

IT-Education in Austria

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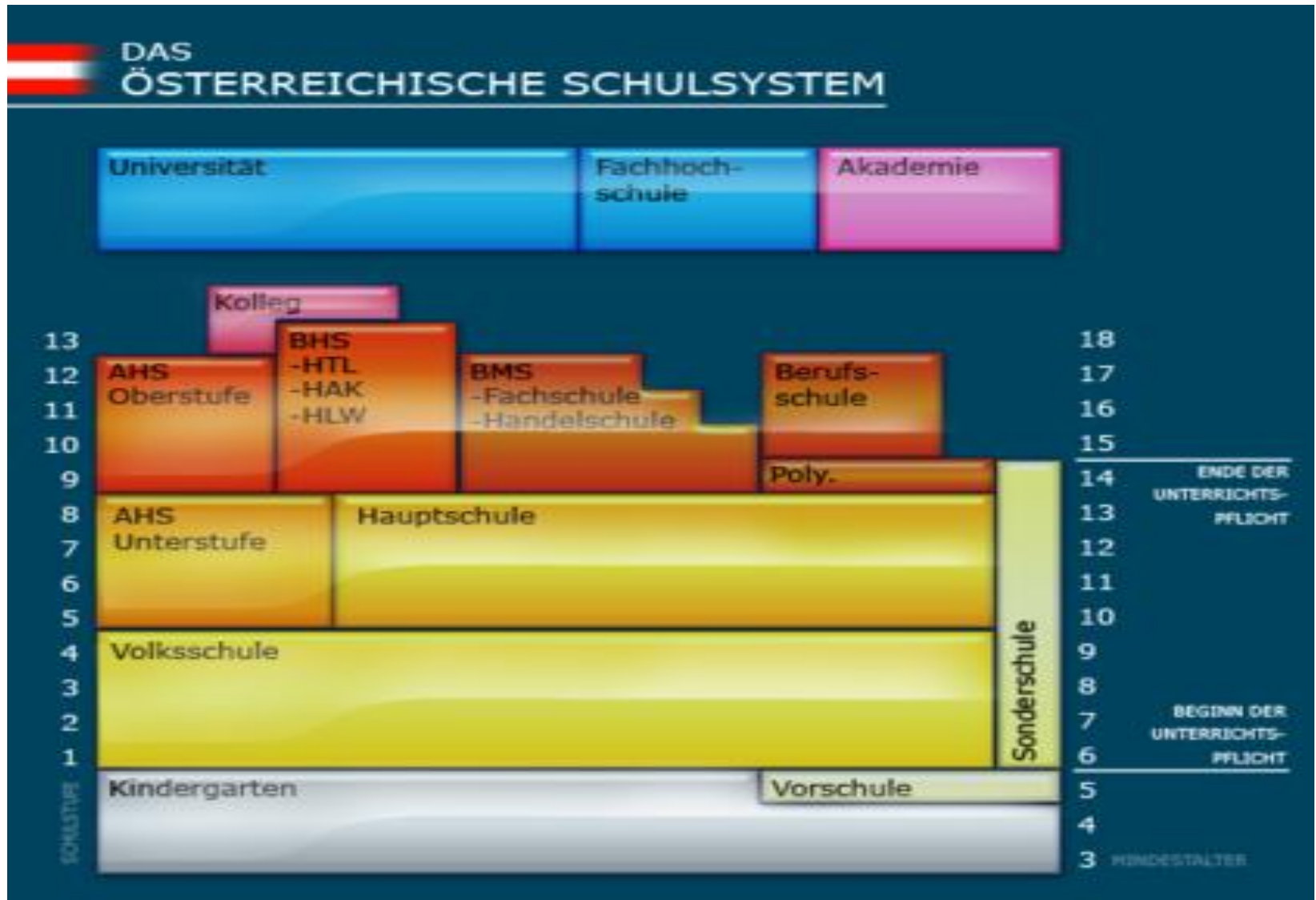
Austria and EU



Austria in Figures

- Republic, EU member since 1995
- Inhabitants: 8,355,260 (Jan 2009)
- Area: 83,871 km² , 60% alpine area
- = 99.5 inhabitants per km²
- Language: German (99%)
- Gross domestic product ca. 28,880 Euro per inhabitant
- 4.2 % unemployment rate (Q1 2008)

Austrian School Education System



Number of pupils and teachers

- ***Kindergarten*** 198 652, female 97 135, male 101 517
 - ***Compulsory schools*** 669 388, female 317 698, male 351 690
 - ***Academic secondary schools*** 197 418, female 106 607, male 90 811
 - ***Higher technical and vocational colleges*** 140 949, female 74 659, male 66 290
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- Total about 1,000,000 pupils (grade 1 – 13)
 - About 120,000 teachers

IT-Education at Austrian schools

grade 1 to 8

In general no compulsory IT subject

IT should be involved in all subjects

about 50 % of schools offer special IT and Informatics courses (mostly ICT)

grade 9

Compulsary IT education since 1985 (ICT and Informatics)

grade 10-12 (13)

at least elective topic

in most vocational schools compulsory IT
graduation with topic informatics possible

IT Competitions for pupils

- **25th Austrian Youth Informatics Competition**
OCG, jiw.ocg.at, Informatics projects Competition
age 6 to 20
- **Computer Contest Austria**
www.contestsinternational.eu/ComputerContest
given tasks to be solved, computer applications
pod cast, video competition
- **Cyber School Competition**
www.cyberschool.at, Project Competition
- **Bebras Contest** since 2007
2009 we expect more than 10,000 participants
- Patrik Fimml, the Austrian finalist at **IOI** 2009, won a silver medal, ioi.ocg.at.

Informatics Teacher Education for Secondary Schools

Situation in Austria

- Since 2007 compulsory schools teacher education at „Universities of Education“
 - But no Informatics Teacher tracks
- Since 2001 Academic secondary Informatics Teacher Education at University level
- At Universities in Vienna, Klagenfurt, Salzburg, Linz, Innsbruck, Graz
- Duration: 4 years
- Compulsary combination with a second topic: Informatics and English, Informatics and History, Informatics and Mathematics, etc.

Curriculum

Diploma Thesis (15)	
Informatics (100)	Second Topic (100)
Informatics Lectures (70)	Second Topic Lectures (70)
Informatics Didactics (26)	Second Topic Didactics (26)
Real School Experience (4)	Real School Experience (4)
Pedagogical Lectures (14 + 3)	

Lectures for Informatics Teachers

- Maths for Informatics
- Algorithms, Data Structures and Programming
- Theoretical Informatics
- Practical Labs
- Internet Applications
- Data Bases, Data Modelling
- Security
- Privacy
- User Interface Design
- E-Learning
- Soft Skills
- IT-Administration
- etc.

Informatics Didactics

- School Informatics
- Interdisciplinary Projects
- Project Management at School
- History of Informatics
- E-Learning Didactics
- Selected Topics of Informatics Didactics
- etc.

Future of teacher education

- Same education for all secondary teachers
 - Universities + Universities of Education
- Bachelor + Master studies
- Master study „Informatics Didactics“ exists already at Universities of Vienna (since 2009)