SE350 – Operating Systems

Winter 2015

Thomas Reidemeister

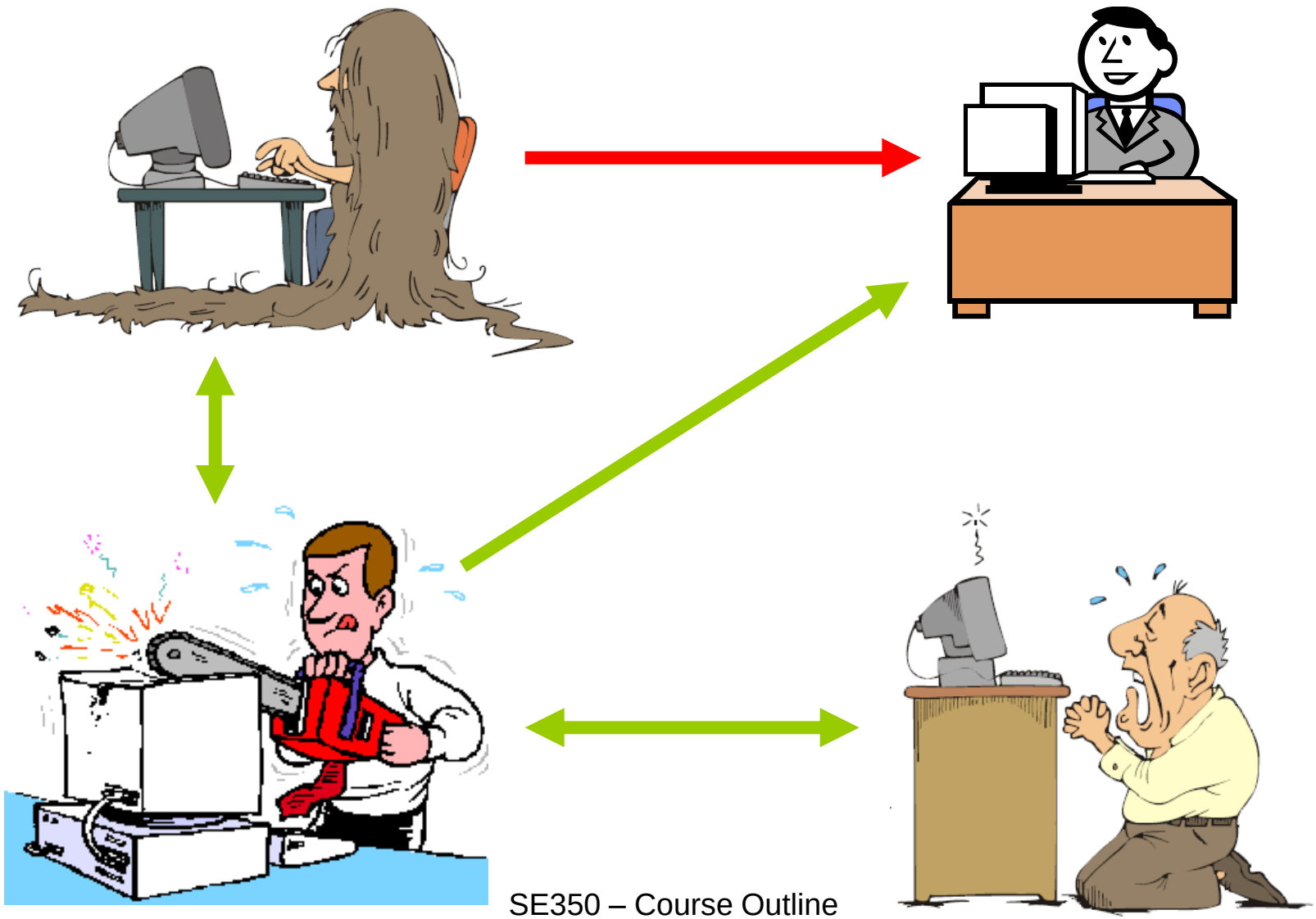
Course Objectives

- **Learn what really happens if you double-click an icon**
- **How can you run two applications in parallel?**
- **How come I have 64 GB of memory although I only bought 4 GB of RAM?**
- **Why is timing important and what does the OS do about it?**
- **What differs between OSs?**
- **…**

Course Project

- **Learn about the challenges of writing an OS**
- **Get used to low-level programming**
- **Get hands-on experience with embedded software development**
- **Experience team dynamics**
- **Learn and experience basic project management**

Project Stages



Course Resources

Lecture: http://learn.uwaterloo.ca

- **Lecture slides**
- **Project information**
- **Assignments**
- **Additional materials & references**

SE350 - Team

Instructor:

- **Thomas Reidemeister**

Lab Instructor:

- **Irene Y. Huang**

Teaching Assistants:

- **Mahmoud Salem (tutorials)**
- **Neda Paryab (project)**
- **Sanu Edayath Subramanian (project)**
- **Marten Pape (project)**

Contact information, locations, office hours posted on LEARN

SE350 – Important Dates

Lectures: 16:30 – 17:20; M, T, Th

Tutorial: 10:30 – 11:20; T (starts next week)

Lab: 10:30 – 12:40; W, Th, F (odd weeks)

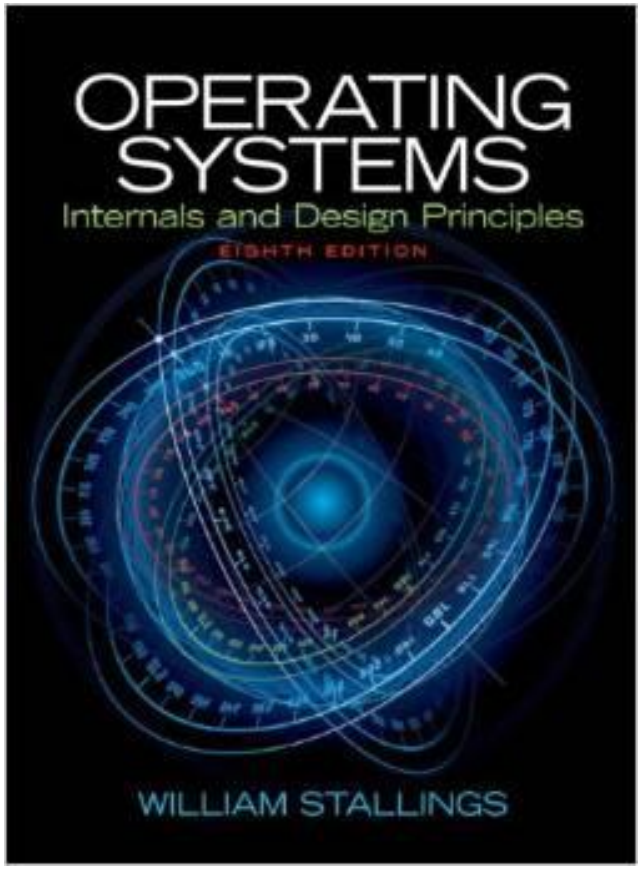
Passing the Course

- **No midterm**
- **Four quizzes = 15 % (best three of four)**
- **Final exam = 50 %**
- **Project = 35 %**

Preliminary dates will be posted on LEARN

Course Text

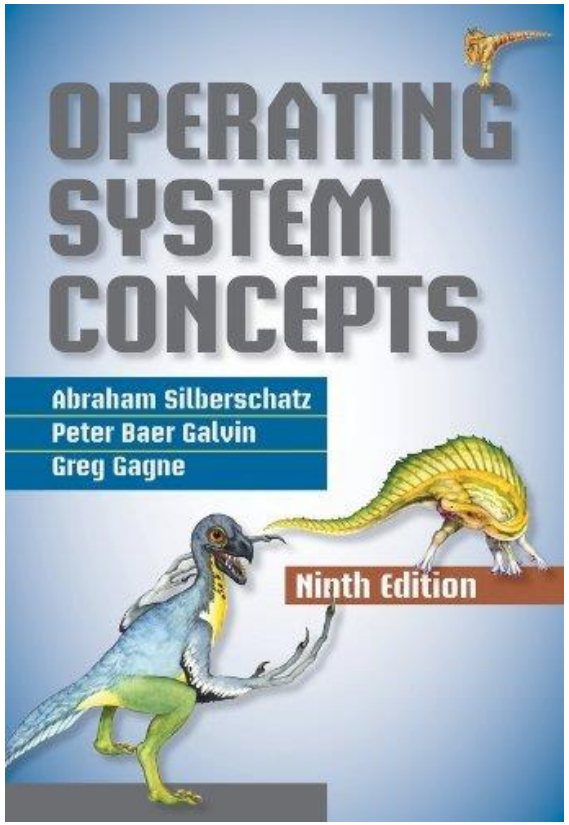
Stallings, Operating Systems – Internals and Design Principles, 8th Edition



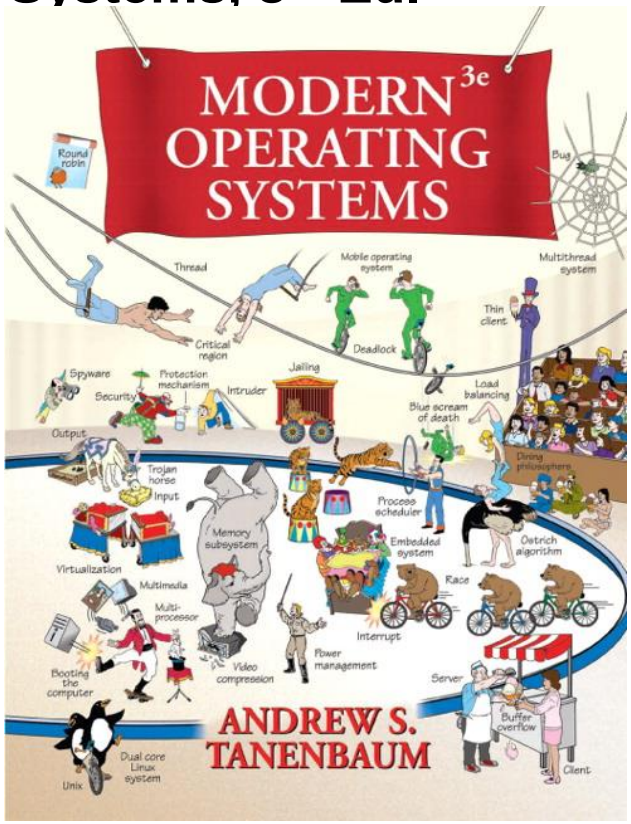
- **Read the book**
- **Take notes during lecture**

Second Opinion

Silberschatz, Operating System Concepts, 9th Ed.



Tanenbaum, Modern Operating Systems, 3rd Ed.



Project Support

Performing = technical skill + team management

Technical support:

- **Keil MDK development IDE in ECE labs**
- **GNU ARM Toolchain for major Linux distributions**
- **Links to code snippets on LEARN**

Non-technical support:

- **OHD leadership courses & certificate**
  http://www.ohd.uwaterloo.ca/students/

Other References

Technical (help for project):

- **Various C/C++ programming books**
- **Mitchell, "Advanced Linux Programming"**
- **Hunt, "The Pragmatic Programmer – From Journeyman to Master"**
- **Various version management manuals**

Nontechnical (team-dynamics):

- **Lencioni, "The Five Dysfunctions of a Team"**
- **Lencioni, "Three Signs of a Miserable Job"**

How to do Great in the Course

- **Ask questions**
- **Go to the tutorial**
- **Contact TAs (email, office hours)**
- **Try it on your favourite OS**

What's Next

- **Lecture: Introduction to Computer Systems**
- **Lab: Introduction to development environment**
- **Tutorial: starts next week**