto Nakagawa
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring
単位数/ Credits： 2

1 Course Description and the Learning Objectives

[Course Description]

This course is designed so that students understand fundamental ideas on earthquake hazard evaluation for specific locations when an earthquake and soil condition is given. The students are expected to acquire knowledge of relevant topics such as geotechnical site investigation, soil dynamics, and strong earthquake motion observation. The students also learn about recent studies on strong earthquake ground motions and seismic hazard analysis to mitigate future earthquake disasters.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies
(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand fundamental ideas on earthquake hazard evaluation for specific locations
(2) acquire knowledge of geotechnical site investigation, soil dynamics, and strong earthquake motion observation
(3) learn about recent studies on strong earthquake ground motions and seismic hazard analysis to mitigate future earthquake disasters.

2 Course Outline (Course Topics)

(1-3) Soil Test and Survey

－Basic Properties of Soil
－Planning for Geotechnical Investigation
－Geophysical prospecting
－Drilling and Sampling
－Sounding
(4-6) Soil Dynamics
－Fundamentals of soil mechanics and site investigation
－Dynamic soil properties
－Liquefaction
－Seismic response analysis of layered soil system
(7-12) Strong Ground Motion Study I
－Ground motion prediction equation
－Probabilistic seismic hazard analysis
－Hand calculation of seismic hazard curve
－Seismic hazard map
(13-15) Strong Ground Motion Study II
－Recent studies on strong ground motions
－Empirical Green's function method
－Recipe for predicting strong ground motion

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about earthquake hazard assessments by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3 Grading

Class discussions (50%) and reports on practices (50%) will be evaluated.

[Evaluation Criteria]

Student’s achievement of the Course Goals is:

Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D

Below the acceptable level: E

4 Textbooks

Lecture notes and the necessary materials will be provided.

5 Software Used in Lectures（If not applicable, it can be left blank.）：

6 Auditing ; Allow or Not Allow

否 Not Allow

7 Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3010E
講義名[日本語(英語)] / Class Name：Earthquake Risk Assessment
担当者（フルネーム）/ Course instructor (Full Name)：小豆畑　達哉 / AZUHATA Tatsuya
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn fundamental theories and concrete technologies to mitigate seismic disasters due to the collapse of buildings. In the first part, students are expected to acquire knowledge of seismic evaluation methods for existing buildings and various techniques for retrofitting vulnerable ones. Those are countermeasures that should be done before an earthquake. In the second part, students are expected to acquire knowledge of quick inspection and damage classification methods for damaged buildings and various techniques for repairing them. Those are countermeasures that should be taken after an earthquake. The quick inspection lectured in this course also covers the structural health monitoring based on the system identification theory.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand the outlines and significance of earthquake risk assessment, mainly focusing on building structures,

(2) acquire knowledge of seismic evaluation and retrofit techniques of existing buildings and

(3) quick inspection and damage classification of damaged buildings and repair techniques for them.

2. Course Outline：

(1-18) Seismic evaluation methods and Seismic retrofits of existing buildings

- Evaluation concepts and methods
- Rehabilitation strategy
- Case studies

(19-21) Quick inspection, Damage classification, and Repairing of damaged buildings
- Outline and role of quick inspection
- Outline and role of damage evaluation
- Rehabilitation Technique Examples
(22-24) System identification
- Theory and methods of system identification
- Identification of structural characteristics of buildings

[Out-of-class Learning]
Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about earthquake risk assessments by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：
Class discussions (30%) and reports on practices (70%) will be evaluated.

[Evaluation Criteria]
Student's achievement of the Course Goals is:
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)
Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow
否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3030E
講義名[日本語(英語)] / Class Name：Tsunami Hazard Assessment
担当者（フルネーム）/ Course instructor (Full Name)：芝崎　文一郎 / SHIBAZAKI Bunichiro
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

To manage tsunami risk and administer tsunami disaster prevention, it is essential for students to prepare a tsunami hazard map that identifies the areas that are likely to flood and sustain damage under different tsunami scenarios.

The objective of this course is to study the knowledge and the techniques necessary for assessing the hazards of a tsunami by numerical simulations of tsunami propagation and inundation, preparing a tsunami hazard map, planning for evacuation, and educating the residents about disaster prevention in case of a tsunami.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) acquire knowledge of tsunami propagation and inundation and skills for their numerical simulations

(2) acquire the knowledge of tsunami hazard map and evacuation planning

(3) understand the method of Tsunami Damage Survey

(4) acquire knowledge of tsunami education

2. Course Outline：

(1)-(3) Tsunami Hazard Assessment ―Theory of Tsunami Propagation and Inundation Simulation

- Shallow water theory
- Tsunami propagation model and finite difference method
- Numerical model of tsunami (TUNAMI-N1, Linear model)

- Numerical model of tsunami (TUNAMI-N2, Non-linear model)
- Practice to run the model

(4)-(9) Numerical Simulation of Tsunami Inundation and Its Application

- Theory of the long-wave model
- Finite difference method for the long-wave model
- Simulation exercises for tsunami propagation and inundation

(10)-(14) Tsunami Hazard Map and Evacuation Planning

- Tsunami Hazard Mapping
- Tsunami Evacuation Planning
- Tsunami Evacuation Simulation
- Case studies and Workshop

(15)-(17) Tsunami Damage Survey

- Examples of tsunami damages
- Survey method and the theory
- Matters to be attended in field survey
- Exercise

(18) Tsunami Education

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about the covered subjects by searching lecture notes and related research papers, and prepare themselves to have courses related to tsunami hazard assessment.

3. Grading：

Class discussions (50%) and reports on practices (50%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

   否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3040E
講義名[日本語(英語)] / Class Name：Tsunami Countermeasures
担当者（フルネーム）/ Course instructor (Full Name)：藤井　雄士郎 / FUJII Yushiro
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn the techniques and methods necessary as tsunami countermeasures. In the first part, students are expected to acquire the knowledge of tsunami force, various tsunami protection facilities, and tsunami refuge buildings. Through field studies students will also observe the actual tsunami protection facilities in the course. In the second part, students are expected to acquire the techniques and methods for tsunami observation, tsunami early warning systems and warning dissemination.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand outlines, techniques and methods necessary for tsunami countermeasures,

(2) acquire knowledge of tsunami force, various tsunami protection facilities, and tsunami refuge buildings and

(3) techniques, principles and methods for tsunami observation, tsunami early warning systems and warning dissemination.

2. Course Outline：

(1)-(3) Tsunami Protection Facility

- Great breakwater at bay mouse at Kamaishi City
- Kamaishi Port, Offshore GPS wave gauge

(4)-(6) Tsunami Damage and Reconstruction I

- Collapsed and/or fallen RC buildings at Onagawa Town
- Evacuation places, Tsunami memorial park at Rikuzentakata City

(7)-(9) Tsunami Damage and Reconstruction II
- Devastated buildings by the 2011 tsunami at Minamisanriku Town
- Remain of disaster prevention office building
- Great tide wall at Miyako City (former Taro Town)
- Evacuation places
- Sign boards of tsunami heights by historical earthquakes
- Koborinai fishing port

(10) Tsunami Deposit Survey
- Sendai, Arahama Beach, Tagajo, Ishinomaki
- Tsunami inundation area and Highway of eastern Sendai
- Tsunami deposits by the 869 Jogan and 2011 Tohoku earthquakes

(11)(12) Tsunami Observation
- Sea Level Observation Method
- Tidal Data Analysis
  Ocean Tide Component Removal, Filtering, Tsunami Measurement
- Tidal Station Tour
- Practice on Tsunami Measurement

(13)-(16) Tsunami Early Warning System and Warning Dissemination
- Outline of Tsunami Warning Service
  National Tsunami Warning Service, International Tsunami Information Service
- Tsunami Estimation

(17) Tsunami Force and Tsunami Resistant Structure
- Tsunami mitigation
- Design formula of tsunami force
- Experiment of tsunami force in a large flume
- Tsunami observation and GPS buoy system

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. Also, be sure to have an overview of the tsunami countermeasure facilities that you will visit in advance. After the lecture, review the content and submit the assigned report by the due date. Students can learn about tsunami countermeasures by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：

Class discussions (30%) and reports on practices (70%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

   Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow

   否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3050E
講義名[日本語(英語)] / Class Name：Earthquake Hazard Assessment B
担当者（フルネーム）/ Course instructor (Full Name)：林田　拓己 /HAYASHIDA Takumi
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn microtremor observation techniques and data processing procedures, seismic reflection methods, design earthquake ground motion, and nonlinearity of the site amplification to understand methodologies of earthquake hazard evaluation for specific locations when an earthquake environment is given.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies
(3) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) acquire knowledge of microtremor observation techniques and data processing procedures
(2) acquire knowledge of principles of seismic reflection methods
(3) understand methodology of how to generate design earthquake ground motion for engineering purpose
(4) understand nonlinearity of the site amplification

2. Course Outline：

(1-3) Microtremor Observation Ⅱ

- Passive source exploration: Horizontal-to-vertical (H/V) spectral ratio
- Passive source exploration: Spatial autocorrelation (SPAC) method
- Active source exploration: Multichannel analysis of surface waves (MASW)

(4-9) Geophysical Prospecting

- Seismic refraction exploration
- Seismic refraction analysis

(10-12) Simulation of Seismic Ground Motion

- Seismic provisions in the building standard law of Japan
- Define and generate design earthquake ground motions for buildings

(13-15) Seismic Micro-Zonation

- Geomorphologic classification
- Amplification capability estimation from geomorphologic units
- Remote sensing technology and damage estimation
- Interferometric SAR (InSAR) Technology for DEM Generation
- Nonlinearity of site amplification during strong ground motions

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about the covered subjects by searching lecture notes and related research papers, and understand methodologies of earthquake hazard evaluation for specific locations.

3. Grading：

Report assignments (50%) and examinations (50%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

Excel, FORTRAN, Python

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3200E
講義名[日本語(英語)] / Class Name：Earthquake Phenomenology
担当者（フルネーム）/ Course instructor (Full Name)：北　佐枝子 / KITA Saeko
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn the techniques and methods necessary as determinations of earthquake parameters and understanding earthquake phenomena. Practical training of determinations of hypocenter and magnitude, and earthquake observations are included. Students are expected to acquire the techniques and methods for earthquake observation, identification of seismic phases, analyses of local earthquakes, magnitude calculation, seismicity, crust and upper mantle structure and earthquake early warning systems through lectures and practical trainings.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand outlines, techniques and methods necessary for earthquake observation and obtaining earthquake parameters.

(2) acquire knowledge of earthquake observation, determinations of hypocenter and magnitude, and earthquake early warning systems and warning dissemination.

2. Course Outline：

(1-6) Earthquake Observation　I

(7-12) Local Earthquake Analysis　I

(12-18) Teleseismic Phases and Magnitudes

(19-21) Earthquake Early Warning　I

(22-24) Crust and Upper Mantle Structure

[Out-of-class Learning]

After the lecture, review the content and submit the assigned report by the due date. Students can learn about earthquake phenomenology by reviewing lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：

Class discussions (30%) and reports on practices (70%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3210E
講義名[日本語(英語)] / Class Name：Characteristics of Earthquake Disasters
担当者（フルネーム）/ Course instructor (Full Name)：原　辰彦 / HARA Tatsuhiko
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn knowledge of theories essential for seismological data processing, basic theories of numerical simulation of seismic wave propagation, and understand effects of surface geology on seismic motion. Underground shear waves velocity structure gives large influences on seismic waves propagation and amplification, and dynamic behavior of soft sedimentary layers near the earth's surface. Students also learn about broadband moment magnitude.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

acquire knowledge of theories essential for seismological data processing
acquire knowledge of basic theories of numerical simulation of seismic wave propagation,
understand the effects of surface geology on seismic motion and
acquire knowledge of broadband moment magnitude

2. Course Outline：

(1-12) Data Processing

- Least squares method (Introduction to inverse problem, Straight line fitting, General linear least squares, Linear inversion under constraints, Iterative procedure to solve non-linear problem)
- Processing of discrete time series (Linear system, Discrete Fourier transform (DFT), Fast Fourier transform (FFT), Digital filters)

(13-18) Numerical Simulation of Seismic Wave Propagation

- Basic theory of seismic wave propagation.
- Propagator matrix method.
- Numerical method (Finite-difference method).
- Simulation of seismic wave propagation using PC

(19-24) Effect of Surface Geology on Seismic Motion

- Site effects in seismic design
- Site effects and seismic bedrock
- Calculation of 1D site effects
- 2/3D site effects
- Site effects in strong motion records
- Application of microtremors in estimation of site effects
- Microtremor array exploration for subsurface S-wave velocity
- Inversion of subsurface S-wave velocity from earthquake records

(25-29) Determination of Broadband Moment Magnitude

- Basic concept of broadband moment magnitude (Mwp)
- Comparison of various magnitude scales (e.g., mb, Ms, Mw, Mm)
- Procedure of determination of Mwp
- Practices to determine Mwp

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about the covered subjects by searching lecture notes and related research papers, and prepare themselves to have courses related to earthquake hazard assessment.

3. Grading：

Report assignments (60%) and examinations (40%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：
   Python, Fortran, Cygwin, SAC (Seismic Analysis Code), MS-Excel

6. Auditing ; Allow or Not Allow
   否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3220E
講義名[日本語(英語)] / Class Name：Earthquake Circumstance
担当者（フルネーム）/ Course instructor (Full Name)：芝崎　文一郎 / SHIBAZAKI Bunichiro
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students understand earthquake circumstances, such as earthquake mechanisms and generation processes of earthquakes. First, basic lectures on practical mathematics for seismology are given. Then, lectures and practices on earthquake focal mechanisms and moment tensors are given to help understand earthquake circumstances. Finally, the current research of earthquake generation and forecasting is introduced to understand earthquake circumstances.

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[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) acquire knowledge of theories essential for mathematics for seismology

(2) acquire knowledge of fundamental theories of earthquake focal mechanisms and moment tensors and

(3) understand earthquake generation and forecasting

2. Course Outline：

(1-16) Mathematics for Seismology

- Ordinary Differential Equations
- Fourier Series, Fourier Transform
- Wave Equations
- Matrix Algebra, Eigenvalue Problem, Diagonalization
- Vector Analysis

(17-21)Earthquake generation and forecasting I

- Earthquake kinematics and dynamics
- Stress drop estimation
- Earthquake preparation process
- Earthquake cycles and long-term forecasting

(22-27)Earthquake Focal Mechanism

- Terms and parameters of seismic fault
- Radiation Pattern
- Focal mechanism diagram
- Determination of focal mechanism by P-wave first motion method

(28-33)Analysis of Moment Tensors

- Forward modeling and inversion
- Double couple model
- Moment tensor
- Theory of moment tensor inversion
- Practice in moment tensor inversion

Examination/report

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about the covered subjects by reviewing lecture notes and related research papers and preparing themselves for courses related to earthquake circumstances.

3. Grading：

Report assignments (50%) and examinations (50%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

   否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3230E
講義名[日本語(英語)] / Class Name：Information Technology Related with Earthquakes and Disasters
担当者（フルネーム）/ Course instructor (Full Name)： ITO Eri
学期・曜日・時限 / Term・Day・Period：秋、冬 /Fall, Winter/
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn the basics of information technology related to earthquakes and disasters and acquire the ability to utilize them through a series of lectures and practices. First, students will understand important Unix/Linux commands and obtain basic knowledge of shell scripting. Students also learn major computer languages in seismological research (Fortran90 and Python), mapping tool (Generic Mapping Tools; GMT), and basic theories of seismic waves.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

understand the features and uses of Linux and operate Linux by using commands.
understand the structure of shell scripts.
create maps and scientific figures using GMT.
write computer programs for simple numerical calculations.
understand basic theories of seismic waves.

2. Course Outline：

(1-27) Computer

- Unix/Linux

- GMT
- Fortran
- Python

(28-45) Theory of Seismic Waves
- Basic Elasticity Theory
- Elastic wave equation; P and S waves
- Reflection and refraction of plane elastic waves on a horizontal boundary
- Introduction to surface

(46-48) Surface Waves
- Overview of surface-wave generation and propagation
- Surface wave dispersion: Frequency-dependence of phase and group speeds
- Measurements of phase and group dispersion curves from waveform analyses
- Inversion of surface-wave dispersion data for crust and upper mantle structures
- Surface wave tomography: lateral heterogeneity and anisotropy

(49-51) Scattering and Attenuation
- Stochastic modeling of small-scale heterogeneities in the crust and upper mantle: in contrast with a deterministic approach
- Scattering and attenuation in the crust and upper mantle (1): coda waves
- Regional variation of coda waves, and applications to site and source effects (including scaling laws of seismic sources)
- Location estimation of volcanic tremors and landslides as an example of applications of high-frequency scattered waves
- Scattering and attenuation in the crust and upper mantle (2): direct waves
- Anelastic attenuation of seismic waves: mechanism, measurement, frequency dependency, regional variation (if time is available)

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about the subjects covered by searching lecture notes and related textbooks and preparing themselves for Linux, computer programs, and seismic wave theories.

3. Grading：

Report assignments (50%) and examinations (50%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

   Lecture notes and necessary materials are provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow

   否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3400E
講義名[日本語(英語)] / Class Name：Structural Analysis
担当者（フルネーム）/ Course instructor (Full Name)：大塚　悠里 / OTSUKA Yuri
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn the fundamental concepts and principles for structural analysis, such as displacement and stress methods using matrix formulation. In the first part, students are expected to acquire knowledge of the basic concepts of the finite element method, focusing on solving static linear problems using iso-parametric element models. In the second part, students are expected to acquire knowledge of the member models and basic concepts of the direct stiffness method for the non-linear frame analyses of buildings. In the third part, students learn to evaluate the seismic responses of buildings following the instructions of computer programs.

[Related Diploma Policy (DP)]

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand the outlines and significance of structural analysis, mainly focusing on building structures,

(2) acquire knowledge of seismic evaluation and elasto-plastic analysis techniques of buildings

(3) comprehend to the evaluate the seismic response of buildings using computer software.

2. Course Outline：

(1-15) Structural Analysis

- Fundamental concepts and principles of structural analysis
- Displacement method and force method by matrix formulation
- Exercise for displacement method and force method

(16-24) Finite Element Method I

- Elasto-plastic analysis of structure

- Exercises for elasto-plastic analysis of structure
- Basic concept of finite element method
- Exercises using computer software for static linear problems
- Nonlinear member models for frame analysis of buildings
- Evaluation of earthquake responses of buildings

[Out-of-class Learning]
Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about structural analysis by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：
Examination results for structural analysis (50%) and reports on practices (50%) will be evaluated.

[Evaluation Criteria]
Student's achievement of the Course Goals is:
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)
Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow
否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3410E
講義名[日本語(英語)] / Class Name：Ground Vibration and Structural Dynamics
担当者（フルネーム）/ Course instructor (Full Name)：中川　博人 / NAKAGAWA Hiroto
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn fundamental theories to understand the behaviors of grounds and structures subjected to dynamic loadings. In the first part, the students are expected to acquire basic theories of dynamic behaviors of structures based on SDOF (Single-Degree-Of-Freedom) and MDOF (Multi-Degree-Of-Freedom) systems. In the second part, the students are expected to acquire knowledge of the dynamic response of structures through practice in computer programming of typical structural dynamics calculations based on the SDOF system. Also, the students understand the effects of surface geology on seismic motions.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) acquire basic theories of dynamic behaviors of structures based on SDOF and MDOF systems

(2) acquire knowledge of the dynamic response of structures through practice in programming

(3) understand the effects of surface geology on seismic motions.

2. Course Outline：

(1-12) Structural Dynamics I

－Free vibration of SDOF system

－Forced vibration of SDOF system

－Free vibration of MDOF system

－Forced vibration of MDOF system

(13-24) Structural Dynamics II

－Fortran 95 programming

－Response of SDOF system
－Response spectrum
－Fourier spectrum
(25-27) Effect of Surface Geology on Seismic Motion I
－Site effects in seismic design
－Site effects and seismic bedrock
－Calculation of 1D site effects
－2/3D site effects
－Site effects in strong motion records
(28-30) Effect of Surface Geology on Seismic Motion II
－Application of microtremors in estimation of site effects
－Microtremor array exploration for subsurface S-wave velocity
－Inversion of subsurface S-wave velocity from earthquake records
[Out-of-class Learning]
Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about ground vibration and structural dynamics by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：
Examinations (50%) and reports on practices (50%) will be evaluated.

[Evaluation Criteria]
Student's achievement of the Course Goals is:
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)
Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow
否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3420E
講義名[日本語(英語)] / Class Name：Seismic Structures
担当者（フルネーム）/ Course instructor (Full Name)：WATANABE Hidekazu
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn the seismic design of structures based on their elastic-to-plastic behaviors under earthquakes and the required performance. Students are expected to acquire knowledge of the mechanical properties of the materials, elastic-to-plastic behaviors of structural members and joints, seismic behaviors of the entire structures and their failure characteristics through the seismic experiences, results of structural experiences, and theoretical approaches. Students will also learn the various design factors that dominate the seismic behavior of structural members and systems based on the seismic design methods used in practice. Through the structural test for RC members, students will observe the actual structural performance in the course.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

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(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand the outline of seismic design of structures based on their elastic-to-plastic behaviors under earthquakes and the required performance,

(2) acquire knowledge of structural performance, failure properties and design procedure of RC members and

(3) acquire knowledge of design procedure of steel members and connections.

2. Course Outline：

(1-3) RC Structures I

Design Practice for RC members and Evaluation of the Structural Performance. The failure properties of RC members predicted by the equations are as follows.

(1) Crack of concrete

(2) Yield of reinforcement

(3) Ultimate strength for flexure and shear, etc.

(4-13) Steel Structures

- Outline of steel structures in Japan
- Materials
- Basic items for structural design of steel structure
- Design of tension members
- Design of compression members
- Design of beams
- Design of beam-columns
- Bolted connections
- Welded connections
- Beam-to-column connections
- Column-to-footing connections

(14-23) Structural Testing I, II

Outline of Structural Testing

- Objectives of Dynamic and Static Testing
- Relationships Between Structural Test, Structural design, Analysis and Earthquake Damages
- Tests for Materials, Structural Members and Full-scale Structures
- Testing Facilities
- Specimens
- Loading
- Measuring

Practice of Structural Static Testing

- Test Specimens
- Loading Setup
- Measuring Setup and Data Acquisition System
- Installing Technique of Strain Gauges
- Static Loading Test of RC elements
- Comparison between the Results of Design, FEM Analysis and Test
- Technical Report

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about seismic structures by searching lecture notes and related research papers and preparing themselves in relation to their own research objectives.

3. Grading:

   Reports on RC and steel structures (60%) and reports on the structural testing (40%) will be evaluated.

   [Evaluation Criteria]
   Student's achievement of the Course Goals is:
   Outstanding: A
   Superior: B
   Satisfactory: C
   Minimum acceptable: D
   Below the acceptable level: E

4. Textbooks and References (4-1: Required 4-2: Others)

   Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing: Allow or Not Allow

   否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3430E
講義名[日本語(英語)] / Class Name：Seismic Evaluation and Seismic Design Code
担当者（フルネーム）/ Course instructor (Full Name)：小豆畑　達哉 / AZUHATA Tatsuya
学期・曜日・時限 / Term・Day・Period：Fall through Spring 秋－春
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn holistic information from conceptual matters to detail in knowledge and techniques on seismic codes, earthquake design ground motion, seismic micro-zoning, and design methodologies for seismic energy dissipation and seismically isolated systems. Students are expected to comprehend the specific meanings of these topics well through practical study like code comparison. This course shows students not only conventional techniques but also newly developed techniques related to the "Seismic Evaluation and Seismic Design Code."

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand the outlines, conventional and newly developed techniques related to seismic evaluation and seismic design code,

(2) acquire knowledge of earthquake design ground motions and seismic micro-zoning and

(3) design methodologies for seismic energy dissipation and seismically isolated systems.

2. Course Outline：

(1-10) Seismic design codes I, II

- Introduction of the seismic codes in the world
- Code comparison

(11-13) Earthquake design ground motions

- Selection of recorded ground motions

- Generation of spectrum compatible earthquake motion

(14-19) Seismic micro-zonation

- Geomorphologic Classification
- Amplification Capability Estimation from Geomorphologic Units

(20-22) Seismic energy dissipation systems

- Basic theory
- Passive and active response control devices

(23-25) Seismically isolated systems

- Features of Seismic Isolation
- Effect on Seismically Isolated Buildings during Earthquakes

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. Also, be sure to have an overview of the tsunami countermeasure facilities that you will visit in advance. After the lecture, review the content and submit the assigned report by the due date. Students can learn about seismic evaluation and seismic design code by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：

Class discussions (30%) and reports on practices (70%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3600E
講義名[日本語(英語)] / Class Name：Theory of Tsunami
担当者（フルネーム）/ Course instructor (Full Name)：藤井　雄士郎 / FUJII Yushiro
学期・曜日・時限 / Term・Day・Period：Fall through Spring 秋－春
単位数/ Credits： 3

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn basic theories of tsunami and acquire the techniques needed for tsunami simulation which are essential to forecast tsunami heights or to prepare a tsunami hazard map around a coastal region. In the first part, students are expected to acquire the knowledge of data processing, theoretical topics of fluid mechanics for tsunami, tsunami source, tsunami generation and propagation. In the second part, students are expected to acquire the skills to estimate tsunami source and calculate the tsunami propagation through hands-on practices by using Unix emulator on Windows PC or Linux WS.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand outlines, knowledge and methods necessary for tsunami theory,

(2) acquire knowledge of data processing, fluid mechanics, and hydrodynamics and

(3) techniques, principles and methods for estimating tsunami source, simulating tsunami generation and propagation.

2. Course Outline：

(1)-(12) Data Processing

- Least squares method

Introduction to inverse problem, Straight line fitting, General linear least squares, Linear inversion under constraints, Iterative procedure to solve non-linear problem

- Processing of discrete time series

Linear system, Discrete Fourier transform (DFT), Fast Fourier transform (FFT), Digital filters

(13)-(27) Hydrodynamics for Tsunami

- Basic Equations of Hydrodynamics
- Influence the rotation of the Earth
- Small Amplitude Wave Theory
- Energy Transport and Group Velocity of Waves
- Linear Long Wave
- Eigenvalue Oscillation in a Bay
- Generation of Tsunami
- Tsunami approaching a coast
- Edge waves
- Non-Linear Wave Theory
- KdV Equation and the theory of Solitons
- Tsunamis ascending in a river

(28)-(32) Tsunami Source

- Tsunami Travel Time (TTT) with Generic Mapping Tools (GMT)

Arrival times of observed tsunami waveforms, Data processing for bathymetry data, How to use of the TTT software, Visualization of refraction diagram for tsunami, Estimation of tsunami source

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. Also, be sure to have an overview of the data processing, hydrodynamics that you will learn in advance. After the lecture, review the content and submit the assigned report by the due date. Students can learn about tsunami theory by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：

Class discussions (20%), reports on practices (60%), and performance in the examinations (20%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and necessary materials are provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:
   FORTRAN, Python, Cygwin, Tsunami Travel Time (TTT) Software Package, Generic Mapping Tools (GMT), MS-Excel

6. Auditing ; Allow or Not Allow
   否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3803E
講義名[日本語(英語)] / Class Name：Geographic Information Systems and Remote Sensing Technique
担当者（フルネーム）/ Course instructor (Full Name) : Rasmy Mohamed and KAWASAKI Akiyuki／Rasmy Mohamed, 川崎　昭如
学期・曜日・時限 / Term・Day・Period： Fall, Winter 秋、冬
単位数/ Credits：2

1 Course aims & objectives

Remote sensing entails obtaining information about the Earth's surface using special cameras/devices. A geographic information system (GIS) is a computer system for capturing, storing, checking, analyzing, and displaying mostly huge and complex geographic information. The fields of Remote Sensing and GIS are expanding very fast and the methods are constantly adapted to new fields of application.

[Course Goals]

The objective of this course is to introduce the basic theory and practices of remote sensing (RS) and geographic information systems (GIS) and how they can be applied to water-related disaster management research, planning, and decision-making processes. The course is delivered through lectures, hands-on training, exercises, assignments, and a group-seminar.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to understand the basic GIS and satellite remote sensing principles

(2) Ability to execute, analyze, and visualize the outputs from the latest available tools (e.g. ArcGIS and QGIS), and their applications in hydrology

(3) Ability to work with big data and advanced cutting-edge tools for big-data processing methods (e.g. Google Earth Engine and cloud computing) for rainfall estimation and inundation mapping.

2 Course Topics

1：Geographic Information System (GIS) (1) Understanding GIS data structures

2：Geographic Information System (GIS) (2) ArcGIS Data management

3：Geographic Information System (GIS) (3) ArcGIS Data processing

4: Geographic Information System (GIS) (3) ArcGIS Spatial analysis

5：Geographic Information System (GIS) (4) ArcGIS Hydrology analysis (1)

6：Geographic Information System (GIS) (5) ArcGIS Hydrology analysis (2)
7：Geographic Information System (GIS) (6) Working with Q-GIS
8：Remote Sensing (1) Basic principles of optical and thermal satellite remote sensing
9：Remote Sensing (2) Basic principles of microwave remote sensing and rainfall estimation
10：Remote Sensing (3) Inundation Mapping (1) MODIS images & water indices
11: Remote Sensing (4) Inundation Mapping (2) Case studies using MODIS data
12: Remote Sensing (5) Satellite rainfall estimation (1) GSMaP data processing
13: Remote Sensing (6) Satellite rainfall estimation (2) GSMaP data applications
14: Big-data processing and Applications (1) Google Earth Engine and cloud computing
15: Big-data processing and Applications (2) Group project presentation and evaluation

[Out-of-class Learning]
Study the lecture notes, manuals, and related research papers distributed in this course in advance to understand the lecture outline. After the lecture, review the content and submit the assigned report by the due date. Students can also learn about GIS, remote sensing, and Google Earth Engine applications by searching lecture notes and related research papers online and preparing themselves for their research objectives.

3 Grading

Students will enhance their understanding of hydrological and sediment transport processes and modelling through lectures, hands-on training, assignments and a group project, and will be graded from A to E depending on the depth of their understanding.

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E
75% points for assignment reports
25% points for the group project
Remarks: The late submission of the reports and assignments will not be evaluated.

4 Textbooks

4-1 Required Material made by the instructors

4-2 Others

5. Software Used in Lectures（If not applicable, it can be left blank.）：
ArcGIS, Q-GIS, Google Earth Engine

6. Auditing; Allow or Not Allow
Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3811E
講義名[日本語(英語)] / Class Name：River Engineering
担当者（フルネーム）/ Course instructor (Full Name)：SHIMIZU Yoshihiko／清水　義彦
学期・曜日・時限 / Term・Day・Period：Fall, Winter 秋、冬
単位数/ Credits：2

1. Course Description and the Learning Objectives：
A river has a naturally-based form in general but has changed by influences of human impacts. The purpose of this course is to understand such characteristics of rivers caused by natural and human impacts and to learn the basics and their applications of river channel design and river management with safety against flood disasters and conservation of river environment.

[Course Goals]
This course enables students to acquire the implementation methodology of “River Engineering” linking knowledge of “Hydraulics” and “Sediment Transport Mechanics”.

[Related Diploma Policy (DP)]
Disaster Management Policy Program (DMP):
1. Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
3. Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice
4. Ability to identify an issue, analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

2. Course Outline：
(1) Fundamental characteristics of river basin and channel morphology (three classes)
- Drainage basin zones and some channel formation types,
- Typical longitudinal variation in channel properties from headwater to river mouth,
- Morphological classification of channel plane-form pattern.

(2) Basics and practice for river channel design (three classes)
- Applications of specific energy and specific force,
- Channel design by using uniform and non-uniform flow analysis,
- Evaluating flow resistance due to lateral variation of roughness in a cross-section.

(3) Flood hydraulics and its applications (three classes)

- Characteristics on time and space propagation of water level and flood discharge by using unsteady one-dimensional flow analysis,
- Transformation of water level and discharge hydrographs,
- Function of dam and flood retarding facility.

(4) Depth-averaged flow approach (three classes)
- Basic equations on depth-averaged flow and river bed variation analysis,
- Channel flow with a narrow path
- Meandering channel, Flow with riparian forest, Flow with bars

(5) Function of river hydraulic structure (three classes)
- Hydraulic function of groyne, Consolidation works with a hydraulic drop,
- Levee design, Local scouring around the pier,
- Traditional measures for flood fighting

[Out-of-class Learning]
After the lecture, review the content and ask questions if any. Students can learn about the basics of river engineering by searching lecture materials and related research papers, which will support their research.

3. Grading：
Students will deepen their understanding of the hydrological phenomena and its system through lectures and the final examination and will be graded from A to D or E depending on the depth of their understanding.

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks： (4-1:Required 4-2:Others)
Textbook will be distributed to students in the class.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3821E
講義名[日本語(英語)] / Class Name： Sediment Transport Mechanics
担当者（フルネーム）/ Course instructor (Full Name)： QIN Menglu and EGASHIRA Shinji／秦梦露, 江頭　進治
学期・曜日・時限 / Term・Day・Period：Fall, Winter 秋、冬
単位数/ Credits：2

1. Course aims and objectives

Sediment transportation takes place in various forms such as bed-load, suspended load, debris flow etc. and its spatial imbalance causes river bed degradation and aggradation, side bank erosion, sand bar formation and channel shifting. Such channel changes will be suitable for ecological systems, if they are within an allowable level. However, if these are over some critical level, flood and sediment disasters will happen.

[Course Goals]

This course requires students to understand various sediment transport forms and their transport rates in rivers as well as governing equations for describing flood flow and sediment transport systems for evaluating channel changes with various geometric scales such as sediment particles sizes, flow depths, flow widths etc. Students also are required to understand sediment management for disaster mitigation as well as for developing a suitable river channel conditions.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

2. Course Topics and Methods

1: Introduction (1)

- Characteristics of sediment

2: Introduction (2)

- Sediment transportation and corresponding channel changes

- Methods to evaluate channel changes
3: Mechanics of sediment transportation (1)
- Parameters associated with sediment transportation
4: Mechanics of sediment transportation (2)
- Critical condition for initiating bed load
5: Mechanics of sediment transportation (3)
- Bed load formulas
6: Mechanics of sediment transportation (4)
- Bed load formulas
7: Mechanics of sediment transportation (5)
- Extension of bed load formula to non-uniform sediment
8: Mechanics of sediment transportation (6)
- Suspended load
9: Mechanics of debris flow (1)
- Constitutive equations
- Debris flow characteristics over erodible beds
10: Mechanics of debris flow (2)
- A bed load formula derived from constitutive equations
11: Bed forms and flow resistance (1)
- Geometric characteristics of bed forms
- Formative domain of bed forms
12: Bed forms and flow resistance (2)
- Flow resistance
13: Prediction of channel changes (1)
- Governing equations employed in steep areas
- Topographic change in steep areas
14: Prediction of channel changes (2)
- Governing equations employed in alluvial reaches
- Topographic change in alluvial reaches
15: Method to predict sediment transport process in drainage basins
-Sediment management in drainage basin

[Out-of-class Learning]
Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about Mechanics of

Sediment Transportation and Channel Changes by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading

River bed variations are evaluated using the sediment transport system equations that are constituted by the continuity equation and equation of motion for flood flow, the mass conservation equation of sediment in the flow body, the equations of sediment erosion and deposition for suspended sediment, the mass conservation equation for bed sediment, and the bed load formula. Students will deepen their understanding of the sediment transport system through lectures, reports and examination, and will be graded from A to D or E depending on the depth of their understanding.

[Evaluation Criteria]

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

50 points for reports and short quizzes

50 points for the examination at the end of semester

Notice: Either a report or a short quiz is assigned every two classes, regarding questions illustrated at the end of each chapter in Lecture Note.

4. Textbooks

4-1 Required

- Egashira, S. (2009): Mechanics of Sediment Transportation and River Changes, Lecture Note

4-2 Others

- turm, T. W. (2001): Open Channel hydraulics, McGraw-Hill.
- Graf, W. H. (1997): Fluvial Hydraulics, Wiley.
- Julien Pierre: River Mechanics, Cambridge University Press
  (Website: http://www.cambridge.org/us/catalogue/catalogue.asp?isbn=9780521529709)
  (http://www.amazon.co.jp/River-Mechanics-Pierre-Y-julien/dp/0521529700)
- Albert Gyr and Klaus Hoyer: Sediment Transport, A Geophysical Phenomenon, Springer Netherlands
  (http://www.springerlink.com/content/q0x656/)
- Ashida K., Egashira S. and Nakagawa H. (2008), River Morphodynamics for the 21st Century, Kyoto University Press (in Japanese)

5. Software Used in Lectures (If not applicable, it can be left blank.):

6. Auditing; Allow or Not Allow
Not Allow

7. Note:

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3840E
講義名[日本語(英語)] / Class Name：Control Measures for Landslide & Debris Flow
担当者（フルネーム）/ Course instructor (Full Name)：Prof. YAMAGUCHI Shinji
学期・曜日・時限 / Term・Day・Period：秋、冬 / Fall through Winter/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

Landslides, debris flows and sediment-laden flood give serious impacts for human lives and infrastructures by not only direct hitting, but also discharge for downstream area in many countries. This course provides the key issues of landslide, debris flow and sediment-laden flood phenomena. Then, structural and non-structural countermeasures to reduce damages due to both direct hitting and sediment discharge to downstream. The lecture will also illustrate the sediment yield preventions woks, such as revegetation works, on hillslopes. For non-structural countermeasures, the basic information about the hazard mapping and the early-warning systems will be provided.

[Course Goals]

This course requires students to understand various natural phenomena related to landslide and debris flow and to have ideas for various type of control measures on such disasters.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

2. Course Outline：

Week

1. Outline of sediment-related disasters and Sabo projects (Prof. Yamaguchi)
2. Sediment yield and discharge (Prof. Uchida)
3. Sabo planning for debris flow and sediment discharge control (Prof. Uchida)
4. Structural countermeasures against debris flow and sediment discharge (Prof. Uchida)
5. Hazard mapping for debris flows (Prof. Uchida)
6. Landslides- phenomenon and mechanism (Mr. Takeshi)
7. Planning for landslide (Mr. Takeshi)

8. Structural countermeasures against landslide (Mr. Takeshi)
9. Hzard mapping for landslides (Mr. Takeshi)
10. Warning and evacuation system for sediment-related disasters (Mr. Okamoto)
11. Restoration of vegetation on wasteland and its effect (Mr. Okamoto)
12. Dams and River Basin Sustainability (Prof. Sumi)
13. Sediment Management in Reservoirs (Prof. Sumi)
14. Application of Sabo/landslide projects to each country (1) (Prof. Yamaguchi Prof. Uchida)
15. Application of Sabo/landslide projects to each country (2) (Prof. Yamaguchi, Prof. Uchida)

[Out-of-class Learning]
Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about Control Measures for Landslide ＆ Debris Flow by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：
Class contribution (30%)　　Report and Final discussion (70%)

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)
4-1 Required
4-2 Others
SABO in JAPAN : Japan Sabo Association, 2018

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3901E
講義名[日本語(英語)] / Class Name：Field Inspection Study
担当者（フルネーム）/ Course instructor (Full Name)： KOIKE Toshio／小池　俊雄
学期・曜日・時限 / Term・Day・Period： Fall through Summer 秋－夏
単位数/ Credits：2

1 Course Description

This course provides opportunities for students to visit actual fields to study structural countermeasure and flood control practice in Japan so that they would experience and understand the concept and ideas that can possibly be introduced to their countries. The course shall provide insight of structural countermeasures, which include but not limited to, river levees, flood retarding basins, dams, and Sabo structures. After each study-visit, students will be requested to submit a report describing the lessons they have learnt and discussion of any possibility to introduce the concept to their countries.

[Course Goals]

Through literature review, and field experience, students will gain a deep and broad understanding of the diverse natural and social characteristics underlying water-related disasters in Japan.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

1. Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
2. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies
5. Ability to play an active role as a balanced leader based on a deep understanding of different values and systems in a global society

2. Course Outline：

1) Introductory lecture (two classes)
2) Kinu River (two classes)
3) Rivers in Shikoku Area (three classes)
4) Kokai River (one class)
5) Shinano River (three classes)
6) Tone River (one class)
7) Fuji River and Kano River (three classes)

[Out-of-class Learning]
Read the related documents and reports distributed in this course in advance to understand the site visit outline. After each site visit, students will be required to submit a report. The report topic will be announced prior to each site visit.

3. Grading：
This course focuses on sharing the knowledge gained in Japan. Active discussion at each site based on students' preparatory studies and comprehensive reports are highly valued.

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks： (4-1:Required 4-2:Others)
Documents for each site will be distributed to students in the class.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing; Allow or Not Allow
Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP3911E
講義名[日本語(英語)] / Class Name：Open Channel Hydraulics and Practice
担当者（フルネーム）/ Course instructor (Full Name)：Prof. NAITO Kensuke
学期・曜日・時限 / Term・Day・Period： Fall through Spring 秋－春
単位数/ Credits：2

1 Course Description

In this course, students will learn to apply the theories studied in Hydraulics through exercises, observation of real flow through the hydraulic experiments, and hydraulic calculations, enabling them to use the theoretical framework of Hydraulics for analyzing real phenomena. The class will not only consist of lectures but also include group experiments, discussions, and individual applications of hydraulic analysis to various fields.

[Course Goals]

The learning goals for the students in this lecture are to be able to describe hydraulic phenomena using hydraulic theory, particularly to be able to depict water surface profile using hydraulic theory.

2 Course Outline (Course Topics)

1: Open channel flow (1): Introduction and review of governing equations
2: Open channel flow (2): Simplification of equations
3: Open channel flow (3): Water surface profile (1)
4: Open channel flow (4): Water surface profile (2)
5: Experimental work (1): Outline of the experiments
6: Experimental work (2): Hydraulic conditions
7: Experimental work (3): Flow resistance
8: Experimental work (4): Hydraulic jump
9: 1-D flow calculation (1): Water surface profile (1)
10: 1-D flow calculation (2): Water surface profile (2)
11: 1-D flow calculation (3): Sediment transport (1)
12: 1-D flow calculation (4): Sediment transport (2)
13: 2-D flow calculation (1): Water surface profile
14: 2-D flow calculation (2): Sediment transport
15: Discussions

[Out-of-class Learning]
Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date.

3 Grading
Since this class focuses on discussions based on individual data and computation results, active contributions to presentations and discussions are highly evaluated.

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4 Textbooks (4-1: Required, 4-2: Others)
4-1 Egashira, S. (2016): Hydraulics, Lecture Note

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing: Allow or Not Allow
Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number： DMP5000E
講義名[日本語(英語)] / Class Name：Master Thesis Seminar
担当者（フルネーム）/ Course instructor (Full Name)： KITA Saeko / ITO Mai / FUJII Yushiro
学期・曜日・時限 / Term・Day・Period：秋～夏 /Fall through Summer
単位数/ Credits： 10

1.[Course Description]
In this course, students tackle specific research subjects applying knowledge, analysis techniques, etc. acquired in this course and all other lectures. Students will meet regularly with course advisors to formulate and discuss their research topics, and the advisors will determine the supervisors based on the students' research interests. All students are requested to make a research proposal and to write a research report and its synopsis. They are also requested to make presentations in the interim presentation meetings to manage their research progress and evaluate the research achievements.

[Related Diploma Policy (DP)]
Disaster Management Policy Program (DMP):
(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
(2) Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies
(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice
(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]
Students can:
(1) understand more advanced and practical knowledge and skills in corresponding the specific course of Seismology, Earthquake engineering, or Tsunami Disaster Mitigation, and
(2) determine the individual study topics and prepare the research reports, and
(3) improve their professional skills and complete the research reports aimed at solving problems in their own countries.

2. Course Outline (Course Topics)

[Seismology]

(1)-(3) Earthquake Observation II

(4)-(6) Local Earthquake Analysis II

(7)-(9) Earthquake Early Warning II

(10)-(15) Seismicity and Statistics

(16)-(21) Crustal Deformation

(22)-(24) Earthquake Generation and Forecasting II

(25)-(33) Earthquakes and Plate Tectonics

(34)-(42) Earthquake Source Process

(43)-(45) Study Tour of Earthquake Monitoring (JMA)

(46)-(49) Real Time Determination of Source Parameter

(50)-(52) Seismic Tomography

(53)-(58) Strong Earthquake Motion Observation

(59)-(61) Microtremor Observation I

(62)-(64) Seismic Micro-Zonation

(65)-(70) Tsunami and Earthquake/Earthquake Geology

(71)-(73) Lessons from the Great East Japan Earthquake of March 11, 2011/Education of Tsunami Disaster Reduction and International Tsunami Warning System

[Earthquake Engineering]

(1)-(3) Finite Element Method II

(4)-(6) Limit Analysis

(7)-(15) Soil Mechanics

(16)-(21) Structural Response Analysis

(22)-(24) Shaking Table Testing

(25)-(27) Dynamic Soil Structure Interaction

(28)-(33) Microtremor Observation I, II

(34)-(45) RC Structures II, III, IV

(46)-(48) Prestressed Concrete Structures

(49)-(54) Masonry Structures I, II

(55)-(63) Foundation Engineering I, II, III

(64)-(66) Underground Structures and Large Soil Deformations

(67)-(72) Bridge Engineering I, II

(73) Port & Harbor Structures and Tsunami Engineering

[Tsunami Disaster Mitigation]

(1)-(3) Tsunami Magnitude and Catalogue

(4)-(14) Tsunami Simulation

(15)-(17) Geology for Tsunami

(18)-(20) Tsunami Load and Structural Design of Tsunami Shelter

(21) International Seminar for Disaster Management

(22)-(27) Tsunami and Earthquake/Earthquake Geology

(28)-(30) Earthquake Observation II

(31)-(33) Local Earthquake Analysis II

(34)-(36) Earthquake Early Warning II

(37)-(42) Seismicity and Statistics

(43)-(48) Crustal Deformation

(49)-(51) Earthquake Generation and Forecasting II

(52)-(60) Earthquakes and Plate Tectonics

(61)-(69) Earthquake Source Process

(70-72) Lessons from the Great East Japan Earthquake of March 11, 2011/Introduction of Tsunami disaster Mitigation

(73) Tsunami Hazard Assessment and the Sendai Framework for Disaster Risk Reduction

[Works for Master Report]: common for all courses above

Execution of research under your supervisor (analysis, experiment, field survey, observation, etc.)

(74)-(75) Presentation of interim results

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. Also, be sure to have an overview of the lectures related to the research topics that students will learn in advance. After the lectures, they review the contents and submit the assigned reports by the due date. Students can deeply learn about the individual research themes by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading

Performance and attitude (10%), presentation (50%), report (10%) and discussion (30%) in the preparation of individual study will be evaluated: 100%

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks

Lecture notes and necessary materials are provided.

The supervisors will indicate the literatures the students should survey concerning the research subjects.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

FORTRAN, Python, Cygwin, Generic Mapping Tools (GMT), QGIS, R

6. Auditing ; Allow or Not Allow

Not Allow

7. Note : The template for the report will be provided. Students have to make the report following it.

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP5310E
講義名[日本語(英語)] / Class Name：Case Study (Practice for Earthquake Disaster - Recovery Management Policy I)
担当者（フルネーム）/ Course instructor (Full Name)：ITO Mai
学期・曜日・時限 / Term・Day・Period：秋、冬 /Fall, Winter/
単位数/ Credits： 1

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn research ethics and literacy, overviews of earthquakes and disasters, or overviews of seismology and earthquake engineering, which are necessary for beginning research on earthquake disaster prevention. The students are expected to present at two colloquiums to prepare for their individual study. At the Colloquium I, students will present their country report to show the current condition of their country and their organizations activity on earthquake disaster prevention, etc. Then, students will discuss them with other students and professors. For the Colloquium II, students will review technical/scientific papers related to their research topics recommended by their advisor. Through the colloquiums, students are expected to obtain the skill to convey their points to audiences accurately.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) learn research ethics and literacy, overviews of earthquakes and disasters, or overviews of seismology and earthquake engineering according to their specialty,

(2) receive advice and comments on their individual study topics through discussions,

(3) develop presentation skills.

2. Course Outline：

(1) Research ethics and literacy

- Overview of research ethics
- How to write a scientific report

(2-4) Overviews of earthquakes and disasters, or overviews of seismology and earthquake engineering according to student's specialty

- Basic concepts of earthquake engineering and damage aspects by past earthquakes
- Features of strong ground motion and strong motion estimation

(5-6) Colloquium I

- Presentation of country report

(7-8) Colloquium II

- Reviewing technical/scientific papers related to the individual study topics

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. Prior to the colloquiums, read the research papers related to your individual study, prepare a presentation material and discuss it with your advisor. After the colloquiums, consider topics and direction of individual study in response to questions and comments received at colloquiums.

3. Grading：

Presentation (80%) and discussion (20%) will be evaluated.

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP5320E
講義名[日本語(英語)] / Class Name：Case Study (Practice for Earthquake Disaster - Recovery Management Policy II)
担当者（フルネーム）/ Course instructor (Full Name)：林田　拓己 / HAYASHIDA Takumi
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 1

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn how to write academic papers and conduct academic research, which is important for completing a masters thesis. Students will learn about writing effective English academic papers. At the Colloquium III, students will introduce a tentative plan for their individual study. Students are expected to provide logical explanations of their researchs purpose and methodology and engage in discussions with other presenters. Students will also visit research institutes to learn about earthquake monitoring systems, understand the differences between their countries and Japan, and deepen the discussion.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
(2) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice
(3) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) develop academic writing skills in English.
(2) develop presentation skills.
(3) understand earthquake monitoring systems in Japan.

2. Course Outline：

(1-4) How to write a scientific report

- Writing science in English
- Paragraph ordering
- Preparing a cover letter
- Audience analysis
- Recommended research writing resources

(5-6) Colloquium III: Presentation of a tentative plan of individual study

- Seismology Course
- Earthquake Engineering Course
- Tsunami Disaster Mitigation Course

(7-8) Study tour of earthquake monitoring

- National Research Institute for Earth Science and Disaster Resilience
- Geospatial Information Authority of Japan

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. Before the colloquium, write a manuscript on the introduction, data, and methods of the master's thesis and prepare a presentation material. After the colloquium, consider the direction of individual study in response to questions and comments received during the presentation.

3. Grading：

Performance and attitude in the presentation (55%), quality and originality of the individual study report (30%), and discussion (15%) will be evaluated: 100%

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number： DMP5330E
講義名[日本語(英語)] / Class Name： Case Study (Practice for Earthquake Disaster - Recovery Management Policy III)
担当者（フルネーム）/ Course instructor (Full Name)：的場　萌子 / MATOBA Moeko
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 1

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students visit past earthquake disaster areas and learn methodologies of reconstruction management for damaged areas and earthquake disaster mitigation through lectures and study tours.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

(1) understand the outlines of the earthquake mechanism and building structures disaster of past Earthquake,

(2) acquire knowledge of seismic evaluation, mainly focusing on damaged buildings and repair techniques of buildings for significant earthquakes and,

(3) policy of reconstruction management for damaged areas and methodologies of earthquake disaster mitigation.

2. Course Outline：

(1) Policy of Recovery Management for Earthquake Damaged Building

(2-8) Study Tour of Past Earthquake Disaster Areas

- Observation of damaged areas and structures in Tohoku districts
- Seminar for Earthquake Disaster Mitigation and Reconstruction at Disaster-related institutes
- Practice for Earthquake Countermeasures

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture

outline and prepare questions to be asked. Also, be sure to have an overview of the earthquake disaster reconstruction area that you will visit in advance. After the lecture, review the content and submit the assigned report by the due date. Students can learn about earthquake disaster reconstruction management by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading：

Class discussions (50%) and reports on practices (50%) will be evaluated.

[Evaluation Criteria]
Student's achievement of the Course Goals is:
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP5340E
講義名[日本語(英語)] / Class Name：Case Study (Practice for Tsunami Disaster Mitigation Policy)
担当者（フルネーム）/ Course instructor (Full Name)：原　辰彦 / HARA Tatsuhiko
学期・曜日・時限 / Term・Day・Period：秋～春 /Fall through Spring/
単位数/ Credits： 1

1. Course Description and the Learning Objectives：

[Course Description]

This course is designed so that students learn real-time determination of earthquake parameters and determination of the broadband moment magnitude through lectures, practices.

[Related Diploma Policy (DP)]

Disaster Management Policy Program (DMP):

(1) Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies

(3) Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice

(4) Ability to analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them

[Course Goals]

Students can:

acquire knowledge of real-time determination of earthquake parameters

acquire knowledge of determination of the broadband moment magnitude

2. Course Outline：

(1-4) Real Time Determination of Earthquake Parameter

・Real time Monitoring

- Necessary Condition for Processing System
- Earthquake Detection
- Automatic Phase Picking

・Hypocentral Parameter Determination

- Hypocenter Determination
- Magnitude Determination
- Earthquake Early Warning

・Practice on Interactive Processing

(5-9) Determination of Broadband Moment Magnitude

- Basic concept of broadband moment magnitude (Mwp)
- Comparison of various magnitude scales (e.g., mb, Ms, Mw, Mm)
- Procedure of determination of Mwp
- Practices to determine Mwp

[Out-of-class Learning]
Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about the covered subjects by searching lecture notes and related research papers, and prepare themselves for further understanding practices for tsunami disaster mitigation.

3. Grading：
Class discussions (20%) and report assignments (80%) will be evaluated.

[Evaluation Criteria]
Student's achievement of the Course Goals is:
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)
Lecture notes and the necessary materials will be provided.

5. Software Used in Lectures（If not applicable, it can be left blank.）:
SAC (Seismic Analysis Code), MS-Excel

6. Auditing ; Allow or Not Allow
否 Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP5802E
講義名[日本語(英語)] / Class Name：Project Cycle Management Practice
担当者（フルネーム）/ Course instructor (Full Name)：Koike Toshio
学期・曜日・時限 / Term・Day・Period：Fall, Winter 秋、冬
単位数/ Credits：2

1. Course Description:
The purpose of this project is to learn the concept of PCM at the timing prior to writing the master's thesis in order to utilize what they have learned in Japan in their home countries, and to "raise awareness" so that they will work on their master's thesis with an awareness of problem solving, practicality, and realistic viewpoints with a view to utilizing what they have learned in Japan in their home countries.

[Course Goals]
Students can learn how to plan, implement, evaluate, and provide feedback on projects, the theory of PCM, and specific methods of stakeholder analysis, problem analysis, objective analysis, and PDM proposal development.

[Related Diploma Policy (DP)]
Disaster Management Policy Program (DMP):
1. Ability to identify problems by analyzing issues from multiple perspectives with the expertise in disaster management policies
2. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies
3. Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice
4. Ability to identify an issue, analyze related data using engineering tools, compile them into research papers and policy recommendations, and present them
5. Ability to play an active role as a balanced leader based on a deep understanding of different values and systems in a global society

2. Course Outline：
Practice on project cycle management
1) Introductory lecture (one class)
2) Overview of PCM (two classes)

3) Problem analysis (explanation of method and practice) (two classes)
4) Objective analysis (explanation of method and practice) (two classes)
5) PDM proposal development (explanation of method and practice) (two classes)
6) Group works and Group presentations and discussion (four classes)
7) Follow-up seminar (two classes)

[Out-of-class Learning]
Read the lecture notes and related research papers and documents distributed in this course in advance to understand the lecture outline. After the lectures, seminars, practices, and fieldwork, review the content and apply it to each student's research topics and areas of each student. Students can also learn from the case studies implemented by other students in an interactive way.

3. Grading：
Since this class focuses on discussions based on individual data and computation results, active contributions to presentations and discussions are highly evaluated.

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks： (4-1:Required 4-2:Others)

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow
Not Allow

7. Note：

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP7001E
講義名[日本語(英語)] / Class Name：Advanced Disaster Management Policies A: from Regional and Infrastructure Aspect
担当者（フルネーム）/ Course instructor (Full Name)：知花　武佳　日比野　直彦 / CHIBANA Takeyoshi, HIBINO Naohiko
学期・曜日・時限 / Term・Day・Period：秋学期 /Fall/
単位数/ Credits： 2

1. Course Description and the Learning Objectives：

[Course Description]

This course deals with the various aspects of disaster management policies from the viewpoint of infrastructure development. It emphasizes obtaining the ability to analyze the mechanisms of natural disasters that have occurred in various regions and to consider appropriate countermeasures. The course consists of four parts:

I) Introductory lecture to overlook disaster management policies
II) Lectures in specialized fields on practical measures against natural disasters
III) Site-visiting in central Tokyo
IV) Presentations by students and overall discussions
The 3rd and 4th are jointly managed with DMP(B).

[Related Diploma Policy (DP)]

Disaster Management Program (DM)
2.Ability to make maximum use of available tools, and/or develop new one to explore, collect, archive, search and integrate scientific data and information as well as information of experiences, including good practices and success/failure stories, and facilitate effective risk communications.
3.Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies.
4.Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice.
5.Ability to nurture creativity with which to help on-site stakeholders develop their ability to solve problems by themselves.
6.Ability to play an active role as a balanced leader based on a deep understanding of different values and systems in a global society.

[Course Goals]

Students will gain a broad understanding of key disaster management concepts, including policies and institutions, technical measures, and characteristics of natural dynamics.

2. Course Outline：

Ⅰ.

1. Characteristics of Natural Disasters

Ⅱ. Disaster Management in Individual Fields (by various experts)

2. Heavy Rain, Snow and Other Disasters in Road Systems, etc.
3. Flood Management in Japan 1
4. Flood Management in Japan 2
5. Wind and Rain Disaster Management in Railway Operation
6. Japan Railway and Natural Disaster
7. Coastal Disaster Management
8. Flood Disaster and Poverty

Ⅲ. Site-Based Study in Tokyo Metropolitan District

9. Site-Based Study 1) (Together with DMP(B))
10. Site-Based Study 2) (Together with DMP(B))
11. Site-Based Study 3) (Together with DMP(B))

Ⅳ. Presentations and Discussion

12. Esquisse (Presentation Workshop) (Together with DMP(B))
13. Presentation and Discussion 1) (Together with DMP(B))
14. Presentation and Discussion 2) (Together with DMP(B))
15. Presentation and Discussion 3) (Together with DMP(B))

[Out-of-class Learning]

Students are expected to read the materials provided in advance and familiarize themselves with the lecture content prior to attending class.

3. Grading：

Final Group Presentation and Contribution to Discussion (70%)

Final Report (30%)

[Evaluation Criteria]

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Necessary materials will be provided by instructors.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

   ☐ Allow

7. Note：

   Exclude site visits from the audience.

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP7011E
講義名[日本語(英語)] / Class Name：Advanced Disaster Management Policies B: from Urban and Community Aspect
担当者（フルネーム）/ Course instructor (Full Name)：片山　耕治 /KATAYAMA Koji
学期・曜日・時限 / Term・Day・Period： 秋学期/Fall/
単位数/ Credits：2

1. Course Description and the Learning Objectives：

[Course Description]

This course aims to deepen understanding of disaster risk management with a particular focus on the implementation of concrete policy actions related to urban, housing, and community aspects. It aims to equip doctoral students with the skills necessary to apply sophisticated, context-specific strategies that address social, economic, and environmental conditions in various countries. The course will critically analyze:

-Detailed implementation strategies of disaster management policies

- In-depth case studies of significant global disasters

- Urban Disaster risk management approaches in Japan

- Evaluation of policies and regulations to secure building safety

[Related Diploma Policy]

Disaster Management Program (DM)

2.Ability to make maximum use of available tools, and/or develop new one to explore, collect, archive, search and integrate scientific data and information as well as information of experiences, including good practices and success/failure stories, and facilitate effective risk communications.

3. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies.

4.Ability to make policy recommendations for practical solutions based on a deep understanding of the current state of theory and practice.

5. Ability to nurture creativity with which to help on-site stakeholders develop their ability to solve problems by themselves.

6. Ability to play an active role as a balanced leader based on a deep understanding of different values and systems in a global society.

[Course Goals]

Students will gain a in-depth understanding of key disaster management concepts, including the use of tools for data management and analysis, policy development, and risk communication.

2. Course Outline：

1. Disasters in the World, Basics of Disaster Risk Management

2. Lessons from 2011 Tohoku and 1995 Kobe ,Basics of Disaster Risk Management, Development of disaster

risk management

3. Urban disaster risk management policy, Building / housing policy and disaster management

4. Special Lecture "Augmented Reality disaster management training"

5. Special Lecture "Weather and Disasters"

6. Special Lecture "No code App"

7. Special Lecture "Sediment-related Disasters"

8. Special Lecture "OpenStreetMap"

9. Esquisse (Presentation Workshop) (Together with DMP(A))

10. Presentation and Discussion 1) (Together with DMP(A))

11. Presentation and Discussion 2) (Together with DMP(A))

12. Presentation and Discussion 3) (Together with DMP(A))

13. Site-Based Study 1) (Together with DMP(A))

14. Site-Based Study 2) (Together with DMP(A))

15. Site-Based Study 3) (Together with DMP(A))

[Out-of-class learning]

Students are expected to read the materials provided in advance and familiarize themselves with the lecture content prior to attending class.

3. Grading：

Final Presentation(70%) and Contribution to Discussion(30%)

[Evaluation Criteria]

Student's achievement of the Course Goals is:

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks and References (4-1:Required 4-2:Others)

Necessary materials will be provided by instructors.

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow

☐ Allow

7. Note：

Site visits are restricted to enrolled course students and are not open to the audience.

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP7831E
講義名[日本語(英語)] / Class Name：Advanced Disaster Risk Reduction for Hydroclimatic Extremes
担当者（フルネーム）/ Course instructor (Full Name)： 小池　俊雄／KOIKE Toshio
学期・曜日・時限 / Term・Day・Period：Term: 秋、冬 / Fall through Winter
単位数/ Credits： 2

1. Course Description and the Learning Objectives:
This course addresses the question of how we can reduce the risks of hydro-climatological extremes, such as floods, which are being exacerbated by climate change. It introduces the recent conceptual developments of "risk", "resilience" and "sustainability" and their reflection in UN policies on "Development and Environment" and "Disaster Risk Reduction". Japan provides a useful example of the evolution of the concepts and their implementation, including governance, legislation and finance. In this course, the history of trials and errors and updates will be presented and discussed. Students are required to obtain the ability to deeply consider the application of river engineering technics.

[Course Goals]
This course enables students to develop and share advanced capacity and science-based knowledge for informed cross-sectoral decision-making among all stakeholders to improve resilience to hydroclimatological extremes under climate change and to build a sustainable society.

[Related Diploma Policy (DP)]
Disaster Management Program (DMP):
1. Ability to identify and delineate on-site problems by surveying the gap between the ideal state and the current state from multiple perspectives with the expertise in disaster management policies.
2. Ability to make maximum use of available tools, and/or develop new one to explore, collect, archive, search and integrate scientific data and information as well as information of experiences, including good practices and success/failure stories, and facilitate effective risk communications.
3. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies.
5. Ability to nurture creativity with which to help on-site stakeholders develop their ability to solve problems by themselves.

2. Course Outline:

(1) Understanding and practicing the occurrence of disasters (four classes)
   1) What is disaster risk?
   2) PAR model and ACCESS model
   3) Impacts of Climate Change
   4) Disaster management cycle
(2) Conceptual evolution of UN policies (four classes)
   1) Development and Environment
   2) Disaster Risk Reduction
   3) Climate Change Mitigation and Adaptation
   4) Integrated Management
(3) Japan's experiences (four classes)
   1) Conventional river management before the 20th century
   2) The river management evolution in the 20th century
   3) Updated river management in the 21st century
   4) Strengthening sustainability and resilience by all
(4) Understanding and practicing the international cooperation (three classes)
   1) Science-based cooperation
   2) Multilateral cooperation
   3) Bilateral cooperation

[Out-of-class Learning]
After the lecture, review the content and ask questions if any. Students can learn about the basics of water resources management and river engineering by searching lecture materials and related research papers, which will support their research.

3. Grading:
Students will deepen their understanding of the hydrological phenomena and its system through lectures and the final examination and will be graded from A to D or E depending on the depth of their understanding. Grades will be assessed based on a report and presentation related to the lecture (30%) and an examination (70%).

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C

Minimum acceptable: D
Below the acceptable level: E

4. Textbooks: (4-1:Required 4-2:Others)
4-1:Required

- Ben Wisner, Piers Blaikie, Terry Cannon and Ian Davis: At Risk -natural hazards, people's vulnerability and disasters- (Routledge, London & NY, 2004)
- Kuniyoshi Takeuchi: Integrated Flood Risk Management – Basic Concepts and the Japanese Experience (Routledge, London & NY, 2023)
- UNESCO IWRM guidelines steering committee, IWRM Guidelines at River Basin Level: Part 1-1 Principles, 2-1 Part 2-1 Coordination, 2-2 Flood Management, 2-3 Irrigation. (UNESCO, 2009)
- Students are encouraged to search literatures, including articles related to this lecture, based on their individual interests.

5. Software Used in Lectures (If not applicable, it can be left blank.):

6. Auditing; Allow or Not Allow
Not Allow

7. Note:

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP7881E
講義名[日本語(英語)] / Class Name : Advanced Geography on Flood Disaster Management
担当者（フルネーム）/ Course instructor (Full Name)：南雲　直子, 須貝 俊彦／Assoc. Prof. NAGUMO Naoko, Prof. SUGAI Toshihiko
学期・曜日・時限 / Term・Day・Period：秋、冬 / Fall through Winter
単位数/ Credits：2

1. Course Aims and Objectives

The characteristics of river basins are developed over a long period of time by both the natural conditions inherent to rivers and the social and economic activities by human. One of the goals of Geography is to elucidate these characteristics of river basins and to assist in fostering more desirable relationships with rivers, such as flood control, water use, and environmental conservation measures. From this perspective, students in this lecture will learn the methods of geographical regional analysis and understand that there are regional differences in the characteristics of rivers, hydrological and hydrological phenomena in river basins, and human settlement patterns. Furthermore, students will study the history of rivers and human interactions with them, and learn the importance of flood control, water use, and environmental conservation measures adapted to the characteristics of each river basin. Students are expected to acquire the ability to interpret and explain the geographic characteristics of target areas.

[Course Goals]

This course aims to enable students to create maps and conduct regional analysis using geographic information, as well as to be able to explain geographic characteristics of their individual study area at an advanced level. Additionally, understanding the importance of flood control, water use, and environmental conservation measures which are tailored to the characteristics of each river basin is also one of the goals of this lecture.

[Related Diploma Policy (DP)]

Disaster Management Program:

1. Ability to identify and delineate on-site problems by surveying the gap between the ideal state and the current state from multiple perspectives with the expertise in disaster management policies.
2. Ability to make maximum use of available tools, and/or develop new one to explore, collect, archive, search and integrate scientific data and information as well as information of experiences, including good practices and success/failure stories, and facilitate effective risk communications.
3. Ability to conduct policy analysis for problem solving based on academic analysis from

multiple perspectives with the wide-range of knowledge on disaster management policies.
5. Ability to nurture creativity with which to help on-site stakeholders develop their ability to solve problems by themselves.

2. Course Topics and Methods

1: Introduction
    Development of geographical concepts
2: Interpretation of Geographic Information (1)
    Application of map representation and map reading
3: Interpretation of Geographic Information (2)
    Advanced use of topographic maps
4: Interpretation of Geographic Information (3)
    Advanced aerial photograph and satellite image interpretation
5: Regional analysis using geographic information (1)
    Description of regional characteristics
6: Regional analysis using geographic information (2)
    Role of mapping and land measurement
7: Excursion
    Excursion to the Geospatial Information Authority
8: Fluvial systems and fluvial processes (1) (Prof. Sugai)
    Earth system and hydrological system
9: Fluvial systems and fluvial processes (2) (Prof. Sugai)
    River morphology, process, and floodplain geomorphology
10: Fluvial systems and fluvial processes (3) (Prof. Sugai)
    Fluvial responses to climate changes
11: Fluvial systems and fluvial processes (4) (Prof. Sugai)
    Fluvial responses to tectonic and anthropogenic changes
12: Development of river basins and alluvial plains (1)
    Sediment transportation and flooding of sediment in a river basin
13: Development of river basins and alluvial plains (2)
    Civilization in alluvial plains
14: Development of river basins and alluvial plains (3)
    Development of rivers and its challenges
15: Summary of the class

[Out-of-class Learning]

Students are required to review the lecture materials distributed in class and their own lecture

notes both before and after the lecture. Additionally, they must submit assignments by the deadline, and search for and read related research papers according to their individual interests.

3. Grading
[Evaluation Criteria]
Students are required to deepen their understanding of geography through lectures, class exercises and assignments as well as examination. The grade will be evaluated based on class exercises and assignments as well as presentations (40%) and exams (60%).

[Evaluation Criteria]
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks
4-1 Required
In this course, no textbook is specified.
4-2 Others
Fryirs, K.A. and Brierley, G.J. (2013) Geomorphic Analysis of River Systems: An Approach to Reading the Landscape, First Edition, Blackwell Publishing.
Leopold, L.B., Wolman, M.G., Miller, J.P. (2020) Fluvial Processes in Geomorphology, Second Edition, Dover Publications.

5. Software Used in Lectures (If not applicable, it can be left blank.):

6. Auditing; Allow or Not Allow
Not Allow

7. Note:

Class Name: Advanced Crisis and Risk Management
Course Number: DMP7901E
Course instructor (Full Name): OHARA Miho
Academic Year: (April 2024 - March 2025)
Term: Fall through Winter
Credits: 2
1. Course Description and the Learning Objectives:
For achiving flood disaster risk reduction, both risk management and crisis management is essential. Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR) defines four priority for action. Among these priorities, “Priority 1: Understanding disaster risk” and “Priority 2: Strengthening disaster risk governance to manage disaster risk” are the basis of disaster risk reduction. In addition, “Priority3: Investing in disaster risk reduction for resilience” is related to risk management while “Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” is related to crisis management. Based on SFDRR, This course aims to provides the advanced understanding of crisis and risk management including learning good practices related to each priority for action. Necessary governance and communication to achieve these priorities are also explained.

[Course Goals]
This course requires students to understand both risk management and crisis management defined as priorities for action by SFDRR. Students are required to understand measures implemented in Japan including their history of establishment and revisions in addition to understand necessary governance and communication with related stakeholders to achieve these priorities. Students are also required to obtain the skill of making a plan of risk management and crisis management, conducting risk assessment for designing preventive investment and implement necessary measures for achieving appropriate risk management and crisis management following to SFDRR.

[Related Diploma Policy (DP)]
Disaster Management Program (DMP):
1. Ability to identify and delineate on-site problems by surveying the gap between the ideal state and the current state from multiple perspectives with the expertise in disaster management policies.
2. Ability to make maximum use of available tools, and/or develop new one to explore, collect, archive, search and integrate scientific data and information as well as information of experiences, including good practices and success/failure stories, and facilitate effective risk communications.
3. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies.

5. Ability to nurture creativity with which to help on-site stakeholders develop their ability to solve problems by themselves.

2. Course Outline:

1. Introduction: Framework of SFDRR and four priorities for action
2. Understanding Risk (SFDRR-Priority1)
3. Good practices for understanding Risk (SFDRR-Priority1)
4. Risk Governance (SFDRR-Priority2)
5. Methodology for assessing socio-economic impact (SFDRR-Priority 3)
6. Exercised for assessing socio-economic impact (SFDRR- Priority 3)
7. Example of assessing direct impact (SFDRR- Priority 3)
8. Example of assessing indirect impact (SFDRR- Priority 3)
9. Disaster information dissemination in Japan (SFDRR-Priority 4)
10. Disaster information dissemination in Asia, Dr. Minami (SFDRR- Priority 4)
11. Emergency response /Timeline and good practices (SFDRR- Priority 4)
12. Risk finance and impact on Business sector (SFDRR- Priority 4)
13. Risk-based land use management (SFDRR- Priority 4)
14. Build Back Better and good practices (SFDRR- Priority 4)
15. Presentation, discussion, and evaluation

[Out-of-class Learning]

After the lecture, review the content and ask questions if any. Students can learn about the examples of risk management and crisis management by searching lecture materials and related research papers, which will support their research.

3. Grading:

Students will deepen their understanding of risk management and crisis management and good practices through lectures and the final examination and will be graded from A to D or E depending on the depth of their understanding.

[Evaluation Criteria]

Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D
Below the acceptable level: E

4. Textbooks: (4-1:Required 4-2:Others)

At Risk: Natural Hazards, People's Vulnerability and Disasters, Piers Blaikie, 2003.

5. Software Used in Lectures (If not applicable, it can be left blank.):

6. Auditing; Allow or Not Allow

Not Allow

7. Note:

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP8831E
講義名[日本語(英語)] / Class Name：River Engineering
担当者（フルネーム）/ Course instructor (Full Name)：清水　義彦/ Prof. SHIMIZU Yoshihiko
Term: Fall through Winter 秋、冬
単位数/ Credits: 2

1. Course Description and the Learning Objectives：
A river has a naturally-based form in general but has changed by influences of human impacts. The purpose of this course is to understand such characteristics of rivers caused by natural and human impacts and to learn the basics and their applications of river channel design and river management with safety against flood disasters and conservation of river environment. Students are required to obtain the ability to deeply consider the application of river engineering technics.

[Course Goals]
This course enables students to acquire the advanced implementation methodology of “River Engineering” linking knowledge of “Hydraulics” and “Sediment Transport Mechanics”.

[Related Diploma Policy (DP)]
Disaster Management Program (DMP):
1. Ability to identify and delineate on-site problems by surveying the gap between the ideal state and the current state from multiple perspectives with the expertise in disaster management policies.
2. Ability to make maximum use of available tools, and/or develop new one to explore, collect, archive, search and integrate scientific data and information as well as information of experiences, including good practices and success/failure stories, and facilitate effective risk communications.
3. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies.
5. Ability to nurture creativity with which to help on-site stakeholders develop their ability to solve problems by themselves.
2. Course Outline：
(1) Fundamental characteristics of river basin and channel morphology (three classes)
- Drainage basin zones and some channel formation types,
- Typical longitudinal variation in channel properties from headwater to river mouth,
- Morphological classification of channel plane-form pattern.
(2) Basics, practice and application for river channel design (three classes)

- Applications of specific energy and specific force,
- Channel design by using uniform and non-uniform flow analysis,
- Evaluating flow resistance due to lateral variation of roughness in a cross-section.

(3) Advanced flood hydraulics and its applications (three classes)

- Characteristics on time and space propagation of water level and flood discharge by using unsteady one-dimensional flow analysis,
- Transformation of water level and discharge hydrographs,
- Function of dam and flood retarding facility.

(4) Depth-averaged flow approach and its applications (three classes)

- Basic equations on depth-averaged flow and river bed variation analysis,
- Channel flow with a narrow path
- Meandering channel, Flow with riparian forest, Flow with bars

(5) Function of river hydraulic structure and its applications (three classes)

- Hydraulic function of groyne, Consolidation works with a hydraulic drop,
- Levee design, Local scouring around the pier,
- Traditional measures for flood fighting

[Out-of-class Learning]

After the lecture, review the content and ask questions if any. Students can learn about the basics of river engineering by searching lecture materials and related research papers, which will support their research.

3. Grading：

Students will deepen their understanding of the hydrological phenomena and its system through lectures and the final examination and will be graded from A to D or E depending on the depth of their understanding. Grades will be assessed based on a report and presentation related to the lecture (30%) and an examination (70%).

[Evaluation Criteria]

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks： (4-1:Required 4-2:Others)

4-1: Textbook will be distributed to students in the class.

4-2: Students are encouraged to search literatures, including articles related to this lecture, based on their individual interests.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

Not Allow

7. Note：

Subject: Advanced Sediment Transport Mechanics
Course number: DMP 8841E
Instructor: Assoc. Prof. QIN Menglu, Prof. EGASHIRA Shinji
Academic Year: April 2024 - March 2025
Term / Time: Fall through Winter
Credits: 2

1. Course aims and objectives
Sediment transportation takes place in various forms such as bed-load, suspended load, debris flow etc. and its spatial imbalance causes river bed degradation and aggradation, side bank erosion, sand bar formation and channel shifting. Such channel changes will be suitable for ecological systems, if they are within an allowable level. However, if these are over some critical level, flood and sediment disasters will happen.

[Course Goals]
This course requires students to understand various sediment transport forms and their transport rates in rivers. Additionally, students will delve into the governing equations that characterize flood flow and sediment transport dynamics, enabling them to assess channel transformations across various geometric scales, encompassing sediment particle sizes, flow depths, and flow widths. Furthermore, the curriculum mandates an exploration of advanced sediment management strategies for disaster mitigation and their practical implementation, alongside the development of suitable river channel conditions.

[Related Diploma Policy (DP)]
Disaster Management Program (DMP):
1. Ability to identify and delineate on-site problems by surveying the gap between the ideal state and the current state from multiple perspectives with the expertise in disaster management policies.
2. Ability to make maximum use of available tools, and/or develop new one to explore, collect, archive, search and integrate scientific data and information as well as information of experiences, including good practices and success/failure stories, and facilitate effective risk communications.
3. Ability to conduct policy analysis for problem solving based on academic analysis from multiple perspectives with the wide-range of knowledge on disaster management policies.
5. Ability to nurture creativity with which to help on-site stakeholders develop their ability to solve problems by themselves.
2. Course Topics and Methods
1: Introduction (1)

- Characteristics of sediment

2: Introduction (2)

- Sediment transportation and corresponding channel changes
- Methods to evaluate channel changes

3: Mechanics of sediment transportation (1)

- Parameters associated with sediment transportation

4: Mechanics of sediment transportation (2)

- Critical condition for initiating bed load

5: Mechanics of sediment transportation (3)

- Bed load formulas

6: Mechanics of sediment transportation (4)

- Bed load formulas

7: Mechanics of sediment transportation (5)

- Extension of bed load formula to non-uniform sediment

8: Mechanics of sediment transportation (6)

- Suspended load

9: Mechanics of debris flow (1)

- Constitutive equations
- Debris flow characteristics over erodible beds

10: Mechanics of debris flow (2)

- A bed load formula derived from constitutive equations

11: Bed forms and flow resistance (1)

- Geometric characteristics of bed forms
- Formative domain of bed forms

12: Bed forms and flow resistance (2)

- Flow resistance

13: Prediction of channel changes (1)

- Governing equations employed in steep areas
- Topographic change in steep areas

14: Prediction of channel changes (2)

- Governing equations employed in alluvial reaches
- Topographic change in alluvial reaches

15: Method to predict sediment transport process in drainage basins

-Sediment management in drainage basin

[Out-of-class Learning]

Read the lecture notes and related research papers distributed in this course in advance to understand the lecture outline and prepare questions to be asked. After the lecture, review the content and submit the assigned report by the due date. Students can learn about Mechanics of Sediment Transportation and Channel Changes by searching lecture notes and related research papers, and prepare themselves in relation to their own research objectives.

3. Grading

River bed variations are evaluated using the sediment transport system equations that are constituted by the continuity equation and equation of motion for flood flow, the mass conservation equation of sediment in the flow body, the equations of sediment erosion and deposition for suspended sediment, the mass conservation equation for bed sediment, and the bed load formula. Students will deepen their understanding of the sediment transport system through lectures, reports and examination, and will be graded from A to D or E depending on the depth of their understanding.

[Evaluation Criteria]

Outstanding: A

Superior: B

Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

A special report on this lecture and its presentation in class (50%)

Advanced examination (50%)

Notice: Either a report or a short quiz is assigned every two classes, regarding questions illustrated at the end of each chapter in Lecture Note.

4. Textbooks

4-1 Required

- Egashira, S. (2009): Mechanics of Sediment Transportation and River Changes, Lecture Note

4-2 Others

- turm, T. W. (2001): Open Channel hydraulics, McGraw-Hill.
- Graf, W. H. (1997): Fluvial Hydraulics, Wiley.
- Julien Pierre: River Mechanics, Cambridge University Press
  (Website: http://www.cambridge.org/us/catalogue/catalogue.asp?isbn=9780521529709)
  (http://www.amazon.co.jp/River-Mechanics-Pierre-Y-julien/dp/0521529700)
- Albert Gyr and Klaus Hoyer: Sediment Transport, A Geophysical Phenomenon, Springer

Netherlands
(http://www.springerlink.com/content/q0x656/)

- Ashida K., Egashira S. and Nakagawa H. (2008), River Morphodynamics for the 21st Century, Kyoto University Press (in Japanese)
- HARADA Daisuke, EGASHIRA Shinji, Tanjir Saif Ahmed and ITO Hiroyuki, Entrainment of bed sediment composed of very fine material, Earth Surface Process and Landforms (ESPL)、Vol.47, Issue13, pp.3051-3061, 2022.

5. Software Used in Lectures (If not applicable, it can be left blank.):

6. Auditing; Allow or Not Allow
Not Allow

7. Note:

Academic Year: (April 2024 - March 2025)
科目番号 / Course Number：DMP8850E
講義名[日本語(英語)] / Class Name：International Policies on Water and Disasters
担当者（フルネーム）/ Course instructor (Full Name)：廣木　謙三 /HIROKI Kenzo
学期・曜日・時限 / Term・Day・Period： 秋学期/Fall/月 Mon/2
単位数/ Credits：2

1. Course Description and the Learning Objectives：

[Course Description]

This course studies formulation and implementation process of international policies that give concrete impact on local and national practices and field works, and vice versa. Water and disasters, key cross cutting areas of SDGs, will be addressed as a main subject of study in the course. The course intends to help students broaden their knowledge base and enhance their capability to formulate and implement national and international policies and connect them with local practices and projects.

The course will be started by lectures on cases in which practitioners and stakeholders faced actual disasters. Following group discussion will explore how international policies may help local practitioners and stakeholders in meeting diverse local challenges. Afterwards, the course moves to lectures on chronological development of international water and disaster policies in which selected official documents are examined. A recent process of merging water policy and disaster policy will also be studied.

Having learned these basics, students will learn key policy elements such as Climate Change Adaptation and management of transboundary water. Process and methods to connect policy and science at decision making levels will be discussed. Meeting/conference processes will be taken up as a tool to facilitate formulation and implementation of policies. The course will study how those meeting processes determine success and failure of the policies.

As Integrated Water Resources Management (IWRM) is the key for sustainable, inclusive, and resilient water management, students will study basic concept, field cases and national and international policies on IWRM. They will deepen their knowledge on IWRM by presenting their own cases and discuss them in a seminar.

Having completed this course, students will be able to acquire sufficient basic knowledge and concepts of international policies on water and disasters, and can explain how it works, thereby using and analyzing them in formulation and implementation of practices, strategically realizing the policies by creating effective conference processes, and reviewing and upgrading them in spiral manners as in the processes of Integrated Water Resources Management (IWRM). (Diploma Policy : Disaster Management Program 2,3,4,5,6)

2. Course Outline：

Phase 1 (Week1-4): "Overview of status and policies on water and disasters at local and global levels"

The course is started by knowing from cases what challenges practitioners and stakeholders are likely to face in actual disasters. Students will learn outline of key international policies n water as well as DRR and their historical background. A recent process of merging water policy and disaster policy will also be visited. Group

discussion will explore how international policies may help local practitioners and stakeholders in meeting the local challenges. Having completed this phase, students will be able to use obtained background information on international policies on water and disasters in analyzing and formulating policies at national and local levels. (Diploma Policy 2,3,4,5,6)

Lecture: Global overview on water and disasters

Lecture: International policy on water

Lecture: International DRR policy and merging water and DRR policies

Seminar on DRR Policy (Group discussion on policies to address local challenges on water and disasters)

Read "Sendai Framework for Disaster Risk Reduction (DRR)" (Pages to be specified by the lecturer):
https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

Phase 2 (Week 5-7): "Bridging international policy, national policy, and field practice"

Students will learn how international and national policies are translated into local practices. Practical knowledge and lessons learned from recent cases will be shared through lecture. These will lead to group discussion on status and challenges of current policies on water and disasters.

Having completed this phase, students will be able to use obtained knowledge and information on international policies on water and disasters in formulating and implementing practices by bridging policies and practices at national and local levels. (Diploma Policy 3,4,5,6)

Lecture: Bridging international policy, national policy, and field practice

Crisis management of water-related disasters

Dam safety policy

Financing and investment on water-related DRR

Lecture: Learning from cases and good practices

Seminar: "Looking at the future by visiting the past: Discussing policies which should be created in the future."

Read "The 2030 Agenda for Sustainable Development" (Pages to be specified by the lecturer):
https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf

Phase 3 (Week 8-11): "Methods to create effective international policies"

International policies are just a stack of paper without giving real impacts on national and local actions. Students will learn the process of developing effective international policies. Various meetings and conferences are compared as prerequisite tools to build consensus and formulate international policies. Students will discuss The students will discuss building effective international processes that can give intended impact on national and local actions.

Through this phase, students will be able to use obtained background information on international policies on water and disasters in formulating policies and implementing practices at national and local levels.

Having completed this phase, students will be able to use obtained knowledge and information to help strategize and implement strategic conference processes that will serve policy objectives at international and national

levels. (Diploma Policy 3,4,5,6)

Lecture: How international policies and their implementation are connected to conference process

Lecture: Climate change adaptation and DRR

Lecture: Addressing water-related Disaster Risk Reduction under COVID-19

Seminar: "Discussing methods to formulate effective international policies that lead to concrete actions"

Read "UNSGAB Hashimoto Action Plan 1" and "UNSGAB Journey"
https://sustainabledevelopment.un.org/content/documents/8701unsgab-journey-web.pdf
Read " Final Outcome Report of High Level panel on Water" (Pages to be specified by the lecturer)
https://sustainabledevelopment.un.org/content/documents/17825HLPW_Outcome.pdf

Phase 4 (Week 12-15): "Integrated Water Resources Management (IWRM)"
Concept, background, effects and necessary frameworks and process of IWRM will be learned. International guidelines to implement IWRM will be visited to learn how practically IWRM can help integrate various water-related sector including that of DRR for efficient ,management of water resources.
Having completed this phase, students will be able to use obtained knowledge and information to help create and/or revise IWRM processes at transboundary, national, and basin levels. (Diploma Policy 2,3,4,5,6)

Lecture: Overview of Integrated Water Resources Management (IWRM)

Lecture: Practicing IWRM (1)

Lecture: Practicing IWRM (2)

Seminar: "Discussing cases of IWRM"

Read "UN Convention on the Law of the Non-navigational Uses of International Watercourses" (Pages to be specified by the lecturer): http://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf

3. Grading：

Performance in class discussion (20%), Presentation (30%), and Final Exam (50%)
Criteria of grading is as follows:
A: Acquire sufficient basic knowledge and concepts of international policies on water and disasters, and can explain how it works.
B: Acquire basic knowledge and concepts of international policies on water and disasters, and can explain how it works.
C: Acquire basic knowledge and concepts of international policies on water and disasters in general, and can explain how it works.
D: Acquire the minimum basic knowledge and concepts of international policies on water and disasters, and can explain how it
works.
E: Not acquire the basic knowledge and concepts of international policies on water and disasters, and cannot explain how it works.
Rejection.

4. Textbooks and References (4-1:Required 4-2:Others)

4.1

"Sendai Framework for Disaster Risk Reduction (DRR)": https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

"The 2030 Agenda for Sustainable Development": https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf

"UN Convention on the Law of the Non-navigational Uses of International Watercourses" (Pages to be specified by the lecturer): http://legal.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf

"UNSGAB Hashimoto Action Plan 1": to be distributed by the lecturer

"UNSGAB Journey" https://sustainabledevelopment.un.org/content/documents/8701unsgab-journey-web.pdf

Other materials to be distributed by the lecturer when necessary

5. Software Used in Lectures（If not applicable, it can be left blank.）:

6. Auditing ; Allow or Not Allow

否 Not Allow

7. Note：

開講年度（2024.10 月-2025.9 月）
科目番号：SSP1011J
講義名：　国際安全保障
担当者：　兵頭　慎治
学期：秋前

１．本講義の概要：
　国際安全保障に関する基礎知識を修得した上で、日本を含めた国際社会が直面する安全保障上の課題について概観する。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
②学んだ知識を政策に結びつけられる能力
③政府関係等の対応や関係諸国との調整、各種法制の適用などを踏まえつつ、政策を実現させる実践力

２．各授業のテーマ：
　第１回　ウクライナ戦争と国際安全保障
　第２回　国際政治学概説
　第３回　地政学概説
　第４回　戦略論概説
　第５回　戦争の本質と軍事力の諸相
　第６回　戦略的コミュニケーション
　第７回　日本の安全保障
　第８回　まとめ

　【授業外学修】
　事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
　レポート（１００％）
　与えられたテーマに関するレポートを提出する。

　[成績評価基準]
　A 90-100 合格 到達目標を高い水準で達成している
　B 80-89 合格 到達目標を満足できる水準で達成している
　C 70-79 合格 到達目標を概ね達成している
　D 60-69 合格 到達目標を最低限の水準で達成している

E 0-59 不合格 到達目標を達成していない
または
P 合格 到達目標を達成している（合格・不合格を指定する授業科目の場合）
F 不合格 到達目標を達成していない（合格・不合格を指定する授業科目の場合）

４．テキスト、参考文献等：

第１回	必読	なし
	参考	なし
第２回	必読	ジョセフ・ナイ、デイヴィット・ウェルチ『国際紛争 - 理論と歴史』原書第10版、有斐閣、2017年。第一章および第二章。
	参考	なし
第３回	必読	なし
	参考	ローレンス・フリードマン『戦争の将来』（中央公論新社、2021年） Lawrence Freedman, The Future of War: A History(Public Affairs, 2017)
第４回	必読	１　ダニエル・カーネマン『ファスト&スロー　あなたの意思はどうのように決まるか？』（上）（早川書房、2014年）、第19章、20章[Daniel Kahneman, *Thinking, Fast and Slow*, Chapters 19 and 20.] ２　吉﨑知典「ウクライナ危機とNATO：同盟の戦略概念への含意」『CISTECジャーナル』No.199（2022年5月）、179-188頁
	参考	１　ローレンス・フリードマン『戦略の世界史（下）（2018年）36-38章（Lawrence Freedman, *Strategy*, Oxford U.P., 2013, Chapters 36-38）.ナシーム・ニコラス・タレブ『ブラック・スワン』（上・下）ダイヤモンド社、2009年 ２　吉﨑知典「NATO結束のディレンマ：ウクライナ、ポピュリズム、コロナ危機」『国際安全保障』第48巻第4号（2021年3月）59-75頁
第５回	必読	石津朋之著『戦争学原論』（筑摩書房、2013年）
	参考	石津朋之「戦争の将来像――戦争と社会、そして『時代精神』」『海外事情』第65巻4号（2017年4月）
第６回	必読	１　『戦略的コミュニケーションと国際政治－新しい安全保障の論理』（日経出版、2022年10月） ２　「戦略的コミュニケーションと防衛外交」渡部・西田共編『防衛外交とは何か』（勁草書房、2021年）
	参考	なし
	必読	なし

第７回	参考	1　平和・安全保障研究所『日本の新しい「国家安全保障戦略」等について－分析と評価－』2022 年 12 月 2　徳地秀士「新しい「国家安全保障戦略」と今後の日本の課題」『學士會会報』第 959 号、2023 年 3 月、20－24 頁 3　徳地秀士「日本の新しい「国家安全保障戦略」について－安全保障政策の大転換？－」『NPI Quarterly』第 14 巻第 2 号、2023 年 4 月、10－11 頁 4　徳地秀士「日米同盟の強化に向けて」『隊友』2023 年 7 月 15 日、2 頁
第７回	参考	5　Hideshi Tokuchi, ″Japan’s New National Security Strategy and Contribution to a Networked Regional Security Architecture,″ CSIS, June 23, 2023 6　Hideshi Tokuchi, “The Basic Orientation of Japan’s National Security Strategy: International Security Cooperation with Enhanced Comprehensive National Power,” AJISS Commentary, No. 303, June 26, 2023 7　Hideshi Tokuchi, “Japan’s New National Security Strategy: Background and Challenges,” EUI; RSC; Policy Paper; 2023/05, July 2023 8　Hideshi Tokuchi「Impact of Russian Invasion of Ukraine on East Asian Security」『展望與探索』第 21 巻第 7 期、2023 年 7 月、62－74 頁 9　Hideshi Tokuchi, “To Build a Bridge over a Troubled Strait” U.S.-Australia-Japan Trilateral Cooperation on Strategic Stability in the Taiwan Strait, CSIS, August 2024 pp.34-37 10　徳地秀士「日本の防衛関係費について― 脅威を直視して防衛力そのものを議論せよ―」『改革者』2023 年 10 月号
第８回	必読	なし
	参考	なし

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否

否

７．履修上の注意：

特になし

開講年度（2024.10 月-2025.9 月）
科目番号：SSP1013J
講義名：法と安全保障
担当者：永福　誠也
学期：秋前

１．本講義の概要：

安全保障にかかわる憲法、国内防衛法制及び国際法の基本概念や法原則について講義を行い、理解を深める。特に憲法については、日米安保・国際協調主義と 9 条との関係、国際法については、海洋・空・宇宙など空間にかかわる論点や、紛争解決、武力行使関連問題など様々な論点を扱い、理解を深める。

[関連するディプロマ・ポリシー]
戦略研究プログラム　DP3, DP4

２．各授業のテーマ：

第１回　憲法と安全保障（１）
第２回　憲法と安全保障（２）
第３回　防衛法制
第４回　国際法（安全保障をめぐる最近の諸課題と国際法）
第５回　国際法（紛争の解決と海洋における法の支配の実現）
第６回　国際法（空・宇宙法）
第７回　国際法（武力行使関連）
第８回　まとめ

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：

授業への貢献度（５０％）、レポート（５０％）

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

または

P 合格 到達目標を達成している（合格・不合格を指定する授業科目の場合）

F 不合格 到達目標を達成していない（合格・不合格を指定する授業科目の場合）

４．テキスト、参考文献等：

第１回

必読　なし

参考

１ 篠田英朗『はじめての憲法』ちくまプリマー新書、2019 年）

２ 同『憲法学の病』（新潮新書、2019 年）

３ 同『ほんとうの憲法』（ちくま新書、2017 年）

４ 同『国家主権という思想―国際立憲主義への軌跡』（勁草書房、2012 年）

第２回

必読 なし

参考

１　篠田英朗『戦争の地政学』（講談社新書、2023 年）

２　同『集団的自衛権で日本は守られる』（PHP、2022 年）

３　同『パートナーシップ国際平和活動』（勁草書房、2021 年）

４　同『集団的自衛権の思想史―憲法 9 条と日米安保」（風行社、2016　年）

第３回

必読　なし

参考

【概説書】

１　田村重信編著『新・防衛法制』（内外出版、2018 年）

２　西修・浜谷英博・髙井晋・松浦一夫・富井幸雄『日本の安全保障法制』（内外出版、2001 年）

３　安田寛『防衛法概論』（オリエント書房、昭和 54 年）

４　宇都宮静男監修『防衛法』（自由国民社、1974 年）

５　田上穣治、杉村敏正『防衛法』(法律学全集 12-Ⅱ)(有斐閣、1958 年)

【テーマ別】

１　冷戦下の自衛隊（防衛白書昭和 63 年版、第３部（HP 版））

２　国際貢献（防衛白書平成 3 年版、第 3 章）

３　事態対処法制整備（防衛白書平成 17 年版、第 3 章第 3 節）

４　本来任務化（防衛白書平成 18 年版、第 2 章第 4 節）

５　平和安全法制整備（防衛白書平成 28 年版第Ⅱ部第 3 章）

第４回

必読

１　中谷和弘「国際法から見たエネルギー安全保障及び食料安全保　　障」『国際法研究』第 13 号（2024 年 3 月）120－137 頁。

２　同「国際法からみた経済安全保障の諸相」『研究レポート』日本国際問題研究所（2023 年 12 月 12

日）
3　同「サイバー諜報と国際法」『国際法外交雑誌』第 122 巻第 1 号（2023 年 5 月）1-21 頁。
4　同「米ソ核戦争防止協定の作成における英国外交官の関与」『国際法研究』第 12 号（2023 年 5 月）170—191 頁。
5　同「尖閣諸島、竹島、国際裁判」内閣府：尖閣諸島研究・解説サイト（2020 年 12 月 18 日）
6　同「エストニアのデータ大使館と国際法」『国際法研究』第 10 号（2022 年 3 月）186-197 頁。
7　同「中国による南シナ海の違法な人工島建設の法的結果」『島嶼研究ジャーナル』第 11 巻第 1 号（2021 年 10 月）18-28 頁。
8　同「米国法と中国法の域外適用の板挟みになる日本企業」『国際商事法務』第 49 巻第 4 号（2021 年）455-460 頁。
9　同「タリンマニュアルについて」『情報処理』第 61 巻第 7 号（2020 年 7 月）25-30 頁。
10　同「南シナ海比中仲裁判断と海洋における法の支配」『国際問題』No.659（2017 年 3 月）1-3 頁。
11　「ホルムズ海峡と国際法」坂元茂樹編著『国際海峡』（東信堂、2015 年）129-155 頁。
12　同「米中軍用機接触事件と国際法」『法学教室』No.252（2001 年 9 月）49-54 頁。
参考　なし。
第 5 回
必読 なし
参考
1 浅田正彦編『国際法（5 版）』（東信堂、2022 年）231-261 頁。
2 岩沢雄司『国際法（第 2 版）』（東京大学出版会、2023 年）251-308、593-670 頁。
3 山本草二『海洋法』（三省堂、1992 年）。
4 李禎之「南シナ海仲裁手続きの訴訟法的含意」『国際法外交雑誌』第 117 巻第 2 号、2018 年 8 月、30-49 頁。
5 永福誠也「ロシアによるウクライナ侵略と国際裁判所」『NIDS コメンタリー』（2023 年第 265 号）
6 永福誠也「裁判と裁判外紛争解決」『防衛研究所ブリーフィング・メモ』（2017 年 5 月号）。
7 J. Crawford, Brownlie's Principles of International Law (9th ed.), Oxford University Press, 2019, pp. 692-716.
8 D. R. Rothwell and T. Stephens, The International Law of the Sea (2nd ed.), Hart Publishing, 2016.
9 R. R. Churchill and A.V. Lowe, The Law of the Sea (3rd ed.), Manchester University Press, 1999.
第 6 回
必読 なし
参考
1 橋本靖明「宇宙と安全保障の歴史」渡邉浩崇編著『宇宙の研究開発利用の歴史 日本はいかに取り組んできたか』（大阪大学出版会、2022 年）149-179 頁。
2 杉原高嶺『国際法学講義』（有斐閣、2008 年）第 13 章（351-359 頁）。
第 7 回
必読 なし
参考

１ 浅田正彦「ウクライナ戦争と国際法」浅田正彦・玉田大編著『ウクライナ戦争と』（東信堂、2023 年）5-37 頁。
２ 黒崎将広他『防衛実務国際法』（弘文堂、2021 年）505-527 頁。
３ 浅田正彦編『国際法（5 版）』（東信堂、2022 年）231-261 頁。
４ 岩沢雄司『国際法（第 2 版）』（東京大学出版会、2023 年）677-748 頁。
５ オスカー・シャクター『現代国際法の理論と実践』長谷川正国訳（信山社、2020 年）133-226、465-497 頁。
６ Emily Crawford and Alison Pert, International Humanitarian Law (2nd ed.), Cambridge University Press, 2020.
７ Oscar Schachter, International Law in Theory and Practice, Mrtinus Nijhoff, 1991, pp. 106-183,389-417.
第８回
必読 なし
参考 なし

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
否

７．履修上の注意：
特になし。

開講年度（2024.10 月-2025.9 月）
科目番号：　SSP1014J
講義名：　経済と安全保障
担当者：　富川　英生
学期：秋、冬

１．本講義の概要：
　わが国の安全保障に関する総合的かつ戦略的な考察の資とするため、経済の観点から国際関係を分析・把握するとともに、その基礎的方法を習得する。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
③政府関係等の対応や関係諸国との調整、各種法制の適用などを踏まえつつ、政策を実現させる実践力

２．各授業のテーマ：
第１回　導入講義「経済と安全保障（経済基礎・国際政経論)」
第２回　経済基礎（１）「人（人口動態)」
第３回　経済基礎（２）「モノ（資源・エネルギー)」
第４回　経済基礎（３）「お金（国際金融・通貨市場)」
第５回　経済基礎（４）「流通（国際物流)」
第６回　共同研究導入講義「中国の経済外交政策」
第７回　共同研究（１）「第１回討議」
第８回　共同研究（２）「第２回討議」
第９回　共同研究（３）「第３回討議」
第１０回共同研究（４）「第４回討議」
第１１回まとめ「共同研究成果発表会」

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
まとめ「共同研究発表会」での発表内容（５０％）
課題レポート（持ち帰り式）（５０％）

[成績評価基準]

A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない
または
P 合格 到達目標を達成している（合格・不合格を指定する授業科目の場合）
F 不合格 到達目標を達成していない（合格・不合格を指定する授業科目の場合）

４．テキスト、参考文献等：
第１回
必読／参考　ＴＢＡ
第２回
必読／参考 ＴＢＡ
第３回
必読　柴田明夫『今、資源に迫っている危機』（ＴＡＣ出版、2013 年）
参考
１ 柴田明夫『図解 世界の資源地図』（中経出版、2012 年）
２ 柴田明夫『食糧危機が日本を襲う！』（角川ＳＳＣ新書、2011 年）
３ 柴田明夫『日本は世界一の「水資源・水技術」大国』（講談社プラスアルファ新書、2011 年）
４ 柴田明夫『「シェール革命」の夢と現実』（PHP 研究所、2013 年）
５ 柴田明夫、中田雅彦、大場紀章、星野克美共著『コロナ後を襲う世界７大危機 石油・メタル・食糧・気候の危機が世界経済と人類を脅かす』（NextPublishing Authors Press、2021 年）
第４回
必読　棚瀬順哉「国際収支の基礎・理論・諸問題」（財経詳報社　2019 年 12 月）
参考　吉川雅幸「ドルリスクー米国発世界金融危機のゆくえー」（日経ビジネス人文庫、２００９年）
第５回
必読／参考 ＴＢＡ
第６回
必読　ＴＢＡ
参考
１ 「転換期にある「一帯一路」構想と経済外交」（松本はる香編著『＜米中新冷戦＞と中国外交』所収、白水社、2020 年）
２ 大西康雄「転機の一帯一路構想」（『「一帯一路」建設と日中第三国市場協力』、中国社会科学出版社、2020 年）
第７回、第８回、第９回、第１０回、第１１回
必読

１　丸川和雄・梶谷懐［著］『超大国・中国のゆくえ４―経済大国化の軋みとインパクト』（2015 年, 東京大学出版会）序章、終章（1-18、211-225 頁）。

２　内閣府「（１）景気の拡大テンポが緩やかになる中国経済」『世界経済の潮流２０１４年Ⅰ』第１章第２節３アジア経済（平成２６年６月）83-95 頁。

http://www5.cao.go.jp/j-j/sekai_chouryuu/sh14-01/pdf/s1-14-1-2-3-1.pdf

http://www5.cao.go.jp/j-j/sekai_chouryuu/sh14-01/pdf/s1-14-1-2-3-2.pdf

参考

１　IMF (2015), People's Republic of China: 2015 Article IV Consultation, Washington, D.C.: IMF.

http://www.imf.org/external/pubs/ft/scr/2015/cr15234.pdf

２　各班のテーマ決めなどの参考として、Keizaireport.com 等で中国経済・世界経済に関するレポートを検索

http://www3.keizaireport.com/report.php/-/node=65/

https://www.mof.go.jp/pri/research/conference/china_research_conference/index.htm

http://www5.cao.go.jp/keizai3/whitepaper.html

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否

否

７．履修上の注意：

特になし

開講年度（2024.10 月-2025.9 月）
科目番号：SSP1015J
講義名：米国の安全保障政策
担当者：新垣　拓
学期：秋前

１．本講義の概要：
　米国の安全保障政策の展開と課題を分析し、我が国を含む東アジアの安全保障に対するインプリケーションを考察する。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：
　第１回　米国の国防政策
　第２回　米国の内政と安全保障政策
　第３回　米国の対中政策
　第４回　米国の新領域安全保障
　第５回　米国の不拡散政策
　第６回　米国の宇宙政策
　第７回　米国の軍事戦略
　第８回　まとめ

　【授業外学修】
　事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：期末ペーパー（１００％）
　「米国の安全保障政策」に関連したテーマ（これに関係するものであれば、具体的なトピックの選定は自由）で、A4×5 枚程度のペーパーを作成し、２０２４年１月１０日（水）正午までに担当者（arakaki-h@nids.go.jp）に送付すること。

　[成績評価基準]
　A 90-100 合格 到達目標を高い水準で達成している
　B 80-89 合格 到達目標を満足できる水準で達成している

C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
第１回
必読／参考　なし
第２回
必読／参考 なし
第３回
必読　なし
参考
増田雅之編著『大国間競争の新状態』(インターブックス、2023 年)
第４回
必読 なし
参考
Bryan Clark, Mark Gunzinger, and Jesse Sloman, “Winning in the Gray Zone: Using Electromagnetic Warfare to Regain Escalation Dominance,” (CSBA, 2017).
[https://csbaonline.org/research/publications/winning-in-the-gray-zone-using-electromagnetic-warfare-to-regain-escalation]
第５回
必読
秋山信将、菊地昌廣、浅田正彦、宮本直樹「第 2 章　核兵器の不拡散」、黒澤満編著『軍縮問題入門』〔第４版〕(東信堂、2012 年)、42-83 頁
参考　なし
第６回
必読 なし
参考
１ 福島康仁「米国における 2 つの宇宙軍創設―創設の経緯・意図と立 ち上げ状況の評価―」『安全保障戦略研究』第 2 巻第 2 号（2022 年 3 月）63～79 頁。
２ 福島康仁「シスルナ安全保障―シスルナ空間における米中の活動 と今後の論点―」『安全保障戦略研究』第 3 巻第 2 号（2023 年 3 月）1 ～22 頁。
第７回
必読 なし
参考
１．菊地茂雄「中国の軍事的脅威に関する認識変化と米軍作戦コンセプトの展開――統合全ドメイン指揮統制（JADC2）を中心に――」『安全保障戦略研究』第 2 巻第 2 号（2022 年 3 月）23～62 頁

<http://www.nids.mod.go.jp/publication/security/pdf/2022/202203_02.pdf>
２．菊地茂雄「沿海域作戦に関する米海兵隊作戦コンセプトの展開―「前方海軍基地」の「防衛」と「海軍・海兵隊統合（Naval Integration)」―」『安全保障戦略研究』第1巻第1号（2020年8月）55～81頁
<http://www.nids.mod.go.jp/publication/security/pdf/2020/08/202008_04.pdf>
３．菊地茂雄「米陸軍・マルチドメイン作戦（MDO）コンセプト―「21世紀の諸兵科連合」と新たな戦い方の模索―」『防衛研究所紀要』第22巻第1号（2019年11月）15～58頁
<http://www.nids.mod.go.jp/publication/kiyo/pdf/bulletin_j22_1_2.pdf>
第８回
必読／参考 なし

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
否

７．履修上の注意：
特になし

開講年度（2024.10 月-2025.9 月）
科目番号：SSP1016J
講義名：　東アジアの安全保障
担当者：　山口　信治
学期：秋前

１．本講義の概要：

中国の安全保障政策の展開を分析し、東アジアの戦略環境に与える影響を考察する。この際、偏見や誤解を避けた等身大の中国を理解するために必要な基礎知識に加え、東アジア地域と我が国のインプリケーションを持つかを重視しつつ、理解を促進する。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：

第１回　中国の安全保障戦略
第２回　現代中国の軍事・国防
第３回　中国の海洋戦略
第４回　中国の外交戦略
第５回　中国の新領域をめぐる安全保障
第６回　台湾を取り巻く安全保障環境
第７回　日中関係
第８回　まとめ

【授業外学修】

事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：

授業への貢献度（３０％）、レポート（７０％）

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している

D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
第１回
必読
山口信治「中国の目指す覇権と国際秩序とはなにか」川島真・小嶋華津子編『習近平の中国』（東京大学出版会、2022 年）
参考
テイラー・フレイヴェル『中国の領土紛争：武力行使と妥協の論理」（勁草書房、2019 年）
第２回
必読
杉浦康之『中国安全保障レポート 2022　統合作戦の深化を目指す中国人民解放軍』（防衛省防衛研究所 2021 年）
参考
阿南友亮『中国はなぜ軍拡を続けるのか』（新潮社 2017 年）
第３回
必読
飯田将史「第 10 章：南シナ海へ進出する中国の狙いとその影響」加茂具樹編『中国は「力」をどう使うのか』（一藝社、2023 年）
参考
１ 飯田将史『海洋へ膨張する中国』（角川 SSC 新書、2013 年）
２ 飯田将史「人民解放軍の『進化』とインド太平洋の安全保障」『外交』第 76 巻（2022 年 11・12 月）
３ トシ・ヨシハラ、ジェイムズ・R・ホームズ（山形浩生訳）『太平洋の赤い星』（バジリコ株式会社、2014 年）
第４回
必読　なし
参考
１　増田雅之「パワー・トランジッション論と中国の対米政策」『神奈川大学アジア・レビュー』第 2 号（2015 年 3 月）
２　増田雅之「対立への岐路に立つ中国の対米政策」川島真・森聡編『アフターコロナ時代の米中関係と世界秩序』（東京大学出版会、2020 年）
３ 『中国安全保障レポート 2020―ユーラシアに向かう中国』
第５回
必読 なし
参考
１　『中国安全保障レポート 2021　新時代における中国の軍事戦略』
２　八塚正晃「中国人民解放軍の智能化戦争」『安全保障戦略研究』（防衛研究所、2020 年）
第６回

必読　なし
参考
１ 野島剛『台湾とは何か』（筑摩書房、2016 年）
２ 佐橋亮『米中対立―アメリカの戦略転換と分断される世界』（中公新書、2021 年）
第７回
必読
国分良成他編『日中関係史』（有斐閣　2013 年）
参考
高原明生・服部龍二編『日中関係史　1972-2012　政治』（東京大学出版会　2012 年）
第８回
必読／参考　なし

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
　否

７．履修上の注意：
　単位が必要なものは必ずレポートを提出すること。

開講年度（2024.10 月-2025.9 月）
科目番号：SSP1017J
講義名：戦争史原論
担当者：清水　亮太郎
学期：秋前

１．本講義の概要：
　安全保障問題・防衛政策を検討する際に必要とされる戦争史の基礎を考察する。特に、２１世紀における世界の戦略環境及び日本の安全保障問題を理解するために、戦争の本質について歴史的観点から多角的に検討を加える。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力

２．各授業のテーマ：
　第１回　戦争と国家
　第２回　戦争と社会
　第３回　戦争と技術
　第４回　戦争と情報
　第５回　戦争と宗教
　第６回　戦争と平和
　第７回　戦争と歴史認識
　第８回　まとめ

　【授業外学修】
　事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
　期末試験（１００％）

　[成績評価基準]
　A 90-100 合格 到達目標を高い水準で達成している
　B 80-89 合格 到達目標を満足できる水準で達成している
　C 70-79 合格 到達目標を概ね達成している
　D 60-69 合格 到達目標を最低限の水準で達成している
　E 0-59 不合格 到達目標を達成していない
　または

P 合格 到達目標を達成している（合格・不合格を指定する授業科目の場合）
F 不合格 到達目標を達成していない（合格・不合格を指定する授業科目の場合）

４．テキスト、参考文献等：
第１回
必読
１ 長尾雄一郎「戦争と国家」加藤朗他著『戦争―その展開と抑制』（勁草書房、1997 年）、1-21 頁
２ 丸山眞男「超国家主義の論理と心理」『増補版 現代政治の思想と行動』（未来社、1964 年）、11 - 28 頁
参考
１　マイケル・ハワード『改訂版・ヨーロッパ史における戦争』（中公文庫、2010 年）
第２回
必読
１　石津朋之『戦争学原論』（筑摩書房、2013 年）、208-249 頁
２　石津朋之「総力戦と社会の変化」三宅正樹他編『総力戦の時代』（検証　太平洋戦争とその戦略１）（中央公論新社、2013 年）、59-95 頁
参考
１ 石津朋之『ﾘﾃﾞﾙﾊｰﾄとﾘﾍﾞﾗﾙな戦争観』（中央公論新社 2008 年）
２ マーチン・ファン・クレフェルト（石津朋之監訳）『戦争の変遷』（原書房 2011 年）
３ アザー・ガット（石津朋之他監訳）『文明と戦争』上下巻（中央公論新社、2012 年）
第３回
必読　なし
参考
１　ジェフリー・パーカー（大久保桂子訳）『長篠合戦の世界史―ヨーロッパ軍事革命の衝撃 1500～1800 年』（同文館、1995 年）
２　アレックス・ローランド（塚本勝也訳）『戦争と技術』（創元社、2020 年）
第４回
必読
１　小谷賢『インテリジェンス』（ちくま学芸文庫、2012 年）、第 1～第 3 章
２　清水亮太郎「ストックホルム発・ヤルタ緊急電は東京に届いたのか」『NIDS コメンタリー』第 264 号（2023 年 7 月）
参考
１ ジョン・キーガン『情報と戦争』（中央公論新社、2018 年）
２ 森山優『日米開戦と情報戦』（講談社現代新書、2016 年）
第５回
必読
１　庄司潤一郎「戦後日本における歴史認識」『防衛研究所紀要』第 4 巻第 3 号（2002 年 2 月）、100-119 頁

２　庄司潤一郎「『日中歴史共同研究』を振り返って」笠原十九司編『戦争を知らない国民のための日中歴史認識』（勉誠出版、2010 年）、93-118 頁
３　庄司潤一郎「歴史認識をめぐる日本外交」『国際政治』第 170 号（2012 年 10 月）
参考
１ 波多野澄雄『日本の歴史問題 改題新版－「帝国」の清算から靖国、慰安婦問題まで』(中公新書、2022 年)
２ 大沼保昭『「歴史認識」とは何か－対立の構図を超えて』（中公新書、2015 年）
３ 庄司潤一郎「日本における戦争呼称に関する問題の一考察」『防衛研究所紀要』第 13 巻第 3 号（2011 年 3 月）、44-79 頁
第８回
必読／参考 なし

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
　否

７．履修上の注意：
　特になし

開講年度（2024.10 月-2025.9 月）
科目番号：SSP1018J
講義名：冷戦と日本の安全保障政策
担当者：立川　京一
学期：秋前

１．本講義の概要：
　冷戦期における国際政治上の諸事象と日本の安全保障政策の歴史的展開に関する知識を修得し、将来の防衛政策を探求する際の資とする。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
②学んだ知識を政策に結びつけられる能力
⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：
第１回　冷戦概論
第２回　ヨーロッパの冷戦
第３回　アジアの冷戦
第４回　朝鮮戦争・ヴェトナム戦争
第５回　日本の安全保障政策（１）
（戦後安全保障政策の形成）
第６回　日本の安全保障政策（２）
（高度成長から大綱・ガイドラインへ）
第７回　日本の安全保障政策（３）
（新冷戦と日本のグローバル・コミットメント）
第８回　まとめ

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
期末レポート（１００％）

[成績評価基準]

A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
第１回
必読
１ 滝田賢治「冷戦概念と現代国際政治史－日米における議論を基礎に－」細谷千博・丸山直起編『ポスト冷戦期の国際政治』（有信堂、1993 年）2-24 頁
２ 田中明彦『新しい中世－相互依存深まる世界システム－』（日経ビジネス人文庫、日本経済新聞社、2003 年）15-42 頁
参考
１ マイケル・Ｌ・ドックリル、マイケル・Ｆ・ホプキンズ『冷戦 1945-1991』（岩波書店、2009 年）
２ 佐々木卓也『冷戦－アメリカの民主主義的生活様式を守る戦い－』（有斐閣、2011 年）
３ ジョゼフ・Ｓ・ナイ・ジュニア、デイヴィッド・Ａ・ウェルチ『国際紛争－理論と歴史－』[原書第 10 版]（有斐閣、2017 年）
４ 松岡完・広瀬佳一・竹中佳彦編『冷戦史－その起源・展開・終焉と日本－』（同文舘出版、2003 年）
５ 松岡完『20 世紀の国際政治－二度の世界大戦と冷戦の時代－』[改訂増補版]（同文舘出版、2003 年）
６ ルイス・Ｊ・ハレー『歴史としての冷戦』（サイマル出版会、1967 年）
７ Ｏ・Ａ・ウェスタッド『グローバル冷戦史－第三世界への介入と現代世界の形成－』（名古屋大学出版会、2010 年）
８ Jonathan Haslam, Russia's Cold War: From the October Revolution to the Fall of the Wall (New Haven: Yale University Press, 2011)
９ 細谷雄一編著『戦後アジア・ヨーロッパ関係史－冷戦・脱植民地化・地域主義－』（慶應義塾大学出版会、2015 年
１０ ロバート・マクマン『冷戦史』青野利彦監訳、平井和也訳（勁草書房、2018 年）
１１ モーリス・ヴァイス『戦後国際関係史－二極化世界から混迷の時代へ－』細谷雄一・宮下雄一郎監訳（慶應義塾大学出版会、2018 年）
１２ Ｏ・Ａ・ウェスタッド『冷戦－ワールド・ヒストリー－』（上・下）益田実監訳、山本健・小川浩之訳（岩波書店、2020 年）
１３ 青野利彦『冷戦史』（上・下）（中央公論新社、2023 年）
第２回
必読
塩川伸明『冷戦終焉 20 年』（勁草書房、2010 年）107-141 頁。
参考
１ 吉﨑知典「冷戦と安全保障秩序の再構築－1945～59 年－」臼井実稲子編『ヨーロッパ国際体系の史的展開』（南窓社、2000 年）120-146 頁

２　金子譲『ＮＡＴＯ北大西洋条約機構の研究』(彩流社、2008 年)
３　渡邊啓貴編『ヨーロッパ国際関係史』(有斐閣、2002 年)
４　ウォルター・ラカー『ヨーロッパ現代史』(全三巻)(芦書房、1998～2000 年)
５　佐瀬昌盛『ＮＡＴＯ－21 世紀からの世界戦略－』(文芸春秋社、1999 年)
６　植田隆子編『現代ヨーロッパ国政政治』(岩波書店、2003 年)
７　ジョン・Ｌ・ギャディス「ロング・ピース－冷戦史の証言『核・緊張・平和』－」(芦書房、2002 年) 375-422 頁
８　John Lewis Gaddis, The Long Peace: Inquiries into the History of the Cold War (Oxford: Oxford University Press, 1987), pp. 215-245
９　ジョン・Ｌ・ギャディス『歴史としての冷戦－力と平和の追求－』(慶應義塾大学出版会、2004 年) 43-87 頁
１０　ヴォイチェフ・マストニー『冷戦とは何だったのか－戦後政治史とスターリン－』(柏書房、2000 年)
第３回
必読
国分良成「東アジアにおける冷戦とその終焉」鴨武彦編『講座世紀間の世界政治　３　アジアの国際秩序－脱冷戦の影響－』(日本評論社、1993 年) 36-91 頁
参考
１　下斗米伸夫『アジア冷戦史』(中央公論新社、2004 年)
２　マイケル・シャラー『アジアにおける冷戦の起源－アメリカの対日占領－』(木鐸社、1996 年)
３　マイケル・シャラー『「日米関係」とは何だったのか－占領期から冷戦終結後まで－』(草思社、2004 年)
４　赤木完爾・今野茂充編著『戦略史としてのアジア冷戦』慶應義塾大学出版会、2013 年。
５　Tsuyoshi Hasegawa, ed., The Cold War in East Asia, 1945-1991 (Washington, D.C.: Woodrow Wilson Center Press, 2011)
６　原貴美恵『サンフランシスコ平和条約の盲点－アジア太平洋地域の冷戦と「戦後未解決の諸問題」－』(渓水社、2005 年)
７　立川京一「日本とアジアにおける初期の冷戦」『戦史研究年報』第 8 号(2005 年 3 月)
第４回
必読
ジョン・Ｌ・ギャディス『歴史としての冷戦－力と平和の追求－』(慶應義塾大学出版会、2004 年) 第 3 章：89-135 頁、第 4 章：137-184 頁、第 6 章：247-266 頁、第 8 章：359-420 頁
参考
１　神谷不二『朝鮮戦争－米中対決の原形－』(中央公論社、1966 年)
２　赤木完爾編著『朝鮮戦争－休戦 50 周年の検証・半島の内と外から－』(慶應義塾大学出版会、2003 年) 第 13 章
３　赤木完爾「朝鮮戦争史研究の 10 年」『軍事史学』第 46 巻第 1 号(2010 年 6 月)
４　『朝鮮戦争と日本』(防衛研究所、2013 年)
５　赤木完爾『ヴェトナム戦争の起源－アイゼンハワー政権と第一次インドシナ戦争－』(慶應通信、1991

年）
６ 松岡完『ベトナム戦争－誤算と誤解の戦場－』（中央公論新社、2001 年）
７ ジョージ・C・ヘリング『アメリカの最も長い戦争』全 2 冊、秋谷昌平訳（講談社、1986 年）
８ 赤木完爾「朝鮮戦争と核兵器」『慶應の政治学－国際政治 慶應義塾創立一五〇年記念法学部論文集』（慶應義塾大学法学部、2008 年）
９ 赤木完爾・今野茂充編著『戦略史としてのアジア冷戦』（慶應義塾大学出版会、2013 年）第 3 章 赤木完爾「大量報復戦略下の東アジア」
第 5 回
必読
五百旗頭真編『戦後日本外交史〔第 3 版補改訂〕』（有斐閣、2014 年）第 1 章～２章[Makoto Iokibe ed., The Diplomatic History of Postwar Japan (NY: Routledge, 2011), Chapter 1 & 2]
参考
１ 植村秀樹『再軍備と５５年体制』（木鐸社、1995 年）
２ 坂元一哉『日米同盟の絆―安保条約と相互性の模索〔増補版〕』（有斐閣、2020 年）
３ 中島信吾『戦後日本の防衛政策―「吉田路線」をめぐる政治・外交・軍事』（慶應義塾大学出版会、2006 年）
４ 増田弘『自衛隊の誕生―日本の再軍備とアメリカ』（中央公論新社、2004 年）
５ 読売新聞戦後史班編『「再軍備」の軌跡』（読売新聞社、1981 年）
第 6 回
必読
五百旗頭真編『戦後日本外交史〔第 3 版補改訂〕』（有斐閣、2014 年）第 3 章～4 章[Makoto Iokibe ed., The Diplomatic History of Postwar Japan (NY: Routledge, 2011), Chapter 3 & 4]
参考
１ 五百旗頭真編『日米関係史』（有斐閣、2008 年）
２ 真田尚剛『「大国日本」の防衛政策―防衛大綱に至る過程 1968～1976 年』（吉田書店、2021 年）
３ 千々和泰明『安全保障と防衛力の戦後史 1971～2010 「基盤的防衛力構想」の時代』（千倉書房、2021 年）
４ 特集「『防衛計画の大綱』の多角的研究」『国際安全保障』第 44 巻第 3 号（2016 年 12 月）
５ 田中明彦『20 世紀の日本 2 安全保障』（読売新聞社、1997 年）
６ 中島信吾『戦後日本の防衛政策―「吉田路線」をめぐる政治・外交・軍事－』（慶應義塾大学出版会、2006 年）
７ 吉田真吾『日米同盟の制度化―発展と深化の歴史過程』（名古屋大学出版会、2012 年）
第 7 回
必読
１ Narushige Michishita, “The U.S. Maritime Strategy in the Pacific during the Cold War,” in Sebastian Bruns and Sarandis Papadopoulos, eds., Conceptualizing Maritime and Naval Strategy: Festschrift for Peter M. Swartz, Captain (USN) retired (Baden-Baden: Nomos, 2020)
２ Narushige Michishita, Peter M. Swartz, and David F. Winkler, Lessons of the Cold War in the Pacific: U.S. Maritime Strategy, Crisis Prevention, and Japan’s Role (Woodrow Wilson Center, 2016),

https://www.wilsoncenter.org/sites/default/files/media/documents/publication/lessons_of_the_cold_war_in_the_pacific_one_page.pdf

参考

１ Michael J. Green, “The Search for an Active Security Partnership: Lessons from the 1980s,” in Akira Iriye and Robert A. Wampler, eds., Partnership: the United States and Japan, 1951-2001 (Tokyo: Kodansha International, 2001), pp. 135-160

２ マイケル・ジョナサン・グリーン「能動的な協力関係の構築に向けて―冷戦後の同盟漂流に対する 80 年代の教訓」入江昭、ロバート・A・ワンプラー編『日米戦後関係史 1951～2001』細谷千博、有賀貞訳、講談社インターナショナル、2001 年

３ 西村繁樹『防衛戦略とは何か』PHP 新書、2012 年、第 2、3、8、9 章

４ John F. Lehman, Jr., Oceans Ventured: Winning the Cold War at Sea (Norton, 2018)

５ Narushige Michishita, Peter Swartz, and David Winkler, “U.S.-Japan Military Strategies in the Pacific (video),” C-SPAN, March 7, 2016, http://www.c-span.org/video/?406041-1/usjapan-military-strategies-Pacific

６ 外岡英俊、本田優、三浦俊章『日米同盟半世紀－安保と密約－』朝日新聞社、2001 年（「『新冷戦』の到来」章）

７ 「日米安保 第二部 共同作戦計画」『朝日新聞』1996 年 9 月 2-6 日

８ 朝日新聞「自衛隊 50 年」取材班『自衛隊－知られざる変容－』（朝日新聞社、2005 年）第 7 章、283-326 頁

９ 西村繁樹『「戦略」の強化書』（芙蓉書房出版、2009 年）、325-357 頁、385-415 頁

１０ 大賀良平、竹田五郎、永野茂門『シンポジウム 日米共同作戦―日米対ソ連の戦い』防衛選書３、麹町書房、1982 年。

１１ 「冷戦期の『海洋戦略』における核兵器の役割―太平洋戦域を中心に」核不拡散体制の成立と安全保障政策の再定義 第５回公開研究会、政策研究大学院大学、2018 年 2 月 10 日

１２ John B. Hattendorf, The Evolution of the U.S. Navy’s Maritime Strategy, 1977-1986, Naval War College Newport Papers 19 (Newport, Rhode Island: Naval War College, 2004)

１３ 道下徳成「第 8 章 インド太平洋地域のパワーシフト―中国の台頭と日本の対応」庄司潤一郎、石津朋之共編『地政学原論』日本経済新聞出版、2020 年

１４ Narushige Michishita, “Japan’s Grand Strategy for a Free and Open Indo-Pacific,” The Oxford Handbook of Japanese Politics (Oxford University Press, 2021)

１５ 板山真弓『日米同盟における共同防衛体制の形成―条約締結から「日米防衛協力のための指針」策定まで』ミネルヴァ書房、2020 年

１６ 防衛研究所および政策研究大学院大学の各種オーラル・ヒストリー

１７ 道下徳成「太平洋戦域における軍事作戦の変遷－冷戦期と現在の経空攻撃作戦をめぐる攻防を中心に」『エア・アンド・スペース・パワー研究』2020 年 12 月号

第 8 回

必読／参考　なし

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否

否

７．履修上の注意：

特になし

Class Name: Introduction to Japan's Security
Course Number: SSP1101E
Course instructor(Full Name): Yusuke ISHIHARA
Academic Year: (October 2024 - September 2025)
Term: Autumn early

1. Course Description and the Learning Objectives：

An introductory opportunity both for international students to start studying the key subjects of Japanese security and for Japanese students to discuss Japan in English.

[Related Diploma Policy (DP)]
Strategic Studies Program
①安全保障・防衛問題を理解するための知識と分析能力
②学んだ知識を政策に結びつけられる能力

2. Course Outline：

Week1 Introduction and Japan's Grand Strategy
Week2 Japan as a First Responder to China's Rise
Week3 Russia in East Asia
Week4 Korean Peninsula and Security Cooperation
Week5 Japan-ASEAN Security Cooperation
Week6 Space Security, Japan's electronic warfare capability
Week7 European Security
Week8 Wrap up discussions

【Out-of-course Learning】

Read the textbook/handouts/related materials in advance. After the lectures, students should summarize what he/she has learned and apply it to the next lecture.

3. Grading：

Participation (50%), Performance as a discussant (50%)

[Evaluation Criteria]
Student's achievement of the Course Goals is:
Outstanding: A
Superior: B
Satisfactory: C
Minimum acceptable: D

Below the acceptable level: E

4. Textbooks：

Week1

Yusuke Ishihara, “Japan’s Grand Strategy as a Declining Power,” East Asia Forum, 18 June 2023.

Week2

Elli-Katharina Pohlkamp, “The New Central Front: Japan’s Special Role in the West’s Strategic Rivalry with China” European Council on Foreign Relations, 1 June 2023

Week3

None

Week4

Shinae Lee, “Mind the Gap: Achievements and Limitations of Japan-ROK-U.S. cooperation within the Indo-Pacific Context,”International Information Network Analysis, 23 June 2023.

Week5

Shinae Lee, “Mind the Gap: Achievements and Limitations of Japan-ROK-U.S. cooperation within the Indo-Pacific Context,”International Information Network Analysis, 23 June 2023.

Week6

(1) Yasuhito Fukushima, “Japan’s Endeavors to Utilize Space for Defense Purposes,” Henry L. Stimson Center, 23 February, 2023.

(2) Ministry of Defense, “Defense of Japan including its Remote Islands” in Defense of Japan, September 5, 2022.

Week7/Week8

None

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

7. Note：

None

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2102J
講義名：中東の安全保障問題
担当者：小塚 郁也
学期：秋前

１．本講義の概要：
「アラブの春」以降激変する中東の安全保障問題について、基本文献を講読するとともに、討議を通じて理解を深める。

［関連するディプロマ・ポリシー］
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：
第１回　講師による最近の中東情勢の解説。分担の割り当て
　　テキストに関する質疑応答
第２回　テキスト（１）序章、第１章に関する発表及び討議
第３回　テキスト（１）第２章、第３章に関する発表及び討議
第４回　テキスト（２）第９章、第１０章に関する発表及び討議
第５回　テキスト（２）第１３章、第１４章に関する発表及び討議
第６回　自由研究
第７回　研修員自由研究に関する発表及び討議（１）
第８回　研修員自由研究に関する発表及び討議（２）
※ 課題：研修員は各自セミナー当日までに文献を詳読する。発表者はレジュメを作成の上、当日参加者全員に配布して発表する。発表者以外の研修員は、レジュメの内容について討議を行う。

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
研修員発表時の議論その他のパフォーマンス（５０％）、レジュメの内容（５０％）。

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している

C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
テキスト（１）：福富満久『G ゼロ時代のエネルギー地政学－シェール革命と米国の新秩序構想』（岩波書店、2015 年 1 月）。
テキスト（２）：ロバート・D・カプラン（櫻井祐子訳）『地政学の逆襲－「影の CIA」が予測する覇権の世界地図』（朝日新聞出版、2014 年 12 月）。

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
否

７．履修上の注意：
使用言語は日本語。講師による論文指導を希望する者は、必ず受講すること。

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2103J
講義名：東南アジアの安全保障
担当者： 庄司　智孝
学期：秋前

１．本講義の概要：
東南アジアの安全保障に関する諸問題につき理解を深め、それによって学術的な思考法を習得する。

[関連するディプロマ・ポリシー]
戦略研究プログラム　DP1, DP5

２．各授業のテーマ：
第１回　概要説明と導入講義（冷戦期の東南アジア）
第２回　ASEAN とは何か（設立と発展の経緯）
第３回　ASEAN の多国間安全保障協力
第４回　東南アジアの非伝統的安全保障課題
第５回　米中対立と東南アジア
第６回　南シナ海問題
第７回　研修生による発表（１）
第８回　研修生による発表（２）

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
議論への参加・貢献度（３０％）プレゼンテーション（７０％）

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
必読：なし

参考:庄司智孝『南シナ海問題の構図――中越紛争から多国間対立へ』(名古屋大学出版会、2022 年)

５．講義で使用するソフトウェア（特にない場合は空欄でも可）:

６．聴講の可否

否

７．履修上の注意：

特になし

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2104J
講義名：軍事史史料とこれからの文書・資料
担当者：菅野　直樹
学期：秋前

１．本講義の概要：
　防研所蔵史料等に接し、戦史に関して認識を深めることを目指す。加えて、文書の一部が時代を経て史料になっていくという見地から、史資料の存在と生成について知見を深める。

[関連するディプロマ・ポリシー]
戦略研究プログラム　DP1, DP4

２．各授業のテーマ：
　第１回　重要史料と近代日本軍事史
　第２回　戦史史料所蔵の沿革、公開の状況等
　第３回　筆跡判読の体験
　第４回～第８回　履修者報告
　（第８回には講評も実施）。

　【授業外学修】
　事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
　授業への貢献度（５０％）、報告（５０％）。なお筆跡判読の力量については評価対象としない。

　[成績評価基準]
　A 90-100 合格 到達目標を高い水準で達成している
　B 80-89 合格 到達目標を満足できる水準で達成している
　C 70-79 合格 到達目標を概ね達成している
　D 60-69 合格 到達目標を最低限の水準で達成している
　E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
　授業で通知する。
５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否

否

７．履修上の注意：

特になし

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2106J
講義名：朝鮮半島をめぐる安全保障
担当者：室岡　鉄夫
学期：秋前

１．本講義の概要：
朝鮮半島の安全保障問題に係るテキストの読解を通じて、①同問題に対する理解を深めるとともに②論文執筆に必要なノウハウ（テーマの見つけ方、論文の構成、資料の扱いなど）を身につけることを目指す（朝鮮半島以外のテーマで論文を書く学生にとっても有益になるよう努める）。

[関連するディプロマ・ポリシー]
戦略研究プログラム　DP1, DP5

２．各授業のテーマ：
第１回　導入（進め方、当番の割り振りなど）
第２回　発表と討論(1)
第３回　発表と討論(2)
第４回　発表と討論(3)
第５回　発表と討論(4)
第６回　発表と討論(5)
第７回　発表と討論(6)
第８回　まとめ（総合討議）
※（第 2 回以降）指定文献を読んでくる。各回の当番は論点などをプレゼンテーションし、それに基づき、全員で討論。

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
プレゼンテーション（2 回、含むプレゼン資料）（60%）、討論への寄与（40%）

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：

必読：

【第 2 回】: 小倉紀蔵『韓国の行動原理』（PHP 研究所、2021 年）第 1、2 章；兼原信克『安全保障戦略』（日経 BP、日本経済新聞出版本部、2021 年）第 12 講

【第 3 回】: 礒崎敦仁、澤田克己『北朝鮮入門』最新版（東洋経済新報社、2024 年）第 3 章； 平井久志『金正恩の革命思想』（筑摩書房、2024 年）終章

【第 4 回】: 崔正勲『なぜ朝鮮半島「核」危機は繰り返されてきたのか』（クレイン、2020 年）補論；倉田秀也「朝鮮労働党第 8 回大会「戦略的課題」と核使用原則」（日本国際問題研究所, 2023 年）

【第 5 回】: 浅羽祐樹「国際関係論と地域研究の狭間:日韓関係研究の研究戦略」『国際政治』151 号（2008 年）

【第 6 回】: 佐橋亮編『冷戦後の東アジア秩序秩序形成をめぐる各国の構想』（勁草書房、2020 年）第 5 章；木宮正史『日韓関係史』（岩波書店、2021 年）後半

【第 7 回】: 木宮編『朝鮮半島と東アジア』第 7 章；小倉『韓国の行動原理』第 5 章

参考：

ヴィクター・D・チャ 『米日韓　反目を超えた提携』（有斐閣、2003 年）

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否

否

７．履修上の注意：

使用言語は日本語。学生と相談の上、テキストを変更する場合がある。

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2114J
講義名：海洋安全保障
担当者：永福　誠也
学期：秋前

１．本講義の概要：
　海洋安全保障にかかわる基盤的原理の把握と事例研究により、海洋安全保障に関する政策立案・理解のための基礎的素養を涵養する。

[関連するディプロマ・ポリシー]
戦略研究プログラム　DP1, DP2

２．各授業のテーマ：
　第１回　導入講義　：海洋安全保障の意義等
　第２回　海洋法制①：国連海洋法条約
　第３回　海洋法制②：航行の自由
　第４回　海洋戦略　：特別講義
　第５回　事例研究①：南シナ海問題
　第６回　事例研究②：海上交通路の安全確保
　第７回　事例研究③：日本の取組
　第８回　まとめ　　：総括討議

　【授業外学修】
　事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
　授業への貢献度（５０％）、プレゼンテーション（５０％）

　[成績評価基準]
　A 90-100 合格 到達目標を高い水準で達成している
　B 80-89 合格 到達目標を満足できる水準で達成している
　C 70-79 合格 到達目標を概ね達成している
　D 60-69 合格 到達目標を最低限の水準で達成している
　E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等

詳細は別途提示。受講者の要望があれば、当該要望に適う文献を取り上げる。なお、基本的な参考文献は以下のとおり。

1　原田有、永福誠也「海洋の安全保障」『東アジア戦略概観 2018』(防衛研究所、2018 年) 8-39 頁。

2　永福誠也「海洋権益の保護」『アジア太平洋における海洋秩序の維持』(防衛研究所、2018 年) 145－167 頁。

3　永福誠也「排他的経済水域での軍事活動」『日本海洋政策学会誌』第 9 号（2019 年 11 月）14-33 頁。

4　柳井俊二編『海と国際法』(信山社、2024 年) 5　坂元茂樹、『日本の海洋政策と海洋法(第 3 版)』(信山社、2023 年)。

6　島田征夫他『国際海洋法(第 3 版)』(有信堂高文社、2023 年)。

7　後潟桂太郎「海洋戦略論」(勁草書房、2019 年)。

8　ビル・ヘイトン『南シナ海－アジアの覇権をめぐる闘争史』安原和見訳、(河出書房新社、2015 年)。

5．講義で使用するソフトウェア（特にない場合は空欄でも可）：

6．聴講の可否

否

7．履修上の注意：

受講者は各自 1 回報告を実施

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2119J
講義名：宇宙と安全保障
担当者：橋本　靖明
学期：秋前

１．本講義の概要：
　宇宙空間は安全保障上不可欠な領域となり、我が国も宇宙基本法を制定以降、開発利用体制を整えているところである。本セミナーでは、宇宙の利用実態を理解するとともに、我が国の安全保障に宇宙空間を如何に利用すべきか議論する。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
②学んだ知識を政策に結びつけられる能力
⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：
　第１回　導入講義：宇宙の軍事利用
　第２回　資料収集、発表準備
　第３回　発表及び討議（１）
　第４回　発表及び討議（２）
　第５回　発表及び討議（３）
　第６回　施設見学
　第７回　施設見学
　第８回　総合討議：日本の宇宙利用は如何にあるべきか
　※報告：各自の発表内容をまとめた配布資料（Ａ４数枚）をもとに、口頭報告（２０～３０分）を行ってもらう。
　※レポート：特に課す予定はない。

　【授業外学修】
　事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
　授業への貢献度（５０%）、プレゼンテーション（５０%）

　[成績評価基準]

A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
・小塚荘一郎、佐藤雅彦編『宇宙ビジネスのための宇宙法入門 第 2 版』（有斐閣、2018 年）
・福島康仁『宇宙と安全保障』（千倉書房、2020 年）
・橋本靖明「宇宙と安全保障の歴史」渡邉浩崇編著『宇宙の研究開発利用の歴史　日本はいかに取り組んできたか』（大阪大学出版会、2022 年）149-179 頁。

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
否

７．履修上の注意：
基本的に日本語で実施する。ただし、参加者の国籍は問わない。

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2127J
講義名：戦略策定法
担当者：有江　浩一
学期：秋、冬

１．本講義の概要：
　戦略の古典『孫子』を参考に、戦略の策定に必要とされる、目的と手段の相互関係、戦略環境分析、方策の案出法について理解を深める。

[関連するディプロマ・ポリシー]
戦略研究プログラム
②学んだ知識を政策に結びつけられる能力
③政府関係等の対応や関係諸国との調整、各種法制の適用などを踏まえつつ、政策を実現させる実践力
⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：
（１）前段
第１回 導入講義：『孫子』と現代の戦略的課題
第２回 テキスト論点討議：戦略の目的と手段
第３回 同上：戦略環境分析①
第４回 同上：戦略環境分析②
第５回 同上：方策の案出法①
第６回 同上：方策の案出法②
第７回 事例研究
第８回 論点整理、後段研究指示
※『孫子』の戦略の理解
テキスト論点討議：事前にテキストを読み込み、論点をメールにて講座担当者に提出
事例研究（第７回）：導入講義時に指示
（２）後段
第１回 研究テーマ指導
第２回 研究指導
第３回 同上
第４回 中間発表
第５回 研究指導
第６回 同上
第７回 発表

第８回 総括討議
※戦略レポートの作成
研究テーマは、戦略問題に係る研修員個人の興味関心に基づいて選定
『孫子』を手掛かりとしつつ、独創的な戦略を策定し、レポートに纏めて発表
レポートは、第８回目終了後速やかにメールにて提出

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
発表・討議（４０%）、レポート１回（６０%）

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
必読：浅野裕一『孫子』（講談社学術文庫、1997 年）
参考：
Sun Tzu, *The Art of War: A New Translation* (London: Amber Books, 2022)

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
否

７．履修上の注意：
特になし

開講年度（2024.10 月-2025.9 月）
科目番号：SSP2137J
講義名：ロシア軍事史
担当者：花田　智之
学期：秋前

１．本講義の概要：

ロシアに係わる軍事史への理解を深めることを目的とする。今期はロシアの対外戦略の歴史を考察するため、主に日露両国の軍事と外交に注目する。対象期間は、１９世紀後半から冷戦初期までとする。本セミナーを通じて、現代の日露関係への歴史的視座を提供するとともに、今般のウクライナ侵略に見られるロシアの大国主義の歴史的背景を探る。

[関連するディプロマ・ポリシー]
戦略研究プログラム
①安全保障・防衛問題を理解するための知識と分析能力
⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：

第１回　ロシア帝国の領土拡張と極東進出（導入講義）
第２回　日露戦争と日露協約（発表・討論）
第３回　ロシア内戦とシベリア出兵（発表・討論）
第４回　戦間期の日ソ関係（発表・討論）
第５回　ノモンハン事件と独ソ戦（発表・討論）
第６回　太平洋戦争の終結とソ連の対日参戦（発表・討論）
第７回　欧州冷戦とアジア冷戦（発表・討論）
第８回　歴史から見たウクライナ侵略（討論）

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：

成績は、①発表（６０％）、②討論への参加・貢献（４０％）によって決定する。

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している

C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：

【第１回】花田智之「ロシア帝国の領土拡張」下斗米伸夫編『ロシアの歴史を知るための 50 章』（明石書店、2016 年）。横手慎二『日露戦争史』（中公新書、2005 年）第 1 章。

【第２回】横手慎二『日露戦争史』第 4 章。黒沢文貴「ポーツマス講和条約後の日露関係」五百旗頭真ほか編『日ロ関係史』（東大出版会、2015 年）。

【第３回】麻田雅文『シベリア出兵』（中公新書、2016 年）第 1 章。ウラジーミル・ダツィシェンほか「ロシア東部における干渉への日本の参加」『日ロ関係史』。

【第４回】アナスタシア・ローシキナほか「スターリンの日本像と対日政策」『日ロ関係史』。田嶋信雄『日本陸軍の対ソ謀略』（吉川弘文館、2017 年）第 4 章。

【第５回】花田智之「ソ連から見たノモンハン事件」麻田雅文編『ソ連と東アジアの国際政治 1919-1941』（みすず書房、2017 年）。大木毅『独ソ戦』（岩波新書、2019 年）第 3 章。

【第６回】麻田貞雄「原爆投下の衝撃と降服の決定」細谷千博編『太平洋戦争の終結』（柏書房、1997 年）。長谷川毅『暗闘』（中央公論新社、2006 年）第 5 章前半。

【第７回】山本健『ヨーロッパ冷戦史』（ちくま新書、2021 年）第 1 章。下斗米伸夫『アジア冷戦史』（中公新書、2004 年）第 1 章。

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否

否

７．履修上の注意：

使用言語は日本語

Class Name: The Post-War History of Japanese Security
Course Number: SSP2144E
Course instructor(Full Name): Yusuke ISHIHARA
Academic Year: (October 2024 - September 2025)
Term: Autumn early

1. Course Description and the Learning Objectives：

Each week, the seminar convener delivers an an-hour introductory lecture on topics as outlined below. Students are expected to participate actively in an-hour discussions following the lecture. The seminar purpose is to learn about the basics of the post-war history of Japanese security affairs, become able to investigate contemporary security issues in long-term historical perspectives and build skills to participate in academic discussions in English.

[Related Diploma Policy (DP)]
Strategic Studies Program　DP1, DP2, DP3

2. Course Outline：

Week1　-Introduction
　　-The Reverse Course, the Yalta System, and the Cold War (1940s-50s)
Week2　-The Yoshida Doctrine and Japan's Return to International Society (1940s-50s)
Week3　-Japanese Politics after the Security Treaty Revision (1950s-60s)
Week4　-The Sino-U.S. Rapprochement and the Sino-Japanese Normalisation (1960s-70s)
Week5　-The Comprehensive Security Concept (1980s)
Week6　-Lecture
Week7　-Japan under the U.S. hegemonic order (2000s)
Week8　-Wrap up: Japanese Security Affairs of Today

【Out-of-course Learning】
Read the textbook/handouts/related materials in advance. After the lectures, students should summarize what he/she has learned and apply it to the next lecture.

3. Grading：

Participation and performance（100%）

[Evaluation Criteria]
Student's achievement of the Course Goals is:
Outstanding: A
Superior: B
Satisfactory: C

Minimum acceptable: D

Below the acceptable level: E

4. Textbooks：

Makoto Iokibe eds., The Diplomatic History of Postwar Japan, (London: Routledge, 2011). *The convener will announce which chapter/section students are expected to read each week.

5. Software Used in Lectures（If not applicable, it can be left blank.）：

6. Auditing ; Allow or Not Allow

7. Note：

At the outset of in-class discussions, a designated student is required to offer kick-off questions for in-class discussions.

開講年度（2024 年 10 月-2025 年 9 月）

科目番号：SSP3301J
講義名：政策シミュレーション
担当者：松浦　吉秀
学期：秋、冬、春

１．本講義の概要：
国家安全保障政策決定過程についての講義を受講するとともに、班討議、政策シミュレーション演習及び全体討議を通じて、将来の安全保障・防衛政策の在り方を検討する。

[関連するディプロマ・ポリシー]
戦略研究プログラム　DP2, DP3, DP4, DP5

２．各授業のテーマ：
本講義では、政策シミュレーションの方法論について学ぶとともに、マトリクスゲームやセミナーゲーム等の形式による政策シミュレーション演習に参加し、他の各講義・セミナーで得た知識を総合的・一体的に活用して国家安全保障に係る戦略レベルの課題解決に取り組むことにより、安全保障・防衛政策を検討する上で必要な思考力を涵養することを主眼とする。
各学期において、部内講師が方法論についての講義を行うとともに、演習の枠組みについて説明する。部内または部外講師が演習に資する政策講義を行うとともに、必要に応じ資料読解を指示する。演習の内容に応じて班を編成して準備を行い、ファシリテーターの進行により演習を実施し、終了後の AAR（アフターアクションレビュー）にて全体で知見・教訓を共有する。
演習内容は、多様な政策シミュレーションの体験を旨としつつ、全体としては学期の進展に合わせ基礎的なものから複雑なものへと発展させる。進め方については都度別示する。

【授業外学修】
事前に教科書/配布資料/関連する資料等を読んでおくこと。授業後は授業で理解したことを次の授業につなげられるよう、各個人でまとめておくこと。

３．成績の評価方法：
討議や演習での議論・発表（100%）

[成績評価基準]
A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：
都度別示

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否
否

７．履修上の注意：
特になし

開講年度（2024.4 月-2025.3 月）/ Academic Year: (April 2024 - March 2025)
科目番号 / Course Number： SSP5301J
講義名[日本語(英語)] / Class Name： 政策論文演習
担当者（フルネーム）/ Course instructor (Full Name)： Various／関係教員
学期・曜日・時限 / Term・Day・Period：Fall through Summer 秋－夏
単位数/ Credits：2

１．本授業の概要及び到達目標：

【概要】

政策論文演習は、戦略研究プログラムの学生がリサーチペーパーの執筆に取り組むにあたり助言、指導を行う目的で開設されたものである。秋から冬学期に関しては、定期的に合同セッションを持ち、テーマ選定とリサーチ方法に関する指導を行う。また、国内政治分析、国際政治分析の基本的な知識の確認を行う。春・夏学期には、アドバイザーと個別に指導を行い、リサーチペーパーの完成を目指す。GRIPS と防衛研究所より、テーマに応じて合計２名のアドバイザーが決められる。この講義は、SDGs の目標 17（平和と公正）に関連する。

【到達目標】

・論文を書くにあたり、リサーチ・クエスチョンの設定、仮設の設定、研究手法、論文の執筆方法などの一連の流れを理解する。

・安全保障・防衛問題につき、有意なリサーチ・クエスチョンを設定し、それに対するリサーチ方法を身につけ、組織のリーダーとして必要な情報を収集し、問題解決方法を提示する能力を身につける。

・調査の過程で各種政府機関や外国政府関係者との接触をすることにより、実際の政策履行時における調整・実現能力をつける。

・課題を設定し、それに対する解答を見つけるためのプロセスを習得し、解答を他人にうまくコミュニケートするための口頭発表と文章作成の双方の能力を身につける。

*関連するディプロマポリシー：SSP①②④⑤

①安全保障・防衛問題を理解するための知識と分析能力

②学んだ知識を政策に結びつけられる能力

④組織のリーダーとして、必要な情報を提供し、また問題解決方法を提示する能力

⑤国際社会の動きを理解し、異なる価値観や制度に柔軟に対応しつつ、バランスをもったリーダーとして活躍できる能力

２．各授業のテーマ：

Session 1～3 (10 月):

オリエンテーション。リサーチペーパー作成の基本。

・セッション内においては、設問、仮設、研究手法などが適切か、全員でディスカッションをする。講師からは各ステップで重視すべきことを指導する。

【事前準備】
・学生は、毎回定められた期限までに、所定のフォーマットを使い、プロポーザルを提出する。
【講義後の作業】
・授業内での指導に従い、プロポーザルを必要に応じて修正する。先行研究などを調べ、防衛研究所の教官とも協議する。
・テーマが決まった段階で、GRIPS・防衛研究所双方に相談の上、指導教官を決定する。

Session 4~10: 基本的に隔週で、国内政治・国際政治に対するアプローチ、リサーチの方法について、岩間と竹中より問題提起があり、ディスカッションを行う。実際の論文作成の技術的な問題を、必要に応じてCPCの教員などを招きながら指導し、各人の研究の進展具合を確認しつつ、指導を行う。中間発表後には、その結果を踏まえて内容の修正方向を確認する。
春～夏学期は、指導教官の指導の下にリサーチペーパーを完成させる。

Session 4　（竹中）日本政治分析の基礎 I
【事前準備】テキスト『日本政治の第一歩』の４章、５章を（pp.73~116)を読む。
【講義内容】議院内閣制、三権分立という日本の統治構造を理解するために必要な基礎概念について説明するとともに選挙制度が統治構造に及ぼす影響について議論する。
【講義後】授業内容を振り返り、さらに疑問が生じた際は質問を送る。

Session 5　　（岩間）国際政治分析の基礎 I
【事前準備】テキスト『国際政治学をつかむ』の unit0、unit1~10（pp.1~123)を読み、質問を二問考え、事前に講師まで送る。
【講義内容】主権国家の誕生からポスト冷戦期までの国際政治の大きな歩みを理解する。史実を覚えるのではなく、国際政治システムの変遷という観点から歴史を考える能力を獲得する。国際関係の基本的概念、および理論についての理解を獲得し、それを用いて現実の分析が行えるようになる。
【講義後】授業内容を振り返り、さらに疑問が生じた際は質問を送る。

Session 6・７・８　第１回中間発表会（12 月）
【事前準備】学生は、所定の期日までに最初のドラフトを提出する。また、ペーパーの内容を、10 枚以内のパワーポイントスライドにまとめて、所定に日時までに提出する。
【発表会】学生は 15 分以内にプレゼンテーションを行う。その後、学生・指導教官を交えてディスカッションを行う。
【講義後の作業】学生は、防衛研究所、GRIPS の指導教官と協議し、プレゼンテーションで指摘された問題点に関する対応策を考え、ペーパーに適宜修正を加える。

Session ９（竹中）日本政治分析の基礎 II
【事前準備】テキスト『日本政治の第一歩』の 6 章、7 章を（pp.117~160)を読む。
【講義内容】首相をはじめとする重要な政治アクターについて紹介する。また、国会が政策決定過

程において果たす役割、与党議員に及ぼす影響について説明する。
【講義後】授業内容を振り返り、さらに疑問が生じた際は質問を送る。

Session 10　（岩間）国際政治分析の基礎 II
【事前準備】テキスト『国際政治学をつかむ』の unit11~19（pp.124~220）、を読み、質問を二問考え、事前に講師まで送る。
【講義内容】国際政治における安全保障、経済、文化、国際機関、地域機関、脱国家的主体などの役割を理解する。また、政治体制が国際関係に及ぼす影響、対外政策や外交交渉の決定過程を理解するための基礎的知識を獲得する。
【講義後】授業内容を振り返り、さらに疑問が生じた際は質問を送る。

Session 11　（竹中）日本政治分析の基礎 III
【事前準備】テキスト『日本政治の第一歩』の 1 章、9 章を（pp.1~160)を読む。
【講義内容】首相をはじめとする重要な政治アクターについて紹介する。また、国会が政策決定過程において果たす役割、与党議員に及ぼす影響について説明する。
【講義後】授業内容を振り返り、さらに疑問が生じた際は質問を送る。

Session 12　（岩間）国際政治分析の基礎 III
【事前準備】テキスト『国際政治学をつかむ』の unit 20~29(pp.221~335)を読み、質問を二問考え、事前に講師まで送る。
【講義内容】特に最近の国際関係に起きている新しい現象を考え、それが国際政治をどのように変化させているのかを分析する。核兵器、新しい戦争、国連の軍事活動、人権、グローバリゼーション、ODA,環境問題、科学技術とエネルギー、米中関係など、どれも現実に学生が直面する課題を扱い、実際の政策作成のための分析視角を獲得する。
【講義後】授業内容を振り返り、さらに疑問が生じた際は質問を送る。

Session 13~15 (3 月)　第 2 回中間発表会
【事前準備】学生は、所定の期日までに最初のドラフトを提出する。また、ペーパーの内容を、8 枚以内のパワーポイントスライドにまとめて、所定に日時までに提出する。
【発表会】学生は 10 分以内にプレゼンテーションを行う。その後 15~20 分、学生・指導教官を交えてディスカッションを行う。
【講義後の作業】学生は、防衛研究所、GRIPS の指導教官と協議し、プレゼンテーションで指摘された問題点に関する対応策を考え、ペーパーに適宜修正を加える。

春～夏学期は、指導教官の指導の下、論文作成を進める。最終発表会を経て、期日までに論文を提出する

３．成績の評価方法：

授業におけるプロポーザル作成、ディスカッションへの参加、中間発表会でのプレゼン：40%
リサーチペーパー: 60%

[成績評価基準]

A 90-100 合格 到達目標を高い水準で達成している
B 80-89 合格 到達目標を満足できる水準で達成している
C 70-79 合格 到達目標を概ね達成している
D 60-69 合格 到達目標を最低限の水準で達成している
E 0-59 不合格 到達目標を達成していない

４．テキスト、参考文献等：(4-1:必携のテキスト　4-2:その他)

4－1
上神 貴佳　／三浦まり『日本政治の第一歩』〔新版〕 (有斐閣ストゥディア)、2023 年
村田 晃嗣 , 君塚 直隆 , 石川 卓 , 栗栖 薫子 、秋山信将　『国際政治学をつかむ』〔第 3 版〕 (Textbooks tsukamu) 単行本 - 2023 年

4－2
スティーヴン・ヴァン＝エヴェラ『政治学のリサーチ・メソッド』野口和彦、渡辺紫乃訳、勁草書房、2009 年
マーク・トラクテンバーグ『国際関係史の技法』村田晃嗣・中谷直司・山口航訳、ミネルヴァ書房、2022 年。

５．講義で使用するソフトウェア（特にない場合は空欄でも可）：

６．聴講の可否

不可

７．履修上の注意：

講義は日本語で行うが、英語でリサーチペーパー作成することを奨励される。英語での論文作成は、CPC（Center for Professional Communication）の支援を受けることができる。