

# IIID Public Library

**idX**

## **Core Competencies**

What information designers  
know and can do

Coordination: IIID

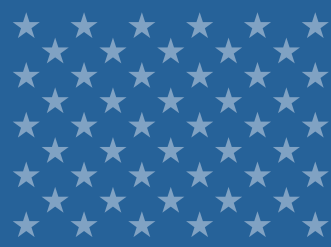
# IIID Public Library

The “IIID Public Library” is a free resource for all who are interested in information design.

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**idX**

information design exchange

## **Information Design: Core Competencies What information designers know and can do**

idX Development of International Core Competencies  
and Student and Faculty Exchange in Information  
Design  
within the EU/US Cooperation Program in Higher  
Education and Vocational Education and Training

2007-08-31

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in Information Design
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- IDU / Information Design University
- Special Interest Group (SIG) for Information Design  
Educators
- IIID Partner Universities
- The International Institute for Information Design
- IIID Board Members

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# idX Development of International Core Competencies and Student and Faculty Exchange in Information Design

The idea for what became idX was suggested by Prof. Jill Dacey at the “Infodesigned 2002” conference at Reading University, GB (September 2002). Jill referred to the opportunity to get a grant of the EU/US Cooperation Program in Higher Education and Vocational Education and Training for a proposal to be submitted to the European Commission, Directorate-General for Education and Culture and, in parallel, in the USA to FIPSE (Fund for the Improvement of Postsecondary Education) until 28 March 2003. We invited all schools that were IILD members and/or had sent representatives to Reading. The following universities responded positively:



- Bauhaus Universität Weimar, Germany
- Mälardalen University, Eskilstuna, Sweden
- Utrecht School of the Art, Hilversum, The Netherlands
- University of Idaho, Moscow, USA
- Columbia College Chicago, USA
- Wayne State University, Detroit, USA.

The necessary paper work was completed, submitted, and funded. Project partners agreed on the acronym idX for “Development of International Core Competencies and Student and Faculty Exchange in Information Design”.

The group had set out to develop a model curriculum. However, it became clear that, due to the grown cultures and specific environments of the participating universities, it would be next to impossible to harmonize their curricula as originally envisaged. Nevertheless, partners felt that universities open to taking on new challenges, and ready to add information design to their programs, might like to learn from the curriculum developed in 1998 for Technikum Joanneum, now FH Joanneum, Graz, Austria. A modified version of it, squeezed into the three-year baccalaureate model, is annexed to the outcome of the group’s considerations.

Graduates of such a course, interested in engaging in further studies, would be advised to continue their education with a Masters course in one of the specialised information design subject areas. Such would have a focus on education, health care communication, financial information, traffic guiding systems, public transport information, inclusive information design, tourist information, etc.

The prime concern of the idX group was on defining “information design core competencies”. The group developed a document and handed it over to a panel of advisors in November 2006. Partly positive, partly negative responses were received from:

- Prof. Per Mollerup (Norwegian Academy of Arts, Oslo, and Mollerup Design Lab A/S, Frederiksberg, DK)
- Prof. Dwayne Overmyer (University of Michigan, USA)
- Prof. David Sless (Communication Research Institute, Melbourne, AUS)
- Robert Waller (Enterprise IDU, Newport-Pagnell, GB)
- Richard Saul Wurman (Newport, RI, USA)

The constructive comments from the advisors prompted the idX group to change its approach. Instead of trying to describe the essence of information design, the idX group put the focus on the requirements of the Diploma Supplement, which is based on the outcome of efforts of a Joint European Commission – Council of Europe – UNESCO working party undertaken in the spirit of the “Bologna Process”.

The idX group related to first hand information given by experts at Transatlantic Education and Training Conferences of the EU/US FIPSE grantee programs in Lisbon (December 2003) and, in a much more extensive way, in Washington (November 2004). These experts made the idX group aware of the need to precisely state in the Diploma Supplement what students know and can do after graduation.

It became clear to the members of the idX groups that the requirements of the Diploma Supplement were key to the formulation of information design core competencies and related educational requirements.

On the practical side, the idX partners organized the exchange of students and faculty across the Atlantic. Subsequently, exchange student evaluations revealed that the rather theoretical approach of European universities in the first two years would be in contrast to the more performance-orientated program of US universities. They also became aware of the enrichment, both educationally and culturally, gained by students who had participated in the exchange and their enthusiasm for the experience.

(Nearly) all students on exchange in a given year also participated in the related IIID Summer Academies, the first held in 2005 at the Free University of Bozen/Bolzano and the second in 2006 at Columbia College Chicago.

Based on insights gained Prof. Rune Pettersson and Lennard Strand (Mälardalen University), together with Prof. Judith Moldenhauer (Wayne State University), initiated a Special Interest Group (SIG) for Information Design Educators. The SIG was inaugurated at the 2007 IIID symposium Vision Plus 12 at Schwarzenberg, Vorarlberg, Austria. One of the aims of this SIG is the continuing promotion of student exchange across the Atlantic and beyond.

Representatives of Mälardalen University also took on the challenge of developing a forum for the academic advancement of information design: they founded the IDU / Information Design University to make information design modules available for distance learning and to promote outstanding information design literature. All universities that are IIID institutional members are invited to become partners in this initiative.

The idX group is proud to be able to present in this publication their “Core Competencies”, the (Model) Curriculum, the SIG for Information Design Educators, the IDU, an overview of IIID university partners (IIID institutional members) and a list of those who have taken on a function in the IIID Board.

We hope that this publication will stimulate further discussions and international cooperation for the advance of information design education at the university level.



*Lisbon conference:  
EU officials of the Directorate-  
General for Education and  
Culture*



*Concluding idX meeting at  
Bezau, Austria, 8 July 2007:  
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# Suggested Set of Core Competencies in Information Design

The following Suggested Set of Core Competencies in Information Design were developed by the idX group in accordance with the set of guidelines established by the Bologna Process for degree transparency and the required “Diploma Supplement”. (See Appendix for information on the Diploma Supplement.)

## What graduates know and can do after completion of their studies

*What graduates know:*

1. The theories and methods which govern the design and interpretation of information (methodical and theoretical dimension of information design core competencies).
2. All relevant facts and tools for qualified professional activities in the field (Practical dimension of information design core competencies):
  - the properties which constitute effective information
  - the facts, tools and skills needed for the structuring, rendering and applying of information
  - the capabilities of information and communication technologies
  - the related insights gained through research done in the field of cognitive and social sciences
  - existing conventions and applicable legislation and standards
  - the implications of business management
3. The social demands underlying successful professional practice (Social dimension of information design core competencies).

*What graduates can do:*

Graduates can design quality information and information systems by creating relationships between people and information and by providing evidence that the information is accessible and usable to an agreed high standard. The areas in which information designers become active may include education, health and financial services, transport and tourism. These depend on high quality information and information systems. Information designers may contribute in leading positions to information-based development strategies, Internet supported services, product interfaces, instruction guides, signage systems, forms, bills, and scientific information visualization.

## How graduates attain their design competence

Graduates attain their design competence through a mix of instructions/lectures, project work, and practical experience gained through internships.

Project work is indispensable for acquiring competence in information design concerning

- problem definition
- skills
- media and information technology
- development of interaction processes
- evaluation procedures
- project management.

Project work during the course of studies begins with a focus on simple tasks to be performed in familiar environments and progresses to complex tasks involving unknown users performing in a multitude of work conditions.

Project work makes it possible to procure important knowledge in a task-related way. This concerns

- strategies of thinking and creativity
- relevant laws and regulations
- clarity in expression and rendering
- appropriate presentation of results
- fluency in native language and English.

Working outside of the institution in an internship in the information design industry in the second half of the study period is strongly recommended.

## How information designers design information and develop information systems.

*Methodical and theoretical dimension of information design core competencies*

Information Designers

- Identify the goal(s) to be met and tasks to be performed.
- Define the user(s), either through appropriate methods, such as observation, interviews, and development of personas.
- Compose the information using verbal, pictorial, acoustic, haptic and/or olfactory elements, which they



- shape, and structure according to principles of cognitive and perceptual psychology.
- Pay due regard to the media and reproduction/distribution processes to be employed within an existing or to be developed communication infrastructure.
  - Integrate feedback.
  - Document the information elements, the objects to which they refer, the processes involved and the respective responsibilities of those who have to safeguard the production and maintenance of related materials and systems.
  - Initiate the testing of use and usability, evaluate the test results and refine the information accordingly.
  - Assist clients with implementing and with performance-focused monitoring of the information.
  - Provide information on the value dimension of measured results.

### Elements used by information designers.

#### *Practical dimension of information design core competencies*

Information designers must have knowledge of:

- Materials
- Media production techniques
- Ergonomics
- Hardware and Software
- Business Communications
- Two and three-dimensional composition
- Professional writing
- Typography
- Diagramming
- Multimedia and web authoring
- Project management
- Negotiation skills.

### Social demands on the professional practice of information designer.

#### *Social dimension of information design core competencies*

The social dimension of information design consists of five essential principles:

Politics, Position, Parsimony, Politeness, Performance. Sless, David. *Theory for Practice. IIID Vision Plus Monograph 12 E/D*. 1997. Presented at Vision Plus 3, 10–12 July 1997, Schwarzenberg, Austria.

### Definitions of Terms

#### *Information*

For the purpose of this document, the idX group accepts the following definition:

Information is the result of processing, manipulating and organizing data in a way that adds to the knowledge of the person receiving it.

#### *High quality information*

In many cases, information designers will only succeed in designing high quality information if the information to be designed is part of an information chain.

The suggested attributes\* of high quality are:

- |               |                  |
|---------------|------------------|
| – Accessible  | – Interpretable  |
| – Appropriate | – Objective      |
| – Attractive  | – Relevant       |
| – Believable  | – Timely         |
| – Complete    | – Secure         |
| – Concise     | – Understandable |
| – Errorless   | – Valuable       |

\*Adapted from Wang, Richard Y. and Diane M. Strong. *Beyond Accuracy: What Data Quality Means to Data Consumers. Journal of Management Information Systems. Vol. 12 No. 4, Spring 1996, pp 5–33.*

### Appendix

#### *Diploma Supplement Model*

The Diploma Supplement model was developed by the European Commission, Council of Europe and UNESCO/CEPES.

The purpose of the supplement is to provide sufficient independent data to improve the international 'transparency' and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended. It should be free from any value judgements, equivalence statements or suggestions about recognition.

Information in all eight sections should be provided. Where information is not provided, an explanation should give the reason why.

[http://ec.europa.eu/education/policies/rec\\_qual/recognition/diploma\\_en.html#](http://ec.europa.eu/education/policies/rec_qual/recognition/diploma_en.html#)

# University Course in Information Design

## by Peter Simlinger

based on the reasoning behind the “Fachhochschul-Studiengang Informations-Design”, developed by Peter Simlinger with the assistance of a team of experts for Technikum Joanneum, Graz, Austria, 1998, and updated by him under consideration of insights gained since then and adjusted to the “Suggested Set of Core Competencies in Information Design” elaborated by the idX group, 2007.

Thankful acknowledgement: Prof. Jay Rutherford, Bauhaus-Universität Weimar, for translations

### Preamble

It's the “new media”, which more than anything else prompted the development of information design. However, to deal with the possibilities and demands of the new media, we must acquire competencies quite independent of them. Terry Winograd, Stanford University, may be quoted: “The majority of today's students will not be working in a world bounded by current familiar examples. They will design interactions that move beyond the desktop and even beyond the extended desktops of PDAs and wall-sized whiteboards. The human-computer interface of the future will not be perceived as the interface to a computer, but as a pervasive part of the environment we all inhabit.” (4)

### Information

*is the result of processing, manipulating and organizing data in a way that adds to the knowledge of the person receiving it. (1)*

### Design

*is the identification of a problem and the intellectual creative effort of an originator, manifesting itself in drawings or plans, which include schemes and specifications. (2)*

### Information Design

*is the defining, planning, and shaping of the contents of a message and the environments in which it is presented, with the intention of satisfying the information needs of the intended recipients. (3)*

Since “the environment we all inhabit” presents itself three-dimensionally, we cannot restrict ourselves to paper or the computer screen.

### Information design in social context

Equipped with the appropriate expertise based on practical, methodical and social competencies the information designer will have “the right stuff” to become one of the key professionals of the future. The quality concept of the virtual enterprise (5), geared to customer and employee relations, suits him well. The philosophy: it is much easier to keep existing customers (or employees) than to gain new ones. And: one loses customers (and employees) only when they have reason to be dissatisfied. Customers and employees alike want to be informed and to feel a part of a community with shared values. And if they feel they are welcome in such a community that listens to their concerns and gives them an opportunity to contribute to improvements they reciprocate with dedicated loyalty.

Ever more frequently, the idea of making the customer a partner moves to centre-stage in company philosophies. Philips (Royal Philips Electronics N.V., one of the largest electronics companies in the world) had compressed this to a slogan: “Let's make things better!”

*Information designers identify and optimize task-related information required by both customers and employees.*

This, however, is easier said than done. In the course of development of the “Fachhochschul-Studiengang Informations-Design” for Technikum Joanneum, Graz,

interviews were held to investigate the needs of the regional industry with employment opportunities for graduates.

A representative of a world-wide successful company\* stated: "When we wish to bring a product to market, and the development engineer has done his job, our problems begin: how do we explain the product in sales documents, how do we explain operation and maintenance, how do we create Manuals and Help-Desks?" The representative of another company\*\*, no less well known as an international market leader, has an answer: "We hire specialists which we found after a long search in Kiel in Northern Germany. When we need the same in English, we get help from experts in Atlanta in the United States".

*The development of information products is becoming ever more complex. Designers with interdisciplinary competence who are able to achieve user-friendly results are sought-after around the world.*

Designing means planning and developing. What the design profession is able to bring about is clear to anyone who has had first hand experience with design processes. For these people, the future of the world economy stands or falls with design. Thinkers like Edward de Bono demand: "The word 'design' should be a very important word because it covers all aspects of putting things together to achieve an effect." (6)

*The industrial age gave rise to industrial design.  
The information age gives rise to information design.*

An article in Business Week magazine in 1996 expressed what differentiates the contemporary interpretation of design from previous impressions. Arnold Amstutz of Citibank Private Bank referred to this in his presentation "Customer-driven Design" at the "1996 Strategic Design Conference", run by the American Center for Design in Chicago. He said, "They were talking about the Industrial Society of America Awards and they said that America is coming back to the cutting edge of design. Well, that's encouraging. But what was really fascinating to me is what they said about why. They said: Americans are pioneering a major shift from designing a single product to designing the whole process of product innovation and development. And I would submit that the key thing that we see happening is that it is no longer a single process – from one point in time to the end and then you start over – but that it is rather becoming an iterative process with change cycles as short as three weeks. And they pointed out a third thing that I found interesting and that was: that the Awards illustrated the interactive design factor which is making the US edge real." (7)

Any remaining doubts about the relevance of such statements to the profession of information design were put to rest by Ann Senechal in the Spring 1997 edition of "Adobe Magazine": "It's all in the PROCESS. Information design isn't necessarily about databases, spreadsheets, or even infographics. It's about process – designers and clients working together to solve problems and convey complex information through design systems that are functional and beautiful." (8)

*The information age, "new independents", and knowledge transfer*

The process of rapid change, enhanced through evolving technologies, including those in the realm of information and communication, leads up to societal transformations. New professions appear for which there exist no educational opportunities.

In addition, many people practice several occupations in parallel. (9)

There may be various reasons for this:

1. They like the variety.
2. They want to increase their independence and maximize their income.
3. Available positions are part-time only.

For the same reasons, many people change jobs with astounding regularity. (10)

There are no signs that the indicated changes have come to a halt.

Developments like the mentioned ones often result in the need to train and retrain. This is often done in an autodidactic manner.

Information designers facilitate knowledge transfer by making information (supplied by those who know) accessible and understood (by those who don't know, but aspire to know). They do it by considering the task-related and goal-oriented purpose of the information. To Richard Saul Wurman this should lead up to processes which empower motivated people to accomplish something which they otherwise would not have been able to achieve. "Empowerment is what enables employees to go beyond the instructions they are given." (11)

Without knowledge transfer there is no effective learning of how to cope with challenges of assigned or desired tasks, such as those encountered in a new business situation, when moving around in a country where people speak a language different from one's own, when trying to use unfamiliar means of public transport, or wanting to operate an unfamiliar apparatus.

\* Ing. Heinrich Schönmaier, Marketing-Services, KNAPP Logistik Automation GmbH

\*\* Dipl.-Ing. Dr. Michael Paulweber, Development for Test Bed Automation and Control Systems, AVL LIST GmbH

## The Occupational Field of Information Design

It is the same with information as it is with construction materials: for efficient design and production one requires purpose-led concepts and plans. It's not enough just to have printing presses and "information highways" in order to create usable information, the same as construction equipment and building cranes cannot alone create usable human spaces.

For optimal information creation one requires information designers the same way architects are required to create optimal living and working spaces.

*"Users" and "use" as concerns of information designers and the consequences thereof*

In the context of information design, the "user" is someone who uses an (information) object, a service or a system in the framework of an activity in order to carry out a task. Carrying out an unfamiliar task to achieve particular objectives can be facilitated by the acquisition of task-specific information.

The usefulness of information is dependent on:

- whether and to what the extent it can broaden the existing knowledge of a person so that he/she can make reliable decisions for the accomplishment of given tasks
- whether the rendering of the information enables the user to quickly find and to clearly understand the required information.

The intention of use is an important constituent of this definition. It implies a predisposition on the part of the user and is the reason why "creating desire" is not a part of information design.

Depending on the task at hand, the user of information is an information end-consumer or someone in the information chain between information building and the abandonment of the information.

To create satisfaction for all those involved equal attention needs to be given to the envisioning, planning, creating, implementing, servicing, using, updating, and eventual modifying or recycling of information with respect to a given information system.

Zwaga, Boersema and Hoonhout in the introduction to their book *Visual Information for Everyday Use* (12), refer to "use-centered design", a term made a subject of discussion by Flach and Dominiguez (13): "A designer is a product manager who coordinates the contribution of all the different experts and is the custodian of the budget and the time scale." Flach and Dominiguez continue to

say that "a new product should satisfy at reasonable costs not only the needs of the user, but also those of the client/producer, and, when applicable, those of the distributor and retailer. Also the consequences of the introduction of the product for the environment may play a role in the development process. From the point of view of the user this relates to: appropriate pricing, easy availability, convenience of use, aesthetic appeal, and safety in disposal."

To satisfy the information needs of the intended recipients Information Design must facilitate knowledge transfer within activity systems, overcoming departmental boundaries and considering all those involved in an information chain from creating to using to substituting or abandoning task-related information.

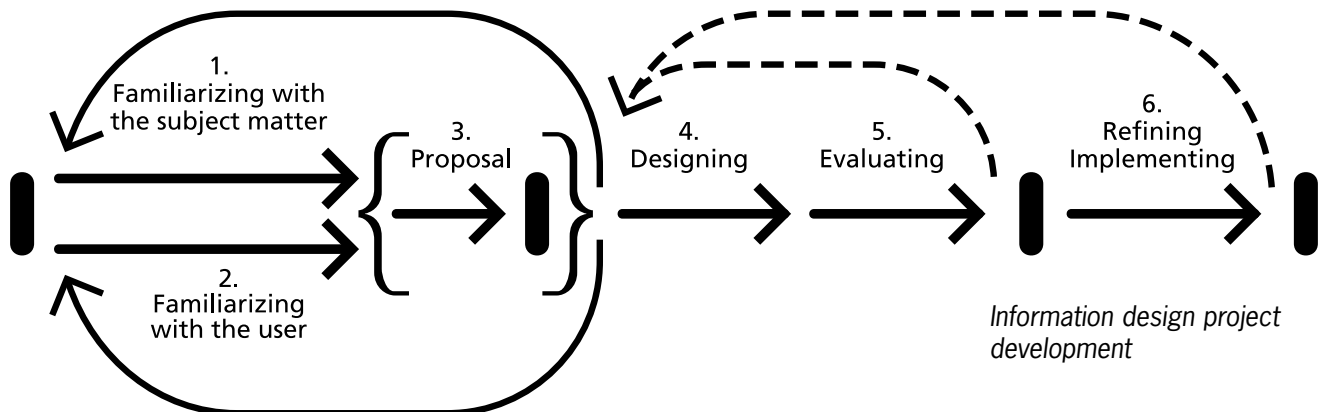
*Optimized knowledge transfer requires optimally designed task-related information.*

Whether information gives rise to an optimal task-related broadening of the user's knowledge depends on how well the content and the design of the information corresponds to his/her needs.

The demands on the design of information are:

- content based (specific to the circumstance about which the person wishes to gain knowledge in order to make decisions)
- cognitive (specific to the perception, learning and recall abilities of the person who wishes to use the information), and
- technical (specific to the information system which makes the information available).

## Professional Practice



Step one of every information design project:  
*Understanding a given subject matter and its value for a given user.*

The first stage of every information design project requires the designer to unlock – with an open mind and open eyes – the information to be designed. The warning applies: If you don't understand it, don't design it.

In normal business life understanding the information usually precedes understanding the anticipated addressees of the information. On occasion this can be the other way round. Quite certainly, both notions are closely interlinked.

By becoming familiar with the meaning of the information and the environments in which it is intended to be presented the designer also acquires intimate understanding of the purpose of the information.

Step two:  
*Understanding the users/addressees of the information*  
*Applying methodical competence*

“Once you see or understand something you cannot conceive of what it was like not to have seen or understood it. You lose the ability to identify with those who don't know.” (14)

Information designers are aware of the resulting dilemma: Understanding of a given subject matter as a prerequisite of facilitating knowledge transfer is often an impairment to awareness of the mindset of the intended recipients of the information.

The acquired methodical competence enables the information designer to overcome this dilemma and to design the information in such a way that it facilitates the accomplishment of the assigned or desired tasks which – in the long run – helps the user attain defined goals.

The resulting perfect deal: the expectations of the user of the information meet the expectations of the provider of the information and vice versa.

To design and optimize the information, the designer determines what is critical for a user by observations (in both controlled laboratory situations and in real world situations), by interviewing, and by investigations. Variations of these processes are undertaken depending on the use of the information.

Considering the need to get a clear picture of the most relevant user requirements, the information designer often develops scenarios in which virtual “personas” (= prototype users) perform the tasks the information is supposed to facilitate. (15)

By doing this the designer becomes critical about the benchmarks which determine whether a design would be considered successful or not.

Being aware that tasks never exist in an isolated manner, that there is always a before and after, the information designer also considers the activity chains in which the tasks are performed. Adding a time factor to scenario building, e.g. by introducing the concept of “The Journey”, developed by Michael Wolff and Wally Olins (16), it becomes evident that sequences of tasks/activities must be perceived as processes towards goals of users/customers within user-orientated task systems.

Step three:  
*Making a proposal*

After steps one and two, the information designer is ready to make a proposal which outlines the work/results to be done/achieved, which technical and legal standards should apply, and how much time and money this would cost.

This, of course, should result in an *assignment*.

Step four:

*Designing the information*

*Practical competence, Six Thinking Hats, and Intuition*

As steps one and two were made in a rough mode to enable the designer to compose a proposal they now need to be repeated in “quality mode”. Only thereafter the designer is ready to start with designing the information which comprises “the defining, planning, and shaping of the contents of the message and the environments in which it is presented”.

Information usually manifests itself in the form of visuals: no wonder many think that information design equals visualization and that the education of information designers equals the education of graphic designers. This is certainly a good guess which needs to be extended into other fields of sensory perception and complemented with elements of professional writing, cognitive and social sciences, knowledge of related legislation and standards, information and communication technologies, and business management – to name just the most important themes. They all constitute the practical competence of an information designer.

When the defining, planning, and shaping of the contents of a message and the environments in which it is presented, with the intention of satisfying the information needs of the intended recipients gets exceedingly complex the information designer applies the method of the Six Thinking Hats, “an extremely simple thinking technique based directly on the phenomenon of context, ... providing a tangible way of translating intention into performance.”

The foremost value of the Six Thinking Hats is that of defined role-playing. “The hats allow us to think and say things that we could not otherwise think and say without risking our egos” says Edward de Bono, author of the *Six Thinking Hats*. “There is the white hat for attention to pure and neutral data. There is the red hat to allow the input of intuition and feeling without any need for justification. There is the black hat of the logical negative, which is caution and points out why something cannot be done. There is the yellow hat of the logical positive, which focuses on the benefits and feasibility. For creative thinking there is the green hat, which calls for new ideas and further alternatives. Finally there is the blue hat for process control, which looks not at the subject but at the thinking about the subject (meta-cognition).” (17, 18)

Methods like this help a lot but cannot guarantee a positive outcome. L. Lohr, quoted by R. Pettersson, says: “Too many factors influence design. That is why it is considered an art as well as a science.” (19, 20)

Step five:

*Evaluating the effectiveness of the designed information*

To make sure that the objective of task-related knowledge transfer is attained information designers have a strong interest in determining whether their information products yield the desired effect. They know how to utilize insights of cognitive psychology, to conduct user interviews, to apply evaluation methods, and how to interpret results with regard to set benchmarks.

Step six:

*Refining and implementing the information*

Based on insights gained through testing information designers optimize their designs to content, consider alternatives or identify obstacles which they overcome through a change of directions. They subsequently assist in the implementation of the design(s) and, if needed, stand by for adjustments and modifications in response to changing requirements.

*Information design: more than a problem solving activity*  
*When social competence really becomes an issue*

If information impacted problems or unspecific information needs of “users” are in the forefront of an information design challenge the subject matter requiring familiarization/analysis, design and evaluation will be much wider – and deeper too.

Information designers who take an effort in finding out which contribution information (design) could make to the improvement of an unsatisfactory situation will be able to develop innovative concepts beyond “problem-solving” [problem-solving, according to Edward de Bono, “only get us back to where we were before”]. (21)

Such concepts always require a technically feasible match of interests of “problem owners”, information providers and information users. On a global scale they might range from the need to successfully fight HIV/AIDS or to reduce global warming. On a more moderate scale they might include a strategy to improve living conditions in a given region.

Here the social dimension of information design core competencies, Politics, Position, Parsimony, Politeness, Performance, defined by David Sless as the five Ps (five essential principles), really become an issue. (22)

*Interactivity as a prerequisite of successful information systems*

Interactivity has to do not only with operating machines and/or accessing task-relevant information on a screen. It is basically independent of the question of which of the media at hand should address to which senses.

Optimizing knowledge transfer is enforced through rapid and often unforeseeable change of technologies, legislation, user preferences and responsibilities affecting tasks to be done. Because of this, traditional evaluation procedures sometimes meet a problem. Whenever they would need to be repeatedly applied, concerns of time and money come in. To facilitate the timely adaptation of the information, it therefore pays to set up interfaces in an

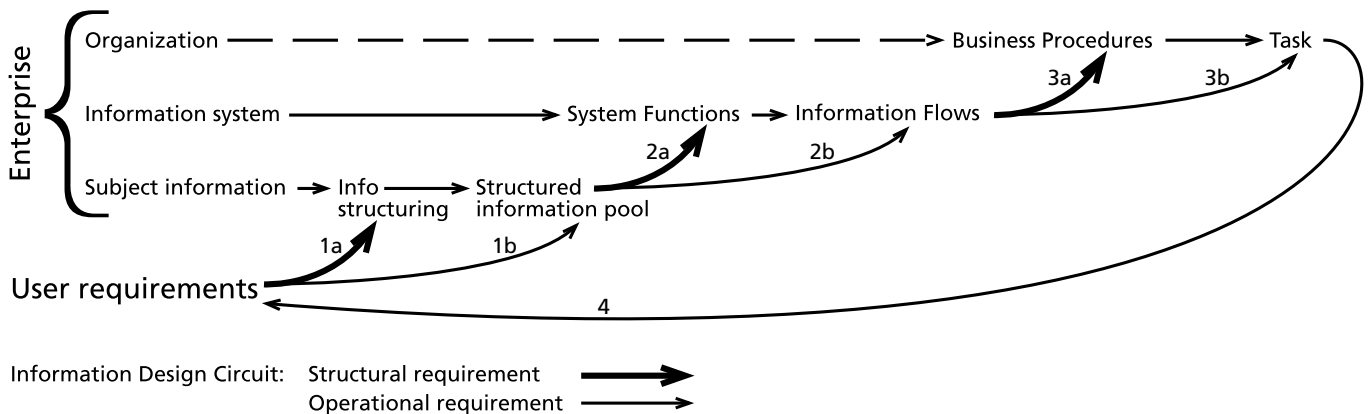
inviting, interactive way. Thus user feed-back will be generated, enabling constant actualization of the information and its infrastructure.

*By putting effort into the optimization of the design of information the information designer familiarizes himself/herself with the given subject matter. He/she endeavors to optimize information by considering the cognitive and the technical requirements so that the designed information appeals to the senses of the addressees and can readily be understood. He/she engages in an iterative process of designing and evaluating and takes precautions to enable the continuous actualization of the information through inviting interactive interfaces.*

This justifies the conclusion that what really challenges information designers is the design of information systems.

**User-orientated task system**

Interactive self-actualization of task relevant information



*Example 1 (Engineering):*

- 1a Determining of search criteria concerning elements of a technical system
- 1b Provision of concrete information on integrated products of various manufacturers
- 2a Information, e.g. on the reliability of control elements, determine the purchasing policy, the content of training programmes and the calculation of projects
- 2b Provision of information on control element X
- 3 Updating of task-relevant information is initiated: Reports on accumulating atypical, but critical failures, caused by control element X
- 3a Determining of linkage between information on control element X and all its applications
- 3b Warning notes concerning control element X along with verbal and pictorial repair instructions
- 4 Feedback generated by users facing problems understanding/applying information

*Example 2 (Financial information):*

- 1a Determining of search criteria concerning secure types of investment
- 1b Provision of concrete information on newly issued bonds in foreign currencies
- 2a Information, e.g. on the acceptance of Far East Bonds determining purchasing policies, the content of training programmes and the structuring and the visual presentation of customer information
- 2b Provision of information on stock prices, transaction fees und agio/disagio on completion of the purchase, credit, disposition
- 3 Updating of task-relevant information is initiated: Customer complaints about incomprehensible/incorrect statements of foreign currency credit notes
- 3a Examination of linkage between billing procedures and general information provided on screen and in print as well as customer specific information supplied by the transaction profit centre
- 3b Instructions to employees and apologies to all customers with foreign currency accounts together with explanations on improved statements
- 4 Feedback generated by users facing problems understanding/applying information

*Example 3 (Public transport):*

- 1a Determining of passenger categories according to frequency of travels
- 1b Provision of software for the automatic calculation of shortest possible connections
- 2a Information, e.g. concerning the capacity of certain lines, determine the acceleration programme of the transport company but also its advertising
- 2b Individual calculation of shortest traffic routes for every single passenger
- 3 Updating of task-specific information is initiated based on complaints about the unfavourable coordination of two lines after relocation of stops which results in significantly longer journey times for passengers who need to change means of transport
- 3a Revision of timetables of the two lines and adjustment of the system
- 3b Apologies to customers via flyers posted at stops giving information on timetable changes and the now optimized travel times for transfer passengers.
- 4 Feedback generated by users facing problems understanding/applying information

*Task-related information must also be optimized in an economically feasible way.*

The economic feasibility of information is governed by considerations of marketing and business management. They require that information be provided in a pre-structured manner to enable multipurpose use. Clearly the costs of individually designed information need to be restricted to justified individual cases.

*Information design is geared to create standards for the structuring, the design and the use of task-related information.*

Standards for the structuring, design and use of information find their technical analogy in electronically supported information systems.

Decisions concerning the necessary media mix for knowledge transfer in a given situation need to be based on task-specific user requirements. The capabilities of the media acting together in an information system depend on the depth, the breadth, the structure and the required interactivity of the information provided to support users in a task-specific way.

The coaction of specialists in the following fields is required for the setup of useful information systems:

- information design
- information technology
- software design
- information management.

To do a proper job the information designer needs to be informed about the core competencies of the coaching specialists. He/she must be able to explain relevant concerns in a way suitable to stimulate team members to work towards adequate solutions. His/her role could be compared to the one of an architect. Both professions not only take an interest in formal and esthetic challenges, but also in meeting all sorts of user needs. To safeguard optimal results they engage in close cooperation with representatives of additional, predominantly technical disciplines.

- (1) Definition of the idX group (2007)
- (2) Definition approved/confirmed by the IID General Assemblies 1993 and 2000
- (3) Definition approved/confirmed by the IID General Assemblies 1993 and 2000, partly amended by using a phrase coined by Rune Pettersson in "It Depends: ID – Principles and Guidelines"; p 10; (21)
- (4) NEWMAN William M., LAMMING Michael G.: Interactive System DESIGN, p viii; Addison-Wesley, 1995
- (5) DAVIDOW William H., MALONE Michael S.: The Virtual Corporation / Structuring and Revitalizing the Corporation for the 21st Century; Harper Business; 1993
- (6) DE BONO Edward: I am Right – You are Wrong / From this to the new renaissance: From rock logic to water logic; p 20; Penguin Books, 1990
- (7) AMSTUTZ Arnold of Citibank Private Bank referred to this in his presentation "Customer-driven Design" at the "1996 Strategic Design Conference", run by the American Center for Design in Chicago. Transcript of the presentation from an audio cassette supplied by the ACD
- (8) SENECHAL Ann: "It's all in the PROCESS", pp 34; Adobe Magazine, Spring 1997
- (9) Internationale Arbeitskonferenz, 85. Tagung, 1997, Bericht VI (1) "Vertragsarbeit", Kapitel II, Internationales Arbeitsamt Genf; S 16: "Das angesprochene Modell des langfristigen Beschäftigungsverhältnisses zwischen Arbeitgeber und Arbeitnehmer wird gegenwärtig durch vielfältige 'nichttraditionelle' oder 'atypische' Beschäftigungsformen abgelöst". S 17: "Die Spanne reicht dabei von geringqualifizierten Arbeitnehmern, die traditionell in der Landwirtschaft sowie im Bau- und Transportgewerbe beschäftigt werden, bis hin zu hochqualifizierten Spezialisten, die Dienste in Bereichen wie Rechtshilfe, Buchhaltung, Ingenieurtechnik, Werbung, Informationsanalyse und -verarbeitung usw. erbringen." International Labour Conference, 85 Session, 1997, Report VI (1) "Contract work", Chapter II, International Labour Organization Geneva; p 16: "The referred to model of long-term employment relationships between employer and employee is currently replaced through manifold 'non-traditional' or 'atypical' forms of employment". p 17: "The span ranges from low qualified employees, who traditionally work in the building and transport trade to highly qualified specialists in areas like legal assistance, bookkeeping, engineering, advertising, information analysis and processing etc.".
- (10) Wiener Zeitung, 2 September 1997; "Synthesis-Studie im Auftrag des AMS: Arbeitsmarkt sehr dynamisch: Jedes dritte Dienstverhältnis wird innerhalb eines Jahres neu gegründet, nur zwei Drittel der Arbeitnehmer sind im Jahresverlauf durchgängig beschäftigt. 40% der Arbeitsplatzwechsel sind auch mit einem Branchenwechsel verbunden." "Synthesis study on behalf of AMS: job situation very dynamic: every third work contract gets newly established during a year, only two thirds of the employees enjoy continuous employment over the year. 40% of the changes in employment go hand in hand with a change to another business sector."
- (11) WURMAN Richard Saul: INFORMATIONANXIETY 2, pp 191–198; Que Publishing, 2001
- (12) ZWAGA Harm J., BOERSEMA Theo, HOONHOUT Henriëtte, (Editors): Visual information for everyday use / Design and research perspectives, p xxxi; Taylor & Francis, 1998
- (13) FLACH J. M., DOMINGUEZ C. O.: Use-centered design. Integrating the user, instrument, and goal. pp 19–24, Ergonomics in Design 3, 1995
- (14) WURMAN Richard Saul: INFORMATIONANXIETY 2, p 60; Que Publishing, 2001
- (15) COOPER Alan: The Inmates are Running the Asylum / Why High-Tech Products Drive Us Crazy and How to Restore the Sanity, SAMS, 1999
- (16) The Wolff Olins Guide to Design Management / Mysteries of Design Management Revealed; Wolff Olins, 1984
- (17) DE BONO Edward: Six Thinking Hats, Penguin Books, 1990 In German: "Das Sechsfarben-Denken"; ECON Verlag, 1987
- (18) DE BONO Edward: I am Right – You are Wrong / From this to the New Renaissance: from Rock Logic to Water Logic, p 124; Penguin Books, 1991 In German: Der Klügere gibt nicht nach / Vom erstarren zum fließenden Denken, ECON Verlag, 1991
- (19) LOHR Linda: Creating Graphics for Learning and Performance. Lessons in Visual Literacy; Pearson Education, Inc., 2003
- (20) PETERSSON Rune: It Depends: ID – Principles and Guidelines; Second Edition, p 17; Institute for Infology, 2007 PDF version of the book may be downloaded free of charge from <http://www.iiid.net/>
- (21) DE BONO Edward: I am Right – You are Wrong / From this to the New Renaissance: from Rock Logic to Water Logic; p 274; Penguin Books, 1991 In German: Der Klügere gibt nicht nach / Vom erstarren zum fließenden Denken, ECON Verlag, 1991
- (22) SLESS David: Theory for Practice / Theorie für die Praxis; Vision Plus Monograph 12 E/D; International Institute for Information Design; 1997



## Curriculum

The three-year curriculum presented here is a slightly modified version of the original four-year course conceived for Technikum Joanneum (now FH Joanneum), Graz, Austria. ECTS Credits, 30 for each of the six semesters, were attached, summing up to 180 Credits altogether for three years of studies.

One semester previously dedicated to an international internship and another semester set aside for diploma work have been eliminated. Now summer holidays may accommodate the internship, and the diploma work is thought to be done along with lectures and seminars in the last semester.

The curriculum is designed to ensure subject, methodical and social competencies.

In lectures, tutorials, seminars and project work, students are confronted with assignments of increasing complexity. In the first and second semesters, basic knowledge is conveyed and skills taught. These are subsequently enriched by specialized knowledge with regard to business communication, product interface design and orientation systems.

Apart from the subjects which determine the above cited competencies, the curriculum incorporates elements of General Studies (Studium Generale) which may be adjusted to newsworthy topics relating to information, communication, culture, the humanities and economics.

The concluding diploma work, stimulated by suggestions of consultants to the school, should relate to real-life situations.

Increasing complexity of project work should concern:

- skills
- media mix and information and communication technology
- project management
- interaction and evaluation
- sort and size of the respective user group(s).

Ever more complex tasks require that the time frame allocated for projects gets gradually increased.

Project work makes it possible to convey important content of teaching and practice in a task-oriented way.

This concerns

- strategies of thinking and creativity
- relevant laws, regulations and standards
- precision in expression and rendering
- adequate to perfect presentation of the results
- practice in native and English language.

Consequently high demands are posed on both students and faculty.

**Practical competence**

*Factual knowledge*

le, 2 Credits

**Material I**

Information carriers, surface protection, finishing

le, 2 Credits

**Reproduction techniques**

Reproduction and printing methods, electronic information presentation

*Conceptual knowledge*

le, 2 Credits

**Information design I**

Areas of competence for information designers; information systems, information processes, cognitive basis of information design: perception, recognition, understanding, learning, remembering; Language; writing, image, colour, texture, sound, smell; metaphors; informational drawing

le, 2 Credits

**Typography**

Writing and writing systems, typeface and font formats, appropriate typeface choice; specifying type; readability criteria; typographic systems, static and dynamic applications, typographic hierarchy

is, 1 Credit

**Technical drawing**

Presentation methods and conventions

is, 3 Credits

**Hard- and software I**

Word processing, raster and vector image creation tools, office programmes, databases

**Methodical competence**

is, 1 Credit

**User-related design I**

Requirements of inclusive design / universal design / design for all, usability, methodical procedures

se, 1 Credit

**Professional writing I**

Rules: text basics, text analysis, text research

**Social competence**

is, 1 Credit

**Psychology of listening and speaking**

Learning to understand what matters; formulating and questioning assignments; interdependencies and competencies (responsibilities); recognizing social hierarchies; determining human needs; proposing arguments, sifting out business needs; bringing it "to the point"; dealing with objections, formulating results

se, 2 Credits

**General English I**

is, 1 Credit

**Social context of information**

Cultures and traditions/conventions, determining aims and objectives of activities, priorities in decision making and knowledge needed to perform

**General studies**

le, 1 Credit

**Art and design**

Including history of information design – from hieroglyphics to ISO 7001

is, 1 Credit

**Handwriting**

Visual communication with Latin, Cyrillic and Far Eastern scripts

is, 10 Credits

**Project work I**

Projects of 2 to 4 days with regard to subsequent standards

- Skills: describe and explain content and processes; photography, sketch, draw
- Media mix and IT: interpersonal and print communication
- Project management: problem analysis and re-design
- Interaction and evaluation: subjective judgement

Target group: the individual students themselves

**Practical competence**

*Factual knowledge*

le, 1 Credit

**Material II**

Binding and packaging information carriers, building and attaching displays, developing and mounting sign systems

le, 1 Credit

**Ergonomics**

Sensory capacity, vision geometry, ergonomic product design (epd), setting- and adjustment controls, office ergonomics, light and lighting

*Conceptual knowledge*

is, 4 Credits

**Hard- and Software II**

Scripting and programming

is, 16 Credits

**Project work II**

Projects of 3 to 20 days with regard to requirements in addition to Project work I

- Skills: + structuring information in area and space; tabular comparison; diagrammatic presentation of situations and processes; interviewing; production of working models and samples; production of working drawings
- Media mix and IT: + poster, display, packaging
- Project management: + briefing, design and motivation report
- Interaction and evaluation: + structured user interviews

Target group: a manageable group of people to which the students themselves belong

**Internship I:** 6 weeks in summer

**Methodical competence**

le, 2 Credits

**Information Design II**

Successful thinking; structuring and analysing information, developing goal-oriented creativity; reducing object-oriented information to the basic characteristic features; developing symbols and icons; communication with words, pictures, sounds

se, 3 Credits

**User-related Design II**

Qualitative aspects of interactive systems in view of usability; requirements of user-based interface design; researching; interviewing methods

se, 1 Credit

**Professional Writing II**

Textual rhetoric: word, phrase, rhythm, dialogue, image/text relationships

is, 1 Credit

**Exhibition Didactics**

Goals and strategies for exhibitions; exhibition communication, project management incl. evaluation and feedback; use of AV and multi-media technologies

is, 1 Credit

**Exhibition Design**

se, 1 Credit

**Professional Practice**

**Social competence**

is, 1 Credit

**Discussion and**

**negotiation management**

Criteria for invitation and agenda-creation; organizing meetings and conferences; time control

se, 2 Credits

**General English II**

**General studies**

le, 1 Credit

**Global Trends I**

Population growth, nutrition, water, energy, waste, transport, environmental implications, education, standards of living

le, 1 Credit

**Technology and**

**Media Theory I**

Medialization as individual history; the influence of technical media on the perception of reality; the medialization of reality with the emergence of new interacting parallel worlds; the biological, the technical, the virtual, the spiritual

**Practical competence**

*Factual knowledge*

le, 1 Credit

**Material III**

Materials for designing with light: glass, acrylic, polycarbonates, etc., as well as translucent, light-transmitting and radiating materials, such as solf, lisa, etc.

*Conceptual knowledge*

is, 4 Credits

**Hard- and Software III**

Software and tools for visualization and animation (I)

le, 2 Credits

**Business Communication and Computer Science for Economics**

Introduction to marketing practice, sales, production, financing, business information systems, facility management, internet, intranet

is, 2 Credits

**Multimedia Production I**

Photography, video, audio and CD-rom production; storyboarding, post-production, video editing

is, 1 Credit

**Multimedia Art I**

Medial appearance and presentation methods, multimedia screening, information aesthetics, practice-based implementation

**Methodical competence**

is, 2 Credits

**Information Design III**

Corporate personality, corporate identity, corporate design; visual rhetoric

is, 3 Credit

**User-related Design III**

Usability engineering (I): analysis; user involvement; generating and evaluating feedback; assignment modelling; usability criteria; prototyping

se, 1 Credit

**Professional Writing III**

Text-practice: grammar, style, speech and text categories; technical report writing; outlining, abstract, key words, literature quotation, images and image legends, footnotes

le, 1 Credit

**Project Management**

Briefing, cost estimating, specification (technical description, performance index), order placement, implementation supervision, invoice control, copyright (rights of use) control

le, 1 Credit

**Standards in information, communication and documentation**

International and national standards, conventions, legislation and directives; general and specific requirements of information design subject areas, standards and conventions in everyday life

**Social competence**

se, 2 Credits

**Professional English I**

**General studies**

le, 1 Credit

**Market Economy**

Covering basic needs, stimulating needs; regionalism/globalism

le, 1 Credit

**Technology and Media Theory II**

Medialization as individual history; the influence of media on cultural, social, political, economic and societal change.

is, 16 Credits

**Project work III**

Projects of 8 to 30 days with regard to requirements in addition to Project work I and II

- Skills: + designing information with regard to attractiveness and appropriateness to content
- Media mix and IT: + special effects
- Project management: + specification for implementation and cost estimating
- Interaction and evaluation: + iterative testing and designing

Target group: a manageable group of people to which the students themselves do not belong

**Practical competence**

*Factual knowledge*

le, 1 Credit

**Dynamic Displays**

*Conceptual knowledge*

is, 3 Credits

**Hard- and Software IV**

Software and tools for visualization & animation (II)

le, 2 Credits

**Orientation Systems**

User needs/demands; type-faces for display, public symbols, colour-coding; interior and exterior size relationships; demands on maps and transit diagrammes

is, 3 Credits

**Multimedia Production II**

Photo-, video-, audio- and CD-rom production; storyboarding, post-production, video editing

is, 1 Credit

**Multimedia Art II**

Medial appearance and presentation methods, multimedia screening, information aesthetics, practice-based implementation

**Methodical competence**

is, 3 Credits

**Information Design IV**

Visualizing flow and process; diagrammes and tables; fundamentals of statistics; sound design; design methods and processes

is, 3 Credits

**User-related Design IV**

Usability engineering (II): evaluation; statistical criteria; demographic methods; implementation; feedback to analysis

se, 2 Credits

**Professional Writing IV**

Hypertext practice

se, 1 Credit

**Professional Practice**

**Seminar**

**Social competence**

se, 2 Credits

**Professional English II**

**General studies**

le, 1 Credit

**Technology and**

**Media Theory III**

Functionality of technical media in the building of networked structures; medialized communication among work areas, education and leisure and the transdisciplinary between science and art

is; 8 Credits

**Project work IV**

Projects of 3 to 6 weeks with regard to requirements additional to Project work I to III

- Skills: + designing dynamic, sequential and sound-supported information
- Media mix and IT: + "New Media" (stand-alone solutions)
- Project management: + Teamwork
- Interaction and evaluation: + integrated feedback/ self-actualization

Target group: anonymous addressees within a defined region

**Internship II:** 6 weeks in summer

**Practical competence**

*Conceptual knowledge*

is, 2 Credits

**Hard- and Software V**

Operating Systems; platform guidelines and corporate style guides; design manuals

le, 2 Credits

**Electronic Publishing**

Mark-up languages

**Methodical competence**

is, 4 Credits

**User-related Design IV**

User manuals and help systems

is, 3 Credits

**Multimedia and Web Authoring Systems**

le, 1 Credit

**Web Engineering**

Implementation of web applications

se, 1 Credit

**Professional Practice Seminar**

**Social competence**

se, 2 Credits

**Successful Negotiating**

se, 2 Credits

**Professional English III**

Professional meetings

**General studies**

se, 1 Credit

**Global Trends II**

Focus on Conflicts: Military trends, poverty, clash of economies, migration, ageing populations, global warming

se, 1 Credit

**Quality and Innovation**

The True, the Good, the Beautiful; stable and unstable values: reflections on religion, economy and the stock market; conservation versus throw-away mentality; innovation in electronics; quality and ever-shorter life cycles

is, 11 Credits

**Project work V**

Projects of 1 to 2 months with requirements additional to Project work I to IV

- Skills: + designing information for the Internet
- Media mix and IT: + "New Media" (networked)
- Project management: + estimation of expected work and costs involved, supervision, post-calculation
- Interaction and evaluation: + use of statistical criteria

Target group: anonymous addressees worldwide

**Practical competence**

Conceptual knowledge

le, 2 Credits

**Introduction to Information Network Technologies**

The PC as communication machine: LAN-Internet-working and Intranet; WAN-infra-structure ('lines', multiplexers, SDH/PDH), ISDN, branch installations, telephony applications, broadband technologies (from frame-relay to ATM); aspects of telecommunications law

is, 2 Credits

**Hard- and Software VI**

Update: word-processing, drawing, painting and office programmes; databases; scripting and programming; authoring: overview of EU and other research initiatives.

**Methodical competence**

is, 1 Credit

**Presentation techniques**

le, 2 Credits

**Professional Practice**

Code of Conduct; things and behaviours which make the designer [look] smart: tools of the trade, professional behaviour and etiquette; the five principles of information design: Politics, Position, Parsimony, Politeness, Performance; office organization and starting a business; quality assurance; copyright and trade mark protection

is, 2 Credits

**Specifying and Cost Accounting**

Specifying, fixed and variable costs, cost estimating, control and verification, settlement of accounts, taxes and duties

se, 3 Credits

**Degree Seminar**

**Social competence**

se, 2 Credits

**Professional English IV**

Project work and presentation

**General studies**

se, 2 Credits

**Consumer requirements**

Project-based investigations into cultural differences

se, 2 Credits

**Research & Development**

Opportunities in R&D, national and international research programmes, managing R&D projects, interdisciplinary cooperation, cost-models, budgeting, interim-financing, reporting

is, 12 Credits

**Project work VI**

Projects of 1.5 to 3 months including degree work with requirements additional to Project work I to V

- Skills: + designing coherent multimedia information
- Media mix and IT: + 3D + product interaction
- Project management: + user manuals and help systems
- Interaction and evaluation: + use of demographic methods

Target group: specialists in a defined field

**Project work**

Increasing complexity with regard to

	Skills	Media mix and IT	Project management	Interaction and evaluation	Social and economic relevance	Examples	Duration
<b>1st Semester</b>	Describe and explain content and processes; sketching, drawing, photographing	Interpersonal and print communication	Problem analysis and redesign	Subjective judgement	for the individual student	<b>1.1 Secure bursary</b> <b>1.2 Find the way from the train station to your new apartment</b> 1.2.1 via public transport 1.2.2 on foot <b>1.3 Rent a car, use it, return it</b>	2–4 days
<b>2nd Semester</b>	+ Structuring information (2D and 3D); making tabular information comparable; presentation of content and processes using diagrammes; interviewing; production of working models and samples; production of working drawings	+ Poster, display, packaging	+ Briefing + Design + Motivation report	+ Structured user interviews	for a manageable group of people to which the students themselves belong	<b>2.1 Find detailed information for a pre-determined assignment</b> 2.1.1 from Consumer information office 2.1.2 in the university library 2.1.3 over the Internet <b>2.2 First Aid</b> 2.2.1 rescue / call emergency 2.2.2 bandage according to rescue instructions 2.2.3 hospital visit 2.2.4 organize insurance claim <b>2.3 Public presentation of finished work</b> 2.3.1 design of an exhibition 2.3.2 explanation of the work 2.3.3 encourage and evaluate feedback 2.3.4 determine needs for next year's presentation	3–20 days
<b>3rd Semester</b>	+ Designing information with regard to attractiveness and appropriateness to content	+ Special effects	+ Specification for Implementation + Cost estimating	+ Iterative testing and designing	for a manageable group of people to which the students themselves do not belong	<b>3.1 City map for the handicapped</b> (with accessible locations marked) 3.1.1 design 3.1.2 evaluate and publicize <b>3.2 Babysitting co-operative</b> 3.2.1 explain 3.2.2 publicize <b>3.3 Car-sharing project</b> 3.3.1 explain 3.3.2 publicize 3.3.3 operate	8–30 days
<b>4th Semester</b>	+ Designing dynamic, sequential and sound-supported information	+ New media, stand-alone	+ Project work in teams	+ Integrated feedback	for anonymous addressees within a defined region	<b>4.1 Applying for legal design protection</b> Interactive user instructions using three designs from the 3rd semester as examples <b>4.2 Interactive study guide</b> <b>4.3 Interactive city information guide and orientation system</b>	3–6 weeks
<b>5th Semester</b>	+ Designing information for Internet presentation	+ New media, networked	+ Estimation of expected work and costs involved + accompanying control + post-mortem calculation	+ Use of statistical criteria	for anonymous addressees world-wide	<b>5.1 Design own home page</b> <b>5.2 Surgeon-general's health recommendations</b> (to be realised employing push-media) <b>5.3 Internet Information system</b> (e.g. Salzkammergut)	1–2 months
<b>6th Semester</b>	+ Designing coherent multimedia information	+ 3D + Product interaction	+ Manual and help system	+ Demoscopic methods	for experts of a defined professional group	<b>7.1 Multimedia exhibition system</b> (visitor-oriented guide system) <b>7.2 Externally-defined project</b> (e.g.: development of an information system for motor testing) 7.2.1 Sales papers 7.2.2 Manual 7.2.3 Help system <b>7.3 Business start-up via Internet</b>	1,5–3 months



# The birth of the virtual Information Design University

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## **IDU** Information Design University

*IDU is an international online university in information design, that is under development by Mälardalen University in Sweden for the International Institute for Information Design, IIID.*

*Eventually IDU, through various universities, will offer a variety of courses in information design at various levels for students all over the world.*

*Presently IDU offers only courses through Mälardalen University. IDU also offers a virtual library from where research reports, conference papers, and various material/writings about information design can be downloaded.*

The virtual Information Design University, IDU, is a result of discussions within the International Information Design community, IIID, on how to develop a unified base for teaching information design.

The idea is to create an international online university in information design with participation of a number of universities in various countries; where each university will offer specialties at various levels in the subject area. Hereby students from everywhere may be able to pick courses from a smorgardsbord of interesting information design courses; ideally in the future students may be able to put together enough courses to get an undergraduate degree, and/or a Master degree in information design. To be discussed with interested parties are administration and examination procedures.

By sharing a base for teaching the international information design community will have a “carrot” and an arena for cooperation, exchange of students and faculty, and sharing of ideas.

The plan is also that IDU will have a virtual library from where various conference papers, other papers, and PhD-dissertations can be downloaded for free. Already uploaded is “Selected readings”, a PDF-file with 25 research papers by Rune Pettersson, Professor of Information Design at Mälardalen University in Eskilstuna, Sweden.

The IDU has already started – on a modest scale in January this year, 2007, with a few students, with the course Information Design – Information Graphics, lead by Assistant Professor/Senior Lecturer Lennart Strand at Mälardalen University in Eskilstuna, Sweden. Participating students came from USA and Austria.

The course was given online during ten weeks, where students were asked to write a module report every other week, and an essay for final individual work. Students shared each others reports, and a chat session took place every other week in an exchange of research findings and ideas.

IIID Partner Universities are invited to enhance the value of the IDU by contributing educational units.

A few comments about the course from students:

Student 1)

“As this course can be seen as some kind of self-study it is a good way to learn not only about design matters but also about self-discipline, organizing deadlines as well as research. I think, by doing this “investigation into design” on your own, you learn probably more than theoretical lectures on this topic can teach you – no offence to the lecturers! – because you have to look into the subject as opposed to just absorb the information by listening.

I think the climate within the class was very good – there was a good information exchange and the annotation on the reports went very well (this helped me a lot especially on how to write reports, how to reference things and how to back up theories – which was my biggest lack, I would say). As I need these particular skills soon for my diploma thesis, I appreciated this class a lot. Also the whole system of the reports due every second week and the seminars in between works very well. There’s enough time to prepare and do research.”

Student 2)

“As the first online class that I have taken, I was very comfortable with the format, which included: online chat discussions, E-mail discussions, self-study assignments posted to the bulletin board, peer review comments, and podcast lectures. I appreciated the free PDF articles, a comprehensive book list, and recommendations for websites to study and discuss. The syllabus was well thought out and organized and the topics were interesting to study. I liked the format for modules, allowing 2 weeks for each, one for a report and the other for the online discussion.

I did have a hard time getting motivated for the class since coordinating the timing of the class was difficult.”

Comments from Lennart Strand:

“My experience, which has been confirmed by other teachers that work with distance learning (including Maria D. Avgerinou, Associate Professor at DePaul University, Chicago, USA, and Rune Pettersson, Professor of Information Design at Mälardalen University in Sweden), is that distance learning call for intensive attention, especially in the beginning of a course and during chat sessions; it’s needed to make people feel like they are part of a group that work together, that they have the same goal, and that they will learn from each other.”

This is the web page to IDU: <http://www.idp.mdh.se/idu/>

About Lennart Strand:

Lennart Strand has a long background in journalism, as a writer and graphic designer. Today he teaches information design, information graphics and graphic design at Mälardalen University in Eskilstuna, Sweden.

He is co-author of a book about information design (Bild & form för informations-design), and together with professor Rune Pettersson, Mälardalen University, co-author of several research papers. Lennart Strand is presently working on educational projects. Since 2007 he is IID President Elect.

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## Special Interest Group (SIG) for Information Design Educators

*under the auspices of the International Institute for Information Design (IIID).*

Information design education – whole programs, dedicated courses, specific projects and assignments – is growing worldwide. More and more individual design faculty are recognizing the impact of information design on their disciplines and have developed courses on information design. More and more universities and colleges are investing in information design programs or tracks and are supporting collaborative research initiatives that incorporate information design. And more and more university design position announcements seek faculty whose areas of expertise includes information design. Faculty and institutions of higher education are recognizing the need to teach students how to organize and visualize information as technology continues to provide more opportunities for people to get and exchange information (internet web browsers and search engines, GPS devices, podcasts, to name just a few). The importance of designing from the perspective of the people who must get and use specific information is gaining ground in academia.

With so many information design programs, courses, and projects happening all over the world, the value of a SIG that serves the needs of information design educators is increasingly clear. Such a SIG can help set standards for information design education and provide support for and networking between information design faculty. Through this SIG, educators could learn from one another's experiences – the successes and non-successes, the obstacles and opportunities – at their respective institutions. The SIG would be a conduit for faculty to connect with one another for joint research projects, student and faculty exchanges, and curriculum development (e.g., online courses that could be taken by students at a variety of institutions).

Locating this SIG within IIID makes sense because IIID is an international information design advocacy organization and has already demonstrated a commitment to information design education. IIID created a board position dedicated to education and has been the European lead institution in a US/EC FIPSE grant about information design education that supported the exchange of faculty and students and the development of an international core educational competencies.

The SIG could encourage faculty in their respective countries to collaborate in addressing curriculum devel-

opment. The SIG could also foster the same attitude among information design faculty at the state or province level.

The IIID education chair and two other educators representing different areas of the world would serve as the advisory committee of the SIG. While each member of the SIG would share in the operation of the SIG, the advisory committee would serve as the coordinating point for ideas, contacts, and activities.

Thus the purpose of the SIG would be to

1. help set standards for information design education worldwide
2. serve as a forum for information design educators
3. connect information design faculty with one another in order to
  - share experiences at their respective institutions
  - develop and participate in joint research projects
  - enable faculty and student exchanges
  - collaborate on class projects
  - develop joint online courses
  - support curriculum development at current affiliated institutions
  - support initiatives for information design education at additional institutions
4. foster curriculum coordination between institutions within their respective countries
5. foster curriculum coordination between institutions at the state or province level
6. sponsor a conference on information design education every 3–5 years

The SIG for information design educators was inaugurated on 6 July 2007 at the IIID Vision Plus 12 Symposium at Schwarzenberg, Vorarlberg, Austria

Information design educators applying for IIID membership may at the same time sign up for the SIG (page 31).

Prof. Lennart Strand (Mälardalen University, Sweden)

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Prof. Rune Pettersson (Mälardalen University, Sweden):

E: [runepe@telia.com](mailto:runepe@telia.com)

Prof. Judith Moldenhauer (Wayne State University, USA)

E: [judith.moldenhauer@gmail.com](mailto:judith.moldenhauer@gmail.com)

## IIID Partner Universities (IIID Institutional Members)

### Asia

National Institute of Design  
Information & Digital Design  
Ahmedabad, IND  
[www.nid.edu](http://www.nid.edu)

### Europe

Coventry University  
School of Art and Design  
Coventry, GB  
[www.coventry.ac.uk](http://www.coventry.ac.uk)

De Montfort University  
Faculty of Art, Design and  
Architecture  
Leicester, GB  
[www.dmu.ac.uk](http://www.dmu.ac.uk)

The University of Reading  
Department of Typography and  
Graphic Communication  
Reading, GB  
[www.rdg.ac.uk/typography](http://www.rdg.ac.uk/typography)

Mälardalen University  
Department of Innovation  
Design and Product Development  
Eskilstuna, S  
[www.idp.mdh.se/eng/id](http://www.idp.mdh.se/eng/id)

Den Grafiske Højskole  
Copenhagen, DK  
[www.dgh.dk](http://www.dgh.dk)

Bauhaus-Universität Weimar  
Faculty of Art and Design  
Weimar, D  
[www.uni-weimar.de/cms/en/universitaet/faculty-of-art-and-design.html](http://www.uni-weimar.de/cms/en/universitaet/faculty-of-art-and-design.html)

Hochschule der Medien  
Studiengang Informationsdesign  
Stuttgart, D  
<http://www.hdm-stuttgart.de/idb>

Freie Kunstschule für Gestaltung  
Ravensburg e. V.  
Schule für Gestaltung  
Ravensburg, D  
[www.sfg-ravensburg.de](http://www.sfg-ravensburg.de)

Donau-Universität Krems  
Department für Wissens- und  
Kommunikationsmanagement  
Krems, A  
[www.donau-uni.ac.at/wuk](http://www.donau-uni.ac.at/wuk)

FH Joanneum  
Studiengang Informations-Design  
Graz, A  
<http://informations-design.fh-joanneum.at>

### North America

Arizona State University  
College of Design  
Tempe, USA  
[www.asu.edu](http://www.asu.edu)

Carnegie Mellon University  
School of Design  
Pittsburgh, USA  
[www.design.cmu.edu](http://www.design.cmu.edu)

Carnegie Mellon University  
Software Engineering Institute  
Pittsburgh, USA  
[www.sei.cmu.edu](http://www.sei.cmu.edu)

Rochester Institute of Technology  
School of Design  
Rochester, USA  
[www.rit.edu](http://www.rit.edu)

University of Idaho  
Department of Art and Design  
College of Letters, Arts and Social  
Sciences  
Moscow, USA  
[www.uidaho.edu](http://www.uidaho.edu)

Wayne State University  
Department of Art and Art History  
Detroit, USA  
[www.art.wayne.edu/](http://www.art.wayne.edu/)

University of Alberta  
Department of Art and Design  
Edmonton, CDN  
[www.ualberta.ca/ARTDESIGN](http://www.ualberta.ca/ARTDESIGN)

York University  
Department of Design  
Toronto, CDN  
<http://design.yorku.ca>

# The International Institute for Information Design (IIID)

was founded to develop research and practice in optimizing information and information systems for knowledge transfer in everyday life, business, education and science.



*IIID is recommended by UNESCO as a partner organization for world wide co-operation on matters of information design (Resolution 4.9 of the 28th General Conference of UNESCO, 1995, Paris).*

*IIID is affiliated to the International Council of Graphic Design Associations (ICOGRADA) and cooperates with a number of other national and international organizations interested in information design.*

The main concern of the International Institute for Information Design is to contribute to a better understanding within the human community with respect to cultural and economic issues by means of improved visual and other than visual communication.

Special attention is paid to the potential of graphic information design to overcome both social and language barriers.

IIID endeavours

- to develop information design as an independent interdisciplinary field of knowledge and professional practice,
- to document and to make generally accessible specifically relevant information,
- to carry out research within its possibilities and in co-operation with its members and
- to find new ways of educating information designers.

The aims of the IIID are to be achieved by interdisciplinary and international co-operation. Thus IIID has established links to renowned universities, research laboratories and design companies.

IIID is supported by the Institute for Information Design Japan (IIDj), founded by the Vision Plus 7 organizing committee in 2002. [www.iidj.net](http://www.iidj.net)

## IIID Board and Director

<i>President</i>	Prof. Robert O. Swinehart, School of Design, Carnegie Mellon University Pittsburgh, PA (USA)
<i>President Elect</i>	Prof. Lennart Strand, Mälardalen University, Eskilstuna (S)
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## IIID Membership

The continued dedication of IIID members enables the Institute to perform and to continually enhance the scope of its activities.

In particular, IIID members enjoy the following privileges:

- IIID members are part of the Institute's global network of information design experts and practitioners. Members may take advantage of this opportunity for establishing business relations, exchanging and discussing their opinions, research and design experience.
- IIID members may actively participate in ongoing IIID initiatives focusing on transport guiding systems and public transport information as well as on subject matters under development like financial information, tourist information and manual design. Educators may cooperate in the Special Interest Group (SIG) for information design educators.
- IIID members may profit from participating in IIID events, some of which are offered at a reduced rate or free of charge to members.
- IIID partner universities may contribute to the Information Design University (IDU) under development by Mälardalen University, Eskilstuna, Sweden.
- IIID members receive regular mailings. Readers get informed about the Institute's events and activities. Related symposia, conferences and design competitions which are of interest to information designers are included. Newly published or especially interesting publications in the field are cited.
- The IIID mailings may be a valuable resource for members for posting advertisements free of charge.
- IIID members are granted a discount on the IDJ / Information Design Journal published by John Benjamins Publishing Co., Amsterdam. The IDJ is the only scientific journal with a focus on information design.
- More about IIID can be found at [www.iiid.net](http://www.iiid.net).





# IIID

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