

**Baccalaureate Education
in the
California State University**

In fall 1995, the Academic Senate CSU began an examination of baccalaureate education in the CSU. The Senate's two-year study was informed initially by the results of a CSU academic conference in February 1996 where campus faculty and academic administrators, together with student and alumni/ae representatives, identified key topics upon which to focus. In fall 1996, Senate committees met in special sessions examining the effectiveness of baccalaureate education from the perspectives of students, parents, employers, alumni/ae, state policy makers, senior citizens, and the public in general. Following intense debates and a drafting process, further extensive consultation occurred with campus senates and faculty throughout the CSU, especially through special presentations and small group discussions at the February 1997 academic conference in Monterey attended by over 500 faculty leaders. Issues debated during the report's development included the needs of students, the changing environment of undergraduate instruction, assessment of learning, integration of technology into instruction, precollegiate instruction and remediation, and organizational changes associated with the new modes of education. The discussions of these topics informed participants in the Cornerstones project and its task forces as well.

The resulting Academic Senate report, *Baccalaureate Education in the California State University*, describes the Senate's vision of the baccalaureate for the graduates in the year 2005, although many aspects of the vision are already in place. The content of the report enunciates the purposes and scope of the baccalaureate degree. It is written to provide guidance to the Academic Senate, to the chancellor's staff and to campus senates and faculty as baccalaureate education evolves.

The report highlights the importance of:

- Better integration of general education and major coursework;
- Working with high schools and community colleges to assure students are prepared for baccalaureate education;
- Using varied methods of assessing student learning before, during, and at the end of the baccalaureate;
- Effective use of the new teaching approaches and of technology;
- Continuous assessment of the knowledge and skills needed by graduates; and
- Commitment to faculty who assure the diversity of CSU degree programs.

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November 1997

Baccalaureate Education in the California State University

Collegial authority and responsibility for the curriculum and the awarding of degrees resides with the faculty of the California State University. The Academic Senate CSU began a reexamination of baccalaureate education in fall 1995 and held a systemwide academic conference in February 1996 to identify issues for the review. Study of those issues proceeded during Senate meetings in fall 1996, and the issues being discussed were shared with CSU's faculty at a February 1997 academic conference in Monterey and with campus senates in March 1997.

What follows is the result of that review and the consultation with faculty throughout the CSU. Prominent among the ideas that emerged during the review were a call for a more thoughtful integration of general education and major requirements; clearer recognition of the importance of students' readiness for baccalaureate education and, hence, the need for improved articulation with high schools and community colleges; acknowledgment of the proper role of technology and new modes of instruction in baccalaureate education; appreciation of the importance of varied methods of assessing students before, during, and at the end of their baccalaureate education; and commitment to the diversity within the CSU, to its baccalaureate degree programs, and to the faculty who are the creators and guardians of baccalaureate education in the CSU. These proposals inform this report.

Our report is written to provide guidance to the ASCSU and to campus senates and faculty as baccalaureate education evolves. It describes our vision of the baccalaureate for graduates in the year 2005 although many aspects of the vision are already in place.

California State University is a system of 22 university campuses. CSU baccalaureate programs share a common structure, philosophy of undergraduate preparation, and general education framework. Diversity and individual strength, however, characterize our campuses and baccalaureate programs. The variety of teaching approaches among campuses keeps the CSU (and American higher education) vital and creative. Indeed, variety and innovation in programs, curricula, course content, and teaching styles are fundamental to the academic freedom necessary for continuous development and improvement of baccalaureate programs.

Diversity also characterizes our student body. Many of our students are resident at a campus, but many others commute, are older than traditional college students, and have families and careers. Many are part-time students. Most transfer from community colleges or other CSU campuses. Thus, the portability of academic credit from community colleges to the CSU and within the CSU is extremely important to them. Outside the academy, discussion has often focused on "years to degree." The important issue is not the years-to-degree or units-to-degree, but rather the knowledge and competencies that students derive from the baccalaureate experience and the quality of the education they receive. If evolving sets of knowledge and competencies integrate well with the needs of graduates and can be offered at high levels of quality through undergraduate degrees with time or unit requirements different from the traditional baccalaureate then appropriate adjustments can be made.

The Purposes of Baccalaureate Degrees

Baccalaureate programs in the CSU build upon the foundations established during elementary and secondary education, as well as other formal educational and significant life experiences. CSU undergraduate education engages each student in the development of advanced knowledge, skills, and understanding that are the mark of educated persons. Such an education is necessary for lifelong intellectual endeavor, for becoming productive members of society, and for participating in democratic institutions and civil society. Equally important, the baccalaureate provides opportunities to understand values and ethics and the role they play in the life of the individual and of society.

Higher education, besides providing society with "educated persons," remains the most effective agent for individual fulfillment and advancement, thus stimulating broad social change. A *public* university system is mindful of its roles in society and of its need to offer the opportunity and benefits of higher education on a fair basis to all who qualify.

Knowledge and skills for lifelong intellectual endeavor. CSU baccalaureate education provides graduates with the opportunity to develop the skills and acquire the breadth and depth of knowledge necessary to continue to learn throughout their lives. Graduates learn to locate, evaluate, analyze, synthesize, and create information. They are able to think critically, understand methods of inquiry, communicate their work effectively, and integrate and apply knowledge from various fields. They appreciate the arts and the importance of imagination and creativity. The educational process prepares them to respect intellectual and cultural perspectives different from their own and to engage in civil and informed discourse over such differences. Graduates are prepared to respond to and participate in change.

Knowledge and skills to participate in democratic decision-making and global civil society. CSU baccalaureate education prepares graduates to participate fully and responsibly in decision-making processes and in global civil society more generally. Graduates possess an understanding of democratic institutions and values, and understand their responsibility to their community. They possess a sense of self-awareness within a broader awareness of kinship with the human community in all its diversity. CSU graduates understand the nature of prejudice and discrimination and reject stereotypic thinking.

Knowledge and skills for productive members of society. CSU baccalaureate education provides graduates with the knowledge, skills, and social perspective necessary to succeed in their chosen careers or in advanced study. Graduates are prepared to accept responsibility, to work collaboratively with others, and to exercise initiative, creativity, leadership, and mature judgment. They understand the value of appropriate technology and are prepared for technological change. The baccalaureate recipient understands systems of merit and reward within a broader framework of ethics and social responsibility.

Systems of values and ethics for using knowledge and skills. CSU baccalaureate students examine systems of values and ethics relevant to their use of knowledge and skills. Through their baccalaureate studies and experience, students undergo a maturation resulting in a more developed understanding of values and ethics, a willingness to question personal and social norms, and a more reflective and universal perspective resulting in a sense of social responsibility.

Readiness for Baccalaureate Education

Academic programs leading to a baccalaureate degree build upon the knowledge and skills that students acquire during their elementary and secondary education. College entrance expectations are focused upon the determination of specific knowledge and competencies possessed by students rather than certifications of course completion, and are articulated in close collaboration with high school faculty. The development of knowledge and competencies must be addressed early and reinforced throughout the secondary education experience. Furthermore, each initial entrance competency is raised to a higher level throughout the breadth component of the baccalaureate curriculum.

Without altering CSU's commitment to admit the upper one-third of the state high school graduating class, entrance-level competencies for entering freshmen are determined in each of the following general areas. (These competencies include both subject matter and skill acquisition.)

- *English, comprehension and composition*
- *Mathematics*
- *Social science including history*
- *Natural and physical science including laboratory experiences*
- *A second language*
- *Visual and performing arts*
- *Knowledge acquisition skills including information management and critical thinking*
- *Computer application skills*

Intersegmental competency statements exist in English, mathematics, natural science, and several languages other than English. These statements are kept current and new statements will be developed, where appropriate. The standards embodied in the statements inform the curricular processes in secondary education. While college entrance-level competencies generally exceed the standards for high school graduation, there is a clear curricular relationship between the two. The need for remedial education among students otherwise eligible for college admission, although the result of varied and complex factors, justifies better integration of the content of secondary and higher education. It is important that CSU faculty collaborate with high school faculty in the development of competency assessment tools that encourage a high level of student achievement in the high schools.

The Scope of the Baccalaureate Degree

The scope of the baccalaureate encompasses **development of knowledge, skills, and values**. Baccalaureate degree recipients achieve a university-level competency in understanding concepts, in the acquisition of information and knowledge, and in assessing the central role theories play in determining which of the multitude of facts are significant to an inquiry. They perform tasks with a refined repertory of skills and qualities of mind, and have a heightened sensitivity to themselves, to others, and to the world around them.

Learning and education result from the synergistic melding of a wide variety of experiences that collectively constitute the content of a baccalaureate program. The specific set of experiences is never exactly the same for any two students, nor should it be. What is more important is the *process* of the baccalaureate and how the student learns, advances, and matures through that process.

Knowledge reaches beyond mere comprehension or acquisition of factual data or information to an awareness of its implications and meaning. The baccalaureate embraces and integrates both breadth and depth of knowledge.

Breadth of knowledge in the baccalaureate imparts an appreciation and broad understanding of human experience throughout the world including our cultural legacies, human accomplishment in such areas as the arts and technology, the advancement of human thought including philosophy and science, and the evolution of human institutions-economic, political, and social. Through the baccalaureate process, students experience and learn to appreciate bodies of knowledge including the creative and performing arts, the humanities, the sciences, and the social and behavioral sciences, in order to provide access to realms of creativity, imagination, and feeling that explore and enlarge the meaning of what it is to be human.

Students learn of their physical and biological environment including an appreciation of empiricism and experimentation, an understanding of cause and effect, and the ability to conceptualize physical and abstract systems.

Students gain a fundamental knowledge and historical consciousness of the human organism as a biological, psychological, and social entity. They understand how humans interact at both the interpersonal and broader social levels. They appreciate the roles that humans adopt in social systems. They have the ability to recognize and understand social structures and the ways in which humans are grouped by virtue of such characteristics as race, ethnicity, gender, sexual orientation, and social, political, or economic status. They also understand the implications of such groupings. Students develop an appreciation of global interdependence and multicultural experiences to break down prejudices and provincial visions and to open their eyes and minds to the diversity of cultures and experiences which define American society and the contemporary world. Thus, breadth provides graduates with knowledge, skills, and insights necessary for lifelong learning and for success as people

Depth of knowledge in the baccalaureate develops a seriousness and discipline of mind, through more advanced and focused inquiry, than is obtained through breadth programs. Rigorous, guided, and sustained inquiry, that is, disciplined study in one or more fields, yields knowledge and skills that augment general education while preparing students for specific careers or

advanced study. It requires sequential as well as non-sequential learning, sophisticated understanding, and creative and imaginative synthesis. Depth of knowledge cannot be an independent component of the curriculum, nor is it necessarily restricted to one academic discipline or field. Through study in depth, one gains an understanding of the interrelatedness of knowledge.

Study in depth teaches a student how to communicate and act based upon a reliable knowledge base so as to extend that knowledge base. Depth of knowledge includes a central core of method and theory that serves as an introduction to the explanatory power of a field of inquiry. Depth of knowledge imparts an understanding of a field's characteristic questions, its arguments and analytic tools which can serve as a basis for subsequent study and investigation, and the joy and self-confidence of mastery. It also teaches one to recognize the expertise, as well as the limitations, of oneself and others.

Skills involve the application of knowledge. Using critical thinking to make appropriate choices and decisions is a skill. Using statistical analysis to identify the variables or factors associated with a medical condition is a skill. Some skills are broad, having application in all fields, like communication skills and quantitative skills. Other skills are appropriate to specific disciplines or subdisciplines, like using a computer spreadsheet program for financial analysis or performing a qualitative analysis of a substance in a biochemistry lab. This discussion is concerned primarily with the skills having broad application.

Baccalaureate recipients possess advanced communication and literacy skills. They write, speak, read, listen and critically evaluate at a superior level. They recognize and deal with complexity, ambiguity, and uncertainty. They think logically, critically, and, where necessary, abstractly, in order to synthesize reasoned conclusions from information.

They are skilled in using various methods of inquiry: scientific, philosophical, problem-solving and artistic. They are able to identify relevant and adequate sources of information and are skilled in collecting information, both by reviewing secondary sources and by using empirical techniques to acquire data from primary sources. They are capable of objective observation, of discriminating between observation and inference, of formulating and testing hypotheses, and of drawing appropriate theoretical conclusions.

They are able to analyze and evaluate both quantitative and qualitative data to obtain meaningful information. They can integrate knowledge obtained from different sources and disciplines to create new knowledge and wisdom. Their experience with academic discourse involves advancing and defending assertions, and challenging the assertions of others. These skills are augmented by a recognition of the limits of empiricism, a willingness to engage creative risk-taking, and an ability to understand the societal context of the processes of inquiry.

Values include the attitudes and ethical positions that individuals develop. While it is not possible or appropriate for the academy to determine or develop the full range of values and character attributes that its students possess, the baccalaureate process teaches students the importance of objective inquiry, tolerance, respect for diversity, open-mindedness, integrity, and intellectual honesty. These values combined with flexibility of mind and attitude, intellectual curiosity, and an appreciation for learning, contribute to the ability of the individual to cope with, use, and influence change.

Baccalaureate graduates are able to make critical and reflective value choices, to understand one's role in the moral order, and to understand the values and ethics of a democratic society and the responsibilities of citizenship. They are aware of the existence of differing systems of values. Graduates also develop a social and environmental consciousness and compassion. Through well-designed educational experiences, the process of a baccalaureate education develops character attributes such as the willingness, when appropriate, to accept individual responsibility and leadership and to work collaboratively. The overall educational process instills a sense of personal awareness, self-worth, self-confidence, and empowerment.

Relation Between Breadth and Depth

The combination of elements of breadth and depth is regarded as a hallmark of American higher education. Most breadth elements in the baccalaureate curriculum are no longer prerequisite to or separate from the major. Study in depth extends logically and complements breadth of study. Majors use the foundations provided by breadth, and build upon those foundations. Students are able to see easily the connections between the breadth and depth in their baccalaureate curriculum.

Breadth develops a core of knowledge that characterizes a baccalaureate graduate. Depth of knowledge and a mastery of specialized skills prepare students for employment, advanced study, and lifelong learning. Both are equally important. Each reinforces the other. Both create a sense of self-awareness, self-respect, and accomplishment. The actual structure of both comes from the best judgment of the faculty taking into account the availability of resources, the prior preparation of students, accrediting requirements, and the needs of society. Breadth and depth progress in tandem leading to a capstone experience that integrates elements of both.

A sound and demanding *general education* program implements the primary breadth requirements of the CSU baccalaureate. When programs of study are planned so that breadth and depth are integrated, students do not perceive general education as something to "get out of the way" before the education in the major is begun. It is vital, however, that general education provide early development of basic skills. Basic subjects (language and quantitative skills) that are a necessary foundation for all further college-level study begin during a student's first semester.

Integration is facilitated by a clear definition of breadth outcomes deriving from both breadth requirements in the baccalaureate and the collective needs of major curricula. Such outcomes also facilitate more meaningful assessment and improve the preparation of transfer students through better curricular articulation with community college faculty. It is less important *where* students receive general education than that it is *effective*. Because the knowledge derived from general education is the common centerpiece of baccalaureate education it is subject to rigorous and effective assessment.

The effectiveness of contemporary general education is examined regularly by the faculty of the CSU, through their academic senates. With the joint participation of the faculty of the California Community Colleges, we have engaged in a broad review and study of general education in our two segments. Such reviews determine the education needed for our graduates, assess to what extent graduates acquire this education, and determine if changes in general education programs are required to achieve high levels of education and proficiency.

Quality of education

Quality of the baccalaureate is our primary concern in educating students. The California State University owes to its students and the citizens of the state the highest possible level of quality in the educational process. Education quality should not be affected or diminished by the pressures of access. Quality is assured through internal processes and external processes such as accreditation by the Western Association of Schools and Colleges and by national groups for professional and specialized programs of study.

The faculty, because of their specialized knowledge, are the primary decision-makers regarding the curriculum and are the first judges of the quality of the baccalaureate. The faculty develop and offer courses and they determine the requirements for general education and majors. Their initial task in developing courses, programs, and curricula must be to define academic quality, both in terms of the standards and criteria for teaching the curriculum and in terms of the learning objectives and performance standards to be achieved by students. Only then can conformance to standards, and hence quality, be determined and measured through faculty peer evaluation and recommendations regarding the fitness of those who teach the curriculum, and through evaluations of students to determine the completion of learning objectives and, ultimately, the completion of courses, programs, and degrees. This process takes place within departments and campus academic senates and is symbolized by the announcement at all commencement ceremonies that the faculty have recommended the award of the degrees. Faculty reconceptualization of curricula in terms of learning objectives and competencies provides opportunities for addressing educational objectives in ways that redefine the use of the academic year and the three- or four-unit course.

Teaching

There are **many ways of teaching**, and particular modes may be better suited for some purposes than for others. Individual students differ in the ways they learn best. Modes that work for some in realizing a particular purpose may not work with similar effectiveness for others. Therefore, variety and flexibility characterize CSU teaching.

Over the course of baccalaureate study, students experience many modes of teaching and learning, ranging from formal lectures to small group instruction or interaction in seminars, laboratories, or studios, to faculty supervision of independent learning. Most students have opportunities for learning in a small-group setting and through collaborative learning centered on core activities for a discipline--a research seminar, a group research project in a laboratory, or a studio project that includes criticism by other students. This happens quite often through a capstone course, usually an undergraduate seminar in the major. The CSU rightfully prides itself on its ability to provide such learning experiences for students.

Technology augments traditional pedagogies; it does not replace them in baccalaureate education. The availability of modern computer and communications technology has increased the opportunities for faculty and students to enhance the teaching and learning process in new ways. Using technology, students may sometimes study and learn on their own schedules, at their own pace, at a distance from the professors who prepare their learning materials. They may communicate more frequently with their professors and fellow students. Videotape, one- or two-way video, the computer, and the Internet can transmit a lesson or a course. However, face-to-face contact or proximate interaction between teachers and students, and between students and

other students guided by an instructor, adds dimension and experience to baccalaureate education that cannot be replaced or simulated. Attending classes, engaging in discourse, and completing assignments at prescribed times creates a necessary structure for CSU undergraduate students without which many would flounder. Thus, the use of communications technology, just as the use of other tools and pedagogies, is determined by the faculty considering the students' preparation and the learning outcomes to be achieved. The Academic Senate Principles on Technology Mediated Instruction provide a basis for examining the use of technology in the baccalaureate curricula.

Assessment

Assessment is the basis for the continuous renewal of our goals, our curricula, and our teaching effectiveness that will ensure the success of our baccalaureate graduates in society. Assessment (evaluation) of institutions and academic programs as a continuous, ongoing process within the CSU is often overlooked by the public. CSU faculty readily accept the importance of regular assessment. They justifiably take pride in the many individual and collective achievements of the faculty and the students. Our publics may focus narrowly on only one dimension of assessment, for example, short-term student outcomes. But in the broader perspective, the quality and reputation of the CSU baccalaureate depends on what our graduates do in their lifetimes, what they accomplish in our society, and what they attribute as added value in their lives because of their CSU baccalaureate degrees.

Our study of the CSU baccalaureate examined what we do well, what we must improve upon to maintain quality, and what is expected of our graduates in the year 2005. It is easy to accept that quality academic programs produce quality graduates. It is not an easy task, however, to conduct an assessment of the quality of learning that our academic programs offer. Nor is it an easy task to conduct an assessment of the quality of learning that our graduates have achieved. In our effort to improve assessment, often we must accept indirect measures, or proxies, where direct measurement is not feasible. For example, most assessments of academic programs comment on the number of full-time, expert faculty within the program, student-faculty ratio, the number of scholastic achievements by faculty and students, and applied resources available for laboratory, practicum, and internship. Despite insufficient overall funding, CSU campuses engage in regular, comprehensive evaluations of faculty, academic quality, and performance such as through faculty peer review, periodic review of tenured faculty, annual student evaluations of faculty teaching, five-year program reviews with outside evaluators, WASC accreditation, and accreditation for specialized programs by outside professional agencies, as in business, nursing, social work, and engineering.

CSU faculty assess student performance and nurture the ability of students to assess their own performance. The three broad areas of educational achievement expected of CSU graduating students are: (1) acquiring a sophisticated knowledge base, (2) acquiring the skills needed to use knowledge and to learn new knowledge so as to renew their knowledge base, and (3) participating in a mix of collegiate experiences and social processes that contribute to values for successful living. The quality of the CSU baccalaureate, and the faculty scholarship required to assure that quality, are only possible through the continuous assessment of the knowledge and skills our students require in a world of rapid change.

The Baccalaureate in a Statewide System of Higher Education

CSU faculty--through their curricula and their teaching--define the baccalaureate offered at our 22 campuses. As a system of higher education, CSU expounds a common philosophy apparent in certain common aspects of the baccalaureate programs offered on our campuses. This is especially so in the framework of the general education program that facilitates transfer for students. Indeed, CSU honors the need for many students to complete much of their breadth of study in California Community Colleges. At the same time, we recognize the uniqueness of each CSU baccalaureate program, curricula, and faculty. How scholarship and the quality of the CSU baccalaureate are maintained by each program and by each CSU campus is through their own manner of continuous assessment of what knowledge and skills are needed by our graduates. Our baccalaureate's true strength resides in the faculty's continuous work to strengthen and renew baccalaureate programs.



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November 1997