

# CISC 498: Information Technology Project

Some Important Information

2020-21

# About the Instructor

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- 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

- Anika Anwar
- Senior Doctoral Student, School of Computing
- **Contact:** [anika.anwar@queensu.ca](mailto:anika.anwar@queensu.ca)

# CISC 498

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- Capstone course of the Software Design program (SODE)
- Format – no lectures, presentations and report only
- 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 in software artifact review meetings)
  - *Deliver* software requirements specification and design, quality assurance plan, and a working software

# Stakeholders

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- Coordinator – Mohammad Zulkernine (email)
  - ▶ to organize and oversee a number of meetings and presentations
  - ▶ assist you in finding a supervisor
  - ▶ help you in accessing the resources you need
  - ▶ evaluate your work (together with the customers and supervisors)
- Teaching Assistant – Anika Anwar (OnQ and email)
  - primary contact person for the submissions to me
- Group members
  - registered for this course
  - 4-5 members

# Stakeholders – contd

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- 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

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- 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 an *systematic way*
  - Each software process model includes a *set of steps* to build a software product - *software life cycle model*

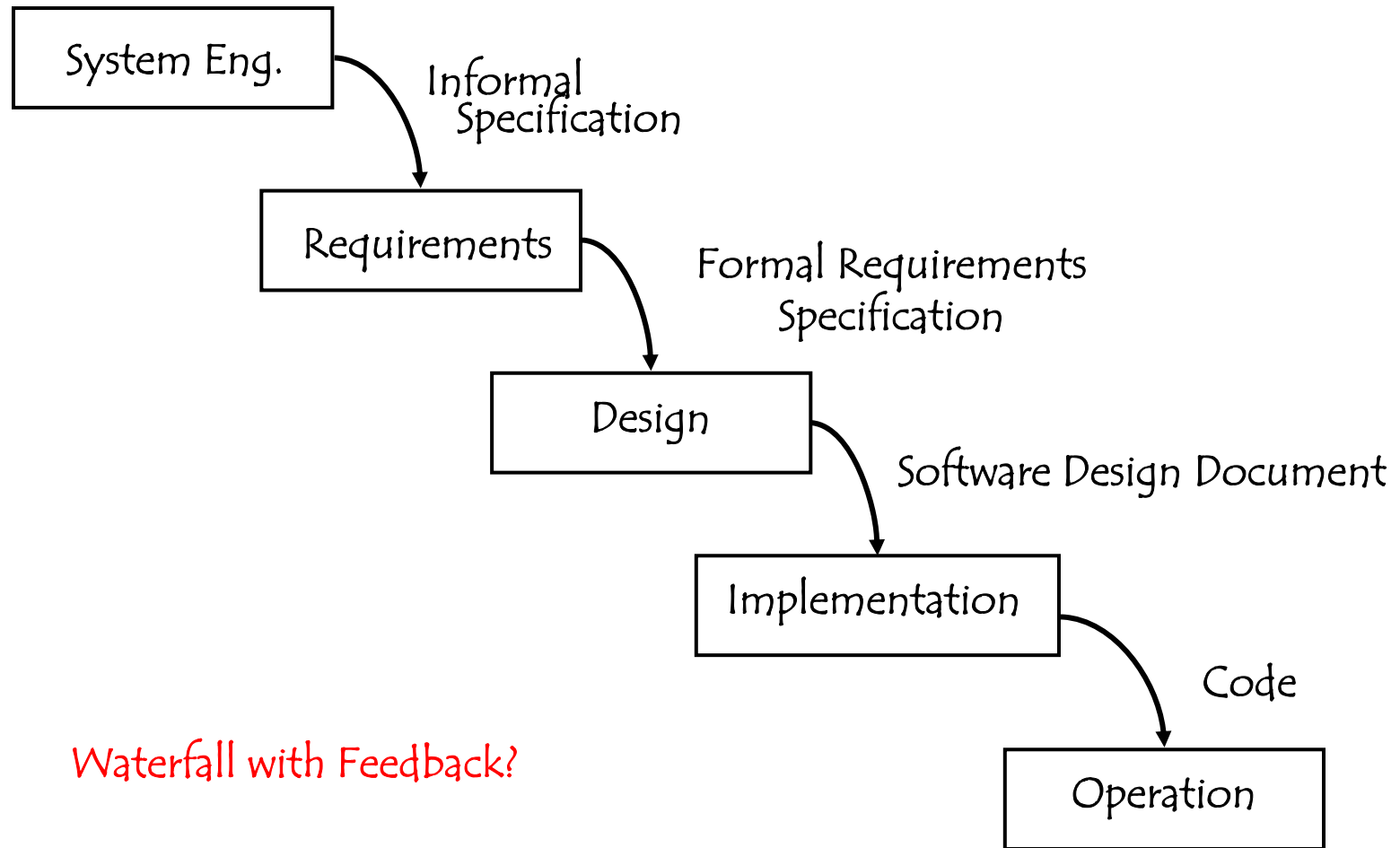
# Software Process Models

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- 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

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Waterfall with Feedback?



# Waterfall – Advantages and Disadvantages

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- 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

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## ■ Important Dates

What	When	Weight
Contract plus initial project plan	23 September, 2020 (23:59:59 EST, by email to TA and supervisor)	5%
Requirements document	21 October, 2020 (23:59:59 EST, by email to TA and supervisor)	10%
Requirements presentation	21 October, 2020 or earlier (online)	5%
Design document	25 November, 2020 (23:59:59 EST, by email to TA and supervisor)	10%
Design presentation	25 November, 2020 or earlier (online)	5%
Quality assurance and deployment plan document	27 January, 2021 (23:59:59 EST, by email to TA and supervisor)	10%
Quality assurance and deployment plan presentation	27 January, 2021 (in class or online, TBD)	5%
Weekly progress reports (email to supervisor & customer)	By email, each Monday, starting January 11, 2021	5%
Final project documentation	March 31, 2021 (23:59:59 EST, by email to TA and supervisor)	15%
Delivered system to customer	March 31, 2021 (demo, software and documentation delivery, TBD)	25%
Final project presentation and demonstration (poster)	Creative Computing Showcase (TBD)	5%
Total		100%

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## Next tasks and Submission

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- 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 23, 2020)
- Check the resource page for example documents and guidelines

## Some Important Points

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- 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 meetings/presentations is **mandatory**
- **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 23, 2020**

## Some Important Points – contd.

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- 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
- Any questions? Please email me or the TA.
- For detail information: <http://cs.queensu.ca/home/cisc498/>