

Chemistry, chemical technology, and their products have been penetrating into all human activities ever more and more. Modern environmentally sound chemical technologies aimed at lower consumption of energy and raw materials, developing at the frontiers of chemistry and physics, chemistry and biology, are compatible with the strategy of sustainable development. Production of new materials for other progressive technological branches and involvement of biotechnologies corresponding to the laws of living matter are among prerequisites for gradual overtaking of technologically most developed countries. This was one of the reasons for the re-establishment of the Faculty of Chemistry at the Technical University, Brno in 1992, with the aim that its graduates should meet the demands of entering the third millennium.

The Faculty was re-established on May 26, 1992, following the decision of the Academic Senate of the Technical University, and accredited according to the decision of the Accrediting Commission at the Ministry of Education, Youth, and Physical Education of the Czech Republic, on December 7, 1992.

The re-building of the Faculty has proceeded since 1992 parallel with the far-reaching economic transformation and restructuring of the whole society. That is why the fundamental conceptual document, *i.e.* the report for the accreditation procedure, took into account a very careful analysis not only of the number of applicants but mainly of the potential labour market and use of graduates, as well as of the requirements of industries which produce and use chemical products and, last but not least, of the intellectual potential of the Brno region. Even other conceptual works, necessary for forming the whole set of branches of education, scientific research, and other professional activities of the Faculty, are based on profound analysis of interrelationship of requirements and possibilities. For the concept of the development of the Faculty the most decisive is its orientation towards branches, typical for the requirements of the relevant territory, *i.e.* for the Moravian and Silesian regions and adjacent regions in the Czech Republic and abroad. Another characteristic feature of the concept and the size of the Faculty is a close informal co-operation with the Chemical Branch at the Faculty of Science, Masaryk University, Brno. For the build-up of the Faculty's activities very important are also close links with institutes of the Academy of Sciences of the Czech Republic located in Brno, as well as with numerous research institutes and all universities in Brno, all universities and faculties involved in chemical education in Czechia and, among others, mainly with the Faculty of Chemical Technology of the Slovak Technical University in Bratislava.

The renewed Faculty does not comprise the whole spectrum of technologies, typical for the programme of education at the time of the beginning of the Faculty's existence or for its post-WW-II period. Instead, it is oriented on a limited number of more broadly defined and highly selected branches with direct impact on industrial development in the above-mentioned regions. Also, it is aimed at such forms of its educational, scientific and other professional activities which enable a relatively quick and flexible response to the requirements of scientific and technological development and to the labour market, in order to produce top specialists able to respond to the growing and changing international competition.

Since its renewal, the Faculty has stressed the importance of international co-operation based in the initial period of its build-up on the projects and contacts brought by the leading personalities of Faculty from their former institutions, as well as on the new international projects and co-operation with organizations in the EC countries, in neighbour Central European states, and other countries including those in overseas.

The main goal of the Faculty is the teaching at the graduate (BSc., Dipl. Eng.) and postgraduate (PhD.) level according to the requirement of research, production, uses and commercial management of the chemical, pharmaceutical, food, consumer's and construction industries and other industrial branches having increasing demands for chemists, as well as for the requirements of the state and public administration.

The education system is aimed at:

- Theoretical bases of chemistry, physics, and applied mathematics, integral knowledge of technologies, as well as the theory of processes and technological equipment of chemical industry;
- Linguistic skill of graduates enabling their professional communication with the surrounding world;
- Universal skill in selected branch of broader specified chemical technology;
- Detailed skill in a given specialization within the above-mentioned branch;
- Necessary knowledge of disciplines connected with economics and organization of production and trade;
- Working style based on extensive use of computer and information technologies.

At present, the pregraduate studies encompass five branches:

- Material Sciences
- Chemistry and Technology of Environmental Protection
- Food Chemistry and Technology and Biotechnologies
- Consumer's Chemistry and Technology
- Printing Technology and Applied Photography

Postgraduate PhD. teaching proceeds in the following specializations:

- Material Sciences and Engineering
- Macromolecular Chemistry

The accreditation of the two other ones, *i.e.* Physical Chemistry and Chemistry and Technology of Environmental Protection is in progress.

The Faculty is organized unconventionally into institutes possessing vertical structure. It corresponds to the branches of pregraduate studies, while the general or propedeutic disciplines, such as General Chemistry, Inorganic Chemistry, Organic Chemistry, Analytical Chemistry, Physical Chemistry, Physics, Chemical Engineering, and the like are incorporated in the respective departments located within these institutes. This organization, typical for the initial phase of the Faculty's existence enabled quick organized growth of all structures. At the beginning, the Faculty made use of the generous offer of the Faculty of Science, Masaryk University in Brno, to teach some general chemical subjects, such as General, Inorganic, Organic Chemistry and others. This is, by the way, similar to the help of the Chemical Branch of the Technical University in Brno, given to the just established Masaryk University after 1919. Among these institutions very good mutual cooperation exists even now, and it will continue in future to the benefits of both partners.

The undergraduate teaching takes place in two steps: five semesters represent joint programme for all students, the division starts in the sixth semester when the joint programme sharply diminishes. The studies end with the State Exam and the defence of Theses. Teaching languages are Czech and Slovak.

The Faculty stresses a modern approach to the environmental education of all graduates, in order to overcome the old technocratic attitude and to emphasize the responsibility towards the health and the environment *via* cleaner technologies.

The programme of the Faculty's scientific research takes into account needs of the economic

environment of the territory in which the Faculty is located. The basic directions of the scientific research were therefore formulated as follows:

- Material engineering of advanced materials;
- Surface and volume properties of flat fibrous and foil materials and their alteration using physical processes which are energetically undemanding and environmentally safe;
- Studies of the environmental impact of industrial and communal activities and the solution of the adverse effects on technological scale;
- Studies of biotechnological processes in order to introduce them instead of or beside chemical ones;
- Studies of properties of disperse systems of waste material generated by mining, and by energy and chemical industries aimed at new technologies applied in civil engineering, agriculture, and consumer's industry.

The Faculty has already entered into wide cooperative links to solve many research and technological tasks for numerous economic subjects, including many national and international research projects, organized under the aegis of EC, such as COST, COPERNICUS, and the like.

Besides, through its leading personalities and on the basis of their former and present activities, the Faculty participates in a number of international organizations, universities, other scientific and editorial bodies, international organizations of professionals, and prominent non-governmental organizations.

At present, entering the fifth year of its new life, the Faculty's pedagogical staff reached the number of 45. Nearly 48 per cent of it is represented by full professors and associate professors. The Faculty's staff is quite extraordinary in one respect: All full professors possess the scientific degree of DrSc. and all associate professors have been regularly habilitated.

At present, the Faculty has 450 undergraduates and 20 postgraduates whose interest in chemical studies increases sharply year after year. These numbers are limited mainly by the temporary moving of the Faculty which, paradoxically, has not returned to its original buildings. This situation will be solved after the year 1997/1998 when the Faculty is to occupy new location within the new campus of the Technical University, under the Palacký Hill, close to the Czech Technology Park.

Due to its publication activity and other activities at the national and international level the Faculty of Chemistry has been gradually entering the awareness of the professional and general public. The publication activity of the Faculty's pedagogical staff (starting from four persons in winter 1992/1993) within the period 1993–1995 consists of 11 books and book chapters, 9 textbooks, 141 publications in journals, and 230 communications at congresses and conferences, besides numerous research reports.

The Faculty is linked, through its leading personalities, to UNO and its agencies, like UNIDIR, UNEP, and UNIDO, and it takes part in the activities of NATO/CCMS. In addition the Faculty is represented in prestigious international NGOs, such as Pugwash Conferences, World Federation of Scientific Workers, International Network of Engineers and Scientists for Global Responsibility, to name only a few.

The results that have been achieved till now, have shown undoubtedly the benefits of re-establishing the Faculty for the Technical University and the respective territory of the Czech Republic, the viability of the Faculty and its impact on scientific and technological development.

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