STRATEGIES FOR DEVELOPING A PRECALCULUS COURSE WITH WEB BASED ACTIVITIES
Jean Bevis, Georgia State University, USA; Margo Alexander, Georgia State University, USA; Draga Vidakovic, Georgia State University, USA

In the precalculus course under development, students have the option of accessing interactive web based materials in lieu of attending lectures. They also have the option of taking daily quizzes in class or over the web. When students complete their daily work, it keeps them involved in the course material in a regular and beneficial manner. When students do not complete their daily work, the easy accessibility of options, helps students to accept responsibility for their decisions. We also report on a successful strategy for the rapid development of this Web-based course.

A MODULARIZED COMPETENCY-BASED SCIENCE /MATH CURRICULUM FOR ASSOCIATE DEGREES IN INFORMATION TECHNOLOGY
Douglas Brown, NorthWest Center for Emerging Technologies / Bellevue Community College, USA; Arthur Goss, Bellevue Community College, USA

This session will present the Science & Math for Information Technology (SMIT) core curriculum developed through the NorthWest Center for Emerging Technologies at Bellevue Community College (Washington) and a selection of representative hands-on activities. Designed to provide an efficient and flexible tool for strengthening the analytical component of IT programs by infusing appropriate science and math learning experiences, it has several distinguishing features: Competency-based and linked to the nationally recognized, industry-based NWCEI IT Skill Standards, Individual units can be incorporated into existing IT courses or combined into stand-alone courses, Curricular goal is not topical coverage but for students to "learn how to learn science" and acquire a foundation for broadly applicable science/math-based analytical techniques, and Organized around team projects with a real world structure and format. They are inquiry-based but require a concrete deliverable outcome.

DIGITAL PHOTOGRAPHY FOR MATH AND SCIENCE
Catherine Cavanaugh, Ph.D., University of South Florida, USA; Terence Cavanaugh, Ph.D., University of South Florida, USA

Digital cameras have many advantages over film cameras for math and science education, and add a multimedia dimension to learning. Today's digital cameras offer a variety of features, and are as easy to use as film cameras without the expense of film processing. Digital images are available more rapidly than film images, allow unlimited low-cost duplication, and can be controlled and manipulated easily. Using a digital camera, students make personal meaning of documents, presentations, and electronic communications such as email and web pages. Math and science teaching and assessment are enhanced through electronic field trips, demonstrations and portfolios. Digital cameras enable students to visualize the mathematical and natural worlds in unique ways. Many cameras have panorama and limited audio/video capabilities. Most offer live or recorded video output, and can be used with special lenses, including microscopes and telescopes.

MATH AT MIDNIGHT: TEACHING AND LEARNING IMPLICATIONS
Faith Chao, Golden Gate University, US; Jim Davis, Golden Gate University, US; Peg McPartland, Golden Gate University, US; TJ Tabara, Golden Gate University, US

In this presentation we will discuss some of our course explorations that utilize the asynchronous features of the Internet together with its graphic capabilities to build web-based math courses at Golden Gate University. We will focus on the internet technology that gives students the flexibility to participate in classes at any time of the day and any day of the week and how this flexibility affects their expectations of the course. We will also discuss course design features and teaching strategies in order to motivate students to achieve understanding at a deep level for the varied learning styles of this new medium. The techniques utilized in a variety of math courses will be discussed along with student comments and our findings of learning outcomes.