BASIC INFORMATION

Requester(s):  Ted Coskey
College:  South Seattle Community College
Division/Dept:  Academic Programs
Dean:  Laura Kingston
Peer Reviewer(s):  Rick A Downs

COLLEGE SUPPLEMENTAL

Proposed Quarter of Implementation:  Summer of 2014 implementation  NA  Request Provisional Exception

Class Capacity:  35

Modes of Delivery:  (Check all that apply)

☑ Fully On Campus
☐ Fully Online
☑ Hybrid
☐ Other  Explanation:

Select the Special Designation(s) this course will satisfy, if applicable:
(No Special Designations Selected)

Class Schedule Description:
Covers Pre-Calculus review, Limits and their properties, Differentiation, Applications of differentiation, and Antiderivatives
NOTE: While institutions usually cover the same topics throughout the calculus sequence, individual topics may be covered in different courses within the sequence. To ensure proper transfer credit, students should consult with an adviser before taking different parts of the sequence at different institutions. Prerequisite: MATH& 142 with a 2.0 or higher

Student Learning Outcomes:

Communication
Read and listen actively to learn and communicate

Computation
Use arithmetic and other basic mathematical operations as required by program of study
Apply quantitative skills for academic and career purposes

**Critical Thinking and Problem-Solving**
Think critically in evaluating information, solving problems, and making decisions

**Technology**
Select and use appropriate technological tools for academic and career tasks

**Personal Responsibility**
Uphold the highest standard of academic honesty and integrity

Respect the rights of others in the classroom, online and in all other school activities

Attend class regularly, complete assignments on time and effectively participate in classroom and online discussions, group work and other class-related projects and activities

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**Program Outcomes:**

<table>
<thead>
<tr>
<th>Included in Course Objective Number</th>
<th>SSCC Student Learning Outcomes</th>
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<tbody>
<tr>
<td>SLO 1.1</td>
<td>Communication - read and listen actively to learn and communicate.</td>
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<td>SLO 1.2</td>
<td>Communication - speak and write effectively for academic and career purposes.</td>
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<tr>
<td>SLO 2.1</td>
<td>Computation - use arithmetic and other basic mathematical operations as required by program of study.</td>
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<tr>
<td>SLO 2.2</td>
<td>Computation - apply quantitative skills for academic and career purposes.</td>
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<tr>
<td>SLO 3.1</td>
<td>Human Relations - use social skills to work in groups effectively.</td>
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<tr>
<td>SLO 3.2</td>
<td>Human Relations - have knowledge of the diverse cultures represented in our multicultural society.</td>
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<td>SLO 4.1</td>
<td>Critical Thinking - think critically in evaluating information, solving problems, and making decisions.</td>
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<td>SLO 5.1</td>
<td>Technology - select and use appropriate technological tools for academic, and career tasks.</td>
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<tr>
<td>SLO 6.1</td>
<td>Personal Responsibility - uphold the highest standards of academic honesty and integrity.</td>
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<td>SLO 6.2</td>
<td>Personal Responsibility - respect the rights of others in the classroom, online and in all other school activities.</td>
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<tr>
<td>SLO 6.3</td>
<td>Personal Responsibility - attend class regularly, complete assignments on time, and effectively participate in classroom and online discussions, group work and other class-related projects and activities.</td>
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Course Outcomes / Objectives:

After completing the course, students are expected to be able to:

1. Calculate the limit of a function at a point algebraically using appropriate techniques and by using l’Hospital’s rule.
2. Find points of discontinuity for functions and classify them.
3. Determine whether a function is differentiable at a point.
4. Compute the value of the derivative at a point algebraically using the definition of the derivative.
5. Differentiate various types of functions using the differentiation rules: Powers, Sum, Difference, Product, Quotient Rules, Chain Rule, Implicit and Logarithmic Differentiation.
6. Apply differentiation to solve problems involving rates of change, related rates and optimization.
7. Sketch the graph of the derivative of a function from the given graph of the function.
8. Compute the expression for the line tangent to a function at a point.
9. Interpret the tangent line geometrically as the local linearization of a function.
10. Find an antiderivative.

Explain the student demand for the course and potential enrollment:

The class is offered seven times a year at South.

Explain why this course is being revised:

This course revision is to update the outline to account for the change in the number of the third course in this sequence from Math& 153 to Math& 163.

What challenges, if any, do you foresee in offering this course:

None.
This is to certify that the above criteria have all been met and all statements are accurate to the best of my knowledge.

Faculty involved in originating this program:

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<thead>
<tr>
<th>Name</th>
<th>Signature</th>
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<tbody>
<tr>
<td>Ted Coskey</td>
<td></td>
<td>6/5/2014</td>
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Dean:

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<tr>
<th>Name</th>
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<tr>
<td>Karen L Whitney (Admin)</td>
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<td>6/9/2014</td>
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Results of SSCC Curriculum Coordinating Council Findings

Participating Faculty Response and Remarks

- [X] Recommended for approval
- [ ] Not recommended for approval

Chairman, Curriculum Coordinating Council:

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<tr>
<th>Name</th>
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<tr>
<td>Diane Schmidt</td>
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<td>6/10/2014</td>
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Vice President for Instruction:

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<th>Name</th>
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<tr>
<td>Donna Miller-Parker</td>
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