Table 9: Mapping Courses to Program Outcomes

Course	(the required courses are in bold)	Credits	(a) An ability to apply knowledge of mathematics, science, and engineering.	(b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.	(c) An ability to design, implement, and evaluate a computer based system, process, component, or program to meet desired needs.	(d) An ability to function effectively on teams to accomplish a common goal.	(e) An understanding of professional, ethical, legal, security and social issues and responsibilities.	(f) An ability to communicate effectively with a range of audiences.	(g) An ability to analyze the local and global impact on individuals, organizations, and society.	(h) Recognition of the need for and ability to engage in continuing professional development.	(i) An ability to use the current techniques, skills, and tools necessary for computing practice.	(j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in modelling and design of computer based systems in a way that demonstrates comprehension of the trade-offs involved in design choices.	(k) An ability to apply design and development principles in the construction of software systems of varying complexity.
CS 100	**The Computer Science Profession**	1					• [1 2]	•	•	•	•		
CS 115	**Introduction to Computer Programming**	3	•		•		• [1]		•	•			
CS 215	**Intro to Program Design, Abstraction**	4	•	•	•		• [1]	•	•				
CS 216	Introduction to Software Engineering	3	•	•	•	•	• [1 2 4]		•				
CS 275	**Discrete Mathematics**	4	•									•	•
EE 280	**Design of Logic Circuits**	3	•		•		• [1]	•	•				
CS 315	**Algorithm Design and Analysis**	3	•	•	•		• [1 2 3]			•		•	
CS 316	Web Programming	3	•	•	•	•	• [1 2]	•	•		•		•
CS 321	**Introduction to Numerical Methods**	3	•									•	
CS 335	Graphics and Multimedia	3	•		•	•					•	•	•
CS 375	**Logic and Theory of Computing**	3	•										
CS 380	**Microcomputer Organization**	3	•	•	•		• [1]	•					
CS 405G	Introduction to Database Systems	3	•		•		• [1 2]		•		•		
CS 441G	Compilers for Algorithmic Languages	3	•	•	•	•					•	•	
CS 450G	Fundamentals of Programming Languages	3	•	•				•			•	•	
CS 463G	Logic and Artificial Intelligence	3	•	•	•			•			•	•	
CS 470G	**Introduction to Operating Systems**	3	•	•	•		• [1 4]	•	•	•	•	•	•
CS 471G	Networking and Distributed Operating Systems	3	•	•	•		• [1 4]	•	•	•	•		•
CS 499	**Senior Design Project**	3	•	•	•	•	• [1 2 3 4 5]	•		•	•	•	•
CS 505	Intermediate Topics in DB	3	•		•		• [1 2 4]		•		•		
CS 515	Algorithms	3	•	•	•		• [1 4]			•			
CS 537	Numerical Analysis	3	•	•								•	
CS 541	Compiler Design	3	•	•	•	•					•	•	•
CS 571	Computer Networks	3	•		•		• [1 4]	•	•	•	•		
CS 575	Models of Computation	3	•	•								•	

footnotes for column (e): [1] – professional, [2] – ethical, [3] – legal, [4] – security, [5] – social issues and responsibilities