

**Minutes of the
Academic Committee on Mathematical Subjects
February 6-7, 2003**

The Academic Advisory Committee on Mathematical Subjects (ACMS) met on February 6 and February 7, 2003, at the Clarkston Campus of Georgia Perimeter College. The meeting began at 1:00 PM with a presentation, "Revising Georgia's P-14 Standards," by Dr. Judy Monsaas, Board of Regents Director of P-16 Assessment and Evaluation. She reviewed the process by which Georgia educators have developed broad-based content standards for pre-kindergarten through the second year of post-secondary studies in language arts, mathematics, science, and social studies. She gave an overview of the draft of the broad-based content and process skills standards and asked committee members not only to use the Department of Education website to give feedback (www.doe.k12.ga.us) but also to inform other mathematics faculty about the standards and encourage their feedback. She pointed out the feedback deadline of March 31, 2003, and explained that these broad-based standards will provide the framework for the development of P-12 grade- and course-specific learning objectives during the summer of 2003.

Dr. Monsaas' presentation was followed by time for meetings of Standing and Ad Hoc Subcommittees. ACMS then reconvened for reports and discussions related to the work of the Ad Hoc Subcommittees for Math 1101, 1111, and 1113. These committees were formed to begin work on the following charge, which was given to all the committees of the Academic Advisory Council in September 2002: "Although the University System has *Common Student Learning Outcomes for the Core Curriculum*, it does not have learning outcomes for the common courses that are taught in the core. We are asking each Academic Committee to review each core course for which it has responsibility, and to prepare a set of learning outcomes that are common to all institutions. In other words, what do you all agree are the intentions of the course(s)? What is it that all of you agree on that you want students to know and be able to do when they complete your core course(s)?" The Math 1101 Ad Hoc Committee presented a draft of Math 1101 Learning Outcomes; the Math 1111 Ad Hoc Committee, two alternative prototypes of possible content standards for Math 1111. The Math 1113 Ad Hoc Committee distributed a package of materials, including the Math 1113 outcomes from several individual institutions. In the discussion that followed, ACMS agreed that action on next steps would be taken at the business meeting on February 7.

Business Meeting

Chair Wayne Bosche of Dalton State College convened the business meeting at 8:30 A.M. on Friday, February 7.

Representatives and Visitors Attending

Georgia State University	Jean Bevis
Georgia Southern University	Lila Roberts
Valdosta State University	Ashok Kumar
Armstrong Atlantic State University	Jim Brawner
Augusta State University	Sam L. Robinson
Clayton College & State University	Catherine C. Aust

Georgia College & State University	Craig Turner
Kennesaw State University	Danny Lau
North Georgia College & State University	Ed Green
Southern Polytechnic State University	Steve Edwards
Abraham Baldwin Agricultural College	Joy Shurley
Atlanta Metropolitan College	Jack Morrell
Coastal Georgia Community College	Bob Balman
Dalton State College	Wayne Bosche
Dalton State College	Wyatt Cooper
Floyd College	Brent Griffin
Gainesville College	Beata Hebda
Georgia Perimeter College	Robby Williams
Gordon College	Allen G. Fuller
Macon State College	Steve Davis
South Georgia College	Charles Douglas
Waycross College	Jim Helms
Georgia Board of Regents	Kathleen Burk

Report from Dr. Kathleen Burk: The Chair recognized Dr. Burk, the liaison from the Board of Regents.

Dr. Burk distributed envelopes containing course grade distribution reports for the three courses Math 1101, Math 1111, and Math 1113 covering the period Summer 2000 through Spring 2001. Each institutional representative received reports for his or her institution, for all institutions in the sector of the institution, and for all state institutions. Dr. Burk explained that grade distributions were analyzed for several categories of students, that system mandated Learning Support students were designated by “DS,” and the institutional mandated Learning Support students were designated by “LS.” She noted that the reports show system-wide passing rates of 58% for Math 1101, 50% for Math 1111, and 54% for Math 1113, calculated separately for transfer students and students with no transfer history. She indicated that institutions should check the reports against known local data and examine the issue of whether they should have more students institutionally required to be Learning Support. She reminded the committee that there are alternatives for students who are institutionally required as Learning Support; for example, an institution could require a 2-semester-hour Learning Support course as corequisite to Math 1101 for these students. In answer to a question, Dr. Burk explained that students designated “Transfer Students” in the report are those who have transferred to the current institution college credit earned after the date of high school graduation.

Dr. Burk then reported on the discussion of the status of the Regents Quantitative Skills Test (RQST) from the meeting of University System of Georgia Presidents on January 16, 2003. Noting the uncertainty of funding for the test, she stated that a decision on whether there will be a test and, if so, what the test will cover, will be made during the current semester. She further explained that if there is a decision to require the test for graduation, implementation would be delayed to apply to those students who graduate in Summer 2004 or later. Dr. Burk observed that the system might decide not to require the test for graduation but make it available for institutions to use as an optional general education assessment. Dr. Burk has discussed possible uses of the test with the Vice Presidents for Academic Affairs of the two-year institutions. They

considered whether to keep all of the content categories of the present test. VPAA's of the two-year institutions like the current distribution with 50% of the content from Area A mathematics courses and 50% covering other quantitative skills. Dr. Burk then mentioned that system-sponsored development of content modules to address the other quantitative skill is a possibility; if developed, such modules could be used by biology, psychology, and sociology faculty to provide instruction in the skills within courses where they have application.

Dr. Burk then asked the ACMS to consider whether there is interest in having another core mathematics course to address the types of quantitative skills that have been identified in the development of the RQST. She said that each representative should have received the book *Mathematics and Democracy: The Case for Quantitative Literacy*, a publication of the National Council on Education and the Disciplines which presents some of the arguments for teaching quantitative reasoning skills, and she observed that there are a number of textbooks on quantitative literacy currently available. Several concerns were expressed when Dr. Burk asked committee members to give their opinions of such a course as an option in Area A for non-science majors. Robby Williams wondered whether a quantitative reasoning course might bring about the demise of Math 1101, and Jack Morrell observed that there is no national agreement about the content for a quantitative literacy course. Jim Brawner suggested that modifying the existing mathematical modeling course is a possible alternative to a new course. Dr. Burk stated that, if a quantitative reasoning course were added as an option in Area A, it would be an institutional decision of whether to have the course, but institutions would have to accept it for transfer. She also observed that issues related to Area D2 would also need to be resolved. If there is interest in developing this course, the next step would be to create a subcommittee of four or five interested mathematics faculty and use the topic list for the RQST as a starting point. There would be many steps before such course could go into effect, including approval by the Council on General Education. However, a course supported by ACMS and several institutions would likely receive favorable consideration by the Council.

Dr. Burk concluded her report by thanking those institutions that participated in the field test of the RQST and inviting examination field test results at the University System website or at www.gsu.edu/rqst. She also noted that the University System website has much information of interest: the Chancellor's budget address, legislative updates, and the Chancellor's State of the System address.

Minutes accepted: A motion to accept the minutes of the 2002 meeting as previously distributed was made, seconded, and approved by voice vote.

Elections for Executive Committee: Chair Bosche gave the Executive Committee's list of nominees for new members of the Executive Committee, noting that the Chair and Chair-elect move to Past-chair and Chair, respectively. These were approved unanimously to create the following 2003-2004 Executive Committee.

Wayne Bosche	Past-chair	Dalton State College
Cathie Aust	Chair	Clayton College & State University
Jim Brawner	Chair-elect	Armstrong Atlantic State University
Jean Bevis		Georgia State University
Lila Roberts		Georgia Southern University

Subcommittee Reports

Assessment/Computer Science Liaison: John Stroyls (CS Liaison), Alvina Johnson, Steven Davis, Jean Bevis. The subcommittee sent its usual survey asking for updates on assessment activities. Three institutions responded that there were no changes. Ed Green reported that, as a part of program review, North Georgia has revised their senior exit questionnaire to align with program assessment. Steve Davis indicated that members should contact him at sdavis@mail.maconstate.edu for information about Macon State's outcomes in mathematics for General Education program review.

Distance Learning: Richard Gibson (Chair), Beata Hebda, Barbara McClendon, Jack Yu. There was no formal subcommittee report, but a question about the process of approving eCore courses was raised. Jack Morrell asked if members of ACMS were comfortable with the current approval process for eCore mathematics courses or if ACMS wanted to endorse the eCore Math 1101, Math 1111, Math 1113, and Math 1501 which have been sent to the Council on General Education. There was consensus that the current approval process is satisfactory. Jack then asked that members look at the course outlines posted at the Advanced Learning Technologies SCOUT site and, if anyone has specific concerns, convey them to him by the end of February.

Faculty Development: Charles Douglas (Chair), Margaret Davis, Bruce Landman, Zephyrinus Okonkwo. Charles Douglas reported that announcements of faculty development activities should be sent to him at cdouglas@sga.edu for posting to the ACMS website. He noted that, in lieu of a program planned by ACMS, the meeting was occurring in conjunction with the annual Georgia Perimeter Mathematics Conference and that all were invited to participate in conference scheduled to begin at 1:00 P.M. on the Dunwoody campus of Georgia Perimeter College.

Mathematical Awareness: Dan Kannan (Chair), William Snyder, Allen Fuller, Michael Lacey. Allen Fuller stated that the committee had no report and suggested that the subcommittee be given a new charge to explore classroom activities to promote Mathematical Awareness Month; for example, they could develop a list of relevant websites.

Placement/Learning Support Liaison: Danny Lau (Chair), Ed Bolton, Ijaz Iwan, Lila Roberts. Danny Lau stated that within the next two weeks the subcommittee would send a request to each institution to provide information on mathematics placement procedures at the institution. There was a discussion about the experiment sponsored by the Board of Regents several years ago. Using a placement test from North Carolina thousands of high school juniors in Georgia were given feedback on what their placement would be if they were enrolling in college for the next fall. The high schools used the information to promote enrollment in appropriate math courses for the senior year. Kathleen Burk observed that this project is no longer underway but that development of a Georgia test which could be used in this way is something that could be considered in the future.

Course and Textbook Information: Robby Williams, Jim Helms, Craig Turner, Joy Shurley. (Jack Morrell hosts the spreadsheet of textbook information.) Robby Williams reported that the majority of institutions had already updated their textbook lists for this year and asked that the remaining institutions please submit any changes within the week.

Curriculum and Transfer of Credit: Jack Morrell (Chair), Cathie Aust, Jim Brawner, Sam Robinson. Jack Morrell reported on several items.

- University system strategic planning goals were discussed at the Council on General Education meeting in November. The Council encourages all institutions to pursue academic structures that promote interdisciplinary learning and urges two-year and four-year institutions to collaborate on curriculum as a whole as well as refinement of course objectives for common courses.
- In addressing the charge that all Academic Committees review the Area F for each program for which the Committee has responsibility, the current Area F and the charge were posted as a discussion topic at the ACMS WebCT site. Responses to the Discussion page indicated that no changes need to be made in Area F for Mathematics.
- Jack Morrell distributed data from a survey of Fall 2002 grades in Math 1101, Math 1111, and Math 1113, and indicated that complete survey information will be posted at the ACMS WebCT site. Individual institutions will not be identified, but data will distinguish between two-year and non-two-year institutions. The data will be posted in a spreadsheet so that readers can manipulate it to explore questions of interest.
- The survey also gathered information about the extent to which credit by exam is used for credit in Math 1101, 1111, and 1113. The results show few institutions award credit by exam in Math 1101, but about half the institutions do so in Math 1111 and about half do so in Math 1113 (but not the same list of institutions for both courses).
- Georgia College & State University requested ACMS endorsement of their proposal to offer a two course sequence integrating Precalculus and Calculus I. Craig Turner distributed an information sheet detailing the proposal, its rationale, possible textbooks, and a list of colleges in the United States already offering such a sequence. After a discussion of how transfer credit should be handled, Jack Morrell made the following motion as a recommendation from the Subcommittee. The motion passed by voice vote. It is intended to inform the Council on General Education which must approve GCSU's request.

Successful Motion: ACMS endorses the proposal of Georgia College & State University for the Math 1115 – Math 1116 course sequence and its placement in Areas A and D of their Core Curriculum. Students who transfer both courses in the sequence should be given credit for Math 1113 and Calculus I. Students who transfer Math 1115 only should be granted Area A credit for any non-math/science major, but are not guaranteed satisfaction of Area A for mathematics or science majors.

Craig Turner thanked ACMS on behalf of GCSU.

Math 1111 Ad Hoc: Ed Green (Chair), Robert Balman, Steven Davis, Sam Robinson. Ed Green asked that each representative respond at the ACMS WebCT site indicating whether the institution represented prefers Prototype A or Prototype B as presented during the report and discussion time on February 6.

Discussion of the status of the development of learning outcomes for Math 1101, 1111, and 1113 followed. The consensus of all present was that the Ad Hoc Committees had made a good start, but work needed to continue into next year with a goal of formulating learning outcomes that could be approved at next year's business meeting.

New Business

Jack Morrell made the following motion as a recommendation from the Transfer of Credit Subcommittee. It passed by voice vote.

Successful motion: In response to its charge, ACMS has examined the current Area F, acknowledges that it provides needed flexibility while maintaining standards for students majoring in mathematics, and recommends we retain the current Area F in mathematics.

Chair Wayne Bosche turned the committee's attention to the process of developing a course in Quantitative Reasoning since the discussion during Dr. Burk's report had indicated interest in doing so. He indicated that he would send an email to all members of the committee asking for volunteers to serve on a course development committee while Jean Bevis and he developed a process for course development. Ed Green expressed opposition to the development of a Quantitative Reasoning course because he felt that it would hinder the inclusion of Quantitative Skills modules in other courses across the curriculum. Kathleen Burk said that she suggested developing such a course because of the discussions that resulted from the development of the RQST. Jack Morrell suggested that course developers start with the University System Quantitative Reasoning objectives as well as the RQST test objectives. Wayne Bosché proposed that participants in course development need not be restricted to ACMS representatives. Jack Morrell then made the following motion; it was seconded by Jim Brawner and passed by voice vote.

Successful motion: ACMS will appoint a committee to develop a proposal for a Quantitative Reasoning course. Wayne Bosche will select committee members from interested volunteers (either ACMS representatives or faculty colleagues suggested by the representative) and charge them to report at the 2004 meeting of ACMS.

Jack Morrell raised the issue of the composition of the Executive Committee. When Academic Committees were first asked to have Executive Committees, ACMS resolved that the Executive Committee would include the Past-chair, Chair, Chair-elect, and additional members to insure that there was a member from each of the four sectors: research university, regional university, state university, and two-year college. He made a motion to change the descriptions of the types of institutions that must be represented on the Executive Committee. Jim Brawner seconded, and the motion passed by voice vote.

Successful motion: The slate of nominees for the incoming Executive Committee should include a person from a research university, one from a regional university, one from an institution that offers a Bachelor's degree in mathematics (other than a research or regional university), and one from an institution that has no Bachelor's degree in mathematics.

It was noted that the 2003-2004 Executive Committee meets the new requirements.

Kathleen Burk then stated that she assumed from the earlier discussion during her report that ACMS was against the RQST as a graduation requirement but supported further development of the test as an individual institutional option for general education assessment. No one disagreed with her statement.

Wayne Bosche raised the question of the site for next year's meeting and the issue of whether the committee wanted to continue to plan its meeting in conjunction with a mathematics conference sponsored by a system institution. After some discussion, Jim Brawner made and Ashok Kumar seconded the following motion which passed by voice vote.

Successful motion: For 2004, ACMS should schedule its meeting at South Georgia College on Thursday afternoon and Friday morning to coordinate with the annual Mathematics Technology Conference on Friday afternoon at Valdosta State University.

Several announcements were made.

- Cathie Aust announced that the Department of Mathematics at Clayton College & State University would soon join the Department of Information Technology in the recently named College of Information and Mathematical Sciences.
- Members were reminded to post and view informational items at the ACMS WebCT site.
- Members were reminded to comment on the revised P-14 revised standards by the March 31 deadline.
- Ashok Kumar invited participation in the annual Mathematics Technology Conference at Valdosta State University scheduled for Friday, February 28, from 2 to 6 PM.

Wayne Bosche thanked all the members for the work done this year, gave special thanks to Robby Williams for the superb local arrangements for the meeting, and adjourned the meeting.