

# Unit 2 Help Lecture

CSCI1800

Dr. Aaron Sidney Wright

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# Agenda

1. Mid-Term Feedback on CSCI1800
2. Unit 2 Orientation
3. Student Topic: The Moore School
4. Student Topic: Schools vs Others
5. Student Topic: Eckert and Mauchly later
6. Your questions

Use these slides on your own: <https://g.aaronswright.com/>.

# Midterm Feedback on CSCI1800

34 of 390 students gave mid-term feedback on CSCI1800 through  
Dal's SRIs

## Example feedback

- Want: More videos / lectures
- Want: Due Dates on BrightSpace Calendar / Checklists
- Want: More / earlier feedback
- Dislike: Team plans / time zone scheduling
- Like: Worksheets / Samples / Templates
- Like: Teamwork / Intro videos
- Like: Office Hours/ quick replies on Discussion Board

# Midterm Feedback on CSCI1800

## Changes so far

- Due Dates on BrightSpace Calendar / Checklists
- Team plans / time zone scheduling: Better instructions
- Coming up in Unit 3: interactive guest lecture with Dr. Helen He on accessible design (4:05-5:25 Mon. Nov 2)

# Unit 2 Orientation

Use the Schedule in the Course Syllabus

CSCI1800\_Fall2020 : Schedule

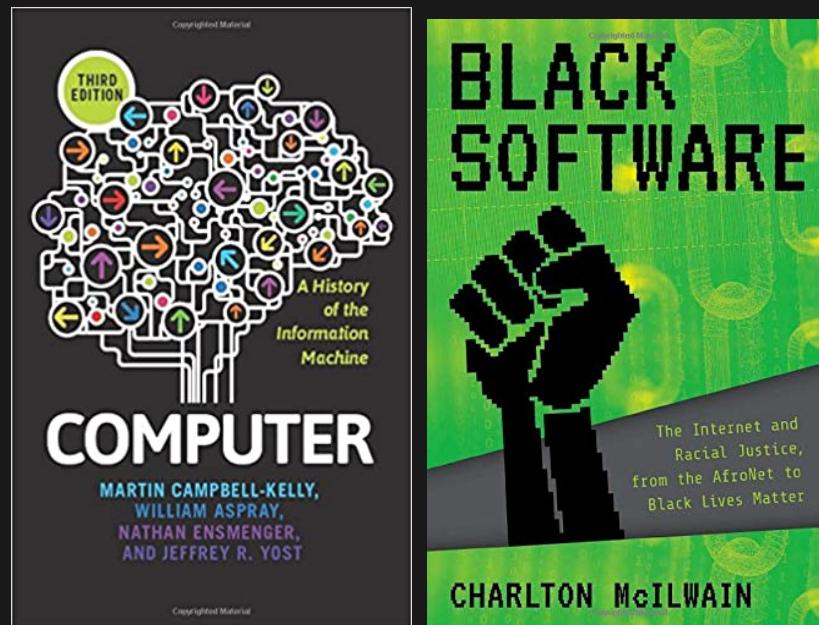
Unit	Week	Date	Due Dates	Tutorial	Tutorial Activity	Notes
<u><a href="#">Unit 0. Introduction</a></u>	Week1	Mon., Sep. 7,		Week1 Tutorial	None	LabourDay
		Tue., Sep. 8,				
		Wed., Sep. 9,				
		Thu., Sep. 10,	<a href="#">Open Office Hour, 10AM Atlantic and 4PM Atlantic</a>			
		Fri., Sep. 11,	Introductory post			
	Week2	Sat., Sep. 12,		Week2 Tutorial	Synchronous Practice Session: active reading / note taking	
		Sun., Sep. 13,				
		Mon., Sep. 14,	Team Charter, due 5pm Atlantic			
		Tue., Sep. 15,				
		Wed., Sep. 16,	Team Plan Unit 1, due 5pm Atlantic			
		Thu., Sep. 17,	<a href="#">Open Office Hour, 10AM Atlantic and 4PM Atlantic</a>			
		Fri., Sep. 18,				
		Sat., Sep. 19,				
		Sun., Sep. 20,				
		Mon., Sep. 21,	<a href="#">Synchronous help lecture, 4:05-5:25 Atlantic</a>			

Schedule

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# Unit 2 Readings



Campbell-Kelly et al. (2014), Chapter 4: Inventing the Computer, Chapter 5: The Computer Becomes a Business Machine, PHOTOS: From Babbage's Difference Engine to System/360 and Chapter 2: The Tech School Route from McIlwain (2020) *Black Software*.

# Unit 2: Orientation

- Essay Topic 1: Schools and Education
- Essay Topic 2: Connect to Civil Rights
- Essay Topic 3: Connect to Entrepreneurs

# Unit 2: Student Topics

Discussions List > View Topic Settings

## Ask Dr. Wright

[Start a New Thread](#) [Refresh](#) [Mark All Read](#) [More Actions ▾](#)

[★ Subscribe to Topic](#) View: Threaded ▾ [Apply](#)

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Search For...  Show Search Options

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<input type="checkbox"/>				Subject	Authored By
<input type="checkbox"/>				<a href="#">▼ You decide the lecture topics! Wednesday October 14, 4-5:25 ★</a>	Aaron Wright
<input type="checkbox"/>				<a href="#">You decide the lecture topics! Wednesday October 14, 4-5:25</a>	Zexi Liu
<input type="checkbox"/>				<a href="#">You decide the lecture topics! Wednesday October 14, 4-5:25</a>	Qiaodan Luo
<input type="checkbox"/>				<a href="#">What happened next to Eckert and Mauchly?</a>	Manar Elgamil

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# Student Topic 1: The Moore School



Moore School of Electrical Engineering ([U Penn](#))  
around 1940.



A woman tests a machine gun at Aberdeen  
Proving Grounds, 1942.

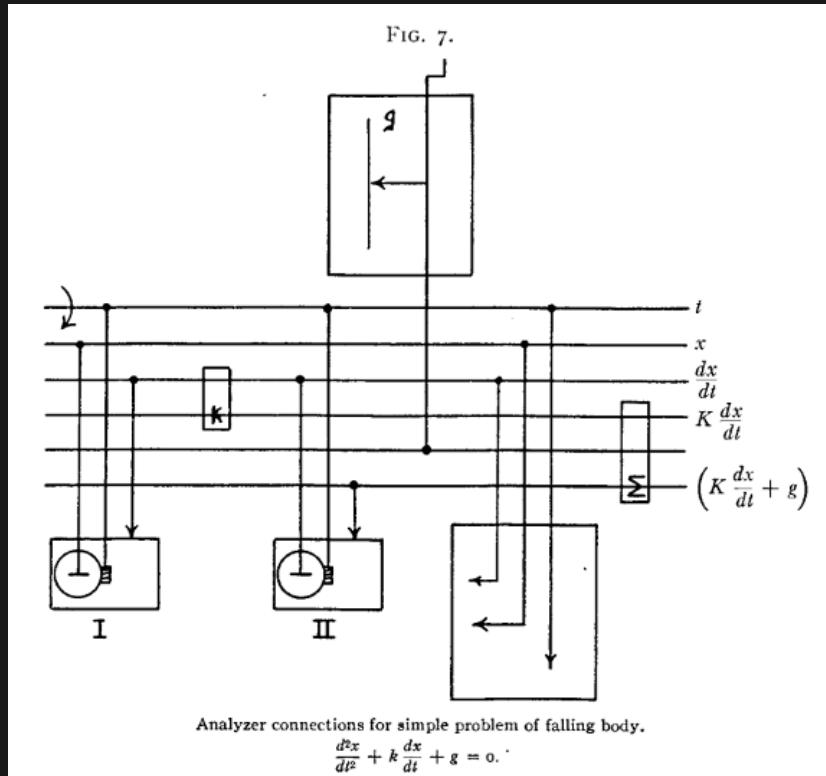
# Aberdeen Proving Ground

- Ballistics Research Laboratory
  - Main activity: mathematical ballistics
  - Founded in WWI
  - Initially ~30 people.

## Firing table (Polacheck 1997, doi:10.1109/85.586069).

# Bush's Differential Analyzer

Analog computing solving  
differential equations



Credit: Bush (1931) doi: 10.1016/S0016-0032(31)90616-9

# Pre-ENIAC Analog Computing

Kay McNulty, Alyse Snyder, and Sis Stump operate the differential analyser “Annie” in the basement of the Moore School of Electrical Engineering, U Penn, ca. 1942.

Photo: US Army



Credit: US Army.

# Summary: Moore School

- Coordinated with US Army
- Analog and digital computing
- Strong roles for women
- Impacts: technology, careers, innovations...
- What is the most important thing about the Moore School in the Campbell-Kelly et al. book?



Moore School Lectures. (Credit: Bonhams)

# Student Topic: Education Compared

How should we compare educational institutions?



Moore School of Electrical Engineering ([U Penn](#))  
around 1940.

**FREE FACTS FOR MEN 17-55!**  
*Prepare In Spare Time For Profitable Jobs In . . .*

**ELECTRONICS**  
AS USED IN  
**GUIDED MISSILES**

TELEVISION — RADAR — MICRO-WAVES, ETC.

No Advanced Education or Previous Technical Experience Required!

A man doesn't even have to know how to splice a lamp cord or use a soldering iron to be eligible to prepare in his spare time at home to enter the big opportunity field of Electronics. As a result, many laborers and bookkeepers, store clerks, shop men, farmers and men of nearly every calling—have taken the DeVry Tech program, and today have good jobs or service shops of their own in Electronics.

**KEEP YOUR JOB!**

As you train for a good opportunity that pays real money in Electronics, you won't have to interfere with your present job. Your chances for promotion and advancement need not be held back because of the job you held today. Send coupon for full facts!

**Sample Booklet FREE!**

We'll give you a free copy of an interesting booklet, "Electronics and You," which will show you how you may take advantage of the opportunities in this burgeoning field.

**DEVRY TECHNICAL INSTITUTE**  
200 North Dearborn Street, Chicago, Ill., Dept. P.E-10-0  
Please give me your FREE booklet, "Electronics and YOU," and tell me how I may prepare to enter one or more branches of Electronics.

Name \_\_\_\_\_ Age \_\_\_\_\_  
Street \_\_\_\_\_ PLEASE PRINT \_\_\_\_\_ Apt. \_\_\_\_\_  
City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_  
 Check here if subject to Military Training.  
DeVry's Canadian Training Center, located at 2015 48th Street, Edmonton, Alberta, Canada

October, 1958

7

Ad for DeVry Technical Institute ([1958](#)).

# Basis for Comparison



## Other Schools

- Facilities
- Ranking
- Quality of education
- Number of students
- Programs offered
- Finances
- Types of students
- Impact of graduates

# Basis for Comparison



**DALHOUSIE  
UNIVERSITY**

## Other Economic Impacts in NS (ex: Tourism)

- Budget
- # People at Dal / Tourists
- Costs to Government
- International affairs/  
connections
-

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2020 North Paulina Street, Chicago, Ill., Dept. P.E-10-0  
Formerly DeFOREST'S TRAINING, INC.

"One of North America's Largest Electronics Training Centers!"

Accredited Member of Association of Study Councils

October, 1958

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# Student Topic: Eckert Mauchly later

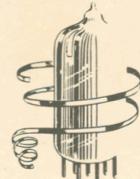


Eckert-Mauchly Computer Corp. Engineering Group - 1949. Row 1: Fran Morello, Bob Shaw, Pres Eckert, Brad Sheppard, Frazer Welsh, John Mauchly, Jim Weiner, Al Auerbach, Betty Snyder; Row 2: John Sims, Marv Jacoby, Paul Winsor, Gerry Smoliar, Art Gehring, Betty Jay, Ed Blumenthal, Bob Mock, Jean Bartik, Herman Lukoff, Bernie Gordon, Ned Schreiner; Row 3: George Gingrich, Marv Gottlieb, Lou Wilson, Doug Wendell, Charlie Michaels, Ben Stad, Si Levitt, Larry Jones.

**ECKERT-MAUCHLY COMPUTER CORPORATION**  
SPECIALISTS IN ELECTRONIC DIGITAL EQUIPMENT  
INCLUDING AUTOMATIC COMPUTERS FOR INDUSTRIAL CONTROLS  
RAPID, ACCURATE, AND ECONOMICAL PROCESSING OF INFORMATION

The UNIVAC  
Universal Automatic Computer  
(Decimal and Alphabetic)

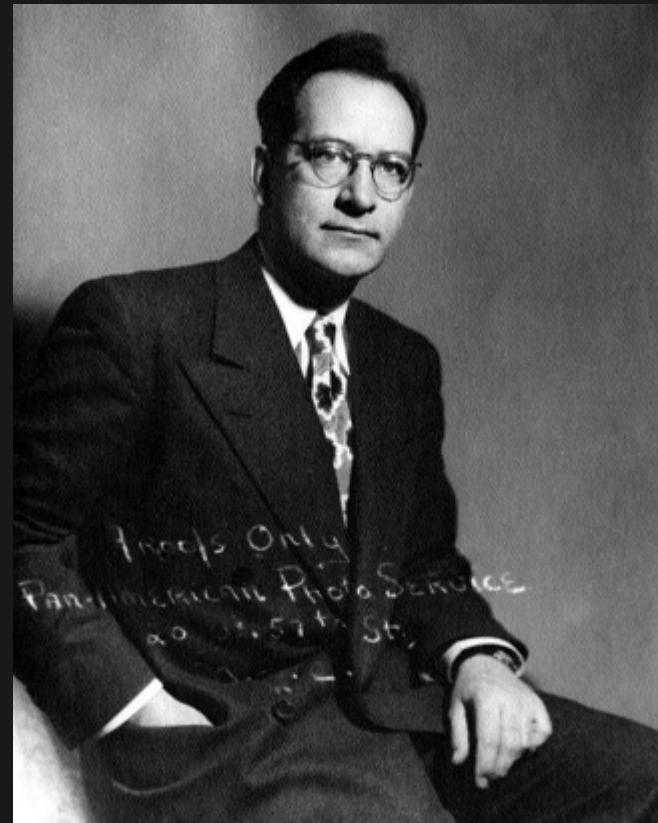
The BINAC\*  
Binary Computer for  
Engineering and  
Industrial Control  
Applications



"Eckert-Mauchly Computer Corp. Engineering Group - 1949. Row 1: Fran Morello, Bob Shaw, Pres Eckert, Brad Sheppard, Frazer Welsh, John Mauchly, Jim Weiner, Al Auerbach, Betty Snyder; Row 2: John Sims, Marv Jacoby, Paul Winsor, Gerry Smoliar, Art Gehring, Betty Jay, Ed Blumenthal, Bob Mock, Jean Bartik, Herman Lukoff, Bernie Gordon, Ned Schreiner; row 3: George Gingrich, Marv Gottlieb, Lou Wilson, Doug Wendell, Charlie Michaels, Ben Stad, Si Levitt, Larry Jones." (CHM).

# John Mauchly

- Born: 1907, Ohio
- Died: 1980 Pennsylvania
- 1933 PhD Physics, John's Hopkins
- Instructor in Moore School
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- 1950-60: Remington Rand
- 1960-: Consultant



# J. Presper Eckert

- Born: 1919, Pennsylvania
- Died: 1995 Pennsylvania
- BS 1940 Moore School
- MS 1943 Moore School
- Student of Mauchly's in Moore School



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- 1950-89: Remmington Rand, Burroughes, Unisys



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# Questions?

- Ask Dr. Wright forum: search strategies
- Thesis statement for comparing educational institutions
  1. Identify (multiple) bases for comparison
  2. Assess the institutions
  3. Propose a reason that explains the differences/ similarities  
"The quality of education [1] at Dalhousie is better than at UBC [2] because of the snow in Halifax [3]."

# Thank you for coming!

Dr. Aaron Sidney Wright

CSCI1800 Fall 2020

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