Interactive Introduction to Sustainable Development – board games and interactive lectures

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New small course module:  
Introduction to Sustainable Development

Innovative approach to student learning:

- **Interactive lectures:** moderated discussions, students discuss with each other and with the teacher
- **Seminars:** students play board games that challenge them with mini-quiz questions and sustainability dilemmas
- **18 hours class room + self studies + written exam = 1,5 hp/ ECTS**
- **First introduced** in 2012 at 1st year of the Mechanical Engineering programme; after that word has spread and now:
- **Variations of the module** has been given on 8 occasions for almost 1000 students at KTH

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New small course module:

Introduction to Sustainable Development

Agenda:
• About the course module
• How does the module fit into the education programme?
• New module: from fall semester 2014
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Concept:
• Interactive lectures
• Seminars
• Self-study

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Concept:
- **Interactive lectures (5)**
- Seminars
- Self-study
  - **Introduction**: episodes of “conventional” teaching (concepts, theory, definitions ...)
  - **Interaction**: student discussions under teacher moderation
  - **Connection** to seminars where students meet various dilemmas
  - **Connection to literature**
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Concept:
- Interactive lectures
- Seminars (4)
- Self-study

- **Board game GaSuCo:** specially made for this type of learning activities
  - 160 quiz questions
  - 4x15 dilemmas

- **Interaction:** student peer discussions

- **Connection** to lectures
- **Connection to literature**

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Concept:

- Interactive lectures
- Seminars
- Self-study

- Board game GaSuCo: made specially for this type of learning activities
  - 160 quiz questions
  - 4×15 dilemmas
- Interaction: student peer discussions
- Connection to lectures
- Connection to literature

"Earth Hour is the hour when we are asked to put out power and everything that is powered on electricity. Discuss whether you think this is a pointless stunt or a really good idea.”

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Concept:
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- New book (ready for fall semester 2014, in Swedish)
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We believe that it is important for students to not only learn about sustainability but also to reflect on sustainability issues and eventually train to work for a sustainable development.

Four steps for incorporating sustainability in education (BRDI):

- **Background:** learning theory, definitions and the structure of the subject including fundamental sustainability issues, tools for addressing sustainable development and references to key reports.
- **Reflection:** addressing key dilemmas and learning that taking a position in sustainability issues often depends on basic values, point of view, stakeholder perspectives, background knowledge and approach to risk.
- **Discussion** is a tool for reflection and necessary for transparency and acceptance in decision making. Students may realize that decision making in sustainable development is actually often a sub-optimization process.
- **Integration** of sustainable development starts in BRD – maybe in an introduction course module, but eventually needs to be integrated into practical issues in following courses throughout the education programme.
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New Introduction Module in Sustainable Development:
- 18 hours class room + self studies + written exam = 1,5 hp/ECTS
- Discussion with Cambridge University

- Lecture
- Seminar: Fish Banks
- Seminar: Building Futures
- Seminar: GaSuCo
- Seminar: GaSuCo
- Lecture

Individual reflection assignment
Group reflection assignment
Test (computerised)

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Thank you for your attention!

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