Agenda

- Idea in the beginning and todays reality
- Continuously using Kurt to improve the course
- Allocating resources
- Our plans in the future
- Ingredients – Thanks to Kurt!
  - Present the NEED and WHY
  - Reality context
  - Let the students OWN the course – project based learning
Idea in the beginning and todays reality

- TMKT57 was first thought as a broad modeling and simulation course for the mechanical engineering domain

- 2 x PhD students took charge of the course and year by year the course got more and more specialized

- Today the course is only about automating repetitive CAD (3D modeling).

- Having ONE specific topic is much easier to package and sell
Continuously using Kurt to improve the course

- The response rate has been between 60-80% for the past 3 years.
- The course is not obligatory and has grown from 30 to ~130 students

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Allocating resources

- Most resources are allocated to lab assistants (students and PhD students). 1 to 1 knowledge transfer may not be cheap but it is very effective

- Administration surrounding the examination task

- Least resources are spent on lecture- and course material such as tutorials.
Our plans in the future

- Make the course even more industrial relevant by involving industrial partners.

Present the NEED and WHY
What is this course worth in the industry?

- Prices taken from courses given by consultant companies:
  - CATIA V5 Fundamentals: 5 dagar 15 900 SEK
  - CATIA V5 for Surfaces: 3 dagar 10 500 SEK
  - CATIA V5 Mechanical Design: 5 dagar 17 900 SEK
  - CATIA V5 Product Design: 2 dagar 7 200 SEK

- Even with Design Automation and Parametric Design excluded, the course is worth much more than 50 000 SEK per student in the industry.

From order to delivery

- Boeing 747, 60s, 2 years
- Airbus A380, more than 10 years
Studies show that 80% of design is **repetitive** and **routine-like**

Reality context
Use existing CAD-parts

Build complete 3D-model in 3DCS configurator

CAD Configurator
3D Data
Product data

Sales Configurator
• Real-time render
• Quotation
• Product specifications

• CAE enabled start models
• 3D drawings
• BOM of material
• Production documentation

HDT genererar ritningar för varje sektion
Our Vision

- Boeing 747, 60s, 2 years

- Airbus A380, more than 10 years <2 years
Let the students OWN the course – Project Based Learning

Previous Examination Projects
Previous Examination Projects

Never send a human to do a machine's job

/Agent Smith (Matrix)

Production Automation

Design Automation
Never send a machine to do a human's job