

**ECS15:**  
**Introduction to Computers**

Fall 2013  
Patrice Koehl

<http://www.cs.ucdavis.edu/~koehl/Teaching/ECS15/index.html>

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**When do we meet?**

- **Class:**  
MWF 10:00-10:50 a.m.; 1227 Haring;
- **Labs:**
  - A01 M 12:10 a.m.-3 p.m.; 2020 SLB
  - A02 F 3:10 p.m.- 6:00 p.m.; 2020 SLB
  - A03 W 1:10 pm.-4:00 p.m.; 2020 SLB
  - A04 F 2:10 p.m.-5 p.m.; 2020 SLB

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**Some Important Facts**

- **Instructor:** Patrice Koehl  
<http://koehlab.genomecenter.ucdavis.edu/>
- **Instructor office hour:**
  - Monday 11:00 a.m.-12p.m. at 3106 Kemper Hall
  - Email: [koehl@cs.ucdavis.edu](mailto:koehl@cs.ucdavis.edu) (subject line: ECS 15)
- **TAs:** Darrel Aubrey and Sifat Ferdousi
- **Reader (for the term paper):** Lissa Miller
- **TA office hour and location**
  - same as the lab sessions

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## Course Material

- **Textbooks**

- Michael Dawson, Python programming for the absolute beginner, 2nd edition, Thomson Course Technology, ISBN: 1-59863-112-8.

**Also available online:**

<http://site.ebrary.com/lib/ucdavis/docDetail.action?docID=10370091>

- Spraul, V. Anton, *Computer Science Made Simple*, Broadway Books, 2005, ISBN: 0-7679-1707-3.

- **Class website:**

<http://www.cs.ucdavis.edu/~koehl/Teaching/ECS15/index.html>

- Check for notes
- Check for announcements periodically.

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## Grading

- **Term paper (20%)**

- Computer in an area of your interest

- **Lab assignments (35%)**

- 9 small projects (basic computer skills, basic programming): **we remove the lowest grade.**
- No homework

- **Midterm (20%)** (one mid-term)

- Open book
- In class

- **Final (25%)**

- Open book

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## Some rules...

- **All lab assignments require individual efforts.**  
Discussions are allowed, no copying allowed.

- **Late policy**

- Full credit if **on time**
- 50% if within 24 hours
- 25% if within 48 hours
- 0 after 48 hours

- **Regrading Policy**

- **One week** regrading period after grades returned to students

- **Incomplete will not be granted**

- Unless **proved emergency** with **filled emergency form**

- **Academic Integrity**

- Writing: we use commercial software to check for plagiarism
- Lab assignments

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### How to get a good grade?

- **Computers are rational**
  - Understand, not memorize: this is why tests are open book
- **Active classroom participation**
- **Do your own assignments**
  - You will understand what you do!
- **Make sure you check the web site + notes + textbooks**
- **Midterm course review**
- **Final review**

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### What we will study

- **Computers (3-4 weeks)**
  - Hardware: motherboard, processor, memory, I/O devices, etc.
  - Software and application:
  - Graphics: image, video, 2D, 3D, game,
  - History and ethics
- **The Internet (2-3 weeks)**
  - Layered architecture
  - Applications: web, email, p2p, etc.
  - The path of your email/webpage.
  - LAN: local area network, wireless local area network.
  - Security
- **Python Programming (3-4 weeks)**
  - Getting started
  - Basic concepts: type, variable, I/O
  - Loops: while, for,
  - Conditionals: if

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### Why?

- **Basic knowledge of computers**
  - Order a computer online
  - Buy a digital camera
  - Configure your wireless router
- **Basic understanding of software and tools**
  - Word processing, etc.
- **Security and privacy**
- **Writing programs to solve your own problems**

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### Computers and You

- *The computer is your "magic wand"*
  - It can be your best friend
  - It may mean a lot of frustration
- *It does exactly what you tell it to*
- *Your job is to figure out what/how to tell it!*
- *Learning the language is easy...*

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### Laboratories

- Go to your registered Lab session if possible.
- Priority goes to students registered in the lab session
- TAs will be there the whole time to help you.
- Yes, you can go and ask any questions related to the class!
- Please let the TAs talk about the lab assignment first.
- Lab assignments are posted two weeks in advance
- All assignments are due on Friday 6pm, at my.ucdavis.edu
- Please make sure you submit correctly!
- Please check your grade and TA comments (if any).

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### Term paper

- *20% of the total grade*
- *~2500 words (around 10 pages)*
- *A research paper on a topic related to computers that interest you*
- *An opportunity to learn how computers are used in an area you are interested in.*
- *Start early!*

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### Timetable

- *Prospectus due Friday, October 12*
- *Progress report due Friday, October 26*
- *Draft due Friday, November 9*
- *The paper itself is due Wednesday, Nov 28*
- *All due at 6pm*

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### Possible Topics

- *Computers in education*
  - for teaching reading
  - for teaching music
- *Computers in biology*
  - bioinformatics
  - computational biology
- *Computers in art, architecture, and design*
  - computer-generated and computer-supported art
  - computer-aided design
- *Digital libraries*
  - legal issues (e.g., intellectual property)
  - technologies
- *Music on the Internet*
- *Internet on entertainment*
  - P2P file sharing
  - Video-on-demand
  - E-books

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### Possible Topics

- *Social networking websites and their impacts*
- *Online advertising*
  - Google?
- *Security and privacy*
- *computer and/or Internet addiction*
- *failures regarding computers in schools*
- *famous computer viruses and "worms"*
- *Digital divide*

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### Computer Science

- Theory of computation
- Software engineering
- Computer graphics
- Computer security and cryptography
- Computer networks
- Artificial intelligence
- Human-computer interface
- Bioinformatics
- System and architecture

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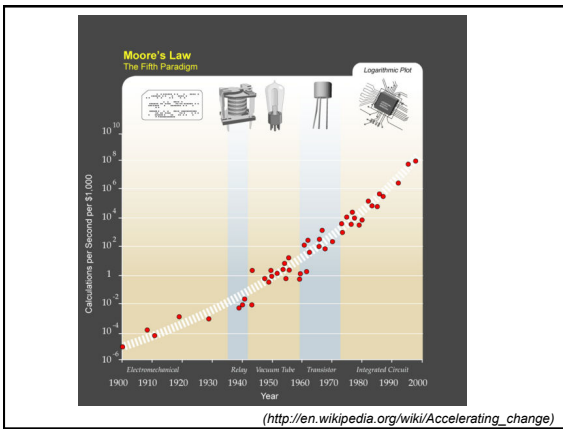
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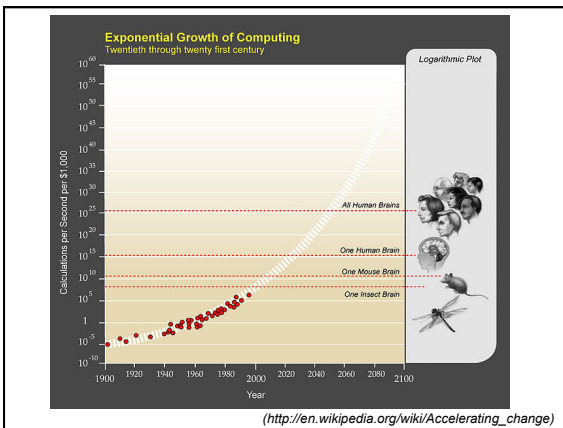
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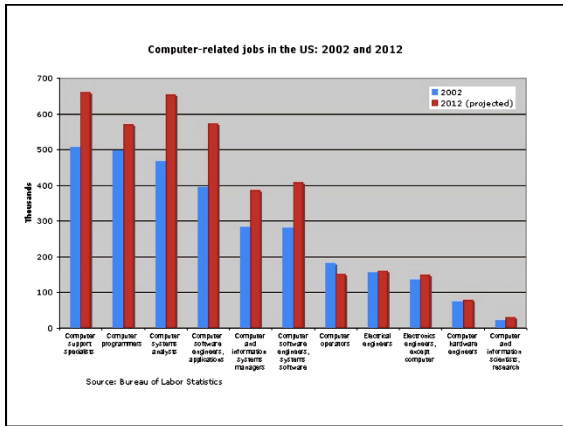
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