Fundamentals of Appropriate Technology (AT)

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-Discussion 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.

Properties

<table>
<thead>
<tr>
<th>Course</th>
<th>Semester hours</th>
<th>Credits</th>
<th>Type</th>
<th>Format</th>
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<tr>
<td>311.066</td>
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<td>3.0</td>
<td>VU</td>
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<td>UE</td>
<td>Presence</td>
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Institute

- E311 Institute of Production Engineering and Photonic Technologies

COURSE REGISTRATION!

06.02.2023 06:00 - 02.05.2023 00:00
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)

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
<th>Description</th>
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<tbody>
<tr>
<td>Tue</td>
<td>09.05.2023</td>
<td>14:00 - 18:00</td>
<td>Zoom address/ID will follow after your registration <a href="mailto:kojo.taylor@tuwien.ac.at">kojo.taylor@tuwien.ac.at</a> &amp; <a href="mailto:contact@grat.at">contact@grat.at</a></td>
<td>Preliminary Discussion via Zoom Pre-concept on AT and experiences; human needs and technology</td>
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<tr>
<td>Tue</td>
<td>16.05.2023</td>
<td>10:00 – 17:00</td>
<td>S-House, Böheimkirchen *</td>
<td>Lectures on basics of Appropriate Technology &amp; cases; Students workshop (case study/development)</td>
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<tr>
<td>Wed</td>
<td>17.05.2023</td>
<td>14:00 – 18:00</td>
<td>TU Wien</td>
<td>Lectures on AT for developing and developed countries; Students workshop &amp; mentoring</td>
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<tr>
<td>Thu</td>
<td>18.05.2023</td>
<td>10:00 – 17:00</td>
<td>To be decided *</td>
<td>Excursion</td>
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<tr>
<td>Fri</td>
<td>19.05.2023</td>
<td>10:00 - 17:00</td>
<td>S-House, Böheimkirchen *</td>
<td>Final presentation; Demonstration of solar cooking</td>
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* 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.