MATH&163 - Calculus 3

Document Type: Master Course Outline Supplemental
Proposal Type: New Course
Requester(s): Rick A Downs
College: South
Origination Approved: 06/12/2014 - 10:53 AM

BASIC INFORMATION

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

COLLEGE SUPPLEMENTAL

Proposed Quarter of Implementation: NA ☑ Request Provisional Exception

The district stated that this class will be first offered Summer Quarter 2014 to make the third quarter of the calculus sequence comply with the Common Course Numbering System.

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 sequences, Taylor series, vectors, vector-valued functions, multivariable calculus, partial differentiation, and double integrals. 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& 152 with a 2.0 or higher.

Student Learning Outcomes:

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

Program Outcomes:

SLO #	Included in Course Objective Number	SSCC Student Learning Outcomes
SLO 1.1		Communication - Read and listen actively to learn and communicat
SLO 1.2		Communication - Speak and write effectively for academic and care
SLO 2.1	1 - 10	Computation - Use arithmetic and other basic mathematical operati by program of study.
SLO 2.2	1 - 10	Computation - Apply quantitative skills for academic and career pur
SLO 3.1		Human Relations - Use social skills to work in groups effectively.
SLO 3.2		Human Relations – Have knowledge of the diverse cultures represe multicultural society.
SLO 4.1	1 - 10	Critical Thinking—Think critically in evaluating information, solving p making decisions.
SLO 5.1	1 - 10	Technology - Select and use appropriate technological tools for aca tasks.
SLO 6.1		Personal Responsibility – Uphold the highest standards of academic integrity.
SLO 6.2		Personal Responsibility – Respect the rights of others in the classro all other school activities.
SLO 6.3		Personal Responsibility – Attend class regularly, complete assignme effectively participate in classroom and online discussions, group w class-related projects and activities.
SLO 6.4		Personal Responsibility – Abide by appropriate safety rules in labora classrooms.
SLO 7.1		Information Literacy—Independently access, evaluate, and select in variety of appropriate sources.
SLO 7.2		Information Literacy – Have knowledge about legal and ethical issu use of information
SLO 7.3		Information Literacy - Use information effectively and ethically for a

Course Outcomes / Objectives:

A student who successfully completes this course should be able to:

1. Sketch a curve given by parametric or polar equations.
2. Use techniques of calculus with parametric equations to find the tangent to a curve and the length of a curve.
3. Find the Taylor series for a function.
4. Use vector methods to analyze plane and space curves, and curvilinear motion.
5. Solve problems related to vectors and vector-valued functions.
6. Determine the equation of a line and a plane.
7. Find the partial derivatives of a function of several variables.
8. Find the equation of the tangent plane and normal line to a surface at a point.

9. Find the absolute extrema of a function of several variables.
10. Evaluate double integrals as iterated integrals.

Explain the student demand for the course and potential enrollment:

This course is offered five times a year at South.

Explain why this course is being created:

The material covered in our third quarter of calculus fits better the course content for Math & 163 than the number that has been used, Math& 153. The state board has requested that we change the number of our class 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:

Rick A Downs	*Rick A Downs*	6/5/2014
Print Name	**Signature**	**Date**

Dean:

Laura Kingston	*Laura Kingston*	5/30/2014
Print Name	**Signature**	**Date**

Results of SSCC Curriculum Coordinating Council Findings

Participating Faculty Response and Remarks

[X] Recommended for approval

[ ] Not recommended for approval

Chairman, Curriculum Coordinating Council:

Diane Schmidt	*Diane Schmidt*	6/12/2014
Print Name	**Signature**	**Date**

Vice President for Instruction:

Donna Miller-Parker	*Donna Miller-Parker*	6/12/2014
Print Name	**Signature**	**Date**