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Contents

EDUCATION IN HUNGARY

The present structure of education in Hungary is the result of a long development which in the quarter of century following World War II was particularly rapid and significant; the period and a standard of the compulsory education have been lengthened and a number of new types of schools have been established. The fundamental purpose of the development of the educational system is the raising of the cultural standard, of the education and training of experts of high vocational knowledge, the continuative training of adults.

Education in Hungary consists of three stages.

Stage 1

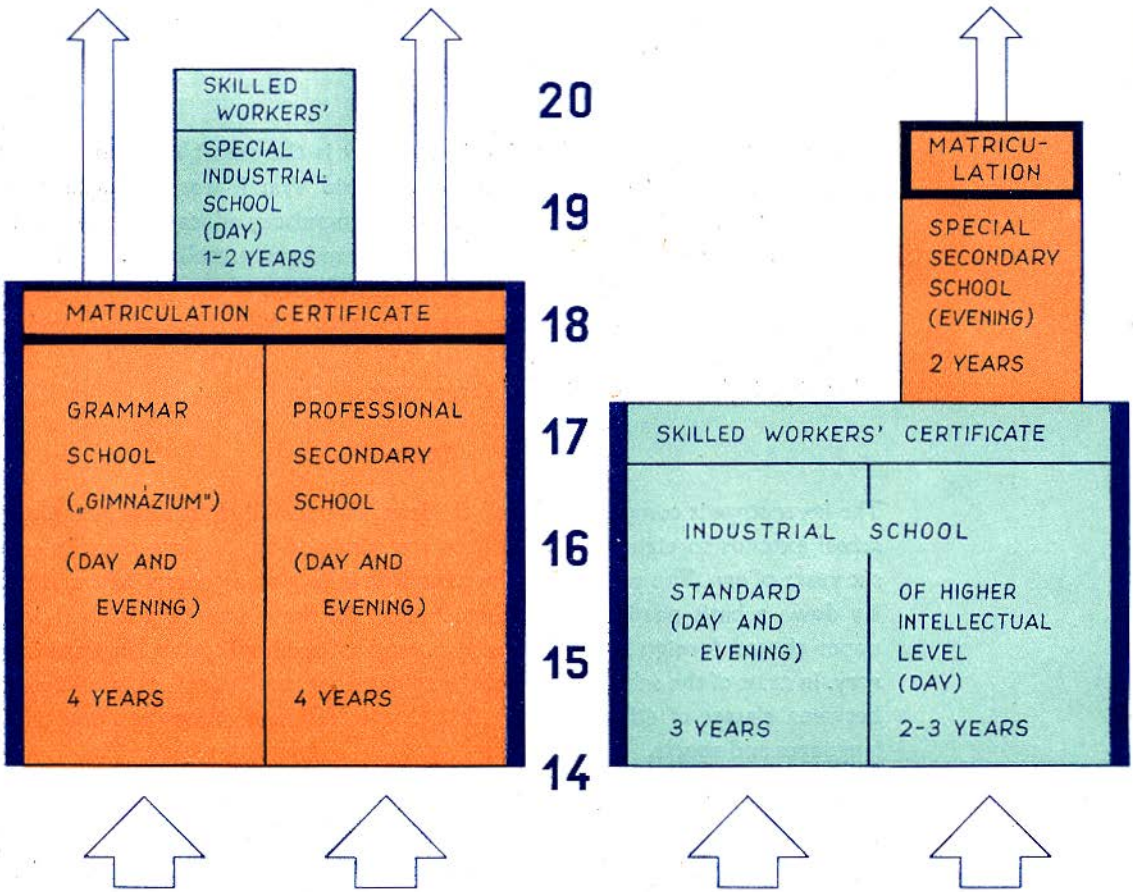
The *lower stage* is compulsory for all children. The period of training in the *elementary school* extends to eight years. Children are admitted to the first class, in general, at six years of age. The purpose of the education is to give a general information and to lay down a basis needed for further studies. At the elementary schools, in the four upper classes, foreign languages are also taught; learning Russian language is compulsory. In most of the schools a part of the subjects are facultative i.e., pupils may choose between classes of different types. Most types of these classes are musical, foreign languages and sports.

Stage 2

The *middle stage* is not uniform. Here, there are two main types of schools. One of them grants a certificate, the so called "matriculation certificate", which entitles admission to higher schools and universities; the other one ensures qualification for the most various vocations.

Matriculation certificates may acquired again at two kinds of chools: in *grammar schools* (in this country: Gimnazium), and *professional secondary schools*. Both of them comprise four years of teaching. The grammar schools offer primarily theoretical and more general education, whereas in the professional secondary schools there is some trend towards vocational training.

In grammar schools, besides classes of general subjects, there are classes of such curricula where certain subjects are taught in a higher weekly number of hours. There are


TO UNIVERSITIES AND COLLEGES
SKILLED WORKERS' SPECIAL INDUSTRIAL SCHOOL (DAY) 1-2 YEARS
MATRICULATION CERTIFICATE
GRAMMAR SCHOOL ("GIMNÁZIUM") (DAY AND EVENING) 4 YEARS
PROFESSIONAL SECONDARY SCHOOL (DAY AND EVENING) 4 YEARS
20
19
18
17
16
15
14
MATRICU-LATION
SPECIAL SECONDARY SCHOOL (EVENING) 2 YEARS
SKILLED WORKERS' CERTIFICATE
INDUSTRIAL SCHOOL
STANDARD (DAY AND EVENING) 3 YEARS
OF HIGHER INTELLECTUAL LEVEL (DAY) 2-3 YEARS
FROM ELEMENTARY (GENERAL) SCHOOL

—classes of languages (Russian, English, German, French, etc);
—classes of natural sciences (mathematics, physics, chemistry, biology, etc);
—classes of arts (song, music, drawing, etc).

In grammar schools, besides Russian, learning of another foreign language is also compulsory.

The professional secondary schools, besides preparing students for the matriculation examination, also give vocational training, to a certain extent, in some professions. There are secondary schools specialized for training in industrial, transport, economic, agricultural, sanitary and artistic fields. These schools, as a matter of course, do not give such thorough special training as needed by a skilled worker; therefore, if a student wants to get a certificate as a skilled worker as well, then he must complete an additional course of about a one year training period. At the same time, after some years' practice, in the case of accomplishment of certain requirements, students may obtain qualification as technicians.

Both grammar schools and professional secondary schools have evening courses for adults.

Skilled workers' certificate can be obtained in the so-called *industrial schools*. Training in these institutions takes place according to several kinds of curricula:

Cirriculum "A": Pupils, having passed the elementary school, may gain qualification after three years for one of the simpler trades.

Curriculum "B": Pupils who passed the elementary school also may obtain qualification after three years for one of the simpler trades; but besides, they may acquire such a detailed theoretical knowledge that after getting the skilled worker's certificate could pass the matriculation examination at a special secondary school, established for this purpose at evening or correspondence courses.

Curriculum "C": Pupils passing the secondary school, i.e. having matriculation certificates, may acquire special worker's qualification in one or two years for more acvanced trades, to learn that for which a certain scientific grounding is needed. (For example: telecommunication technique.)

Curriculum "D": Semi-skilled labourers, working but having no skilled worker's certificate, can obtain qualification at this section through evening courses for certain trades.

Stage 3

At the highest stage there are also two types of institutions, i.e., the three-year *colleges* and the *universities* of five or six years. Students may be enrolled into either types of these educational institutions only when having passed successfully the matriculation examination of the secondary school and the entrance examination.

Students, graduating from the colleges, are qualified for the more practical aspects; such as production engineers, school-teachers, etc.

Education at the universities is rather of a theoretical nature; engineers, physicians, physicists, arts graduates, etc., are graduated mainly for performing development-, creative work.

Most of the colleges and universities have evening and correspondence courses for adults.

The colleges and universities are, in general, independent from each other, their curricula not being built upon one another. College graduates can, for the most part, acquire a university diploma by commencing from the beginning the university studies as correspondence students. The universities may make allowance for certain examinations whereby the training time may be shortened somewhat. However, those possessing a college certificate, practically, can be employed at almost all those posts where, in general, university diplomas are required.

There are certain efforts to create colleges within the framework of the universities which would make possible the co-ordination of the curricula to some extent. Certain university faculties made experiments in teaching according to a curriculum branched in two direction. After the first two years the students are separated into two groups. One of these groups is trained for only one further year, and obtains a college certificate, whilst the students of the second group continue their studies for three more years and will be graduated by the university.

Besides, in Hungary, there are transiently "higher-grade technicum". Their standard of training is somewhat lower that that of the colleges. In a few years, these schools will be closed or reorganized as colleges.

There are specialized colleges; such as music, fine arts, dramatic art, motion picture and physical education. At the military schools educational time is four years, however, besides giving officer training, they also grant some kind of civil certificate.

It should be noted that in Hungary, the general compulsory military service—which concerns only young men—begins at the age of 18. Those young men fit for military service who are admitted to a college or university prior to the commencement of their studies, do military service for a year at a military school which trains subaltern officers and conforms with the selected university branch. The programme of courses held for them differs from the usual courses for subaltern officers: there are lectured subjects which later aid in learning university courses. After completing the one-year course they attain the subaltern officer's rank and are discharged. Having been graduated, they are called up for three month's military service from where they will be discharged as reserve officers.

HISTORY OF ENGINEERING EDUCATION IN HUNGARY

The history of Hungarian engineering education dates back more than two centuries. Although the predecessor of our University, the "Engineering Institute" (Mérnöki Intézet) began its functioning in 1782, the fundaments of the civil engineering knowledge became regular subjects as early as in the middle of the 18th century at the universities of sciences, high schools, and later, at the courses of philosophy at the academies.

However, this training of civil engineers which, in fact, only gave a preparation to those who chose to be civil engineers for obtaining practical knowledge in civil engineering (surveying, hydraulic engineering, architecture), proved to be unsatisfactory. This is why, at first the "Collegium Eoconomicum" in Szempc (1763 to 1780), and later, since this institution could not be equal to the expectations, the "Civil Engineering Institute" belonging to the University of Buda and later to that of Pest, had been reorganized.

The social development in the country, and first of all, the reconstruction and technical arrangement of the territories devastated during the Turkish occupation of one and a half century assigned immense tasks to the Hungarian engineers and engineering training. Under these circumstances, it was inevitably necessary to organize the Institute of Civil Engineering (Institutum Geometricum, or by full name: Institutum Geometrico-Hydrotechnicum, i.e., an institute for training civil engineers on land surveying and hydraulic engineering) which had a pioneering significance on an international level as well.

The course of Civil Engineering started in 1782 and, in fact, it was a three-year vocational continuative training for students who completed the philosophy course, preparing students for higher studies at the faculties of theology, law and medical science. This institute might be regarded as the first one training civil engineers on a university standard, which conferred civil engineer's certificates equal in appearance and of value of the universities' doctor's certificates (1785 to 1850). The importance of the certificates also has been confirmed by a royal decree which made of taking degree at the Civil Engineering Institute a condition for performing public civil engineering services.

A student, and later on, a professor of this institute was József Petzval (1807 to 1891),

the world renowned inventor of the photo-optics (1841) and it was here that Ányos Jedlik (1800 to 1895) the Hungarian discoverer of the electric motor (1827) and dynamo-electric principle (1856), held his lectures.

Later, undoubtedly, the institute could not keep abreast with the new requirements. The development in technology would require that the chemical and the mechanical engineering should be taught more extensively. This, however, had been prevented the educational policy of the foreign autocracy, and the ever and ever heavier despotism weighing on Hungary. This is why in the reform period the idea of not only the further advancement of the institute, but of the establishment of an independent technical university presented itself, initiated by István Széchenyi and Lajos Kossuth. The Imperial Court of Vienna counteracted this, and for the cultivation of the above mentioned sciences connected with the industrial advancement gave permission only for the foundation of a secondary technical school, the "József Industrial School" (1846). In 1848, the Minister of Education of the first responsible Hungarian Government, József Eötvös considered to unite the two institutes—the Civil Engineering Institute and the Industrial School—having been become separately unviable and to reorganize them into one up-to-date Technical University. This plan, however, could not be realized because of the suppression of the Hungarian War of Independence. Nevertheless, when the two institutes had been united during the "Autocracy", this did not entail the modernization of the Hungarian higher technical training, because the Civil Engineering Institute had been amalgamated into the Industrial School which was an institute of a lower training standard. The reorganized institution got a rank of university only later, in 1856 (with the name: Joseph Polytechnicum-József Műegyetem), the development of which had been ensured by the evolution of capitalization of the country after 1967.

In the furtherance of the higher technical training the Mining College of Selmec, known all over Europe, had a significant role which had been developed on the ancient fundaments of the Hungarian mining techniques from the mining-officer school organized by the renowned Hungarian polyhistor, civil engineer, mathematician and cartographer, Sámuel Mikoviny (1700 to 1750). His epoch-making work in introducing the chemical laboratory training and in starting research work in chemistry is well known. In organizing the world-famed "École Polytechnique", the first independent technical university, founded in Paris, the method of training developed in this Hungarian Institution had been taken as a model.

The successor institution of the Mining College of Selmec, the Mining, Metallurgy and Forestry Engineering College moved in 1918 to Sopron, and in 1935 it had been incorporated into the "Palatin József University of Technical and Economic Sciences" as its faculty of Mining, Metallurgy and Forestry Engineering. Naturally, at its former residence, in Selmecbánya, the college, reorganized by the Czechoslovakian State, which got this territory after World War I, continued its functioning.

The teaching staff of the "Joseph-Industrieschule" established through the union of the József Industry School and the Civil Engineering Institute, succeeded in fighting

out the acknowledgement of the higher educational rank of the school and the authorization of assuming the up-to-date organization form of the foreign technical universities (Joseph Polytechnicum=József Műegyetem, 1856). From this time on, the József Műegyetem (József Technical University) was, by right, a "polytechnical school" of university grade, and, by organization, fulfilled its function as equal in rank with the major polytechnics of the Austro—Hungarian Monarchy (in Brno and Graz). However, the full re-establishment of engineering training on a university standard together with the re-establishment of the right of conferring certificates bound to the condition of university engineering examination could only be achieved after the "Political Compromise" in 1867 (1871).

Changes in the organization made on this occasion (for example, organization of the "Sections" conforming to the university faculties, namely the sections of architecture, mechanical engineering, civil engineering, chemical engineering, and general sciences, etc.) permitted that at the University of the technical sciences an up-to-date training, including all of the fields of these sciences schould be developed. The out-of-date "chairs" which remained as the heritage of the former industrial school, had been successively reorganized, and for teaching the curriculum ever more differentiating, new departments had been instituted.

As a result of the work of the teaching staff, the Hungarian higher technical training in the decades of the turn of the century proved to be up-to-date in every aspect, and achieved on our whole continent an over-all appreciation and respect. Owing to this, parallel with the capitalization of the country, the University beginning to develop rapidly—indirectly, by training the technical intellectual class leading the technical life in the country, and directly, through the practical work of the teaching staff—became a factor of ever greater effect and significance in the economic and technical advancement of the country.

In the development of the University a significant step was the construction of the new university building block in the district of Lágymányos, in Buda (1902 to 1909), where the Hungarian technical training found at last a final home suitable in every respect to the requirements of that time.

However, the issues of the World War (1914 to 1918) prevented the up-to-date buildings from being equipped with modern instruments.

Since 1848, it was for the first time in 1918 and 1919, in the period of the bourgeois republic and the Hungarian Council Republic, that the University came again into the limelight of the attention of the Government.

However, the Hungarian Council Government, in realizing its plan of modernization of the higher technical training, could achieve the reorganization only of the Section of Architecture, and the preparation of the reform of the Section of Mechanical and Chemical Engineering. In reoganizing the Section of Architecture new, up-to-date departments (Department of Urban Planning, Department of Industrial and Agricultural Arhitecture) had been organized and filled with prominent professional teach-

ing staff. However, the continuation of the measures of great importance—from which the effort to increase the number of the teaching staff, to improve their status (financialcircumstances), to initiate women's emancipation and to liquidate the cultural monopoly of the former ruling classes should be mentioned—was prevented by the fall of the Hungarian Council Government. The counterrevolution annihilated all of the measures taken by the former government and dismissed a number of prominent experts from the University (Theodor von Kármán, Ödön Bogdánffy, etc.).

From that time on, almost every effort of the leaders of the University, having in view the modernization of the technical education, remained unsuccessful. The Government did not take into account the requirements of development of the University; under the pretext of the really heavy economic conditions it pushed the University into the background from the line of the institutions of higher education, and it did not want to realize that, expressly for the development of the economic potentiality of the country, an added subvention of the technical sciences and of the University would be necessary. The Government considered, as its first task, to advance the training of lawyers and pedagogues, and gradually lowered the quota of the University in the subvention granted to universities. It paralysed and spoiled the furtherance of the University and the standard of the higher technical education by a series of irresponsible and harmful financial measures. It was symptomatic that the fundamental investment asked for the installation of the new buildings and laboratories in 1907, the uninterrupted allocation of the quotas which during the World War had been discontinued by the educational government of the counter-revolution, could not have been placed at disposal to the University entirely until 1944.

This is why the laboratory training could not be introduced in the University at that time.

The economic crisis of the 1930s affected the life of the University particularly heavily. The repeated reduction of the financial subvention of the University, the increase in the misery of students, the desolate future of young engineers, and the threat of engineer-distress constantly presented new impediments for the University in performing a successful training work.

The series of the Government's irrespondible measures culminated in the establishment of the "József Nádor (Palatine József) University of Technical and Economic Sciences". On the pretext of economizing, the training of the technical, economic, agricultural and veterinary sciences had been amalgamated into a single institution. It was a matter of course, that the huge organization created by this amalgamation, whose expressed objective was the rationalization, liquidation of the "superfluous" and unifiable departments, by the harmful displacement of the centre of gravity of the professional training to the detriment of the technical faculties, prevented the furtherance of the technical training and progress in the sound direction of specialization.

It was strongly typical of the general hindrance of development of our higher technical education and lack of specialization that, for expample, the omission of the university

training of electrical engineers lasted until 1928, and such faculty had only been organized after World War II.

Nevertheless, the teaching staff of the University still succeeded, in the period between the two World Wars, in preserving the former reputation of the University in a number of scientific fields and in supplementing the lack in financial means by intellectual values, in ensuring the up-to-date standard of training.

The stagnancy, even retrogression, of the counter-revolutionary system had been made worse by the devastations of World War II.

The fascist armies, beaten and enclosed, used the block of buildings of the University as a military base which led to heavy damages on the buildings and almost total devastation of the equipment.

The year of the liberation of Hungary, 1945, opened a new era also in higher technical education.

The progress, as the whole of Hungarian education since this date is characterized by two parallel features; partly the "cultural revolution" conforms to the social political transformation of the country, i.e. democratization of the education: opening the schools for the children of the working people, labourers and peasants, partly the modernization of education, development of its organization, content and methodology. And as a matter of course, simultaneously the education of youth in a socialist manner has become one of the most significant questions.

The progress of our higher technical education also has particular characteristics. The first problem of the year 1945 and of the following years was the reconstruction of this country and, in particular, the Capital, which suffered great damages in World War II. This also was the task of the University. It remains memorable forever that battles were still fought at a distance of some hundred metres from the University, when the professors, workers and students already began to remove the ruins from the area which was a battlefield, as if the question of rebuilding were that of their own homes. Thanks to this devotion and to the factory workers coming to the aid of the rebuilders, in spite of the enormous destruction (more than 20 per cent damages in the buildings, and more than 60'per cent damages in the equipments) a few weeks after the cessation of arms, the training work began at the University, as a matter of fact, with an enrollment that exceeded the former one.

Some changes in the organization (branching off and the creation of an independent University of Economy, an Agricultural University, an University of Veterinary Sciences) clarified the proper scope of the Budapest University of Technology.

By introducing reforms in training, beginning in the years of 1948 and 1959, the achievement of the modernization of higher technical education succeeded.

By the specialization of training, the network of the higher technical education could also be developed. In 1949, the second and third technical universities had been established: the University of Heavy Industry in Miskolc, and the University of Heavy Chemical Industry in Veszprém. In 1951 the fourth technical university had been estab-

lished in Szeged: the University of Transportation Engineering. In 1952, two faculties were separated from the University of Budapest, and the fifth technical university, the University of Building Industry had been created of them. By taking into account that the Mining, Metallurgical and Forestry Engineering Faculties belonged only nominally to the Budapest University of Technology, in realty it was an independent institution, at this time, in essence, training was given at six technical universities in Hungary. It should also be noted that from 1947 the State Technical College was also functioning in Budapest, with the objective to provide an opportunity to acquire technical knowledge to workers of ability who, until the liberation of the country had no possibility to be graduated at a university. In 1951, this independent technical college discontinued; instead, evening and correspondance courses had been organized at every technical university.

This network of technical universities developed over period of some years, had been reorganized in the 1950s.

In 1952, the University of Transportation Engineering transferred its residence to Szolnok, in 1955 and 1956 moved to Budapest and was amalgamated with the University of Building Industry and the such united university got the name: University of Building Industry and Transportation. That University had three faculties: Civil Engineering, Architecture and Transportation. It had been located on the same site as the Budapest University of Technology; this also had three faculties: Mechanical Engineering, Electrical Engineering and Chemical Engineering. In 1959, the Faculty of Mining Engineering moved from Sopron to Miskolc, thus from this time, at the University of Heavy Industry training was carried on also at three faculties at the Mechanical, the Mining and the Metallurgical Engineering. In the same year, the Faculty of Surveying moved from Sopron to Budapest, and had been amalgamated with the Faculty of Civil Engineering of the University of Building Industry and Transportation. Thus, in Sopron, a university, of two faculties had been left: the University of Forestry and Wood Industry which, however, was put under the supervision of the Ministry of Agriculture, instead of the Ministry of Education. (Otherwise, the Ministry of Agriculture has two other universities, and a number of colleges where forestry engineering, agricultural and agricultural mechanical engineering, as well as horticultural engineering are being taught.)

On the whole, in the 60s there were ten technical university faculties in the country; six in Budapest, three in Miskolc and one in Veszprém. This situation remained unchanged also in 1968 when the two technical universities in Budapest had been united under the name Budapest University of Technology. On this occasion some changes had been made in the names of faculties.

The training period was four years until 1953, since then, it is five years.

The reform of education carried out in the first half of the 1960s has eventually been extended to the whole of Hungarian higher education. In the area of the higher technical education the most significant issue of the reform was the creation of a new type of institution, called higher grade technicum. By this, the Government desired

to establish an institution of transitional nature; its final purpose was to create a network of technical colleges. The first higher grade technicum had been established in 1962. In some years, their number grew to over forty. These high grade technicums had been organized by the industrial departments of the Government. According to the anticipation of the Government, the Ministry of Education would take over those high grade technicums having attained a certain standard of training and raise them to the rank of colleges, at the same time closing the other ones. The first technical college had been established in 1968.

In the technicums of higher grade, as well as at the technical colleges, the period of training is three years. During this, students are trained first to work out everyday problems of production, fabrication, construction, etc., by a rather practical training method. Besides the independent colleges there are also colleges under some of the universities; for example, our University has in the town Baja a hydraulic engineering college, and some of the university faculties grant college certificates to some of the students.

ORGANIZATION AND ACTIVITY REGULATION OF THE UNIVERSITY

(Abstract)

Direction and Central Administrative Organs of the University

§ 4

Central administrative functions in directing the University are performed by

—the Rector and Vice-Rectors,

—the Senate of the University,

—the Conference of Delegates of the Instructional Staff,

—the Rector's Council,

—the University Committees,

—the Chief Administration Officer.

§ 5

(1) The head of the University is the Rector designated from among the professors by the Senate, and on the proposal of the Minister appointed by the Government for a three year term. The Rector is assisted by three Vice-Rectors whose duties are prescribed by the Rector on the basis of the proposal of the Senate, including sharing of his own functions with the Vice-Rectors. The Rector designates his general assistant from among the Vice-Rectors who, at the absence of the Rector, excercises the full power of the Rector. He informs the Rector of the measures taken during his absence.

(2) The Vice-Rectors are selected for a three year term by the Senate from among the professors and associate professors on the proposal of the Rector and in agreement with the leaders of the social organizations of the University; their appointments are confirmed by the Minister.

(3) In order to extend the Rector's appointment for further three year terms the Minister may make propositions to the Government by taking into account the proposal of the Senate. The appointment of the Vice-Rectors may be extended by the Senate for further three year terms on condition of the affirmation mentioned in Section (2).

§ 9

(1) The Senate participates in the direction of the Uhiversity; in certain questions it has full right of decision, being otherwise an advisory committee making recommendations and expressing opinions.

(2) Members of the Senate entitled to vote are:

a) the *Rector*, as the president of the Senate;

b) the *Secretary:* designated by the Rector from among the members of the Senate;

c) members by virtue of their offices are:

the Vice-Rectors, the Deans, the Chief Administration Officer, the Secretary of the University organization of the Hungarian Socialist Workers' Party, the President of the University organization of the Trade Union, the Secretary of the University commitee of the Young Communists' League (KISZ), as well as the Pro-Rector of the University.

d) elected members of the Senate of the University are:

—three persons from each faculty, selected by the instructional staff, on the proposal made by the Deans in agreement with the social organs of the faculties, from among the faculty members from professors to assistants of full employment,

—a student from each faculty, elected on the basis of the proposal of the Executive Committee of the Young Communists' League (KISZ); at the conference of the KISZ-delegates;

e) Invited members:

—persons of public life, experts not belonging to the staff of University requested on the recommendation of the Senate by the Rector to assist in the work of the same; the number of these invited members may be as many as five;

—four non-instructional members of the University, as proposed by the University Executive Committee of the Trade Union, are to be invited.

§ 10

(1) In the sessions of the Senate the following participate with right of consulation: Head of the Rector's Office, managers of the Educational and the Personnel Offices, heads of the Offices of the Scientific and the International Relations, Director of the Central Library, President of the Athletic and Football Club of the Technical University (MAFC), as well as two delegates of the evening correspondence courses designated by the Rector on the proposal of the Deans for each academic year.

(2) In the session of the Senate the Ministry of Education is also represented.

(4) The Senate may hold public sessions on festive occasions. In the public sessions the Rector and Deans—in accordance with the tradition—wear the badges of their offices.

§ 13

(1) The sphere of authority of the Senate covers the following:

a) establishment of the organization, operation and other regulations of the University;

b) development of the educational policy of the University;

c) laying down the schedule of training and examinations;

d) approval of the new curricula of the faculties, sections and branches, establishment and dissolution of branches;

e) approval of instructional programs of the central educational units not belonging to the faculty organization, with the exception of programs of the Marxism—Leninism courses;

f) the appointment of the heads of departments excluding the heads of the Departments of Marxism—Leninism;

g) granting of the title of Honorary Doctorate of the University—on previous approval of the Ministry;

h) establishment of the educational program of the University in correspondence with the decrees and directives of the higher authorities;

i) determination of the system of basic requierements of postgraduate education;

j) approval of the scientific programs of the University;

k) approval of the personnel policy;

l) allocation of the budgetary funds among the faculties and central organs of the University, approval of the yearly account of budgetary management;

m) granting of the so called Golden, Diamond and Iron Diploma, as well as technical doctor's titles ("Dr. techn");

n) granting of university distinctions conferred on students;

o) approval of the operative plan of the University and that of the report on carrying out this plan;

p) all other affairs having been relegated by statutory provision or university regulation into the sphere of authority of the Senate.

§ 15

(1) The Senate makes proposals to the Ministry for inviting applications for professors' and assotiate professors' employment and for appointment of this staff, further for filling the offices of deans, institute directors and the office of the Chief Administration Officer.

(2) The Senate may submit proposals

—on granting distinctions and university degrees;

—to the Scientific Qualifying Committee that the university doctoral examination passed "Summa cum laude" be accepted for candidate examination, and that doctoral dissertation of outstanding value be accepted for a candidate dissertation;

—on the affairs affecting the educational and scientific work of the University.

§ 16

The Senate expresses its opinion

—on filling the rector's position;

—on establishment, amalgamation and dissolution of educational organization units;

—on establishing long range development programs of the University;

—on all other affairs in which the Minister or Rector asks for the standpoint of the Senate and which are in connection with the direction of the University.

§ 17

The Rector has to inform the Senate on the execution of resolution of the Senate and on all of his substantial measures. He has to explain the reasons of his measures if they deviate from the resolutions of the Senate.

§ 18

(1) Once a year, the Rector convenes the conference of the delegates of the instructional staff of the University. The date of the session is determined by the Rector in agreement with the leaders of the social organizations. On the basis of the Rector's account, the conference discusses all the activities of the University, as well as the most significant tasks to be completed in the future. The conference may submit recommendations to the chief officers, to the Senate and faculty councils.

§ 19

(1) To prepare and organize the completion of the administrative and economic functions in directing the University, the Rector may bring into existence a council, the Rector's Council.

(2) Members of the Rector's Council are: Vice-Rectors, the Chief Administration Officer, the Deans, representatives of the social organizations of the University, and on the invitation of the Rector, the chief officers of the central sections mentioned in paragraph 10.

(3) The Rector's Council is not empowered to make decisions. Its scope of function and working program is specified by the Rector.

§ 20

In order to elaborate analyses and recommendations requiring collective work, and to prepare decisions in such affairs, the Rector may establish training—educational, scientific committees and others dealing with international relations, economic questions, etc. This committees, however, may be of advisory nature only.

§ 21

(1) The economic management of the University is organized and directed by the Chief Administration Officer, directly subordinated to the Rector. However, he should take into account the decisions lying within the competence of the Senate. Without his preliminary consent, neither economic engagements charged to the University, nor measures affecting its financial interests may be undertaken.

(2) The economic administration of the University is managed by the Chief Administration Officer, the responsible leader of economic administration. In exercising this function he supervises the economic and financial activities of all of the organizational units having been engaged in this field.

Organs and Direction of the Faculty

§ 22

(1) The faculty is a self-administered organizational unit of the University, within whose framework training and education of graduate and post-graduate students and cultivation of sciences are performed. In given cases, it may educate students for college graduation as well.

(2) The faculty consists of the

a) instructional staff participating in training the students according to Section (1);

b) students receiving this training;

c) non-teaching staff performing functions for promoting and completing the educational and scientific work of the faculty.

§ 23

Tasks in connection with the direction of the Faculty are completed by

—the Dean and Vice-Deans,

—the Faculty Council,

—the Conference of the Instructional Staff of the Faculty,

—the Dean's Council and

—the faculty committees.

§ 24

(1) The head of the faculty is the Dean who is the chief of the instructional and the non-teaching staff, and the students of the faculty.

(2) The Dean in performing his functions in directing the faculty, by taking into consideration the proposals and statements of organs authorized in this respect, takes decisions as a responsible leader of the faculty, with the exception of affairs having been relegated to the competence of superior authorities and the Faculty Council.

(3) The Dean is appointed from among the professors and assotiate professors of the faculty for a three-year period by the Minister. The proposal is submitted by the Rector in agreement with the leaders of the social organizations of the University and by taking into consideration the opinion of the Senate and the faculty.

(4) On the proposal of the organs mentioned in Section (3), the appointment of the Dean may be extended several times to further three-year period.

§ 25

(1) The Dean may share his functions with two to five Vice-Deans. The duties of each of the Vice-Deans are prescribed by the Dean, who should take into account the statement of the Faculty Council in doing this. The General Vice-Dean is

appointed by the Dean from among the Vice-Deans who, in the Dean's absence, has the full authority.

(2) The Vice-Deans are elected for a three-year period by the Faculty Council. The proposal is submitted by the Dean in agreement with the leaders of the social organizations of the faculty; their appointment requires the confirmation of the Rector.

(3) The appointment of the Vice-Deans may be extended several times to other three-year periods depending on the standpoint of the Faculty Council.

§ 27

(1) The Faculty Council participates in the administrative activities of the faculty; it is, in certain questions, endowed with power of decision, being otherwise a consulting and advisory corporation.

(2) *Memberts of the Faculty Council endowed with voting rigths are as follows:*

a) Chairman: the Dean,

Secretary: a member of the Faculty Council designated from among the faculty members by the Dean;

b) members by virtue of their office:

the Vice-Deans, heads of the teaching organizational units of the faculty, one leading professor of each department of the social sciences lecturing on the faculty, the Secretary of the faculty organization of the Hungarian Socialist Workers' Party, the Secretary of the faculty organization of the Trade Union, the Secretary of the faculty organization of the Young Communists' League, as well as the Pro-Dean of the faculty;

c) elected members:

—one person per 30 to 50 faculty members maintaining the ratio among the instructional categories, excluding members *ex officio*. Elected members are designated by the faculty members from among themselves by secret balloting at a general meeting;

—five to seven students elected on the proposition of the faculty Executive Committee of the KISZ, at the delegates' Conference of the students;

d) invited members:

not more than three outstanding external specialists are to be invited by the Dean, further, one or two non-teaching persons of the faculty delegated by the faculty Trade Union Committee.

§ 28

(1) In the sessions of the Faculty Council the following participate with right of consulation: the Heads or representatives of Departments lecturing on the faculty, but belonging to the organization of another faculty, the Director of the Dean's Office and that of the faculty residence halls, the Director of personnel affairs or his representative, further, the representative of the Minister of Education, and these Ministers interested in the field of education at the faculty, of organizations of national authority, the Rector of the University or his delegate, and invited by the Dean for a year, one student from each of the evening and correspondence courses.

§ 32

(1) The Faculty Council elects the Vice-Deans from among the professors and associate professors belonging to the faculty according to the point *j)* of Section (2), § 6; the election will be valid only after the approval of the Rector.

(2) The Faculty Council has the right of decision in the following affairs:

a) curricula of the faculty, establishment and dissolution of sections and branches;

b) approval of the programs of courses comprised by the curricula, with the exception of the courses of Marxism—Leninism, further, designation of electives;

c) edition and publication of Faculty Regulations;

d) distribution of the pecuniary means originating from any sources, among the instructional and other organizational units of the faculty, except those already allocated for a particular purpose, and those sums for which the right of decision is in the competence of the Dean;

e) to control the use of pecuniary means at the disposal of the Dean or instructional units and other organizations;

f) decision on utilization of other materials (machines, instruments, etc.) put at the disposal of the faculty, except, if given for a specified purpose;

g) decision on the utilization of buildings, premises and constructions;

h) working out of the long range development plan of the faculty, including the personnel policy, further, assuming standpoints in questions affecting the training, educational and scientific work or economic and personal conditions;

i) in questions of instructional organization and methodology, basically affecting the instructional-educational work;

j) validation of diplomas received at universities in foreign countries;

k) decisions in connection with the actions for attaining and awarding doctoral degrees assigned to its authority;

l) approval of the working program of the faculty, acceptance of the report on this program and of its execution.

§ 34

(1) The Faculty Council submits proposals to the Senate

a) on appointment of the Department Heads, Directors of faculty institutes;

b) on awarding honorary degrees and certificates of merit;

c) on inviting applications for professoriates and associate professoriates of instructional organization units belonging to the faculty;

d) in connection with filling the professor's and associate professor's positions;

e) on the system of postgraduate and advanced education;

f) on the acceptance of the outstanding doctoral dissertations as candidate's dissertations;

g) on awarding distinctions to students.

(3) The Faculty Council expresses its standpoint concerning

a) the proposal on the appointment of the Dean;

b) establishment, amalgamation and dissolution of instructional units at the faculty;

c) inviting applications for higher instructional positions;

d) the plan of development and budget of the University;

e) the report on the activity of the faculty to be submitted to the superior authorities;

f) the drafts of university regulations;

g) the proposals relating to the scholarships and studies of the instructional staff in foreign countries, lasting for more than three months;

h) awarding students the Scholarship of the Hungarian People's Republic.

§ 35

(1) In case the members of the Faculty Council outnumber 31, they must elect a Presidency from among the members of the Council.

(2) The Faculty Council may empower the Presidency to take decisions to submit proposals, and to give opinions in the name of the Council; but may not transfer the right

—of decision, proposal and expressing opinions in personal issues, except in giving opinions in connection with applications for obtaining positions of assistant professors;

—of approval of establishment or dissolution of faculty curricula, sections or branches;

—of distributing the money put at the faculty's disposal and the right of decision on utilizing other material means;

—of issuing faculty regulations.

§ 36

The Presidency performs the tasks conferred on it in the period between the sessions of the Council within the specified sphere of authority. On its measures taken, or decisions, if any, it has to submit a report to the Faculty Council at the next session, if required, in writing. The Faculty Council may cancel the measures or decisions of the Presidency if they violate the provisions of law, decrees of superior authorities, University or faculty regulations.

§ 37

Chairman of the Presidency of the Faculty Council is the Dean having the same rights as the President of the Faculty Council. The Presidency should have nine to eleven members, and its composition reflects that of the Faculty Council.

§ 38

(1) The consulting corporation of the instructional staff of the faculty is the meeting of the faculty members. Once a year, on the basis of the Dean's report, the meetting discusses all activities of the faculty and the most important tasks to be fulfilled in the future. The date of the session is designated by the Dean, together with the other leaders of the faculty and its social organizations. The titular professors and titular associate professors also may take part in the meeting. The meeting—if necessary—may also be convened to discuss other programs.

(2) The meeting may submit recommendations to the Dean, Rector, Faculty Council and to the Senate.

§ 39

For the preparation of performing tasks in connection with the direction of the faculty, the Dean may form a council, the Dean's Council, consisting of the Vice-Deans,

leaders of the social organizations of the faculty with the participation of the representative of personnel affairs. The Dean's Council is an advisory organization, its sphere of function and working program being established by the Dean.

§ 40

For the arrangement of problems having significance from the viewpoint of the function of the faculty, for working out proposals, analysing questions and making decisions on problems of such nature, the Dean may establish standing or *ad hoc* committees for attending to instructional, scientific, international, economic, etc. affairs. Composition and establishment of working programs of these committees fall within the competence of the Dean.

Instructional and Other Organizational Units

§ 41

(1) The instructional, educational, scientific and creative work, as well as other associated functions performed at the University are carried out by the instructional organizations: departments, faculty institutes and university institutes.

§ 42

(1) The *department* is the fundamental instructional and educational organization unit of the University instructing its own branch of science at one or several faculties in conformity with the approved curricula, programs and schedules of instruction.

(2) The department is, within its own framework, an independent, selft-administering unit whose activity is directed by the Department Head on the principle of the "one-man responsibility".

(3) The faculty department is, in general, as an organizational unit, the part of the faculty instructing its students. The heads of the faculty departments bear the responsibility of their work to the Dean and Faculty Council, whilst the heads of university departments not belonging to faculties, are responsible to the Rector and to the Senate for their work. Departments not belonging to, but lecturing on the faculty, are obliged to conform to the directives given by the Dean.

(4) Departments may be members of a university or faculty institute.

(5) The Department Head is appointed by the Senate on the proposal of the Faculty Council for a period of 1 to 5 years. The appointment may be prolonged. The Department Head may submit a proposal for the appointment of a permanent deputy to be appointed by the Dean or, in the case of university departments, by the Rector. In the absence of the Department Head, the deputy fulfills the functions, the rights and duties of the Department Head.

§ 44

(1) The *institute* is a self-administrative organizational unit, consisting of several departments or groups, established for achieving more effective instructional, educational, and scientific work. The most efficient utilization of the pecunary and material means is ensured by the common library, common stock of instruments, common workshops, common students' and research laboratories, common economic management and, if the location of the departments permits, common administration, common technical and auxiliary staff working for all of the departments of the institute.

a) The Director of the *faculty institute* is a subordinate of the Dean, he is a member of the Faculty Council.

b) The Director of the *university institute* is a subordinate of the Rector.

(2) The Director of the faculty institute is appointed on the recommendation of the Council and Senate, and the Director of the university institute on the recommendation of the Senate, by the Minister for a 1 to 5 year period. The appointment may be prolonged.

(3) The detailed regulation of the organization and activity of the institutes is approved by the Minister on the proposal of the Senate.

§ 48

For the accomodation and education of the students, the University maintains, in the framework of the faculty organization, residence halls governed and regulated by special rules.

§ 49

The University has a library network to provide professional literature required for study and scientific work of the professors and students. The core of the library

network is the Central Library, its member libraries being the faculty, the department, and the institute libraries.

The Central Library in the collection of professional literature of scientific fields conforming with faculties of the University and corresponding to the directives given by the Minister; it is the professional library of mathematics and physics of national interest, scientific library of the chemistry and educational sciences. Organization and use of the library is controlled by special regulations.

Curricula and Courses

§ 50

(1) In order to develop, and maintain an up-to-date standard of educational efficiency, as well as for the sake of due consideration and optimum utilization of the personnel and material potentials, the University establishes its curricula and programs within the limits of the instructional and educational policy, curriculum principles, and other requirements laid down by the Minister.

(2) The curriculum principles decided by the Minister comprise the purpose of professional training, the courses and weekly hours of the ideological education, the list of the groups of sciences the study of which is compulsory, the proportions of the fundamental and professional courses as well as that of theoretical and practical training, the highest number of the weekly hours, the requirements of the state examination and other examinations being of fundamental significance according to the nature of the specialty.

(3) The curricula determine the order of instruction of each specialty. In the evening and correspondence education, the standard of requirements should be the same as those of the day courses. The curricula comprise the following details:

a) names of the university, faculty, specialty and branch;

b) names of all of the compulsory courses, numbers of weekly hours of their theoretical and practical training broken down according to term time;

c) names of the courses the choice from which is obligatory, as well as the numbers of weekly hours of other theoretical and practical training broken down in term time;

d) nature, length and time of summer practices in the industry;

e) forms and time of examinations;

f) schedule of the school year (term, examination period, summer practices, vacation);

g) prescriptions concerning the diploma work;

h) subject matter of the final state examination and detailed conditions of admittance to state examination.

(4) The program outlining the subject matter of the course, related closely to the curriculum, is a document worked out on the basis of the purpose of training.

The program contains:

a) name of the course;

b) short description of the subject matter;

c) number of hours of instruction, specifying the proportions of the various instructional forms (lecture, seminar, laboratory, etc.);

d) study-aids (text-books, lecture notes, thesaurus of examples, other compulsory literature, etc.) required and available.

The programs are common for all of the three forms of education (day, evening and correspondence).

Staff of the University

§ 51

(1) The instructional, educational and scientific work and all those connected with them, are performed, in general, by the instructional personnel appointed or employed to posts* established at the departments.

(5) On the proposal of the University, the Minister may award, on the basis of special prescriptions of the relevant regulations, to the outstanding representatives of scientific life—if they deliver lectures or advance in some way or other the training-educational work at the university—titles of Titular Professor or Titular Associate Professor.

§ 53

The consulting organization of the department is the departmental meeting. Departmental meetings should be held regularly, in term time at least once in every month. The departmental meeting supervises the activities of the whole of the department, the instructional, the educational, and the scientific work of each of the department members, discusses the most significant tasks of the next period and establisheds programs for them.

At the meeting, the department head informs his staff on the decisions of the leaders and corporations of the University and the faculty, so permitting them to express

* Leading instructor's posts: Professor and Associate professor (in this country: docens)
Assisting instructor's posts: First Assistant (in this country: adjunktus) and Assistant

opinions on the pedagogic, ideologic, scientific, and other significant problems affecting the activity of the department. The meeting is authorized to make propositions to the authority (Senate) of the University for improving the standard and efficiency of the scientific work.

Rights and Duties of Students

§ 56

(2) The students of the University pursue their studies on the day, evening, and correspondence courses.

(3) Only those applicants may be admitted to the University who are citizens of our country, and who, on the basis of their abilities, erudition, attitude and state of health, may be supposed that they can graduate and work effectively in their selected profession. In respect of the conditions, procedure of admission of foreign citizens, special rules of law dispose.

§ 59

(1) Students should fulfill their duties through systematic studies, to the best of their knowledge, with disciplined behaviour, being ready to help one another; they have to assist at the prescribed pursuits, and to co-operate in performing the tasks of the study groups.

(2) The students should conform to the provisions of law and dispositions of the leaders of the University. In the case of omission of their duties, disciplinary action may be taken against them according to the disciplinary regulations.

§ 60

The students are entitled to take advantage of all the benefits and sponsoring personnel established by the statutory provisions and university regulations. Accordingly, the students

a) are obliged and entitled to participate in classes and the related activities at the University;

b) may consult with the instructors, may make use of the central library and of those established at the faculties and departments;

c) may take part in the cultural and reacreational activities of the University organizations;

d) may not work in cultural societies and play for clubs outside the University unless permission is granted by the Dean (this restriction for day students only);

e) may be favoured the admission the residence hall and be awarded benefits (for example: reduction of tuition fees, scholarship, social assistance), conforming with the orders of the Minister and the Rector's dispositions regulating their execution;

f) may directly apply to the departments with all problems connected with their studies and graduation;

g) may participate, conforming with the conditions of the Minister's order, in the work of the Students' Study Circles, in the scientific work of the departments and research institutes collaborating with the University, and in competitions announced for students;

h) may enter into agreements for students' grants offered by any organization, conforming with the conditions specified by the decree of the Minister;

i) may be rewarded special favours on the basis of their outstanding achievements;

j) may take jobs on conditions specified by the Educational and Examination Regulations;

k) may submit to the leaders of the University, Faculty or the apropriate departments, as specified in the Educational and Examination Regulations, a complaint or an appeal against measures disadvantageously affecting their studies or in connection with questions harmfully affecting their living conditions. On the complaint or appela, the answer should be given *in merito.*

§ 64

The University may confer fifty, sixty or seventy years' diploma (the Golden, Diamond and Iron Diploma respectively) to its alumini. The granting of such a diploma is prescribed by special regulations.

APPENDIX TO THE ORGANIZATION AND ACTIVITY REGULATION OF THE UNIVERSITY

To § 5 Rector: Dr. **Imre Perényi,** Professor, Doctor of Technical Sciences, Head of the Department of Urban Planning.

Vice-Rectors:

Dr. **András Lévai,** Professor, Doctor of Technical Sciences, Head of the Department of Thermal Power Stations,

Dr. **István Benke,** Professor, Candidate of Economic Sciences, Head of the Department of Political Economy,

Dr. **Radomir Lásztity,** Associate Professor.

To § 22 Faculties of the University in the sequence of their establishment:

Faculty of Civil Engineering
Faculty of Mechanical Engineering
Faculty of Architectural Engineering
Faculty of Chemical Engineering
Faculty of Electrical Engineering
Faculty of Transportation Engineering.

To § Dean of the Faculty of Transportation Engineering:

Dr. **István Turányi,** Professor, Doctor of Technical Sciences, Head of the Department of Transport Operation

Vice-Deans: Dr. **Gábor Szász,** Professor, Doctor of Mathematical Sciences, Head of the Department of Mathematics,

Dr. **Lajos Ilosvai,** Associate Professor, Candidate of Technical Sciences,

Dr. **Károly Kurucz,** Associate Professor, Candidate of Technical Sciences.

To § 42 Departments of the University:

Central departments:

A) *Departments of Social Sciences*

Philosophy
Industrial Economics
Economics of Transport and Building Industry
Pedagogy
Political Economy, I and II
Scientific Socialism, I and II

B) *Department of Physical Education*

Faculty of Civil Engineering

Steel Structures
General Surveying
Geology and Mineralogy
Building Materials
Advanced Surveying
Photogrammetry
Geotechnics
Experimental Physics
Building Construction
Mathematics
Mechanics
Road Construction
Reinforced Concrete Structures
Railway Construction
Hydrologic Engineering
Water Resources

Faculty of Mechanical Engineering

Descriptive Geometry
Fluid Mechanics
Electrics
Building Installations I
Precision Mechanics and Optics
Machine Parts
Heat Energetics
Thermal Power Stations
Thermal Engines
Manufacturing Technology
Agricultural Machinery
Mechanics
Textile Technology and Light Industry
Chemical Machinery and Agricultural Industries
Hydraulic Engines

Faculty of Architectural Engineering
Descriptive Geometry
Building Operations
History of Architecture
Building Installations II
Building Constructions
Industrial and Agricultural Building Planning
Public Building Planning
Residential Building Planning
Drawing and Form Knowledge
Strength of Materials and Bearing Structures
Urban Planning

Faculty of Chemical Engineering
Applied Chemistry
General and Analytical Chemistry
Food Chemistry
Physical Chemistry
Technology of Chemistry
Agricultural Technology of Chemistry
Technology of Plastics and Rubber Industry
Organic Chemistry
Organic Technology of Chemistry
Inorganic Chemistry
Machinery of Chemical Industry
Chemical Operations

Faculty of Electrical Engineering
Nuclear Physics
Automation
Electron Tubes and Semiconductors
Theory of Electricity
Physics
Process Control
Mechanical Engineering
Production Technology
Mathematics
Microwave Communication
Instruments and Measurements
High Voltage Technics and Equipments
Wire Communication Technics
Wireless Communication Technics
Electric Machines
Materials for the Electrical Industry
Electrical Power Station

Faculty of Transportation Engineering
Aero- and Thermotechnics
Building and Material Handling Machines
Machine Parts
Transport Operation
Electricity and Automation
Mathematics
Mechanics
Machine Manufacturing Technology
Automobiles
Railway Vehicles

To § 44 At present only one institute is in operation; that is the Institute of Languages

To § 50 At present, instruction takes place at the University in the following specialties and branches:

1. *Faculty of Civil Engineering*
   - 11 Construction Engineering
     - 111 Underground and Bridge Construction
     - 112 Building Construction
   - 12 Road and Railway Engineering
   - 13 Hydraulic Engineering
     - 131 Hydraulic Fixtures
     - 132 Water Supply and Sewerage
     - 122 Agricultural Hydraulic Engineering
   - 14 Surveying
2. *Faculty of Mechanical Engineering*
   - 21 Machine Production
   - 22 Power Engineering
     - 221 Heat-Power Engineering
     - 222 Building Installations
     - 223 Fluid Machinery
   - 23 Agricultural Machinery
   - 24 Textile Machinery
   - 25 Chemical Machinery
     - 251 Chemical Machinery
     - 252 Industry Machinery
3. *Faculty of Architectural Engineering*
   - 31 Architecture
4. *Faculty of Chemical Engineering*
   - 41 Organic and Biological Chemical Industry
     - 411 Organic-Synthetic Chemistry
     - 412 Plastics and Synthetic Fibre Industry
     - 413 Pharmaceutical Industry
     - 414 Light Chemical Industry
5. *Faculty of Electrical Engineering*
   - 51 High Voltage Engineering
     - 511 Electric Power Stations
     - 512 Electric Engines and Equipments
     - 513 High Voltage Mechanization and Automation
   - 52 Telecommunication
     - 521 Communication

522 Broadcasting
523 Vacuum and Semiconductor Technics
524 Microwave and Transmission Technics
53 Instrumentation and Control Technics
531 Electronic Instruments
532 Instrument Production
533 Measurement and Control Technics
54 Communication and Instrumentation Industry and Technology
541 Equipment Production
542 Parts Production

6. *Faculty of Transportation Engineering*

61 Transportation
611 Transportation Technology
612 Transport Systems Design
62 Automotive Engineering
621 Automobiles
622 Railway Vehicles
63 Building and Material Handling Machines
631 Building Machines
632 Material Handling Machines

GENERAL REGULATIONS

Admittance to the University

The Ministry of Cultural Affairs yearly publishes a booklet entitled, "Information on Hungarian Institution of Higher Education" which enumerates these institutions informing about the diplomas obtainable at them, the number of students to be admitted, kinds of entrance examinations, etc.

In admitting the applicants, their ability, preparedness, aptitude, moral and political behaviour will be taken into consideration. The judgement on admission takes place at the entrance examination where also the secondary school achievement, as well as the character of the applicant, will be taken into account.

The entrance examination consists of three parts:

—written examination,
—oral examination,
—interview.

The subjects of the entrance examination held at the technical universities are mathematics and physics; thus two written and two oral examinations have to be passed. To the number of points obtained at the entrance examination another number of points are added, the amount of which depends on the secondary school achievement. The admission quota is filled with applicants obtaining the highest number of points. In the case of equality in points, preference should be given to those whose parents are manual labourers, or who have fulfilled their military service and who, after passing the secondary school, spent at least a year in practical work.

Applicants who achieved a good standing at one of the National Secondary School Competitions may be admitted to the University without entrance examination.

Educational and Examination Regulations

The applicant, in his request for admission, chooses a speciality, i.e. a curriculum. The curricula are fixed. However, most of the curricula contain branches from which the applicant selects one. Only a few electives occur in the curricula.

The student gets at his enrollment a registration book in which he must enter, at the beginning of each term, the courses prescribed by the curriculum. At the end

of the terms, the examination grades are entered by the examiners. Some of the courses may extend through several terms.

The school year begins about the first of September. Lectures of the first term are held until the middle of December; this is followed by a period of examinations of 6 to 7 weeks. The lectures of the second term commenced on the first of February, and the examinations on the 20th of May, or thereabout. The school year closes on the 30th of June. The curricula may prescribe summer practices, but at least one month vacation should be ensured for the students.

Principally, the students must attend the classes, however, their presence is checked only in the first three years.

At the beginning of the term, the instructors post the requirements which should be satisfied by the students in connection with the courses (for example: completing assignments, writting tests, etc.). At the end of the term, the instructors enter their signatures into the registration book of those students only who fulfilled the requirements. Without these signatures the students are not allowed to take part in the examinations. For a few of the courses the signature itself is sufficient, but the curriculum prescribes examinations for most of the courses. It is the instructor who chooses the form of the examinations; this can be written or oral, or the combination of both.

The curriculum may prescribe also so-called "rigorous examinations" for two or the most important subjects of basic nature. These are such examinations at which the student must account for the entire material of a course lectured through several terms, although having passed examinations at the end of each term for the respective parts.

For certain courses the grade given is not established on the basis of an examination but on the basis of the results permanently produced at the seminars. Such a course is, for example, a foreign language.

Special grades are granted to students for the independent work prescribed by the program in connection with certain courses, for example, for the preparation of a term-project or study. Thus, it occurs that for the same courses two grades are granted; one on the basis of the examination and another on the basis of a project or study.

Examinations may be tried only in the regular period of examinations.

The date of the examination is fixed by the instructors in agreement with the youth organization. The students independently schedule their examination period and choose the dates of their examinations.

If at an examination the student's knowledge is deemed insufficient, the exam may be repeated at the most twice for the same course in the examination period. Students may repeat exams of no more than half the total courses taken. A student who repeats examinations more than 12 times, in the first four terms, must discontinue his studies.

The student who can not pass his examinations successfully during the examination period must repeat the term's work or, if he has already repeated one of the terms, must discontinue his studies.

Five grades are in use for indicating scholastic achievement:

5=excellent
4=good
3=fair
2=passed
1=insufficient.

At the end of the term, the grade average is calculated, since this affects the tuition fee, scholarship, etc.

The duration of education is five years (ten terms).

There are faculties at the universities where, after the second year, the students are classified into two groups. The group of the more talented students continues studying further three years (i.e., altogether for five years). The other part of the students continues its studies only for one further year according to another curriculum. At the end of the three years they qualify as college fellows.

By finishing the five-year study, the students prepare their diploma works, and pass their state examinations before the Examination Board. The state examination is composed of three important courses; two are prescribed by the curriculum, the third is connected to the subject-matter of the student's diploma work.

Tuition Fee

The sum of the tuition fee depends on the grade average and social situation of the student.

Students, whose grade average is higher than 3.5 do not pay any tuition fee. The highest possible tuition fee is 1000 forints per term. (This is paind by students repeating the term, in whose family the rate of income for a family member is at least 1500 forints.) In general, the average tuition fee is 300 forints.

Scholarships, Subsidies

There are two kinds of scholarships:

—state scholarships granted by the University,

—company scholarships offered by some undertaking or institution.

The amount of the scholarship depends solely on the scholastic achievement.

Every student whose achievement expressed in the grade average is higher than 3.5 is given a scholarship, the minimum of which is 100 forints per month, the maximum

—in the case of state scholarships, 500 forints per month,

—in case of company scholarships, 900 forints per month.

In this latter instance, the student enters into a work contract with a company for at least as many years as he was given the scholarship. The students receive the state scholarship automatically, while company scholarship is offered and sould be applied for. The students may partake in only one kind of scholarship.

Students who give evidence of outstanding progress in their studies, are given a special scholarship, the so-called "Scholarship of the People's Republic" amounting to 1000 forints monthly.

The students may also be granted social assistance; the amount depends solely on the social condition of the student. Social assistance may be granted to students in two forms:

—pecuniary subsidy, at most 300 forints per month,

—allowances on fees of residence hall and/or meals.

For the full-accomodation in residence hall, 800 forints must be paid by students who do not need social assistance. Depending on the social condition of the student, this sum may be reduced to 50 forints.

At present, 80 per cent of the students are given a scholarship or social assistance, or both. For instance, a student of a poor and/or large family, having a grade average higher than 4.5, receives monthly 500+300=800 forints cash and does not pay tuition fee and pays only 50 forints for full board and the residence hall. If the applied for a grant offered by an organization, the sum he may receive, could amount to 1200 forints.

It should be noted that the expenses of students connected with their studies are not significant. Prices of the text-books are extraordinarily reduced; thus all of the books for a term may be bought a total of 100 to 200 forints.

Evening and Correspondence Education

Employed women and men wishing to graduate from the University, may request their admission to the evening or correspondence education. (Such courses do not exist at every university, thus; for example, at the Medical University there are none.) These applicants participate in entrance examination along with the applicants for the day education, however, the scholastic achievement obtained in the secondary school is not taken into consideration.

The evening education is organized for those domiciled in the city of the University and can attend the university lectures for three or four occasions per week. Out-of-town students may take part in correspondence education; they must participate only at university conferences once a month for one or two days.

The subject mater prescribed by the curriculum for evening and correspondence education is the same as that for the day courses, however, the duration of evening and correspondence education is six years instead of five, that is, the number of the terms is 12.

The Government grants significant benefits for the students of the evening and correspondence education. The working day of the evening students on class days' is shorter by two hours, but the wages for this time are paid. To allow the correspondence students to participate at the university conferences they get thirty days paid holdays per year, as well as two weeks paid holidays for the examination period.

Continuing Education

Three kinds of continuing education are customary at the University:

—single courses,
—advanced study: two-year study with curriculum and examinations,
—achievement of the University Doctor's title.

Single courses are organized by the Office of Continuing Education. Every term more than 300 different courses are offered. There are neither entrance nor final examinations. The students, after completing this course, do not get certificates.

Advanced study is arranged according to fixed curricula schedulded for two years. Courses are organized by the departments. Instruction takes place in the evening or correspondence courses; the students get reduction in work hours at their employment. The study is closed by a state examination; graduating students may use the title: "Specialized Engineer" or in the case of a curriculum of economical character: "Economy Engineer".

For the achievement of the *University Doctor's title*, the work is commenced by submitting the draft of the doctoral dissertation. On the proposal of the department, the Faculty Council decides on the acceptance of the draft. The subject matter is worked out in the form of a dissertation. The dissertation will be accepted by the Faculty Council which assigns the subject matter of the Doctor's Examination which is taken before a Board. If the doctorant participated in a two-year advanced study with outstanding success, the examinations passed in this study will be taken into account.

On the basis of the accepted dissertation, the Faculty Council makes a proposal to the Senate on conferring the University Doctor's title upon the doctorant. The gradu-

ation takes place with full solemnity. The doctors of technical universities may use the title: "Dr. techn." beside their names.

To outstanding Hungarian and foreign scientists and specialists, the Senate may award the title: Honoray Doctor of the University.

The doctors who achieve the University Doctor's title "Summa cum Laude", and apply to the Scientific Qualification Committee of the Hungarian Academy of Sciences for a *scientific degree*, will receive the moral support of the University.

In Hungary there are two of the above mentioned scientific degrees:

—Candidate of Sciences,

—Doctor of Sciences.

The latter should not be confused with the University Doctor's title. For obtaining the candidate's degree, examinations should be passed and a dissertation submitted. In order to work out the dissertation, it is possible to obtain a scholarship for three years. The scholarship, in general, is the sum of the earlier salary. For these three years the scholarship holder (aspirant) is sent to one of the research institutes or universities. For the degree of Doctor of Sciences, the Candidates of Sciences may apply by submitting another dissertation of higher scientific standard, without examinations. At this stage, performance of significant scientific activity is required. The right of awarding the scientific degrees is reserved for the Scientific Qualifying Committee. As a matter of course, a number of the members of this Committee are university professors.

From among the Doctors of Sciences, the most outstanding scientists will be elected as corresponding or ordinary fellow members by the Hungarian Academy of Sciences.

EDUCATION ON THE TRANSPORTATION ENGINEERING FACULTY

Aims of Instruction

Curricula are established by the faculties, and approved by the Senate. The students select one of the curricula at the beginning of their studies. Besides the compulsory courses there are only a few which are optional.

Students registered at the Faculty of Transportation Engineering may chooses from among three curricula. All of the curricula are prepared in two alternatives, thus training is branched in six directions.

In other words, instruction at the Faculty takes place in three specialities, and the specialities have two branches each.

Transportation (K)

Transportation Technology (KT)

Transport Systems Design (KR)

Automotive Engineering (J)

Automobiles (AG)

Railway Vehicles (VG)

Building and Material Handling Machines (É)

Building Machines (ÉP)

Material Handling Machines (AM)

The purpose of instruction in each specialty is as follows:

I. Specialty of Transportation

The purpose of this specialty is training *transportation engineers* who are engaged in designing, developing and managing transport equipment and operation and process systems respectively, and are also capable to design and improve technologies and systems of the flow of materials, energy, and information, as well as maintenance and repair work.

The students receive, besides the advanced basic training in natural and social sciences, thorough knowledge, mainly in the various fields of mechanics,machine

parts, heat and fluid technics, electrotechnics, as well as control technics; and having obtained the necessary information in operating, construction, service conditions and trends in development of transport facilities and equipments, they will be trained in the fundamental vocational knowledge in technics, operating system-technics, economics and management of transportation; the students acquire fundamentals of the scientific way of thinking.

Within the specialty there are two branches, one of which is oriented towards operations and management of transportation, the other examines transportation as a complex system by mathematical and cybernetical methods:

Transportation Technology

Transport Systems Design

The *transportation engineers* graduating from this specialty are employed in planning, research, technical management primarily by transport services, industrial enterprises, design and research insitutes, national and regional administrative organizations.

2. Specialty of Automotive Engineering

The purpose of education at this specialty is to train *mechanical engineers* to be engaged in designing, developing and manufacturing machines, particularly vehicles, who are also capable of solving problems arising in operating, maintenance and repairs. Besides advanced fundamental training in natural and social sciences, the students acquire thorough knowledge, first of all, in the various fields of mechanics, machine parts, thermal and fluid technics, electrotechnics, machine production, maintenance and repairs, applying it to the vehicle and its engine, as well as to other mechanical equipments, and acquire all knowledges necessary for designing, manufacturing, improving, and testing machines. They achieve practice in creative work, acquiring meanwhile the fundamentals for the scientific way of thinking.

The training, extending primarily to two kinds of vehicles, has two branches:

Automobiles,

Railway Vehicles.

The *mechanical engineers* graduating from this specialty are employed in design, construction, research, production and technical management at developing and research institutes, firms of machine industry, particularly in design bureaus of engine and vehicle factories, construction and sections, as well as at transport companies and services, vehicle repair shops.

3. Specialty of Building and Material Handling Machines

The purpose of education at this specialty is to train *mechanical engineers* skilled in the design and production of machines of building and material handling processes, and in designing and developing equipment as well as process systems, in solving problems occuring in operation, maintenance and repairs of machines and equipments. Besides advanced fundamental training in natural and social sciences, the students acquire thorough knowledge, mainly in the various fields of machines, machine parts, thermal and fluid technics, electrotechnics, production and repairs of machines as well as in process designing and system technics. Becoming acquainted with machines, equipments and process systems, they gain information necessary for planning, production, testing, supervising operations, maintenance and repair work, as well as for designing, developing and directing equipment and process systems. They meanwhile acquire the fundamentals of the scientific way of thinking.

Conforming with two kinds of production processes, the specialty consists of two branches:

Building Machines,

Material Handling Machines.

The *mechanical engineers* graduating from the branch of Building Machines, are in general, employed in machine design, mechanization and system planning, organization and technical management at designing and developing bureaus, research institutes, mechanical, technological maintenance and repair departments of enterprises of civil engineering and building industry.

Mechanical engineers graduating from the branch of Material Handling Machines are employed in machine design, mechanization and system planning, organization and technical management by bureaus, research institutes and factories engaged in designing and developing material handling machines, technologies, systems of processes and equipments, and by the most diverse kinds of undertakings having problems with material handling, loading, storage and packing.

Curricula

The courses of the three specialties are shown in the tables.

Meanings of the figures and letters standing before the titles of courses are as follows:

—The first digit indicates the term in which the lecture of the course in question begins. The other digits are simple serial numbers.

—The letters, introduced in the chapter "Aims of Instruction", indicate all the specialties and branches to which that course relates.

The tables contain ten series in conformity with the ten terms. The digits in the series indicate the *standard hours* for each course.

The *standard hours* define the amount of the subject matter of the course in question.

The standard hours are, at the same time, the upper limit of the actual contact hours to be installed in the time-table. This means that on a course, for example, of four standard hours, in the case of an easily comprehensible course, only three or perhaps two hours are lectured per week, instead of four; however, the amount of the subject-matter required to learn is four standard hours.

In the table there are numbers of four digits, each digit has a place value representing the following:

1000=one standard hour of lecture or recitation

0100=one standard hour of seminar or computation of problem

0010=one standard hour of laboratory or gymnasium

0001=one standard hour of drawing or design.

Example. *Introduction to Engineering: 4210.* In this course an amount of material of four standard hours is taught in the form of lectures, probably (at most) of four hours. The course is lectured for all of the first year students in a large auditorium. The students aided by instructors, working out examples and discussing difficulties, review the delivered material in samall study groups. These seminars are attended by 20 to 30 students. In this course two seminary hours are schedulded in the curriculum. To this course one standard hour of laboratory but no drawing exercises are added.

The amount of standard hours is uniformly 36 in each semester.

Generally, at the end of each term, the students are granted grades for each course. Grades are established mainly at examinations. The examinations may be oral or written, or both; this depends on the instructor. For the elaboration of drawing or design problems, grades are granted independently of the grade received at the examination.

Studies are completed after preparing a diploma work and passing a state examination. State examinations cover the subject matter of three courses, two of them are indicated in the table (AV), the third one being connected to the subject of the diploma work.

Training in the evening education takes six years instead of five; accordingly, the curriculum of the evening courses covers 12 semesters. The courses are the same as those at the day education with the exception of the first three courses of the day education, which have been omitted of the curriculum of the evening education. The content and extent (standard hours) of the courses also are the same as those of the day education but the subdivision into semesters differs. Since the compulsory

Transportation

Day courses

Courses	I		II		III		IV		V	
	1	2	3	4	5	6	7	8	9	10
Gymnastics	0020	0020	0020	0020						
Foreign Languages	0200	0200	0200	0200	0200	0200	0200	0200		
Military Knowledge	0200	—	—	—	—	—	0200	—	—	0200
Work Safety										2000
Political Economics	1100	1100	1100	—	—	—	—	0200		
Philosophy					2200	—	—	—	0200	
Scientific Socialism						2200	0200			
101-KJÉ Introduction to Engineering	4210									
102-K Chemical Technology	4000	0020								
103-KJÉ Mathematics	5500	5500								
104-KJÉ Descriptive Geometry	1100	1100								
105-K Engineering Drawing	2003	0002					Lecture			1000
201-KJÉ Eng. Materials and Processes		4020	4110	2010			Seminar			0100
202-K Engineering Mechanics		6200	4210	4210			Laboratory			0010
301-KJÉ Computers			2200				Design			0001
302-KJÉ Electrotechnics			4010	4020						
303-K Machine Parts Design			4004	4014	0002					
401-K Thermodynamics				4210						
501-K Fluid Mechanics					4210					
502-K Applied Mathematics					4200	4200				
509-K Management					2200					
601-KJÉ Control Engineering						4020				
603-K Civil Engineering						2200	2200			
510-K Road Vehicles					4021	4022				} AV
716-K Aircrafts and Ships							2200			
717-K Railway Vehicles							4020	4032		
702-K Statistics							2200			
703-K Loading Engineering							3100			
801-K Communication Engineering								4030		
804-KJÉ Physics								2000	4020	
805-K Transport Economics								4200	4200	
901-K Accounting and Mechanization in Administration									2200	
902-K Operational Management of Passenger Transport									4004	
909-K Machine Manufacture and Maintenance									2110	
Transportation Technology										
511-KT Operational Management of Transport					2200	4002	4004			
...-KT Elective								4022	0020	
903-KT Traffic Systemtechnics									2200	
Diploma Work										32
Transport System Design										
512-KR Computers in Batch-Processing					2020					
609-KR Transportation Technology						4200	0002	0002		
718-KR Information Systems in Transportation							4020	4020		AV
910-KR System Design in the Transportation									2004	

Summer practices:
after the 1st year: Driver's Course (4 weeks)
after the 3rd year: Transport Operation Practice (4 weeks)
after the 4th Transport Operation Practice (4 weeks)

Electives:
841-KT Automobile Maintenance and Repair
852-KT Maintenance of Railway Vehicles
853-KT Materials Handling Technics
854-KT Railway Automatics

Automotive Engineering

Day courses

Courses	I		II		III		IV		V	
	1	2	3	4	5	6	7	8	9	10
Gymastics	0020	0020	0020	0020						
Foreign Languages	0200	0200	0200	0200	0200	0200	0200	0200		
Military Knowledge	0200	—	—	—	—	—	0200	—	—	0200
Work Safety										2000
Political Economics	1100	1100	1100	—	—	—	—	0200		
Philosophy					2200	—	—	—	0200	
Scientific Socialism						2200	0200			
101-KJÉ Introduction to Engineering	4210									
106-JÉ Chemistry	4000	0020								
103-KJÉ Mathematics	5500	5500								
104-KJL Descriptive Geometry	1100	1100								
107-J Engineering Drawing	2003	0002	0004				Lecture			1000
201-JÉ Eng. Materials and Processes		4020	4110	2010	0020		Seminar			0100
202-JÉ Engineering Mechanics		6200	4210	4210			Laboratory			0010
301-KJÉ Computers			2200				Design			0001
302-KJÉ Electrotechnics			4010	4020						
303-JÉ Machine Parts Design			4000	4014	4014	0004				
401-J Thermodynamics				4210						
501-J Fluid Mechanics					6210					
402-J Applied Mathematics					4200	4200				
601-KJÉ Control Engineering						4020				
602-J Applied Mechanics						4220				
706-J Hydraulic and Heat Engines							4202			
707-J Lightweight Structures							4002	—	0020	
802-J Machine Manufacture								4110		
806-J Engineering Chemistry								2020		
804-KJÉ Physics								2000	4020	
904-J Industrial Management									3200	
905-J Industrial Economics									5200	
Elective									3100	
Branch of Automobiles										
505-AG Automobiles and Engines					4000	4020	0024			
708-AG Engine Design and Laboratory							6040	0046		AV
807-AG Automobile Design and Laboratory								6040	0046	AV
Diploma Work										(34)
Branch of Railway Vehicles										
506-VG Railway Vehicles					4000	2000				
605-CG Vehicle Design and Laboratory						2020	0044	0044	0003	AV
709-VG Electric Locomotives							2000	4000		
710-VG Diesel Design and Laboratory							6000	0040	0003	AV
808-VG Diesel Locomotives								4000		
906-VG Mechanics of Traction									2011	
Diploma Work										(34)

Summer practices:

after the 1st year: Driver's Course(4 weeks),
after the 3rd year: Workshop Practice (4 weeks),
after the 4th year: Industrial Practice (4 weeks),

Electives

951-AG Operation of Automobiles
952-VG Operation of Railway Vehicles
953-J Aircrafts
954-J Ships

Building and Materials Handling Machines

Day courses

Courses	I		II		III		IV		V	
	1	2	3	4	5	6	7	8	9	10
Gymnastics	0020	0020	0020	0020						
Foreign Languages	0200	0200	0200	0200	0200	0200	0200	0200		
Military Knowledge	0200	—	—	—	—	—	0200	—	—	0200
Work Safety										2000
Political Economics	1100	1100	1100	—	—	—	—	0200		
Philosophy					2200	—	—	—	0200	
Scientific Socialism							2200	0200		
101-KJÉ Introduction to Engineering	4210									
106-JÉ Chemistry	4000	0020								
103-KJÉ Mathematics	5500	5500								
104-KJÉ Descriptive Geometry	1100	1100								
105-É Engineering Drawing	2003	0002	0004				Lecture			1000
201-JÉ Eng. Materials and Processes		4020	4110	2010	0020		Seminar			0100
202-JÉ Engineering Mechanics		6200	4210	4210			Laboratory			0010
301-KJÉ Computers			2200				Design			0001
302-KJÉ Electrotechnics			4010	4020						
303-JÉ Machine Parts Design			4000	4014	4014	0004				
401-É Thermodynamics				4210						
501-É Fluid Mechanics					6210					
502-É Applied Mathematics					4200	4200				
601-KJÉ Control Engineering						4020				
711-É Applied Mechanics							4220			
712-É Frameworks							4010			
802-É Machine Manufacture								4110		
804-KJÉ Physics								2000	4020	
907-É Engineering Chemistry									2020	
Branch of Building Machines										
507-ÉP Building Machines					4000	4020	0020	4020		
606-ÉP Civil Engineering						4400				
713-ÉP Design and Laboratory							6023	2045	2024	AV
714-ÉP Management in Building Industry							2200	4002	4002	AV
905-ÉP Industrial Economics									4200	
908-ÉP Operation of Building Machines									2020	
Diploma Work										(34)
Branch of Materials Handling Machines										
508-AM Materials Handling Machines					2020	4020	4020			
607-AM Civil Engineering						2200				
608-AM Production Processes						2200				
715-AM Design and Laboratory							6014	4026	0024	AV
809-AM Materials Handling Processes								4202	4002	AV
810-AM Loading Techniques								2002	2002	
905-AM Industrial Economics									4200	
Elective									2000	
Diploma Work										(34)

Summer practices:

after the 1st year: Driver's Course (4 weeks),
after the 2dn year: Workshop Practice (3 weeks),
after the 3 rd year: Machine Handling (3 weeks),
after the 4th year: Industrial Practice (4 weeks).

Electives

955-AM Ropeways
956-AM Packing Technique

classes in the evening education cannot be extended to more than 16 hours per week, those presented in the curriculum tables are the actual hours. The place value of the digits here also indicates the form of instruction.

Students living out of town, naturally, cannot attend the evening classes. For these, the University organizes a special form of instruction, the so-called conference, generally, ones or twice each month. During the term, the correspondence students participate in conferences for a total of 80 hours. In the correspondence students' table, the figures indicate the conference hours per term. Otherwise, the curriculum of the correspondence education is identical to that of the evening education.

CREATIVE WORK AT THE UNIVERSITY

One of the prerequisites of elective educational work is that faculty members should practice what they teach. It is especially important that instructors should constantly participate in practical work Since the curriculum continuously changes in keeping with the development of techniques, sciences and methods.

At the technical universities engineers are trained who, for the most part, will be engaged in technical developments, designing new structures, techniques and processes, in short, in engineering creativity; only a few of them work in scientific research. Therefore, faculty members must have experiences that make them capable to meet the requirements of training such engineers, both in the field of creative engineering and research. This applies particularly to those faculty members who join the staff immediately following graduation; neither that part of the faculty staff which comes to the University from design bureaus or research institutes, should detach itself from practice.

Generally, at the universities, it is possible to undertake creative and research work which may take place as follows:

A) The faculty members or departments choose the theme themselves; the university puts the equipments and assistants at their disposal. In certain modest limits, it is also possible to purchase new devices and instruments. In this way faculty members have the opportunity to perform research work, conduct experiments and, through this activity, to work on their doctor's candidates dissertations.

B) The department joins itself to the research plan of the Academy of Sciences or the Committee for National Technical Development; therefore, these organizations can offer significant support by buying equipments and instruments; they can also put technical personnel at the disposal of the department. The Academy of Sciences is not, in general, in direct connection with every department but with departmental groups, the so-called "co-operatives". At our University, among others, the Co-operative of Transport Sciences is operating. On behalf of our Faculty, the Department of Transport Operation and the Department of Automobiles are members of this co-operative. Besides, two more departments from the Civil Engineering Faculty, that of the Road Construction and of the Railway Construction, as well as the Department of Economics of Transport and Building Industry, are assisting this

co-operative. The Chairman is Dr. I. Turányi, Professor, Doctor of the Technical Sciences, Head of the Department of Transport Operation. As a matter of course, also by the research work performed with the assistance of the Academy of Sciences or Committee for NTD, many valuable scientific results and dissertations are given birth.

C) Besides choosing its own theme and/or joining the research plans of the Academy and the Committee, every department may make contracts with companies or institutions to work out problems lying within its own scope of profession. Works of this nature are recompensed in proportion to the standard and amount of the work performed and the material used. Distribution of remuneration paid for this work takes place as follows.

First, the turnover tax, trade costs (about 30 per cent of the total), actual expenses (costs of fuel or raw material, blueprints, etc.), the wages of assisting co-workers from outside of the University should be deducted.

The remauring sum will be deviden into two parts:

—its 30 per cent serving diverse ends, as for example, cultural fund, university and department investment funds, etc;

—70 per cent remains for reward funds, a smaller part of which (10 per cent) will be added to the general reward fund, and the greater part (90 per cent) may be distrubuted among those faculty members, who actually participated in carrying out the work.

The amount of this reward is rather considerable; faculty members may obtain on this account a sum of up to 80 to 100 per cent of their salary—or even more.
Contractual works are of the most various nature. A great part of them consists of designing, preparing documentations of production and manufacturing of new devices, instruments or equipments, as well as testing their experimental models. Some companies order the elaboration of new production processes. Many of the departments are entrusted to carry out research work, often requested to give advisory opinion, or to perform a continuous consulting activity.

Occasionaly the University is asked to carry out investigations of routine nature; this occurs especially frequently at departments where a special device or instrument is available of which only a few pieces of them are to be found in this country.

Some of these contracts involve such enormous work which one department cannot solve. Thus, for instance, the Department of Automobiles could fulfill the contract of designing a dumper of a capacity of 10-cu. metre and working out its full documentation only by making use of the help of the Department of Machine Parts of the Faculty of Mechanical Engineering, and employing outside experts working at industrial enterprises. These external co-workers complete this work for the University after their regular workday, for which they are remunerated on the basis of preliminary agreement, in cash, generally after completion of the task.

For entering into a contract with an industrial enterprise, the Dean's permission is necessary.

The directing and supervisory organ of the research and creative work is the Faculty Committee of Scientific and Technical Development. It is entrusted to coordinate the scientific and creative work, prepare scientific sessions, adopt and supervise the research plans of the departments, distribute pecuniary funds, aid in scientific development of the faculty staff. The Committee gives opinions and directives in connection with the applications for obtaining a University Doctor's degree.

Research at the Transportation Engineering Faculty

At the Department of Mathematics, in conformity with the special line of the faculty, mathematical problems of the operation research are mainly dealt with; investigations of stability, oscillation and economy of engineering structures are performed, as well as various algebraic patterns. At the Department of Transport Operation, the most significant fields of work are: operative planning and traffic control, information systems for railways, investigation of information theory problems of marshalling yards, analysis of railway networks and flow of traffic.

The other departments of the faculty, such as the department of Mechanics, Machine Parts, Building and Material Handling Machines, as well as the Department of Aero- and Thermotechnics, deal successfully with the up-to-date kinematic and kinetic, as well as strength dimensioning problems. From these, the stochastic analysis of loads should be stressed and in connection with this, the programming of endurance testing of structures, investigation of factors affecting the cylindrical test pieces, and development of photoelastic analysis advancing the up-to-date structural design. The up-to-date structural design calculations based upon the theory of probability, and, in the frame of this work, dimensioning for fatigue are dealt with.

The improvement of the theory for dimensioning frameworks, carcasses of vehicles, analysis of aeroelastic phenomena and special strength problems of aircrafts, as well as the analysis of the elastic behaviour of cables and rubber springs, should particularly be emphasized. Several faculty members succeeded in developing the theory of the planetary mechanisms appreciated also by professional circles abroad. Some departments also are dealing with the dynamic investigation of vehicles, and within the frame of this work that of the longitudinal and lateral oscillation of railway vehicles, vertical oscillation of automobiles, first of all in the case of articulated buses. The starting and braking conditions of elevators also have been studied. In this program, study of the noise in railway operating and research to resolve this problem also are included. The study of developing the technical velocity of road vehicles, further, the analysis of the applicability of electronic procedures in the road traffic constitutes a significant research field. Eventually, both of them serve the safety of trans-

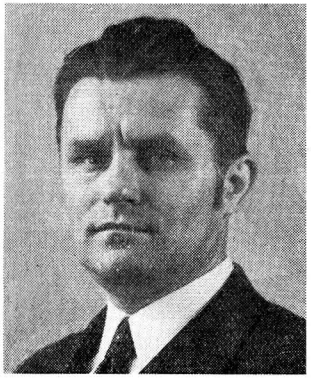
in the study of control systems of Diesel-electric locomotives, as well as in working out thyristor control systems of railway vehicles. Construction of a device for railway vehicle identification also may be considered as a significant achievement.

The Department of Automobiles assisted the qualifying and development research of almost all types of automobile engines manufactured in Hungary. It participated in the investigation and development of drive systems of automobiles and railway locomotives, in the research and development work on diesel injection pumps and pump elements, as well as at testing underframes of these vehicles. From the planning work, the design of a 10-ton craneautomobile and a 10-cu. metre dumper should be mentioned, further, the design and construction of an experimental sample of a machine making diletation cuts in concrete roadways.

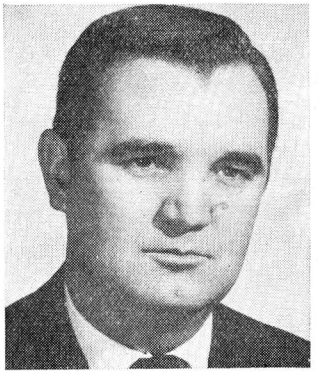
The Department of Railway Vehicles designed and constructed a device of continuous operation for measuring fuel consumption.

The Department of Building and Material Handling Machines worked out the designs of several material handling devices and processes. In particular, a crane of high output and the construction of the machinery equipment of a gravel unloading river-boat of high capacity are to be mentioned.

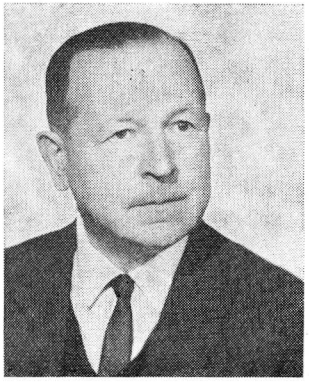
Department of Automobiles



Dr. **Zoltán Lévai**
Professor, Department Head,
Doctor of Technical Sciences

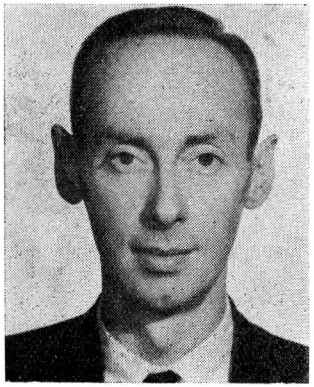


Dr. **Lajos Ilosvai**
Associate Professor, Candidate of Technical Sciences,
Vice-Dean

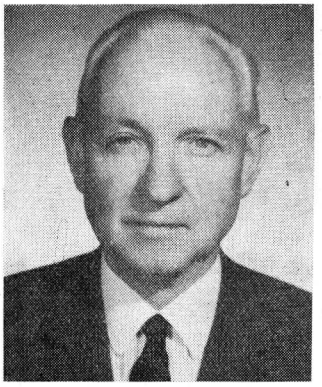


Dr. **Aurél Jurek**
Professor, Candidate of Technical Sciences

Dr. **Zoltán Ternai**
Associate Professor



Dr. **Jenő Bujtor**
Associate Professor, Candidate of Technical Sciences



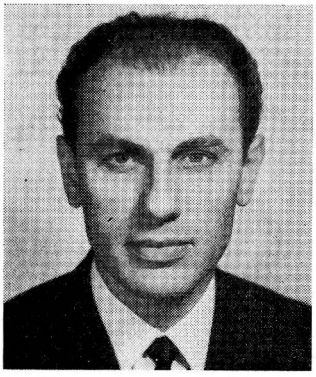
Sándor Terplán
Associate Professor

Dr. **Kálmán Ábrahám**
Titular Associate Professor

Ernő Kovácsházy
Titular Associate Professor

Dr. **Alfréd Balló**
Titular Associate Professor, Candidate of Technical Sciences

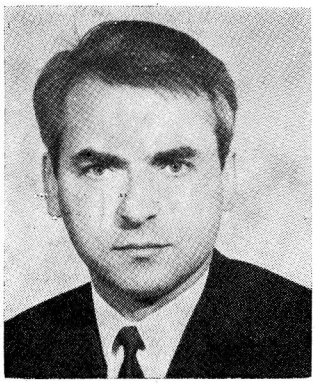
József Örkényi
Titular Associate Professor



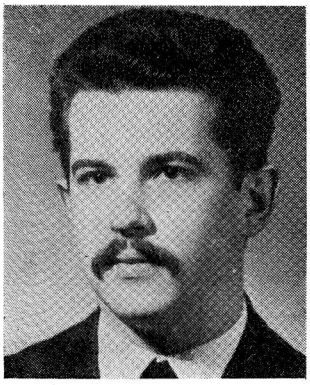
Dr. **Sándor Betely**
Titular Associate Professor, Candidate of Technical Sciences

Dr. **György Dezsényi**
First Assistant

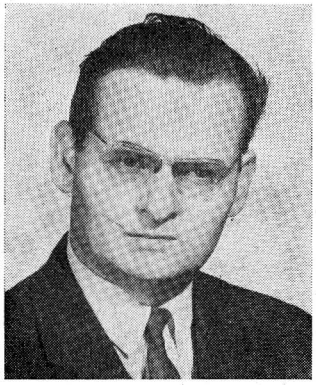
Dr. **István Emőd**
First Assistant



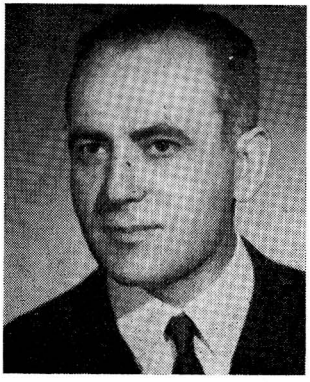
József Hegedűs
First Assistant



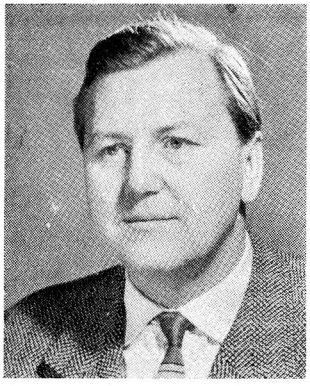
Dr. **Liviu Finichiu**
First Assistant



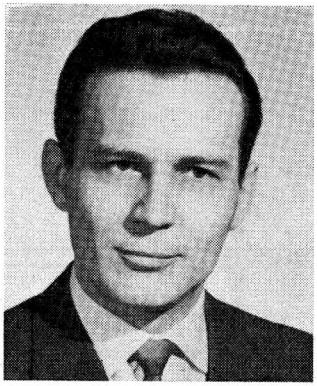
László Hodvogner
First Assistant



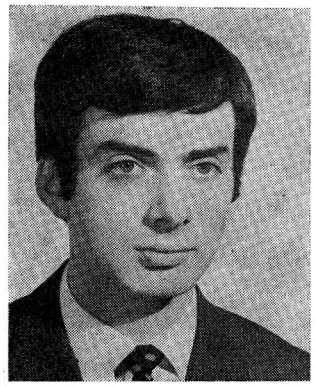
Dr. **Zsigmond Habuda**
First Assistant



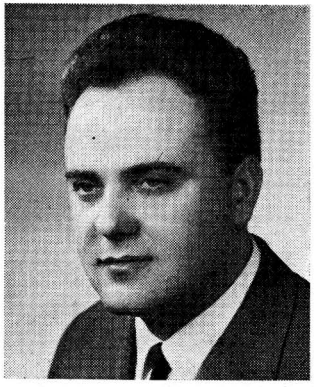
Imre Hörömpöly
First Assistant



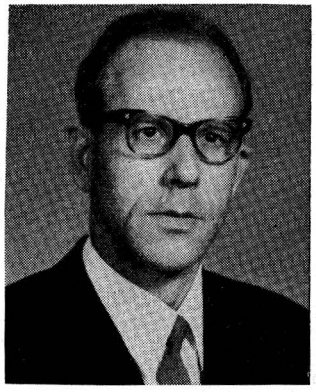
László Józsa
First Assistant



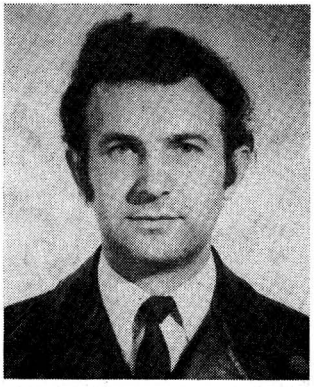
Tamás Farkas
Scholar



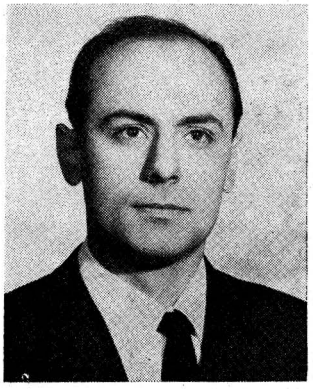
Ferenc Varga
First Assistant



Dezső Oswald
Engineer



Lehel Kádár
Aspirant



Péter Kismartoni
Engineer