



## Challenges and Chances Implementing “Bologna” in SAP Campus Management

<http://campus.unibas.ch>



### Agenda

- ▶ SAP at the University of Basel  
(*Elsa Sutter*)
- ▶ Bologna Process: ECTS in general  
and new curricula at the University of Basel  
(*Lukas Heierle*)
- ▶ Implementation of new curricula into  
SAP Campus Management:  
Academic structure, degree audit, prerequisites  
(*Andreas Born*)



## SAP at the University of Basel

### Why did we choose SAP ?

- ▶ Standard software offering functionalities for academic services
- ▶ SAP strategy (integrating modules Finance, Personal, Controlling)
- ▶ Long living solution with continuing development
- ▶ One data base (centrally and/or decentrally used)
- ▶ Cooperation with other universities in Switzerland, Europe and USA

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## SAP R/3 - Productive Modules

1998

Financials

2000

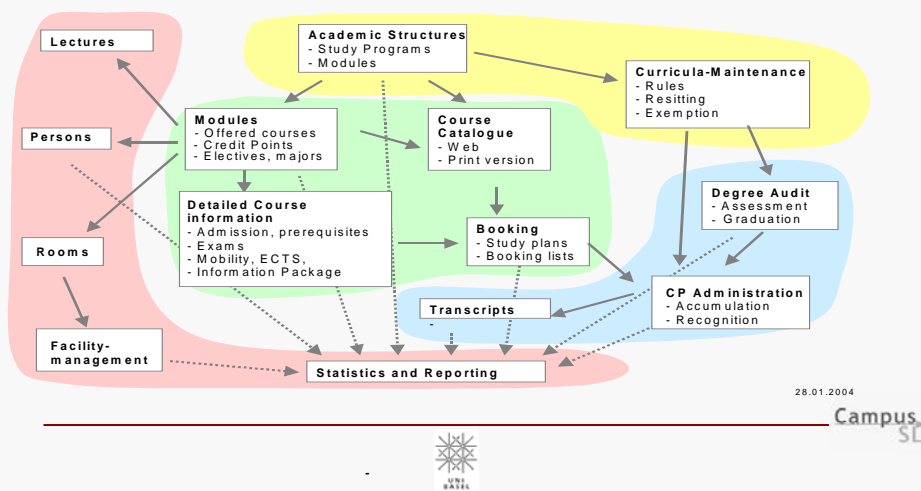
Human Resources

2002

Student Administration

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## Project Campus Studium & Lehre 2004 - 2006...



## Bologna Declaration

- ▶ The Bologna Declaration was signed in June 1999
- ▶ Representatives of 31 Governments signed the Declaration to promote the "European Higher Education Area" (EHEA)
- ▶ For the Swiss Government, Charles Kleiber, State Secretary for Science and Research, signed the Declaration

## Intentions of the Bologna Declaration

- ▶ Improvement of teaching and learning at Higher Education Institutions
- ▶ Orientation of the curricula to the needs of students
- ▶ Facilitation of student mobility



## Key Features of the Bologna Process

- ▶ Structuring curricula as Bachelor, Master and Doctorate programs
- ▶ Modularisation of the academic study programs
- ▶ Measurement of the students workload in ECTS-Credits

ECTS:  
European Credit Transfer and Accumulation System



## Selected Key Features of ECTS

- ▶ 60 credits are equivalent to the workload of a full time student during one academic year
- ▶ 1 credit stands for 25-30 hours of student work
- ▶ Credits are obtained after completion of the work required and appropriate assessment of the learning outcomes
- ▶ Credits are allocated to modules, courses, self-study and homework

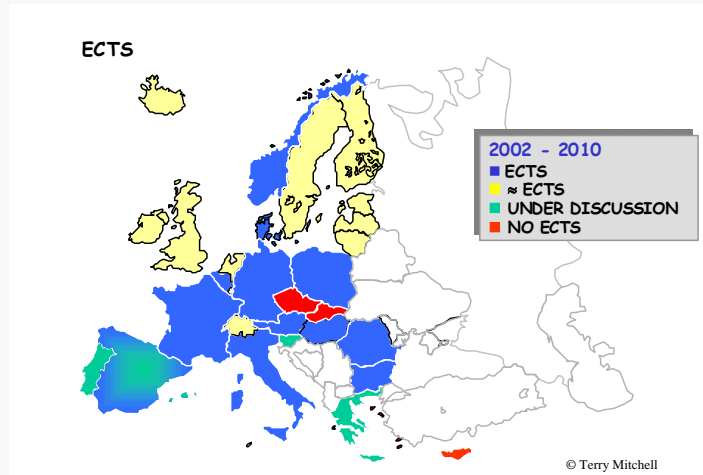


## Key Documents of ECTS

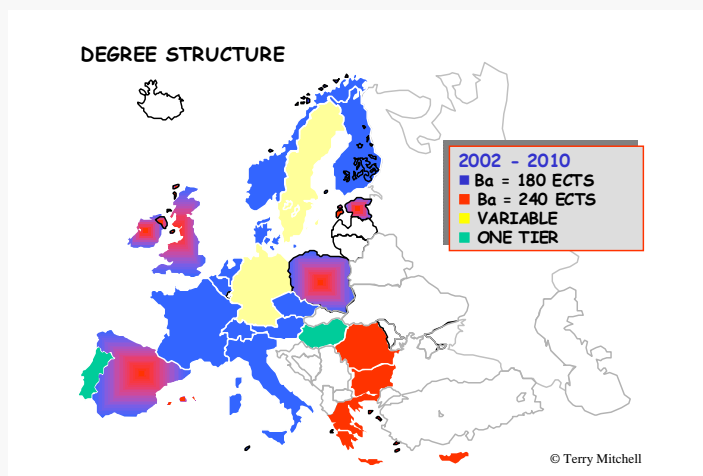
- ▶ Regular Course Catalogue:  
Two languages, web, hard copy
- ▶ Learning Agreement:  
List of courses to be taken and agreed upon by the student and the responsible academic body
- ▶ Transcript of Records:  
List of courses taken, credits gained, local grades, possible ECTS grades
- ▶ Diploma Supplement:  
explains the educational system of the country ...



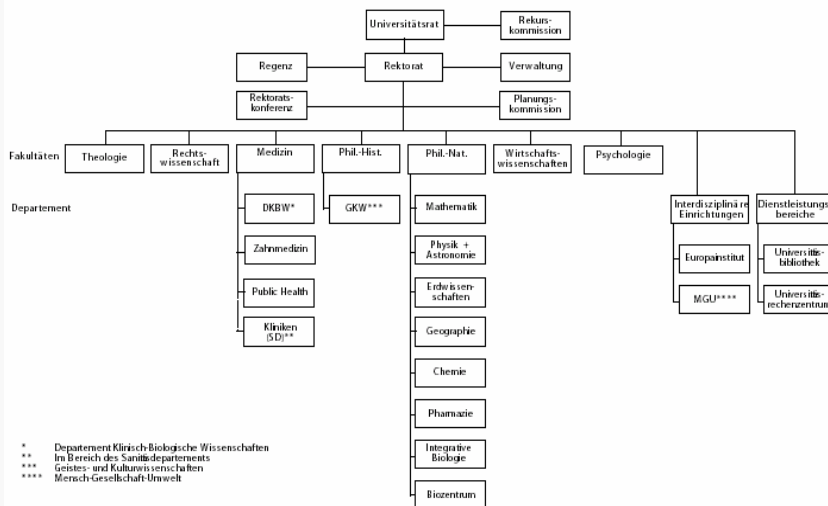
## ECTS in Europe



## BA in Europe



## University of Basel



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## BA / MA-Curricula at the University of Basel

- ▶ BA-Curricula are usually structured:  
Basic studies (first year), second and third year BA
- ▶ Most courses of the basic studies are mandatory
- ▶ Elective courses: 12 CP from other programs:  
Students choose, which courses they attend



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## BA of Informatics - Conditions

§ 9. Das **Aufbaustudium** mit Vertiefungsrichtung "Computer Science" ist bestanden, wenn folgende Kreditpunkte erworben sind:

- a) 45 KP aus dem **Modul** Informatik II
- b) 14 KP aus dem **Modul** Mathematik II
- c) 16 KP aus dem **Modul** Physik
- d) 10 KP aus dem **Modul** Life Sciences
- e) 26 KP aus dem Vertiefungs**modul** Computer Science, inkl. einem Seminar im Umfang von 6 KP
- f) 24 KP aus dem **Wahlbereich** II

Im Wahlbereich II müssen 12 KP aus den Disziplinen Informatik, Bioinformatik, Geoinformatik, Mathematik, Physik und Nanowissenschaften und ggf. aus einem ausseruniversitären Praktikum und 12 KP aus frei wählbaren Lehrveranstaltungen aus Disziplinen ausserhalb der Informatik stammen.



## BA of Informatics

- ▶ The module "Informatik I" consists of five courses (CS 101 to CS 105) with CP.
- ▶ Students from other disciplines are allowed to book single elective courses; they don't have to attend the whole module.
- ▶ The offerer of a course (professor, faculty) defines how the examination takes place independent from the curriculum of the student.



## Modelling Study Programs in SAP CM – „Bologna Model“

.BA_Inf	Bachelor in Informatik
vermittelt	
.BA_Inf_GS	Bachelor Grundstudium
.InfG_Inf01	Modul Informatik I
.InfInfo1	Prüfung zu Modul Informatik I
.InfAnwendun	Anwendungen der Informatik
.InfProgra1	Programmieren 1 (Winter)
.InfProgra2	Programmieren 2 (Sommer)
.InfTheorie	Theorie der Informatik
.InfWerkzeug	Werkzeuge der Informatik
.InfG_Mathe1	Modul Mathematik I
.BA_Inf_AS	Bachelor Aufbaustudium
.Mj_InfB_Com	Major Computer Science
.Mj_InfB_Com	Modul Computer Science
.Mj_InfB_Bio	Major Bioinformatik
.Mj_InfB_Geo	Major Geoinformatik
.InfA_Inf02	Modul Informatik II
.InfA_Mathe2	Modul Mathematik II
InfA_Physik	Modul Physik

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## BA of Informatics - Basic Study Courses

Semester	Modul	Code *)	Veranstaltung	KP
1	Informatik I	CS101	Programmieren I, mit Übungen	6
		CS102	Werkzeuge der Informatik, mit Übungen	4
		CS103	Anwendungen der Informatik (Ringvorlesung)	2
	Mathematik I		Infinitesimalrechnung I, mit Übungen	6
			Lineare Algebra I, mit Übungen	6
	Wahlbereich I, Major		6	
2	Informatik I	CS104	Programmieren 2, mit Übungen	6
		CS105	Theorie der Informatik, mit Übungen	3
	Mathematik I		Infinitesimalrechnung II, mit Übungen	6
			Lineare Algebra II, mit Übungen	6
		Wahlbereich I, Major		9

To maintain credit points and grades you need a SM !



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## Modelling Study Programs in SAP CM – „Basel Model“

BA_Inf	Bachelor in Informatik
vermittelt	
BA_Inf_GS	Bachelor Grundstudium
InfG_Info1	Modul Informatik I
InfAnwendung	Anwendungen der Informatik
InfProgram1	Programmieren 1 mit Übungen
InfProgram2	Programmieren 2 mit Übungen
InfTheorie	Theorie der Informatik mit Übungen
InfWerkzeug	Werkzeuge der Informatik mit Übungen
InfG_Mathe1	Modul Mathematik I
verwendet	
Ba_Inf_AS	Bachelor Aufbaustudium
InfA_Info2	Modul Informatik II
InfA_Mathe2	Modul Mathematik II
InfA_Physik	Modul Physik
InfA_LifeSci	Modul Life Sciences
InfA_Kommuni	Modul Kommunikation
Mj_InfB_Comp	Vertiefungsmodul Computer Science
Mi_InfB_Rin	Vertiefungsmodul Bioinformatik



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## Requirements for Program Completion - Examples

Module	Requirement
Informatics I	21 CP in module <b>Informatics I</b> 1 grade may be <4.0 Average grade must be $\geq 4.0$
Mathematics I	24 CP in module <b>Mathematics I</b>
Major Computer Science	26 CP in module <b>Computer Science</b> including 6 CP from seminars
Elective Courses (Computer Science)	12 CP in Informatics, Bioinformatics, Geoinformatics, Physics, ... ----- 12 CP not in Informatics (SC)
Study Program	180 CP overall



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## Defining Subrequirements - Module "Informatik I"

### 1. Select academic work

- ▶ All academic work (SM) in module "Informatik I" (CG)

### 2. Calculate performance index and compare

- ▶ Sum of graded (not earned!) CP  $\geq 21$
- ▶ Number of failed SM  $\leq 1$
- ▶ Average grade  $\geq 4.0$

▼	InfG_Info1	
▶	InfAnwendung	2 CP
▶	InfProgram1	6 CP
	InfProgram2	6 CP
	InfTheorie	3 CP
▶	InfWerkzeug	4 CP
		<hr/>
		21 CP



## Degree Audit

### Academic Structure:

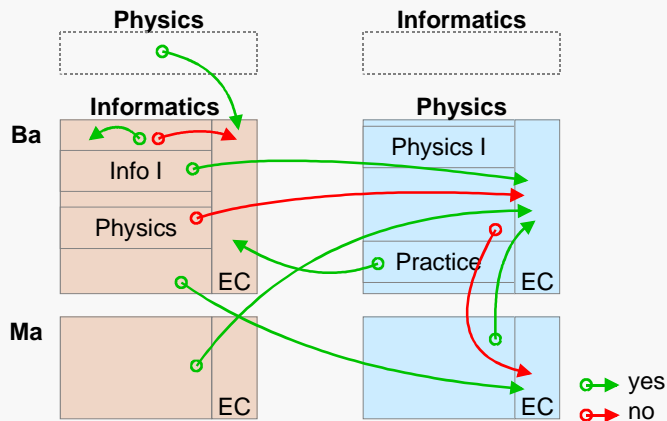
	Bezeichnung
BA_Inf	Bachelor in Informatik
▶ vermittelt	
▶ BA_Inf_GS	Bachelor Grundstudium
▶ InfG_Info1	Modul Informatik I
▶ InfG_Mathe1	Modul Mathematik I
▶ verwendet	
▶ Ba_Inf_AS	Bachelor Aufbaustudium
▶ InfA_Info2	Modul Informatik II
▶ InfA_Mathe2	Modul Mathematik II
▶ InfA_Physik	Modul Physik
▶ InfA_LifeSci	Modul Life Sciences
▶ InfA_Kommuni	Modul Kommunikation
▶ Mj_InfB_Comp	Vertiefungsmodul Computer Science
▶ Mj_InfB_Bio	Vertiefungsmodul Bioinformatics
▶ Mj_InfB_Geo	Vertiefungsmodul Geoinformatics
▶ InfA_ohneMZu	Lehrveranstaltungen ohne Modulzuon
▶ verwendet	
▶ verwendet	

### Audit Run:

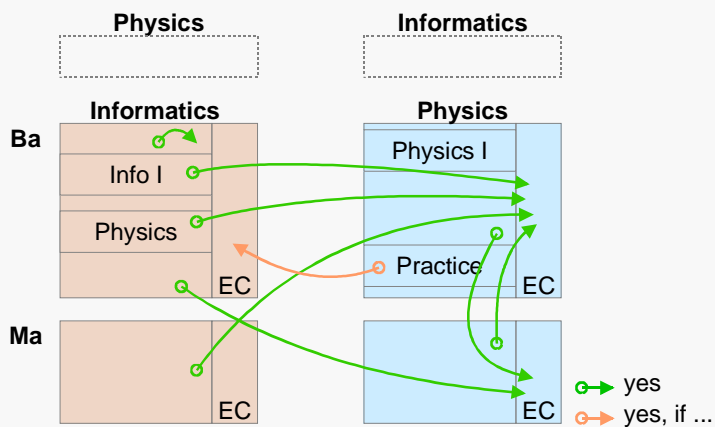
Offizielles Profil	
▼ Anforderungen Grundstudium	
● K++ BA_Inf $\geq 60$	✓
● K++ InfG_Info1 $\geq 21$ komp.	✓
● K++ InfG_Mathe1 $\geq 24$	✓
▼ Anforderungen Aufbaustudium	
● K++ BA_Inf $\geq 180$	✗
● K++ InfA_Info2 $\geq 45$	✓
● K++ InfA_Mathe2 $\geq 14$	✓
● K++ InfA_Physik $\geq 16$	✓
● K++ InfA_LifeSci $\geq 10$	✓
● K++ BA_Inf $\geq 12$ Wahl frei	✓
▼ Anforderungen 1. Schwerpunkt	
● K++ Mj_Inf_Comp $\geq 26$ Sem	✓
▲ K++ Mj_Inf_Comp $\geq 12$ Wahl	✗
▼ Anforderungen 2. Schwerpunkt	
● MGU kleines Basismodul	
▲ MGU grosses Basismodul	
MGU Grundkursprüfung best	



### Prerequisites – Can I use my credits?



### Prerequisites – Can I book a course?



Thank you!  
Questions and remarks?

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## Contact

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