CHICO STATE UNIVERSITY

ASSESSMENT SUMMARY UPDATE

PROGRAM: B.S. Computer Science

Year of review	Student Learning Outcome	Describe assessment activity done this year for this SLO	Findings	Based on the results or evidence, what action was taken regarding program improvements?
2016-2017	a. An ability to apply knowledge of computing and mathematics appropriate to the discipline.	embedded/senior survey/Major Field Test in Computer Science (ETS)	Embedded assessment values for this SLO dropped from 96% to 92%, yet still exceeded Department expectations. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	No further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	b. An ability to analyze a problem, and identify and define the computing requirements appropriate to itssolution.	embedded/senior survey/Major Field Test in Computer Science (ETS)	Embedded assessment values were greater this year for this SLO over last year, going from 98% to 99% and this metric exceeded Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	No further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	c. An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.	embedded/senior survey/Major Field Test in Computer Science (ETS)	although embedded assessment measures dropped for this year from 91% to 78%, the metric still exceeds the Department standard, which is set at 78%. Bottleneck courses such at CSCI 311, CSCI 340 and CINS 465 are contributing to this drop. All instructors for these courses are aware and are implementing pedagogical changes, as well at Course redesigns.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	d. An ability to function effectively on teams to accomplish a common goal.	embedded/senior survey/Major Field Test in Computer Science (ETS)	embedded assessment values were greater this year for this SLO over last year, going from 84% to 90%, and all continue to exceen	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning

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			Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	e. An understanding of professional, ethical, legal, security and social issues and responsibilities.	embedded/senior survey/Major Field Test in Computer Science (ETS)	embedded assessment values were greater this year for this SLO over last year, increasing from 96% to 100%, and still surpassing Department standards. The strengthening of assessment and feedback in CSCI 301 and Cyber-security courses have contributed to this improvement. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	f. An ability to communicate effectively with a range of audiences.	embedded/senior survey/Major Field Test in Computer Science (ETS)	This embedded assessment value for this SLO remained at 100% compared with last year's metric and continues to exceed Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	g. An ability to analyze the local and global impact of computing on individuals, organizations, and society.	embedded/senior survey/Major Field Test in Computer Science (ETS)	This embedded assessment value for this SLO dropped slightly from 96% to 94% compared with last year's metric and continues to exceed Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	h. Recognition of the need for and an ability to engage in continuing professional	embedded/senior survey/Major Field Test in Computer Science (ETS)	This embedded assessment value for this SLO remained at 100% compared with last year's metric	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a

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	development.		and continues to exceed Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	i. An ability to use current techniques, skills, and tools necessary for computing practice.	embedded/senior survey/Major Field Test in Computer Science (ETS)	embedded assessment values dipped this year for this SLO, going from 96% to 82%. Yet this measure still meets and exceeds Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	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.	embedded/senior survey/Major Field Test in Computer Science (ETS)	embedded assessment values dipped this year for this SLO, going from 98% to 83%. Yet this measure still meets and exceeds Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.
	k. An ability to apply design and development principles in the construction of software systems of varying complexity.	embedded/senior survey/Major Field Test in Computer Science (ETS)	This embedded assessment value for this SLO remained at 100% compared with last year's metric and continues to exceed Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs as well as a mix of Supplemental Instruction and Learning Assistants. We also have implemented course redesigns for our bottleneck courses, CSCI 111 and CSCI 311.

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2015-2016	a. An ability to apply knowledge of computing and mathematics appropriate to the discipline.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	b. An ability to analyze a problem, and identify and define the computing requirements appropriate to itssolution.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	c. An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	d. An ability to function effectively on teams to accomplish a common goal.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	e. An understanding of professional, ethical, legal, security and social issues and responsibilities.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs

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			Department standards.	
	f. An ability to communicate effectively with a range of audiences.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	g. An ability to analyze the local and global impact of computing on individuals, organizations, and society.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	h. Recognition of the need for and an ability to engage in continuing professional development.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	i. An ability to use current techniques,skills, and tools necessary for computing practice.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs
	j. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs

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	way that demonstrates comprehension of the tradeoffs involved in design choices.		results meet and exceed Department standards.	
	k. An ability to apply design and development principles in the construction of software systems of varying complexity.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	embedded assessment values were greater this year for all SLOs over last year and all met Department standards. The senior survey shows students perceive success in all outcomes. The MFT results meet and exceed Department standards.	no further action is indicated at this time by assessment, however we have added 'help-desk' personnel in our programming labs

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2014-2015	**a)** An ability to apply knowledge of computing and mathematics appropriate to the discipline.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This is showing a nice increase from historical data. No concerns here.	
	b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This value was high last year and has increased nicely and shows no cause for concern.	
	c) An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This outcome shows a slight dip but is above the minimum criterion of 3.5. Not a cause for concern at this time, but will continue to watch.	
	d) An ability to function effectively on teams to accomplish a common goal."	embedded/senior survey/Major Field Test in Computer Science (ESRI)	There is no cause for concern here.	
	e) An understanding of professional, ethical, legal, security, and social issues and responsibilities.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This value is steady and shows no cause for concern.	
	f) An ability to communicate effectively with a range of audiences.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This value is fairly steady and shows no cause for concern.	
	g) An ability to analyze the local and global impact of computing on individuals, organizations and society.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This score has dipped just slightly but is still quite high. No concerns here.	
	h) Recognition of the need for, and an ability to engage	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This outcome shows a very slight improvement and is still well	

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	in, continuing professional development.		above the minimum criterion of 3.5.	
	i) An ability to use current techniques, skills, and tools necessary for computing practice.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	Although this score has dipped, it is well above the minimum criterion of 3.5	
	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.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This score has dropped significantly and is a definite cause for concern since it has dipped below the minimum criterion of 3.5. The 2 courses in which this outcome was measured are CINS 465, Web Programming, and CSCI 340, Operating Systems. Both instructors have corrective measures they intend to implement in fall 2015. We will continue to watch this outcome carefully.	
	k) An ability to apply design and development principles in the construction of software systems of varying complexity.	embedded/senior survey/Major Field Test in Computer Science (ESRI)	This score has dropped significantly. It is still above the minimum criterion of 3.5. 2 courses were used to assess this outcome and the CSCI 431 course in Usability (Software Engr.) was the course that caused the metric to dip. The instructor has an improvement plan that will be implemented in spring 2016, the next time this course is to be offered. Note: this course is no longer required in either CINS or CSCI in the new 2015-16 catalog.	

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2013-2014	**SLO a:** An ability to apply knowledge of computing and mathematics appropriate to the discipline.	Embedded assessment in two classes.	82% of students achieving the goal.	The department is seriously considering curriculum changes in both the MS and undergraduate degrees, taking into account the expertise of the current faculty.
	SLO b: An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.	(a) Embedded assessment in Classes.	(a) 83% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO c: An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.	(a) Embedded assessment in two classes.	(a) 78% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO d: An ability to function effectively on teams to accomplish a common goal.	(a) Embedded assessment in one class.	(a) 94% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO e: An understanding of professional, ethical, legal, security and social issues and responsibilities.	(a) Embedded assessment in one class.	(a) 88% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO f: An ability to communicate effectively with a range of audiences.	(a) Embedded assessment in three classes	(a) 92% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO g: An ability to analyze the local and global impact of computing on individuals, organizations, and society.	Embedded assessment in one class.	88% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO h: Recognition of the need for and an ability to engage in	(a) Embedded assessment in one class.	(a) 88% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.

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	continuing professional development.			
	SLO i: An ability to use current techniques, skills, and tools necessary for computing practice.	(a) Embedded assessment in one class.	(a) 94% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO 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.	Embedded assessment in three classes.	89% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO k: An ability to apply design and development principles in the construction of software systems of varying complexity.	Embedded assessment in one class.	90% of students achieving the goal.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.

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2012-2013	**SLO a:** An ability to apply knowledge of computing and mathematics appropriate to the discipline.	Embedded assessment in three classes.	Average 84.6% of students achieving	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO b: An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.	(a) Embedded assessment in classes (b) Q31 and Q36 in Senior Exit Survey	(a) 83.6% and 63.8% of students achieving. (b) Q31: average score 3.7/5.0 Q36: average score 3.9/5.0	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO c: An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs.	(a) Embedded assessment in three classes (b) Q34 in Senior Exit Survey	(a)Average 63.8 of students achieving. (b) Average score 3.8/5.0	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO d: An ability to function effectively on teams to accomplis a common goal.	(a) Embedded assessment in three classes (b) Q35 in Senior Exit Survey	(a) Average 90.2% of students achieving. (b) Average score 3.4/5.0	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO e: An understanding of professional, ethical, legal, security and social issues and responsibilities.	(a) Embedded assessment in two classes (b) Q39 and Q40 in Senior Exit Survey	(a) Average 91.6% of students Achieving. (b) Q39: average score 3.7/5.0 Q40: Average score 3.9/5.0	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO f: An ability to communicate effectively with a range of audiences.	(a) Embedded assessment in four classes (b) Q37 and Q38 in Senior Exit Survey	(a) Average 89.8% of students Achieving. (b) Q37: Average score 3.6/5.0 Q38: Average score 3.8/5.0	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO g: An ability to analyze the local and global impact of computing on individuals, organizations, and society.	Embedded assessment in two classes	Average 89.8% of students achieving.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO h: Recognition of the need for and an ability to engage in continuing professional development.	(a) Embedded assessment in two classes (b) Q43 in Senior Exit Survey	(a)Average 60% of students achieving. (b) Average score 3.9/5.0	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO i: An ability to use current techniques, skills, and tools necessary for computing practice.	(a) Embedded assessment in two classes (b) Q41 in Senior Exit Survey	(a)Average 61.2% of students achieving. (b) Average score of 3/6/5.0	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.

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	SLO 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.	Embedded assessment in two classes	Average 50% of students achieving.	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.
	SLO k: An ability to apply design and development principles in the construction of software systems of varying complexity.	Embedded assessment in two classes	Average 82.8% of students achieving	At present, the CSCI department lacks sufficient resources to consider any changes in the curriculum.