



Course Introduction – Autumn 2019

Department of Computer Science | Software Analysis & Design
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Content

- Goal of the course
- Why is this course important
- Practical information
- Schedule and learning material



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Goals of the Course

- This course studies **methods** for specifying, organizing and working with software requirements and software design.
- The needs of the user and the structure of systems are **modelled** and co-operation with the user is practiced.
- The students learn different design methods for **designing** systems and the user interface
- The students learn **testing practices**
- The main focus is on practicing different **methods** for requirements specification, analysis, design and testing in the early phases of software development



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Why is This Course Important?



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1. Companies Focus on Users e.g. Google

- The focus is more and more on user experience in software development, for example Google
 - <https://www.google.com/about/our-company/>

Our mission is to **organize** the world's **information** and make it **universally accessible** and **useful**.



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2. Understanding Requirements can Save Money



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Our Great Software MMDS

Developer/2000 Forms Runtime for Windows 95 / NT (Return Entry 019:00 Kwan Yick Bldg)

Action Edit Block Field Record Query MMDS Help Window

Return number 71345 NDF Freight charges 14,000.00 Return number 21
 Other charges 250.00 Status 2
 Return date 18-DEC-96 Reference number 303 Description Unconfirmed

Return lines

Item Ref No	Description	Quantity	Net cost price	Net cost value	Retail price	Retail value
010340003	D.F. ICE CREAM-CHOCOLATE	60	16.85	1011	22.5	16.85
010340008	D.F. CHOC MILK BTL 239ML	60	3.52	211.2	5.7	3.52
010340008	D.F. CHOC MILK-S	60	3.52	211.2	4.7	3.52
010340011	D.F. FRESH MILK BTL 329ML	15	4.68	74.88	5	4.68
010340012	D.F. FRESH MILK-S	10	4.68	46.8	5.8	4.68
010340013	D.F. FRESH MILK-M	60	9.2	552	11.4	9.2
010340016	D.F. ICE CREAM-VANILLA	60	29.9	1794	45	29.9
010340017	D.F. LONG LIFE U.H.T. MILK	60	10.9667	634.002	14	10.9667
010340018	D.F. LONG LIFE MILK	16	3.6333	561.308	4.32	3.6333
010340020	D.F. CORNET-VANILLA	16	4.65	74.4	5	4.65
010340021	D.F. JOYSTICK	16	3.5	56	5.5	3.5
010340027	D.F. GOLD SEAL MILK-CTN	100	3.38	338	4.5	3.38
010340030	D.F. IVC CUP-VANILLA	610	4.45	2714.5	6.6	4.45

Mode - 1 Overview - 2 Item Info - 3 Receipt - 4 V07:15 Confirm - 6 Print - 7

Count: 14 (86M) (55C) (08G)



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The Development Process

- > 1 year project duration
 - The Clients came with 3 month interval
 - I was responsible for functional testing
- I went to Australia
 - to teach the users
- I discovered some **problems**
 - which do you think?



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3. Changing World - Technology



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And More Possibilities



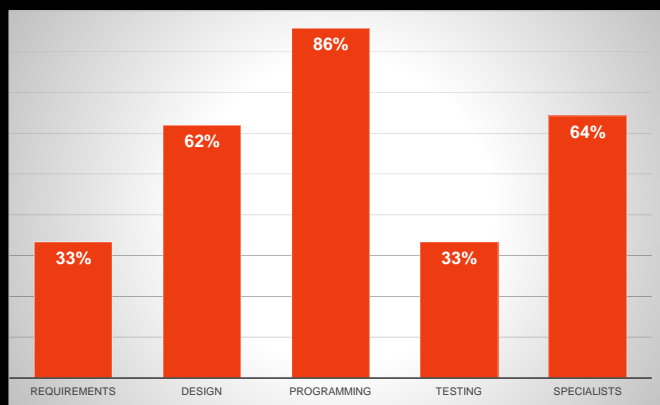
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Various Contexts



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4. Practise for Future Job Roles



- Source: Final project at RU in 2014 – Computer Scientists from RU graduated 2009 - 2014

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5. This course is a Prerequisite for Other courses

Mandatory courses

- Semester Project 1 (T-113-VLN1)
 - Verklegt námskeið 1
- Software Engineering (T-303-HUGB)
 - Hugbúnaðarfræði
- Final Project (T-404-LOKA)
 - Lokaverkefni

Elective courses

- User Centred Software Development
- Human Computer Interaction



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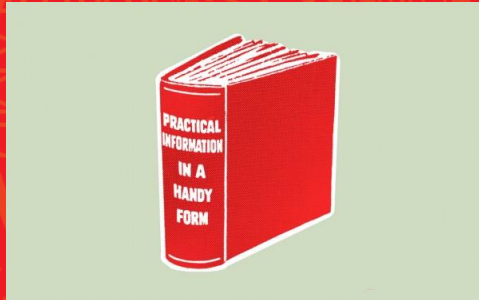
Summary of Reasons

1. Companies are focusing of users
2. Understanding requirements can save money
3. The world is changing – More variation
4. Practice for future job roles
5. Prerequisite for other courses



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Practical Information



Assessment

- **Hand-in assignments - Total 40%**
 - 4 assignments at 10% each
 - Quality of the result will be emphasized
- **Lab assignments - Total 10%**
 - 2 % each
 - Possible grades: 10, 8, 6, 4, 0
 - The five best provide the grade (you will get 7 projects in total)
- **Final exam – Total 50%**
 - Will be both in Icelandic and English
 - To pass the course you must pass the final exam (with 4,75 or higher)
 - No helping material allowed in the final exam



NOTE

- In group assignments I want you to participate in **ALL** the activities
 - The written exam is partly based on the projects in the course
 - The companies you will work for want you to be skilled in doing all the activities
- All assignments will be graded according to the **quality** of the results
 - Not just if something has been done or not
 - This is also very important for future job roles



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Lectures

- 3 lectures per week
 - Two lectures at the university
 - Group 1 and 3: Mondays at 8:30 – 10:05 in M101
 - Group 2 and 4: Mondays at 10:20 – 11:55 in M101
 - One lecture recorded, put on line on Fridays
- All lectures will be recorded and be visible in Echo360 in Canvas
- Students that attend lectures do better in the final exams
 - Has been found in research studies



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Lecturers



Marta Lárusdóttir

1. and 2. week
4. – 8. week
11. and 12 week

Human-computer
interaction subjects



Skúli Arnlaugsson

3. week
9. and 10. week

Modelling subjects



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Marta Lárusdóttir – Education and Work



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Practical Classes – Start this Week

- Practical open classes with assistance
 - Weekly practical projects and hand-in group projects
- Wednesdays
 - 8:30 – 10:10 in M201
 - 11:50 – 13:30 in V201
 - 13:30 – 15:10 in V201
 - 15:10 – 16:50 in V201
- Mondays
 - at 16:50 – 18:30 for HNV (háskólanám með vinnu) in M108
- There will be two students assisting all the time



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Teaching Assistance

- There will be 7 TAs assisting in the course
 - Berglind Kara Guðmundsdóttir
 - Grading projects and TA in problem solving classes
 - Birna Vala Björnsdóttir
 - Grading projects
 - Bryndís Charlotte Sturludóttir
 - Grading projects and TA in problem solving classes
 - Elmar Þór Aðalsteinsson
 - Grading projects
 - Hildur Björg Gunnarsdóttir
 - Grading projects and TA in a problem solving class
 - Hrefna Namfa Finnsdóttir
 - Grading projects and TA in problem solving classes
 - Ólafur Pálmi Gunnarsson
 - In Akureyri assisting the students there



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Schedule and Learning Material



Schedule – First Three Weeks – Marta and Skúli

Dags.	Þema fyrirlestrar	Fyrirlesari
Vika 0		
14.ágú.19	Engir dæmatímar í þessari viku	
Vika 1		
19.ágú.19	Kynning á námskeiðinu	Marta
19.ágú.19	Greining notendahópa	Marta
23.ágú.19	Hönnun notendaviðmóta (fyrirlestur eingöngu tekinn upp)	Marta
19. og 21. ágúst	Dæmatimaverkefni 1 - Greining notendahópa	
Vika 2		
26.ágú.19	Virknikröfur og almennar kröfur	Marta
26.ágú.19	Viðtöl	Marta
30.ágú.19	Upplýsingaöflunaraðferðir (fyrirlestur eingöngu tekinn upp)	Marta
26. og 28. ágúst	Dæmatímar - Verkefni 2 - kröfur	
Vika 3		
2.sep.19	Notkunartilvik	Skúli
2.sep.19	Meira um notkunartilvik	Skúli
6.sep.19	Hlutbundin forritun (eingöngu tekinn upp)	Skúli
2. og 4. sept	Dæmatímar - Vinna að skilaverkefni 1	Marta
7.9.2019	Skila inn skilaverkefni 1 (23:59)	Marta



Schedule – Week 4 and 5 – Marta

Vika 4		
9.sep.19	Leiðbeiningar um viðmótshönnun	Marta
9.sep.19	Leiðbeiningar um viðmótshönnun (frh.)	Marta
13.sep.19	Sérfræðingaprófanir (eingöngu tekinn upp)	Marta
9. og 11. sept	Dæmatimar - Verkefni 3 - Sérfræðingaprófanir	Marta
Vika 5		
16.sep.19	Skissur	Marta
16.sep.19	Pröfun frumgerða	Marta
20.sep.19	Meira um grunnmyndir (eingöngu tekinn upp)	Marta
16. og 18. sept	Vinna að skilaverkefni í dæmatíma	Marta
19.9.2019	Skila inn skilaverkefni 2 (kl. 23:59)	Marta


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Schedule – Week 6,7 and 8 - Marta

Vika 6		
23.sep.19	Millihönnun viðmóta	Marta
23.sep.19	Millihönnun viðmóta (frh.)	Marta
27.sep.19	Ýmsar tegundir viðmóta (fyrirlestur eingöngu tekinn upp)	Marta
23. og 25. sept	Dæmatimar - Dæmatimaverkefni 4 - Millihönnun viðmóta	Marta
Vika 7		
30.sep.19	Nytsemi og mælanlegir þættir	Marta
30.sep.19	Mælanleg nytsemismarkmið	Marta
4.okt.19	Meira um nytsemi (fyrirlestur eingöngu tekinn upp)	Marta
30. sept og 2. okt	Dæmatimar - Dæmatimaverkefni 5 - nytsemismarkmið	Marta
Vika 8		
7.okt.19	Notendaupplifun og markmið	Marta
7.okt.19	Markmið og prófanir	Marta
11.okt.19	Meira um notendaupplifun (fyrirlestur eingöngu tekinn upp)	Marta
7. og 9. okt	Dæmatimar - Vinna að skilaverkefni 3	Marta
12.okt.19	Skila skilaverkefni 3 (23:59)	Marta


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Schedule – Week 9 to 12 – Skúli and Marta

Vika 9		
14.okt.19	Stöðurit	Skúli
14.okt.19	Klasarit	Skúli
18.okt.19	Nafnorðagreining (eingöngu tekinn upp)	Skúli
14. og 16. okt	Dæmatímar - Dæmatímaverkefni 5 - Klasarit/stöðurit	Skúli
Vika 10		
21.okt.19	Runurit	Skúli
21.okt.19	Runurit	Skúli
25.okt.19	Farið yfir dæmi (eingöngu tekinn upp)	Skúli
21. og 23. okt	Dæmatímar - Vinna við skilaverkefni 4	
26.okt.19	Skila skilaverkefni 4 (23:59)	Skúli
Vika 11		
28.okt.19	Hugbúnaðarprófanir - kynning	Marta
28.okt.19	Testing Activities - Guestlecture in English	Mohammad Hamdaga
1.nóv.19	Hugbúnaðarferlar og viðhald tölvukerfa (eingöngu tekinn upp)	Marta
28. og 30. okt	Dæmatímar - Dæmatímaverkefni 7	Marta
Vika 12		
4.nóv.19	Upprifun námskeiðsins - HCI	Marta
4.nóv.19	Upprifun - UML	Skúli
	Engir dæmatímar í þessari viku	


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Teaching Material

Interaction Design: Beyond Human-Computer Interaction

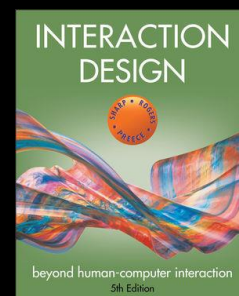
Authors: Preece, Sharp, Rogers

Publisher: Wiley

Edition: 5

Year: 2019

ISBN-13 number: 978-1-119-54725-9



Used in weeks: 1,2,4,5,6,7,8,11 and 12

Taught by Marta

Further reading may appear later in the course

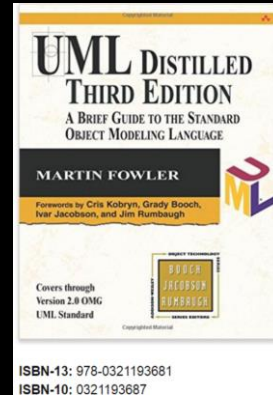

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Teaching material

Book: UML Distilled Third Edition

Author: Martin Fowler
 Publisher: Addison-Wesley
 Edition: 3
 Year: 2004
 ISBN-13 number: 978-032119-368-1

Used in weeks: 3, 9, 10
 Taught by Skúli



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Piazza

- Have made a page on Piazza for the course
 - https://reykjavik.instructure.com/courses/2700/external_tools/442
- There are the following guidelines
 - We are polite to each other
 - I will not answer immediately
 - But generally quicker response between 9:00 – 17:00
 - You can not count on that I will answer during weekends
 - Even though there deadlines during that weekend
 - Try to help each other
 - I will encourage teaching assistants to answer also



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We want you to learn

We would like to co-operate
with you to achieve that goal



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