

POLITICAL WARGAME DESIGN

Course code	<i>POL150</i>
Compulsory in the programmes	<i>Compulsory</i>
Level of studies	<i>Undergraduate</i>
Number of credits and hours	<i>6 ECTS (48 contact hours + 6 consultation hours, 106 individual work hours)</i>
Course coordinator (title and name)	<i>Assoc. Prof. Dr. Pijus Krūminas</i>
Prerequisites	
Language of instruction	<i>English</i>

THE AIM OF THE COURSE:

The course is based on wargaming methodology and focuses on applying simulation game-based learning to analysing politics, economics, and public policy, often through the lens of conflict. While scientific theories offer an understanding of political and economic processes and standard modelling tools such as game theory help explain these processes, wargames build upon this knowledge by applying it to real (or probable) events, while also employing an alternative approach to modelling reality, where participants make choices within a model. During the course, student groups develop analogue wargames in close cooperation with a dedicated external institution / organization that will also provide a topic for the game and thematic support during the semester. By combining theory, literature analysis and other tools, the course helps to build an understanding how simulation games can serve as a means for research, education, and analysis through the lenses of modelling and agency.

In addition to lectures, the course puts a strong focus on trying out various wargames and simulation games to help develop students their own games. Therefore, there are weeks, where the main focus is on hands-on engagement with games rather than on theory. In this case, students are required to pre-read texts dealing with the topics of games used in class to better understand how modelling works in these cases. The selection of games to be run in the classroom remains at the discretion of the lecturer but it is done in consultation with students and depends on the topics for their projects. Opportunities for trying simulation games outside of the classroom are also arranged throughout the whole academic year.

MAPPING OF COURSE LEVEL LEARNING OUTCOMES (OBJECTIVES) WITH DEGREE LEVEL LEARNING OBJECTIVES, ASSESMENT AND TEACHING METHODS

Course level learning outcomes (objectives)	Degree level learning objectives (Number of LO)	Assessment methods	Teaching methods
CLO1. Understand the use of wargaming and simulation games in the study and research in politics and economics.	ELO1.1. ELO1.2.	Seminar participation, simulation project (written output), simulation project (demonstration), final exam	Lectures, seminars, workshops, self-study, group-work, consultations
CLO2. Understand the types of wargames and their practical application to inform policy and business decisions, including in the context of ethics.	ELO1.1. ELO1.2. ELO2.1.	Seminar participation, simulation project (written output), simulation project (demonstration), final exam	Lectures, seminars, workshops, self-study, group-work, consultations
CLO3. Define the elements of wargames and serious game design.	ELO1.2.	Seminar participation, simulation project (written	Lectures, seminars,

		output), simulation project (demonstration), final exam	workshops, self-study, group-work, consultations
CLO4. Structure and develop interactive simulations in the areas of politics and economics.	ELO1.1. ELO1.2.	Seminar participation, simulation project (written output), simulation project (demonstration), final exam	Lectures, seminars, workshops, self-study, group-work, consultations
CLO5. Carry out research needed to make theories applicable to a wargame-based model.	ELO1.1.	Seminar participation, simulation project (written output), simulation project (demonstration), final exam	Lectures, seminars, workshops, self-study, group-work, consultations
CLO6. Implement group projects of high complexity, needing a broad set of skills from research to time management and engagement with a sponsor.	ELO4.1. ELO4.3.	Seminar participation, simulation project (written output), simulation project (demonstration), final exam	Lectures, seminars, workshops, self-study, group-work, consultations
CLO7. Analyse the results of games and interpret their results in terms of political and economic processes.	ELO1.2.	Seminar participation, simulation project (written output), simulation project (demonstration), final exam	Lectures, seminars, workshops, self-study, group-work, consultations
CLO 8. Use simulation games to teach others about a specific topic.	ELO4.1. ELO4.2. ELO4.3.	Seminar participation, simulation project (written output), simulation project (demonstration), final exam	Lectures, seminars, workshops, self-study, group-work, consultations

ACADEMIC HONESTY AND INTEGRITY

The ISM University of Management and Economics Code of Ethics, including cheating and plagiarism are fully applicable and will be strictly enforced in the course. Academic dishonesty, and cheating can and will lead to a report to the ISM Committee of Ethics. With regard to remote learning, ISM reminds students that they are expected to adhere and maintain the same academic honesty and integrity that they would in a classroom setting.

COURSE OUTLINE

Topic	In-class hours	Readings
Introduction. Introductory comments about the course content and its structure. What are wargames, simulations and serious games? What are their benefits for learning and research? Analogue vs. digital. Seminar activity: an example of a wargame	4	Readings: Suckling (2025), ch. 3, 24. Group arrangements and topic presentations.
History and use of political/economic games. The origins and types of serious games. Seminar activity: an example of a wargame	4	Readings: Perla & McGrady (2011); Suckling (2025), ch 4-6.

Designing political economy simulations. Elements of a serious game. Types of games. Use of simulation games in social science education and research. Process of serious gaming. Roles in designing simulation games. Mechanics. Adjudication. Seminar activity: workshop on project topics and design elements	4	Readings: Weuve et al. (2004); Dunnigan (2011); UK Ministry of Defence (2017), ch. 2-3; U.S. Naval War College (n.d.), Annex B. For a wide overview of mechanics see: Engelstein & Shalev (2022). Assignments: none.
Interactive activities: modelling social and urban policy	4	Reading: brief pre-reads for the topic – to be provided based on the selected game. Assignments: project literature list and brief theory description.
Research for simulation game development: Why is research needed? Planning research. Connecting theory and wargames. Seminar activity: example of a wargame	4	Reading: selected background descriptions and designer notes – to be provided. Assignments: none.
Storytelling in simulations. Why should simulation games tell a story? What is a story? How do simulation games tell stories? Scenarios. Seminar activity: workshop on project prototypes	4	Reading: Holland (2025), ch. 4-6; Suckling (2025), ch. 22. Assignments: draft prototype presentations.
Analysis and business. How can simulation games inform research? Benefits for theory research and applied research. The application of wargaming approach to business. Games for management. Games for business regulation compliance. Seminar activity: example of a wargame focused on business topics.	4	Reading: Davies et al. (2020); Wong (2016); Schwarz (2011, 2013); Schwarz et al. (2019). Assignments: none.
Interactive activities: modelling disinformation and influence campaigns.	4	Reading: UK MoD (2023). Assignments: none.
Matrix games. Definition and structure of matrix games. The applicability of matrix games. Advantages and disadvantages. Seminar activity: an example matrix game	4	Reading: Curry, Engle & Perla (2018); Price (2019). Assignments: none.
Simulations, commercial games, application. Commercial games and their relevance. Paths to commercialisation. The practical use of wargame design skills. Educational use of wargames. Seminar activity: workshop on project prototypes.	4	Reading: selected rules for commercial political economy-focused games. Assignments: none.
Future directions and summary. Hot topics: hybrid warfare, pandemics, peacebuilding, etc. Summarising the course contents. Discussing the advantages and disadvantages of simulation games Seminar activity: discussing prototype preparations.	4	Reading: Haggman (2019), Dorn et al. (2020); Davies (2020) Assignments: be ready to ask questions on improving your prototypes
Prototype testing Final testing of student game prototypes.	4	Reading: none. Assignments: have pre-final prototype demonstration ready.
	Total: 48 hours	

CONSULTATIONS	6	
FINAL EXAM	2	
FINAL DEMONSTRATION	4	

FINAL GRADE COMPOSITION

Type of assignment	%
<i>Group Components 60%</i>	
Simulation project (written output)	50%
Simulation project (demonstration)	20%
<i>Individual Components 40%</i>	
Seminar activity	20%
Final exam	20%
Total:	100

DESCRIPTION AND GRADING CRITERIA OF EACH ASSIGNMENT

(Provide short descriptions and grading criteria of each assignment)

Assessment consists of four different elements:

- **Seminar participation (20%)** – participating in seminar prototype presentations, wargames, and workshops.
- **Simulation project (written output) (40%)** – preparing the project report involving the background and theoretical analysis of the simulated topic, instructions of the simulation, components of the simulation.
- **Simulation project (demonstration) (20%)** – demonstration of the prototype of the simulation game (to be done before providing the final version of the written output). ***The separate date for the demonstration will be agreed upon together at the start of the course, and both faculty and external guests will be invited to test the games and provide feedback.***
- **Final exam (20%)** – answering questions based on the course material.

Seminar participation will include:

- workshops to analyse the applications of the discussed content to the projects developed by students (e.g. design, research implementation, etc.)
- prototype presentations that will allow to assess the state of the projects, further steps and possible modifications
- example wargames to test various types of wargames in practice, learning how they work, and how they can illustrate political economic processes and decision making

Simulation project – simulation game prototype (written output) will consist of the following elements:

- topic summary
- literature review on the topic (empirical and theoretical studies)
- the approach to transforming the topic into a wargame (its theoretical basis)
- game rules and components

Simulation project (demonstration) will cover:

- presenting the instructions to the coursemates and guests
- running the most up-to-date version of the simulation

The final exam will consist of an open question, where you will have to describe how you would approach simulation development for a given topic.

Retake policy: If the final grade is negative, the student may be allowed to retake the final examination during the re-sit exam session. The retake will cover all course material and comprise 20% of the final grade. Therefore, it is important to take note that seminar activity and simulation project development are necessary to have a sufficient cumulative grade. In the case of retake, only the final exam evaluation is annulled.

Readings (changes are possible during the semester based on mutual agreement and the focus of your projects, you will be notified in advance):

- Caffrey, M. Jr. (2019). *On Wargaming*. The Newport Papers. 43. Available at: <https://digital-commons.usnwc.edu/newport-papers/43>.
- Curry, J., & Price, T. (2014). *Matrix games for modern wargaming: developments in professional and educational wargames innovations in wargaming-volume 2*. History of Wargaming Project.
- Davies, B., Rainwater Lovett, K., Card, B. & Polatty, D. (2020). Urban Outbreak 2019 Pandemic Response: Select Research & Game Findings. U.S. Naval War College Digital Commons.
- Dorn, A.W., Webb, S. & Pâquet, S. (2020). From Wargaming to Peacegaming: Digital Simulations with Peacekeeper Roles Needed. *International Peacekeeping*, 27(2), pp. 289-310.
- Dunnigan, J.F. (2011). Simulation Game Design. In: Costikyan, G. & Davidson, D. *Tabletop: Analog Game Design*, pp. 27-31.
- Engelstein, G., & Shalev, I. (2022). *Building Blocks of tabletop game design: An encyclopedia of mechanisms*. CRC Press.
- Haggman, A. (2019). *Cyber Wargaming: Finding, Designing, and Playing Wargames for Cyber Security Education*. Doctoral dissertation.
- Harrigan, P. & Kirschenbau, M.G. (2016). *Zones of Control: Perspectives on Wargaming*. MIT Press.
- Holland, A. (2025). *Cardboard Ghosts: Using Physical Games to Model and Critique Systems*. CRC Press.
- Perla, P. & McGrady, E.D. (2011). Why Wargaming Works. *Naval War College Review*, 64(3), pp. 1-20.
- Price, T. (2019). Basic Law: A Matrix Game of anti-government riots.
- Schwarz, J.O. (2011). Ex ante strategy evaluation: the case for business wargaming. *Business Strategy Series*, 3(12), pp. 122-135.
- Schwarz, J.O. (2013). Business wargaming for teaching strategy making. *Futures*, 51, pp. 59-66.
- Schwarz, J.O., Ram, C. & Rohrbeck, R. (2019). In: Combining scenario planning and business wargaming to better anticipate future competitive dynamics. *Futures*, 105, pp. 133-142.
- Suckling, M. W. (2024). *Paper time machines: Critical game design and historical board games*. Routledge.UK
- Ministry of Defence (2017). *Wargaming Handbook*. Development, Concepts and Doctrine Centre, United Kingdom Ministry of Defence.
- UK Ministry of Defence (2023). *Influence Wargaming Handbook*, United Kingdom Ministry of Defence.
- U.S. Naval War College (n.d.). *War Gamers' Handbook. A Guide for Professional War Gamers*. War Gaming Department, U.S. Naval War College, Newport, RI, USA.
- Weuve, C.A., Perla, P.P., Markowitz, M.C., Rubel, R., Downes-Martin, S., Martin, M. & Vebber, P.V. (2004). *Wargame Pathologies*.
- Wong, Y.H. (2016). How Can Gaming Test Your Theory? Accessible: <https://www.rand.org/pubs/commentary/2016/05/how-can-gaming-help-test-your-theory.html>

ANNEX

DEGREE LEVEL LEARNING OBJECTIVES

Learning objectives for the Bachelor of Social Science

Programmes:

Economics and Data Analytics,

Economics and Politics

Learning Goals	Learning Objectives
Students will be critical thinkers	ELO1.1. Students will be able to understand core concepts and methods in the key economics disciplines
	ELO1.2. Students will be able to identify underlying assumptions and logical consistency of causal statements
Students will have skills to employ economic thought for the common good	ELO2.1. Students will have a keen sense of ethical criteria for practical problem-solving
Students will be technology agile	ELO3.1. Students will demonstrate proficiency in common business software packages
	ELO3.2. Students will be able to make decisions using appropriate IT tools
Students will be effective communicators	ELO4.1. Students will be able to communicate reasonably in different settings according to target audience tasks and situations
	ELO4.2. Students will be able to convey their ideas effectively through an oral presentation
	ELO4.3. Students will be able to convey their ideas effectively in a written paper