



AALBORG UNIVERSITET

Communication and digital media 8th semester, Information Architecture, Aalborg

Semester description

Semester details

School: School of Communication, Art and Technology (CAT)

Study board: Communication and digital media

Study regulations:

http://www.fak.hum.aau.dk/digitalAssets/107/107898_ma_informationsarchitecture_2015_hum_aau.dk.pdf

Semester organisation and time schedule

The semester offers 3 obligatory and one elective course (A) for masters students at Kommunikation og digitale medier. The obligatory courses count Design tools (study subject module), Design of information architecture (study subject module), and Information architecture in organisations (project module).

The purpose of the semester is to develop competences in understanding and incorporating the organisational context in the development and maintenance of information architecture. Furthermore, the semester introduces user driven and agile approaches to the design of information architecture. The course Design of information architecture is partly offered along with Human centred informatics (8th semester). Lastly, "Design tools" offers understanding of and skills in using specific design tools at different steps of the design process.

Semester coordinator and secretariat assistance

Anchor person: Tanja Svarre Jonassen

Secretarial assistance: Pia Knudsen

Module description: “Design of Information Architecture”

“Design of Information Architecture” 10 ECTS
Location 8 th semester
Module coordinator Tanja Svarre
Type and language Study subject module English
Objectives In the module the students will acquire knowledge of: • Theory and methods of system development • User-driven techniques and tools • Formalisation and categorisation as regards formal models for the preparation, visualisation and communication of design solutions. Skills in: • assessing strategies and methods for system development and system design on the basis of user needs and/or costumer needs and knowledge of the disciplinary theories and methods. • choosing suitable strategies and methods for system development and system design directed towards various domains • data collection and analysis as regards system development and system design • applying formal models for the preparation and communication of system development and system design • communicating system development and system design to peers and others. Competences in: • taking an analytical, reflective and critical approach to the preconditions for system development and system design • taking an analytical, reflective and critical approach to system development and system design • engaging in disciplinary and interdisciplinary collaboration on system development and system design, with a professional approach • identifying own learning needs and structuring own learning in relation to the subject area of system development and system design.
Academic content and conjunction with other modules/semesters The module will introduce students to design of ICT and IA directed towards organisational practice or another professional practice. The module comprises teaching within the following areas: system design with particular emphasis on interaction design, user-driven system development and system development methods in theory and practice, and formal models for preparing and communicating design solutions (for example blueprints, UML etc.). The module is evaluated through an individual 3 days take home assignment.
Participants Students enrolled at the 8 th semester Information Architecture

Prerequisites for participation

BA-level in studies accepted by the study board of Human Centered Informatics

Module activities (course sessions etc.)

Lecture about Information philosophy

Description

Informatics is the science of information systems involving computing (hardware engineering, software design and programming. Programming is description of objects and relationships, and data flows, as well as theory building. The aim of the lecture is to seek to come to grips with the relationship between an object and a description of an object – in everyday folk theory, in programming, and in design.

Literature for this lecture

Naur, P. (1985). *Programming as theory building. Microprocessing and Microprogramming*, 15, 253-261.

Nygaard, K. (1986). *Program development as a social activity. In: Kugler (ed.). Information Processing 86, IFIP. Elsevier: North-Holland*, 4-13.

Miettinen, R. & J. Virkkunen (2005). *Epistemic Objects, Artefacts and Organizational Change. Organization*, 12, 437–456

Company visit to Logimatic

This Thursday (February 4th) Lone and Heilyn are going with you to visit a company (more details on Monday). The talk starts at 9.00 but we meet at 8.45. The address is:

LOGIMATIC

Sofiendalsvej 5B
9200 Aalborg SV
Denmark
+45 9634 7000
www.logimatic.com

Lecture about Systems Design & Participation

Literature

Löwgren, J., & Stolterman, Erik. (2004). *Thoughtful interaction design : A design perspective on information technology (Elektronisk udgave ed.)*. Cambridge, Mass: MIT Press.

Michael J. Muller: *"Participatory Design: The Third Space in HCI" Human-computer interaction: Development process (2003): 165-185.*

Sanders, E. (2008) *An evolving map of design practice and design research. Interactions Magazine – November and December, 2008*

Lecture about Design roles and Methods and Techniques

Literature

Löwgren & Stolterman Chapter 3 + 4, 6

Yanki Lee: "Design participation tactics: the challenges and new roles for designers in the co-design process", in CoDesign, 4:1,31-50 2010.

Kanstrup & Bertelsen: "Participatory Reflections – Power & Learning in User participation", In What is Techno-Anthropology? Tom Børsen & Lars Botin (eds.) Aalborg University Press, Series in Transformational Studies; Nr. 1, Vol. 2, pp. 405-430.. s)

Suchman: "located accountabilities in technology production" in Scandinavian Journal of Information Systems, 2002, 14(2): 91-105

Lecture about Introduction to Systems development

Description

This lecture surveys the history of systems development and also give an introduction of activities that takes place in industry practice today, without assuming prior knowledge to programming or industry experience. Waterfall and agile methods are compared and contrasted.

Literature

Parnas, D., & Clement, P. (1986). A rational design process - How and why to fake it. IEEE Transactions on Software Engineering, 12(2), 251-257.

Royce, W. (n.d.). Managing development of large software systems. IEEE Wescon (pp. 1-9).

Boehm, B. W. (1988). A spiral model of software development and enhancement. Computer, 21(5), 61–72. doi:10.1109/2.59

Lecture about Formal models for communicating systems design

Description

It introduces and discusses the concept of information architecture and presents the four core elements in information architecture: Navigation, organization, labelling, and search.

Literature

Fowler, M. (2003). UML Distilled: A Brief Guide to the Standard Object Modeling Language. Boston: Pearson. Ch. 1-4, 9.

Gomaa, H. (2011). Software Modeling and Design: UML Use Cases, Patterns, and Software Architectures. Cambridge: Cambridge University Press. Ch. 1-2

Lecture about agile systems development

Description

Introduction to agile methods. Reflecting back on previous experience of agile projects (as students or employees). This session is highly interactive.

Literature

Beyer, H. (2010). User-centered agile methods. San Rafael, Calif. Morgan & Claypool Publishers

Näkki, P., Koskela, P., Pikkarainen, M. (2011). Practical model for user-driven innovation in agile software development. In the ICE2011 proceedings

Lectures about Design Thinking in Theory and Practice

Description

These lectures cover the theory of Design thinking and the implementation of the methodology through a real case exercise (6 hours lectures + a field trip).

Literature

Brown, T. Change by design: how design thinking transforms organizations and inspires innovation. Harper Business, New York, 2009 (253 pages).

Martin, R. L. (2009). The design of business: Why design thinking is the next competitive advantage (3rd ed.). Cambridge, MA: Harvard Business School Press (195 pages).

Thoring, Katja, Muller, Roland, M., Martens, Jean-bernard, & Markopoulos, Panos. (2011). Understanding the creative mechanisms of design thinking: An evolutionary approach. Creativity and Innovation in Design Proceedings of the Second Conference, 137-147.

Examination

An internal written individual test in: Design of information architecture. The test takes the form of a set take-home assignment to be handed in after 3 days. On the basis of the module, students will respond to one or a number of questions and assignments within the subject area of the module. The assignment paper must demonstrate that the student fulfills the objectives for the module stated above. The assignment paper must not exceed ten pages, and it must be prepared individually.

Module description: “Design tools”

5 ECTS equals 137,5 working hours
Location 8 th semester Study board of Communication and digital media
Module coordinator <i>Pär-Ola Zander</i>
Type and language Study subject module English
Objectives In the module the students will acquire knowledge of: • Tools for designing and developing information architecture Skills in: • Selecting relevant tools for supporting and documenting the design of information architecture • Applying specific design tools in practice for designing and documentation of information architecture Competences in: • Reflecting on own practice and documentation hereof • Identifying own learning needs and structuring own learning in relation to applying
Academic content and conjunction with other modules/semesters <i>This course is similar to the other "Databases" course in that they are practically oriented, and enables academic engagement within the profession of Information Architecture, by allowing the students to familiarize themselves with tools in the profession.</i> <i>The professional and practical competences that will be covered are:</i> <i>IT Design Tools</i> • <i>Raster Graphics</i> • <i>AXURE</i> • <i>MIXED PROTOTYPING</i> • <i>Eye tracking</i> • <i>Choosing between tools</i>
Scope and expected performance <i>The expected scope of the module in terms of ECTS load. This comprises number of teaching hours, exercises, preparation time.</i> - <i>7 times of 3 hours with interactive discussions and hands-on trials</i> - <i>Additional work, requiring 2-3 weeks of independent training in order to reach sufficient grasp of</i>

the tools

- The course finish with a 3-day assignment where all time needs to be spent on working with an assignment

The course is co-read with module 13, ICT for learning, knowledge and content management (the master's programme in Human Centered Informatics)

Participants

Students enrolled at the 8th semester Information Architecture

Prerequisites for participation

BA-level in studies accepted by the study board of Communication and digital media

Module activities (course sessions etc.)

Lecture 1: Raster Graphics I

Improve your speed in handling raster graphics, with specific focus on prototyping.

Lecture 2: Raster Graphics II

More work with raster graphics.

Lecture 3: Wireframing in Axure

Note! You should have Axure installed for this session. But do not install too early, unless you have a non-trial version. The trial version is for 30 days, and you want to have it running during the exam.

Lecture 4: Wireframing in Axure II

More work in Axure.

Lecture 5: Google Analytics

You need a Google account and a Google Analytics account for this session.

[Check with Heilyn for 2nd opinion]

Lecture 6: Mixed prototyping

Follow-up on Google Analytics

For this session you need to bring sketching material; pens, papers, scissors. And if you have a camera with wifi, bring that as well.

Date and time:

Lecture 7: Eye-tracking

Topics: How to set up an eye-tracking test.

Literature

- Webb, N., & Renshaw, T. (2008). Eyetracking in HCI. In P. Cains & A. L. Cox (Eds.), Research methods for human-computer interaction (pp. 35-69). Cambridge, UK: Cambridge University Press.
- Lim, Y.-K., Stolterman, E., & Tenenberg, J. (2008). The anatomy of prototypes. *ACM Transactions on Computer-Human Interaction*, 15(2), 1–27. <http://doi.org/10.1145/1375761.1375762>

- Ehn, P., & Kyng, M. (1986). A tool perspective on design of interactive computer support for skilled workers. *DAIMI Report Series, 14*(190).
- Dow, S. P., Heddlestone, K., & Klemmer, S. R. (2009). The efficacy of prototyping under time constraints. In *Proceedings of the seventh ACM conference on Creativity and cognition* (pp. 165–174). ACM.
- Kanstrup, A. M., & Christiansen, E. (2005). Model power: still an issue? In *Proceedings of the 4th decennial conference on Critical computing: between sense and sensibility* (pp. 165–168). ACM.
- Dade-Robertson, M. (n.d.). Between city lights receding and the non-space of the mind. In *The Architecture of Information: Architecture, Interaction Design and the Patterning of Digital Information* (pp. 67–89). Oxon: Routledge.
- Hayles, K. (1999). *How we became posthuman*. Chicago: Chicago University Press.

Examination

An internal written individual test in: Design tools. The test takes the form of a set take-home assignment to be handed in after 3 days. In the test, the student completes a designated task within the tools presented in the course. The assignment paper must demonstrate that the student fulfills the objectives for the module stated above. Evaluation: Grading according to the 7-point scale.

The test is handed out through email, and is delivered back in Moodle, in zipped files..

Module description: “Information Architecture in organisations”

“Information Architecture in organisations” 10 ECTS
Location 8 th semester
Module coordinator Tanja Svarre
Type and language Project module English
Objectives In the module the students will acquire knowledge of: • Information management and digital communication strategies and their individual and organisational consequences • Ethical considerations regarding the use of Information Architecture and Persuasive Design in organisations skills in: • Developing information architecture supporting organisational information management and digital communication strategies • Reflecting on ethical problems related to the use of information architecture elements and persuasive design principles competences in: • Coordinating and co-operating in design processes using knowledge about information management and communication strategies • communicating with both specialists and users on professional problems in relation to strategic information architectures and persuasive designs • communicating design strategies • to plan and manage the design of culture-sensitive and multi-medial information architectures in a way which demonstrates the ability to achieve insight into other cultures and perceptions
Academic content and conjunction with other modules/semesters The focus of the module is the individual and organisational changes and consequences to which an information architecture may give rise, and to use this knowledge to develop strategies for information management and digital communication.
Scope and expected performance The module comprises 10 ECTS. There is 30 k-hours in the course and 1000 pages of reading. All lectures are placed in February. Further, as this is the project module, this is where the semester project is placed. The students have 15 hours of supervision for the individual projects, and some of these will be offered as cluster supervision.

Participants Students enrolled at the 8 th semester Information Architecture
Prerequisites for participation BA-level in studies accepted by the study board of Human Centered Informatics
Module activities (course sessions etc.) Theme 1: Communication strategies in organisations Lecturer: Pär-Ola Zander and Tanja Svarre Dates: 8.2 and 10.2 The theme introduces the theoretical landscape of strategy theory. Relationships between the most important discourses: Organisation theory. Strategy theory. Corporate strategy. Normative & descriptive approaches of Strategy Theory. Public sector strategy. Stakeholder theory. Enterprise Architecture recap. The second lecture concentrates specifically on the development of information strategies. Readings for 8.2: • <i>Amit, R., & Zott, C. (2001). Value creation in E-business. Strategic Management Journal, 22, 493–520.</i> • <i>Alford, J. (2001). The implications of “publicness” for strategic management theory. Exploring public sector strategy (pp. 1–13).</i> Readings for 10.2: • Rosenfeld, Morville & Arango (2015). <i>Information Architecture for the Web and Beyond</i>. Sebastopol: O'Reilly. <u>Ch. 12</u>. Supplementary literature: • Mohapatra & Singh (2012). <i>Information Strategy Design and Practices</i>. London: Springer. <u>Ch. 1</u>. Theme 2: Information behaviour in corporate settings Lecturer: Marianne Lykke Dates: 11.2 and 17.2 In this lecture, we work with the notion of information behavior specifically on models and methods used to study information behavior. We will also look at specific studies of information behavior in corporate settings and discuss how we can use this knowledge as information architects. Litterature: • Case, D.O. (2006). Information behavior. <i>Annual Review of Information Science and Technology</i>, 40 (1). 293-327. • Wilson, T.D. (1981) On user studies and information needs. <i>Journal of Documentation</i>, 37(1), 3-15 [Available at http://informationr.net/tdw/publ/papers/1981infoneeds.html] Theme 3: Persuasive design and ethics in organisations

Lecturer: Sandra Burri

Dates: 16.2 and 18.2

On the notion of persuasion

In this lecture, we extend our understanding of the notion of persuasive design, by approaching persuasion as a concept, from rhetorical, social psychological and learning perspectives. By doing so, we extend our understanding of persuasion from being solely focused on changing the attitudes and behaviours of users, to also focusing on shaping or reinforcing behaviours.

Literature:

- Miller, G – On being Persuaded (From the Persuasion Handbook)

Applied Ethics

In this lecture, we build upon the 7th semester's general introduction to ethics, and focus specifically on applied ethics in design processes. How can we as designers include ethics in our design processes, and how do we distinguish between practical and ethical challenges.

Literature:

- Davis, J (2010) Generating Directions for Persuasive Technology Design with the Inspiration Card Workshop, 5th international conference on persuasive technology, Springer
- Gram-Hansen, Sandra Burri; Ryberg, Thomas (2015) From Participatory Design and Ontological Ethics, Towards an Approach to Constructive Ethics., Computers & Society: The Newsletter of the ACM Special Interest Group on Computers and Society Special Issue on 20 Years of ETHICOMP.

Theme 4: Information management

Lecturer: Gunilla Widen

Dates: 24.2-26.2

Wednesday:

Lecture 1: Introduction. Information science perspective

Lecture 2: Literature seminar and lecture on approaches to workplace IKM

Thursday:

Lecture 3: Social aspects to IKM.

Group work description and workshop

Friday:

Lecture 4: Group work presentations

Readings:

Lecture 1:

Dalkir, K. (2011). Knowledge Management in Theory and Practice. Chapter 1

Maceviciute, E. and Wilson, T.D., Eds. (2005). Introducing information management: an Information Research reader. Chapter 2, 12.

Lecture 2:

Case, D. (2007) Looking for information: a survey of research on information seeking, needs, and behavior. 2. Ed. Chapter 11.

Dalkir, Kimiz (2009) "Knowledge Management". In: Eds. Bates & Maack, Encyclopedia of Library and Information Sciences, 3. ed. London: Routledge (pp. 3129-3138)

Detlor, Brian (2009) "Information Management". In: Eds. Bates & Maack, Encyclopedia of Library and Information Sciences, 3. ed. London: Routledge (pp. 2445-2451)
Kirk, Joyce (1999) "Information in organisations: directions for information management" Information Research, 4(3). Available [here](#).

Lecture 3:

Mackenzie, M. L. (2005) "Managers look to the social network to seek information". Information Research, 10(2). Available [here](#).
Tredinnick, L. (2008) Digital information culture: the individual and society in the digital age. Chapters 1-3, 6.
Widén-Wulff, G. (2007). Challenges of Knowledge Sharing in Practice: a Social Approach. Chapters 2, 7-9
Virta, M. & Widén, G. (2011) Sharing what you know, building expertise: information sharing between generations in a business organization. In: Proceedings of the International Conference on Knowledge Management and Information Sharing. Paris, France, 26-29 October 2011. (pp. 129-135)

Theme 5: Organisational change

Lecturer: Heilyn Camacho

Dates: 29.2

This lecture will cover the topics of change and the IT driven changes within an organizational context. Furthermore, it will introduce the participant into different approaches to change management.

Readings:

BASSETTI, C. (2012), 'IS-related organizational change and the necessity of techno-organizational co-design(-in-use). An experience with ethno methodologically oriented ethnography', in G. Viscusi, G.M. Campagnolo and Y. Curzi (eds.), Phenomenology, Organizational Politics and IT Design: The Social Study of Information Systems, Hershey, Penn.: IGI Global.

Burnes, Bernard (2004) Kurt Lewin and the Planned Approach to Change: A Re-appraisal. Journal of Management Studies 41:6 September 2004

Cabrera, A., Cabrera, E. and Barajas, S. (2001). The key role of organizational culture in a multi-system view of technology-driven change. International Journal of Information Management 21

Lewis, L. K. (2011). Organizational change : creating change through strategic communication. Chichester, West Sussex; Malden, MA: Wiley-Blackwell. (Chapters 1-3, 5)

Kotter, J. (2012). Leading Change (2.nd ed.). Boston, Mass: Harvard Business Review Press

Markus, L. (2004) Technochange management: using IT to drive organizational change. Journal of Information Technology 19:4-20. (Palgrave Macmillan)

Schein, E. (1996) Kurt Lewin's Change Theory in the Field and in the Classroom: Notes Toward a Model of Managed Learning. Systems Practice, Vol. 9, No. 1 (pages 27-37)

Examination

An external written individual test in: Information Architecture in Organisations. The student develops an information strategy in a certain context and prepares an essay of not more than 30 pages that presents, theoretically examines and critically discusses the proposed strategy.

Literature foundation: 1000 standard pages supervisor approved, self-selected literature related to the project