



A Closer Look at WPI Computer Science

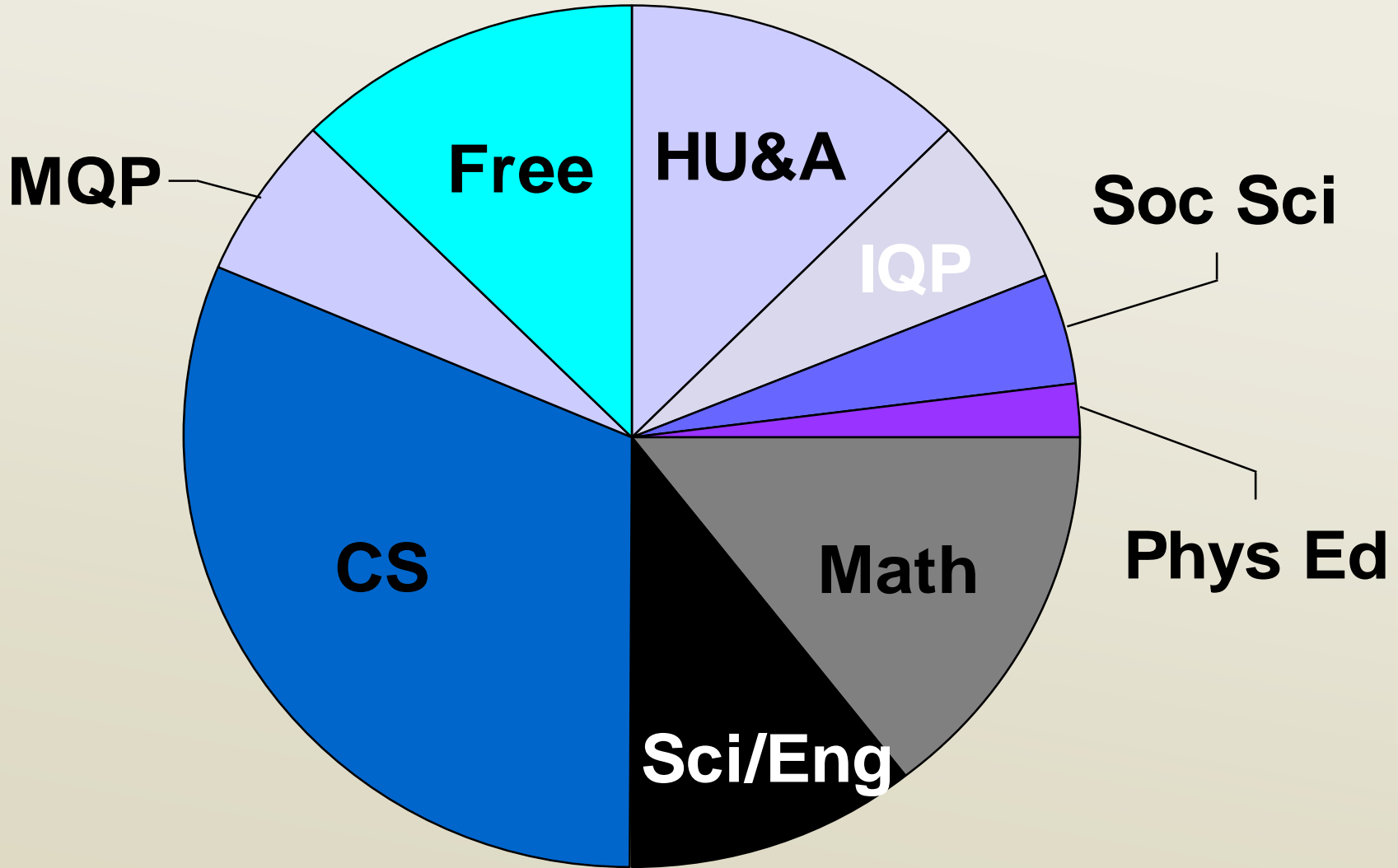
April 2020



Congratulations!
You Have Been
Admitted to WPI



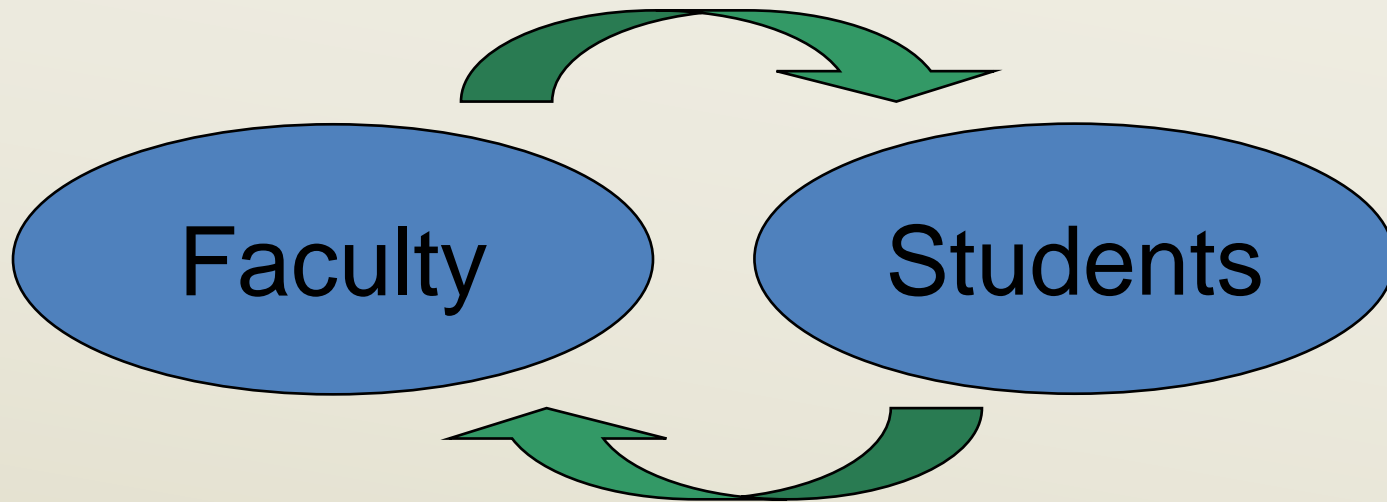
WPI Computer Science is Balanced (and Flexible)





WPI Computer Science is Interesting

CS 1101	Introduction to Program Design
MA 1021	Calculus I
EN 2231	American Literature: The Raven.
CS 1102	Accelerated Intro to Program Design
PE 1018	
MA 1023	Calculus III
FY 1100	Great Problems Seminar:
BB 1035	Introduction to Biotechnology
PE 101	
SP 1523	Elementary Spanish I
MA 1021	Calculus I



- All faculty teach undergraduates
 - Teaching and undergraduate assistants assist
- You know the faculty and they know you
- Undergraduates participate in research groups



WPI Computer Science is Solving Problems



Sometimes just for fun



WPI Computer Science is Community

- Association for Computing Machinery
 - ACM hackathons
 - Social events, BBQs
- Women in CS
 - Networking Dinner
- UPE CS Honor Society
 - Technical Interviews
 - Burning the Midnight Oil
- Game Development Club
- Cybersecurity Club



Worcester Polytechnic Institute

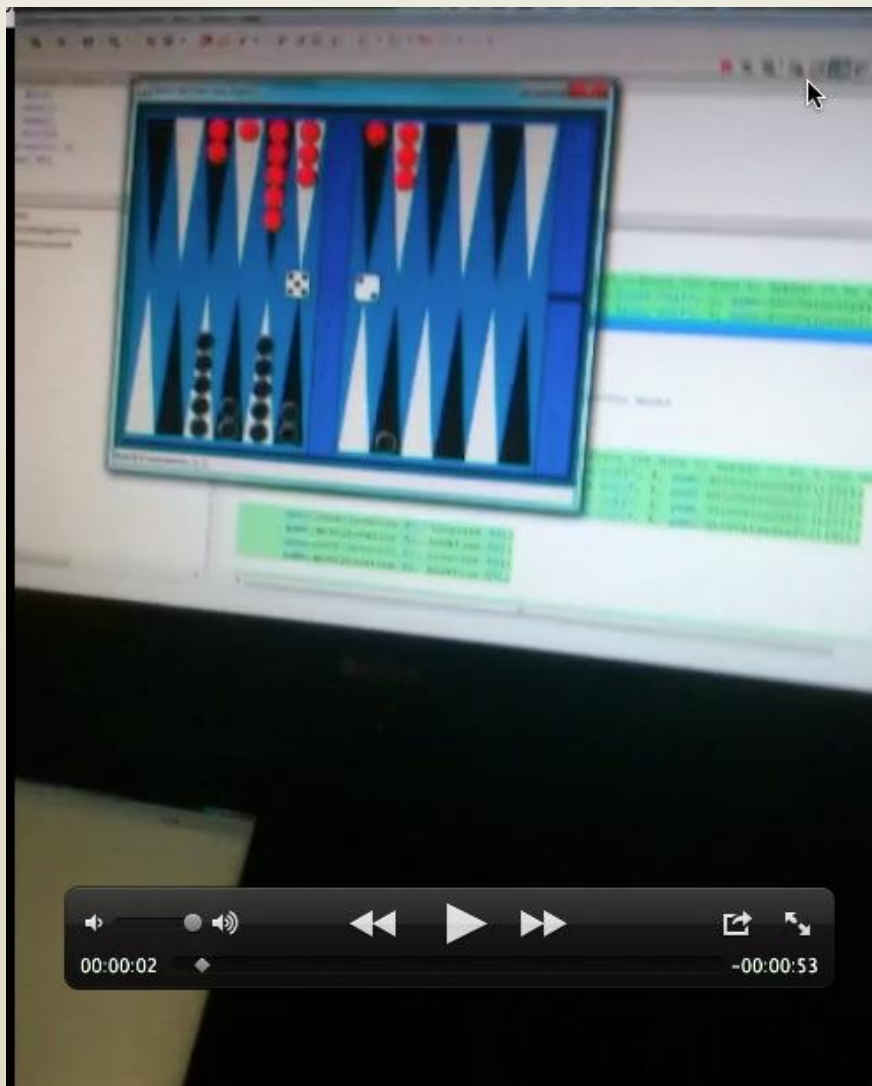


WPI Computer Science is Multi-talented





WPI Computer Science is Hard Work

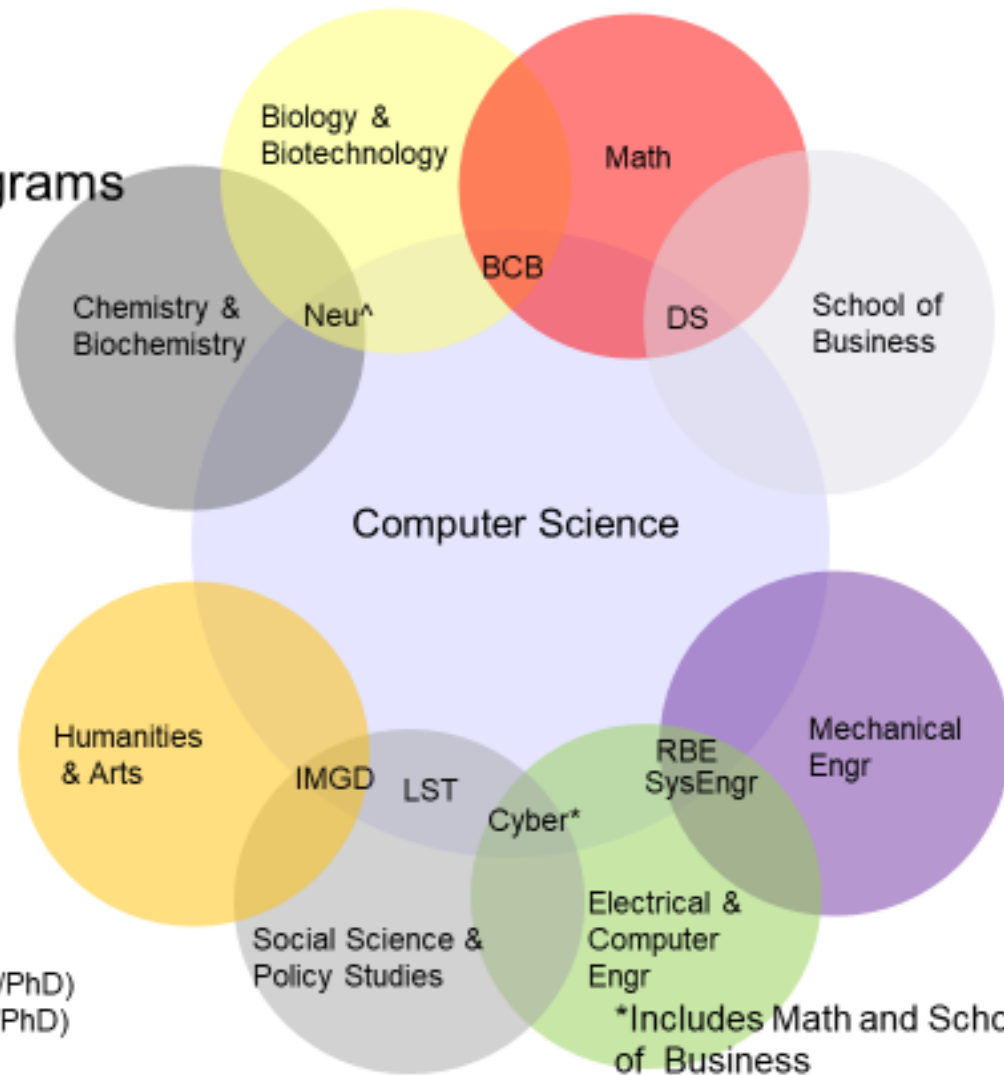


- Interesting problems
- Theory and practice
- Interesting hours
- Collaborating with your peers



WPI Computer Science is Interdisciplinary

Computer Science: The Hub of WPI Interdisciplinary Programs



- BCB: Bioinformatics & Comp. Biology (BS/MS/PhD)
- Cyber: Cybersecurity (BSConc, MS)
- DS: Data Science (BS/MS/PhD)
- IMGD: Interactive Media & Game Development (BS/MS)
- LST: Learning Sciences & Technologies (MS/PhD)
- Neu: Neuroscience (MS)
- RBE: Robotics Engineering (BS/MS/PhD)
- SysEngr: Systems Engineering (MS/PhD)

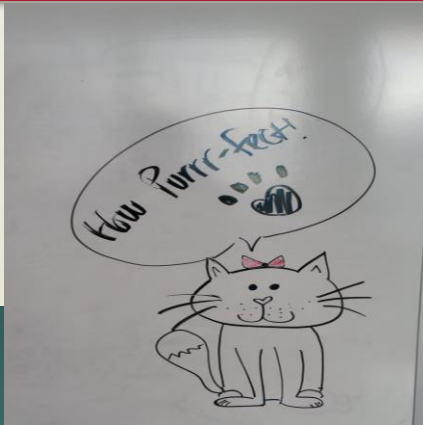


WPI

*Includes Math and School of Business
^includes BME, Math and SSPS



WPI Computer Science Is Whiteboards



	INSERT	SELECT	MERGE	QUICK	HEAP	BINARY
T	N	N ²	N log N	N log(N)	N log(N)	1
G	N ²	N ²	N log N	N log(N)	N log N	1
ST	N ²	N ²	N log N	N ²	N log N	log N
DETAILED			- cut in half - merge does all the work - have id if not explicit compare with in summary	- pivot value - partition		

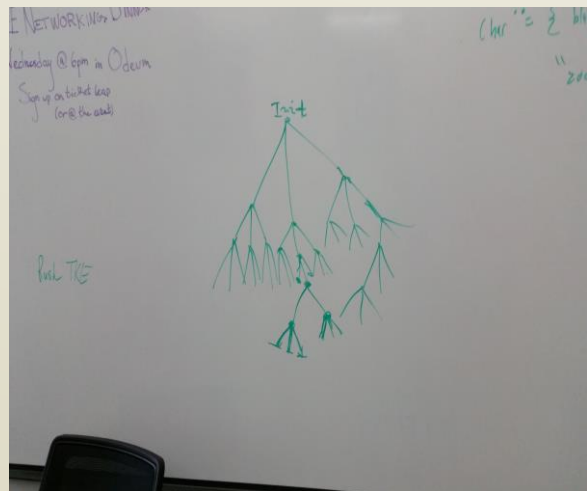
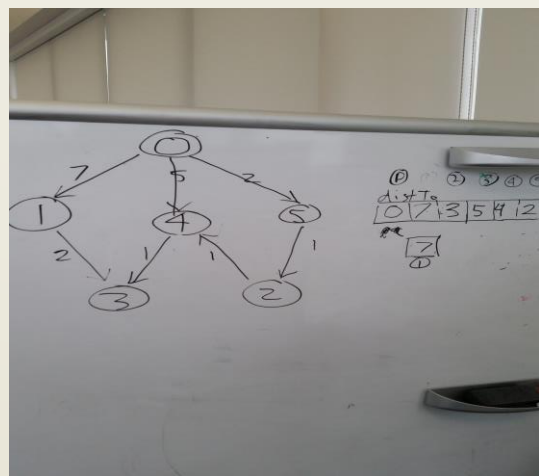
	BAG	QUEUE	STACK
ADD	add(Obj)	enqueue(Obj)	push(Obj)
REMOVE		dequeue	pop()
SIZE	size()	size()	size()
IS Empty	isEmpty()	isEmpty()	isEmpty()

	DATA STRUCT	INSERT	REMOVE	SEARCH
ARRAY		N	N	N
LINKED LIST		1	1	1
HEAP		log N	log N	log N

ST. OPERATION DESC.

put (key, val, val)	Associate (key, val) in table
Value get (key)	retrieve value
void delete (key)	REMOVE (key, value) pair
boolean contains (key)	check if key in table
int size	return number of pairs
boolean isEmpty	determine if empty

hack.wpi.edu





WPI Computer Science Is Junior-Year Projects

- IQPs are done both off and on campus
- IQP Project Centers Where CS Students Have Done Projects include:
 - Venice, Italy
 - Washington, DC
 - Hong Kong
 - London, England
 - Morocco
 - Namibia
 - Denmark
 - New Zealand
 - Bangkok, Thailand
 - Melbourne, Australia
 - Moscow, Russia
 - Costa Rica
 - Bar Harbor, Maine
 - Nantucket, Massachusetts



WPI Computer Science is Senior-Year Projects

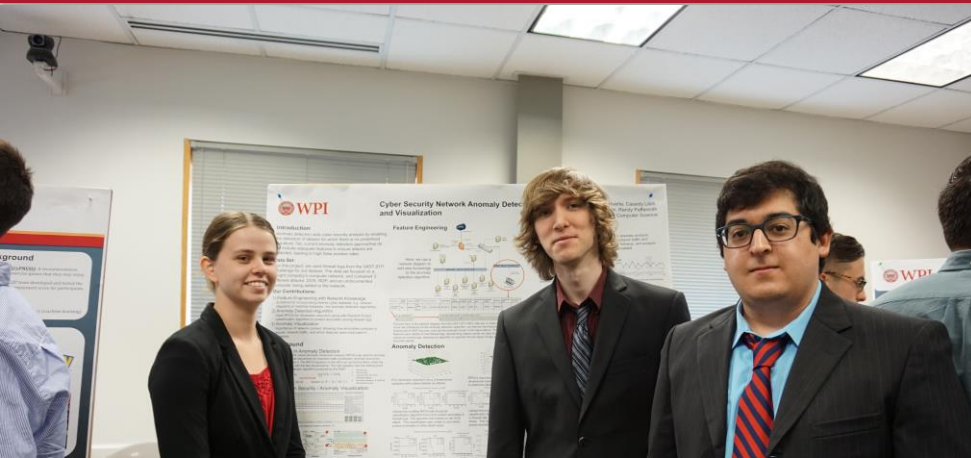


- MQPs off and on campus
- MQPs may or may not be company sponsored
- MQP Project Centers of CS Students
 - Silicon Valley, CA
 - Wall St., NY
 - Osaka, Japan





WPI Computer Science is Project Presentation Day





WPI Computer Science

Prepares You for Graduate School



Massachusetts
Institute of
Technology



ILLINOIS



WPI



BROWN

UMASS
AMHERST



Berkeley
UNIVERSITY OF CALIFORNIA

Carnegie
Mellon
University



University of Southern California



WPI Computer Science Prepares You for Industry

Google

amazonrobotics

athenahealth
we connect care™

Microsoft

IBM

wayfair.com
a zillion things home

GENERAL DYNAMICS

KAYAK



BAE SYSTEMS
where information lives™

Vistaprint Make an impression.

Raytheon

CISCO

facebook

Average salary of \$86K for WPI CS students with BS degree in 2018.

Mar'20: CollegeFactual ranks **WPI CS as 2nd best program** in the U.S. (2nd year in a row)

Students interested in Cybersecurity can earn scholarships for Junior/Senior years and BS/MS program through NSF-supported grant.



Let our students tell you about
their experiences. Contact them via
<https://web.cs.wpi.edu/~cew/admissions20/>

Contact Craig Wills, Dept Head,
with questions at
cew@wpi.edu