The Shift to Bachelor/Master Programs in Germany and Their Accreditation -
A Report on the Current Status in Informatics

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Situation in Germany in 2000/2001:

- Education in Germany is ruled by 16 individual state governments
  - Federal government only responsible for some coordination and financing
- Study programs required permission by the state ministry
  - Only formal checks, no subject related or quality requirements
  - Standards have been established by organizations like Fakultätentag Informatik
- Politics demand that Universities offer the Bachelor/Master system by 2010 nationwide
  - Well established Diploma programs (typically 9 semesters)
  - In particular in Engineering and Natural Sciences, should be completely abolished
- No details concerning designing Bachelor-Master programs had been worked out
  - In particular length, titles of graduation
    (BA of Science - BA of Informatics - BA of Science in Informatics - ...)
- Special situation in Germany: Fachhochschulen
  - (Colleges without research duties and Ph.D., Polytechnica, Universities of Applied Science)
  - (Graduation, Dipl. Ing. (FH))
Structural Requirements demanded by the Council of the States

- new programs have to be accredited first

- existing or transferred programs have to be accredited within 1 year

- Ba programs of Universities and Fachhochschulen shall not be differentiated
  in particular no more distinction between „more fundamental“ and „more applied“
  every Bachelor degree qualifies for Master continuation

- Ba programs have to achieve „employability“
  for the majority this should be final academic qualification

- Ma programs have to be classified:
  „more research oriented“ or „more applied“
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euroTICS 2006, 16-17.10.2006, Zürich

Institutional Organisation

Akkreditierungsrat
German Accreditation Council

Accreditation Agencies

structural demands
accredite

INQAAHE

ECA European Consortium for Accred. in Higher Education

D-A-CH

Washington Accord

ACQUIN AHPGS AQAS ASIIN FIBAA ZEvA
ASHIN: Accreditation Agency for Study Programs in

Engineering
Informatics
Natural Sciences
Mathematics

private organisation (e.V.)

established by academic and industrial institutions

GI Gesellschaft für Informatik
VDI Verband der Ingenieure
FTI Fakultätentag Informatik (University departments)
FBI Fachbereichstag Informatik (FH departments)
and many more ........

focussed, but not restricted to accrediting programs in Germany
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Structure of ASIIN

4 Akkreditierungskommissionen
6-10 members each

14 Fachausschüsse
8-15 members each

Reviewing Team
4-8 members special for each case

Board of institutional members

discusses
prepares a decision

decides on accreditation

selects members

checks program proposal
visits institution
writes report + proposal

Informatics:
> 100 experts from Universites, FH, Industry, Students
Accreditation Procedure

- **duration:** 6 month
- **evaluation:** 1.5 days at the institution
- **report:** 30-50 pages
- **cost:** 10 - 15k €

Possible decisions:
- Accreditation for 5 years
- Conditional accreditation for 1+4 years
- No accreditation
## Some Statistics

(state ~ October 2006)

<table>
<thead>
<tr>
<th>accreditation of ASIIN</th>
<th>Universities</th>
<th>Fachhochschulen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor</td>
<td>130</td>
<td>276</td>
</tr>
<tr>
<td>Master</td>
<td>210</td>
<td>192</td>
</tr>
<tr>
<td>sum</td>
<td>340</td>
<td>468</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>number of accreditations</th>
<th>percentage in Informatics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACQUIN</td>
<td>300</td>
</tr>
<tr>
<td>AQAS</td>
<td>285</td>
</tr>
<tr>
<td>ASIIN</td>
<td>482 (&gt; 75%)</td>
</tr>
<tr>
<td>ZEvA</td>
<td>280</td>
</tr>
</tbody>
</table>
### Some Statistics II

(state ~ October 2006)

<table>
<thead>
<tr>
<th></th>
<th>Universities</th>
<th>Fachhochschulen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>number of study programs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>7863</td>
<td>3086</td>
</tr>
<tr>
<td>Bachelor</td>
<td>1741 22%</td>
<td>1386 45%</td>
</tr>
<tr>
<td>Ba accredited</td>
<td>361 20%</td>
<td>527 38%</td>
</tr>
<tr>
<td>Master</td>
<td>1259 16%</td>
<td>830 27%</td>
</tr>
<tr>
<td>Ma accredited</td>
<td>432 34%</td>
<td>414 50%</td>
</tr>
<tr>
<td>Ba + Ma</td>
<td>38%</td>
<td>72%</td>
</tr>
<tr>
<td><strong>length of study programs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Sem</td>
<td>95%</td>
<td>52%</td>
</tr>
<tr>
<td>7 Sem</td>
<td>3%</td>
<td>38%</td>
</tr>
<tr>
<td>Master</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Sem</td>
<td>75%</td>
<td>50%</td>
</tr>
<tr>
<td>3 Sem</td>
<td>12%</td>
<td>33%</td>
</tr>
</tbody>
</table>
### Some Statistics III

(state ~ October 2006)

<table>
<thead>
<tr>
<th>number of accredited programs by area</th>
<th>Ba</th>
<th>Ma</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informatics</td>
<td>127</td>
<td>99</td>
<td>226</td>
</tr>
<tr>
<td>Mathematics</td>
<td>17</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>Physics</td>
<td>25</td>
<td>17</td>
<td>42</td>
</tr>
<tr>
<td>Total Natural Sciences, Inf., Math</td>
<td>224</td>
<td>186</td>
<td>412</td>
</tr>
<tr>
<td>Elec. Engineering</td>
<td>80</td>
<td>76</td>
<td>157</td>
</tr>
<tr>
<td>Mech. Engineering</td>
<td>75</td>
<td>42</td>
<td>117</td>
</tr>
<tr>
<td>Total Engineering</td>
<td>275</td>
<td>255</td>
<td>530</td>
</tr>
</tbody>
</table>
Research Project EuroInf

European Accreditation of Informatics Programs (2006-2008)

Goal: setting up a qualification framework for accreditation of informatics education
- common European standards
- European label

Institutions: ASIIN
CEPSIS Council of European Professional Informatics Societies
HAW Hochschule für Angewandte Wissenschaft Hamburg
Uni PB Universität Paderborn, Institut für Informatik

previous projects: EUR-ACE
Accreditation of Euro. Engineering Programmes and Graduates (FEANI)
Outlook

- still several thousand Diploma programs have to changed into Ba/Ma by 2010

- no clear solutions yet for the areas medicine, law, theology, teachers education

- still several thousand programs have to be accredited within the next years

- first reaccreditations on the way (7 years period)

- methodological shift from setting up formal rules to output requirements (skills)

- new accreditation procedures? - program versus process/system