

INTRODUCTION

BACKGROUND

The Intersegmental Major Preparation Articulated Curriculum (IMPAC) project originated in the Intersegmental Committee of Statewide Academic Senates (ICAS) of the California Community College (CCC), University of California (UC), and California State University (CSU) systems. IMPAC is a unique faculty-designed, faculty-run project designed to assist the student transfer process from the community colleges to the UC and CSU systems for the baccalaureate degree. In June 2000, the Chancellor of the California Community College system awarded the first of five \$550,000 annual grants to fund the work of IMPAC.

GOALS AND PURPOSES OF THE PROJECT

IMPAC is expected to continue as long as articulation is needed among the higher education systems. The goal of IMPAC is for faculty in the disciplines, through regional and statewide meetings, to come to a common understanding of lower-division, major preparation that serve as prerequisites to upper-division work at UC and CSU campuses. Faculty review, revise and update prerequisite and lower-division course requirements for the major and seek to define the content areas, competencies, skills, and experiences transferring students must have to compete successfully at the upper division level. Resultant course descriptions will serve as the basis for articulation among UC, CSU, CCC and other institutions so that students may smoothly transfer in a manner that assures both full preparation and complete credit for courses completed. The goals of the IMPAC project include:

- ◆ Reaching intersegmental consensus on the required elements to be included in the lower division preparation for the major;

- ◆ Working with other intersegmental transfer efforts: the California Articulation Numbering (CAN) project, Articulation System Stimulating Inter-institutional Student Transfer (ASSIST), Intersegmental General Education Transfer Curriculum (IGETC), GE-Breadth/IGETC, the CSU Regional Core Alignment Project, and the community college organizations of counselors, articulation officers, and transfer center coordinators;
- ◆ Increasing transferability of students between system campuses and between the three higher education systems, and
- ◆ Decreasing the time to degree for students.

IMPAC also seeks to increase intersegmental faculty collaboration, strengthen the alignment of curriculum and the rigor of its delivery, build trust among faculty of the three segments, and better serve students whose education is a shared mission of both the sending and receiving institutions.

As a result of IMPAC, ICAS hopes to improve student transfer through increased awareness and involvement of faculty and ensure that all students are well prepared for upper-division work. Students should be able to avoid unnecessary course work prior to transfer, assure that all required courses are taken before transfer, and not have to repeat courses taken successfully at the community college in preparation for the major.

PROCESS

The IMPAC project over the next five years will create an effective infrastructure within and between academic disciplines. IMPAC has grouped the range of available transfer majors into five broad areas or “clusters” of disciplines. These five discipline areas are listed below. Each year additional disciplines will be added until all disciplines are included. These grouped clusters of disciplines generally reflect the overlap of prerequisites for a given major. Thus, in Science Cluster 1, students majoring in physics commonly will need pre-transfer work in mathematics to be eligible for the major. Biology majors need mathematics, as well as some chemistry and physics, to be successful as biology majors. Majors in Applied Sciences (Cluster 2) build upon the core courses of Cluster 2. Thus, the interdisciplinary discussions cross clusters as well as disciplines.

2000 Sciences (Cluster 1):

biology, chemistry, physics, and mathematics.

2001 Applied Sciences (Cluster 2):

agriculture, computer science, earth sciences, food science/nutrition, and nursing.

2002 Business and Government (Cluster 3):

computer information systems, criminal justice, business, economics, and political science. In addition, the Steering Committee has determined that the engineering and geography disciplines should commence discussions in year 2002.

2003 Social & Behavioral (Cluster 4):

anthropology, geography, history, psychology (including human development), and sociology.

2004 Language (Cluster 4):

English, ESL, foreign languages, communications/speech, and journalism.

2005 Arts & Humanities (Cluster 5):

art/fashion/interior design, theater arts, humanities, music, and philosophy.

To be considered prior to 2005, pending completion of CSU's internal review: teacher preparation/liberal studies.

In our pilot year, project participants came to understand that, to capture the full range of coursework needed for successful transfer, it is essential that we facilitate both discipline and cross discipline faculty dialogues. In fact, we have found that such interdisciplinary discussions can have immediate and lasting effect when faculty come to understand the reality and impact of given requirements on student transfer chances. For example, upon discussion and reflection, faculty from biology and mathematics concluded that the historical practice of requiring calculus-based physics for biology transfers is more tradition than necessity. The conversations between physics and biology can lead to a more flexible articulation of the algebra-based physics as appropriate for bioscience transfers. This outcome will be of immediate benefit to students, particularly those who want to transfer from smaller or more rural community colleges unable to offer such advanced courses on a regular basis.

For 2000-2001, ICAS, through its Steering Committee, identified lead faculty in each of the nine disciplines in the Science Cluster. Work began by these lead faculty on developing matrices showing major-preparation requirements at each UC and CSU and summarizing the courses offered in a given major at every community college. After review by the Steering Committee, these [major prep matrices](#) served as the basis for preparing [tables of course descriptions](#) using information from on-line catalogs. Work then began on determining the extent of articulation of major prep courses. Matrices for each UC and CSU for each major was constructed to show numbers for courses already articulated from each community college. Information from the state repository for articulation agreements, Articulation System Stimulating Interinstitutional Student Transfer (ASSIST), was used to create these [articulation matrices](#). Tables of course descriptions and the articulation matrices were put together by the staff of the Academic Senate for the California Community Colleges.

The next step in this process was to hold regional meetings (see Appendix A dates, locations, and

attendees). Lead Faculty members representing UC, CSU, and CCC facilitated these four regional meetings. Private colleges and universities were invited to attend as well. Articulation officers, as well as representatives from the CAN System and ASSIST, were present as resources. Also attending were observers from ICAS, from the three system offices, and graduate students at two universities who studied our project. Like the statewide meetings, regional meetings scheduled time for both disciplinary and interdisciplinary discussions. The discipline faculty began their discussion with an evaluation of the IMPAC matrices and descriptions and to review the status of their existing articulation, identifying potential new agreements that might be fostered. It is anticipated that these discipline-based faculty discussions will lead to increased curriculum alignment across all the segments.

The interdisciplinary discussions that follow later in the day remain essential in building cohesive and coherent programs in the major and in easing what are perceived by students and segments alike as barriers to effective transfer. From these interdisciplinary discussions have come significant recommendations and new understandings among disciplines and their faculty. As faculty from the applied sciences joined the discussions this year, they posed additional salient questions and requested instructional innovation from their science and mathematics colleagues; nursing faculty, for example, requested a revised curriculum in chemistry and biology for their nursing students who struggle under high-unit demands, imposed by external agencies.

Regional meetings are also designed to seek and secure several agreements among departments in the region. Commitments are sought from faculty at four-year institutions to notify community college faculty of impending curriculum changes and to collaborate on those changes to the extent feasible. When major preparation requirements are changed, receiving departments will be asked to establish a one-year period during which community college students will be accepted under previous requirements. Community

college faculty will in turn be expected to invite a representative from a four-year department to participate in the program review now required under the six-year accreditation cycle.

After each regional meeting is concluded, the Lead Discipline Faculty member prepared a report summarizing statements of the competencies and preparation expected of students entering upper-division work in the major. These reports are posted on the IMPAC website and widely circulated for comment by the field. Steering Committee members presented material and commentary for review to ICAS. ICAS then further disseminated those reports containing the core competencies and preparation for each discipline as determined thus far to affected faculty of UC, CSU and CCC, using Web site resources, professional organizations, and internal structures for distribution.

These feedback loops, as well as the alternating regional and state meetings, are extremely important steps in generating sufficient dialogue and building consensus among discipline faculty. The perceived legitimacy of the products is critical in securing widespread “buy in” by faculty across all the institutions.

Thus, over a five-year period, the essential understanding of pre-transfer, lower division, major preparation for each undergraduate major will have been forged by faculty across the segments. These understandings will be concretized in matrices and agreements. An infrastructure of discipline committees, agreements, and contacts will have been established. And the machinery will have been institutionalized for the absolutely essential ongoing review and cyclic renewal of those agreements. By linking these reviews to the ongoing work of articulation officers, using CAN to formalize these course descriptions, and publishing and maintaining the articulation agreements in the ASSIST database, these dynamic agreements about undergraduate major preparation will constitute a considerable advance for students negotiating transfer among the segments of higher education in California.