

COLLEGE OF ENGINEERING Electrical Engineering & Computer Science

## Building a Computer Science B.S. Degree Program Online for Post-Baccalaureate Students

# **Development Process**

# Building a Computer Science Online Degree Program

### Development



## **Program Vision**



Terri Fiez talks about dividing the tasks delivering classes online: experienced faculty would create the lectures for the online classes, and new instructors would be hired to oversee and facilitate the delivery of the classes (see video).

# Collaboration with Ecampus

<u>OSU's Ecampus</u> accepted our proposal and became collaborators for the program. During the development stages Ecampus regularly met with the EECS committee to discuss logistics such as how to handle student inquiries, setting tuition costs, and the specifics of their support.

- Startup Support
  - \$15,000 for each of the 15 courses developed → equivalent to one course buyout for each faculty member
  - Support for a full time advisor for the first year (\$45,000)
  - Initial support for teaching assistants since each course has weekly lab experiences (\$80,000)
- Ongoing Support
  - Working with the faculty on the technical aspects of creating the courses.
  - Help with branding and marketing.
  - Handling initial student questions.

### Start-up Plan

- Target enrollment for first quarter at 100
- Offer four courses the first quarter
- Add four new courses each quarter

# Involving Faculty

The program was structured so that experienced faculty who teach the same courses on campus would design the online courses. This included recording all lectures and developing the homework and exams. However, the courses would be facilitated by different instructors who would deal directly with the students and would be responsible for posting the coursework and grading, with help from teaching assistants.

- Faculty were recruited for developing courses over the summer, and were compensated by overload pay or release time.
- Weekly meetings with the faculty were held to:
  - Develop the program vision and character and discuss how it can be integrated into the courses, such as how to add a human touch or how to incorporate personalized learning.
  - Make decisions on equipment for developing courses (e.g., tablets and Camtasia for recording lectures).
  - Decide on class specifics for consistency across classes such as how many tests to require.
  - Create a resources page for students.
  - Guide and assist faculty through course development.
  - Troubleshoot issues: how to submit math homework, the pros and cons of using a question bank for exams, how to teach debugging, choosing a mechanism for group work such as peer programing, policies on sharing code and academic dishonesty.

## Admission Dogui

- Admission Requirements
  - A bachelor's degree (B.A. or B.S.)
  - College algebra (Math 111) or above such as pre-calculus or calculus with a C grade or higher.
  - 2.25 accumulated GPA requirements. The GPA is computed on the first baccalaureate degree plus any subsequent credit earned.

### Electrical Engineering & Computer Science

## **Organizational Chart**

### VISION & STRATEGY

#### Program Leader

Guides the strategy and direction of the program and mentors the program faculty and staff. Lead Makes decisions on student and academic issues and mentors the program faculty and staff.

Faculty

#### Course Faculty

Design the courses and records the lectures for the online program.

### INSTRUCTIONAL LEADERSHIP

#### Instructional Lead

Facilitates innovations for online teaching.

#### Class Instructors

Work directly with students and facilitate the online classes.

#### Teaching Assistants

Assist the class instructors with grading and answering student auestions.

### PROGRAM & STUDENT SUCCESS

#### Program Manager Creates and facilitates

systems to improve the

quality of the program.

Advisor

Guides students through the program from admission to graduation.

#### Admissions Advisor

Makes admission decisions and advises current students.

### Oregon State

## Creating Course Content

- Faculty worked with Ecampus on the technical aspects of creating online lectures.
  - <u>Camtasia Studio</u> and <u>Adobe Presenter</u> were the two software options for screen recording and video editing.
  - Lecture examples (click to view 3 minute clips): <u>Analysis of Algorithms</u>, <u>Software Engineering I</u>, <u>Introduction to</u> <u>Computer Networks</u>, <u>Mobile and Cloud Software Development</u>
- Personal touches, such as faculty introductions were included in the lectures.



• Created videos with industry representatives to add relevance to course content.



Mark Wyman discusses what skills McAfee looks for in new hires, and how OSU's program provides applicable training.

View industry video

View introduction example

## Ecampus Marketing

- \$10,000 yearly marketing budget to reach a target enrollment of 750 students
- Future marketing plans:
  - Enhance Ecampus website.
  - Host a webinar with prospective students.
  - Online ad campaign including search campaign, display ad campaign, and video ad campaign.
  - Feature student and faculty stories.

# Ramping up

- First four courses (lectures and materials) due to Ecampus.
- The high volume of calls from prospective students became challenging for the program staff to respond to.
- Program advisor hired relieving pressure on staff to answer student questions.
- TAs hired.