


Increasing Quantitative Literacy Through the Mathematics Across the Community College Curriculum Project.

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*American Statistical Association National Meeting
Seattle, WA
August 2-5, 2006*

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

MAC³ supports faculty of all disciplines in creating curriculum that enhances the mathematical or quantitative literacy dimensions in their courses.

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is supported by:


- AMATYC is the lead institution.
- DE supported our first year.
- NSF will support all four years.


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If at first you should succeed, try not to look astonished!







Mathematics Across The Curriculum
at Dartmouth College



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Mathematics Across The Curriculum
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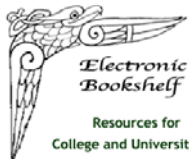


- Make mathematics welcome and even indispensable across the entire curriculum
- Motivate students to take mathematics seriously
- Broaden the diversity of those undergraduates enrolling in math or science courses
- Increase the ability of students to approach data in a mathematical manner
- Increase the ability and willingness of students to use mathematics they already know to facilitate their understanding of other subjects and to draw upon other subjects to improve their mathematics
- Stem the flow away from science and math of students with talent and ability
- Make the methods and materials designed to further these goals available, accessible and outright friendly to the broad national audience of faculty in undergraduate institutions


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The Center for Mathematics and Quantitative Education
at Dartmouth



Electronic Bookshelf
Resources for
College and University



The Little Bookshelf
in the Big Woods
Resources for
K-12 teachers

www.math.dartmouth.edu/~mqed
Consider Publishing Your Work!

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The Center for Mathematics and
Quantitative Education
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Curriculum with Statistical Applications (about a dozen)

- "Exercises in Data Analysis"
- Chance Database
- "Railways and Population Change in Industrializing England"
- "Factors Related to Wages in the Current Population Survey"
- "Introduction to Data Analysis: The Rules of Evidence"
- "Applets for Teaching Statistics"
- "Essay Writing for ESL Students"

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Past, Present & Future of

- 2000-2004 MAC
- 2005-2009 MAC³



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MAC became MAC³ in May, 2005

- **Directors**
 - Christie Gilliland - PI - Green River Community College
 - Deann Leoni - Co-PI - Edmonds Community College
 - Rebecca Hartzler - Co-PI - Seattle Central Community College
 - Patrick Bibby - Co-PI - Miami Dade College
 - Ruth Collins - Co-PI - Delaware Technical and Community College

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MAC³ Activities

- Curriculum Development Institutes
 - Summer Institutes in Washington (August 1-4, 2006, August 6-10, 2007)
 - Winter Institutes in Florida (January 12-15, 2007 in Miami, (Application Deadline is October 16, 2006))
- Presentations at Affiliate Meetings
- Project Information, Draft Curriculum and Faculty Resources at www.mac3.amatyc.org
- Traveling Workshops

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MAC³ projects can be large or small

- Projects within a Course
- Learning Communities
- Department Wide Projects
- Institution Wide Projects

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Projects within a course

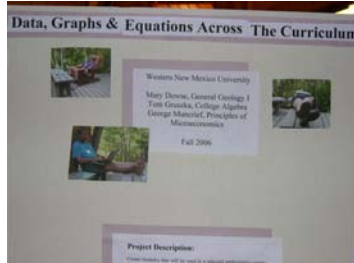
Single projects to enhance the mathematics & quantitative literacy

Examples for last week:

- Wake Technical Community College
 - Statistics & comparisons in psychology surveys
- Western New Mexico University
 - Data, Graphing & Mathematical Modeling in geology & business.

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Western New Mexico University



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Wake Technical Community College



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Learning Communities

Math & History in
Popular Culture
(Humanities 102)
Numeracy, descriptive
statistics, graphing of
trends



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Institution-wide project

- Miami Dade College's QEP Project
 - As part of accreditation Miami Dade College has instituted a college-wide MAC³ project which involves all campuses.
 - Miami Dade began their project by assessing what types of MAC³ projects would best fit their institutional structure and student needs.
 - Current projects include learning communities in art, art history, computer science, ESL, music, nursing, basic reading, study skills and writing

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www.mac3.amatyc.org/projects
(Draft materials)

Anthropology	Health
Art	Labor Studies
Art History	Marketing
Biology	Mathematics
Business	Music
Chemistry	Nursing
Computer Information Systems	Physics
Computer Science	Policy Studies
Developmental Math & Study Skills	Political Science
Economics	Social Services
English	Spanish
Environmental Science	Special Education
Ethnic Studies	Statistics & Data Analysis
Ethnomathematics	Urban Planning

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Evaluation

- Pre/Post Institute Questionnaires
- Post Institute Focus Groups
- Pre Faculty Surveys & Post Faculty Phone Interviews
- Pre/Post Student Attitude and Content Surveys

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Impact on Students

Pre/Post Survey

- Confidence
- Interest
- Math Awareness
- Interdisciplinary Learning
- Concept of Math

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MAC³ Institutes

(The application deadline for Winter January 12-15, 2007 is October 16, 2006.)

- The institute provides the needed time and assistance for faculty to create projects and assessments for their classroom.
- Participants may choose to create any size of curriculum, from one-day modules to entirely new courses that combine mathematics / quantitative reasoning and other disciplines.
- Participants are strongly encouraged to attend in interdisciplinary teams.
- The registration fee is \$100 (payable upon acceptance) and includes food and lodging (triple occupancy) for four days and three nights.
- Participants will receive a \$60/day stipend to develop curriculum during the four-day institute.

6 August 2006

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www.mac3.amatyc.org

See you soon!



6 August 2006

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