

Program/Department Assessment Report to Academic Division and Standing Committee on Student Learning Assessment			
Program/Department: Engineering Science A.S. STEM Report Date: 9/26/2011			
Part 2: Current Assessment Cycle			
Program Learning Outcomes	Related Learning Activities	Assessment Methods and Criteria for Success. A ratio in parenthesis refers to the criterion for defining success. See the attached page for the definition of these ratios.	Assessment Timeline
a) By the end of the program students will have developed the skills and attained the certifications required to transfer and succeed at a four year engineering college	<ul style="list-style-type: none"> • Passing the courses required for AS degree • Successful completion of the student success sequence (Engineering Orientation courses) 	<ul style="list-style-type: none"> • Monitor retention from the start of the program to graduation. Success will be defined as 70% of students achieving their goals for entering the program. • Grades in the student success sequence. (70/80) 	5/13
b) Design and construct experiments as well as analyze and interpret data.	<ul style="list-style-type: none"> • Design one or more experiments • Analyze the results using appropriate mathematical and computational models • Present the results in a formal lab report 	<ul style="list-style-type: none"> • Faculty will grade the report using a standard rubric. Aggregate scores will be analyzed.(70/80) • The student's work, the assessment of their work based on a rubric, and a self-reflection on their work will be included in an electronic portfolio. 	5/13

<p>c) Demonstrate the ability to analyze the impact of engineering solutions in a global, economic, environmental, and societal context.</p>	<p>The students will write a 4 to 5 page paper analyzing an appropriate topic at the interface of engineering and society.</p>	<ul style="list-style-type: none"> • Faculty will grade the report using a standard rubric. Aggregate scores will be analyzed (70/80) • Successful completion of the General Education requirements for an AS degree at BCC. 	<p>5/12</p>
<p>d) Demonstrate the ability to apply the principles and computational tools of mathematics, science, and engineering to solve a wide variety of engineering problems.</p>	<p>Two projects (selected from two different engineering classes) that require the use of these computational tools will be graded using a standard rubric.</p>	<ul style="list-style-type: none"> • The student's work, the assessment of their work based on a rubric, and a self-reflection on their work will be included in an electronic portfolio. Aggregate scores will be analyzed (70/80) • Analysis of aggregate GPA in core math, physics, and engineering courses. (70/70) 	<p>5/13</p>
<p>e) Demonstrate the ability to communicate effectively and function as members and leaders of multidisciplinary teams.</p>	<p>Each student will work as a part of a team to complete a design project and then present that project to an audience.</p>	<ul style="list-style-type: none"> • Faculty will grade the report using a standard rubric. Aggregate scores will be analyzed (70/80) • The student's work, the assessment of their work based on a rubric, and a self-reflection on their work will be included in an electronic portfolio. 	<p>5/12</p>