

# Brainstorming towards a Universal Course

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# Multi-university delivery

- Project based
- Project teams : 4 students
- Delivery : February semester
  - 1<sup>st</sup> semester in southern hemisphere
  - 2<sup>nd</sup> semester in northern hemisphere
- Motivation for multi-university teams
  - Annual competition (July?) to implement the design in a particular location
    - This requires funding to support team travel; project implementation.
    - Possibly one team from each participating university to compete

# Example Project #1

- Small-scale electricity generation using a local hot water stream for an Indonesian village (or NE African)
- Team: 4 students (or four groups of three students from each uni)
  - Expander (possibly adaptation from an automotive scroll compressor)
  - Heat exchanger and condenser (copper coils in hot water spring and cold water pond)
  - Generator and wiring
  - Economic justification and life-cycle costing and maintenance

# Example Project # 2

- Solar hot water heating
- Team: 4 students (or four groups of three students from each uni)
  - Collector
  - Hot water tank
  - System design
  - Needs analysis and life-cycle costing; and maintenance