

IPHIE & EFMI WG EVAL

Evaluation of Health Information Systems:

What theory and practice to include  
in our curricula?



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Medical Information Sciences Curriculum-  
University for Health Informatics and  
Technology Tyrol

- 1,5 years alt (founded in Oct. 01)
- Programs in Health Informatics:  
Bachelor: 3 years  
Master: 1,5 years  
Ph.D.: minimum 2 years
- 75 students
- 3 graduates



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Medical Information Sciences Curriculum-  
University for Health Informatics and  
Technology Tyrol

- Focus on informatics, but with  
application within health care
- Module structure
- University hospitals of Innsbruck:
  - practical training, practical projects
- <http://www.umat.at>



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### Curriculum UMIT: Bachelor

Bachelor						
1st year	Medicine 1	Health Care Systems	Programming Course	Algorithms	Mathematics	Research Techniques 1
	Medicine 2	Medical Documentation	System Software	Algorithms	Mathematics	Literature Analysis
	> 4 weeks of practical training (computer industry)					
2nd year	Health economy	Information Systems in Health Care 1	Databases	Software Engineering	Mathematics	Project Management 1
	Knowledge Representation	Signal Processing	Technical Informatics	Biostatistics	Computer Science 1	Presentation Techniques
	> 4 weeks of practical training (health care institution)					
3rd year	Medical Informatics 1	Information Systems in Health Care 2	Communication Systems	Software Project	Computer Science 2	Project Management 2
	Medical Informatics 2	Project Work	Projects Work	Software Project	Computer Science 3	Research Techniques 2

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### Curriculum UMIT: Master

Master						
1 <sup>st</sup> year	Bioinformatics	Medical Documentation	Biostatistics	Elective 1	Elective 2	Project Management
	Information Systems in Health Care	Knowledge Management	Image and Signal Processing	Elective 3	Elective 4	Staff Management
2 <sup>nd</sup> year	Master thesis					

Electives from the following fields:

- Health Information Systems (e.g. HIS, e-health, Evaluation)
- Image and Signal Processing (e.g. Image Generation, PACS)

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### ‘Evaluation Issues’ in curriculum (1)

Software Engineering: System planning, analysis, design, implementation and evaluation

Biostatistics: Study planning and quantitative data analysis

Project Management: Quality Management within Projects

Information System in Health Care: Quality of Information Systems, Monitoring of Information Systems

Evaluation: Evaluation planning, Quantitative and Qualitative Method, Questionnaire Design and Validation

*(Each module contains theory and practice)*

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**'Evaluation Issues' in curriculum (2)**

2-weeks practical training:

Information Systems Analysis (business process modelling, information flow analysis, information requirements analysis)

Software Engineering (requirements analysis, prototype evaluation, usability evaluation)

Bachelor or Master thesis:

Questionnaire development, user acceptance evaluation, usability evaluation

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**Conclusions - UMIT**

- Evaluation theory and practice spread over various courses
- Greatest opportunities:
  - Evaluation as own elective course in Master program
  - Own research group on evaluation working on this topic
  - Various evaluation studies within University Hospitals as a change to get practical experiences

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