BASIC INFORMATION

Requester(s): Ravi Gandham
College: South Seattle Community College
Division/Dept: Academic Programs
Dean: Laura Kingston
Peer Reviewer(s): Loc H Nguyen
Michael Steffancin

COLLEGE SUPPLEMENTAL

Proposed Quarter of Implementation: Winter 2015
Request Provisional Exception

Class Capacity: 25

Modes of Delivery: (Check all that apply)
☑ Fully On Campus
☑ Fully Online
☑ Hybrid
☐ Other
Explaination:

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

Class Schedule Description:
Advanced concepts of modern programming that continue the ideas introduced in CSC 142. Topics include classes and interfaces, inheritance, graphics, exceptions, stream I/O, recursion, analysis of algorithms, and some dynamic structures (lists, stacks, trees). Uses the Java programming language. Prereq: CSC 142 with 2.0 or better. Computer fee. Transfer class.

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

Program Outcomes:

<table>
<thead>
<tr>
<th>SLO #</th>
<th>Included in Course Objective Number</th>
<th>SSCC Student Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLO 1.1</td>
<td>1</td>
<td>Communication - Read and listen actively to learn and communicate.</td>
</tr>
<tr>
<td>SLO 1.2</td>
<td></td>
<td>Communication - Speak and write effectively for academic and career purposes.</td>
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<tr>
<td>SLO 2.1</td>
<td>2</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>2</td>
<td>Computation - Apply quantitative skills for academic and career purposes.</td>
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<tr>
<td>SLO 3.1</td>
<td></td>
<td>Human Relations - Use social skills to work in groups effectively.</td>
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<tr>
<td>SLO 3.2</td>
<td></td>
<td>Human Relations – Have knowledge of the diverse cultures represented in our multicultural society.</td>
</tr>
<tr>
<td>SLO 4.1</td>
<td>3, 5, 6</td>
<td>Critical Thinking—Think critically in evaluating information, solving problems, and making decisions.</td>
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<tr>
<td>SLO 5.1</td>
<td>4</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></td>
<td>Personal Responsibility – Uphold the highest standards of academic honesty and integrity.</td>
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<tr>
<td>SLO 6.2</td>
<td></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>6</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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<tr>
<td>SLO 6.4</td>
<td></td>
<td>Personal Responsibility – Abide by appropriate safety rules in laboratories, shops, and classrooms.</td>
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<tr>
<td>SLO 7.1</td>
<td></td>
<td>Information Literacy—Independently access, evaluate, and select</td>
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<tr>
<td>SLO 7.2</td>
<td>Information Literacy – Have knowledge about legal and ethical issues related to the use of information</td>
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</tr>
<tr>
<td>SLO 7.3</td>
<td>Information Literacy - Use information effectively and ethically for a specific purpose</td>
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</table>

**Course Outcomes / Objectives:**

Upon successful completion of this course, the student will be able to demonstrate the following:

1. Application of programming concepts to mathematics, modeling, and a broad range of other subjects.
2. The ability to write programs using Java and the object-oriented design paradigm.
3. Proficiency in using modern programming techniques and methods with a focus on analysis and design, as well as common design patterns.
4. Ability to design appropriate class hierarchies for specific problems.
5. Proficiency in writing advanced programs using Java by utilizing the Java2D API, in-depth class design guidelines, exceptions and associated error handling, files, streams, and simple data structures.
6. Application of these principles in the development non-trivial software systems.

**Explain the student demand for the course and potential enrollment:**

Offering this course as a hybrid and fully online offers students with a busy schedule the flexibility to work on the class when they have time. It also gives them the opportunity to complete applied programming work online and develop an online community. The face to face component of the course, in a hybrid mode, allows for focused instruction and student engagement.

This course has been traditionally offered as a 50 minute daily course, which limits in-depth discussions and problem solving. Moving the course to hybrid and fully online gives time for sustained instruction, collaboration (e.g. discussion forum) and problem solving (homework, etc.).

**Explain why this course is being revised:**

In part, this course is being revised to update course objectives with South's new SLOs and align prerequisites with the other CSC 143 courses in the district.

The change of mode revision is to offer this class as a hybrid and online course. The other courses in the series (CSC 110, CSC 142) will also be offered as hybrid and/or online. The curriculum of learning and practicing programming lends itself naturally to online instruction.

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

Currently, Canvas is used to enhance the face to face course; homework, instruction, resources, etc. are integral to course delivery in Canvas. Offering the course hybrid or online is a natural approach for a computer programming course. Also, this course is taught at other institutions (e.g. SCCC, NSCC, Bellevue College, etc.) in all modes. Students taking CSC courses have come to expect they will be taught using an LMS and the course will be offered as a hybrid and/or online 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:

Ravi Gandham  
Print Name:  
Signature: 
Date: 1/1/0001

Dean:

Mark D Baumann (Admin)  
Print Name:  
Signature: 
Date: 3/11/2014

Results of SSCC Curriculum Coordinating Council Findings

Participating Faculty Response and Remarks

☑ Recommended for approval

☐ Not recommended for approval

Chairman, Curriculum Coordinating Council:

Diane Schmidt  
Print Name:  
Signature: 
Date: 5/13/2014

Vice President for Instruction:

Donna Miller-Parker  
Print Name:  
Signature: 
Date: 5/15/2014