MATH&141 - Precalculus I

Document Type: Master Course Outline Supplemental
Proposal Type: Revision
Requester(s): Rick A Downs
College: South
Origination Approved: 06/12/2014 - 10:50 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
Bryan Johns

COLLEGE SUPPLEMENTAL

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

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:
Introduction to functions: Polynomial, rational, exponential and logarithmic functions; related functional and algebraic topics; systems of equations; sequences; and analytic geometry in two dimensions. Section 70: online fee, read https://sites.google.com/a/southseattle.edu/onilne/welcome-letter and contact course instructor.

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 comm
SLO 1.2		Communication - Speak and write effectively for academic a purposes.
SLO 2.1	1 - 13	Computation - Use arithmetic and other basic mathematical required by program of study.
SLO 2.2	1 - 13	Computation - Apply quantitative skills for academic and car
SLO 3.1		Human Relations - Use social skills to work in groups effecti
SLO 3.2		Human Relations – Have knowledge of the diverse cultures r our multicultural society.
SLO 4.1	1 - 13	Critical Thinking—Think critically in evaluating information, s problems, and making decisions.
SLO 5.1	1 - 13	Technology - Select and use appropriate technological tools and career tasks.
SLO 6.1		Personal Responsibility – Uphold the highest standards of ac honesty and integrity.
SLO 6.2		Personal Responsibility – Respect the rights of others in the online, and in all other school activities.
SLO 6.3		Personal Responsibility – Attend class regularly, complete as time, and effectively participate in classroom and online disc work, and other class-related projects and activities.
SLO 6.4		Personal Responsibility – Abide by appropriate safety rules ir shops, and classrooms.
SLO 7.1		Information Literacy—Independently access, evaluate, and s information from a variety of appropriate sources.
SLO 7.2		Information Literacy – Have knowledge about legal and ethi related to the use of information
SLO 7.3		Information Literacy - Use information effectively and ethica specific purpose.

Course Outcomes / Objectives:

Upon completion of this course a student should be able to:

1. Represent functions verbally, numerically, graphically and algebraically.

2. Sketch graphs using the appropriate transformations for: polynomial functions (linear, quadratic, followed by those with degree three and higher), exponential and logarithmic functions, rational functions, and conic sections.
3. Use function notation to evaluate expressions and perform operations on functions such as addition, subtraction, multiplication, division, and composition of functions. Be able to find the domain of functions.
4. Analyze the algebraic structure and graph of a function, including those listed in (2), to determine intercepts, domain, range, intervals on which the function is increasing, decreasing or constant, the vertex of a quadratic function, asymptotes, whether the function is one-to-one, whether the graph has symmetry (even/odd), etc.
5. Use the Remainder and Factor Theorems to find the zeros of polynomial functions.
6. Find the inverse of one-to-one functions.
7. Solve exponential and logarithmic equations.
8. Solve systems of equations, both linear and non-linear.
9. Write the terms in a sequence given the general term or a recursive formula.
10. Write a series in summation notation.
11. Identify and express the general term of arithmetic and geometric sequences, and find the sum of arithmetic and geometric series.
12. Use functions, including those listed in (2), to solve a variety of real-world application problems.
13. Know when and how to use technology, such as graphing calculators, to accomplish the above objectives.

Explain the student demand for the course and potential enrollment:

There are about 7 sections of the class offered each year.

Explain why this course is being revised:

This revision is just an updating of the syllabus. The course has been taught for many years.

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

There are no challenges in offering this course.

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*	6/4/2014
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**