

Science, Technology and Culture

Study programme	YUFE Joint Bachelor in Urban Sustainability Studies
Academic year	2026/2027
Curriculum component	Minor: Urban Ecology
Year and semester	2nd year, 2nd semester (4th semester overall)
Course type	Elective
ECTS credits	3
Contact hours (L+S+E)	30 + 30 + 30
Language of instruction	English

Contact

Course coordinator

Professor Sanja Bojanić, PhD

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Prerequisites

No requirements.

Course objectives

This course critically explores the dynamic relationships between science, technology, and culture in contemporary society. By addressing urgent topics such as light pollution, dark skies, and ecological sustainability, students will gain theoretical foundations and practical tools to navigate and reshape the intersections of scientific knowledge, technological innovation, and cultural values. The course emphasizes design thinking, planetary and relational perspectives, and socially useful learning through collaborative fieldwork, design proposals, and reflection.

Learning outcomes

- Comprehend the interrelationship between science, technology, and culture and recognize their shared discourses.
- Apply design-based approaches to real-world sustainability issues, particularly light pollution and ecological awareness.
- Critically evaluate cultural, ethical, and ecological implications of technology in different social contexts.
- Produce a practical intervention (design prototype) and reflect on its process, purpose, and impact.

Course content

- Week 1 Orientation: Light Pollution & Design Thinking
- Week 2 Social/Ecological Impacts of Light
- Week 3 Solutions to Light Pollution – Globe at Night (Orion + Leo)
- Week 4 Designing with Darkness – Light Walk (Orion + Leo)
- Week 5 Local Problem Solving and Design Proposal

- Week 6 Phenomenology and Environmental Subjectivity
- Week 7 Planetary Thinking – The Overview Effect (Leo)
- Week 8 Indigenous Astronomy and Cultural Identity (Leo)
- Week 9 Ecosophy – Naess and Guattari
- Week 10 Prototype Framing – Multiscalar Design (Leo + Bootes)
- Week 11–13 Materialisation – Design Iteration and Feedback (Leo + Bootes)
- Week 14 Presentation & Reflection

Teaching and learning methods

lectures, seminars and workshops and practical classes.

Assessment and grading

Class Participation & Activities – 40% Attendance – 15% Continuous Knowledge Assessment – 15% Oral Presentation (Final) – 15% Research & Field Engagement – 15% Attend regularly (max. 20% absence).; Engage actively in class and fieldwork.; Complete all readings in advance.; Collaborate on a design prototype.; Join Globe at Night and light walk.; Submit a final report and presentation.; Use digital tools responsibly.

Grading scale

Grade	Percentage
5 (A)	90-100%
4 (B)	75-89.9%
3 (C)	60-74.9%
2 (D)	50-59.9%
1 (F)	0-49.9%