



Faculty of Engineering  
University of Calgary

## About the Instructor



Dr. Behrouz Homayoun Far, PhD, is an Associate Professor at the Department of Electrical and Computing Engineering, University of Calgary. He teaches courses in software reliability and testing, software metrics, agent-based software systems and object-oriented analysis and design. Dr. Far has previously been employed by the Japanese Science and Technology Agency (1990-1992) and Japanese Ministry of Education, Culture, Sports, Science and Technology (1992-2001) and has consulted for several companies in Japan and Canada.



Lecture Series on  
Software Systems for The  
Future (2)  
Organizer and Coordinator:  
Dr. B. H. Far



## Contact Information

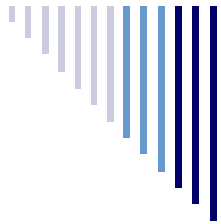
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## Software Reliability Engineering



Lecture Series on Software  
Systems for The Future  
(2)



## Software Reliability Engineering

Reliability is no longer a desired feature but a must for modern software systems.

How to build reliable software systems?

How to integrate the reliability in the software development process?

How much testing is enough?

How to decide upon the release of the software?

How to manage the reliability of the in-house developed and acquired software?

These are only a few questions that can be answered by Software Reliability Engineering.

**How software reliability can influence decisions at various phases of the software life cycle?**

## How to measure, predict and improve software reliability?

### Course Description:

This course is a step by step introduction of software reliability engineering and software reliability process.

The course includes introduction to the software reliability process, defining necessary reliability, developing operational profiles, preparing and executing test.

Topics such as: principles of reliability; failure specification; software reliability models; techniques to improve and predict software reliability; software testing; and tools for parameter estimation and reliability growth modeling are studied.

A workshop (project) is designed to reinforce learning of the presented material. In the workshop, the participants will actually go through the reliability measurement and testing of a realistic software system.

### Course Objectives:

After taking this course, the participants will

- have an understanding of the terminology, the process and the models of the software reliability engineering
- have learned techniques to predict



and measure reliability of the software systems

- know how to improve reliability during the various stages of the software development life cycle

### Course Duration:

2 days

### Course Pre-requisites:

Principles of software engineering and introduction to project management.

### Course Audience:

Senior and project managers; software developers and those who want to know more about how to measure, predict and improve software reliability

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