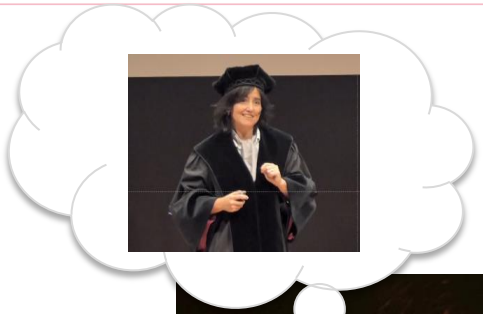
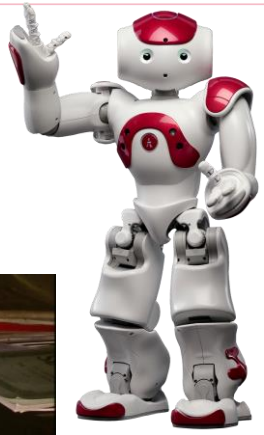
Technische Universiteit Eindhoven University of Technology

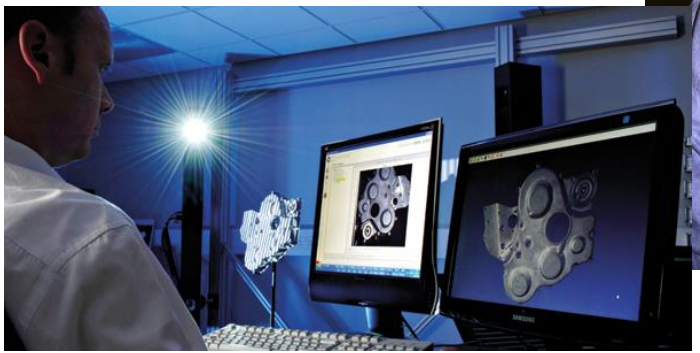
Let’s embrace change!

About diversity, multidisciplinarity and innovation

Prof. dr. ir. Ines Lopez Arteaga







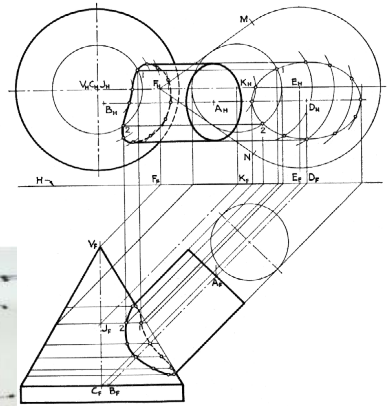


FIG. 137.—Intersection of Cone and Cylinder.

Mission

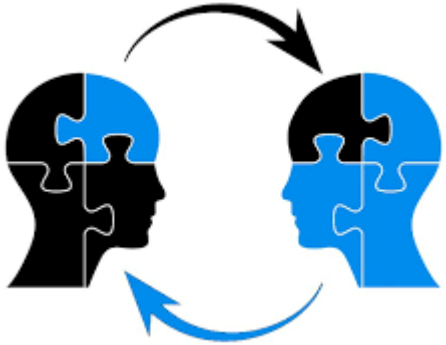
Multidisciplinary

Education in a connected world

TU/e Where people matter

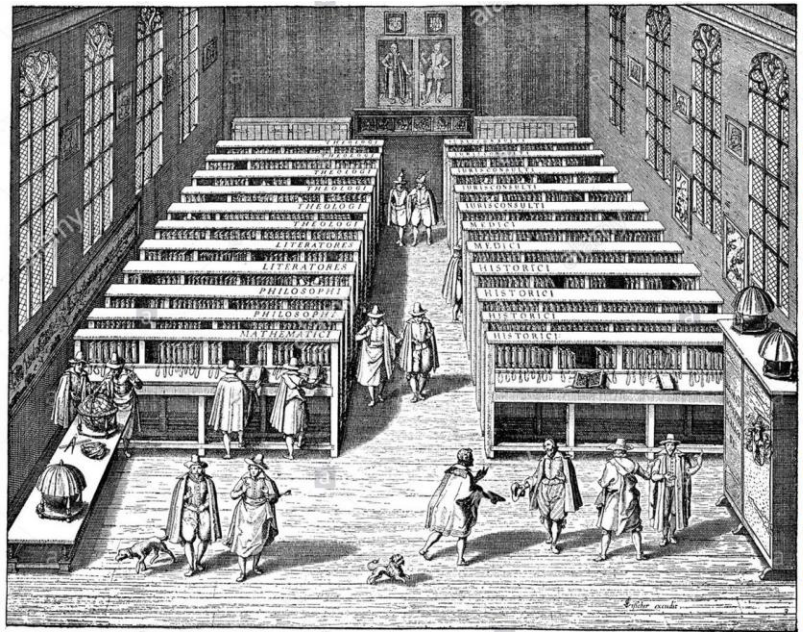
On-campus

Individual supervision



Involve in our research

Education tied to physical location



Leiden University Library 1610

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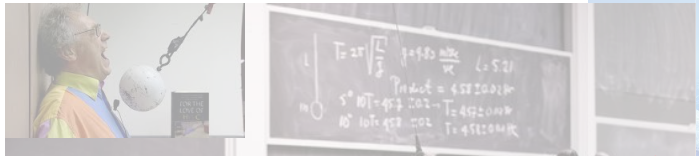
Online education

Online education

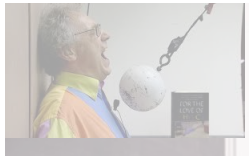


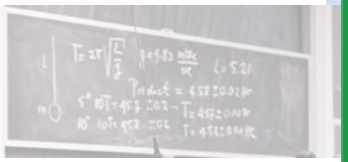
Masive Open Online Courses (MOOC)

Nanodegrees

Micromasters

Online education



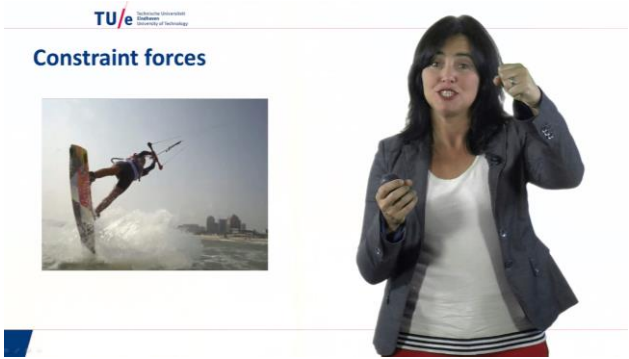


Masive Open Online Courses

Nanodegrees

Micromasters

Blended learning



Lecture Quiz

TU/e

Question 7

Consider the linearized equation of motion

$$\underline{M}_0\ddot{\underline{q}}_1 + \underline{D}_0\dot{\underline{q}}_1 + \left(\underline{K}_0 + \underline{K}_0^Q(t)\right)\underline{q}_1 = \underline{Q}(t)$$

Which of the above matrices are a contribution due to the kinetic energy T

a) $\underline{M}_0$

b) $\underline{K}_0, \underline{K}_0^Q(t)$

c) $\underline{D}_0$

d) $\underline{Q}(t)$

Online Quiz

Question 2
Not yet answered
Marked out of 1.00
Flag question
Edit question

Given a system with $\underline{q} = [x \quad \theta]^T$, which expression of $T_{,\underline{q}}$ can be correct?

Select one or more:

a. $\begin{bmatrix} 0 \\ 0 \end{bmatrix}$

b. $\begin{bmatrix} 0 \\ m\sin\theta\cos\theta\ddot{x} \end{bmatrix}$

c. $\begin{bmatrix} 0 & m\sin\theta\cos\theta\dot{x}^2 \end{bmatrix}$

d. $\begin{bmatrix} 0 & m\sin\theta\cos\theta\ddot{x} \end{bmatrix}$

e. $\begin{bmatrix} 0 \\ m\sin\theta\cos\theta\dot{x}^2 \end{bmatrix}$

f. $\begin{bmatrix} 0 & 0 \end{bmatrix}$

Blended learning??

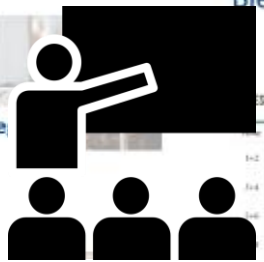
TIMESLOTS

Hour	Time	Monday	Tuesday	Wednesday	Thursday	Friday
1+2	8:45-10:30	A1	C1	B1	E1	D1
3+4	10:45-12:30	A2	C2	B2	E2	D2
5+6	13:45-15:30	B1	E1	D1	A1	C1
7+8	15:45-17:30	B2	E2	D2	A2	C2
9+10	18:15-20:00	E3	B3	A3	D3	C3

Lecture

Problem solving

Online education



Blended learning??

	Monday	Tuesday	Wednesday	Thursday	Friday
	A1	C1	B1	E1	D1
	A2	C2	B2	E2	D2
	B1	E1	D1	A1	C1
	B2	E2	D2	A2	C2

Lecture

Problem solving

Teaching is needed for learning to occur

Online collectives and peer-to-peer learning

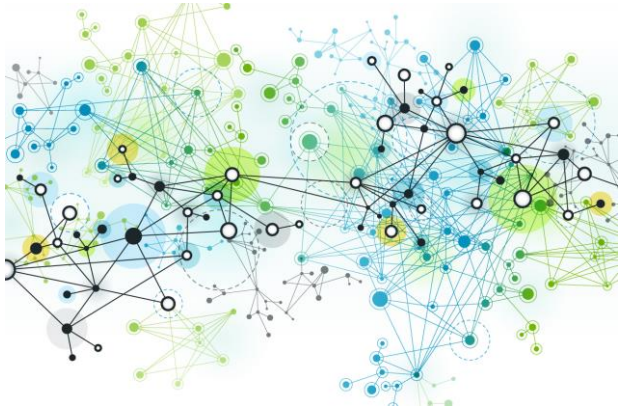
Forums

Games

New learning

Boundaries

Resources



Question+ Imagine + Experiment + Play = Learn

What to do?

Connected education

Online

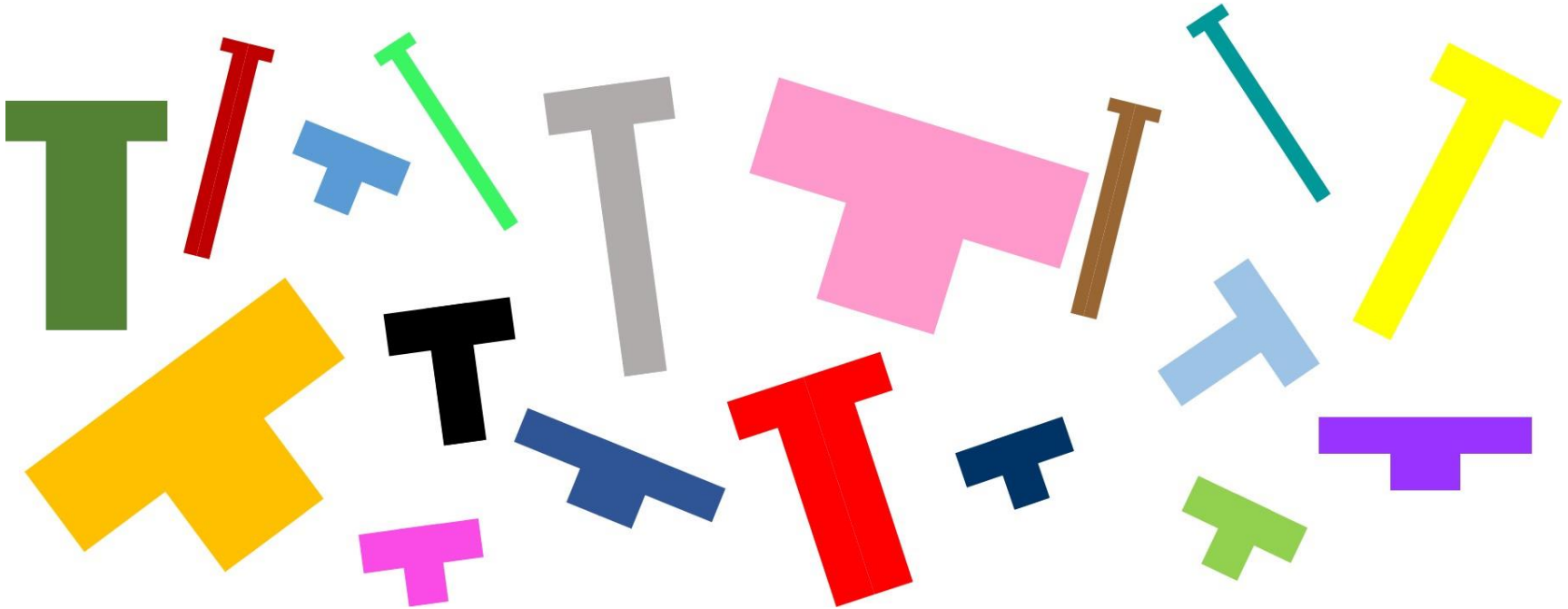
Lectures & problem solving

On campus

Innovation, multidisciplinarity & diversity


Where
innovation
starts

Innovation, multi-disciplinarity & diversity



Diverse teams are more innovative

Innovation

Diverse teams are more innovative

Innovation

Pain

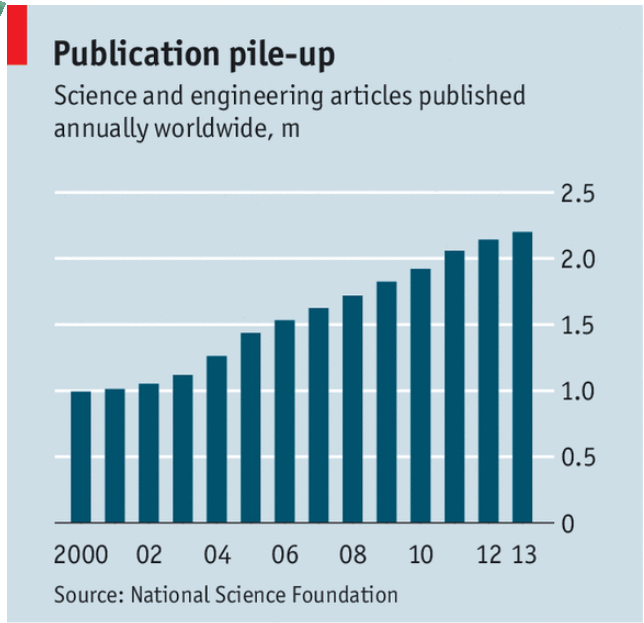
Diverse teams are more innovative

Innovation

Pain

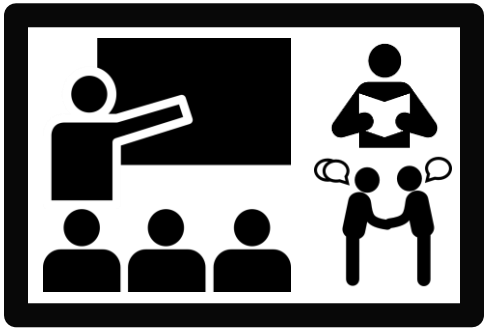
Choice

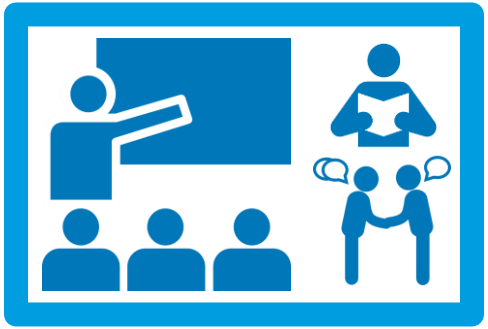
Scientific excellence



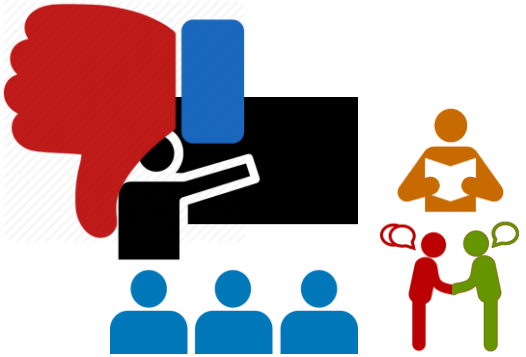
Economist.com

Excellence measures favor monodisciplinary research




Result of excellence measures



Redefine excellence

Future of university education

Multidisciplinary research is a necessary condition in order for universities to provide academic multidisciplinary education

Agree

Disagree

Future of university education

In 2030 Bachelor education will be provided full-time lecturers and researchers will provide only Master and PhD education

Agree

Disagree

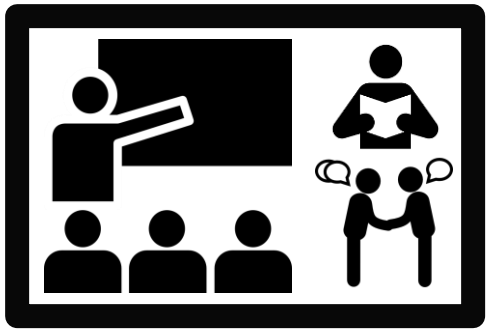
Future of university education

In 2030 there will be no classical on-campus lectures (colleges) anymore, only small scale peer-to-peer and teacher/student interaction

Agree

Disagree

Summarizing



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