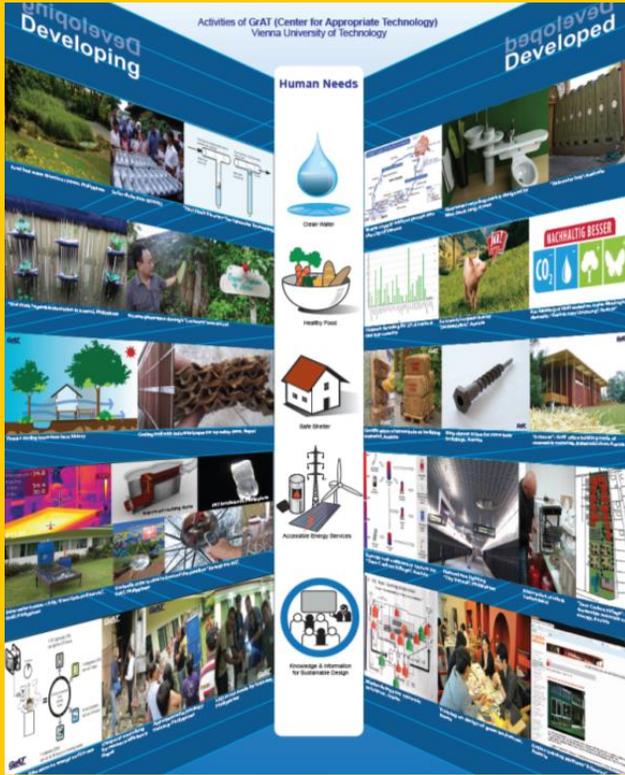


311.066 & 311.067

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: Presence

311.067

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

Subject of course

The lectures provide basic knowledge about the concepts of Appropriate Technology and development technology, as well as chances and challenges of sustainable development and social-ecological transformation. Concepts of Appropriate Technology not only apply in developing countries, North-South-Dialogue and technology transfer, but also in industrialised countries. At the same time, experts from the field of Appropriate Technology, industrial design, technology and civil society share practical experiences and challenges in international development projects, in order to illustrate the importance of the development philosophy and strategies.

Learning outcomes

After successful completion of the course, students are able to:

- ❖ Understand the basic concept and principles of Appropriate Technology (AT) and find access to living examples in the field of sustainable building, ecological product development and alternative energy concepts;
- ❖ Apply the principles in developing sustainable technologies and technical solutions in order to meet diverse human needs, such as clean water, nutritious food, safe and comfortable home, energy, and information;
- ❖ Comprehend and reflect an own perspective on the meaning of independent development of technologies that are applicable in a giving environment and resilient to the changing conditions;
- ❖ Make a presentation over the acquired knowledge on the basis of a seminar work and avail it to a wider audience.



Teaching methods

Open lecture style with room for technical discussions and practical experiments; Interactive, so that students are engaged with their own (pre-) concepts of AT and experiences; demonstration of exemplary AT solutions

Lecturers

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

Mode of examination

Oral and written

Language

English

Course dates (to be held in blocked form)



Day	Date	Time	Location	Description
Thu	02.05.2024	14:00-17:00	Zoom	Preliminary discussion via Zoom (all lecturers); Introduction to AT, the role of AT and experiences, human needs and technology
Mon	06.05.2024	10:00 – 17:00	S-House, Böheimkirchen	Lectures on basics of Appropriate Technology & cases; Tour of the BÖZAT (Böheimkirchen Zentrum für Angepasste Technologie) site; Students' workshop
Tue	07.05.2024	14:00 – 18:00	TU Wien	Lectures and Exercise; Deduction from Technology to Appropriate Technology, new dimensions, application, case study, etc.
Tue	14.05.2024	10:00 – 14:00	TU Wien	Lectures: Working out alternative technologies to safeguard resources for ecological concerned and manufacturing; technological systems
Thu	16.05.2024	10:00 – 14:00	TU Wien	Choice of technology, examples, material, impact, AT for industrial design, technology transfer, working it out for sustainable technologies
Thu	23.05.2024	10:00 – 17:00	S-House, Böheimkirchen	Lectures and Exercise: Simple and effective wood joining technique; Excursion to wind power plant (optional); Students' workshop & mentoring
Thu	13.06.2024	14:00 – 18:00	TU Wien	Final presentation of case studies

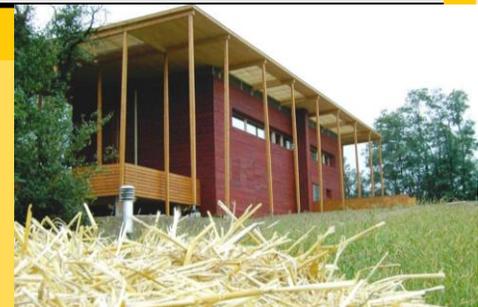
* Transportation to be organized individually. No financial support available.

Examination modalities

- ❖ 50%: Individual report/essays 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 studies

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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