Introduction to CS 100
Overview of CS @ UK

CS 100
1 September 2015
Outline

• CS100: Structure and Expectations
• Context: Organization, mission, etc.
• BS in CS Degree Program
• Department Locations
• Our Faculty
• Miscellaneous
Where to Find Information

- [http://dmn.netlab.uky.edu/~seales/cs100.html](http://dmn.netlab.uky.edu/~seales/cs100.html)

Or, google “Brent Seales” and follow links to CS100 fall 2015

Or read your email (I will send email to the class list with links and information)
Key Items

- Syllabus
- Start Up Guide
- First Assignment
TurningPoint

- UK’s system for collecting “clicks” from students
- You need to purchase and register a “clicker” for CS100
Summary: Action Items

- Get a TurningPoint clicker and register it
- Get the book (“Team Geek”)
- Locate the CS Department
- Locate my office
- Locate the class web page
- Complete Assignment 1 for next week!
UK College of Engineering

- Department of Chemical and Materials Engineering
- Department of Civil Engineering
- Department of Computer Science
- Department of Electrical and Computer Engineering
- Department of Mechanical Engineering
- Department of Mining Engineering
- Department of Biosystems and Ag Engineering
CS Department Mission

As the flagship computer science program in the Commonwealth of Kentucky, our mission is to:

1. Provide excellent undergraduate and graduate education in a state-of-the-art computing environment; preparing students for careers as computer scientists in industry, government, and academia;

2. Advance theoretical, experimental, and applied computer science through nationally and internationally recognized research by faculty and students; and

3. Support society by participating in and encouraging technology transfer.
BS in CS Program Objectives

• Graduates will be equipped to succeed in their chosen career path.
  Specifically, within 3–5 years after graduation:
  • Those employed in industry or entrepreneurial endeavors will demonstrate professional advancement through expanded leadership responsibility, significant technical accomplishment, or other recognition of their contributions.
  • Those who continue their formal education will achieve an advanced degree or other technical certification.

• Graduates will appreciate the preparation received in the program as it relates to their chosen careers, to their role as educated citizens in a global society, and to continued learning.
What Should You Get from your UG education?

• Understanding of general principles behind major computer science technologies and methodologies
  – Examples:
    • Procedural abstraction
    • Measures of algorithmic complexity
  – Test for whether a principle is worth teaching:
    Is its half-life > 10 years?

• Ability to think analytically
  – So you can learn and adapt to this rapidly changing area
  – [How] will we be programming in 30 years?

• Prepare for a career in business or industry
  – Working for yourself or for someone else

• Prepare for graduate school
CS Department Curriculum

- Introduction to field, overview careers: CS100
- Programming skills: CS115, CS215, CS216
- Foundations: Calculus, CS275, EE280
- Machine organization: CS/EE380
- Algorithms and data structures: CS315
- Theory of computing and logic: CS375
- Numerical methods/analysis: CS321
- Systems: CS470G
- 9 hrs of CS electives
- 12 hrs of technical electives
- Senior project CS 499
Curriculum: Technical & CS electives

• Possible strategies:
  – Broaden and/or deepen your knowledge of CS:
    • Databases: CS 405G
    • Intro to graphics, media, and imaging: CS 335
    • Networking: CS 471G
    • Compilers: CS 441G
    • Programming languages: CS 450G
    • Artificial intelligence: CS 463G
    • Advanced courses: CS 485, 505, 570, 571, 575, 537
  – Minor in Math
  – Double Major in Math
  – Minor in Business and Economics
  – Double Major in EE
  – Prepared for a graduate degree program

• Use your academic advisor!
CS Department Locations

James F. Hardymon
Some Faculty (2nd floor)

Davis Marksbury Building – Admin offices,
some faculty
329 Rose Street

You Are Here
(Chem-Phys)
CS Staff – Marksbury

Ms. Diane Mier – Administrative assistant

Ms. Kathy Ice-Wedding – Student Services

Ms. Dee Fuhs – Accounting

Mr. Paul Linton – System and Network Admin

Ms. Amy Long – Administrative assistant
CS Faculty

Prof. Ken Calvert
computer networks

Prof. Fuhua “Frank” Cheng
computer graphics, modeling
CS Faculty

Prof. Judy Goldsmith
artificial intelligence, theory of computing

Prof. Jerzy Jaromczyk
Director of Undergraduate Studies
computational geometry, algorithms, undergraduate research

Prof. Andy Klapper
cryptography
CS Faculty

Prof. Victor Marek  
artificial intelligence, logic

Prof. Mirek Truszczynski  
Director of Graduate Studies  
artificial intelligence, logic

Prof. Greg Wasilkowski  
numerical analysis

Prof. Jun Zhang  
scientific computing
CS Faculty: Hardymon Building

Prof. Zongming Fei
networks

Prof. Raphael Finkel
operating systems, linguistics

Prof. Jim Griffioen
operating systems, networks

Prof. Jane Hayes
software engineering
CS Faculty: Hardymon Building

Prof. D. Manivannan
distributed systems,
OS, mobile computing

Prof. Jinze Liu
databases, data mining
bioinformatics

Prof. Qian Chen
networks, databases, big data
CS Faculty

Prof. Brent Seales
Chair of Department
image processing,
digital media in humanities

Prof. Ruigang Yang
graphics,
computer vision,
image processing
CS Faculty

Prof. Tingting Yu
Software testing, program analysis, concurrent software systems, embedded systems
CS Faculty

Dr. Debby Keen
CS education

Mr. Paul Piwowarski
CS education

Dr. Yi Pike
CS Education
Student Organizations/Activities

• Association for Computing Machinery (ACM) Student chapter
  – Contact: Ethan Gill (esgi226@g.uky.edu)

• Upsilon Pi Epsilon (UPE)
  – First and only international honor society in the Computing discipline
  – Contact Dr. Jaromczyk (jurek@cs.uky.edu)

• Society of Women Engineers (SWE)

• Solar Car Team
Facilities

• Marskbury collaborative space
• eStudio (RGAN)
• Wethington Library
• RGAN Commons + new sandwich shop
• Living and Learning Communities: Woodland Glenn III
• The “Bowman Barn”, a.k.a. Student Center
• Starbucks
• Coffea