SBST489 - Sustainable Building Science Technology Capstone

Document Type: District Master Course Outline
Proposal Type: New Course
Requester(s): David Krull
College: South
Origination Approved: 02/27/2014 - 1:56 PM

BASIC INFORMATION
Requester(s): David Krull
College: South Seattle Community College
Division/Dept: Professional Technical
Dean: Holly Moore

COURSE INFORMATION
Proposed Course Number:
Prefix: SBST  Number: 489
☐ Request a new Prefix
☐ This will be a common course

Full Title: Sustainable Building Science Technology Capstone
Abbreviated Title: SBST Capstone Course

Catalog Course Description:
This project-based course will be offered during the student's last quarter of study and will draw on all previous classes and internship experiences.

Course Length: 11 Weeks  ☐ Request an Exception

Course Prerequisite(s):
Student must be enrolled in the BAS Sustainable Building Science Technology program or have instructor approval.

Topical Outline:
1. Course Overview (1)
2. Review program outcomes (3)
3. Review student learning outcomes (3)
4. Develop Resume/Curriculum Vita (3)
5. Evaluate program (1)

COURSE CODING
Funding Source: 1...................State
Institutional Intent: 21.................Vocational Preparatory
This Course is a requirement for the following program(s):
(No Programs Selected)

☑ My Course Proposal is a requirement for a program not on this list
Program Title/Description/Notes:
BAS Sustainable Building Science Technology program

Will this course transfer to a 4-year university?  No

Is this course designed for Limited English Proficiency?  No
Is this course designed for Academic Disadvantaged?  No
Does this course have a Workplace Training component?  Yes

CIP Code: 03.0198
EPC Code: 177

Credits:
Will this course be offered as Variable Credit?  No

List Course Contact Hours
Lecture (11 Contact Hours : 1 Credit)  11
Lab (22 Contact Hours : 1 Credit)  0
Clinical Work (33 Contact Hours : 1 Credit)  0
Other (55 Contact Hours : 1 Credit)  0

Total Contact Hours  11
Total Credits  1

COLLEGE SUPPLEMENTAL
Proposed Quarter of Implementation: Fall 2014

Class Capacity: 25

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

Class Schedule Description:
This project-based course will be offered during the student's last quarter of study and will draw on all previous classes and internship experiences.

Student Learning Outcomes:
Communication
Read and listen actively to learn and communicate
Speak and write effectively for academic, and career purposes

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

Human Relations
Use social interactive skills to work in groups effectively
Have knowledge of the diverse cultures represented in our multicultural society

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
Abide by appropriate safety rules in laboratories, shops and classroom

Information Literacy
Independently access, evaluate and select information from a variety of appropriate sources
Have knowledge about legal and ethical issues related to the use of information
Use information effectively and ethically for a specific purpose

Program Outcomes:
1. Understand operations and systems of buildings
2. Analyze building data to define and validate solutions
3. Deliver sustainable solutions from analysis
4. Communicate sustainable building practices
5. Perform management functions
6. Build functional workgroups
7. Solve problems through analysis  
8. Understand cost analysis and life cycle costs  
9. Understand building system interaction  
10. Understand building profiles and areas for improvement  
11. Understand codes and standards for construction of sustainable buildings  
12. Understand the process of quality construction and a safe work environment  
13. Demonstrate knowledge of building science principles  
14. Prepare project budget, cost estimate and cost benefit analysis  
15. Learn to adapt new technologies  
16. Create and maintain a professional environment  
17. Use data to make fact based decisions  

**Course Outcomes / Objectives:**

The student will:

1. Develop a final project report that describes how all program outcomes and student learning outcomes have been achieved and how they will be applied in future endeavors.  
2. Evaluate the SBST program and program outcomes.  
3. Create a curriculum vita.  

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

Course required for BAS Sustainable Building Science Technology program. All students will be enrolling in the course as a cohort. Course to be offered one time per academic year.  

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

- Employer demand  
- Student demand  
- Options for place-bound students  

The SBST BAS degree program will address a critical gap in the current education system that has developed as this industry has evolved over the past five to 10 years. Traditional engineering, construction and architectural studies focus on the design of new buildings, rather than the complex and sophisticated systems that enable newly designed and retrofitted buildings to function. Individuals previously trained as facility managers do not have the level of expertise or systems knowledge to support these highly technical operations. Therefore, businesses are hiring engineers and spending months and even years retraining them to work in this capacity. Frequently these individuals do not want this type of work and leave when other more suitable opportunities present themselves. Individuals who choose to pursue a degree in the field of Sustainable Building Science Technology will not only have the specialized skills they need; they will be more stable employees.
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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<td>David Krull</td>
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Dean:

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<td>Holly Moore</td>
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Results of SSCC Curriculum Coordinating Council Findings

Participating Faculty Response and Remarks

☐ Recommended for approval
☐ Not recommended for approval
☒ This course has not yet reached Committee Review

Chairman, Curriculum Coordinating Council:

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Vice President for Instruction:

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<td>Gary L. Oertli</td>
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