Report for IMPAC Statewide Meeting, May 6, 2006
Mathematics
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Based on Minutes by
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[A list of the participants attending appears at the end of this report.]

Preface: Based in part on the recommendations from the 2004-2005 Mathematics IMPAC Report, most of the 2005-2006 Mathematics IMPAC Conferences are being held at local regional sites hosted by university mathematics departments at their campuses. Participants came from colleges and universities with relative proximity to each other within a local region. The agendas for those meetings were distributed and posted on line at the Math IMPAC web site:
http://www.humboldt.edu/~mef2/IMPAC/MATHIMPAC.html.
This report covers the final statewide conference held on May, 2006 at the Hotel Radisson at LAX.

After initial introductions time was available to discuss any current issues about articulation. One question was how community college courses about "proofs" would be treated by universities. The discussion connected these newly developed courses to similar issues for linear algebra and differential equations courses. Articulation would be on a case by case basis. When the University course is an upper division course, a waiver of the university requirement may be allowed at the discretion of the university math department. It was noted that proof courses are less well defined in their syllabus and so may not match well with a university course.

It was suggested that the appropriate connections be made when possible through the articulation officers for developing an explicit agreement. If that was not possible because the university course was an upper division course, that the university be kept well informed on the nature of the college course so that a content waiver might be given for the work done in the college course where no upper division credits could be awarded.

It was noted that this year had seen more local meetings. The participants thought these had worked well but could be improved by greater participation, especially from the community colleges.

The discussion then followed the announced agenda and suggested recommendations were discussed. Reported here are only those discussions that were not previously encountered at local meetings and those that lead to a final recommendation.

ASSIST Developments: Assist has recently placed a form on line to evaluate the web pages on exploring major preparation. The year long discussion of these web pages led to the adoption of the proposed recommendations:

1.1 The ASSIST Web Page: It is recommended that the ASSIST web resource on majors be redesigned to give easier and more direct access to University Mathematics Department Web resources. It is further recommended that ASSIST consult with an inter-segmental panel of mathematics faculty on improvements to the design.

The Math IMPAC Web Page: Those attending felt the IMPAC Math Web page presented much valuable information. There were some suggestions of other information or links that might be included in further expansion of this resource- including links to University Department web pages for colloquia and other University Math events. Professor Flashman suggested he would continue to maintain the web page for some time even if IMPAC was not funded, but that eventually the page might become outdated unless the links were made to resources that would be kept current- such as the CSU Math Department chair link.
The following recommendation was renewed from 2005:

1.2 The IMPAC Math Web Page: It is recommended that the IMPAC Math Web Page give access to a reference grid with relevant contact information for the use of faculty (and students) with regard to programs, articulation agreements, and special events.

Lower Division Transfer Pattern (LDTP) Project.
An agreement adopted by the CSU Mathematics departments now provides a transfer pattern for community college students planning to major in mathematics at one of the CSU campuses. The LDTP (now available on the web) for Mathematics specifies that transferring math majors will have completed three semesters or four quarters of calculus plus all areas of general education except for Physical Science. In addition, individual campuses have determined local requirements related to the major including specifically how to complete the Physical Science general education for that campus.

A student making an agreement with a single CSU campus and completing this pattern before transfer will be given a priority for admission to the CSU (unless the campus is impacted). These students will have satisfied most of the lower division GE and major requirements, allowing completion of work for a degree in mathematics to proceed with less difficulty within two years.

The replacement of CAN at the CSU. The CSU is in the process of replacing the CAN numbers used to identify courses statewide as generally comparable for articulation agreements with its own numbering system. CAN numbers used to describe Mathematics courses still exist and will continue to be used by the CSU until they are replaced with a CSU Common Number. Descriptors are being written for the LDTP courses to go with these new numbers. All current articulation agreements will remain in place until replaced in some way by agreements based on this new numbering system.

The Current CSU Course Number Plan: Five mathematics department chairs of the CSUs and one CC faculty member met in fall, 2005 to determine new course descriptors and course objectives. Seven course descriptors for math were sent to each campus with the instructions to send them to departments that would teach these classes or articulate them for discussion and approval.
They were: Calc-SV I, Calc SV II, Calc MV, ODE, Linear Algebra, ODE + LA, Prob & Stat.
Samples of these descriptors are available on the Math IMPAC web page, They include lengthy lists of recommended course topic coverage.

When there is 70% agreement on the descriptors, they will be adopted. This fall, 2006, a CC can then submit its course via OSCAR to a panel of CSU faculty who will decide to approve or not the course as an LDTP course. If approved the CC can then use the new CSU number. Initially there will be about 500 courses to review.

UC Transfer Major Preparation: A new fast track scheme for creating statewide articulation of courses is awaiting final approval. When a course is articulated with 4 UC's it will be automatically articulated with all UC campuses unless a campus specifically objects to the articulation.

Community College Common Numbering: The Community College Senate is trying to develop a new intersegmental common number system that would incorporate these new CSU Course Numbers in some way.

There was a common consensus preferring a unified intersegmental common numbering system.

2.1 LDTP CSU Common Course Numbering.
It is recommended that the community college faculty should be consulted, through IMPAC if possible, in the future development, and revision of course descriptions of any common course numbering system.

2.2 Unified Inter-Segmental Course Numbering
It is recommended that a single unified intersegmental course numbering system be developed consistent with numbering systems for the CSU and CCC.

2.3 Articulation: It is recommended that University recommendations for Transfer preparation (LDTP and UC transfer major preparation) be identified and described in catalog and web materials.

Math Intersegmental Community:

It was noted that this year's IMPAC meetings at Sacramento State and UC San Diego had continued the development of those campuse as hubs for continued intersegmental communications. Further developments in this direction seem possible for the SF Bay and Santa Cruz/Monterey areas while it appears that efforts will continue at UCSD and Sacramento State .
In light of the likelihood of the IMPAC project not being funded for 2006-2007, discussions on possible alternatives for continued communications included continued local initiatives and alternative venues provided by other organizations - such as the MAA and CMC[3].

1.3 Models for Intersegmental Community Building: It is recommended that individual Universities organize regional Intersegmental Mathematics Articulation conferences to facilitate the communication of relevant information about requirements and courses among proximate Universities and "feeder" colleges and to foster the development of University Hubs and greater Inter-university cooperation.

1.4 Intersegmental Math Councils:
When suitable, it is recommended that Regional Intersegmental Councils should be developed to sponsor intersegmental activities.

1.5 CMC[3] and CMC [3] South: Both CMC [3] and CMC [3] South are encouraged to become involved in developing future intersegmental math connections.

1.6 Alternative locations: That sessions for Intersegmental communication related to transfer be organized at least once at CMC [3] and CMC [3] -South Conferences.

Math Days: The endorsement this year by **CMC [3] and CMC [3]** South of the Math Days concept was reported along with the commitment of people from those organizations to work on these in the future. This Spring a first venture related to this concept was tried in connection with the MAA/NSF Undergraduate Math Conference held at Sonoma State with moderate success. Attendance by the community college students needs more attention in the future for these to be successful.
The consensus was that these efforts should continue and an effort should be made to have a southern version as well in 2006-7.

1.7 It is recommended that Math Day(s) for CC students be organized with the assistance and sponsorship of such organizations as CMC [3], CMC [3]-S with participation from CSU and UC departments encouraged. Coordination of these events with other Undergraduate Mathematics conferences should be encouraged.

University Model Web Page: At several local meetings it was suggested that a model trasnfer web page be developed to make it facilitate universities improving the transfer information on their web pages. Professor Flashman presented a template that Bob Hasson and he had organized. This was discussed and after some additions and revisions it was adopted in the recommendation.

1.8 Transfer Web Page : It is recommended that each University Mathematics Department develop a major transfer web page linked prominently on the department homepage. This page should contain information comparable to that included on the IMPAC developed Transfer Web Page template.

Attendance:

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