

Spring 2009 Appendix IV - Program Outcomes using Direct Assessment of Five Courses

Program Outcome	GOALS: We note that this rule may well be adjusted over time, but it is a starting point. For all CS 1xx or 2xx courses all assessments will have a goal of an A, B, or C for 80% of the students.						GOALS: We note that this rule may well be adjusted over time, but it is a starting point. For all CS 3xx courses, assessments will have a goal of an A, B, or C for 75% of the students.					
	CS201 Metrics	A	B	C	D	E	CS331 Metrics	A	B	C	D	E
a. An ability to apply knowledge of computing and mathematics appropriate to the discipline	<b>AVERAGE</b>	<b>47%</b>	<b>25%</b>	<b>24%</b>	<b>2%</b>	<b>2%</b>						
	Exam 1 - Question 2, 3	25%	25%	31%	6%	13%						
	Lab 9 - Part 1, 2	56%	13%	31%	0%	0%						
	Exam 2 - Question 2,3	50%	25%	19%	6%	0%						
	Lab 12											
		44%	25%	31%	0%	0%						
	Lab 14											
		63%	19%	19%	0%	0%						
	Project											
		50%	25%	25%	0%	0%						
b. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution	Final - Question 4, 5	44%	44%	13%	0%	0%						
	<b>AVERAGE</b>	<b>50%</b>	<b>25%</b>	<b>25%</b>	<b>0%</b>	<b>0%</b>	<b>AVERAGE</b>	<b>83%</b>	<b>1%</b>	<b>4%</b>	<b>0%</b>	<b>13%</b>
	Project	50%	25%	25%	0%	0%	Exam 1 q 5	94%	3%	3%	0%	0%
							Exam 2 q 4	69%	0%	3%	0%	28%
							Exam 2 q 17	85%	0%	10%	0%	5%
							Final q 24	83%	0%	0%	0%	17%
c. An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs	<b>AVERAGE</b>	<b>47%</b>	<b>28%</b>	<b>25%</b>	<b>0%</b>	<b>0%</b>	<b>AVERAGE</b>	<b>64%</b>	<b>3%</b>	<b>7%</b>	<b>2%</b>	<b>24%</b>
	Lab 2 - Part 3						Exam 1 q 3	81%	0%	0%	0%	19%
		35%	47%	18%	0%	0%	Exam 1 q 4	95%	0%	3%	0%	3%
	Lab 9 - Part 1, 2						Exam 1 q 14	35%	11%	3%	8%	43%
		56%	13%	31%	0%	0%	Exam 2 q 6	64%	0%	10%	0%	26%
	Project						Final q 5	47%	3%	19%	0%	31%
		50%	25%	25%	0%	0%						
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												

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	CS201 Metrics	A	B	C	D	E	CS331 Metrics	A	B	C	D	E
g. An ability to analyze the local and global impact of computing on individuals, organizations and society												
h. Recognition of the need for, and an ability to engage in, continuing professional development												
i. An ability to use current techniques, skills, and tools necessary for computing practices.	<b>AVERAGE</b>	<b>51%</b>	<b>26%</b>	<b>23%</b>	<b>0%</b>	<b>0%</b>	<b>AVERAGE</b>	<b>48%</b>	<b>9%</b>	<b>8%</b>	<b>14%</b>	<b>21%</b>
	Lab 2 - Part 3	35%	47%	18%	0%	0%	Lab 2	50%	10%	5%	0%	35%
	Lab 9 - Part 1, 2	56%	13%	31%	0%	0%	Lab 3	37%	7%	10%	41%	5%
	Lab 14	63%	19%	19%	0%	0%	Lab 6	58%	10%	10%	0%	23%
	Project	50%	25%	25%	0%	0%						
j. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices	<b>AVERAGE</b>	<b>46%</b>	<b>31%</b>	<b>21%</b>	<b>2%</b>	<b>0%</b>	<b>AVERAGE</b>	<b>78%</b>	<b>1%</b>	<b>11%</b>	<b>0%</b>	<b>10%</b>
	Exam 2 - Question 2,3	50%	25%	19%	6%	0%	Exam 1 q 4	95%	0%	3%	0%	3%
	Lab 12	44%	25%	31%	0%	0%	Exam 2 q 6	64%	0%	10%	0%	26%
	Final - Question 4, 5	44%	44%	13%	0%	0%	Exam 2 q 7	74%	3%	21%	0%	3%
k. An ability to apply design and development principles in the construction of software systems of varying complexity.	<b>AVERAGE</b>	<b>64%</b>	<b>28%</b>	<b>8%</b>	<b>0%</b>	<b>0%</b>	<b>AVERAGE</b>	<b>50%</b>	<b>8%</b>	<b>13%</b>	<b>3%</b>	<b>28%</b>



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Program Outcome	GOALS: We note that this rule may well be adjusted over time, but it is a starting point. For all CS 4xx courses, assessments will have a goal of an A, B or C for 70% of the students OR median and mean above 75%			GOALS: We note that this rule may well be adjusted over time, but it is a starting point. For all CS 4xx courses, assessments will have a goal of an A, B or C for 70% of the students OR median and mean above 75%		
	CS425 Metrics	Median	Mean	CS422 Metrics	Median	Mean
a. An ability to apply knowledge of computing and mathematics appropriate to the discipline	<b>AVERAGE</b>	83%	80%	<b>AVERAGE</b>	83%	75%
	home Work 2: Design	92%	93%	Exam 1	82%	77%
	Exam 1: Relational Algebra	85%	79%	Exam 2	74%	74%
	Exam 2: Design	71%	67%	Exam 3	76%	69%
	Exam 3: Design	83%	81%	P1: pre-processing & Naïve Bayes classification	88%	75%
				P2: Pre-processing & Neural Network classification	81%	76%
				P3: Pre-processing & Decision Tree classification	94%	79%
				P4: Pre-processing & Association Rules Mining	88%	75%
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	<b>AVERAGE</b>	86%	81%	<b>AVERAGE</b>	88%	76%
	Home Work 1: SQL	88%	79%	P1: pre-processing & Naïve Bayes classification	88%	75%
	Exam 1: SQL	85%	79%	P2: Pre-processing & Neural Network classification	81%	76%
	Exam 3: SQL	83%	81%	P3: Pre-processing & Decision Tree classification	94%	79%
	E 3: additional topics	90%	86%	P4: Pre-processing & Association Rules Mining	88%	75%
	Project	85%	79%			
d. An ability to function effectively on teams to accomplish a common goal	<b>AVERAGE</b>	89%	86%	<b>AVERAGE</b>	83%	80%
	Project	85%	79%	P2: Pre-processing & Neural Network classification	81%	76%
	home Work 2: Design	92%	93%	Paper Presentation	84%	83%
e. An understanding of professional, ethical, legal, security, and social issues and responsibilities						
f. An ability to communicate effectively with a range of audiences				<b>AVERAGE</b>	84%	83%
				Paper Presentation	84%	83%

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	CS425 Metrics	Median	Mean	CS422 Metrics	Median	Mean
g. An ability to analyze the local and global impact of computing on individuals, organizations and society						
h. Recognition of the need for, and an ability to engage in, continuing professional development						
i. An ability to use current techniques, skills, and tools necessary for computing practices.	<b>AVERAGE</b>	84%	80%	<b>AVERAGE</b>	83%	75%
	home Work 2: Design	92%	93%	Exam 1	82%	77%
	Exam 2: Design	71%	67%	Exam 2	74%	74%
	Exam 3: Design	83%	81%	Exam 3	76%	69%
	Home Work 1: SQL	88%	79%	P1: pre-processing & Naïve Bayes classification	88%	75%
	Exam 1: SQL	85%	79%	P2: Pre-processing & Neural Network classification	81%	76%
	Exam 3: SQL	83%	81%	P3: Pre-processing & Decision Tree classification	94%	79%
	Project	85%	79%	P4: Pre-processing & Association Rules Mining	88%	75%
j. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices	<b>AVERAGE</b>	83%	80%	<b>AVERAGE</b>	83%	75%
	home Work 2: Design	92%	93%	Exam 1	82%	77%
	Exam 1: Relational Algebra	85%	79%	Exam 2	74%	74%
	Exam 2: Design	71%	67%	Exam 3	76%	69%
	Exam 3: Design	83%	81%	P1: pre-processing & Naïve Bayes classification	88%	75%
	Project	85%	79%	P2: Pre-processing & Neural Network classification	81%	76%
				P3: Pre-processing & Decision Tree classification	94%	79%
				P4: Pre-processing & Association Rules Mining	88%	75%
k. An ability to apply design and development principles in the construction of software systems of varying complexity.	<b>AVERAGE</b>	85%	81%	<b>AVERAGE</b>	88%	76%



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	For all CS 4xx courses, assessments will have a goal of an A, B or C for 70% of the students OR median and mean above 75%					
	CS485 Metrics	A	B	C	D	E
a. An ability to apply knowledge of computing and mathematics appropriate to the discipline						
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	<b>AVERAGE</b>	84%	5%	0%	7%	3%
	Team History of Computing, paper/present	93%	0%	0%	0%	7%
	Web project	76%	10%	0%	14%	0%
e. An understanding of professional, ethical, legal, security, and social issues and responsibilities	<b>AVERAGE</b>	81%	9%	3%	4%	3%
	Discussion of the units in the text	90%	10%	0%	0%	0%
	Draft of term paper	83%	3%	3%	0%	10%
	Web project	76%	10%	0%	14%	0%
	Final paper	76%	10%	7%	3%	3%
f. An ability to communicate effectively with a range of audiences	<b>AVERAGE</b>	79%	8%	1%	6%	8%
	Team History of Computing, paper/present	93%	0%	0%	0%	7%
	Book report 1 Oral and written report	76%	14%	0%	0%	10%



