

GREEN GAME STUDIES COURSE PACKAGE 7

CGL
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Course: "Greening Games - Games, gaming and sustainability"

Module: Elective course for BA and MA students

Institution: University of Turku, Finland

Timeframe: Autumn Term 2023 (Sep-Oct 2023)

This course package is based on a syllabus of an elective course delivered for the BA and MA students at the University of Turku in autumn term 2023. The package includes the following:

- Course description
- Learning outcomes
- Mandatory sources
- Additional sources
- Assessment & grading criteria
- Course structure

This educational material has been created within the framework of the project "Greening Games. Building Higher Education Resources for Sustainable Video Game Production, Design & Critical Game Studies" (2021-2024) funded by the Federal Ministry of Education and Research in Germany *within the framework of the* Erasmus+ Programme of the European Union (KA220-HED – Cooperation Partnerships in Higher Education).

More information may be found at: <https://greeningames.eu>.



Course description

The course investigates the relationship between sustainability issues and games, gaming cultures, and game production. Throughout the course, students will participate in a reading circle, discuss the texts they have read, and, as a final project, propose a game, game platform, game development environment, or a similar activity that addresses an existing issue relating to sustainability or the environment. Completing the final project does not require coding or other advanced technical skills, as the purpose is to create and present an outline of a more sustainable or greener solution related to the theme of the course rather than implement it in practice.



Learning outcomes

The participants of this course will:

- understand the concept of sustainability, its dimensions, and its implications in contemporary society;
- recognise the relevance of sustainability to the medium of digital games, gaming culture, and game production;
- analyse existing games in terms of their portrayal of environmental issues and sustainability-related themes;
- evaluate game industry practices and game design choices through the prism of sustainability;
- plan and describe their own game or game-related artefact and articulate its connection to sustainability.

Grading

Requirements and assignments

In order to successfully complete the course, students are expected to:

- prepare for classroom discussion by studying and analysing the assigned reading materials;
- familiarise themselves with the course ludography, whether by playing the assigned games or by watching gameplay videos (Let's Plays, game streams, etc.) to a sufficient extent to understand and be able to discuss the games in class;
- attend and actively participate in the discussion sessions in the classroom;
- submit the final project (as outlined below).

Grading (pass/fail)

Class participation (50%)

Passing the course requires completing all reading and playing assignments and active participation in lecture discussions.

Research project (50%)

Essay/plan: 6-10 pages depending on the content. The content should introduce a problem related to the topic of the course and outline a possible practical solution to it. The proposed solution could take the form of a game, game engine or middleware, game distribution platform, etc. The nature of the solution is deliberately defined broadly to accommodate students' own interests.

Presentation: 10 minutes presentation + 10 minutes Q&A. Present what you did, how, why.



Grading criteria

The research project will be evaluated based on the following criteria:

- **Problem statement:** does the project outline the problem it aims to solve in a grounded and persuasive manner?
- **Solution description:** does it introduce the solution in a way that provides sufficient information for the reader to grasp it?
- **Argumentation:** does it convincingly articulate why the proposed solution is a suitable way to address the problem?
- **Referencing:** does it engage with relevant sources (academic and non-academic) to support the problem statement and the idea for the solution?
- **Structure:** is the solution presented in a structured, easy-to-follow way?
- **Class presentation:** did the classroom presentation follow the guidelines and was the author able to meaningfully respond to audience questions?



Course structure

This course is based on the UTU reading seminar format and consists of eight sessions, each 90 minutes in duration. The final session will be dedicated to project presentations and feedback.

Contents

Session 1: Introduction to games and sustainability
(didactic materials planned for a 90-minute-long session)

Session 2: Games infrastructure

Session 3: Games production

Session 4: Games content

Session 5: Games cultures

Session 6: Activism in games

Session 7: Cultural heritage and sustainability

Session 8: Project presentations



Session 1: Introduction to games and sustainability

Leading questions for the session

- What is the course about?
- What is sustainability and sustainable development?
- How does sustainability relate to digital games?

Preparation

For this session, students are expected to consider how sustainability is visible in their gaming habits (if at all), as well as reflect on why this is so.

Lecture

Topic: Introduction to video games and sustainability (45 minutes)

Note: See Lecture Deck "Video Games and Nature - Introduction to Ecocritical Study of Games & Game Making" available in the repository of the "Greening Games" project.



Seminar

Activity 1: *Discuss the following questions in groups (15 minutes), then share your ideas and discuss further (30 minutes):*

- What are the major ways in which the videogame industry and gaming culture impact the environment?
- In what ways are these similar and different to the impact of the ICT industry more broadly?
- What examples can you think of (besides those used in lecture deck) relating to issues relating to economic and social sustainability in gaming?
- In the context of gaming, what implications do environmental issues have for society and the economy?



Session 2: Games infrastructure

Leading questions for the session

- How sustainable are gaming platforms and devices?
- How do different games distribution methods differ in terms of sustainability?
- What options are available to make games infrastructures more sustainable?

Preparation

For this session, students are expected to familiarise themselves with the following sources:

- Gordon, L. 2019. The Environmental Impact of a Play Station 4. The Verge.
- Abraham, B.J. 2022. Digital Games after Climate Change. Palgrave McMillan, Chapter 5: The Carbon Footprint of Games Distribution.

Lecture

Topic: Games infrastructure (45 minutes)

Note: See Lecture Deck “Games infrastructure - on the Materiality of Digital Games” available in the repository of the “Greening Games” project.



Seminar

Activity 1: *Present the reading materials (15 minutes), then discuss the following questions (30 minutes):*

- What are the main contributing factors to game platforms' environmental footprint?
- What kinds of games and platforms have the largest environmental impact?
- In what ways can a regular person reduce the footprint resulting from their playing videogames?
- How can we promote the change in gaming habits necessary to reduce videogames' impact on the environment?



Session 3: Games production

Leading questions for the session

- How sustainable is producing games?
- What kind of issues affect the sustainability of games production?
- How do gaming companies tackle questions of sustainability?

Preparation

For this session, students are expected to familiarise themselves with the following sources:

- <https://www.playing4theplanet.org/> (A gaming industry community that supports 'greener' game development. Browse the site and materials critically)
- Abraham, B.J. 2022. Digital Games after Climate Change. Palgrave McMillan, Chapter 4: How Much Energy Does It Take to Make a Videogame.

Lecture

Topic: Games production (45 minutes)

Note: See Lecture Deck "Introduction to the video game industry's environmental impact" available in the repository of the "Greening Games" project.



Seminar

Activity 1: *Present the assigned materials (15 minutes), then discuss the following questions (30 minutes):*

- What are the major issues in today's game industry in relation to sustainability?
- How have videogame companies attempted to tackle these issues?
- What makes resolving these issues so challenging?
- How could governments and consumers push videogame companies to become more environmentally sustainable?



Session 4: Games content

Leading questions for the session

- How do games portray sustainability and climate themes?
- How does the game industry view climate change themes?

Preparation

For this session, students are expected to familiarise themselves with the following sources:

- Abraham, B.J., Jayemanne, D. 2017. Where are all the climate change games? Locating digital games' response to climate change. *Transformations Journal* 30, p. 75.
- Whittle et al. (2022). *The Environmental Game Design Playbook* (Presented by the IGDA Climate Special Interest Group). International Game Developers Association (Quite long, browse and read the interesting sections critically)

Lecture

Topic: Games content (45 minutes)

Note: See Lecture Deck "Greening Games - 'Theming' and 'Systemic' Pro-Environmental Messaging in Video Games" available in the repository of the "Greening Games" project.



Seminar

Activity 1: *Present the assigned materials (15 minutes), then discuss the following questions (30 minutes):*

- What are some notable examples of games that portray climate change?
- How do they represent it?
- How can game designers incorporate environmental themes in their games?
- In what ways can videogames affect their players' relation to climate issues?

Session 5: Games cultures

Leading questions for the session

- What kind of views and values related to climate and the environment can be found in videogames?
- What kind of culture towards sustainability do games encourage?

Preparation

For this session, students are expected to familiarise themselves with the following sources:

- Op de Beke, L. (2021). Premediating climate change in videogames: Repetition, mastery, and failure. *Nordic Journal of Media Studies*, 3(1), 184-199.
- Cox, M., & Zagal, J. P. (2022). Sustainability in City-Building Games. *Proceedings of DiGRA 2022*.
- Play (or watch a let's play) *Cities: Skylines (Colossal Order 2015)*

Lecture

Topic: Games cultures (45 minutes)

Note: See Lecture Deck "Games Cultures - on Digital Games and Sustainability" available in the repository of the "Greening Games" project.



Seminar

Activity 1: *Present the assigned materials (15 minutes), then discuss the following questions (30 minutes):*

- How can game mechanics and rules represent different values and attitudes towards the environment?
- What assumptions about humanity's relationship to nature are embedded in the gameplay of Cities: Skylines?
- What alternative ways are there to portray environmental issues in city building and other resource management games?
- How could playing these games affect their players' perceptions and attitudes?



Session 6: Activism in games

Leading questions for the session

- How can games be used for environmental activism?
- What kind of ethical questions pertain in using games for activism?

Preparation

For this session, students are expected to familiarise themselves with the following sources:

- Abraham, B.J. 2022. Digital Games after Climate Change. Palgrave McMillan. Chapter 2: How Can Games Save the World?
- Amadori, G. (2023). Gaming for Ecological Activism: A Multidimensional Model for Networks Articulated Through Video Games. *Games and Culture*, 15554120231170141.
- Helsingin Sanomat - Totuus Sodasta
- The Uncensored Library - Reporters Without Borders

Lecture

Topic: Activism in games (45 minutes)

Note: See Lecture Deck “Games Cultures - on Digital Games as Spaces of Eco-Activism” available in the repository of the “Greening Games” project.



Seminar

Activity 1: *Present the assigned materials (15 minutes), then discuss the following questions (30 minutes):*

- What are some notable examples of environmental activism relating to games?
- How were these examples received by the public?
- What ethical issues arise in the context of such activism?
- How can activists engage with players, developers, and policy-makers to get their ideas across?



Session 7: Cultural heritage and sustainability

Leading questions for the session

- How can games be preserved for future generations?
- What challenges exist in preserving games?
- How can cultures and play experiences be passed forward?

Preparation

For this session, students are expected to familiarise themselves with the following sources:

- Niklas Nylund, Patrick Prax & Olli Sotamaa (2021) Rethinking game heritage – towards reflexivity in game preservation, *International Journal of Heritage Studies*, 27:3, 268-280, DOI: 10.1080/13527258.2020.1752772
- Conaway, E. P. (2021). *Server Worlds: Preservation, Virtualization, and Infrastructures of Control in Online Gaming*. University of California, Irvine.
- Chapter 3: Restoring Offline Worlds at a Video Game Museum!
- Play: *Anarchy Online* (2001, Funcom) anarchy-online.com
- Voluntary extra: visit Tampere Game museum



Seminar

Activity 1: *Present the assigned materials (15 minutes), then discuss the following questions (30 minutes):*

- What methods exist for videogame preservation?
- What are the challenges relating to game preservation?
- What kind of games are the most challenging to preserve?
- In addition to games, what other artefacts related to gaming are worthy of preservation? Why?



Session 8: Project presentations

Format of the project presentation

10 minutes per group + 10 minutes Q&A

Final discussion (depending on available time)

What are the major takeaways from the course for you?



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The project "Greening Games. Building Higher Education Resources for Sustainable Video Game Production, Design & Critical Game Studies" (2021-2024) supports educators in addressing the interdisciplinary nature of green digital gaming.

More information may be found at: <https://greeningames.eu>.

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