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Contributions are invited for this feature. News items on policies that concern the engineering education world, new courses and curricula either of a unique nature or of international interest, new innovative laboratories and concepts, funding news for engineering research projects involving international participation, special international continuing education courses and news, industry–university interaction, engineering faculty news, and developments in engineering education of international interest. Please send news items and conference information to the Editor-in-Chief. Public relations offices of universities and human resources divisions in industry are requested to contact the Editor with news items concerning engineering education and training.

Germany

Improvement in job situation

The job market situation for engineers that faced serious problems in 1996 improved considerably in 1997. For the first nine months the number of openings for engineers increased from 26,000 to 32,000. The largest increase was in data processing and information technology where the number of openings increased by 50.5 percent from 2531 to 3810, Automobile engineers came next with an increase from 1967 to 2733 which amounts to 38.9 percent. Improvements of 22.9 percent in mechanical engineering that were long overdue are a positive sign, and electrical engineering positions increased by 12.9 percent.

Student protests reflect financial misery of higher education

Top technical universities and practically all engineering education is struggling against cost cutting and a curtailment of facilities. Students have staged massive protests against the cuts, the threat of student fees and the studying conditions. At the Technical University of Darmstadt, total cuts of DM15 million out of a total budget of DM330 million for 1997 have been incorporated. Out of this budget DM227.2 Million for 1997 and DM237.2 Million for 1998 are allocated for academic salaries. As academics have tenured positions no cuts are possible in commitments to salaries. Consequently, although universities are trying to save on staff recruitment, the only real savings can be achieved by cutting equipment costs. The result is an increasingly outdated equipment park, larger classes and reduced student services. Engineering students feel that investments are misguided and they would rather have money invested in libraries than in multimedia equipment. The budgets for research institutes have been drastically curtailed and many engineering positions are not renewed once Professors reach pension age. Another example of drastic cuts is the Department of Mechanical Engineering at the Fachhochschule Ruesselsheim which has a budget cut from DM290,000 to DM136,000. Such cuts in engineering are also due to the drastic reduction in the number of engineering students. Recruitment of students in Germany is running in parallel with the job opportunity situation, which for mechanical engineers has been catastrophic in recent years (see, however, job development situation in Germany, above). Library funding has been drastically reduced-a worldwide phenomenon. There are frantic attempts to relieve the situation by offering alternative courses, which are often given by the permanent staff, hardly qualified for the new areas. Innovation in teaching and a spirit of competition

are new factors in the German higher education scene.

Employers call for student fees
Student protests, coupled to financial cuts re acting as a boomerang. According to the president of the Employers Association **Dieter Hund** universities need to establish a new image which needs to be linked with performance. **Hund** calls for the introduction of student fees of up to DM1500 per Semester. The fees should be introduced in conjunction with an adequate program for student support for good achievements. The official university representation body – the HRK (the Conference of University Rectors) is against such measures. It demands an improvement in the student support schemes. The HRK position is also driven by political pressure. Once student fees had been abolished in the nineteensixties, it is a mountainous task to get them reintroduced, against student and academic protests.

More Fachhochschule students, but decline in university student numbers
An Interesting phenomenon is the increased demand for fast track education in Fachhochschulen. This contrasts with a decline in demand for the protracted university courses in 1997. A closer examination of the situation shows that Fachhochschulen are faster and more flexible in exploiting market situations for new professional degrees. The colleges have quickly taken up such degrees as Media studies, environmental engineering, or health care, whereas universities are slower in picking up new courses. One obvious reason for this development is that university academic staff is researching in specific areas and cannot easily switch subjects. Fachhochschulen exploit the situation that core studies can easily be switched from one course to another, and that departments are completely independent, i.e. not dependent on specific service departments such as Mathematics to deliver the mathematics requirements. It may be argued that this flexibility although attracting new students is gained at the expense of providing thorough professional courses, at least in the initial stages of introduction of new course areas.

Germany – Austria – Switzerland

Controversies over demand for more responsible management of universities
The crisis in European universities stems from a financial drain that caught higher education structurally unprepared. The systems in Central Europe have been largely dependent on state finances that used to flow profusely. The administrative structure is based on a mass university where no one is made responsible for failed concepts and results. The rule by committee exonerates single persons, including university heads from any responsibility for failed planning. The current student protest wave has resulted in intensified discussions on structural improvements in higher education institutions. **Prof. Müller-Bölling** director of the Center for the Development of Higher Education in Güttersloh (CHE) demands greater personal responsibility of university presidents and a departure from the current decision structure of Rector or President, Chancellor and a congenial group of committees consisting of academics, students, assistants and other staff (including at times low level professional staff such as janitors!). With the current structure no genuine quality control exists, and mismanaged academic decisions are of no serious consequence. According to the Rector **Leopold März** of the University of Agricultural Sciences in Vienna the 'group' university is dead. Strong heads of universities will hinder a divergent autonomy of the professors, and prevent expensive scientific individualism. In Switzerland a greater measure of autonomy to universities has been granted. A university council at the ETH in Zurich, the country's prestigious engineering university, manages the universities on parallel lines to an industrial enterprise. The council is responsible for financial allocations as well as for the quality control of the departments. Success or failure is however not so easily measurable compared to industry. In Germany, greater autonomy has been granted to Presidents and Rectors, compared to the previous political control. However, the Chancellor of the University of Cologne, **Johannes Neyses** feels that the increased powers of university Rectors are a step back to the monocratic times of the 1950's. It seems that it is still a long way away from a benefit and results oriented control of university performance (see also editorial).

Germany – USA

Differences in entrpeneurship of graduates
Around 75 percent of all graduates in Germany are seeking employment with companies or the government. Only a minority envisages establishing their own independent employment. A report by McKinsey Associates says that German graduates simply do not know how to establish their own company. A competition is to be sponsored by the consulting company to enable students at the Technical University of Berlin to become entrepreneurs. This is in contrast to the situation in the USA, where in Silicon Valley alone the number of jobs increased from 17,000 to 250,000 between 1959 and 1992, all through independent initiatives. Comparative regions in Germany, Berlin, Munich and Aachen are way behind in such ventures. According to **Wolfgang Huhn** director of McKinsey in Germany it is the responsibility of univsersities and colleges to try and alter the situation.

USA

Fees for technology services
Technology fees are charged by the majority of public universities, and by 10 percent of the two year community colleges. Many universities see such fees as necessary to supplement tuition fees which do not contribute sufficiently to cover costs. The scale of charges ranges from $1.50 per Semester hour or $27.00 per year to $300 per year in private colleges. They cover items such as software upgrades, and loans of laptops. Technology fees have become a necessity for colleges due to the horendous increases in technology facikities made available to students. Legislators in Florida have refused to allow state universities to charge a $100 technology fee per year, and opted for tuition increases. However, students support the charging of technology fees, and seem to prefer this measure to a general increase in tuition fees. **Chris Duckerfield**, vice provost of Clemson University supports the introduction of a $100 technology fee, which enabled the university to update their computers which were installed in 1995, and were several generations out of date by 1997. The Clemson fee will be used to pay for computer upgrades and computer labs, so that workstations will be replaced every two years. Such measures of direct support contrast with State funded computer labs, as is the case in Germany where computer pools are sporadically installed by state funding, and the centralised system makes it difficult to replace hardware when it is getting obsolescent.

USA – Italy

Global virtual university
In the wake of globalisation of tuition capabilities, cost reduction, and informaion technology advances, the establishment of virtual universities which pool and optimise teaching resources is gaining momentum. About 100 students will be taking courses in global management, centered on seven hilltop castles in Umbria, and supervised by the University of California, Los Angeles. The Online University is named **Universitas Ubiques Studiorium**. The nerve center of the university is in the castle of Gualdo Tandino with the other towns participating being, Gubbio, Spoleto, Assisi, Narni, Orvieto and Perugia. The first course on global management is to be run from New Delhi in India with 12 lecturers from UCLA, four from India and two from Italy. Essentially each course is to be led by one university providing more than half of the lectures. Students will be sitting at their computers and operate through the Italian node. All students will communicate directly with the lecturers, and the line will be open to all students. Classes start with 20 students in management, but the potential of distance learning in medicine, engineering, architecture and the social sciences is being explored.

South Africa

Funding allocations smaller and redistributed
The country has been undergoing a redistribution of scarce higher education funding since the change to a black majority led government. The historically white universities now have a majority of black students. The balance of students at the traditionally white dominated Witwatersrand university is quite different from the black dominated universities in the North. Cutbacks are expected at Witatersrand and at the University of Cape Town. However, the Technikons, training vocational and technical personnel should gain from the government's policy to support education in the applied sciences and engineering. At the University of Natal a staff reduction of 650 academics through attrition is in progress. Afrikaans universities are more threatened than the English language institutions. It is clear that Afrikaans, archeology and athropology departments, will suffer. The government clearly has a problem in satisfying the needs of predominatly African institutions, and at the same time keeping the standards of the historically white universities.

Conferences

The International University
Local and Global Roles
3–5 April 1998
London, UK
Contact: The American International University
Richmond TW10 6JP UK
Tel: +44 181 332 8286; Fax: +44 181 332 1297

CALISCE '98
International Conference on Computer Aided Learning
15–18 June 1998
Chalmers University
Gotteborg, Sweden
e-mail: calisce@pedu.chalmers.se
http://www.pedu.chalmers.se/calosce98.html

ED-Media & Ed Telecom 98
World Conference on Educational Multimedia and Hypermedia
World conference on Educational Telecommunications
20–25 June 1998, Freiburg, Germany
Contact: ED-Media 98/AACE P.O.Box 2966
Charlottesville VA 22902, USA
Tel: +1 804 973 3987; Fax: +1 804 978 7449
e-mail: *AACE@virginia.edu*
http://www.aace.org

American Society for Engineering Education
Annual Conference
28 June–1 July 1998
Seattle Washington

Contact: ASEE 1818 N Street,
Washington DC 20036, USA
Tel: +1 202 331 3500; Fax: +1 202 265 8504

Higher Education for Europe H3E
Gent, Belgium
1–5 July 1998
Contact: Semico, Lange Kruisstraat 12D
B-9000 Gent
Tel: +32 92338660; Fax: +32 2338597
http://www.student.rug.ac.be/vtk/h3e
e-mail: h3e@vtk.rug.ac.be

IEEE Multimedia Engineering and Education Conference
7–9 July 1998
The City University Hong Kong
Contact: Robin Bradbeer
Dept. of Electronic Engineering
The City University of Hong Kong
Tel: +852 27887199; Fax: +852 27887791
e-mail: eertbrad@city.edu.hk

SEFI Annual Conference
European Society for Engineering Education
2–4 September 1998
Helsinki, Finland
Contact: SEFI Conference Secretariat
Lifelong Learning Institute
PO Box 8000
0215 Espoo, Finland
Tel: +3589414009; Fax: +358 9451 40 60

Global Congress on Engineering Education
6–11 September 1998
Cracow, Poland
Contact: Zenon J. Pudlowski
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Clayton, Melbourne, Australia
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e-mail: zjp@eng.monash.edu.au

Engineering Education '98
International Symposium IGIP
14–18 September 1998
Moscow, Russia
Contact: MADI TU, 64 Leningradsky Prospect
125829 Moscow, A-319, GSP-47
Russia
Tel: 007 095 15510171; Fax: 007 095 1517911
e-mail: igip@madi.msk.su