

# Technology Enhanced Learning

## Didactic Activities and Support @ VUT

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## **There is a need for new curriculum**

*Traditionally the curriculum consisted of three elements: knowledge, skills, attitudes, which tends to value knowledge above skills, and skills above attitudes.*

*Experience of life suggests different priorities: positive attitudes are key to a rewarding life and job, **skills are also more important than knowledge.***

*These priorities should be asserted in the development of new curriculum, which would raise the value of social capital, civil society and the role of non-formal learning. “*

*< <http://www.eaea.org/index.php?k=4768&aid=4768> >*

# Topics of this Presentation

1. Technology enhanced teaching @ VUT
2. Didactic support of the ELC
3. Analysis of activities and needs
4. Information and mobilization

# Topic 1

# Technology Enhanced Teaching @ VUT

# About 170 courses in TUWEL/Moodle – the central supported LMS

## Unknown number of courses using

- Weblogs
- Wikis
- Homepages
- TUWIS++

## **Organisation** of courses and learners

Presentation of **content** / learning materials

Stimulation of learner's **activities**

Facilitation of learner's **collaboration**

**Communication** between teachers and learners / learners and learners

**Feedback** and answers to learners

**Assessment** of learner's achievements

## Many supplements of traditional courses: „PDF-repositories“

**TUWEL** 351.025 (VU 3,0) Höhere Elektrodynamik

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TUWEL ► 351.025 HöEdyn

**Personen**

Teilnehmer/innen

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**Kursabschnitte**

1 2 3 4 5 6 7 8 9 10 11  
12 13 14 15

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**Aktivitäten**

Arbeitsmaterialien  
Foren

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**Suche in Foren**

Erweiterte Suche

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**TUWEL Toolbox**

TUWEL Tutorials  
Neuen Kurs anlegen  
Zu TUWIS++  
Zur LVA in TUWIS++  
Aktivitäten Report  
Arbeitsgruppen  
Gruppen benoten

**Themen dieses Kurses**

Nachrichtenforum

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**1 Skriptum HÖHERE ELEKTRODYNAMIK**

- Skriptum Höhere Elektrodynamik: Titel und Inhaltsverzeichnis
- Einführung: Elektromagnetische Größen und ihre Bilder
- Mannigfaltigkeiten: Vorstufe zu einem Modell des physikalischen Raumes
- Tensoren: Lokale Repräsentanten physikalischer Größen
- Differenzialformen: Die geborenen Integranden
- Die grundlegende Struktur des Elektromagnetismus im Dreidimensionalen
- Affine Geometrie: Trägheitsbahnen und gekrümmte Räume
- Metrische Geometrie: Abstände, Längen und Winkel
- Das elektromagnetische Feld und die Geometrie des dreidimensionalen Raums
- Raum und Zeit in der relativistischen Physik
- Grundlagen der relativistischen Elektrodynamik
- Kinematik im Raum und in der Raumzeit
- Elektromagnetische Wechselwirkungen: Energie-Impuls-Komplexe
- Mengen. Relationen. Abbildungen
- Topologie
- Spezielle Karten und Basen im dreidimensionalen euklidischen Raum
- Lösungen

## Some blended learning courses: f2f meetings and self-directed learning



**"Newsroom"**

- News zu den Inhalten der Vorlesung
- Daten- und Informationsrecht WiWi
- Glossar zu Daten- und Informationsrecht
- Verrücktes und Kurioses aus der Welt des Rechts

**(Online-) Sprechstunden**

Hier werden Termine zu Sprechstunden der LVA bekanntgegeben – und ob diese persönlich oder online stattfinden. Dieses Semester werden keine Sprechstunden mehr abgehalten.

- Sprechstunde
- Anmeldung zur Sprechstunde am 05.12.2007

**Umfrage (Vielen Dank für Ihre Teilnahme!)**

- Postkasten
- Stellungnahme zum Postkasten
- Plagiat

**Aufgaben und Bonuspunkte**

- Einführung in die Übungsaufgaben
- Aufgabe 1 (Abgabetermin: Freitag, 23. November 2007, 12:00)
- Aufgabe 2 (Abgabetermin: Dienstag, 11. Dezember 2007, 12:00)
- Aufgabe 3 (Abgabetermin: Freitag, 18. Januar 2008, 12:00)
- Bonuspunkte (Abgabetermin: Donnerstag, 24. Januar 2008, 00:00)

**Bonusaufgaben (freiwillig!)**

Hier finden Sie Bonusaufgaben, die Sie freiwillig lösen können um Bonuspunkte zu erzielen. Diese Aufgaben sind zeitlich (jähr) eingeschränkt verfügbar.

**TUWEL TUWEL ELZ Course**

TUWEL > 111.100 TUWEL

**People**

- Participants

**Section Links**

1 2 3 4 5 6 7 8 9 10

**Activities**

- Assignments
- Feedback Activities
- Forums
- Quizzes
- Resources
- Schedulers

**Search Forums**

Advanced search

**TUWEL Toolbox**

- TUWEL Tutorials
- Add a new course
- To TUWIS++
- To TUWIS++ LVA
- Activity report

**Topic outline**

- Welcome to this course!
  - News forum
- 1 Chapter with exercises:
  - Exercise 1 - Checkmark (Due date: Dienstag, 26. Februar 2008, 10:55)
- 2 Chapter with scheduler:
  - Oral exams
- 3 Chapter with feedback:
  - Feedback
- 4 Chapter with quizzes:
  - Quiz
- 5 Collection of lecture notes:
  - Quickstarter
  - Students document
  - TLMS++ - TUWEL
- 6 Chapter with forums:
  - Forum



None (as far as we know):  
**E-Learning in pure form**

## Topic 2

# Didactic Support

## Basic questions

- What are the best methods to design a TEL course – according to my learning objectives?
- Which technology tools are available to realize my didactical ideas?
- How to create high quality content for TEL?
- How can I apply the chosen tools in an effective and efficient way?

## Our Policy

- Support whatever is **possible**
- But: Concentrate on **efficient** solutions
- Main teaching strategy: **Blended Learning**
- Main goals: fostering
  - active **learning**
  - selfdirected **learning**
  - **development of** competencies

**Question:** What are the best methods to design a TEL course according to my learning objectives?

**Support offers – DIDACTICS:**

- Workshops
- Personal consultation
- E-Learning Impulse / Day
- Website / TUWEL courses

**Question:** How to create high quality content for TEL?

**Support offers CONTENT CREATION:**

- Workshops
- Personal consultation
- TUWEL course

**Question:** Which technological tools are available to realize my didactical ideas?

**Support offers – TECHNICS:**

- Workshops
- E-Learning Impulse / Days
- Helpdesk
- Personal consultation
- TUWEL features course

**Question:** How can I apply the chosen tools in an effective and efficient way?

**Support offers – TECHNICS:**

- Helpdesk
- personal consultation
- Workshops



## Experiences & Hypotheses

- Helpdesk and personal consultation are more frequented over the time
- Workshops and information events (E-Learning Impulses / Days) are less frequented now than two years ago
- Teachers (= customers) do want answers and solutions **HERE & NOW**
- Teaching is private sphere

## Conclusions

- Our formal support offers (information events, workshops) do not exactly meet the real needs.
- We will have to analyze the
  - really existing teaching activities (beyond using TUWEL)
  - and individual needs and interests
- We will have to intensify communication with teachers, students, and managers on more informal level

## Topic 3

# Analysis of Activities and Needs

## Research Questions (I)

- Who practices technology enhanced teaching (TET)
  - (how many teachers,
  - at which faculties and institutes,
  - on which hierarchical level)?
- Who would like to practice TET – but feels or is handicapped (by what)?
- What are teachers actually doing when technology enhanced teaching?

## Research Questions (II)

- Where are teachers satisfied with their results – what would they want to improve?
- Where are students satisfied with courses – what would they want to be improved?
- Which kind of support do teachers and students factually expect from the ELC

## Methods

- Informal talks with teachers and students
- Formal interviews (semistructured) with teachers and students
- E-mail survey (open questions)

## Planning for the future (optional)

- Online survey (representative)

## First Results

(Produced by an e-mail survey among appr. 1000 students with open questions)

- Some teachers have good TEL-concepts, but lack technical knowledge and skills to realize them effectively.
- Many of them learn how to teach only by trial and error – they do not ask for support.

## Open questions

- Why?
- How could this be changed?

## Topic 4

# Information and Mobilization



## **Information events**

- E-Learning Impulse (every two months)
- E-Learning Day (once a year)

## **Talks on informal individual level**

## **Communication on formal level**

- Individual (see research activities)
- Institutional: university management  
individual faculties

**Thank you for your attention –  
and questions**