

CESAER's Statement on the Bologna Declaration

This document expresses the views of the CESAER membership - views that are consistent with those of most European engineering universities - on the strategic questions surrounding implementation of the Bologna Declaration. These views should be carefully considered by any organization involved in the implementation process, and in particular by the **European Ministers of Education who will meet in May 2001** to determine objectives and strategies for the next phase.

The Bologna Declaration: Policy & Implementation

A. Recognition of European Engineering Universities in the Bologna Process

- **The engineering universities of Europe form a sector of vital importance in higher education** that should be specifically represented in the councils that determine the strategies and processes for the implementation of the Bologna Declaration. Those strategies must take into account the mission, public and professional responsibilities, and the way in which engineering universities influence technological growth, workforce development, and ultimately the European economy.
- **Engineering universities should be represented in discussions** concerning any regulations that may affect the mobility of students and graduates, and recognition of their educational credentials. These are critical issues for engineering universities, given their role in preparing competent and mobile professionals for the employers and professions that are served, and ultimately for the public.
- **The process of implementation should have clear provisions for input from the engineering universities of Europe** on such issues as the level and designation of degree programme, the competencies that graduates will possess,

selection policy, length of study, quality assurance, accreditation, and international recognition.

- **Budget and funding policies, at a national and European level, must recognize engineering universities as a distinct class of institutions with unique needs and potentials.** Flexible systems and study grant regulations must be devised to allow Bachelor's-level graduates to continue in Master's-level course work, on either a full- or part-time degree basis, or to take individual subjects for continuing professional development.

B. Considerations at the System Level

- **CESAER supports the concept of undergraduate- and graduate-level education, but it is noted that a single standard for the length of each phase may not work in every system.** The ability to compare study levels is most important. Therefore, whatever the division of studies or names given to phases or diplomas may be, the work should be described in a manner that permits equivalencies and academic standards to be accurately determined.

- **The concept of a standardized European Bachelor's degree is in conflict with the principle of academic diversity.** Programme should be designed to meet local and national needs according to international standards.

The "Bologna" Bachelor's degree should be viewed as part of an educational continuum. Although a Bachelor's-level graduate may choose to enter the labour market, additional education will be required to achieve the competencies associated with Master's-level graduates or to meet the expectations of employers for continuing professional education.

- **Differences in national systems and secondary preparation should be resolved in a manner that preserves student mobility and enhances the likelihood of**

academic success. The crucial pivot point lies at the conclusion of the Bachelor's phase; therefore, the competencies achieved at the end of that phase become more important than entry qualifications. Rather than seeking to harmonize pre-university preparation, the emphasis should be on producing readable and comparable outcomes at each level.

C. Institutional Policies and Practices

- **Institutional flexibility should be maintained or even encouraged.** European engineering universities should not be limited in their ability to determine the areas of study in which Bachelor's and Master's programme will be offered and the areas in which an integrated sequence leading to a Master's diploma is more appropriate, or in their ability to offer degree programme that may have broad academic or more specific professional objectives. Any designation of a Bachelor's programme as the first part of a specific Master's programme should remain an institutional prerogative.
- **European engineering universities should be free to determine their own selection policies and procedures,** in keeping with national, institutional, faculty and professional standards, as well as market conditions. In turn, institutions should ensure that students admitted to any given study programme are prepared to achieve the level defined for a European university engineering Bachelor's or Master's degree. The critical issue is that the entrance qualifications used by a university should allow that university to provide education at such a level that the students have a fair chance to obtain a final degree and to achieve the competencies which are the goal of the education programme.
- **CESAER views the "European Space of Higher Education" as a marketplace in which engineering universities should be able to freely compete for students with all other post secondary institutions.** To encourage mobility, engineering universities should be able to enrol students who come from Bachelor's-level programme in higher professional schools for the second-cycle

or Master's phase. In this scenario, an engineering university may require additional studies, including a bridging programme, to ensure that each incoming student is fully prepared to succeed in a university Master's programme.

- **Candidates for second-cycle, or graduate-level study programme should present an appropriate Bachelor's degree or documented equivalent course work.** The goal is not to obstruct, but to enable students to continue and to succeed. In that spirit, an engineering university may have additional requirements to overcome national or systemic differences in preparation, to remedy individual deficiencies, or to maintain quality and meet professional standards. CESAER notes that engineering accreditation agencies commonly expect that students admitted to an advanced-level engineering programme will have an acceptable engineering Bachelor's degree or the equivalent.

D. Accreditation and Recognition

- **The levels of education defined for the "European Educational Space" must take into account the specific needs and demands of engineering education, including professional expectations.** When defining levels, the diversity of this sector must be recognized in terms of institutions, but more important, in terms of the leadership roles that engineering graduates play in European business, government and industry. CESAER supports the concept of accreditation as a vehicle for quality assurance, cooperation and mutual recognition. Whatever system is developed, it should respect the diversity of European engineering education and preserve the ability of engineering institutions to respond to emerging needs.

- **CESAER supports an outcomes-based approach to determining the quality of study programme.** European engineering universities should move toward a common approach and terminology for planning and documenting study programme, built upon credible objectives and outcomes, assessments at the programme and course level, and consequent efforts to improve. The need for, and feasibility of, a

diploma supplement should be investigated.

- **CESAER believes that accreditation systems should be developed at a national rather than a European level**, with due regard to national educational standards and quality assurance policies, the expectations of stakeholders, and the exigencies of international recognition. Systems based upon shared principles may differ in detail but still achieve the larger objectives of cooperation and mutual recognition.
- **The engineering leadership organizations of Europe must play a formal role in any "Bologna" discussions on accreditation.** Accreditation principles and processes for this sector must come from a cooperative effort of engineering educators, employers and working professionals. CESAER can provide a forum for discussion of the competencies or graduate profiles that may be translated into accreditation standards.
- **CESAER encourages further implementation of the European Credit Transfer System (ECTS) mechanism among the engineering universities of Europe.** Using the ECTS format as a common base, faculties may need to add information to facilitate the analysis and recognition of courses, such as course objectives, outcomes, and the methods used for evaluation.