

CIS 115 - Introduction to Computing Science

Fall 2014

Abridged Syllabus

Sections A, B, C, & D

Instructor: Russell Feldhausen

Office: 212 Nichols Hall

Email: russfeld@ksu.edu

Phone: (785) 292-3121

Website: <http://people.cis.ksu.edu/~russfeld>

Office Hours: MWF 2:30 - 3:30

Section E

Instructor: Dr. William Hsu

Office: 324C Nichols Hall

Email: bhsu@ksu.edu

Phone: (785) 236-8247

Website: <http://people.cis.ksu.edu/~bhsu>

Office Hrs: MTF 10:30 - 11:30, W 12:30 - 1:30

Teaching Assistants

A 1-5: Geordy Williams (geordyp)

A 6-10: Connor Elliott (connorelliott11)

B 1-5: Johnathan Bostrom (johnbos)

B 6-10: Devin Kelly-Collins (devinkc)

C 1-5: Hunter Goddard (hbgoddard)

C 6-10: Naveena Bellam (naveena)

D 1-5: Chris Piggott (cpiggott)

D 6-10: James Tyson (jbtyson)

E 1-5: Jake Ehrlich (jehrlich)

E 6-10: Naveena Bellam (naveena)

Grading

Team Assignments

10% - Textbook Section*

10% - Class Topic Research*

10% - Video Project*

* Team projects include +/- 50% peer review.

* 10% of grade depends on turning in review.

Individual Assignments

14% - Programming Assignments

(2% each, 7 total) (drop 1 lowest)

4% - Final Programming Assignment

28% - Class Attendance and Participation (1%

each) (drop 2 lowest)

24% - Online Blog (2% each) (drop 2 low)

Late Work

Late work will receive penalty of 10% of the possible points for each day it is late. Missed work cannot be made up except under extenuating circumstances.

Required Texts

- “The Pattern on the Stone: The Simple Ideas that Make Computers Work” by W. Daniel Hillis.
ISBN 046502596X - <http://www.amazon.com/dp/046502596X/>
- “Tubes: A Journey to the Center of the Internet” by Andrew Blum.
ISBN 0061994952 - <http://www.amazon.com/dp/0061994952> Kindle edition available
- “Blown to Bits: Your Life, Liberty, and Happiness After the Digital Explosion” by Hal Abelson, Ken Ledeer, and Harry Lewis.
ISBN 0137135599 - <http://www.amazon.com/dp/0137135599/>
Creative Commons digital edition available **FREE** at <http://www.bitsbook.com/>

Software

Scratch 2.0: <http://scratch.mit.edu> - Available online, requires Adobe Flash

Academic Honesty

The honor system website can be reached at: <http://www.ksu.edu/honor>.

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Schedule (as of 8/25/2014)

Date	Lecture	Topic / Blog Article	Reading (Before Class)	Activity
8/26/2014	1	What is Computing Science?		Get a CIS Account
8/28/2014	2	Teams, Projects, and Success	Syllabus & Assignments	Team Resume
9/2/2014	3	Early Computing Machines	POTS 1 - Nuts and Bolts	0 - Scratch Cheat Sheet
9/4/2014	4	Bits and Boolean Algebra	POTS 2 - Universal Building Blocks	Bank - User I/O & Conditionals
9/8/2014	Blog 1	Personal Biography		
9/9/2014	5	Programming	POTS 3 - Programming	1 - Bank - Loops
9/11/2014	6	Universal Computers	POTS 4 - How Universal are Turing Machines	Turing Machine - Variables
9/15/2014	Blog 2	Historical Figure in Computing		
9/16/2014	7	Algorithms	POTS 5 - Algorithms & Heuristics	2 - Sorting Algorithms - Lists
9/18/2014	8	Encoding Data	POTS 6 - Memory: Information and Secret Codes	Binary Worksheet
9/22/2014	Blog 3	Algorithms		
9/23/2014	9	Embedded Systems, Architecture, & FSMs	POTS 7 - Speed: Parallel Computers	3 - Stoplight
9/25/2014	10	High Performance Computing	POTS 8 - Computers that Learn and Adapt	Weather Simulator
9/29/2014	Blog 4	Computer Systems in Daily Life		
9/30/2014	11	Artificial Intelligence	POTS 9 - Beyond Engineering	4 - HPC Sum
10/2/2014	12	Human Computer Interaction	TUBES 1 - The Map	HCI Activity*
10/3/2014	VIDEO	Video Interview Due		
10/6/2014	Blog 5	Making Meaning - POTS		
10/7/2014	13	History of the Internet	TUBES 2 - A Network of Networks	5 - Mars Rover
10/9/2014	14	How the Internet Works	TUBES 3 - Only Connect	Packet Switched Network
10/13/2014	Blog 6	TBD		
10/14/2014	15	HTML & CSS	TUBES 4 - The Whole Internet	6 - HTML & CSS
10/16/2014	16	<i>Video Interview Presentations</i>	TUBES 5 - Cities of Light	<none>
10/20/2014	Blog 7	TBD		
10/21/2014	17	Cryptography	TUBES 6 - The Longest Tubes	7 - Chaocipher
10/23/2014	18	Big Data*	TUBES 7 - Where Data Sleeps	Big Data*
10/27/2014	Blog 8	TBD		
10/28/2014	19	Computer Graphics	BITS 1 - Digital Explosion	Drawing in Scratch
10/30/2014	20	Video Game Design	BITS 2 - Naked in the Sunlight	1964 Starter File
10/31/2014	TOPIC	Topic Research Due		
11/3/2014	Blog 9	TBD		
11/4/2014	21	<i>Topic Research Presentations</i>	<none>	<none>
11/6/2014	22	<i>Topic Research Presentations</i>	<none>	<none>
11/10/2014	Blog 10	TBD		
11/11/2014	23	<i>Topic Research Presentations</i>	<none>	<none>
11/13/2014	24	Robotics	BITS 3 - Ghosts in the Machine	Lego Robots
11/17/2014	Blog 11	Topic Research Response		
11/18/2014	25	Informatics and Social Media*	BITS 4 - Needles in the Haystack	Informatics*
11/20/2014	26	Industry Panel*	BITS 5 - Secret Bits	<none>
11/21/2014	DRAFT	Textbook Section Draft Due		
11/25/2014		<i>No School - Thanksgiving Break</i>		
11/27/2014		<i>No School - Thanksgiving Break</i>		
12/1/2014	Blog 12	TBD		
12/2/2014	27	Cybersecurity	BITS 6 - Balance Toppled	<work time>
12/4/2014	28	Cybersecurity	BITS 7 - You Can't Say That on the Internet	<work time>
12/8/2014	Blog 13	TBD		
12/9/2014	29	Leftovers	BITS 8 - Bits in the Air	FINAL SCRATCH PROJECT
12/11/2014	30	The Future	<none>	<none>
12/12/2014	FINAL	Textbook Section Due		
12/15/2014	Blog 14	Where Do I Go from Here?		