Resolution SS1415-13 **February 11, 2015**

SHUYANG LI, DIRECTOR OF DEPARTMENT OF CAMPUS TECHNOLOGY

RESOLUTION PROPOSING AN ELECTIVE INTRODUCTORY COMPUTER SCIENCE COURSE FOR THE UNDERGRADUATE STUDENT BODY

Whereas, the University does not currently offer a course on computer science which is designed for the general interest of the undergraduate student body, as seen in Enclosure 1;

Whereas, students from various academic majors will benefit from fundamental computer programming skills and problem solving techniques, which the field of computer science addresses;

Whereas, peer institutions of the University have had significant enrollment and exceptional student reviews with their respective introductory computer science courses, as demonstrated in Enclosure 2; and

Whereas, the student body recognizes that the creation of an introductory computer science course addresses the University's strategic plan to offer an unsurpassed undergraduate education; now, therefore, be it

Resolved, that the student body respectfully requests the College of Engineering and Department of Computer Science and Engineering make as a priority the creation or designation of an introductory computer science course for the undergraduate student body; and

Resolved, that the student body respectfully requests the Core Curriculum Committee review the aforementioned course upon its creation or designation for approval as a course that fulfills the university science requirement.

Resolution SS1415-13
Enclosure 1

A SUMMARY OF INTRODUCTORY COMPUTER SCIENCE COURSES AT THE UNIVERSITY OF NOTRE DAME [1]

Course #	CSE 10101 / CAPP 30391	CSE 20211	CSE 20232 – 02 [4]
Title	Script-based Programming I	Fundamentals of Computing I	C/C++ Programming
Enrollment [2]	40 (actual) / 40 (capacity) *20 seats reserved for first year students*	100 (actual) / 102 (capacity) *all seats reserved for Computer Science & Engineering majors*	31 (actual) / 60 (capacity) *all seats reserved for College of Engineering and College of Science students*
Student Composition [3]	*No information available*	88% Engineering, 6% Science, 4% Arts and Letters	85% Engineering, 8% Science, 4% Arts and Letters, 1% Business
Intended Audience	Designed and required for Computing & Digital Technologies Minors	Designed and required for Computer Science majors	Designed mainly for Engineering students, with a focus on "solv[ing] engineering problems in software"
Notes	Pilot offering in Spring 2015		

[1] Most information presented are acquired from Class Search (http://class-search.nd.edu).

[2, 3] Enrollment and student composition figures are taken from Academic Year 2014/2015.

[4] CSE 20232 has 2 sections: Section 1 is reserved for Electrical Engineering majors, and Section 2 is open for enrollment from College of Engineering and College of Science; only information on Section 2 is included here.

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Enclosure 2

A SUMMARY OF SELECTED INTRODUCTORY COMPUTER SCIENCE COURSES AT PEER INSTITUTIONS

Institution	Harvard College	Princeton University	Stanford University
Course	CS 50 [1] *Introduction to Computer Science I*	COS 126 *General Computer Science*	CS 106a *Programming Methodology*
Enrollment	848 [2]	380 [5]	Around 650 [6]
Course Quality	Exceptional; see Figure 1	Exceptional; see Figures 2 and 3	*No information available*
Requirement Fulfilled	Empirical and Mathematical Reasoning [3]	B.S.E. Degree Requirement	Disciplinary Breadth, Engineering and Applied Sciences
Notes	Yale University will offer this course by streaming videos from Harvard, beginning Fall 2015 [4]	This course is also the first requirement for Computer Science major	This course is also the first requirement for Computer Science major

[1] http://cs50.harvard.edu

[2] http://www.thecrimson.com/article/2014/10/8/cs50-yale-harvard-proposal/

[3] Courses that fulfill this requirement include introductory Physics, Biology, Math, Statistics, Economics, Engineering Sciences, and Computer Science courses.

[4] http://www.thecrimson.com/article/2014/11/26/cs50-yale-harvard-approves/

[5] http://registrar.princeton.edu/course-offerings/search_results.xml?term=1134&subject=COS

[6] http://engineering.stanford.edu/news/stanford-programming-class-bigger-better

Category	Mean	Benchmark	1	2	3	4	5	Total
		Natural Sciences						
Overall	4.00	3.87	15	31	112	246	220	624
Materials	4.41	3.97	3	20	76	133	377	609
Section	3.68	3.94	24	65	145	183	161	578
Workload	4.07	2.81	1	33	139	202	249	624
Difficulty	3.97	3.39	3	20	150	266	182	621
Recommendation	4.08	3.93	11	29	134	174	275	623
Feedback	3.67	3	18	69	159	224	149	619
Assignments	3.92	3.84	13	49	119	232	206	619
Instructor	4.21	4.06	5	19	103	205	283	615

Figure 1: Student evaluation of Harvard College's CS 50 in Fall 2013, acquired from https://cs50.harvard.edu/q. Although CS 50 is generally more difficult and has a heavier workload than natural science courses at Harvard College, it received better review of its quality across the board.

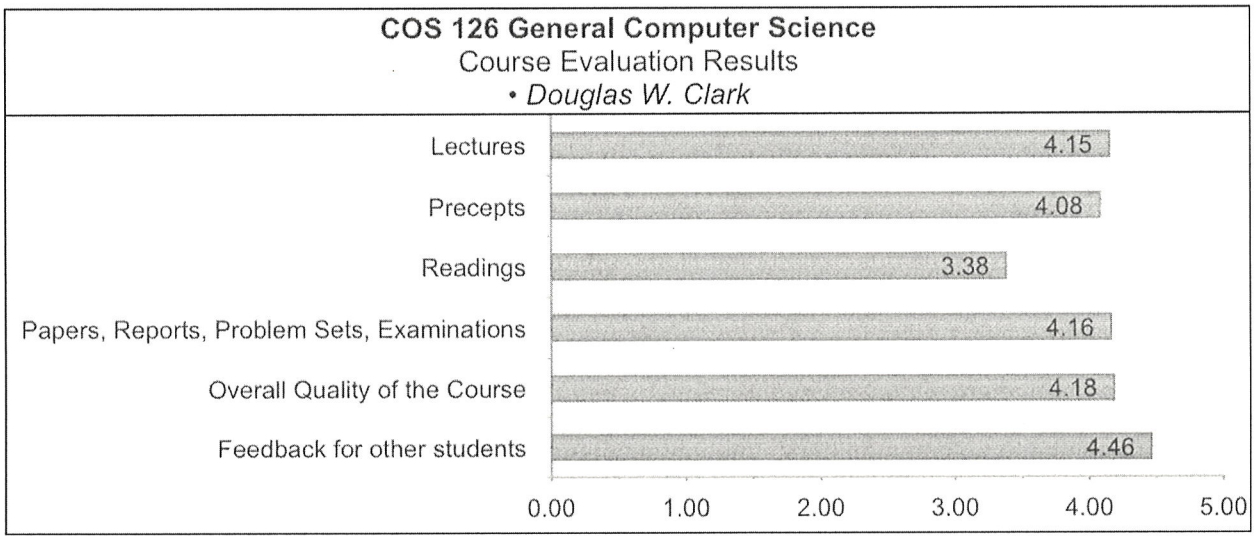

Figure 2: Student evaluation of Princeton University's COS 126 in Spring 2013, acquired from http://registrar.princeton.edu/course-offerings.

Please Note: Princeton University does not consider student comment information provided to be official University course evaluation data; it does not take that information into consideration in approving courses for permanent status; and it does not take the information into consideration in making tenure or promotion decisions.
Student Comments: **What advice would you give to another student considering taking this course?**
Take it.
Take this course!!! Even if it's no longer PDF-able, it's well worth your time, and the weight of the assignments and precept participation ensures that if you do the work and try, you'll do at least decently in the class.
I highly recommend this course. Give it a good effort, and you should be fine.
Take this class! Utilize every aspect of help available, since there are many ways to get your questions answered in this class.
Coding (and knowledge of computers to that extent) is an extremely useful skill that I think everyone should know about. Definitely take this course and take it seriously - you'll be very satisfied by what you learn, and in the future when computers become more and more part of our lives, you won't be left behind, as you'll have at least a tiny bit of computer knowledge. Lastly, I advise students to use the availability of the piazza resource. It was instrumental for me in getting through this course.
Always practice programming even if you are done with the assignments. It helps on the exams. And also go to

Figure 3: Student comments of Princeton University's COS 126, acquired from http://registrar.princeton.edu/course-offerings.