Welcome to SENG 321
Requirements Engineering
Let's make this an engaging course

SENG 321

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http://www.engr.uvic.ca/~seng321/
https://courses1.csc.uvic.ca/courses/201/spring/seng/321

BSENG Accreditation

Thank you

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Announcements

- S2 & C2
  - Posted

- **Quiz 1 (tomorrow)**
  - ***Wed, Feb 24 in class***
  - Class attendance must increase

- **Midterm**
  - Wed, March 2

- **Final Exam**
  - Sat, April 16
  - 19:00-22:00
  - ECS 125

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Quiz 1	Wed, Feb 24	In class	2% of course
Midterm (revised)	Wed, Mar 2	In class	14% of project
Deliverable S2a (revised)	Fri, Mar 4	S2a Detailed req spec: conceptual design	10% of project
Deliverable S2b (revised)	Tue, Mar 8	S2b Class presentation of S2a to customer	5% of project
Deliverable C2 (revised)	Thu, Mar 10	C2 feedback on S2a&S2b	5% of project
Deliverable S3a	Tue, Mar 15	S3a Technical Design Spec	15% of project
Deliverable S3b	Tue, Mar 22	S3b Manual	10% of project
Deliverable C3	Thu, Mar 24	C3 feedback on S3a&S3b	10% of project
Easter break	Mar 25-28	Fri, no class	
Deliverable S4	Mar 29-31	S4 project demo	10% of project
Deliverable C4	Mar 29-31	C4 feedback on S4	5% of project
Last Day of Classes	Fri, Mar 31		
Final Exam	Sat, Apr 16	19:00-22:00 ECS 125	35%

SENG 321 Calendar

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Questionnaires

- Good for large groups when you have specific questions
- **NOT** appropriate as the only way, they suffer from being a *one way* communication technique and suffer *time lag*:
  - You cannot do follow up questions
  - You cannot follow users down interesting paths/points that they might raise during their answer

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Good Usages of Questionnaires

- Good uses of questioners include:
  - Survey of currently used features
  - Reasons for not using specific features
- Questionnaire can be used to establish usability requirements and priorities of features
- You should use interviews to create useful questionnaire for example:
  - "What new features would you like to see?" Open ended and needed... but then you can create a questionnaire and send to users for voting

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Common Questionnaires Mistakes

- Bias in sample selection
- Bias in responding users
- Small sample size
- Untested questions that are ambiguous

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Elicitation Techniques

1. Reuse old requirements or existing system
2. Questionnaire
3. Interviews
4. Brainstorming
5. Observation and apprenticeship
6. Ethnographic studies
7. JAD: Joint Application Design
8. Nominal group technique
9. Delphi technique
10. PIECES Approach

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Interviews

- Key point is to pick the right people to interview!
- Users usually do not know what they want:
  - You built EXACTLY what I asked for!
  - But not what I wanted

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Interviews

- The people you interview should fill different user/stakeholder roles
- Select users that are:
  - Have authority and motivated to see the project succeed
  - Accountable and knowledgeable
- Interviews should be done in person and not through email/surveys:
  - Observe body language
  - helps build rapport

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Interviews

- Interviews permit us to listen and understand better the problems faced by customers
- Before the interview, research the background of the stakeholder to avoid boring them with questions you easily answer
- You can quickly review some answers if needed
- During the interview, jot down the answers
- Make sure the interview schedule is not overly constraining
- Once rapport is established the interview likely will take a life of its own (horror stories and true/root causes)

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Interviews: Types of Questions

- You should start with open-ended and context free questions then move to more specific questions as you learn more and gain a better understanding of users needs and requirements:
  - Open Ended: "How will you search for a job?" vs.
  - Context Free: "Will you search using title?"
- Make sure you remove context from question:
  - You would not really give up features and performance just to have it run on a browser - would you?!! (What would the answer be…)
  - Instead ask questions like:
    - How fast should the search be? What kind of performance is required?
    - *Is performance more important than other features like usability?*

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Examples of Questions

- Example of closed-ended question
  - Would you like the new system to work in your web browser? Y/N (This question does not mention the alternatives and associated costs! What would one give up to get such a feature?)
- Example of open-ended question
  - Would you like the new application be in your web browser even if it means fewer features, and less interactivity?
  - What would you be willing to give up to use your application in your web browser?

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Template for an Interview

- Establish the Customer/User Profile
  - Name, responsibility
  - *How is success measured?*
  - What problems interfere with success?
- Assessing the Problem
  - *What problems do you face for which you lack a good solution?*
  - Why does the problem exist? How do you solve it? How would like it solved? (Any other)
- Understanding the User Environment
  - *User background*, education, computer systems, expectation for product usability
- Recap for Understanding
  - Repeat to customer in your own words their problems and ask for feedback, clarifications, or additions
  - *Repeat to the customers the answer to the red questions*

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Template for an Interview

- The Analyst's Input on the Customers Problems
  - Validate or invalidate assumptions, suggested problems
  - For each suggested problem, ask the customer to prioritize it in relation to their mentioned problems, and ask for how it is addressed now, how would the customer solve it
- Assessing Your Solution
  - Give a rough description of a solution and get users' feedback
- Assessing the Opportunity
  - What are the success factors in the user's opinion? Who else uses/would use the application?

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Template for an Interview

- Assessing the Reliability, Performance and Support Needs (Non Functional Requirements)
  - *How robust should the system be?* How long can it go down for? How easy should it be to use? How long should an operation take?
- Other Requirements
- Wrap Up
  - Can I contact you later to check on things?
- The Analyst's Summary
  - Summarize the higher priority needs or problems identified by the user

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After Interviews

- Using the analyst's summary we are likely to get 10-20 top requirements or needs that should be explored in more detail

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Questions to be asked indirectly

- Are you opposed to the system?
- Would you benefit from delaying or obstructing the system?
- Do you feel threatened by the proposed system?
- Is your job threatened by the new system?
- Is anyone else's?

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Common Interviewing Mistakes

- Missing to interview people
- Assuming stated needs are correct (Why?)
- Letting one person in a group interview dominate the interview
- Not conducting group interviews

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