CISC 498: Information Technology Project

2019-20
About the Instructor

**Instructor**
- Dr. Mohammad Zulkernine
- Professor and Canada Research Chair, School of Computing, Electrical & Computer Engineering (cross-appointed)
- Coordinator: Software Design Program
- Contact: 540 Goodwin Hall, mzulker@cs.queensu.ca
- More information: http://cs.queensu.ca/~mzulker

**Teaching Assistant**
- Abu Faisal
- Senior Doctoral Student, School of Computing
- Contact: faisal@cs.queensu.ca
CISC 498

- Capstone course of the Software Design program (SODE)
- Format – no lectures, meet 2/3 times per term
- Objective
  - Application of software engineering techniques to the development of a substantial software system
  - Communicate with a customer to define and deliver a system that meets the customer’s needs
  - Collaborate with colleagues to develop a software system (group work, oral presentation, participation software artifact review meetings)
  - Deliver software requirements specification and design, quality assurance plan, and a working software
Stakeholders

- **Coordinator – Mohammad Zulkernine (email)**
  - to organize and oversee a number of meetings and presentations
  - assist you in finding a supervisor
  - help you in accessing to the resources you need
  - evaluate your work (together with the customers and supervisors)

- **Teaching Assistant – Abu Faisal (OnQ and email)**
  - primary contact person for the submissions to me

- **Group members**
  - registered for this course
  - 4-5 members (4x7+2)
Stakeholders – contd

- **Customer**
  - Suggested a project already
  - Meet customers to develop requirements (contact info available on the website)
  - It is your responsibility to inform the customer about your presentation
  - Advise customer to become familiar with the customer related information on the course website

- **Supervisor**
  - School of computing (or cross-appointed) faculty members
  - First choice: software engineering faculty members
  - Start contacting potential supervisors
  - It is your responsibility to inform the supervisor about your presentation
Software Engineering

- **Software engineering (definitions from various sources)**
  - Software development is **not only programming**
  - **Multi-person construction of multi-version software**
  - **Engineering techniques and methods for building large software systems by a number of people in a systematic way**
  - Each software process model includes **a set of steps to build a software product** - software life cycle model
Most software life cycle models include the following steps:

- Requirements
- Specification
- Design
- Programming
- Integration
- Testing (may be attached to any steps?)
- Operation and Maintenance

Some most commonly used models:

- Waterfall Model
- Prototyping model
- Spiral model
Waterfall Model


Waterfall with Feedback?
Waterfall – Advantages and Disadvantages

Advantages
- Prescribes a strict disciplined approach following well-defined tasks
- Separation of phases and transitions among them – separation of tasks
- Documentation helps reduce maintenance

Disadvantages
- Client: “I know this is what I asked for, but this is not what I really wanted”
- Heavily documentation dependent – too much overhead for small software
### Important Dates

**Schedule:** Wednesdays, 6:30pm - 9:30pm in Dunning Hall, Rm 11

#### Important Dates

<table>
<thead>
<tr>
<th>What</th>
<th>When</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Contract plus initial project plan</td>
<td>18 September 2019 (23:59:59 EST, by email to TA and supervisor)</td>
<td>5%</td>
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<tr>
<td>Requirements document</td>
<td>16 October, 2019 (23:59:59 EST, by email to TA and supervisor)</td>
<td>10%</td>
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<tr>
<td>Requirements presentation</td>
<td>16 October, 2019 (in class)</td>
<td>5%</td>
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<tr>
<td>Design document</td>
<td>20 November, 2019 (23:59:59 EST, by email to TA and supervisor)</td>
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<tr>
<td>Design presentation</td>
<td>20 November, 2019 (in class)</td>
<td>5%</td>
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<tr>
<td>Quality assurance and deployment plan document</td>
<td>15 January, 2020 (23:59:59 EST, by email to TA and supervisor)</td>
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<tr>
<td>Quality assurance and deployment plan presentation</td>
<td>15 January, 2020 (in class)</td>
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<td>Weekly progress reports (email to supervisor &amp; customer)</td>
<td>By email, each Monday, starting January 22, 2020</td>
<td>5%</td>
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<td>Final project documentation</td>
<td>April 1, 2020 (23:59:59 EST, by email to TA and supervisor)</td>
<td>15%</td>
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<td>Delivered system to customer</td>
<td>April 1, 2020 (in class demo, software and documentation delivery)</td>
<td>25%</td>
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<td>Final project presentation and demonstration (poster)</td>
<td>Creative Computing Showcase (April 2, 2020)</td>
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Next tasks and Submission

▪ Form the group
▪ Submit your group information to the TA (identify a team lead)
▪ Choose and contact the customer
▪ Find a supervisor
▪ Finalize the project plan
▪ Sign and submit the contract (Wednesday, September 18, 2019)
▪ Check the resource page for example documents and guidelines
Some Important Points

▪ Documents not submitted by the due date will face a penalty of 10%
▪ All members of the group are expected to cover a part of each presentation
▪ Attendance at class meetings is mandatory. For each hour of class (or part thereof) missed, two marks will be deducted from your final grade.
▪ Who did what? Each submitted document and email reports should explicitly identify the contributions of each group member.
▪ Next Deadline: Contract plus initial project plan, Wednesday, September 18, 2019
Some Important Points – contd.

- If you cannot find a group by this week, please contact the TA
- If you cannot find a supervisor by the deadline, please contact me
- If you sense any problem in the group, please contact your supervisor and me ASAP

- Don’t leave the room today without forming a group 😊
- You cannot fail in this course 😊
- Any questions?
- For detail information: http://cs.queensu.ca/home/cisc498/