

Chapter 4

Reengineering an Introductory Computer Education Course for Undergraduate Students

Farhat (Meena) J. Lakhavani
Carnegie Mellon University, USA

April Rupp
Carnegie Mellon University, USA

EXECUTIVE SUMMARY

Computing@Carnegie Mellon (C@CM), a required 3-unit course for all incoming Carnegie Mellon undergraduate students, went through total reengineering during 2010. The content, the delivery method, and the support model for this course were all changed simultaneously. The objective of this case study is to share experiences in reengineering this introductory computer education course, including experiences with reengineering the content, the delivery method, and the support model in a rapid rollout mode. Specifically, this case study will discuss lessons learned and speculate on the next step for future academic years based on the successes and challenges in teaching this reengineered course to 1,683 students during the 2010-2011 academic year.

DOI: 10.4018/978-1-4666-2214-2.ch004

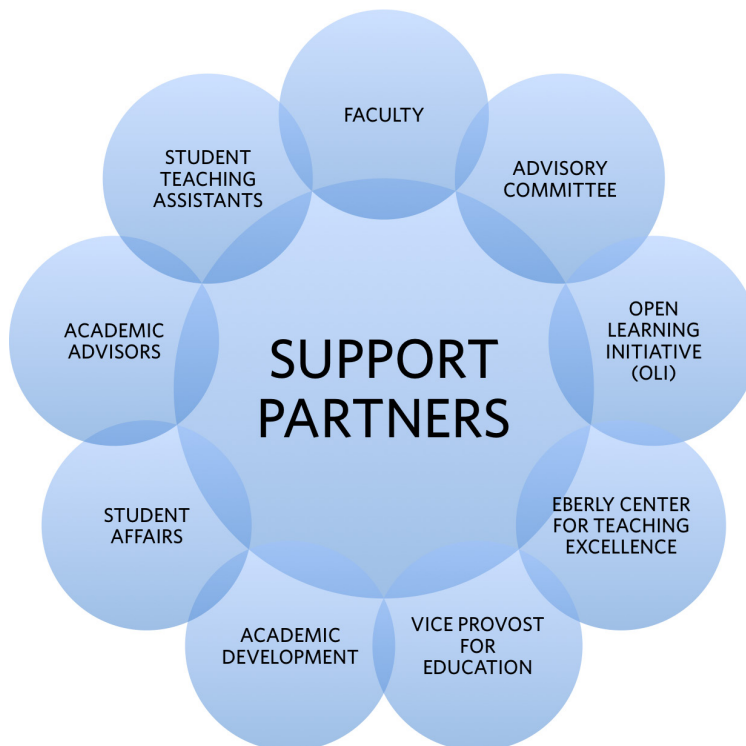
Copyright ©2013, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.

ORGANIZATION BACKGROUND

Carnegie Mellon has been teaching all undergraduate students essential computing skills for more than 22 years. Along with the content, the name of the course evolved from “Computing Skill Workshop” to Computing@Carnegie Mellon (C@CM). C@CM is a required 3-unit course for all incoming undergraduate students. C@CM teaches essential skills for making efficient, responsible, and safe use of electronic resources and effectively finding and evaluating information at CMU. Previously, trained undergraduate student instructors delivered C@CM in the computer labs on both Window and Macintosh computers. Over the last year, C@CM has transitioned to a hybrid course utilizing the Open Learning Initiative (OLI) online environment along with recitation sessions in the computer labs. This course is developed and supported in collaboration with our campus partners across campus (see Figure 1).

Students take this course from all colleges and disciplines, including the School of Computer Science, the College of Fine Arts, the Tepper School of Business, the Dietrich College of Humanities and Social Sciences, and the Mellon College of Sciences.

Figure 1. Support partners



14 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/reengineering-introductory-computer-education-course/70335

Related Content

The Effectiveness of Breakout Rooms in Blended Learning: A Case Study in the Faculty of Engineering, Design, and Information Technology (EDICT) Degree at Bahrain Polytechnic

Fatema Ahmed Waliand Zahra Tammam (2024). *Embracing Cutting-Edge Technology in Modern Educational Settings* (pp. 69-92).

www.irma-international.org/chapter/the-effectiveness-of-breakout-rooms-in-blended-learning/336191

Evolutionary Mining of Rule Ensembles

Jorge Muruzábal (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 836-841).

www.irma-international.org/chapter/evolutionary-mining-rule-ensembles/10917

Feature Reduction for Support Vector Machines

Shouxian Chengand Frank Y. Shih (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 870-877).

www.irma-international.org/chapter/feature-reduction-support-vector-machines/10922

A Survey of Feature Selection Techniques

Barak Chizi, Lior Rokachand Oded Maimon (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1888-1895).

www.irma-international.org/chapter/survey-feature-selection-techniques/11077

Data Warehousing and Mining in Supply Chains

Richard Mathieu (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 586-591).

www.irma-international.org/chapter/data-warehousing-mining-supply-chains/10880