



Eric Behnke

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BSc Mechanical Engineering





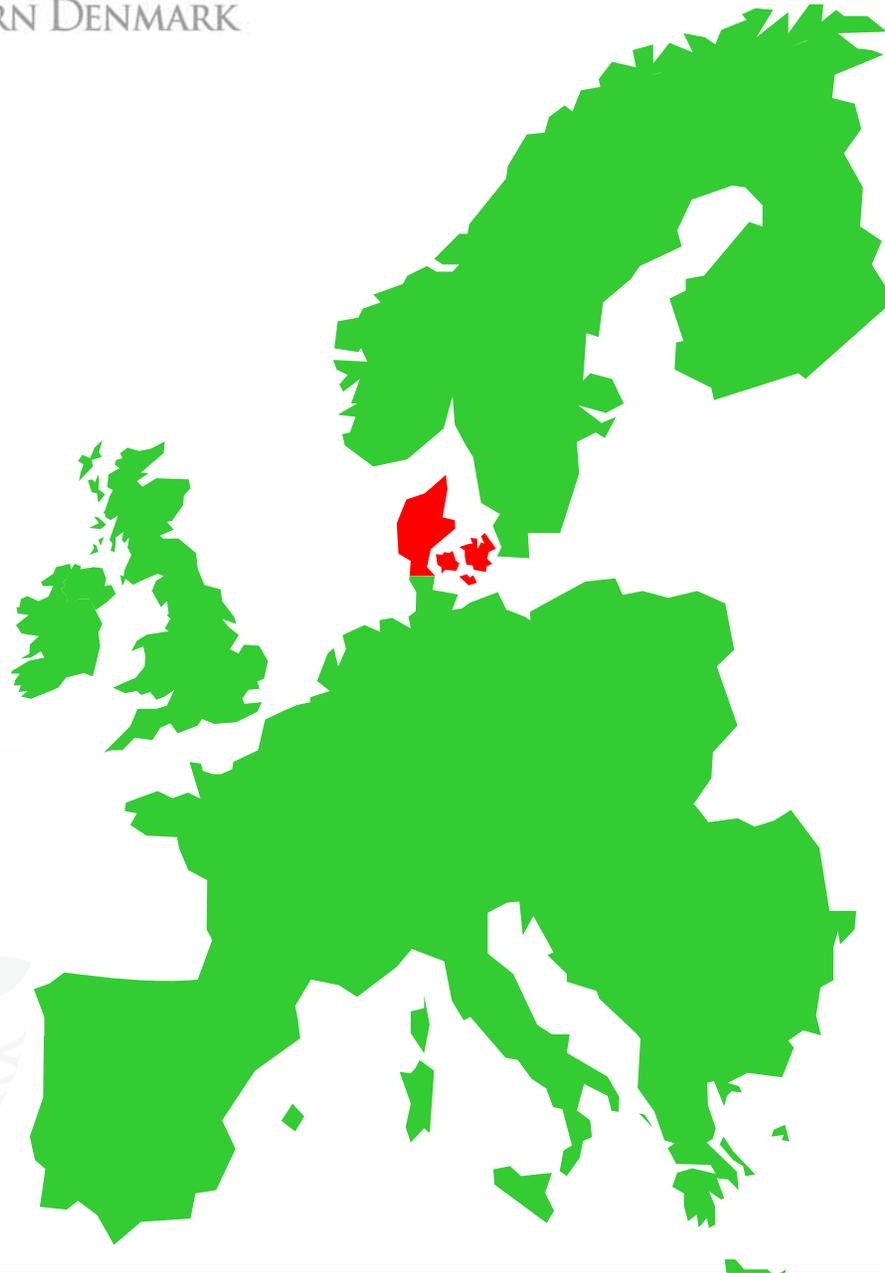
UG NX2
Teaching engineering students
3D solid modelling before 2D
Drafting





Presenting the University of Southern Denmark









The University of Southern Denmark is a State Institution





4 faculties:

Health Sciences

Science and Engineering

Social Sciences

Humanities





Sønderborg





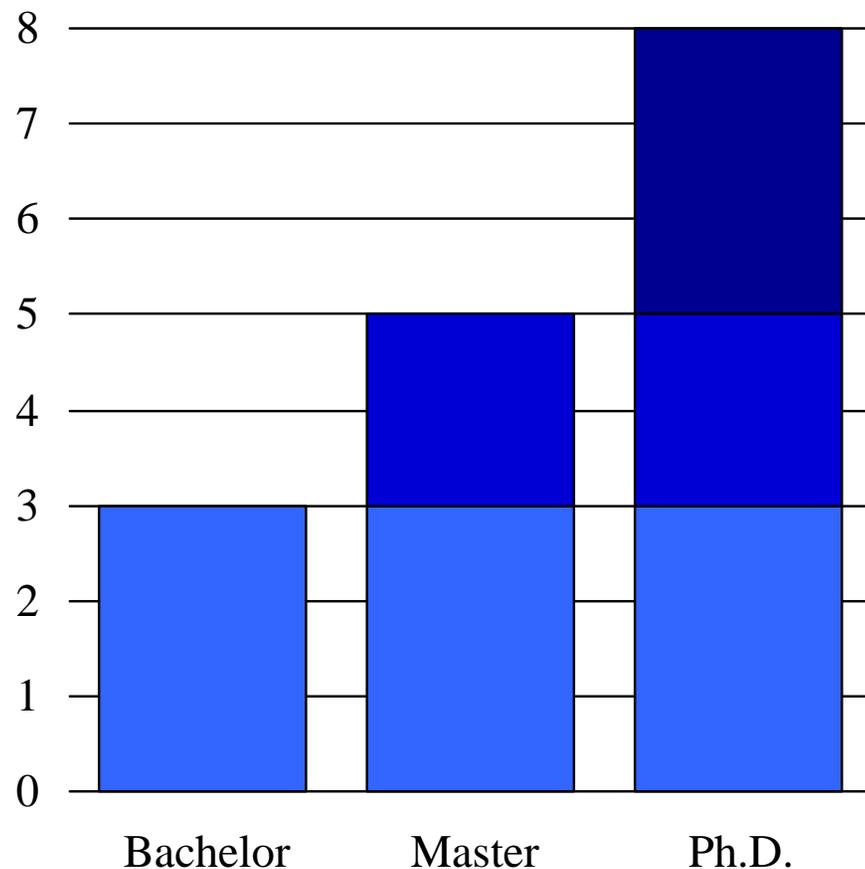
The new University Environment in Sønderborg



Study Programs:

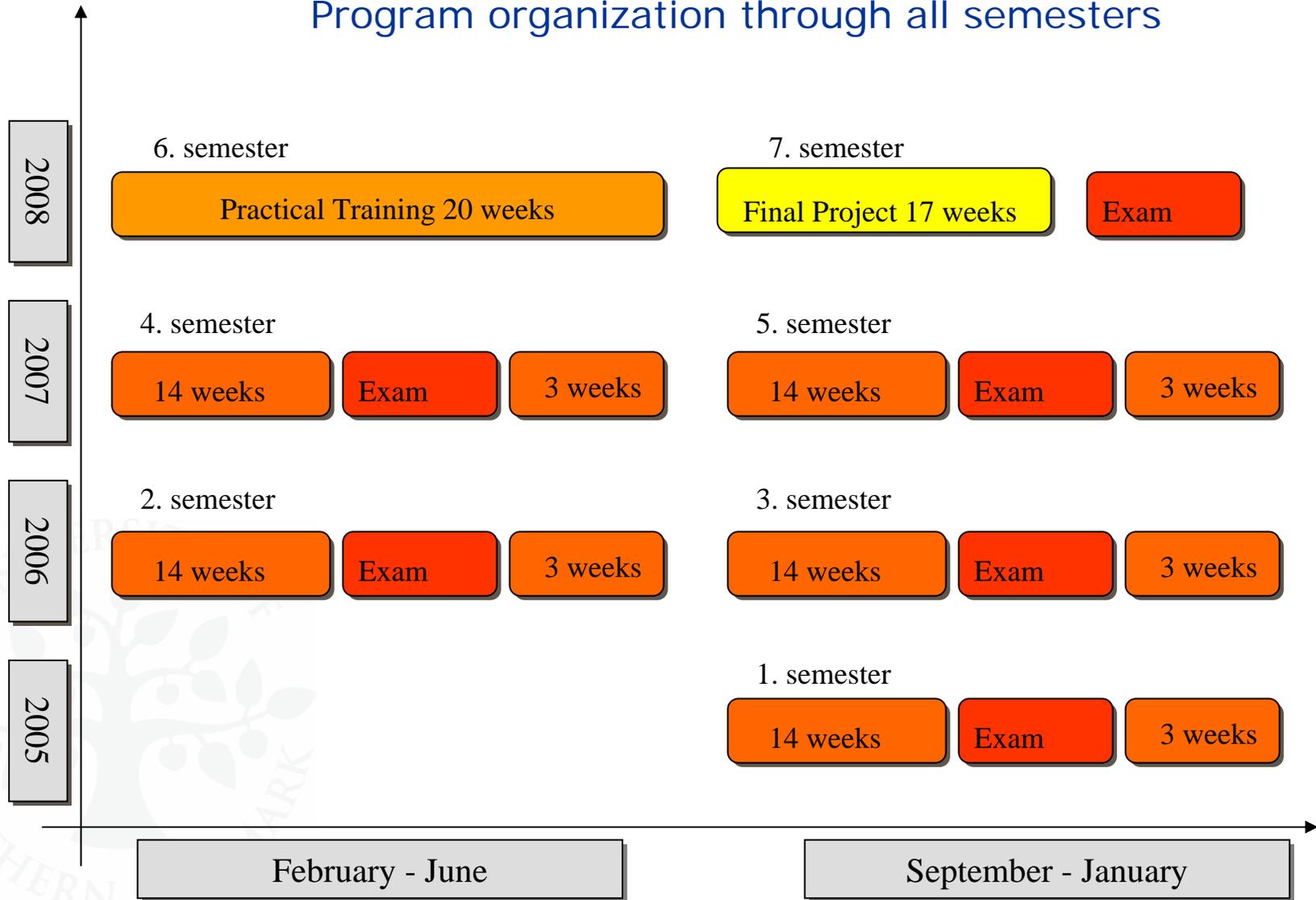
- Management & Technology
- Innovation & Business
- Interactive Design
- Mechatronics

Bachelor **3 years**
Master **5 years**
Ph.D. **8 years**



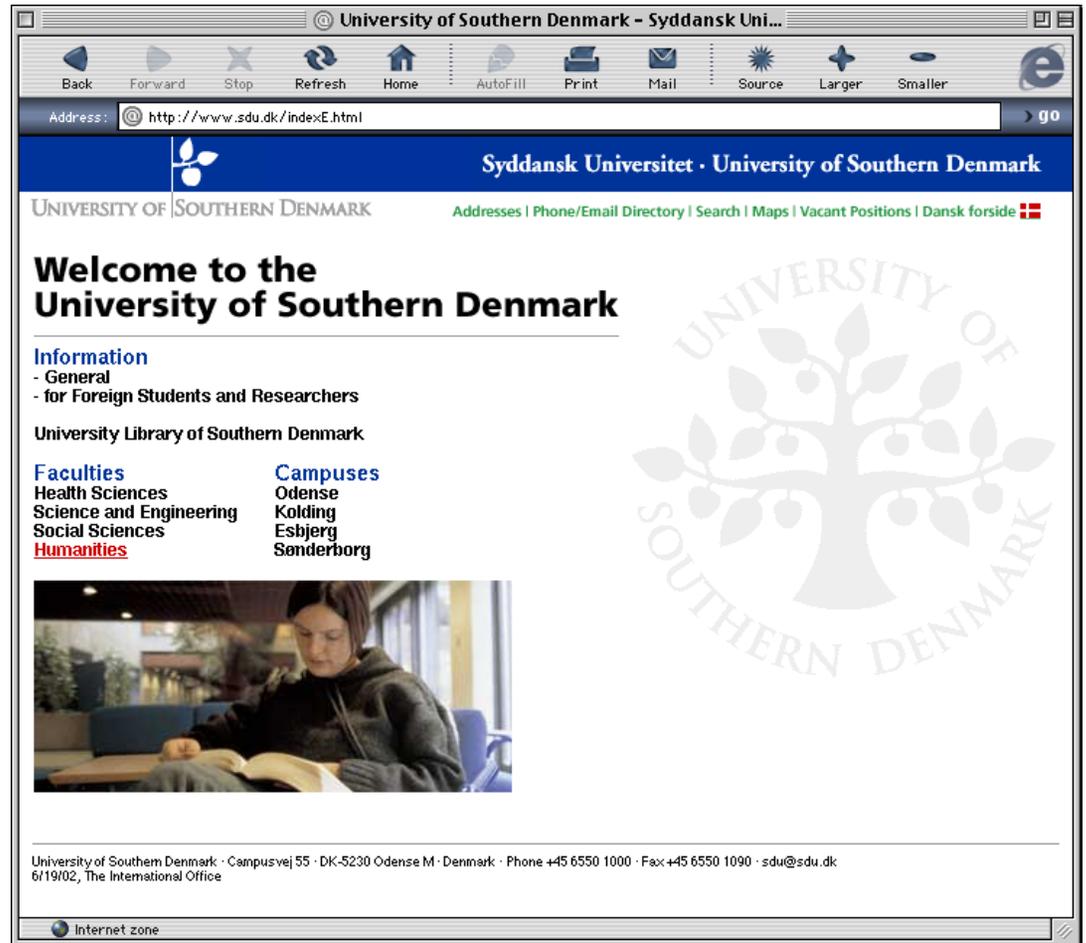


Program organization through all semesters





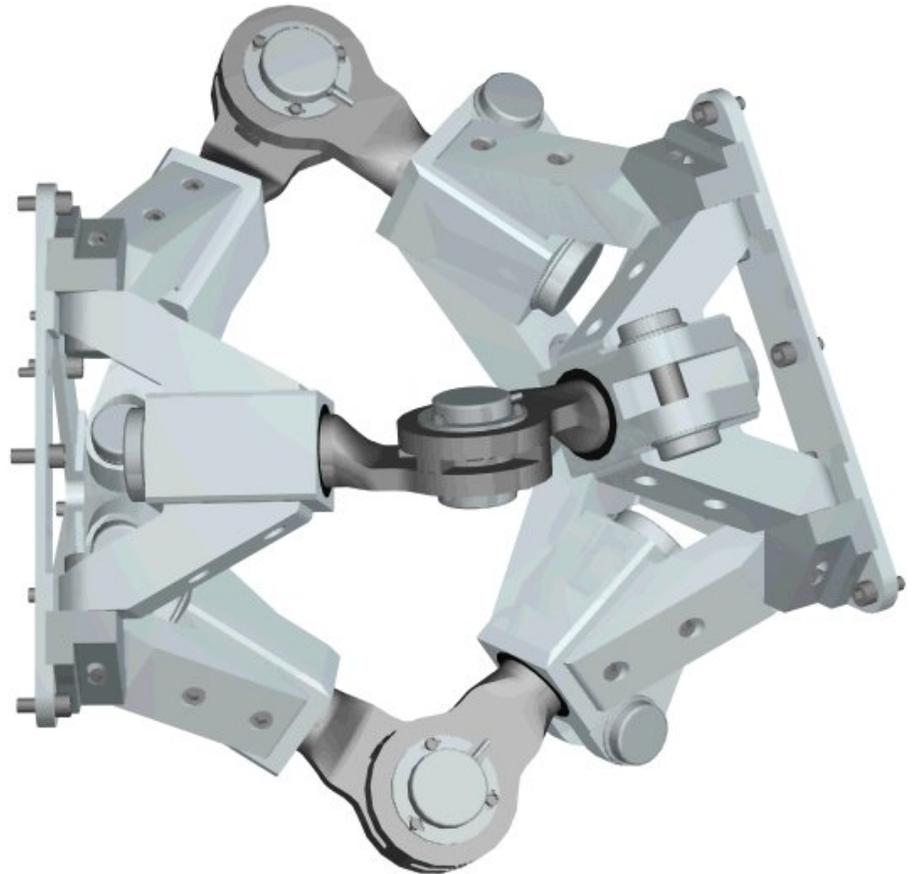
www.sdu.dk





Why 3D before 2D ?

- 3D is a more natural way of thinking
- Today's complicated products requires Engineers to be able to handle 3D
- It is easy to make the 2D drafting in today's CAD systems





Teaching method = Self-study

■ CAD Design compendia

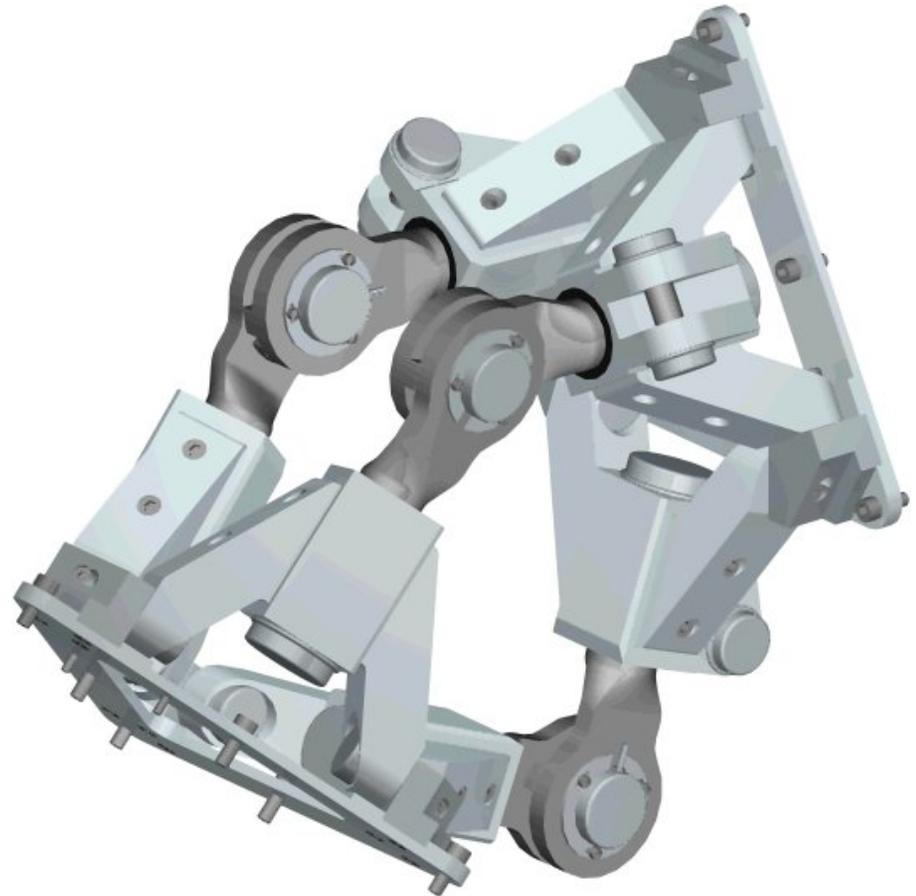
- Syllabus
- Chapters = Overview
- Exercises like in the old MacAuto days
- Solid Modeling Assignments

■ Drafting lectures

- Drafting Assignments

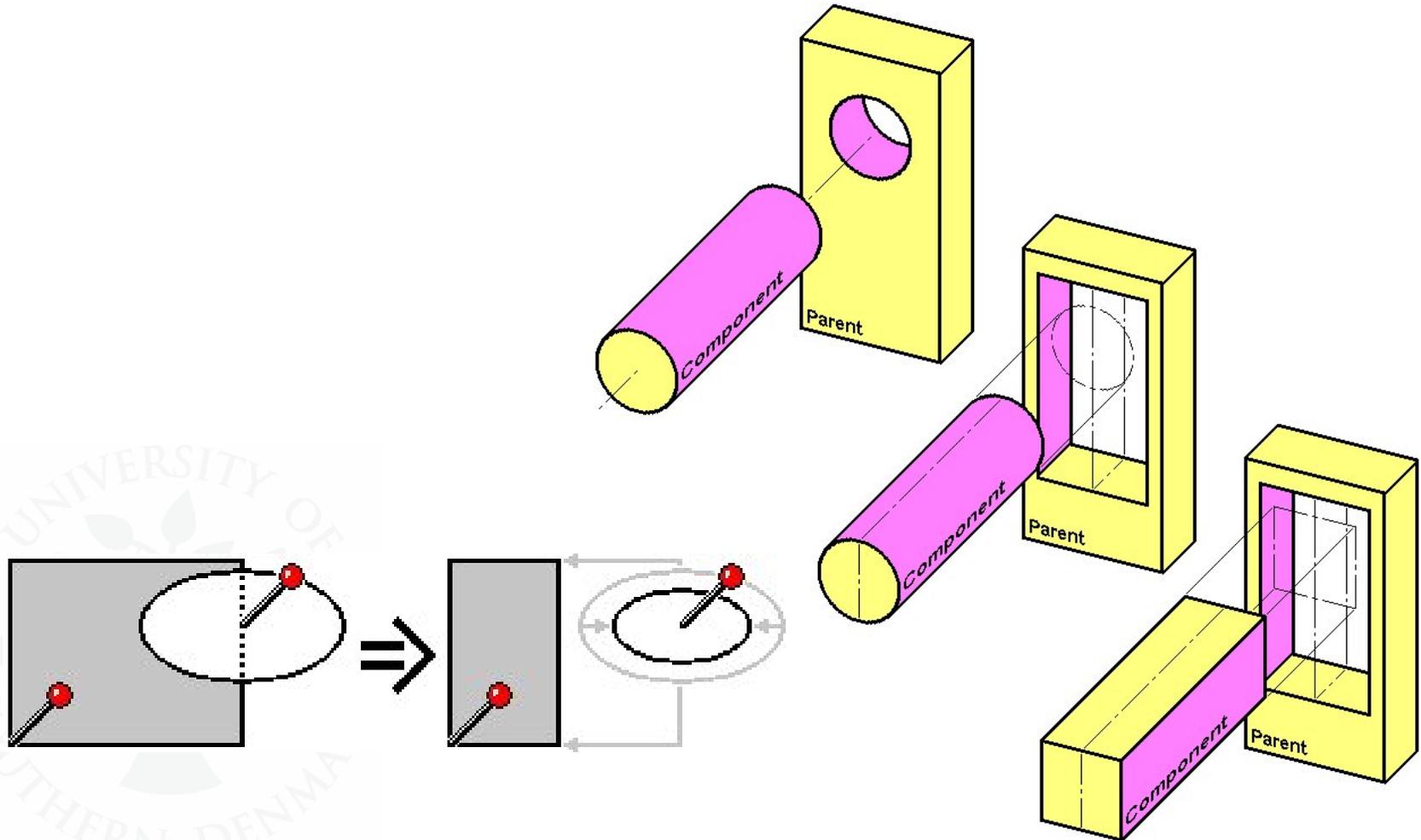
■ Assembly lectures

- Assembly Assignment





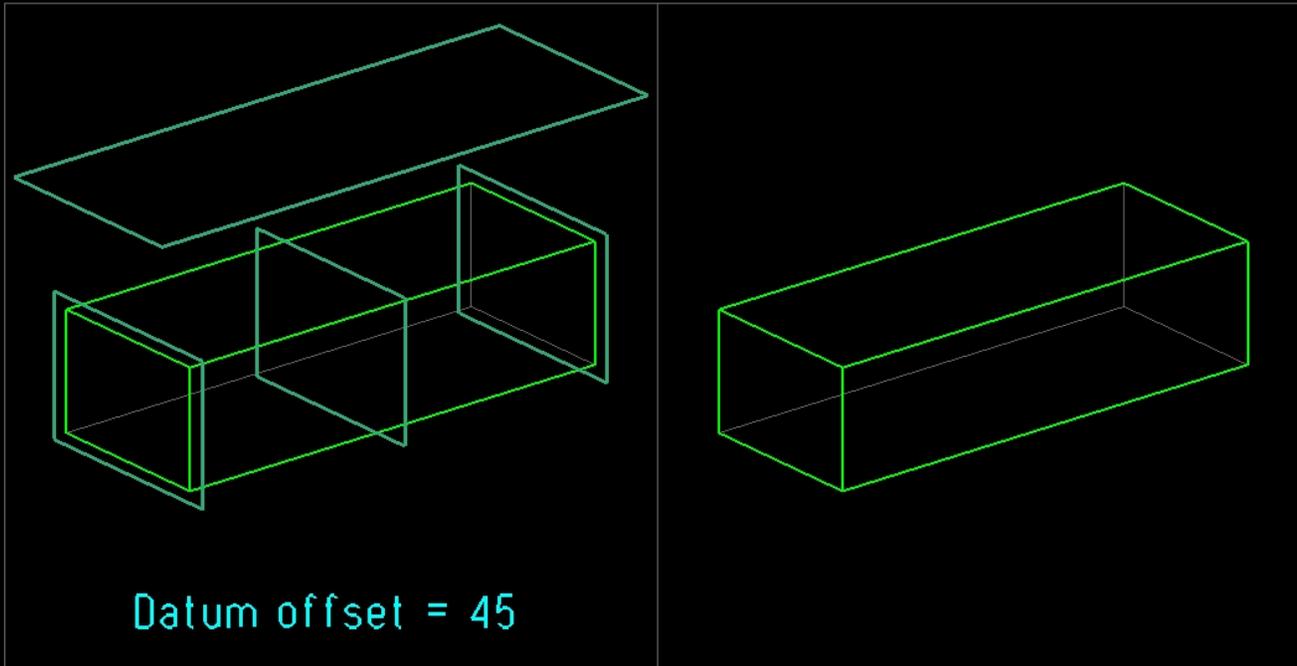
Compendia champers = Overview





Exercises like in old days

Create Datum Plane as offset and Center



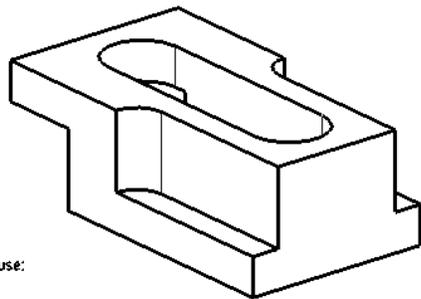
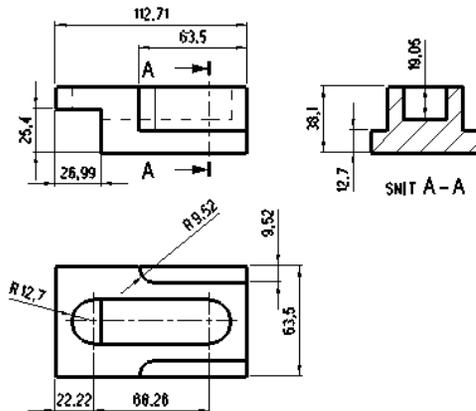
Set Work Layer = 2 and turn off Layer 1

Modeling assignments

CAD Design
3D Solid Modeling in Unigraphics



MODEL 2



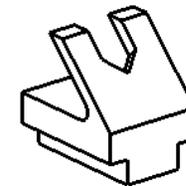
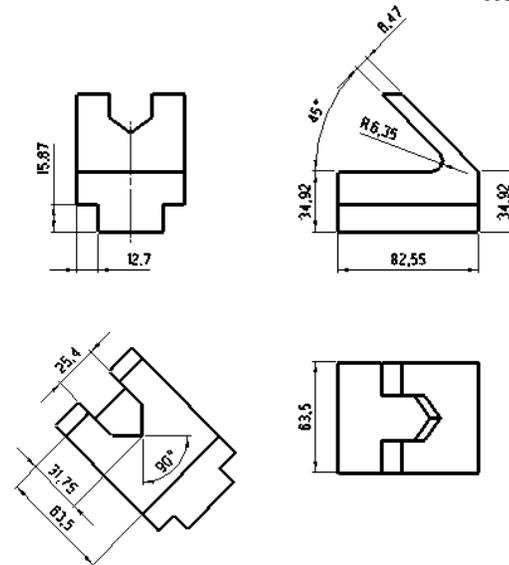
To build Model 2 use:
- BLOCK
- DATUM PLANE
- SLOT

Authored by Eric Behnke 16.9.2005 Model 2

CAD Design
3D Solid Modeling in Unigraphics



MODEL 8



To build Model 8 use:
- BLOCK
- DATUM PLANE
- PAD
- POCKET
- TAPER
- CHAMFER
- BLEND

Authored by Eric Behnke 22.9.2005 Model 8

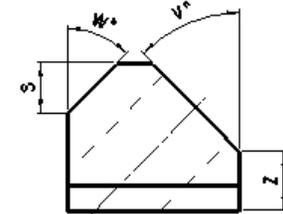
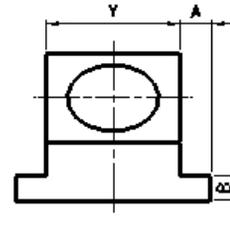


Working with Expressions

CAD Design 3D Solid Modeling in Unigraphics

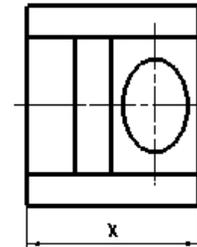
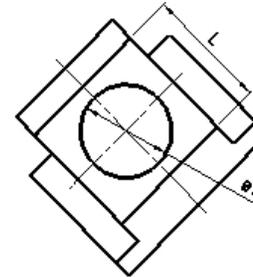


MODEL 11



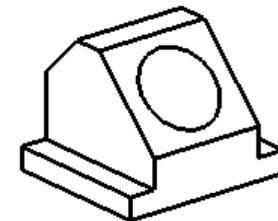
Expression list:

A = 5
B = 4
H = 15
L = 20
S = 8
V = 45
W = 45
X = 28
Y = 22
Z = 10



To build Model 11 use:

- EXPRESSIONS as the above Expression List.
- All following features are to be made by using these variables directly or by using them in a mathematical expression !!!
- BLOCK
- DATUM PLANE
- DATUM AXIS
- PAD
- TRIM BODY
- HOLE



The part is OK, when the Expression List can be used (without errors) to create a variant in different proportions.

Authored by Eric Behnke

22.9.2005

Model 11

ISO view suddenly missing !!

Authorred by Eric Bernike
22.9.2005
Model 16

Model 16

MODEL 16

To build Model 16 use:

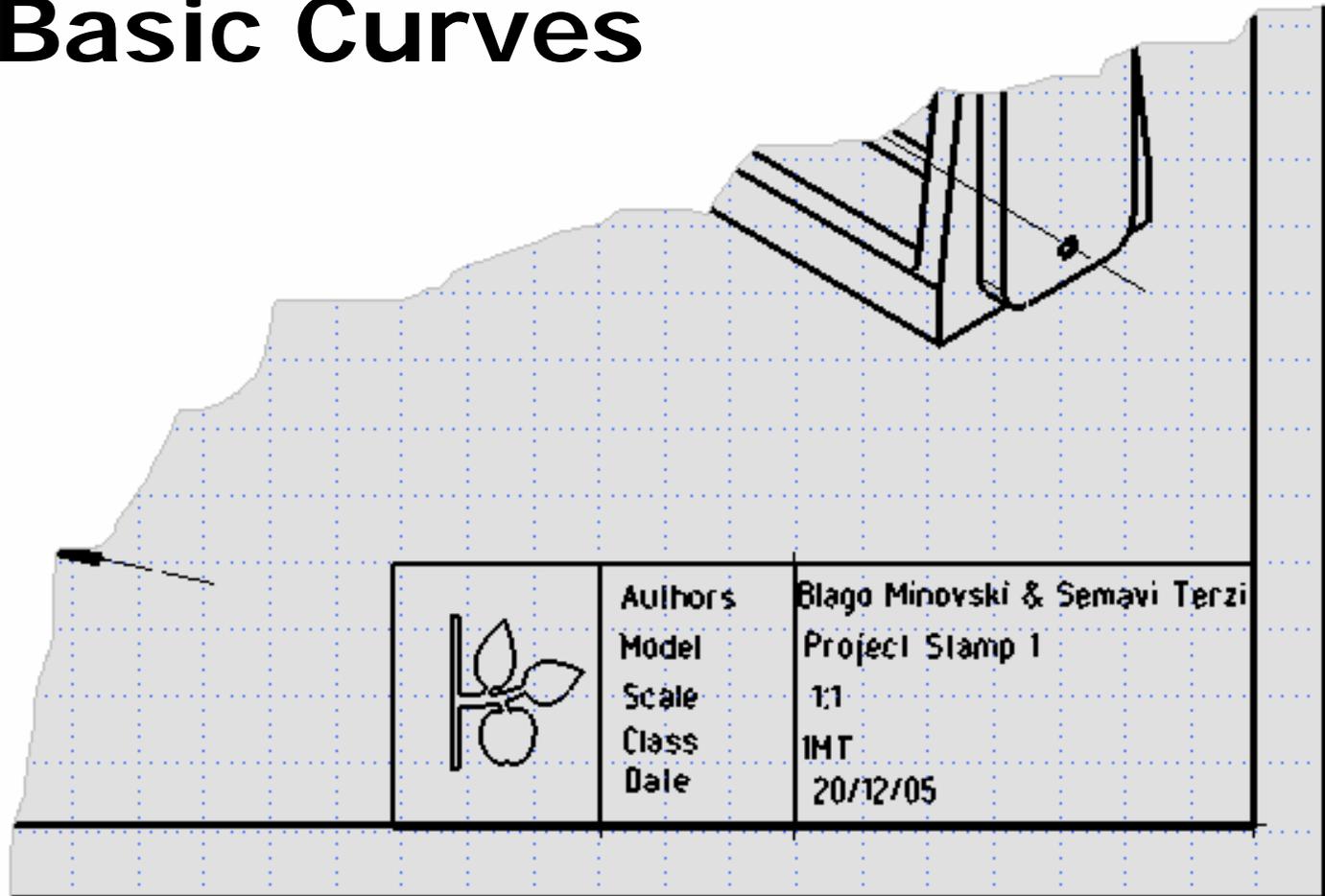
- BLOCK
- PAD
- BLEND
- DATUM PLANE
- OFFSET FACE
- HOLLOW

SH11 (DWG) WORK

CAD Design
3D Solid Modeling in Unigraphics

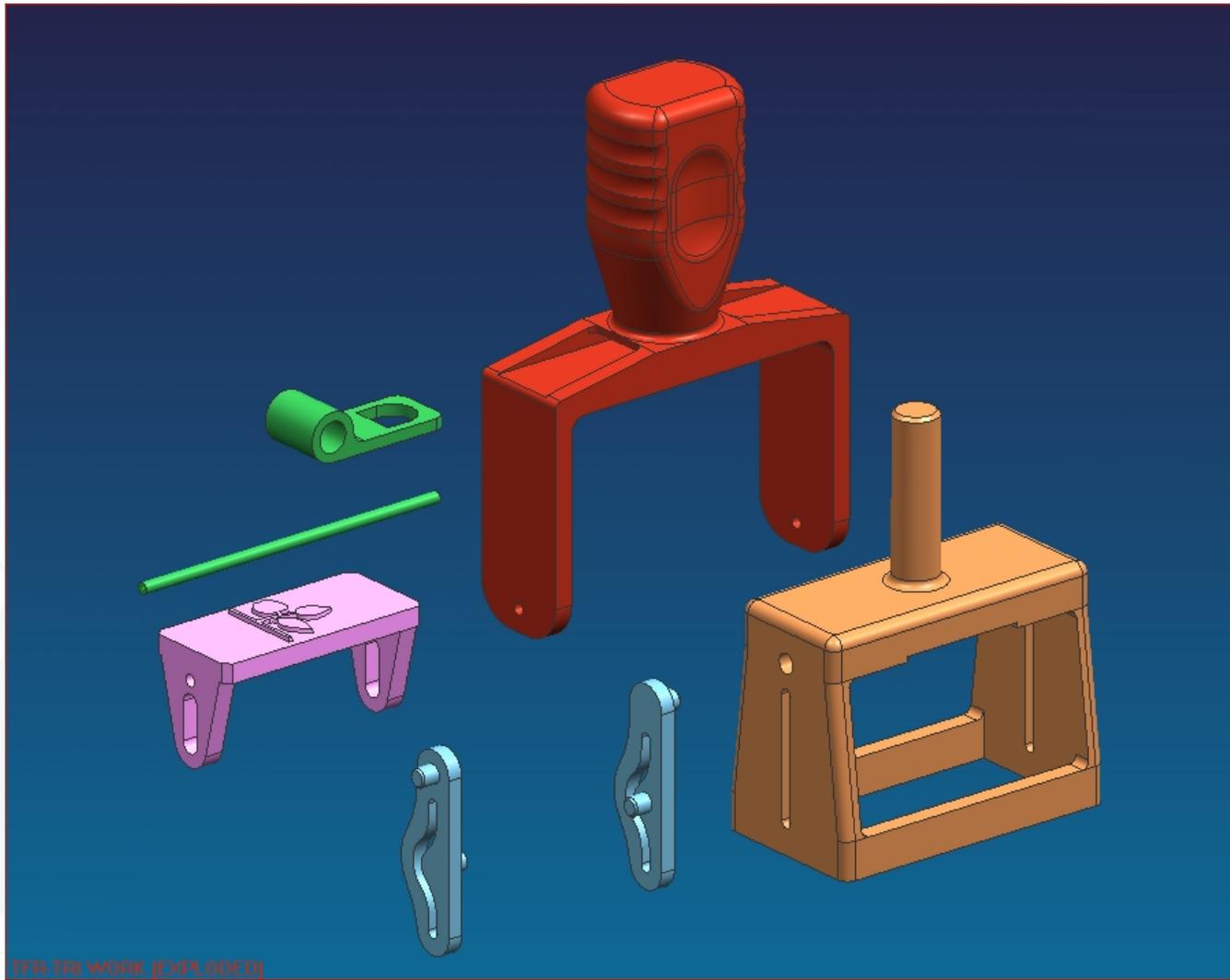


Designing the Drawing Header using Basic Curves





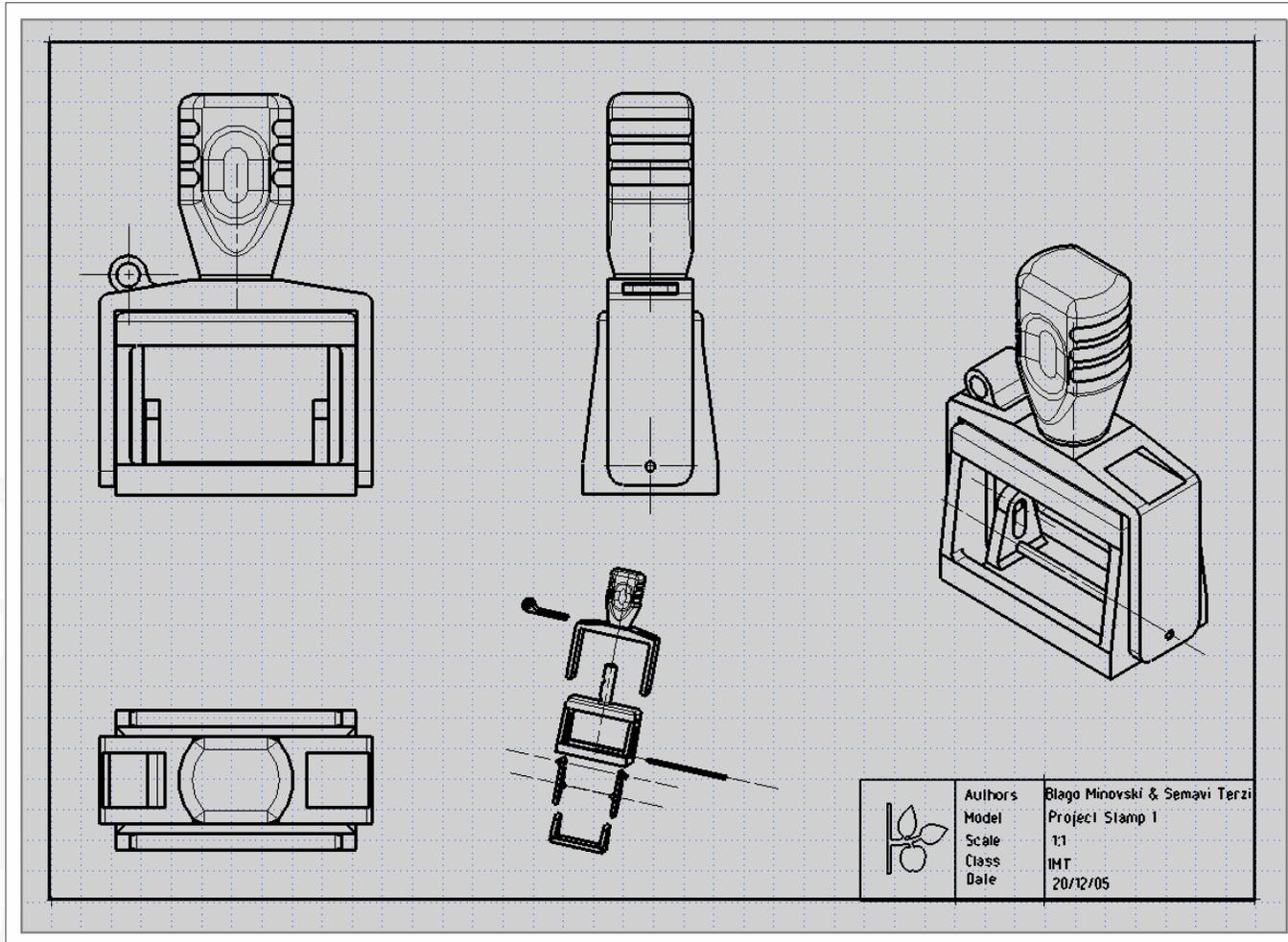
Final Assignment



TFD-TD WORK (EXN 0010)



Assembly Drawing



	Authors	Blago Minovski & Semavi Terzi
	Model	Project Stamp 1
	Scale	1:1
	Class	IMT
	Date	20/12/05



Final assignment as Prototype

