Integration of Business Administration, Computer Science, Interculture, and Statistics
A Course in Applied Systems Engineering

Tim Heyer

Karlstad University

November 23, 2005
Programs

- Karlstad University has examination rights since 2001
- Master of Science in Chemical Engineering (2001)
- Master of Science in Information Technology (2002)
- Master of Science in Materials Engineering, Engineering Physics or Industrial Engineering and Management (2004)
Organization

- Large courses that integrate several traditional courses
- Work in projects containing aspects of communication, economics et cetera
- Students should meet their professional role and applications early
- Teacher and student cooperation across subject and science borders
- . . .
Objectives

- Laws and regulations: ... to develop products and processes considering the goals of the society regarding social conditions, resource management, environment and economics
- Local university goals: ... relevant knowledge in human science, social science, and gender science
- CDIO, Civilingenjörer – i går, i dag, imorgon
- Program goals: ... work in international and interdisciplinary environments
- ...
Organization

- Business administration 6 ECTS, database techniques 6 ECTS, data communications 6 ECTS, interculture 1.5 ECTS, software engineering 4.5 ECTS, and statistics 6 ECTS
- Included project with 7.5 ECTS
- Course is given in the fourth semester (spring semester)
- 6 to 11 teachers
- 14 to 8 students
- Lectures refer to each other
- Strongest coupling through project (balanced score card system, XP support tool)
Objectives

Mostly application level (Bloom’s taxonomy), except

- ...create software engineering processes based on eXtreme programming (XP)
- ...understands communication processes in international and interdisciplinary environments
Students

Integration 2004

Team 2004

Integration 2005

Team 2005
Teachers

■ Careful planning is required
■ Good and regular communication between the teachers is required, e.g.
  ■ all teachers are contacted by students
  ■ regular teacher meetings
■ Integrated home pages, documents and so on are required
■ Commitment to the ideas behind integrated courses is required