

311.066 & 311.067

Appropriate Technology (AT) – Fundamentals & Practices

Solutions to Real-life Problems



Institute

- ❖ E311 Institute of
Production Engineering and Photonic Technologies

Properties

311.066

- ❖ Semester hours: 2.0
- ❖ Credits: 3.0
- ❖ Type: VO
- ❖ Format: Hybrid

311.067

- ❖ Semester hours: 2.0
- ❖ Credits: 2.0
- ❖ Type: UE
- ❖ Format: Presence

Subject of course

This course explores how technology can be designed to create meaningful, sustainable solutions for real-world challenges. Students are introduced to the principles of **Appropriate Technology (AT)** and examine how innovative approaches in sustainable building, ecological product design, and alternative energy can improve quality of life in diverse environments. Through case studies and insights from practitioners working in international development, the course connects theory with practice and highlights how technology can support social and ecological transformation — both globally and locally.

Learning outcomes

By the end of this course, students will be able to:

- ❖ Explain the core principles of Appropriate Technology and identify real-world applications in sustainable construction, ecological design, and renewable energy systems.
- ❖ Design and evaluate sustainable technical solutions that address essential human needs such as clean water, food security, housing, energy, and access to information.
- ❖ Critically reflect on the role of technology in society and develop their own perspective on resilient, context-sensitive innovation.
- ❖ Produce a reflective report or essay that synthesizes and critically analyzes the key concepts, methods, and insights gained from the course (VO).
- ❖ Communicate their ideas effectively by presenting a seminar project that shares their findings with a broader audience (UE).



Teaching methods

The course combines interactive lectures with discussions, practical demonstrations, and small experimental activities. Students are encouraged to actively contribute their perspectives and prior experiences, explore hands-on examples of Appropriate Technology, and engage in collaborative learning. Guest experts from technology, design, and civil society bring practical insights from current international projects, creating a dynamic link between academic concepts and real-world application.



Lecturers

- ❖ Wimmer, Robert
- ❖ Kang, Myung-Joo
- ❖ Taylor, Kojo

Day	Date	Time	Location	Description
Tue	05.05.2026	14:00-16:00	Online (Zoom)	Preliminary discussion via Zoom (all lecturers); Introduction to AT
Thu	07.05.2026	14:00 – 18:00	TU Wien	Theory
Tue	12.05.2026	10:00 – 17:00	S-House, Böheimkirchen*	Lectures on basics of Appropriate Technology & cases; Tour of the BÖZAT site
Tue	19.05.2026	10:00 – 14:00	TU Wien	
Thu	21.05.2026	10:00 – 17:00	S-House, Böheimkirchen*	Lectures and Exercise, Students’ workshop & mentoring
Tue	02.06.2026	10:00 – 17:00	TU Wien	Theory, Q&A
Wed	10.06.2026	14:00 – 18:00	TU Wien	Final presentation of case studies

* Transportation to be organized individually. No financial support available.

Examination modalities

- ❖ 50% (100% for VO): Individual report/essay depicting and proofing students’ understanding of the theory of appropriate technology in a real situation (either in German or English)
- ❖ 50%: Group/individual presentation of case study



Literature

- ❖ No lecture notes are available.
- ❖ References: “*Appropriate Technology: Tools, Choices and Implications*” by Barret Hazeltine and Christopher Bull; “*Capital in the 21st century*” by Thomas Piketty, “*Technology for Liberation*” by Willem Riedijk, and “*Small is beautiful*” by Ernst F. Schumacher.

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