科目名 Course Title	Inter-Graduate School Classes (Educational Program): Nitobe College Honors Program: Graduate Curriculum		
講義題目 Subtitle	Global Advanced Course I		
責任教員 Instructor	WHITFIELD Dale Lee (Institute for Academic Innovation)		
担当教員 Other Instructors	YANG Zitong (Institute for Academic Innovation)		
	IWASAKI Shinya (Faculty of Environmental Earth Science)		
科目種別 Course Type	Inter-Graduate School Classes	**他学部履修等の可否 Open To Other Faculties / Schools**	OK
開講年度 Year	2026	**期間 Semester**	1st (Spring Term)
授業形態 Type of Class	Seminar	**単位数 Number of Credits**	2
対象学科・クラス Eligible Department / Class	-	**対象年次 Year of Eligible Students**	-
時間割番号 Course Number	101233	**補足事項 Other Information**	-
ナンバリングコード Numbering Code		IGS_IDS 9211	
大分類コード・名称 Major Category Code / Title		IGS_IDS / Inter-Graduate School Classes_Inter-Disciplinary Sciences	
レベルコード・レベル Level Code / Level		9 / Others (e.g. study abroad)	
中分類コード・名称 Middle Category Code / Title		2	
小分類コード・名称 Small Category Code / Title		1	
言語 Language Type		Classes are in English.	
実務経験のある教員等による授業科目 Course list by the instructor with practical experiences		-	

キーワード Key Words

"3+1 Competencies" (Ability for Sustainable Personal Development; Team Organization & Management Skills; Capacity for Knowledge Sharing & Application for Social Benefit; and Professional Ethics), Systemic Problem Solving, Systemic Design, Systems Thinking, Giga-Mapping, Leverage Analysis, Intervention Architecture, Service Design, Impact Modeling, Social Innovation

授業の目標 Course Objectives

In a world facing interconnected crises, traditional problem-solving often addresses symptoms rather than root causes. This course immerses graduate students in Systemic Design, using Systems Thinking to map complexity and design interventions that shift entire system behaviors. Through a rigorous, active learning curriculum, students develop Sustainable Personal Development skills by mastering critical thinking to analyze feedback loops and anticipate future consequences. They strengthen their Team Organization & Management skills by aligning diverse teams around leverage points and navigating the challenges of interdisciplinary design. Ultimately, by crafting multi-layered intervention portfolios, students demonstrate Knowledge Sharing & its Application for Social Benefit, grounded in Professional Ethics that emphasize long-term resilience and the prevention of unintended harm.

到達目標 Course Goals

By completing this course, students will actively advance their professional development by producing concrete evidence of their growth within the Nitobe College "3+1 Competencies" framework, specifically by learning to:

1) Apply systems thinking to address complex problems systemically by using giga-mapping to visualize intricate stakeholder networks and feedback loops that drive wicked problems.
2) Conduct a strategic leverage analysis to identify high-impact intervention points and design a multi-layered intervention architecture that fosters sustainable social innovation.
3) Put systemic design into practice by developing service design blueprints to structure concrete user experiences, and use Impact Modeling to anticipate risks and support long-term resilience.

授業計画 Course Schedule

This course is organized into eight weekly modules that integrate Systems Thinking into a cohesive framework for Systemic Design. It guides students from mapping complex root causes to developing and defending comprehensive portfolios of multi-layered interventions. With the exception of Week 1 (Saturday), classes are held every Wednesday from April 22 to June 17 during periods 5 and 6 (16:30 – 19:45).

Week 1: Why Good Solutions Fail (April 18)
Many well-intentioned solutions fail because they treat complex "Wicked Problems" as simple technical fixes, overlooking the deeper systemic structures involved. By applying Systems Thinking and the Iceberg Model, students will learn to look beneath the surface of events to identify root causes, enabling more effective interventions.

Week 2: Drawing the Big Picture (April 22)
Understanding complex systems requires visualizing the intricate web of stakeholders, timelines, and resources that define a problem. By using Giga-Mapping, students will learn to synthesize this information into a single, comprehensive map, revealing hidden connections often invisible in standard reports.

Week 3: System Dynamics & Feedback Loops (May 13)
Many complex problems persist due to hidden cycles that reinforce the issue over time, making standard solutions ineffective. By applying System Dynamics to map these Causal Loops, students will learn to uncover the invisible forces behind the problem and pinpoint exactly where to intervene to change the system's behavior.

Week 4: Choosing Your Battle (May 20)
Maximizing impact in complex systems involves identifying the areas where intervention will be most effective. By learning to recognize Leverage Points, students discover how a small change can create significant systemic effects.

Week 5: Designing More Than a Product (May 27)
Solving wicked problems requires more than a single product; it demands a coordinated ecosystem of solutions that simultaneously address multiple leverage points. By designing an Intervention Portfolio, students will learn how to create a cohesive strategy that integrates policy, service, and narrative interventions to drive systemic change.

Week 6: Designing the Experience (June 3)
Even the most strategic interventions will fail if they cannot be translated into a seamless and viable user experience. By developing Service Blueprints, students will learn to align the visible "frontstage" interactions with the invisible "backstage" processes required to make their solution operationally sustainable.

Week 7: Stress-Testing Your Solution (June 10)
Responsible innovation requires anticipating not only the immediate benefits of a solution but also its potential long-term and unintended consequences. By applying Second-Order Thinking, students can learn to identify negative ripple effects and adjust their interventions to promote systemic resilience.

Week 8: Project Showcase – Gallery of Solutions (June 17)
Validating complex systemic interventions requires subjecting them to rigorous critique to ensure they address root causes effectively and avoid unintended consequences. By presenting their Giga-Maps and Intervention Portfolios in a Systemic Gallery Walk, students defend their strategic logic and demonstrate to stakeholders how their coordinated solutions influence overall system behavior.

準備学習（予習・復習）等の内容と分量 Homework

To ensure the quality of learning, students are expected to prepare and review before and after each class, including going over course materials to enable active participation and refining their weekly 'Reflective Evidence Logs' (see Grading System) to accurately record their competency development. While the main coursework is intended to be completed during scheduled class hours, students should also dedicate time outside of class for these review activities. Those who are absent or want to revise and resubmit assessments to enhance their competency levels must complete these tasks independently.

成績評価の基準と方法 Grading System

This course utilizes a Competency-Based Assessment model in which students are graded on their ability to demonstrate specific professional skills through the submission of weekly 'Reflective Evidence Logs.' To ensure this process is manageable, these assessments are designed to be conducted within class hours, with dedicated time set aside at the end of sessions for students to draft and submit their work.

These evidence logs contribute to the development of a professional portfolio based on the 27 elements of the Nitobe College "3+1 Competencies" and form part of the holistic journey toward becoming a Global Leader. Each element is evaluated based on a 5-point competency scale ranging from 0 to 4. As this is a formative process, students are encouraged to revise and resubmit their logs based on feedback to improve their competency level throughout the course.

テキスト・教科書 Textbooks

必要に応じて指示する。
Supplementary materials are instructed or provided, where appropriate.

講義指定図書 Reading List

必要に応じて指示する。
Supplementary materials are instructed or provided, where appropriate.

参照ホームページ Websites

https://nitobe-college.academic.hokudai.ac.jp/, https://nitobe-college.academic.hokudai.ac.jp/en/

研究室のホームページ Websites of Laboratory

N/A

備考 Additional Information

This course is one of two core subjects offered by the Nitobe College Honors Program: Graduate Curriculum, alongside “Global Advanced Course II”.

To register for the Nitobe College Honors Program: Graduate Curriculum, students must meet the eligibility and enrollment requirements, details of which can be found on the Nitobe College website: https://nitobe-college.academic.hokudai.ac.jp/en/gs-curriculum/g-guidelines-for-applicants

For any inquiries regarding this course please email: nitobecollegegraduates@high.hokudai.ac.jp