### Department: Mathematics

**Courses Included in Assessment:** Transfer Courses  
**Contact Faculty:** Joanne Brunner

**Mission Statement:** Joliet Junior College is committed to providing a quality education that is affordable and accessible to the diverse student population it serves. J.J.C. prepares its students for success in higher education and employment. It also provides a broad spectrum of transitional, extension, adult, continuing and work force education.

**Department Goal(S):** To assess the transfer courses in the area of basic skills, real world-applications and critical thinking skills.

<table>
<thead>
<tr>
<th>A.) Student Competencies /Skills (related to program)</th>
<th>B.) What is the anticipated student outcome (desired level of competency)</th>
<th>C.) Assessment Instruments /Measures (can have more than one)</th>
<th>D.) Target Population</th>
<th>E.) Who is involved and identify their responsibilities?</th>
<th>F.) What were the results of the assessment? (Attach any relevant data or assessment instruments).</th>
<th>G.) How will the results be used to improve/modify the course or program? (delivery, content, sequencing, text, objectives, assessment, etc)</th>
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| **Basic Skills**  
Students will be able to work with the properties of logarithms. | 80% of students should show proficiency (only include students who currently have a grade of C or better) | Problems given on exams or final exam | Math 131  
Math 141  
Math faculty | Different instructors:  
86% proficient  
80% proficient  
46% proficient  
63% proficient | We will spend more time relating the properties to relevant applications. |
| **Basic Skills**  
Students will be able to perform integration by parts. | 80% of students should show proficiency (only include students who currently have a grade of C or better) | Problems given on exams or final exam | Math 171  
Math 172  
Math faculty | 87.5% recognized the need to use the technique.  
85.71% of the 87.5% successfully integrated by parts. | Continue to include problems that require integration by parts in the students’ work throughout the semester. |
| **Basic Skills**  
Students will be able to identify different types of functions both by the graphs and equations. | 80% of students should show proficiency (only include students who currently have a grade of C or better) | Problems given on exams or final exam | Math 131  
Math 141  
Math faculty | Different instructors:  
94% proficient  
88% proficient  
40% proficient  
70% proficient | We plan to use more handouts that illustrate the graphical and algebraic representations. |
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<td>Students should be able to apply concepts in <strong>Real Life Applications</strong></td>
<td>30–40% of students should show proficiency</td>
<td>Problems given on exams or final exam</td>
<td>Math 150 Math 135 Math 153 Math 170</td>
<td>Math faculty</td>
<td>Different instructors: 76% proficient 48% proficient 50% proficient 35% proficient</td>
<td>We plan to emphasize terms and definitions to help students retain more information. Also, we plan to stress better study skills at the beginning of the semester.</td>
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<tr>
<td>Students should be able to apply concepts in <strong>Real Life Applications</strong></td>
<td>80–100% of students should show proficiency</td>
<td>Projects</td>
<td>Math 150 Math 135 Math 153 Math 170</td>
<td>Math faculty</td>
<td>80–90% proficient</td>
<td>Since the majority of the students have done well on the projects, nothing needs to be changed in the course.</td>
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<tr>
<td><strong>Critical Thinking Skills</strong> Students should know the concept of the derivative.</td>
<td>70% of students should show proficiency</td>
<td>Problems given on exams or final exam</td>
<td>Math 170</td>
<td>Math faculty</td>
<td>70.8% of those tested showed proficiency on a set of two questions.</td>
<td>This can be improved with more class time (one extra day) spent on the analytic geometric relationship.</td>
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<td><strong>Critical Thinking Skills</strong> Students should be able to work with the standard normal curve and hypothesis testing.</td>
<td>70% of students should show proficiency</td>
<td>Problems given on exams or final exam</td>
<td>Math 128</td>
<td>Math faculty</td>
<td>57.6% were proficient in standard normal curve calculations. 73.4% were proficient in hypothesis testing.</td>
<td>More class time is needed for standard normal curve calculations. Daily quizzes will be given when this topic is initially presented.</td>
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