

311.066 & 311.067 Fundamentals of Appropriate Technology (AT)



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

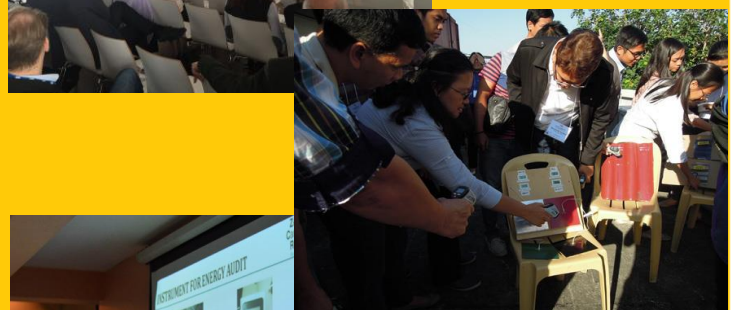
Subject of course

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
- ❖ 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
Tue	09.05.2023	14:00 - 18:00	Zoom address/ID will follow after your registration kojo.taylor@tuwien.ac.at & contact@grat.at	Preliminary Discussion via Zoom Pre-concept on AT and experiences; human needs and technology
Tue	16.05.2023	10:00 – 17:00	S-House, Böheimkirchen*	Lectures on basics of Appropriate Technology & cases; Students workshop
Wed	17.05.2023	14:00 – 18:00	TU Wien, Seminar Room @Argentinierstrasse 8, Ground floor	Lectures on AT for developing and developed countries; Students workshop & mentoring
Thu	25.05.2023	10:00 – 17:00	Niederösterreich	Excursion; ; Demonstration of solar cooking; Students workshop & mentoring
Wed	31.05.2023	14:00 – 18:00	TU Wien, Böcklsaal for 31.05, Karlsplatz 13 / I. Floor	Final presentation

* 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 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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