

UC San Diego - WASC Exhibit 7.1

Inventory of Educational Effectiveness Indicators

Academic Program	(1) Have formal learning outcomes been developed?	(2) What are these learning outcomes? <hr/> Where are they published? (Please specify)	(3) Other than GPA, what data/evidence is used to determine that graduates have achieved stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)	(4) Who interprets the evidence? What is the process?	(5) How are the findings used?	(6) Date of last Academic Senate Review?
<p>Department: Computer Science & Engineering</p> <p>Major: BS Computer Science BA Computer Science Computer Engineering BS Computer Science with a specialization in Bioinformatics</p>	Yes	<ul style="list-style-type: none"> • Prepares students for leadership in the technology sector and for advanced study in graduate school. By focusing on core computer science the program allows students flexibility in designing their course of study, e.g., pursuit of a double major. • Specifically, lower-division requirements are designed to provide a strong foundation in mathematics, physics, basic programming methodology and skills, and computer organization. This enables students to solve small computing problems through programming and discrete mathematical reasoning. • Upper-division core courses prepare students to solve computing problems using the theory and design of algorithms, hardware, and software. Students gain additional breadth and/or depth computing by an appropriate selection of technical electives. <hr/> <p>Learning outcomes published:</p> <ul style="list-style-type: none"> • On the web at: www.cs.ucsd.edu/ • Course syllabi • Articulation agreements with California Community Colleges (Project IMPAC) 	<p>Data/Evidence:</p> <ul style="list-style-type: none"> • Annual survey of graduates, including employment and salary. • Feedback from employers, for example through contacts from the Jacobs School Corporate Affiliates Program. • Surveys of intermediate progress and student perceptions. • Self-reports of students based on university CAPEs. 	<ul style="list-style-type: none"> • CSE Department's undergraduate committee, including Vice Chair for Education and Department Chair, review evidence and recommend improvements, as approved by full faculty. • CEP Committee • 5-year ACS Review 	<ul style="list-style-type: none"> • ACS collects annual data from all approved departments and publishes outcomes. • Internally the department adjusts requirements and course sequences for the major. • Individual course instructors use feedback to modify their classes. 	2010 -11

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<p>Department: Computer Science & Engineering</p> <p>Major: BS Computer Science BA Computer Science Computer Engineering BS Computer Science with a specialization in Bioinformatics</p>	Yes	<ul style="list-style-type: none"> • Prepares students for leadership in the technology sector and for advanced study in graduate school. • Specifically, lower-division requirements are designed to provide a strong foundation in mathematics, physics, electrical engineering, basic computing methodology and skills, and computer organization. This enables students to solve small computing problems through programming and discrete mathematical reasoning. • Upper-division core courses prepare students to solve computing problems using the theory and design of algorithms, hardware, and software. Students gain additional breadth and/or depth computing by an appropriate selection of technical electives. <hr/> <p>Learning outcomes published:</p> <ul style="list-style-type: none"> • On the web at: www.cs.ucsd.edu/ • Course syllabi • Articulation agreements with California Community Colleges (Project IMPAC) 	<p>Data/Evidence:</p> <ul style="list-style-type: none"> • Annual survey of graduates, including employment and salary. • Feedback from employers, for example through contacts from the Jacobs School Corporate Affiliates Program. • Surveys of intermediate progress and student perceptions. • Self-reports of students based on university CAPEs. 	<ul style="list-style-type: none"> • CSE Department's undergraduate committee, including Vice Chair for Education and Department Chair, review evidence and recommend improvements, as approved by full faculty. • CEP Committee • 5-year ACS Review 	<ul style="list-style-type: none"> • ACS collects annual data from all approved departments and publishes outcomes. • Internally the department adjusts requirements and course sequences for the major. • Individual course instructors use feedback to modify their classes. 	2010 -11

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<p>Department: Computer Science & Engineering</p> <p>Major: Computer Engineering BA Computer Science BS Computer Science BS Computer Science with a specialization in Bioinformatics</p>	Yes	<ul style="list-style-type: none"> • Prepares students for leadership in the technology sector and for advanced study in graduate school. • Specifically, lower-division requirements are designed to provide a strong foundation in mathematics, physics, electrical engineering, probability and statistics, basic computing methodology and skills, and computer organization. • Upper-division core courses prepare students to solve engineering problems in topics including linear systems, electronic circuits and systems, computer architecture and systems, data structures, digital hardware, and theory and design of algorithms. Students gain additional breadth and/or depth in computing by an appropriate selection of technical electives. <hr/> <p>Learning outcomes published:</p> <ul style="list-style-type: none"> • The web: www.cs.ucsd.edu/ • Course syllabii • Articulation agreements with California Community Colleges (Project IMPAC) 	<p>Data/Evidence:</p> <ul style="list-style-type: none"> • Annual survey of graduates, including employment and salary. • Feedback from employers, for example through contacts from the Jacobs School Corporate Affiliates Program. • Surveys of intermediate progress and student perceptions. • Self-reports of students based on university CAPEs. 	<ul style="list-style-type: none"> • ECE and CSE members of the Computer Engineering group. • Each department's undergraduate committee, including Vice Chair for Education and Department Chair, review evidence and recommend improvements, as approved by full faculty. • CEP Committee • 5-year ACS Review 	<ul style="list-style-type: none"> • ACS collects annual data from all approved departments and publishes outcomes. • Together ECE and CSE adjust requirements and course sequences for the major. • Individual course instructors use feedback to modify their classes. 	2010 -11

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<p>Department: Computer Science & Engineering</p> <p>Major: BS Computer Science BA Computer Science Computer Engineering BS Computer Science with a specialization in Bioinformatics</p>	Yes	<p>Students specializing in bioinformatics are trained to work in the biotechnology industry, and can attend graduate school in Computer Science, and Bioinformatics. Specifically, the training in this program enables students to apply advanced computational and experimental methods that model the flow of information (genetic, metabolic and regulatory) in living systems to provide an integrated understanding of the system properties of organisms. Examples include the ability to:</p> <ul style="list-style-type: none"> • Analyze bio-molecular sequence data using available tools and databases, designing and implementing algorithms for comparing sequences. • Interpret data from large-scale experiments measuring transcripts (microarray, transcript sequencing), proteins (mass spectrometry), and genetic variation (genotyping, sequencing). <hr/> <p>Learning outcomes published:</p> <ul style="list-style-type: none"> • Course syllabi • http://www.cse.ucsd.edu/undergrad/degreeprograms/bioinformatics.html/ 	<p>Data/Evidence:</p> <ul style="list-style-type: none"> • Undergraduate research is a big part of the curriculum. Most students start with a research project in their final year. The project is usually an offshoot of a class project, and uses all that they have learned so far. • Extensive surveys of graduating students to get feedback on courses, and how the courses have helped them in the industry, and in graduate school. 	<ul style="list-style-type: none"> • Undergraduate Affairs committee and Vice Chair for Undergraduate education oversee requirements, which are endorsed by faculty. • A Bioinformatics undergraduate steering committee, composed of faculty members, reviews coursework to see that stated outcomes are being met. • Every class is reviewed by the students who rate the class and the instructor on the relevance of the material. • CEP review committee reviews all petitions for change of requirements. 	<ul style="list-style-type: none"> • ACS collects annual data from all approved departments and publishes outcomes. • Individual course instructors use feedback to modify their classes. • The steering committee adjusts course requirements 	2010 -11