

**FUNDAMENTALS OF COMPUTER SCIENCE (FCPS)**  
**CTY Course Syllabus**

<b>Day 1 Monday</b>	am	CTY Honor Code F&M Acceptable use of computing resources Introduction to FCPS Pre-assessment Introduction to Macintosh (storing your files on the server, shortcuts, etc) Beginning collaborative editing (wiki, text editing)
	pm	Student learning/reading journals introduction Computing and information related disciplines <i>Is computer science a science?</i>
	eve	Short position paper on the disciplines
<b>Day 2 Tuesday</b>	am	Small group review of position papers How the World Wide Web works - servers, web pages, local vs. remote, etc. Beginning HTML
	pm	Introduction to algorithms Discovering algorithms Writing pseudo code Sequential, conditional, and iterative operations Can all things be represented by algorithms?
	eve	Short position paper on algorithms
<b>Day 3 Wednesday</b>	am	Small group review of position papers Unary, Binary, and Hexadecimal number systems Encoding Text - ASCII, Unicode Encoding Images - file formats, resolution vs. size vs. dimensions, compression, lossy/lossless
	pm	Classical two-valued logic
	eve	Boolean logic problem set
<b>Day 4 Thursday</b>	am	Small group review of study session work Set theory, sorting, searching
	pm	Representing information in a computer
	eve	Decoding challenge
<b>Day 5 Friday</b>	am	Review study session work Usability and design
	pm	HTML/CSS reading
<b>End Week 1</b>		
<b>Sunday</b>	Eve	Readings/HTML

<b>Day 6 Monday</b>	am	Review study session material Building digital circuits from Boolean expressions
	pm	Structure of modern computers Machine language Introduction to high-level programming language
	eve	Exercises: Writing stand-alone programs
<b>Day 7 Tuesday</b>	am	Review study session work Assembly language Operating systems
	pm	Continued programming language instruction
	eve	Exercises Incorporating programming into web pages
<b>Day 8 Wednesday</b>	am	Review study session work Networking History of the Internet and Web
	pm	Continued programming language instruction
	eve	Exercises Building dynamic web pages
<b>Day 9 Thursday</b>	am	Review study session work Compilers, Compiled vs. interpreted languages
	pm	Continued programming language instruction
	eve	Building dynamic web pages
<b>Day 10 Friday</b>	am	Review study session work Comparison of programming languages
	pm	Miscellaneous topics in programming
		<b>End Week 2</b>
<b>Sunday</b>	eve	Introduction to Artificial Intelligence issues
<b>Day 11 Monday</b>	am	Review study session work Hilbert, Russell, Godel, and Turing, Turing machines
	pm	Turing machine lab
	eve	Turing machine exercises
<b>Day 12 Tuesday</b>	am	Review study session work Artificial intelligence, Turing's imitation game, Eliza, and Alice
	pm	AI debate prep and debate
	eve	HTML/CSS reading
<b>Day 13 Wednesday</b>	am	Review study session work Ethics and legalities
	pm	Ethical hypotheticals and discussions
	eve	Ethics presentations
<b>Day 14 Thursday</b>	am	Review study session work Course review
	pm	Final evaluation
	eve	Student evaluations of course
<b>Day 15 Friday</b>	am	Review activity

