# Teaching module: Philosophy and ethics of energy development Session 1: Natural sciences, technologies and modern societies

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**Class plan Class time:** 2 × 45 min

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| No. | Activity name | Procedure | Teaching guide | Method | Interaction type\* | Expected outcome | Materials | Overall time |
| 1 | Science and technology from the SSH viewpoint | 1. Video about ‘science and technology studies’.
2. Discuss the video.
 | The aim of the session is to elucidate in most general terms how social sciences and humanities (SSH) approach the relationship between science and technology. The aim of the video screening is to open this general topic. | * Presentation
* Discussion
 | T ↔ Ss | * understanding the approach to science and technologies in SSH
 | * TM2-ST1-RM1-introductory video
 | 15 min |
| 2  | Relationship between science and society | 1. Explain the role of natural sciences and technologies in modern societies.
2. Explain technologies as generators of social change.
3. Explain a technocratic approach.
 | T uses the PPT presentation for support. | * Lecture
 | T → Ss | * understanding the relationship between natural sciences and modern societies
 | * TM2-ST1-AM1-PP lecture
 | 20 min |
| 3 | Cities in transition (case study) | 1. Video about participation of citizens or local community in introducing technologies.
2. Discuss experiences or knowledge of similar projects.
3. Explain the difference between technocratic and participative decision making.
 | After the video, T highlights the issue of energy management in the case study and uses the case study to expand on the participative approach to decision making. | * Presentation
 | T ↔ Ss | * understanding the difference between technocratic and participative decision making
 | * TM2-ST1-RM2-case study video
 | 15 min |

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| No. | Activity name | Procedure | Teaching guide | Method | Interaction type\* | Expected outcome | Materials | Overall time |
| 4 | Comparison of approaches to the decision-making | 1. Divide Ss into groups and group task assignment.
2. Ss working in groups on the task (using PPT document template).
 | T and Ss organize the space so that each group can work separately without disturbing the others. Leave up to 15 minutes time for completing the task. Stay ready to assist students in completing the task | * Group work
 | Ss ↔ Ss | * improved competence to perceive and identify social impacts of technologies
* improved competence to perceive citizens as users of technologies
 | * TM2-ST1-AM2-group work
* TM2-ST1-AM3-handout
 | 15 min |
| 5 | Presentation of results & debriefing | 1. Representative(s) from each group present(s) the results.
2. Discuss each presentation.
3. T summarizes the lessons from the session.
 | T allocates up to 10 minutes to each presentation and lets Ss from the other groups comment on it. T does not interrupt the presentations and lets Ss express their views and arguments. | * Presentation
* Discussion
 | T ↔ Ss | * TM2-ST1-AM4-reading tips
 | 25 min |

\* Interaction type:

**T** – teacher

**S** – student

**Ss** – students

**→** - one way

**↔** - two way