



# GREEN GAME STUDIES COURSE PACKAGE 5

**CGL**  
Cologne Game Lab

**Technology**  
**Arts Sciences**  
**TH Köln**



**CHARLES**  
**UNIVERSITY**



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<b>Course:</b>	“Video Games and Nature. Eco-Critical Game Studies and Game Development”
<b>Module:</b>	Advanced Media and Game Studies (M.A. Digital Games Program, Semester 2)
<b>Institution:</b>	TH Köln, Cologne Game Lab, Germany
<b>Timeframe:</b>	Winter Term 2023/2024 (October 2023-February 2024)

This course package is based on a syllabus of a course delivered in the M.A. Digital Games program within the Media & Game Studies module taught at Cologne Game Lab, TH Köln in winter term 2023. The package includes the following:

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

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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

It was high summer 2022. In many regions of Europe and worldwide, temperatures reached record heights. France suffered under unprecedented wildfires, with over 62,000 hectares of flora burned by the end of August 2022. Meanwhile, players of the Riders Republic, a major multiplayer sports video game developed and published by Ubisoft Annecy, engaged in digital reforestation. They planted virtual trees in dedicated locations of the game's map, bringing to life an entirely new forested area that stayed in the game for others to experience long after the event had come to an end. The Riders Republic Rebirth event culminated in the first ever in-game climate march, for which players were equipped with virtual green t-shirts, banners, megaphones and drums, so that they could creatively express their support for the climate cause. The project was conceptualized in 2021 during a Green Game Jam, organized by the Playing for the Planet Alliance, the Environmental Program of the United Nations. Boris Maniora, Riders Republic gameplay director, believes that green activations such as Rebirth show the empowering impact games can have on their players, instigating hope and potentially providing them with skills they could transfer to their off-line realities.

However, video games are not only drivers of ecological messages and climate positivity. They are as much objects of culture as they are of nature. As virtual, immaterial and clean as they are portrayed within the framework of postindustrial capitalism (Maxwell and Miller 2012, 5), they are literally made out of natural resources and material labour. Video games rely on technologies and production dynamics that make those media possible in the first place. Amongst many other media scholars, Sean Cubitt in *Finite Media. Environmental Implications of Digital Technologies* (2017) talks about media as "finite resources in the closed system of planet Earth" (2017, 7), time-bound and tied to their physical dimensions.

This seminar is an invitation to rethink video games and gaming within the context of climate crisis and environmental sustainability. In the two sessions, we will look at the two contrasting facets of video games. On the one hand, their capacity to empower communities and represent ecological issues, and on the other their reliance on earthly matter – e.g., minerals that build up electronic technology, indispensable for their production, consumption and distribution.

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<sup>1</sup><https://playing4theplanet.org/green-game-jam>

Maxwell, R., and T. Miller. 2012. *Greening the Media*. Oxford: Oxford University Press.

Cubitt, S. 2016. *Finite Media. Environmental Implications of Digital Technologies*. Durham, NC: Duke University Press.



# Learning outcomes

The participants of this course will:

- reflect the question of climate crisis within the context of video games,
- learn what green / ecological / environmental games are,
- rethink game design and gaming practice from the perspective of sustainability,
- familiarize themselves with one of the most recent strands of eco-critical research in game studies,
- explore the most recent initiatives launched by the games industry and the critique thereof,
- submit academic podcasts, choosing a specific aspect of gaming to analyze within the context of sustainability.



## Mandatory sources

Abraham, B. J., and D. Jayemanne. 2017. Where are all the climate change games? Locating digital games' response to climate change. *Transformations Journal* 30: [http://www.transformationsjournal.org/wp-content/uploads/2017/11/Trans30\\_05\\_abraham\\_jayemanne.pdf](http://www.transformationsjournal.org/wp-content/uploads/2017/11/Trans30_05_abraham_jayemanne.pdf).

Abraham, B. J. 2020. Making Room for Climate Justice. *Game Developers Conference 2022. Independent Games Summit*: <https://www.gdcvault.com/play/1027763/Independent-Games-Summit-Making-Room>.

Chang, A. 2022. *The Ecology of Games*. [https://www.youtube.com/watch?v=9YJ\\_36AfR9s](https://www.youtube.com/watch?v=9YJ_36AfR9s).

Charles Games. 2023. *Beecarbonize*. Windows, iOS: <https://store.steampowered.com/app/2486750/Beecarbonize>.

Gordon, Lewis. 2020. The many ways video game development impacts the climate crisis. *The Verge*: <https://www.theverge.com/2020/5/5/21243285/video-games-climate-crisis-impact-xbox-playstation-developers>.

Gordon, Lewis. 2019. The environmental impact of a Play Station4. *The Verge*: <https://www.theverge.com/2019/12/5/20985330/ps4-sony-playstation-environmental-impact-carbon-footprint-manufacturing-25-anniversary>



# Assessment & Grading criteria

## Requirements

- All students have to actively participate in the sessions.
- All students have to study and analyze the assigned reading material in a way that enables them to actively and creatively participate in the seminar discussions; i.e., developing their own thoughts and theoretical insights.
- All students have to complete the final assignment – an academic podcast (see formal details below).

## Grading

**Essay (100%):** An essay (2500-3000 words-long), in which you explore the question of environmental sustainability of / in video games. Support your argumentation with **5 reliable and in-depth academic or journalistic sources** (other than the main readings in this seminar).

### Grading criteria

1. **Argument** – how well you develop your argument
2. **References** – how well you embed your argument in literature
3. **Structure** – does your written piece have a clear research question / statement; does it have introduction and conclusion?
4. **Style and form** – how well you write (appropriate language register, grammar, vocabulary)



## Course structure

This course has a time format attuned to the specific needs of the M.A. Digital Games Program at Cologne Game Lab, TH Köln. Each seminar session comprises two 90-minute-long blocks (altogether, eight 45-minute-long sessions). Usually, the course is attended by up to 18 students.

## Contents

**Seminar session 1:** Games as Objects of Culture  
*(didactic material planned for four 45-minute-long sessions)*

**Seminar session 2:** Games as Objects of Nature  
*(didactic material planned for four 45-minute-long sessions)*



# Seminar session 1: Games as Objects of Culture

## Preparation

For this session, students are expected to read / watch the following sources:

- Abraham, B. J. 2020. Making Room for Climate Justice. *Game Developers Conference 2022. Independent Games Summit*: <https://www.gdcvault.com/play/1027763/Independent-Games-Summit-Making-Room>.
- Gordon, L. 2020. The many ways video game development impacts the climate crisis. *The Verge*: <https://www.theverge.com/2020/5/5/21243285/video-games-climate-crisis-impact-xbox-playstation-developers>.
- Gordon, L. 2019. The environmental impact of a Play Station4. *The Verge*: <https://www.theverge.com/2019/12/5/20985330/ps4-sony-playstation-environmental-impact-carbon-footprint-manufacturing-25-anniversary>.

## Lecture

**Topic:** Introduction to Eco-Critical Game Studies I (45 minutes)





## Seminar

**Activity 1:** Warm-up discussion based on the first two sources from the list (45 minutes)

**Activity 2:** Talk & Play session based on playing the game from the sources list (90 minutes)

**Task 1:** Divide students into groups of 3-5 and ask each of the groups to play through the assigned ecological game, e.g., *Beecarbonize* (2023). During the playthrough session, students should take notes, paying attention to how the ecological message is communicated through the game via e.g., game rules (game loop), visual aesthetics, narrative elements (if present), and meta-gaming elements. Discuss the usefulness of “procedural rhetoric”, a term coined by Ian Bogost to describe the way video games persuade via algorithmic procedures. (60 minutes)

**Task 2:** Ask each of the groups to share their impressions and findings. (5-10 minutes per group; 30 minutes)

## Summary

Moderate the discussion based on points shared by student groups. (30 minutes)



# Seminar Session 2: Games as Objects of Nature

## Preparation

For this session, students are expected to read / watch the following sources:

- Abraham, B. J. 2020. Making Room for Climate Justice. *Game Developers Conference 2022. Independent Games Summit*: <https://www.gdcvault.com/play/1027763/Independent-Games-Summit-Making-Room>.
- Gordon, L. 2020. The many ways video game development impacts the climate crisis. *The Verge*: <https://www.theverge.com/2020/5/5/21243285/video-games-climate-crisis-impact-xbox-playstation-developers>.
- Gordon, L. 2019. The environmental impact of a Play Station4. *The Verge*: <https://www.theverge.com/2019/12/5/20985330/ps4-sony-playstation-environmental-impact-carbon-footprint-manufacturing-25-anniversary>.

## Lecture

**Topic:** Introduction to Eco-Critical Game Studies II (45 minutes)

## Leading questions for the session

- How are games and gaming engraved within earthly matter?
- How to wrap our heads around carbon emissions and questions of labour and natural resource extraction?



## Seminar

### *Activity 1: Discussion based on the first source (30 minutes)*

Abraham, B. J. 2020. Making Room for Climate Justice. *Game Developers Conference 2022. Independent Games Summit.*

### *Activity 2: Exploring the intersections between video games and natural resources, carbon emissions, and labor. (60 minutes)*

**Task 1:** Divide students into groups of 3-5 and ask each of the groups to expand on one point from the two reading materials by Gordon Lewis. The students can engage with the following questions:

**Q1:** How is video game development connected to the climate crisis?

**Q2:** How is PlayStation 4 depending on natural resources?

**Q3:** Is making video games detrimental to the natural world?

**Task 2:** Each group should prepare a 10-minute presentation after which another 10 minutes will be reserved for a discussion. *(60 minutes)*

## Summary

Moderate the discussion based on points shared by student groups. *(30 minutes)*



# Credits & Acknowledgements

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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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