Educational Institutes and Software Industry

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Department of Computer Engineering
Chulalongkorn University
University Curriculum

Bachelor  CS CE SE IT
Master    CS CE SE IT
Doctor    CS CE

CS computer science,  CE computer engineering
SE software engineering,  IT information technology
Knowledge Space

Organisational System

Practice ↔ Theory
## Knowledge acquisition

<table>
<thead>
<tr>
<th>Organisational</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain Knowledge Training Experience</td>
<td>Continuing education Training Standard Skill</td>
</tr>
</tbody>
</table>

Workshop for educational planning, MOE, 7-8 August 2006.
Knowledge body for programmer

- System thinking
- Mathematics
- Architecture
- Programming skill and practice
- Specialised domain
- Certificate
Knowledge body for engineer

• Engineering education
• Standard
• Training
• Engineering design
Knowledge body for designer

• Architecture
• Design practice and skill
• Analysis
  Mathematics
• Domain knowledge
• Culture
Knowledge body for manager

- Organisational
- Breath of knowledge
- Management science and skill
- Finance
- Society
Example of Volume of work force produced by Chulalongkorn University
Computer Engineering: CS CE SE

<table>
<thead>
<tr>
<th>Level</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Bachelor</td>
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<td>Master</td>
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<tr>
<td>CS</td>
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<tr>
<td>CE</td>
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<td>SE</td>
<td>30</td>
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<td>Doctor</td>
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</table>
Computer Science, Department of Mathematics  CS

Bachelor  50
Doctor  3
Faculty of commerce and accounting

IT + SE

Bachelor 60

Business software development
Master 60
End