



DENTED

Site Visitation

Charles Univeristy 1st Medical Faculty

PRAGUE

Czech Republic

15-19 April 2000

Part I Self Evaluation Document

Part II Visitors Comments

DENTED VISIT AND REVIEW - UNDERGRADUATE DENTAL CURRICULUM 2000**CHARLES UNIVERSITY 1st MEDICAL FACULTY
PRAGUE, CZECH REPUBLIC**

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Section 1 - Introduction

1.1 Background

The First Faculty of Medicine has been a part of Charles University in Prague since its foundation, in 1348, by the Bohemian King and Emperor of the Holy Roman Empire Charles the Fourth. During the years 1953-1990 it was called The Faculty of General Medicine, and its present name, which is derived from Faculty's ancient traditions, has been in use since 1990. It is the oldest medical faculty in Central Europe, and the largest medical faculty in the Czech Republic. Prague, the city where the Faculty is located, was the capital of the former Czechoslovak Republic, founded in 1918 as one of the democratic states in Central Europe. Prague has also become the capital of the Czech Republic, established as an independent democratic state in 1993.

In the middle ages, the language of teaching at Charles University was Latin, later, during the Austrian Monarchy, it was German, and since 1882 the students have been taught in Czech. In 1992 instruction in English was introduced at the Faculty for student coming from abroad. However, admitting foreign students has always been the Faculty's policy. The students of medicine are selected on the basis of entrance examinations in physics, chemistry and biology. The required standard of knowledge corresponds to British A-levels and the number of enrolled students is limited.

The University and the Faculty are governed by elected academic bodies.

Even though freedom and democratic traditions returned to the country and to the University again in 1989, the academic community had been trying to keep its links with the free world through the past decades and most of its students and professors acquired a good reputation outside the country in foreign academic and scientific circles and among the health care workers.

Education of Stomatology on Prague University

Teaching of stomatology at Faculty of Medicine in Prague began in 1828. F. Nessel returned that year from Vienna, where he undertook his studies under the gestion of famous Carabelli. His successor and son E. Nessel lectured dentistry with his colleague M. Baštýř from the year 1884. Both were publishing their papers in Czech and European journals. They were publishing equally the first textbooks. The foundation of Czech Dentist Association – established in 1897 (still exists as “Česká stomatologická společnost) and of professional journal – established in 1900 (still exists as “Česká Stomatologie) was also important part of university teacher's activities.

J. Jesenský was Nessel's successor from the year 1910. After his postgradual studies abroad (Paris, Berlin) he put basis for his research work in institute of pathology and bacteriology. During the First World War he managed the section of maxillo-facial injuries in military hospital. There he gains experience important for the opening of special department for patient hospitalization in 1920. In 1928 he founded

the stomatological museum for interesting collections (history of dentistry, comparative anatomy of skulls), two years later he founded State Institute for Dentistry, devoted for postgraduate studies.

On 17th November 1939 the Nazi occupants close all Czech academic institutions including the Faculty of Medicine in Prague. After the war, the Faculty quickly restored its activities. In 1945 the 2nd Stomatological department is opened in Prague.

F. Neuwirt experience

Senior teacher and researcher with international fame leads the new institute.

The insufficient number of dentists after the war conveys to opening of stomatological section in 1951. A full course of studies takes 6 years. For students, who started their studies before 1992 the course lasts for five years as a rule. The graduates are awarded the title of "Doctor of General Medicine" (medicinae universae doctor - abbreviated to MUDr.); they are qualified to practice in oral health care. After the graduation the young dentists-stomatologists are directed to independent activity under the supervision of experienced specialist. This philosophy of professional education is in conformity with WHO recommendation for the qualification "oral physician".

Today even Institute of experimental stomatology is integrated into the teaching. History of Institute of Dental Research started in 1924.

In 1924-1954 State Institute of Dentistry – education base for the postdoctoral requalification of physicians, dental research in clinical disciplines of dentistry
1954-1992 Institute of Dental Research – budget organisation governed by the Ministry of Health as the compartment of its biomedical research base, specialized for basic and applied research in dentistry and in border areas with other medical disciplines and for specialized out patient dental care
1992-1999 non-profit organisation of the Ministry of Health Department of dentistry of the Institute of Postgradual Education in Medicine

This institute which was formed from State Institute for Dentistry rapidly developed and evolved new laboratory techniques for basic research in the field of oral biology and stomatology. Interdisciplinary team prepared drinking water fluoridation in Czechoslovakia. During sixties the workgroups split into four major sections. These are oral biology including microbiology and immunology, prosthetic technology, clinical therapy, epidemiology and preventive dentistry. In this academic year the integration of experienced researchers into pregradual teaching is being prepared.

current characteristic: since 1999 department of the General Faculty Hospital, detached research and education base of the 1st medical Faculty, Charles University in Prague

1.2 The primary functions of the institution in the field of Dental education are:

1. Clinical training and education of undergraduate and postgraduate students of Dentistry in Czech republic
2. Postgraduate training of Consultant and Specialists in Oral Surgery, Orthodontics and Periodontology

3. Research
4. Patient Services: the hospital treats aprox. patients weekly, approximately% of whom are treated by undergraduate students.

1.3 The curriculum leading to doctor of medicine degree Stomatology.

The curriculum lasts six years (12 semesters). The first two years include basic medical sciences (structures and functions of the human organism and its behaviour), with stomatological propaedeutics added to this specialized programme. Exams are taken in the same subjects as in the general medicine curriculum, complemented with stomatological propaedeutics.

In the third year and part of the fourth year, preclinical subjects are taught with the same exams as in general medicine, in the third year, preclinical stomatology is also included.

Clinical courses start from the fourth year and are organized in blocks, similarly as in the general medicine programme. At the end of each block, an exam is taken.

The clinical subjects are the same as in the general medicine curriculum. In addition, the following stomatological disciplines are included in the programme: conservative dentistry, oral surgery, prosthetics, periodontology and oral musoca, orthodontics and paedodontics. Among the elective and optinal subjects are also stomatological genetics and preventive dentistry. After the second and fifth year, summer clerkship in the main clinical subjects are to be taken. The curriculum is closed by final state examinations in internal medicine, surgery and all stomatological subjects (conservative dentistry, surgery, prosthetics and orthodontics with paedodontics), which are prerequisites for obtaining the title of doctor of medicine (Medicinae Universae Doctor, abbrev. MUDr.), equivalent to M.D.

STRUCTURE OF PREGRADUATE CURRICULUM - DENTAL MEDICINE

THEORETICAL, PRECLINICAL AND MEDICAL DISCIPLINES

Subject	semester	Lectures	Sem.+Exerc.	Total
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Introduction to Medical Studies	1			8
General Anatomy	1,2	120	160	280
Clinical Anatomy for Dental Medicine Students	5	15	15	30
Biophysics	1	45	45	90
Medical Chemistry	1	30	45	75
Biology and Genetics	2,3	60	75	135
Histology and Embryology	1,2	75	90	165
Biochemistry and Molecular Biology	2	45	30	75
Propedeutics of Medicine	1	45		45
First Aid in Medicine	2	30		30
Latin Language	1,2	30	30	60
Foreign Language	1,2,3,4,5,6		180	180
Sports and Athletics	1,2,3,4,5,6		180	180
Computer Operation	1,2	15	30	45
Biochemistry	3,4	90	90	180
Physiology	3,4	180	120	300
First Aid-Clinical Aspects	3		30	30
Summer Clerkship-Patient Care	after 4			120
Patient Care	4		30	30
Immunology	4	30	15	45
Medical Ethics	3,4	60	30	90
Pathology	5,6	120	120	240
Pathobiochemistry	5	15	15	30
Pathophysiology	5,6,7	90	90	180
Medical Psychology	5,6	60	60	120
Microbiology	5,6	60	60	120
Integrated Block-Pathology and Microbiology	6			25
Pharmacology	7,8	60	90	150
Propaedeutics in Internal Medicine	5	15	30	45
Summer Clerkship in Internal Medicine	after 8		1 week	30
Internal Medicine	6,7,8,9,10			200
Propaedeutics in Surgery	6	15	30	45
Summer Clerkship in Surgery	after 8		1week	30
Surgery	7,8,9,10			225
Oncology	7,(8)			25
Neurology	9,(10)			25
Nuclear Medicine	7,(8)			25
Radiodiagnostics and Radiotherapy	7,(8)			25
Sports Medicine	7,(8)			25
Dermatovenerology	7,(8)			50

Paediatrics	9,(10)	75
Psychiatry	7,(8)	25
Infectious Diseases	7,(8)	50
Ophthalmology	7,(8)	50
Otolaryngology	9,(10)	50
Social Medicine-Health Politics	11,(12)	50
Hygiene and Epidemiology	9,(10)	75
Forensic Medicine	11,(12)	25
Emergency Medicine	9,(10)	50
Obstetrics and Gynaecology	9,(10)	50
Total		4308

DENTAL DISCIPLINES

Propedeutic Dentistry	2,3,4	75	180	255
Preclinical Dentistry and Preventive Dentistry	5,6	90	135	225
Operative Dentistry and Endodontics	7,8,9,10,11,12	44	395	439
Prosthodontics	7,8,9,10,11,12	46	370	416
Oral and Maxillofacial Surgery	7,8,9,10,11,12	45	395	440
Orthodontics	9,(10),11,(12)	6	95	101
Paediatric Dentistry	9,(10),11,(12)	6	95	101
Periodontics and Disease of the Oral Mucosa	9,(10),11,(12)	6	215	221
Total				2 198

T O T A L 4 308 (66%) + 2 198 (34%) = **6 506 (100%)**

ELECTIVES I	3,4		15-60
ELECTIVES II	5,6		15-60
ELECTIVES III	7,8		15-120
ELECTIVES IV	9,10		30-120
Total			75-360
Czech Language for Foreign Students	1,2,3,4	180	180
Parasitology for Foreign Students	7	45	45
total			225

General Aims

- To provide future dentists with an ethical and appropriate scientific foundation for a lifetime of learning and professional development

- To promote and develop clinical competence in primary oral health care and prevention
- To ensure that the educational programme at least fulfils national (and EU requirements).

General Objectives

These are set out in detail under the different subject headings in following sections inclusive and are only covered in broad outline in this introductory stage of the report.

- To produce dentists who on graduation are capable of carrying out the practice in dentistry (under professional supervision during the first two years) in all facets as appropriate for adults, children and special needs patients, at least to the primary care level, including: oral diagnosis, restorative dentistry, endodontics, periodontology, oral surgery, oral medicine and pathology, within the context of prevention and health promotion.
- To provide competence in and knowledge of human diseases to a level that is compatible with the appropriate and safe management of dental patients including those who require first aid and cardio-pulmonary resuscitation and enables effective cooperation with specialists in other medical disciplines.
- To provide sufficient education and training in the pre-clinical and para-clinical sciences in order to understand and acquire the competences required of a practicing dentist.
- To ensure that students have an appropriate understanding of the basic and biological sciences that is sufficient for them to understand the clinical and para-clinical sciences and also to provide them with an acceptable scientific basis to perform as a member of one of the professions in the health sciences.
- To provide them with an acceptable basis in the science of materials appropriate to modern dentistry.
- To ensure that the dental student has a sufficient and appropriate understanding of the biological, psychological and sociological parameters of dental science and their appropriate application in clinical dentistry.
- To promote a responsible attitude both for the individual and the profession in the identification of appropriate and ethical priorities in the delivery of oral health services and prevention.
- To encourage the recognition of one's limitations in the provision of treatment for patients.

Strengths

- Pregraduate curriculum with balanced relations among theoretical, preclinical, medical and dental disciplines
- Student orientated thanks to self-directed learning curriculum
- Development as a result of considerable international advice
- Transparency
- Continuously under review
- Most shortcomings are recognised
- Assessment methods complement educational objectives and methods

Weaknesses

- Contemporary economical rules of health service system disregarding peculiarities of teaching hospitals:
 - dense regional network of private dental offices, absence of patients financial motivation = lack of patients suitable for practical training of dental students
- Insufficient financial support of Clinics and Faculty
- Insufficient number of dental units for students.
- Complicated and irrational system of management of Clinical Departments

Visitors Comments

Section 2 - Facilities

(including Library, Lecture Theatres, Seminar Rooms etc.)

2.1 Clinical Facilities (87 dental chairs/dental units)

The Present State:

General arrangement:

At the present time the 1st and 2nd Stomatological Clinics are situated in three areas of the General Faculty Hospital in Prague: out-patient departments are localized into two buildings. First Stomatological Clinic is situated in Kateřinská street No.32, in the same building as the Dean's office is and contain 6 Departments for out patients and Oral surgery Department. Second Stom. Clinic is localised in Faculty Policlinic building, Karlovo náměstí 32, Prague 2. And its ward Department for Maxillofacial Surgery is situated in General Faculty Hospital, U Nemocnice 2, Prague 2.

There are 6 Departments for the out-patient on each of Stomatological clinic:

- Department of Restorative Dentistry (incl. endodontic treatment)
- Department of Oral Surgery
- Department of Prosthetics (incl. Dental Laboratory)
- Department of Pediatric Dentistry
- Department of Periodontics (incl. Diseases of Oral Mucosa)
- Department of Orthodontic

There are also Departments of Stomatological Propedeutic for preclinical education of students of dentistry.

The out-patient part of the Stomatological Clinics has also X-ray laboratory (with one small X-ray device for intra-oral and extra-oral projections and two orthopantomographs) and one laboratory for immunology and other research work. There are also one Photography Laboratory, Seminar rooms (with 18, resp.30 places for seminar purposes) and two Lecture Rooms (with 90, resp. 40 seats).

The Ward Department for Maxillofacial Surgery consists of ward part with 21 beds, two aseptic operating theatres, one aseptic and one septic re-bandage and checking up room with two chairs and dental units, one smaller out-patient department with three dental units and septic + mesoseptic operating room with two operation chairs. Ward department has also X-ray laboratory (with one small X-ray device for intra-oral and extra-oral pictures and one orthopantomograph) and histological laboratory for bioptic examination. There is also the Lecture room with 25 seats (Table 1).

Oral health care:

In out-patient departments of both Stomatological Clinics and at the Ward Department of the 2nd Stomatological Clinic there are provided basic dental care, as well as over-standard and super-consultant dental services in seven autonomous and sovereign disciplines of dentistry: restorative dentistry, oral surgery, maxillofacial surgery, prosthetics, pediatric dentistry, periodontics and orthodontics. There are provided complicated procedures and operations at these Departments which cannot be covered by the private general dental practitioners activity.

Table 1
1st Stomatological Clinic
Facilities for oral health care and education of dentistry

Department	Rooms	Equipment
<u>OUT-PATIENT PART</u>		
Oral Surgery	2 outdoor offices	5 dental units
Maxillofacial Surgery	2 operating theatres	
	2 outdoor offices	5 dental units
	10 rooms	36 beds
Implantology	1 outdoor office	1 dental unit
Restorative Dentistry	1 outdoor offices (3 rooms)	9 dental units
Prosthetic Dentistry	1 outdoor offices	6 dental units
Pediatric Dentistry	1 outdoor offices	3 dental units
Periodontics + Oral Medicine	1 outdoor office	4 dental units
Orthodontics	1 outdoor office	6 dental units
Stomatological Propedeutics	2 rooms	3 dental units 15 working seats
Orthodontic Laboratory	1 room	4 working places
Prosthetic Laboratory	5 rooms	14 working places 6 educational places technical facilities
X-ray Laboratory	2 rooms	dental X-ray device Orthopantomograph
Photography Laboratory	2	extraoral and intraoral Photography
Library	1	40 seats for seminar purposes
Lecture Room	1 rooms	90 seats over-head projector slides projector video

Table 2
2nd Stomatological Clinic
Facilities for oral health care and education of dentistry

Department	Rooms	Equipment
<u>OUT-PATIENT PART</u>		
Oral Surgery	1 outdoor office	5 dental units
	2 operating rooms	3 dental units
Restorative Dentistry	2 outdoor offices (4 rooms)	9 dental units
Prosthetic Dentistry	5 outdoor offices	10 dental units
Pediatric Dentistry	2 outdoor offices	5 dental units
Periodontics + Oral Medicine	4 outdoor offices	7 dental units
Orthodontics	2 outdoor offices	5 dental units 1 coffee - room
Stomatological Propedeutics	2 rooms	2 dental units 15 working seats
Orthodontic Laboratory	1 room	4 working places
Prosthetic Laboratory	8 rooms	14 working places

X-ray Laboratory	2 rooms	6 educational places technical facilities dental X-ray device
Photography Laboratory	2	Orthopantomograph extraoral and intraoral Photography
Library	2	18 seats for seminar purposes
Lecture Room	2 rooms	40 seats over-head projector slides projector video datavideoprojector

WARD DEPARTMENT FOR MAXILLOFACIAL SURGERY

Ward Department	13 rooms	21 beds (+ 8 emergency beds) head sister and sisters' rooms bioptic laboratory patients' dining room room for health insurance worker
Ward – Operation Tract	8 rooms	2 operation theatres 2 re-bandage and checking up boxes (two chairs, one dental unit)
Ward - Out-patient Department	11 rooms	Chief's Office 1 outdoor office X-ray Laboratory Physiotherapy Room 2 operating rooms 1 doctor's study
Technical Background	18	Lecture Room (25 seats) doctors' studies (4) Photo laboratory (1) store-rooms (2) lavatories (6) shower (5)

2.2 Institute of Dental Research

equipment: state of the art equipment of laboratories for research activities given below state of the art equipment of clinical department (7 dental offices) informatic support – 2 independent nets, 31 PCs with PENTIUM II or higher, outer electronic communication, web site

infrastructure:

clinical department 3 research departments dept. of oral biology including laboratories of electron microscopy, oral microbiology, immunology, biochemistry, biomedical statistics, dept. of oral epidemiology and preventive dentistry, dept. of experimental therapy including laboratory of dental technology) Information center in oral research including accredited scientific library.

Strengths

Contacts and good relations with other faculties in the Czech Republic in the framework of the Association of Dental Educators. Continual discuss of actual problems of undergraduate curriculum, fluent exchange of experience. Cooperation with private dental offices and with Dental Chamber (lectures, seminars, postgraduate courses, experience exchange). Stabilized teaching staff consisting of high-skilled specialists. Student : staff ratios vary from 1:6 to 1:4 and may be even as low as 1:1 for more advanced irreversible procedures. For most clinical procedures it is 1:4.

Weaknesses

Main part of equipment is rather aged, 1st stom. clinic is situated in historical building (problem with inovations), the budget is limited

Best Practices

See strengths

2.3 Teaching Facilities

Our dental students have access to all of the teaching facilities of the Faculty of Medicine, incl. Central Library, and recreational and cultural facilities of Charles University. They are consist of:

Institute of Anatomy

Institute of Histology and Embryology

1st Institute of Medical Chemistry and Biochemistry

2nd Institute of Medical Chemistry and Biochemistry

Institute of Toxicology and Forensic Chemistry

Institute of Physiology

Institute of Biology and Department of Medical Genetics

Institute of Biophysics

Institute of Nuclear Medicine

Hlava 1st Institute of Pathology

2nd Institute of Pathology

Institute of Pathological Physiology

Institute of Pharmacology

Institute of Medical Microbiology and Immunology

Laboratory for Medical Microbiology

Department of Radiology

Department of Oncology and Laboratory for Oncology

1st Department of Medicine and Laboratory for Pathophysiology of Liver and Blood Diseases

1st Department of Tuberculosis and Respiratory Diseases

Department of Pneumology

Department of Occupational Diseases

Institute of Clinical Immunology

2nd Department of Medicine and Laboratory for Cardiology

3rd Department of Medicine and Laboratory for Endocrinology and Metabolism
 Institute of Theory and Practice of Nursing
 4th Department of Medicine and Laboratory for Angiological Research
 Department of Medicine at the Policlinic and Laboratory for Gastroenterology
 Department of Medicine at Strahov
 Institute of Sports Medicine
 Department of Neurology
 Department of Psychiatry and Laboratory for Psychiatric Research
 Department of Paediatrics and Adolescent Medicine and Laboratory for Studies of Child Development
 Institute of Clinical Biochemistry
 Institute of Inherited Metabolic Disorders
 1st Department of Dermatology
 2nd Department of Dermatology
 1st Department of Surgery
 2nd Department of Surgery
 3rd Department of Surgery
 Department of Neurosurgery
 Department of Urology
 Department of Anaesthesiology and Resuscitation
 Department of Orthopaedics
 Department of Otorhinolaryngology and Head and Neck Surgery
 Department of Phoniatics and Laboratory for Phoniatics
 1st Department of Ophthalmology
 2nd Department of Ophthalmology
 1st Department of Stomatology
 2nd Department of Stomatology
 Department of Rehabilitation Medicine
 Institute of Forensic Medicine
 Institute of Hygiene and Epidemiology and Department of Epidemiology
 3rd Department of Infectious and Tropical Diseases and Department of Tropical Medicine
 1st Department of Gynaecology and Obstetrics
 2nd Department of Gynaecology and Obstetrics
 Institute of Sexology and Study of Fertility
 Institute of Physical Education
 Institute of Foreign Languages
 Institute of Scientific Information
 Bibliographical and Information Department
 Department of Didactics
 Reprographic Department
 Institute of Humanitarian Studies in Medicine
 Department of Medical Ethics and Anthropology
 Department of Medical Psychology, Psychotherapy and Psychosomatics
 Department of Public Health and Social Medicine
 Centre for Immunity Disorders
 Institute for History of Medicine

In addition the Dental Clinics have the following:

- 1 Lecture Room (90 seater)
- 3 Seminar Rooms (each 40 seater)

Strengths

- Considerable research, visits to other schools in the Czech Republic, exchange of experience between Czech Medical Schools with dental education.

Weaknesses

- Limited financial budget.

Best Practices

Accent to practical training as a part of the study program.

Innovations

Cooperation with private dental offices enables our students better understanding of private practice problem and asserting after graduation.

2.4 Teaching Laboratories

Teaching laboratories for preclinical training in Dentistry are situated at the 1st as well as at 2nd Clinic of Stomatology. These teaching laboratories were partially modernized last year and there is a plan to furnish them with new equipment during next 3 years.

Strengths

Most efficient use of resources.

Weaknesses

Small number of up-to-date dental simulators (lack of financial resources).

Best Practices

See strengths

Visitors Comments

2.5 Research Laboratories

In present time research is provided mainly on **Institute of Dental Research**, which is located in Vinohrady.

History of institute:

1924-1954 State Institute of Dentistry – education base for the postdoctoral requalification of physicians, dental research in clinical disciplines of dentistry
 1954-1992 Institute of Dental Research – budget organisation governed by the Ministry of Health as the compartment of its biomedical research base, specialized for basic and applied research in dentistry and in border areas with other medical disciplines and for specialized out patient dental care
 1992-1999 non-profit organisation of the Ministry of Health Department of dentistry of the Institute of Postgradual Education in Medicine

current characteristic:

since 1999 department of the General Faculty Hospital, detached research and education base of the 1st medical Faculty, Charles University in Prague

staff:

45 altogether (including 22 academically educated) currently 2 doctorands in PhD. Studies)

activity:

basic and applied research in mechanisms, treatment and prevention of oral diseases monitoring of oral health of population, dental health care system science development of new dental treatment technologies testing of dental materials and devices postgradual education in general dentistry and periodontology, **pregradual education of dentists (external collaboration with 1st medical Faculty)** primary and specialized dental care in the frame of general dentistry, periodontology and oral implantology

infrastructure:

clinical department

3 research departments:

dept. of oral biology including laboratories of electron microscopy, oral microbiology, immunology, biochemistry, biomedical statistics,

dept. of oral epidemiology and preventive dentistry,

dept. of experimental therapy including laboratory of dental technology)

Information center in oral research including accredited scientific library.

Weaknesses

No research laboratories as a part of dental clinics.

Strengths

Closer connection of dental studies and human disciplines enables more complex view of research problems.

2.6 Library

The Institute of Scientific Information provides services to the First Medical Faculty of Charles University in Prague and the General Teaching Hospital. The Institute has a number of departments and also its own library, which was established in 1949. The library has approximately 450.000 registered items of which some are kept at the Institute and some at reference libraries of individual departments and clinics. The entire collection is available to the members of the faculty and hospital medical staff. Upon requests other services are provided, e.g. retrieval, reprography, photography etc.

All medical students have access to a recently opened new study room whose collections include both books and journals. There is a wheel-chair access to this study, which has a collection of almost 4.000 items, including textbooks, monographs and journals. It is open on weekdays from 7 o'clock a.m. to 7 o'clock p.m. (4 o'clock p.m. on Fridays). Items not readily available in the study room can be obtained from the depository. Books and journals can be borrowed for study outside the library. All library loans are recorded on a computer using the T-series automated library system (formerly TINLIB). The system uses bar code scanners. Students can make use of an electronic catalogue that has been developed since 1995 and to which items are retrospectively added.

Students also have access to electronic databases. Using the Charles University Prague net they can work with Current Contents, Medline and EMBASE. Czech and Slovak medical publications database - Bibliomedica is now available on CD-ROM. Teaching and learning programmes on CD ROM are used more and more extensively. The library - as much as its financial situation allows it - tries to make these products generally available. Videotapes are also used for study. These are recorded from satellite EuroTransMed programmes. Currently about 400 videotapes with these programmes are available.

In the library there are 10 PCs for students to work on. All are connected to the Internet. Library new arrivals are all announced on the Internet.

The institute's website <http://lf1.cuni.cz/uvi/vitejte.htm> provides information on newly acquired items the Institute recommends, purchases, loans etc. What is also of interest is the fact that the First Medical Faculty, as one of the few university faculties, offers on its www home page a reference to library services, in particularly those services provided by the library of the Institute of Scientific Information (<http://lf1.cuni.cz/vitejte.htm>). The Institute catalogue, which is part of the Charles University catalogue, is made available on-line on these websites.

The Institute's websites also provide information on literature recommended for study (under "teaching") both for Czech and foreign students. The Institute in conjunction with the First Medical Faculty and in collaboration with publishing houses and distribution companies also organizes regular book exhibitions. The next exhibition will be held between April 17 - 21 2000 (see <http://lfl.cuni.cz/vitejte.htm> - 31st International Exhibition of Medical Literature).

Special teaching modules are conducted by the Institute's staff to provide all students of the First Medical Faculty with basic skills in the use and generation of scientific information in medicine.

Visitors Comments

SECTION 3 - Administration and Organisation

3.1 Clinical/Academic Organisational Structures for School & Hospital

Dental education both in theoretical and preclinical disciplines is provided by the specialized departments of Faculty, centralized in a shared building. The Head of each Department is responsible to the Dean of Faculty for the quality of students' education and its smooth operation. Teaching and research laboratories and seminar rooms are at the disposal both of the students of General Medicine and Dentistry.

Clinical education and training of Dental students in the framework of pregraduate curriculum are guaranteed by Clinical Departments (located on 1st and 2nd Stomatological Clinics). The main task of these clinical departments is, beside pedagogical and research activities, to extend specialized health services for patients from the region of Prague and Central Bohemia (2 mil. inhabitants approx.) The Head of each Stomatological Clinic (Professors) is responsible to the Dean for the content and standard of paedagogical and scientific work and - to the Director of the Faculty Hospital - for the standard of medical care extended by the Department. Faculty Department Heads are nominated for three years period both by the Minister of Health and Minister of Education. The Head directs both the Academic Staff (employees of University) and Medical Staff (doctors and nurses - employees of the Hospital). Academic Staff incl. the Head are usually part time employees of the Hospital (0.15 - 0.30). Pedagogical and research activities of Faculty Departments are funded from the University budget (Ministry of Schoolship), fees paid by foreign students and means from grant agencies. The health services extended by clinical departments are financed from the the Health Insurance.

3.2 Non-Clinical / Academic Administrative Structures

The most important component of academic administrative structures of the Faculty is the Dean's Office. Its Study Department, the staff of which is directed by Vice Deans takes care of students' admission procedure, registration, contacts between students and Faculty academic management, stipends, students applications for accomodation in the halls of residence etc.

The Economic Manager and his staff, responsible for the Faculty budget collaborate with the University economic management.

The Dean's Department of Research and Foreign Relations guarantees collaboration among Faculty Management and Doctoral Program Boards. For postgraduate study (incl. this of dentistry), it takes care of stays of academic staff members and students abroad and, on the other hand, of foreign visitors stay at the Faculty. The Vice Dean for Research submits to the Dean and Scientific Council proposals for nominations professors. An important role is played by this Department in contacting and collaborating with the grant agencies.

3.3 Information Technology

Personal Computer Access for Students

10 PC's in Central Library Computer Room

10 PC's in Association of Dental Students

Lecture Theatre Facilities

Theoretical Department Buildings (shared with medical students):

- 3 lecture theatre for 200 students incorporating:

Dual Slide Projection, Video etc..

- 5 lecture theatres for 100 students incorporating

Slide Projection

1st Clinic of Stomatology:

-1 lecture theatre for 90 students incorporating:

Dual Slide Projection, Video, Audio etc.

2nd Clinic of Stomatology

1 lecture theatre for 40 students incorporating:

Dual Slide Projection, Video, Dataprojector etc.

In collaboration with the Czech Dental Chamber the Dental Clinics of our Faculty serves as a centers of distance learning (life-long education) for dental practitioners in rural areas .

Visitors comments:

Section 4 - Staff

Professor Jiří Mazánek
Email Jiri.Mazanek@lf1.cuni.cz

The main educative aim of the teachers' staff of the 1st and 2nd Stomatological Clinic is undergraduate education in dentistry at the 1st Faculty of Medicine of Charles University. Both Stomatological Clinics at the 1st Faculty of Medicine – 1st and 2nd Stomatological Clinic – are the only bodies at Charles University in the capitol Prague which provide facilities for undergraduate education in dentistry.

Second aim of the Stomatological Clinics is to teach students of medicine the subject of general dentistry, as well as general dentistry for future bachelors in health care technique and health care promotion sciences.

The last aim of the pedagogic staff of the both Stomatological Clinics is postgraduate education: there are graduate programs in orthodontics , pedodontics, oral surgery and periodontics provided in cooperation with the Institute of Postgraduate Medical Training, and specialists of the Clinic are also involved in the programs of pre-licence and continuous education in dentistry organized by the Czech Dental Chamber. They are a members of the board for licence examinations.

Science and Research:

The professional staff of the 1st and 2nd Stomatological Clinic takes part in research projects compatible with integrating goals of science development within European Union. Teachers and clinicians of the professional staff are involved in complex and comprehensive research plan for dentistry at the 1st Faculty of Medicine of Charles University called „Aspects of Development of Oral Health – Pathophysiology, Diagnostics, Therapy and Prevention“ which started in the year 1999 and is proposed for five years' period. From the total amount of 24 research projects in this research plan for all dental sciences cover the members of the 2nd Stomatological Clinic 16 individual research annotations and members of the 1st St. Clinic cover 8 research plans.

Apart of this basic research intention there are other research projects solved under grants of Charles University Grant Agency and other interdisciplinary research projects solved on international bases.

Clinical Academic Staff Statistics (clinics specialized in dental disciplines only):

Full Time Academic Staff

Category	1 st Clinic of Stomatol.	2 nd Clinic of Stomatol.		Total
Professors	1	1		2
Assoc.Professors	2	4		6
Assist.Professors	14	7		21
Lecturer	-	4		4
Total	17	16		33

VICE DEAN FOR DENTAL STUDIES

Jiří Mazánek
MUDr., DrSc.,
Professor of Stomatology

1st Clinic of Stomatology

2nd Clinic of Stomatology

Staff of the 1st Clinic:

Head: Jiří Mazánek
 MUDr., DrSc.,
 Professor of Stomatology

Staff of the 2nd Clinic:

Head: Jaroslav Racek
 MUDr., DrSc.,
 Professor of Stomatology

Full Time Academic Staff :

Department of Operative Dentistry and Endodontics:

Luděk Peřinka, MUDr., PhD.,
 Assistant Professor

Ivan Dziedzic, MUDr.
 Assistant Professor

Lucie Vondráčková, MUDr.
 Assistant Professor

Tomáš Bartoň, MUDr.
 Assistant professor

Department of Paedodontics

Irena Neffeová, MUDr.,
 Assistant Professor

Jana Vášková MUDr.,
 Assistant Professor

Department of Periodontology and Diseases of Oral Mucous Membrane

Milena Nedvědová, MUDr.
 Assistant Professor

Ladislav Korábek MUDr.,
 Assistant Professor

Irena Pipková, MUDr.
 Assistant Professor

Department of Oral and Facial surgery

Jiří Mazánek, MUDr., DrSc.,
Professor

Pavel Hanek MUDr., PhD.,
Associated Professor

Karel Hora, MUDr.,
Assistant Professor

Ludmila Šochmanová MUDr.,
Assistant Professor

Olga Kubačáková MUDr.,
Assistant Professor

René Foltán MUDr.,
Assistant Professor

Hana Staňková MUDr.,
Assistant professor

Jana Švarcová MUDr.,
Lecturer

Kateřina Sadleková MUDr.,
Lecturer

Věra Strnadová MUDr.,
Lecturer

Department of Prosthetic Dentistry

Blanka Kozáková, MUDr., PhD.,
Associated Professor

Pavel Pešata MUDr., PhD.,
Associated Professor

Jan Škopek , MUDr., PhD.,
Associated Professor

Josef Vacek MUDr., PhD.,
Associated Professor

Milan Hanek MUDr.,
Assistant professor

Maryam Yousefi MUDr.,
Lecturer

Jiří Nigrín MUDr.,
Assistant professor

Hana Hubálková MUDr.,
Assistant professor

Department of Orthodontics

Hana Tycová MUDr.,
Assistant Professor

Jaroslav Racek MUDr., DrSc.,
Professor

Marie Marková MUDr., PhD.,
Assistant Professor

Department of Preclinical Dentistry

Arnoštka Pehrová MUDr., PhD.,
Assistant Professor

Jan Handzel MUDr., PhD.,
Associated Professor

Part Time Academic Staff (No. of Teachers)

(0,05 – 0,3 hours/week)

5	2
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Other Clinical Staf (1st and 2nd Stom. Clinic) :

Hospital Dentists	25
Dental Technicians	27
Nurces	85
Instructors	4

Visitors comments:

The Dental curriculum (sections 5 – 7)

SECTION 5 – Theoretical disciplines

5.1 Title of the Course **Introduction to Medical Studies**

Duration 8 hours

Curriculum Timing 1st year - 1st semester

Semester	Study form	Hours per semester
1 st	Lectures	8

Course Design The various parts of the course are dealt with during one or two themes per 1 hour.

Primary aims The aim is to give the students a knowledge of methods and methodology of university studies and some elements of the historical traditions of the medical faculties in Prague.

Main objectives By the end of the course the student shall be able to:
 - have overall understanding of the aims, ethics, general principles and traditions of the Medical School.

Examination Credit only

Course Director Prof.MUDr.E.Strouhal,DrSc

5.2 Title of the Course **General anatomy**

Duration 280 hours

Curriculum timing: 1st year – 1st and 2nd semester

Semester	Study form	Hours per semester	Hours per week
1 st	Lectures	60	4
	Practical training	30	2
	Anatomy dissections	48	
2 nd	Lectures	60	4
	Practical training	30	2
	Anatomy dissections	52	

Course Design The normal anatomy of the human body is lectured and practised according to the particular organ systems in the chapters of clinical and topographical anatomy and of anatomy of imaging methods.

The course is provided in the lectures and practical demonstrations, esp. in anatomic dissection.

Primary aims Lectures. Group sessions. Anatomic dissections.
Basic knowledge of terminology for macroscopic definition of human organs and body parts.

Main objectives By the end of the course, the student shall be able to;
- present theoretical and practical knowledge of the complete anatomic structure of the human body and its particular organ systems.

Examination Credits and Oral examination

Course Director Doc.MUDr.Miloš Grim,CSc

5.3 Title of the Course **Clinical anatomy for dentistry students**

Duration 30 hours

Curriculum Timing 3rd year - 5th semester

Semester	Study form	Hours per semester	Hours per week
5 th	Lectures	15	1
	Practical training and dissections	15	1

Course design Lectures, practical training and dissections in dissection room.

Primary aims The one semester subject deals with the regional anatomy of the head and neck aimed at clinically important structures of the suprahyoid and the superficial and deep facial region.

Main objectives Knowledge of the regional anatomy of the head and neck, knowledge of topographic relations of clinically important structures, orientation in radiographs ,CT and magnetic resonantion scans, knowledge of basic surgical approaches and life-saving procedures.

Examination Practical and theoretical examination

Course director Doc.MUDr.Miloš Grim, CSc.

5.5 Title of the Course **Medical Chemistry**

Duration 75 hours

Curriculum timing 1st year – 1st semester

Semester	Study form	Hours per semester	Hours per week
1 st	Lectures	30	2
	Practical training	45	3

Course design Lectures, Group sessions
Seminars of lab. Practice

Primary aims Acquisition of basic knowledge of general and physical chemistry in biology and medicine

Main objectives By the end of the course, the student shall be able to:

- point out the biological and toxicological characteristics of elements and important inorganic and organic compounds
- point the chemical structure of pharmacologically significant groups of substances and
 - the structure and characteristics of compounds necessary for further study of biochemistry and molecular biology

Examination - at practical training: written test and oral examination
seminars: written test and oral examination
theory: written test and oral examination.

Course Director Prof.MUDr.Stanislav Štípek,DrSc
Doc.MUDr.Bohuslav Matouš,CSc

5.6 Title of the Course **Biology and Genetics**

Duration 135 hours

Curricular Timing 1st year - 2nd semester
and 2nd year - 2nd semester

Semester	Study form	Hours per semester	Hours per week
2 nd	Lectures	30	2
	Practical training	30	2
3 rd	Lectures	30	2
	Practical training	45	3

Course Design Lectures, group and practical sessions (seminars)

Primary aims The educational effort is directed to the intensive training of the detailed theoretical and practical skills in the molecular and cell biology and medical genetics.

Main objectives By the end of the course, the student shall be able to:

- be acquainted thoroughly with the background of
 - molecular genetics
 - cytogenetics
 - formal genetics
 - population genetics
- of the DNA diagnostics
 - immunogenetics
 - oncogenetics
- developmental genetics
 - and of the pedigree and karyotype evaluation and genetic counselling

Examination - written test and practical examination
written test and oral examination

Course Director Doc.MUDr.Jan Kapras,CSc

5.7 Title of the Course **Histology and Embryology**

Duration 165 hours

Curricular Timing 1st year - 1st and 2nd semester

Semester	Study form	Hours per semester	Hours per week
1 st	Lectures	30	2
	Practical training	45	3
2 nd	Lectures	45	3
	Practical training	45	3

Course Design Lectures, seminars, lab. exercises, computer testing.

Primary aims Histology - methods used to study of cell and tissues.
 Definition of the cell. Cell membranes. Receptors and signal transduction. Cell organelles. Cell nucleus, transcription and translation, proteosynthesis.
 Cell division and differentiation, cell cycle.
 Epithelium. Connective tissue. Cartilage. Bone ossification. Dentin, development of tooth.
 Muscle tissue, muscle contraction. Nerve tissue, synapses. Blood, blood cells, evaluation of peripheral blood smear.
 Hematopoeisis.
 Circulatory system. Lymphatic tissue and organs, immune system. Endocrine system. Digestive system. Respiratory system. Urinary system. Reproductive system. Skin. Nerve system. Sense organs.

Embryology- Gametogenesis, fertilisation, cleavage.
 Development of the germ layers, ontogenesis. Development of the yolk sack, amnion and chorion. Decidua. Placenta and fetal membranes. Establishment of the body form. Growth of the embryo. Estimation of the fetal age Delivery. Twins.
 Developments of the organ systems.

Main objectives To provide knowledge in the histological techniques, structure and function of the cell, microscopic structure and function of the tissues and human organ systems and human embryology including development of malformation.

Examination Computer examination throughout the course.
 Oral examination of practical training (microscopic slides), written final exam., Oral final exam.

Course Director Doc.MUDr.Pavel Hach,CSc

5.8 Title of the Course **Biochemistry and Molecular Biology**

Duration 75 hours

Curricular timing 1st year - 2nd semester

Semester	Study form	Hours per semester	Hours per week
2 nd	Lectures	45	3
	Practical training	30	2

Course Design Lectures, seminars and practical lab. group sessions

Primary aims To provide students a sound knowledge of biochemistry required for the applications in pathobiochemistry, clinical biochemistry and other subjects of preclinical and clinical curriculum.

Molecular biology in the 2nd semester of the 1st year represents an important complement to the course of biology and genetics.

In the practical courses the students should acquire experience with important biochemical techniques and learn how to use scientific approach in the experimental work as a method of scientific thinking in general.

Topics include proteins, enzymes, bioenergetics, nucleic acids and protein synthesis, intermediary metabolism, nutrition, digestion and absorption and biochemistry of specific tissues, functions and regulations.

Main objectives By the end of the course, the student shall be able to:

- have sound knowledge of the theory of biochemistry and molecular biology
- which could be applied to his/her medical use

Examination Written and oral examination after exam. from lab. practice.

Course Director Prof.MUDr.Stanislav Štípek,DrSc

5.9 Title of the Course **Propedeutics of Medicine**

Duration 45 hours

Curriculum Timing 1st year - 1st semester

Semester	Study form	Hours per semester	Hours per week
1 st	Lectures	45	3

Course Design Lectures and seminar and group sessions

Primary aims The theoretical basis of education of the freshly admitted student is given by bioekopsychosocial paradigm. Main accent is given to the relation between the medical doctor and his/her patient with underlining of its ethical and psychological dimensions.

Main objectives By the end of the course, the student shall be able to:

- choose approximately its attitudes and approaches to the patients according with the estimation of the very basic features of his/her personality
- have preliminary knowledge about the strategies of relations with different patients
- have preliminary knowledge about the basic problems of psychosomatic symptomatology

Examination Practical oral examination

Course Director Doc.PhDr Jan Vymětal

5.10 Title of the Course **First Aid in Medicine**

Duration 30 hours

Curriculum Timing 1st year - 2nd semester

Semester	Study form	Hours per semester	Hours per week
2 nd	Lectures	30	2

Course Design Practical sessions and group seminars

Primary aims Theoretical and practical education in the first aid, preliminary to the specialised knowledge given by the intensive care units.

Main objectives By the end of the course, the student shall be able to:

- give immaculate first aid in the basic cases of emergencies, happening outside the hospital

Examination Oral practical examination

Course Director PhDr Alena Mellanová, CSc

5.11 Title of the Course Latin Language

Duration 60 hours

Curricular Timing 1st year - 1st and 2nd semester

Semester	Study form	Hours per semester	Hours per week
1 st	Practical training	30	2
2 nd – students without exam after 1 st semester	Practical training	30	2

Course Design Theoretical and practical education in small groups of students

Primary aims The knowledge of basic Latin and Greek terminology, necessary for a successful mastering of medical studies

Main objectives By the end of the course, the student shall be able to;

- have passive knowledge of basic Latin terminology, used in
- present theoretical and clinical medicine
- have basic knowledge of grammatical rules of Latin, which
- enable the student to use the Latin terminology in a correct way

Examination Practical seminar examination, final oral examination

Course Director Doc.PhDr.Milada Říhová,CSc

5.12 Title of the Course **Foreign Language**

Duration 180 hours

Curriculum Timing 1st year 1st and 2nd semester
2nd year 1st and 2nd semester
3rd year 1st and 2nd semester

Semester	Study form	Hours per semester	Hours per week
1 st	Practical training	30	2
2 nd	Practical training	30	2
3 rd	Practical training	30	2
4 th	Practical training	30	2
5 th	Practical training	30	2
6 th	Practical training	30	2

Primary aims The English, German and French Courses are provided, according to the interest of students, lectured in modern active way of acquiring the active and highly idiomatic, but grammatically correct knowledge

The group and seminar tutorial form of teaching is used with the additional application of audiovisual techniques.

Main objectives By the end of three years curriculum, the student shall be able to:

- have sufficient knowledge of chosen foreign language to enable
- him/her active conversation and active participation in scientific presentation
- to fulfil and finish successfully the internationally accepted examinations (TOEFL etc.)

Examination Oral examination at the end of every year

Course Director Doc.PhDr.Milada Říhová,CSc

5.13 Title of the Course **Sports and Athletics**

Duration 120 hours + 120 hours + 120 hours
Curriculum Timing 1st year - 1st and 2nd semester
 2nd year - 3rd and 4th semester
 3rd year – 5th and 6th semester

Course Design The First year is devoted to the keeping and training of basic physical fitness of students, which is in the following years followed by more elective specialisation, according to the students personal physical skills and preferences.

Main objectives By the end of the course, student shall be able to ;

- have the appreciation of the importance of the balance between somatic, mental and stress inducing factors in human disease
- have the appreciation of the importance of the balance of healthy style of life, it means of the balance of nutrition, sporting activities (at least movement activity, contrasted with sedentary and comfortable life style) and keeping basic physical fitness.

Examination Practical examination of acquired physical skills

Course Director PaedDr Milan Jílek

5.14 Title of the Course **Czech Language for Foreign Students**

Duration 180 hours

Curriculum Timing 1st year 1st and 2nd semester (8 weeks)
2nd year 3rd and 4th semester (4 weeks)

Semester	Study form	Hours per semester	Hours per week
1 st	Practical training	60	4
2 nd	Practical training	60	4
3 rd	Practical training	30	2
4 th	Practical training	30	2

Primary aims Lectures and practical exercises, group sessions and tutorials

Main objectives By the end of the course, the student shall be able to:

- manage during the first year the grammar of Czech language, the basics of interpunction and the completing of the knowledge of Czech terminology
- manage during the second year the syntax, the basics of stylistics, the rules of interpunction and the deeper knowledge of Czech terminology.

Examination Oral and practical examination

Course Director Doc.PhDr Milada Říhová,CSc

5.15 Title of the Course **Computer Operation**

Duration 45 hours

Curriculum Timing 1st year - 1st and 2nd semester

Semester	Study form	Hours per semester	Hours per week
1 st	Lectures	15	1
	Practical training	15	1
2 nd	Practical training	15	1

Course design Practical group sessions

Primary aims The aim is to give the students a basic knowledge of i
informatics and computer operation.

Main objectives By the end of the course, the student shall be able to:
- acquire basic knowledge of informatics and computer operation
- learn or improve his/her skills in work with personal computers

Examination Practical and oral examination

Course Director Doc.MUDr.Miloslav Špunda,CSc

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5.16 Title of the Course **Biochemistry**

Duration 180 hours

Curriculum Timing 2nd year – 3rd and 4th semester

Semester	Study form	Hours per semester	Hours per week
3 rd	Lectures	30	2
	Practical training	45	3
4 th	Lectures	60	4
	Practical training	45	3

Course Design Lectures, seminars and practical exercises

Primary aims The subject deals with chemical components of life and their turnover in living systems, esp. in human organism. It should provide the student with sound knowledge of biochemistry required for other application in his/ her preclinical and clinical curriculum

Main objectives By the end of the course, the student shall be able to:

- apply the acquired knowledge in pathobiochemistry, clinical biochemistry, etc.
- acquire more profound knowledge of molecular biology as the complement to molecular genetics
- acquire in practical courses the experience with important biochemical techniques
- learn how to use scientific approach in the experimental work as a method of scientific thinking in general

Examination Written test and practical examination
Written test and oral examination

Course Director Doc.MUDr.Bohuslav Matouš,CSc
Prof.MUDr.Stanislav Štípek,DrSc

5.17 Title of the Course **Physiology**

Duration 300 hours

Curriculum Timing 2nd year - 3rd and 4th semester

Semester	Study form	Hours per semester	Hours per week
3 rd	Lectures	90	6
	Practical training	60	4
4 th	Lectures	90	6
	Practical training	60	4

Course Design Lectures and practical exercises

Primary aims The subject involves the explanation of the physiology of the cell of the general neurophysiology and of physiology of muscles, blood, of cardiovascular, respiratory and gastrointestinal systems. Further on, the stress is put on regulations, in which are participating the kidneys, the hormonal system and the central nervous system

Main objectives By the end of the course, the student shall be able to:

- have deep knowledge of the above quoted systems
- acquire by the practical experimental exercises the examination of some human functions and their regulations
- the education is complemented by the computer modelling

Examination Written test and practical exam.
Written test and oral exam.

Course Director Prof.MUDr.Stanislav Trojan,DrSc

5.18 Title of the Course First Aid -Clinical Aspects**Duration** 30 hours**Curriculum Timing** 2nd year - 3rd semester

Semester	Study form	Hours per semester	Hours per week
3 rd	Practical training	30	2

Course Design Group seminars, practical exercises**Primary aims** Theoretical and practical education of students in the problems of first aid from the aspects of different clinical specialities, as well as from the point of view of other health personal**Main objectives** By the end of the course, the student shall be able to:

- know the basic and more detailed theoretical and practical problems of the first aid help
- acquire basic and more detailed skills in the providing of qualified first aid

Examination Practical examination**Course Director** PhDr Alena Mellanova,CSc

5.19 Title of the Course **Summer Clerkship-Patient Care**

Duration 120 hours (3 weeks)

Curriculum Timing 2nd year - after 4th semester during vacations

Course Design The nurse-care practice on the medical-surgical hospital ward

Primary aims The aim of the summer clerkship is to give students the opportunity to exercise and improve their skills in the setting of hospital ward under the supervision of experienced nurses and doctors

Main objectives By the end of the course, the student shall be able to:

- perform basic nursing procedures
- to practice proper communication with the patients, as an integral part of the patient care
- know the basics of nursing
- know the work organisation both on the ward and within hospital
- learn and recognise the work-safety guidelines

Examination Evaluation of practical efficiency of the student

Course Director PhDr Alena Mellanová,CSc

5.20 Title of the Course **Patient Care**

Duration 30 hours

Curriculum Timing 2nd year - 4th semester

Semester	Study form	Hours per semester	Hours per week
4 th	Practical training	30	2

Course Design Practical exercises

Primary aims Continual education in practical aspects of nursing, patient care and communication with them, as well as in the education of the organisational aspects of nursing. The student should acquire the skills of taking care about immobile patient, administration s.c. and i.m. injections, blood drawing, assessing of vital signs, and other nursing skills.

Objectives By the end of the course, the student shall be able to: progress in the previously acquired knowledge in this area

Examination Practical examination

Course Director PhDr Alena Mellanova, CSc

5.21 Title of the Course **Immunology**

Duration 45 hours

Curricular Timing 2nd year - 4th semester

Semester	Study form	Hours per semester	Hours per week
4 th	Lectures	30	2
	Practical training	15	1

Course Design Lectures and practical group seminars

Primary aims This part of curriculum is directed mostly to the basics of immunology, lectured and tutored by selected specialists in different medical branches The description is given of the close relation to microbiology and serology The explanation is given on the role of cells and organs of the immune system and their products.

Objectives By the end of the course, the student shall be able to:

- know the basics of immunology from the general point of view
- know the basics of immunology, concerned with special branches of medicine.

Examination Practical examination, oral examination

Course Director Prof.MUDr.Terezie Fučíková,DrSc

5.22 Title of the Course **Medical Ethics**

Duration 90 hours

Curriculum Timing 2nd year - 3rd and 4th semester

Semester	Study form	Hours per semester	Hours per week
3 rd	Lectures	30	2
	Practical training	15	1
4 th	Lectures	30	2
	Practical training	15	1

Course Design Lectures and group seminars

Primary aims The aim of the course is to give the medical student the concise knowledge about the systematic ethics with the emphasis on health and medical application and the particular knowledge of its application on separate medical and social fields

Main objectives By the end of the course, the student shall be able to :

- acquire the basic ideology of hermeneutics and philosophical liberalism
- make competent medical and moral decisions

Examination Practical and theoretical oral examinations

Course Director MUDr.Mgr.Jan Payne

5.23 Title of the Course **Pathology**

Duration 240 hours

Curricular Timing 3rd year - 5th and 6th semester

Semester	Study form	Hours per semester	Hours per week
5 th	Lectures	60	4
	Practical training	60	4
6 th	Lectures	60	4
	Practical training	60	4

Course Design Lectures. Macroscopical group demonstration of autopsies, individual training in histopathology. Methodological demonstration in cytopathology, immunochemistry, in situ hybridisation, tissue cultures, electron microscopy. Seminars on selected topics.

Primary aims Give the students the first insight into principles of pathological processes and real diseases as well.

Main objectives By the end of the course, the student shall be able to:

- be well trained in general pathology and cell pathology
- be well acquainted in the theory of tissue pathology in inflammation and immune disorders and in infectious diseases
- know the theory of pathology of circulatory diseases, tumor-like disorders and tumors.
- be well educated in systemic pathology-cardiovascular disorders, hematopathology, lesions of respiratory tract and lesions of gastrointestinal tract with diseases of liver and pancreas, nephropathology, sex organs and mammary gland, neuromuscular diseases, bones and joints disorders, endocrine pathology, dermatopathology, eye and ear pathology

Anatomical pathology in autopsy hall, basic histopathologic diagnostics, activity in seminars, multiple choice question written test

Examination Oral examination

Course director Prof.MUDr.Pavel Miřejovský,DrSc
Prof.MUDr.Ctibor Povýšil,DrSc

5.24 Title of the Course **Pathobiochemistry**

Duration 30 hours

Curriculum Timing 3rd year - 5th semester

Semester	Study form	Hours per semester	Hours per week
5 th	Lectures	15	1
	Practical training	15	1

Course Design Lectures and group seminars

Primary aims The student should be well educated in insight into the mechanisms of the most inherited and acquired diseases at the biochemical, i.e. molecular level.

Main objectives By the end of the course, the student shall be able to:

- be well educated about general biochemical events giving rise to tissue and cell injury
- be well acquainted with disorder in the structure and function of proteins and enzymes
- have good knowledge in genetically based disorders
- gain insight into biochemical causes of the most common systematic disorders and syndromes

Examination Oral examination

Course Director Prof.MUDr.Stanislav Štípek,DrSc

5.25 Title of the Course **Pathophysiology**

Duration 180 hours

Curriculum Timing 3rd year - 5th and 6th semester
4th year - 7th semester

Semester	Study form	Hours per semester	Hours per week
5 th	Lectures	60	4
	Practical training	0	0
6 th	Lectures	30	2
	Practical training	30	2
7 th	Lectures	0	0
	Practical training	60	4

Course Design Lectures and practical group laboratory exercises

Primary aims The aim is to explain the student the biological basis of disease and to integrate all available scientific evidence for a rational analysis of a disease state

Main objectives By the end of the course, the student shall be able to:

- have good knowledge of general pathophysiology
- have good knowledge of special pathophysiology

Examination Written Multiple Choice Question tests from practical and oral part
Oral examination

Course Director Prof.MUDr.Emanuel Nečas,DrSc

5.26 Title of the Course **Medical Psychology**

Duration 120 hours

Curriculum Timing 3rd year - 5th and 6th semester

Semester	Study form	Hours per semester	Hours per week
5 th	Lectures	30	2
	Practical training	30	2
6 th	Lectures	30	2
	Practical training	30	2

Course Design Lectures and group seminars

Primary aims Medical psychology is taught in theory and through the experimental training. Optional complementary course about general and medical psychology is provided. Introduction to psychosomatic medicine is provided in the fourth year.

Main objectives By the end of the course, the student shall be able to:

- understand and manage the basics of general and medical psychology
- have an understanding of the meaning of mental dimension for medical practice

Examination Practical and oral examination

Course Director MUDr Radkin Honzák, CSc

5.27 Title of the Course Microbiology**Duration** 120 hours**Curriculum Timing** 3rd year - 5th and 6th semester

Semester	Study form	Hours per semester	Hours per week
5 th	Lectures	30	2
	Practical training	30	2
6 th	Lectures	30	2
	Practical training	30	2

Course Design Lectures and practical laboratory seminars

Primary aims The course comprises medical microbiology, i.e. medical bacteriology and virology, and includes medical mycology and parasitology, immunology of infectious diseases and serology. This course is closed by integrated Block of Microbiology and Pathology.

Main objectives By the end of the course, the student shall be able to:

- understand mechanisms of microbial virulence and immunity
- know pathogenesis and immunogenesis of infectious diseases
- have knowledge and skills in new diagnostic approaches and techniques
- have knowledge of immunopreparations for therapy and prevention of infectious and neoplastic diseases

Examination Written multichoice test, practical and oral examination**Course Director** Doc.MUDr.Andrej Souček,CSc

5.28 Title of the Course **Integrated Block-Pathology and Microbiology**

Duration 25 hours

Curriculum Timing 3rd year - 6th semester

Semester	Study form	Hours per semester
6 th	Block of lectures and seminars	25 (in 1 week)

Course design Lectures and seminars

Primary aims The integrated block is a 5-day synoptic course closing the regular course of microbiology and immunology. It is held as a panel discussion of a microbiologist, immunologist, pathologist, infectologist, pharmacologist and invited specialists, summarising general definitions and considerations, and selected topics according to clinical, epidemiological and systemic divisions.

Main objectives By the end of the course, the student shall be able to:

- practice and verify in a more concrete way the knowledge, acquired in the previous course of microbiology

Examination Written multichoice test, oral examination

Course Director Prof.MUDr.Pavel Miřejovský,DrSc

Prof.MUDr.Ctibor Povýšil,DrSc

5.29 Title of the Course **Pharmacology**

Duration 150 hours

Curriculum Timing 4th year - 7th and 8th semester

Semester	Study form	Hours per semester	Hours per week
7 th	Lectures	30	2
	Practical training	45	3
8 th	Lectures	30	2
	Practical training	45	3

Course Design Lectures and practical laboratory seminars

Primary aims The education in general and special pharmacology, concerned with all facets of the interaction of chemicals with biological systems and including important discipline of toxicology of drugs.

Main objectives By the end of the course, the student shall be able to:

- acquire good knowledge of basic information on both general and special pharmacology
- know the principles of drug actions
- understand the principles of pharmacokinetics and pharmacodynamics
- have knowledge about available drugs acting on various physiological systems
- know about the principles of application of different drugs for the purpose of treatment, diagnosis or prevention of diseases

Examination Written multiple choice test, oral examination

Course Director Prof.Dr.Hassan Farghali,DrSc

5.30 Title of the Course Parasitology for foreign students**Duration** 45 hours**Curriculum Timing** 4th year - 7th semester

Semester	Study form	Hours per semester	Hours per week
7 th	Practical training	45	3

Course Design Practical group seminars**Primary aims** The course is aimed at introducing students into biology of the most important agents of the parasitic infections of humans, with emphasis on parasitic diseases occurring in tropics.**Main objectives** By the end of the course, the student shall be able to:

- be educated about selected parasitic protozoa,
- helminths, and anthropods
- have good understanding into host-parasite interactions, life cycles and vector biology, underlining transmission and pathogenesis of parasitic infections
- acquire skills in basic techniques of the laboratory diagnosis of parasitic infections and principles of correct specimen collection for this purpose.

Examination Credit only**Course Director** Dr.Chalupský
Dr.Kulda

SECTION 6 – Preclinical , Medical and Elective Disciplines

Sub Sections 6.1 – 6.27

6.1 Title of the Course: **Propaedeutics in Internal Medicine**

Duration:

45 hours

Curriculum Timing:

3rd year, 5th semester

Semester	Study form	Hours per semester	Hours per week
5 th	Lectures	15	1
	Exercises	30	2

Course Design:

Lectures and clinical exercises

Content:

The major aim of this course is to train the students in both good history taking and physical examination instruction about ethical attitude to patients and training of the communication with the patients and with the medical staff.

Objectives:

By the end of the course, the student shall be able to:

- be well trained in medical history taking
- have an overview of basic laboratory tests with their normal ranges
- have an overview of basic instrumental diagnostic methods
- have an overview of main clinical signs and symptoms
- adept ethical attitudes in general, manage good communication skills

Examination:

Practical examination, Oral examination

Course Director:

Doc. MUDr. Sylvie Sulková, Csc.

6.2 Title of the Course: **Summer Clerkship in Internal Medicine**

Duration:

1 week

Curriculum Timing:

Summer after 8th semester

Semester	Study form	Weeks per semester
after 8 th	Summer clerkship	1

Course Design:

Under the guidance of experienced physicians the students should gain basic skills during two weeks of full time work at an internal patient ward in one of the non-medical school hospitals.

Content:

The students get acquainted with basic medical documentation, are trained in simple medical procedures such as blood sampling, insertion of peripheral vein lines, insertion of naso-gastral tubes, ECG taking etc. They take part in the work of both emergency department and patient clinic.

Objectives:

At the end of the course, the student shall be able to:

- verify his/her theoretical and practical knowledge and skills, acquired previously
- be acquainted with the day run of the hospital and out-patient care and the management of the hospital
- cooperate in team work with colleagues and nurses

Examination:

Credit and practical and theoretical examination

Course Director:

Doc. MUDr. Sylvie Sulková, Csc.

6.3 Title of the Course: **Internal Medicine**

Duration:

200 hours

Curriculum Timing:

3rd to 5th year, 6th to 10th semester

Semester	Study form	Hours per semester	Hours per week
6 th	Lectures	45	3
	Exercises	30	2

Semester	Study form	Hours per semester	Weeks per semester
7 th and 8 th	Lectures and exercises	75	3
9 th and 10 th	Lectures and exercises	50	2

Course Design:

Lectures, group seminars and practical clinical exercises

Content:

This course contains Internal clinics and Pneumology.

The final course in internal medicine is directed to integration, consolidation and solidification of students' practical and theoretical knowledge and skills and to erasing eventual weaknesses and inadequacies.

Internal Clinics

Content:

Students are trained in detail in systemic pathology, pathophysiology, symptomatology and diagnostics, clinical course, prevention and therapy of internal diseases. From the 7th semester begins the education in different particular specialities of internal medicine. The practical education is conceptualised as the work of young resident at the different departments of four internal departments of the First Faculty of Medicine. There are also selected seminars of cardiology, gastroenterology and pneumology.

Objectives:

- By the end of the whole course, the student shall be able to:
- be in good knowledge of the diagnostics, therapy and prevention of the internal diseases
 - begin work under supervision of specialists as the residents at the Dept. of Internal Medicine in the Hospital.

Pneumology

Content:

The subject is the part of the cumulative examination from internal medicine in the 5th year and the aim of the course is to give the students sound knowledge of the pathophysiology, diagnostics, clinical picture and treatment of respiratory diseases. The overview about the problem of tuberculosis is given also.

Objectives:

By the end of the course, the student shall be able to:

- have a good knowledge about the main and the most common respiratory diseases
- have a good knowledge and skills in pneumological anamnesis including the proper examination of the chest
- have a good knowledge and overview of the classical (auscultation, percussion, aspection) and modern diagnostic methods (CT, MNR, immunology)
- be acquainted with the basics of bronchology and examination of the respiratory function as well as with the microbiology of tuberculosis

Objectives:

To verify the results of students' complete studies and work in internal medicine and test his/her ability to enter the responsible practice of medicine after graduation.

Examination:

State Comissional Examination

Course Directors:

Doc. MUDr. Sylvie Sulková, Csc

6.4 Title of the Course: Propaedeutics in Surgery

Duration:

45 hours

Curriculum Timing:

3rd year, 6th semester

Semester	Study form	Hours per semester	Hours per week
6 th	Lectures	15	1
	Exercises	30	2

Course Design:

Lectures and clinical exercises

Content:

The aim of this course is to introduce students to the basic principles of clinical examination and treatment of surgical patients.

Objectives:

By the end of the course, the student shall be able to:

- have overview of the history of surgery
- manage basic approach to the patient
- have good knowledge about asepsis
- have good knowledge about common surgical procedures and resuscitation
- have good skills of obtaining accurate history and physical examination
- manage dressing of surgical wounds

Examination:

Credit and Practical and Oral examination

Course Director:

Prof. MUDr. Pavel Pafko, DrSc.

6.5 Title of the Course: Summer clerkship in Surgery

Duration:

1 week

Curriculum Timing:

Summer after 8th semester

Semester	Study form	Weeks per semester
after 8 th	Summer clerkship	1

Course Design:

During this course the students are working at various university surgical departments or at surgical departments of district general hospitals according to their choice.

Content:

This allows them to be involved directly in everyday work of the surgical department and to improve their skills in surgery.

Objectives:

At the end of the course, the student shall be able to:

- verify and improve his/her theoretical and practical knowledge and skills, acquired previously
- be acquainted with the daily practice, running and management of hospital and out-patient surgical care
- work with the team of doctors and nurses

Examination:

Credit only

Course Director:

Prof. MUDr. Pavel Pafko, DrSc.

6.6 Title of the Course: **Surgery**

Duration:

9 weeks

Curriculum Timing:

4th to 5th year, 7th to 10th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th to 8 th	Lectures, seminars and exercises	150	6
9 th to 10 th	Lectures, seminars and exercises	75	3

Course Design:

Lectures, group seminars and practical clinical exercises.

Content:

This course contains courses of General surgery, Neurosurgery, Orthopaedic surgery and Urology. The final course in Surgery is directed to integration, consolidation and solidification of students' theoretical and practical knowledge and skills and to erasing eventual weaknesses and inadequacies.

Neurosurgery

Content:

Pregraduate education in neurosurgery is concerned mainly with symptoms and clinical findings of neurological emergencies and general information about present limits and possibilities of neurosurgery based on diagnostics enhanced by modern techniques (CT, MRI, DSA)

Objectives:

By the end of the course, the student shall be able to:

- be knowledgeable in symptoms and clinical findings of neurosurgical emergencies
- be well informed about present possibilities of neurosurgery enhanced by new techniques (CT, MRI, DSA)
- well trained practically in clinical examination of the patient
- and in some small surgical procedures (lumbar puncture, wound bandage)

Orthopaedic Surgery

Content:

The aim of the course is to introduce the students into basic problems of the orthopaedic surgery and traumatology

Objectives:

By the end of the course, the student shall be able to:

- have a good knowledge about the common orthopaedic diseases
- have good knowledge and skills of the clinical examination, diagnosis and both conservative and operative treatment of common orthopaedic diseases
- acquire sound knowledge about modern trends in endo-prosthetics and operative treatment in general
- have knowledge enabling better judgement on the therapeutical possibilities in orthopaedics from the point of view of general practice

Urology**Content:**

The aim of the course is to give the students good knowledge of current trends in etiopathogenesis, diagnosis and treatment of urological diseases.

Objectives:

By the end of the course, the student shall be able to:

- acquire a sound knowledge of the etiopathogenesis, diagnosis and treatment of common urological disease
- acquire focussed knowledge especially on urgent states and most common diseases as benign prostatic hyperplasia and stone
- acquire basic knowledge of onco-urology and paediatric urology
- use skills acquired by training in assessment of laboratory findings, X-rays, ultrasound and in indications for conservative and surgical treatment in urology

Objectives:

To verify the results of students' studies and work in surgery and to test his/her ability to enter the responsible practice of medicine after graduation.

Examination:

State Comissional Examination

Course Directors:

Prof. MUDr. Pavel Pařko, DrSc.
 Doc. MUDr. Jiřĩ Beneř, CSc.
 Prof. MUDr. Jan Sosna, Drsc.
 Prof. MUDr. Jan Dvořáček, DrSc.

6.7 Title of the Course: Oncology**Duration:**

1 week

Curriculum Timing:4th year, 7th or 8th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th or 8 th	Lectures and seminars	25	1

Course Design:

Clinical practical seminars and exercises, lectures

Content:

The students are exposed to oncology training in the broad field of clinical oncology, the advanced diagnostic modalities and techniques are emphasised.

Objectives:

- By the end of the course, the student shall be able to:
- be well knowledgeable in clinical symptoms of the most common oncologic diseases
 - well trained in clinical examination of the patient with respect to his/her psychological needs
 - have a good overview of the new possibilities of oncology, given by the sophisticated modern diagnostic techniques and treatment

Examination:

Credit and Oral examination

Course Director:

Doc. MUDr. Luboš Petruželka, CSc

6.8 Title of the Course: Neurology**Duration:**

1 week

Curriculum Timing:5th year, 9th or 10th semester

Semester	Study form	Hours per semester	Weeks per semester
9 th or 10 th	Lectures and seminars	25	2

Course Design:

Lectures and practical seminars, Special tutorial seminars

Content:

The aim of the course is to give a modern knowledge of the most common neurological diseases and to train the ability of skills in making appropriate anamnesis and examination of the patient.

Objectives:

By the end of the course, the student shall be able to:

- have basic and deep knowledge of the most common neurological diseases (cerebrovascular d. headaches, cerebral and spinal tumours demyelinations, neuro-infections, epilepsy, disorders of locomotory apparatus
- have skills in making appropriate anamnesis and examination of the patient
- have the basic knowledge of the technical diagnostic approaches, used in modern neurology (CT, MNR etc, and of lab. examinations)
- orient him/herself in basics of clinical thinking and decision making with consideration of ethical approaches

Examination:

Credit and Practical and oral examination

Course Director:

Prof. MUDr. Soňa Nevšimalová, DrSc

6.9 Title of the Course: Nuclear Medicine**Duration:**

1 week

Curriculum Timing:4th year, 7th or 8th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th or 8 th	Lectures and seminars	25	1

Course Design:

Lectures and clinical practical seminars

Content:

The aim of the course is to present the basic knowledge about the use of radio-nuclides in clinical diagnostics and therapy in general.

Objectives:

- By the end of the course, the student shall be able to:
- have up-to-date knowledge about the physical basis of SPECT and PET and about the relation of emission tomography to other visualisation techniques (MRI, CT, sonography)
 - acquire the knowledge about the kinetics of radiopharmaceuticals in the body
 - know the important radioisotope methods in special clinical discipline
 - know about the contribution of radioisotope methods to screening of congenital diseases
 - to be educated in the knowledge about radiobiological effects and influence of radiation on living organisms

Examination:

Credit and Practical and oral examination

Course Director:

MUDr. Jan Urbánek, CSc

6.10 Title of the Course: Radiodiagnostics and Radiotherapy**Duration:**

1 week

Curriculum Timing:4th year, 7th or 8th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th or 8 th	Lectures and seminars	25	1

Course Design:

Lectures and clinical seminars

Content:

The aim of this course is to give the student the basic information on up-to-date imaging methods.

Objectives:

- By the end of the course, the student shall be able to:
- have good knowledge on non-invasive procedures
 - have good knowledge of invasive procedures
 - both of them with special regard to indications, limits and diagnostic efficiency of the methods

Examination:

Credit and Practical and oral examination

Course Director:

MUDr. Jan Daneš, CSc.

6.11 Title of the Course: Sports Medicine**Duration:**

1 week

Curriculum Timing:4th year, 7th or 8th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th or 8 th	Lectures and seminars	25	1

Course design:

Lectures and clinical seminars

Content:

The aim of this course is to provide the students with the knowledge of the reaction and the adaptation of healthy, weakened mind ill people, to various kinds of exercise and with understanding of the importance of physical activity, healthy nutrition and life regime

Objectives:

By the end of the course, the student shall be able to:

- do specific clinical examination
- have a good knowledge and skills of functional diagnostics of cardio-respiratory system
- have good overview of clinical anthropology
- have knowledge and skills in organisation of prevention of cardiovascular diseases

Examination:

Credit and Practical and oral examination

Course Director:

Doc. MUDr. Petr Brandejský, CSc.

6.12 Title of the Course: Dermatovenerology**Duration:**

2 weeks

Curriculum Timing:4th year, 7th or 8th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th or 8 th	Lectures, seminars and exercises	50	2

Course Design:

Lectures and practical and clinical seminars

Content:

The aim of the course is to give the students the basic information about the most common skin and venereal diseases like eczema, dermatitis, mycoses, infections, bacterial and viral manifestations, syphilis, gonorrhoea, AIDS and other sexually transmitted diseases

Objectives:

By the end of the course, the student shall be able to:

- make a good dermatological anamnesis and examination of the patient with the diagnostic interpretation
- have a good knowledge of the above named categories of dermatological and venereal diseases
- have a good overview on the aspects of the external and internal treatments

Examination:

Credit, written multichoice test and oral examination

Course Director:

Prof. MUDr. František Vosmík, DrSc

6.13 Title of the Course: Paediatrics**Duration:**

3 weeks

Curriculum Timing:5th year, 9th or 10th semester

Semester	Study form	Hours per semester	Weeks per semester
9 th or 10 th	Lectures, seminars and exercises	75	3

Course Design:

Lectures, group seminars, practical clinical exercises

Content:

In this course the medical student is coming into the real contact with the "person" of the child in its growth and development. The aim is to show some pathologic problems of children. The course of Paediatrics is devoted to integration, consolidation and solidification of students' theoretical and practical knowledge and skills and to erasing eventual weaknesses and inadequacies.

Objectives:

By the end of the course, the student shall be able to:

- have basic knowledge of the illnesses of children in development from childhood to adolescence
- to acquire knowledge and skills of clinical examination of the child
- acquire substantial knowledge of the care and treatment of the children and adolescents

Examination:

Credit and Oral examination

Course Director:

Doc. MUDr. Josef Hoza, CSc

6.14 Title of the Course: Rehabilitation Medicine**Duration:**

1 week

Curriculum Timing:5th year, 9th or 10th semester

Semester	Study form	Hours per semester	Weeks per semester
9 th or 10 th	seminar/practical		1

Course Design:

Clinical group seminars

Content:

The subject is divided into two separate parts

The first part deals with medical rehabilitation as a medical speciality, the second part is related to the subject "Social Medicine" and deals with rehabilitation of the persons with disability (PWD).

Objectives:

By the end of the course, the student shall be able to:

- have a sound knowledge of the basic diagnostic and therapeutic methods
- have an overview about physiatry, balneology, prosthetics
- have knowledge and skills in the use of technical aids, ergometry, musculoskeletal medicine, combined with practical demonstrations
- have a basic knowledge about various aspects of rehabilitation
- about voluntary organisation of PWD, sport, partnership, barrier-free housing and psychological approaches

Examination:

Practical and oral examination

Course Director:

Doc. MUDr. Jiří Votava, CSc

6.15 Title of the Course: Psychiatry**Duration:**

1 week

Curriculum Timing:4th year, 7th or 8th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th or 8 th	Seminars and exercises	25	1

Course Design:

Seminars and group practical exercises

Content:

The aim is to give the students a sound knowledge of the most common psychiatric diseases and to improve their communication skills and understanding of the psychological needs of the patient and to acquire the basic knowledge of psycho-pathology and of legal and ethical aspects, special for psychiatry

Objectives:

By the end of the course, the student shall be able to:

- have sound knowledge about the most common psychiatric and sexological disorders
- have improved skills of psychiatric anamnesis, based on psycho-therapeutically based effective communication with the patient
- have sound knowledge of psycho-pathology as the basis of good way to differential diagnosis
- have better understanding of psychological needs of the patient
- have improved communication skills
- have good knowledge about the medical sexology in the health care system, about sexual dysfunctions and disorders and about male aspects of reproductive medicine

Examination:

Credit and practical and oral examination

Course Director:

Doc. MUDr. Pavel Pavlovský, CSc

6.16 Title of the Course: Infectious Diseases**Duration:**

2 weeks

Curriculum Timing:4th year, 7th or 8th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th or 8 th	Seminars and exercises	50	2

Course design:

Seminars and clinical practical exercises

Content:

The aim of the course is to give the students an insight into the most common epidemiologically relevant infectious diseases and the understanding of the infectious processes and various aspects of their diagnosis and treatment.

Objectives:

By the end of the course, the student shall be able to:

- understand the basic principles of the causes of bacterial, viral and other infectious diseases
- know principles of diagnosis and treatment of the common infectious diseases
- understand and to know the principles of corresponding laboratory techniques serving for specific diagnosis (HIV/AIDS, Lyme disease etc.).

Examination:

Credit and Practical and oral examination

Course Director :

Doc. MUDr. Alena Lobovská, CSc

6.17 Title of the Course: Ophthalmology**Duration:**

2 weeks

Curriculum Timing:4th year, 7th semester

Semester	Study form	Hours per semester	Weeks per semester
7 th	Lectures, seminars and exercises	50	2

Course Design:

Clinical practical exercises and seminars and lectures

Content:

The aim is to give the students the knowledge of anatomy and physiology of the eye, the understanding of the optics and refraction and the knowledge of the diagnostics and treatment of the most common external and posterior segment eye diseases

Objectives:

By the end of the course, the student shall be able to:

- know well the examination of eye and its specificities
- be knowledgeable about the diagnosis and basic treatment of common and urgent eye diseases
- decide (in the general practice) about the necessity of specialised ophthalmological treatment with urgent and complicated cases
- acquire practical skills on the first aid and examination of visual functions, external eye and fundus in the range, required for general practitioner

Examination:

Credit, Written multi-choice test, practical and oral examination

Course Director:

Doc. MUDr. Martin Filipec, CSc.

6.18 Title of the course: Othorhinolaryngology**Duration:**

2 weeks

Curriculum Timing:5th year, 9th or 10th semester

Semester	Study form	Hours per semester	Weeks per semester
9 th or 10 th	Lectures and exercises	50	2

Course Design:

Lectures, propaedeutics practice in clinical practical exercises, with elements of problem based learning, clinical rotation

Content:

The aim of the education is to give the students orientation in various ENT diseases and the understanding of the position of the ENT speciality and its continuity with other branches of medicine.

Objectives:

By the end of the course, the student shall be able to:

- have good understanding and orientation in various ENT diseases, and their diagnosis and treatment, the problems of differential diagnosis and therapy
- understand possible complications of these diseases
- acquire knowledge of the common and methods of examination used in ETN
- acquire the knowledge of problems of oncology, endoscopy, otology, oto-surgery, cochlear-implant surgery, rhinology, thyroid gland surgery and other disciplines of this broad branch
- acquire knowledge of emergency medicine of the region of head and neck
- know management of life threatening situations and basic care of patients with grave sickness in ETN region

Examination:

Credit and Practical and oral examination

Course Director:

Prof. MUDr. Jan Betka, DrSc.

6.19 Title of the Course: Social Medicine - Health Politics**Duration:**

2 weeks

Curriculum Timing:6th year, 11th or 12th semester

Semester	Study form	Hours per semester	Weeks per semester
11 th or 12 th	Seminars	50	2

Course design:

Group seminars

Content

This course synthesises various disciplines related to health care and represents the trial to integrate disciplines concerned with ethical values like equity, solidarity, responsibility and empathy to others.

Objectives

By the end of the course, the students shall be able to:

- acquire basic information regarding system and organisation of delivery of medical services
- acquire some knowledge of medical sociology, epidemiology and demography, economics, concerning medicine, medical law, social medicine, public health, health promotion and education, rehabilitation and care about risk groups in population
- know other humanities in medicine

Examination

Credit and Oral Commisional examination

Course Director:

Doc. MUDr. František Schneiberg, CSc.

6.20 Title of the Course: Hygiene and Epidemiology**Duration:**

3 weeks

Curriculum Timing:5th year, 9th or 10th semester

Semester	Study form	Hours per semester	Weeks per semester
9 th or 10 th	Lectures, seminars and exercises	75	3

Course design:

Lectures, group seminars and practical exercises

Content:

The aim of the course is to give the students the knowledge of selected topics of hygiene and epidemiology. The main attention is paid to the environmental epidemiology and toxicology, to the health effect of indoor air quality, to hospital acquired infections and hospital hygiene occupational hygiene, health promotion and the life style.

Objectives:

By the end of the course, the student shall be able to:

- know principles and methods of epidemiology, used during the study of human diseases prevalence and incidence and of factors determining their distribution and prevention
- acquire the knowledge of epidemiological methods and basic statistics, esp. those used in clinical research
- acquire the knowledge of methods, evaluating the risk factors of environment and of the effects of these risk factors on human health

Examination:

Written multi-choice test, Oral commisional examination

Course Director:

Prof. MUDr. Vladimír Bencko, DrSc.

6.21 Title of the Course: Forensic Medicine**Duration:** 1 week**Curriculum Timing:**6th year, 11th or 12th semester

Semester	Study form	Hours per semester	Weeks per semester
11 th or 12 th	Seminars and exercises	25	1

Course Design:

Group seminars and practical exercises, forensic autopsies presence

Content:

The students are educated about the forensic pathomorphology of sudden and violent death, about the forensic traumathology, the principles of forensic toxicology and immunochemistry and about medical legal aspects of medicine.

Objectives:

By the end of the course, the student shall be able to:

- know about basic problems, encountered by forensic medicine
- acquire the knowledge about the principles of forensic autopsies
- know the methods of estimation of alcohol in blood and urine
- know the methods and advantages of toxicological analyses in autopsied persons
- be informed about the problems of medico-legal consultations
- know the tasks of forensic medicine in helping the law in discovering the violent criminal acts

Examination:

Oral examination

Course Director:

Prof. MUDr. Přemysl Strejc, DrSc.

6.22 Title of the Course: Emergency Medicine**Duration:**

2 weeks

Curriculum Timing:5th year, 9th or 10th semester

Semester	Study form	Hours per semester	Weeks per semester
9 th or 10 th	Lectures, seminars and exercises	50	2

Course Design:

Lectures and clinical practical seminars and exercises

Content:

The subject deals with the performance of a long term artificial lung ventilation, with the multiple organ failure care and treatment involving complete parenteral nutrition.

Objectives:

By the end of the course, the students shall be able to:

- know the basic principles of emergency care on high level of technical sophistication
- acquire some basic skills of emergency medicine, helpful and necessary for general practice also from point of view of his/her duty to give qualified first aid

Examination: Credit and Oral examination**Course Director:**

Doc. MUDr. Milan Ehler, CSc.

6.23 Title of the Course: Obstetrics and Gynaecology**Duration:**

2 weeks

Curriculum Timing:5th year, 9th or 10th semester

Semester	Study form	Hours per semester	Weeks per semester
9 th or 10 th	Lectures and Practical training	50	2

Course Design:

Lectures, group seminars and practical clinical exercises

Content:

This final course in Obstetrics and Gynaecology is directed to integration, consolidation and solidification of students' theoretical and practical knowledge and skills and to erasing eventual weaknesses and inadequacies.

Examination:

Credit and Oral Examination

Course director:

MUDr. Pavel Calda, CSc.

6.24 Title of the Course: Electives I

15 to 60 hours

Curriculum Timing:2nd year, 3rd and 4th semester

Subject	Semester	Study form	Hours per semester	Hours per week
Summer sport course	4 th	Course	30	1 week
Duration: Basics of social medicine	4 th	Seminars	15	1
Basics of toxicology	3 rd and 4 th	Lectures	60	4

Course Design:

Lectures, group seminars and practical clinical exercises

Content:

The students have choice, but in a compulsory way.

Options: Summer sport course, Basics of social medicine, Basics of toxicology.**Objectives:**

The student should acquire deeper knowledge and skills in areas, in which are especially interested and/or are closely connected with the matters of his/her future medical career.

Examination:

Credit only

Course Directors:

According to Specialities Concerned

6.25 Title of the Course: Electives II**Duration:**

15 to 60 hours

Curriculum Timing:3rd year, 5th and 6th semester

Subject	Semester	Study form	Hours per semester	Hours per week
Winter skiing course	5 th	Course	30	1 week
Human ecology	5 th	Seminars	15	1
Clinical radiobiology	6 th	Seminars	15	1
Basics of toxicology	5 th	Lectures	60	4
Medical parazitology	5 th	Seminars	30	2
Analytical toxicology	5 th	Seminars	30	2

Course Design:

Lectures, group seminars and practical clinical exercises

Content:

The students have choice, but in a compulsory way.

Options: Winter skiing course, Human ecology, Clinical radiobiology, Basics of toxicology, Medical parazitology, Analytical toxicology.**Objectives:**

The student should acquire deeper knowledge and skills in areas, in which are especially interested and/or are closely connected with the matters of his/her future medical career.

Examination:

Credit only

Course Directors:

According to Specialities Concerned

6.26 Title of the Course: Electives III**Duration:**

15 to 120 hours

Curriculum Timing:4th year, 7th and 8th semester

Subject	Semester	Study form	Hours per semester	Hours per week
Orofacial oncology	7 th and 8 th	Practical exercises	15/30	1/2
Medical parasitology	7 th	Seminars	30	2
Psychotherapy	7 th and 8 th	Lectures and seminars	60/60	4/4
Humanities	8 th	Seminars	15	1
Paleopathology	7 th	Seminars	15	1
Preventive medicine	7 th and 8 th	Seminars	15/15	1/1
Medical informatics	7 th and 8 th	Seminars	15/15	1/1
Biophysical methods in medicine	8 th	Exercises	15	1
Communication skills and biophysical methods in medicine	7 th and 8 th	Seminars and exercises	15/15	1/1
Analytical toxicology	5 th	Seminars	30	2

Course Design:

Lectures, group seminars and practical clinical exercises

Content:

The students have choice, but in a compulsory way.

Options: Orofacial oncology, Medical parasitology, Psychotherapy, Humanities, Paleopathology, Preventive medicine, Medical informatics, Communication skills and biophysical methods in medicine, Analytical toxicology.

Objectives:

The student should acquire deeper knowledge and skills in areas, in which are especially interested and/or are closely connected with the matters of his/her future medical career.

Examination:

Credit only

Course Directors:
According to Specialities Concerned

6.27 Title of the Course: Electives IV**Duration:**

30 to 120 hours

Curriculum Timing:5th year, 9th and 10th semester

Subject	Semester	Study form	Hours per semester	Hours per week
Analytical toxicology	5 th	Seminars	30	2
Clinical genetics	9 th and 10 th	Seminars	15/15	1/1
Clinical pharmacology	9 th and 10 th	Seminars	15/15	1/1
Clinical immunology	9 th and 10 th	Seminars	15/15	1/1
Clinical biochemistry	9 th and 10 th	Seminars	15/15	1/1
Advances in gynaecology and obstetrics	9 th and 10 th	Seminars and clinical exercises	15/15	1/1
Geriatrics	9 th and 10 th	Seminars	15/15	1/1
Psychotherapy	9 th and 10 th	Lectures and seminars	60/60	4/4
Tropical diseases	9 th and 10 th	Seminars	15/15	1/1

Course Design:

Lectures, group seminars and practical clinical exercises

Content:Compulsory choice for the students in the 5th year**Options:** Analytical toxicology, Clinical genetics, Clinical pharmacology, Clinical immunology, Clinical biochemistry, Advances in gynaecology and obstetrics, Geriatrics, Psychotherapy, Tropical diseases.**Objectives:**

The student should acquire deeper knowledge and skills in areas, in which are especially interested and/or are closely connected with the matters of his/her future medical career.

Examination:

Credit only

Course Directors:

According to the Specialities Concerned

SECTION 7 – Dental disciplines

7.1 Title of the Course: PROPEDEUTIC DENTISTRY

Course head:

1st Stomatological Clinic: Arnoštka Pehrová, MUDr., PhD.

2nd Stomatological Clinic: Jan Handzel, Assoc.Prof., MUDr., PhD.

Person in school who will explain and show this to the visitors:

1st Stomatological Clinic: Arnoštka Pehrová, MUDr., PhD.

2nd Stomatological Clinic: Jan Handzel, Assoc.Prof., MUDr., PhD.,
e-mail: jan.handzel@lf1.cuni.cz

Course design:

This course represents an introduction to all disciplines of general dentistry. Students ought to gain a basic overview of dentistry as a necessary requirement for their consecutive preclinical and clinical studies.

Curricular timing: 2nd, 3rd, 4th semesters – 1st and 2nd year

Semester	Study form	Hours per semester
2 nd	Lectures / Practical training	15 / 45
3 rd	Lectures / Practical training	30 / 60
4 th	Lectures/ Practical training	30 / 75

Main Objectives:

Description of dental office, dental tools and equipment. Conditions for practical training on instructional phantoms.

Morphology of the oral cavity and its development. Development of teeth, teething of human teeth. Tooth notation in deciduous and permanent dentition.

Basics of restorative dentistry: Dental decay – etiopathogenesis, diagnostic, treatment and prevention. Classification of cavities and basic principles of cavity preparations, instruments and materials. Techniques for management of a deep caries lesion, pulp treatment – direct and indirect pulp capping, pulp devitalization. Techniques, instruments and materials for endodontic treatment.

Basics of prosthetic dentistry: Classification of defects in dental arches (according Voldřich and Kennedy). Treatment planning of fixed and removable dentures, periodontological considerations of a treatment plan. Instruments and materials used in dental prosthetics.

Basics of oral surgery: Principles of oral surgery treatment, surgical instruments, surgical suturing and splinting of teeth, tooth extraction – technique and armamentarium.

Dental X-ray technique. Primary aims and basic principles of treatment in pediatric dentistry, periodontology and orthodontics.

Method of teaching:

Lectures and Practical Training

Lecture syllabus:**2nd semester:**

Terminology of oral cavity and deciduous/permanent teeth morphology. Teeth registration. Basics of gnathology. Restorative dentistry: instruments for examination, preparation, filling and polishing. Cavities classification according Black and new aspects of this classification. Materials for cavity filling. Principles of caries prevention.

3rd semester:

Principles of cavity preparation for Black's classes I. – V. Treatment of dental pulp: deep caries lesion, direct and indirect pulp capping, basics of endodontic treatment. Techniques of root canal therapy in frontal and lateral teeth, root canal obturation. Techniques of vertical and lateral condensation of gutta percha points. X-ray examination prior and after endodontic treatment.

Introduction into pediatric dentistry, preventive programs in pedodontics.

Orthodontics: Classification of orthodontic anomalies, survey of orthodontic treatment methods.

Periodontics: ethiopathogenesis and classification of periodontal diseases, periodontopathies treatment survey, prevention of periodontopathies, basic techniques of oral hygiene management.

Basic terms, procedures and instruments in oral surgery. Local anaesthesia in dentistry, infiltrative and nerve block techniques for all localities of oral cavity. Extraction of teeth: indications, techniques, armamentarium and complications of teeth extractions.

Sterilization and disinfection in dentistry. Principles of X-ray examination in dentistry.

4th semester:

Prosthodontic Dentistry: Biological factors of teeth, classification of teeth as prosthetic abutments. Classification of defects in dental arches according Voldřich and Kennedy. Types of masticatory forces transfer by dental prostheses. Possibilities of prosthodontic treatment: crowns and bridges and removable partial and complete dentures. Periodontological considerations for prosthodontic treatment, use of implants in prosthetic treatment. Prosthodontic materials and metal alloys. Chairside and dental laboratory procedures by fabrication of dental prostheses.

Crowns and bridges: types of abutment's preparation for different types of crowns and abutment constructions, ceramics and metal-ceramic crowns. Problems of fabricating complete dentures. Repairs, relines and additions to dentures.

Practical training syllabus:**2nd semester:**

Tooth notation – training. Modelation of anterior and posterior teeth from wax, plaster and resin. Training in tooth morphology, identification of extracted teeth.

Different forms of cavity preparations in resin plates, use of several types of liners and base materials, principles of work with all types of materials for definite fillings. Cavity preparation on individual polycarbonate teeth for Class I and V of Black's classification.

Work on phantom heads: cavities of 1st and Vth Classes on phantom teeth: preparation, application of liners or bases, definite fillings.

3rd semester:

Restorative dentistry (cont.): Cavities of 1st, 3rd and 4th Classes of Black's classification, use of matrices, demonstration of rubberdam technique.

Preparation of a cavity for inlay (Class I), direct modelation from wax, investment of the wax model to form a mould, demonstration of casting process, luting of the finished inlay into phantom tooth.

Complete endodontic treatments of an upper permanent canine and lower permanent molar in phantom heads.

Use of NiCr prefabricated crowns on deciduous molars after formocresol pulpotomy.

Diagnostic training of orthodontic anomalies on study casts. Work on wire clasps of orthodontic removable appliances.

Training in X-ray techniques and diagnostics. Adjustment of patient's head, X-ray film and tube of X-ray device for projections of all permanent teeth. X-ray status from intraoral films. Demonstration and evaluation of a panoramic X-ray projection.

4th semester:

Principles of treatment in oral surgery. Extraction of teeth: use of forceps and elevators on teeth of a phantom head. Other surgical instruments. Types of soft tissue wounds, basics of surgical suturing on plastic model. Demonstration of disinfection and sterilization at oral surgery department. Local anaesthetics and local anaesthesia in dentistry. Training of indirect and direct method of inferior dental block.

Principles of splinting teeth for surgical purposes.

Prosthetic dentistry: Preparation of a root of upper permanent incisor for cast post core system restoration, indirect modelation of post core from wax on individual cast model. Impression for resin jacket crown after cementation of cast post core construction. Preparation of lower permanent molar for MOD inlay, double – impression technique using elastomer impression material, fabrication of an individual model, modelation of an inlay from wax, demonstration of castings, adaptation and luting of finished inlay into the cavity. Chamfer preparation of lower molar and premolar for a fixed bridge.

Resin jacket crown – laboratory procedures.

Impression materials: impression techniques using hydrocolloid and elastomer impression materials (students impress each other).

Impression of phantom head jaws with Class II and Class III defects by alginate impression material, preparation of wax record block, registration of jaw relationship.

Complete dentures: clinical and laboratory procedures – demonstration on patients and step-by-step work on edentulous jaws in phantom heads. Primary impression of edentulous jaws by hydrocolloid impression material, working cast, individual impression tray. Master impressions. Jaw relationship registration. Upper and lower edentulous casts mounted into the articulator, setting teeth.

Repairs of removable dentures. Relines of complete dentures – direct and indirect method.

Assesment methods:

Regular check up, fulfilment of minimal limits for practical procedures, passing the exam - end of 4th semester

Recommended literature:

- 1) Svoboda, Otto, et al.:
Stomatologická propedeutika,
Učebnice pro lékařské fakulty pro posluchače stomatologie,
Avicenum Praha, 1984
- 2) Adam, Miroslav, et al.:
Základy stomatologické propedeutiky,
Učebnice pro lékařské fakulty,
SPN Praha, 1974
- 3) Zicha, Antonín:
Kompletní náhrada chrupu,
Učební texty pro posluchače LF UK Plzeň,
Karolinum Praha, 1998
- 4) Chlanová, Alena:
Vybrané kapitoly ze stomatologické propedeutiky,
Protetická část,
Učební texty pro posluchače LF UK Plzeň,
Karolinum Praha, 1997
- 5) Fiala, Boris, Stejskalová, Jitka:
Přehled kariologie a endodoncie pro studenty stomatologie,
Vydavatelství Univerzity Palackého v Olomouci,
Olomouc 1994
- 6) Steklý, Luboš:
Vybrané kapitoly z rentgenologie a anesteziologie,
IDV PZ Brno, 1999

Further Reading:

- 1) Kidd, E.A.M., Smith, B.G.N., Pickard, H.M.:
Pickard's Manual of Operative Dentistry,
Oxford Medical Publications, 1995
- 2) McCabe, John:
Applied Dental Materials,
Oxford Blackwell Scientific Publications,
Oxford 1990
- 3) Chestnutt, I.G., Gibson, J.:
Churchill's Pocketbook of Clinical Dentistry,
Churchill Livingstone, Pearson Professional Limited, 1998

7.2 Title of the Course: **PRECLINICAL DENTISTRY** (including Preventive Dentistry)

Course heads:

1st Stomatological Clinic: Luděk Peřinka, Assist.Prof., MUDr., PhD.
2nd Stomatological Clinic: Jan Handzel, Assoc.Prof., MUDr., PhD.,

Person in school who will explain and show this to the visitors:

1st Stomatological Clinic: Arnoštka Pehrová, MUDr., PhD.
2nd Stomatological Clinic: Jan Handzel, Assoc.Prof., MUDr., PhD.,
e-mail: jan.handzel@lf1.cuni.cz

Course design:

This course involves preclinical science and introduction to operative dentistry and endodontics, prosthetics, oral and maxillofacial surgery, periodontics, pediatric dentistry and orthodontics. The course links up with propedeutic dentistry and creates requirements for clinical work in consecutive study.

Curricular timing: 5th 6th semester, 3rd year

Semester	Study form	Hours per Semester
5 th	Lectures/Practical training	45 / 45
6 th	Lectures/ Practical training	45 / 90

PREVENTIVE DENTISTRY –
included in Preclinical Dentistry (7 weeks of 5th semester)

Main objectives:

Definition of preventive dentistry. Primary, secondary and tertiary prevention. WHO objectives. Preventive programs. Fluoridation, systemic and local. Objective assessment of the oral cavity, prophylactic screening, caries indexes. Nutrition and dental health. Saliva. The effect of dental plaque and other factors on the occurrence of caries. Diagnostics of inappropriate fillings, marginal irritation. Treatment of overhanging fillings, polishing. Prevention of orthodontic anomalies, treatment of orthodontic anomalies as prevention of dental caries and impairment of the periodontal tissues and TMJ. Dental plaque, retention factors, plaque detection, hygienic indexes. Procedures to eliminate plaque, motivation of patients. Dental calculus and its elimination. Use of PBI, CPTIN indexes. Examination in periodontics, instruments used in periodontics. Classification of periodontal diseases.

Methods of teaching:

Lectures and clinical instructions both on phantoms and in clinical part on patients.

Lectures:

Definition of preventive dentistry. The effect of dental plaque and other factors on the occurrence of caries. Saliva. Early caries diagnosis, prophylactic properties of fillings.

WHO objectives. Primary, secondary and tertiary prevention. The role of nutrition. Preventive aspects of prosthetic treatment. Fluoridation. Sealing of fissures. Preventive screening. Changes of the enamel. Prevention of orthodontic anomalies. Treatment of orthodontic anomalies as caries prevention. Prevention of the periodontium impairment and TMJ. Diseases of the periodontium. Plaque, dental calculus, hygienic indexes. Motivation to oral hygiene. Indexes PBI, CPITN.

Practical training:

Caries epidemiology. Method of tooth brushing, flossing. Professional cleansing. Systemic and local fluoridation, practical application of local fluoride means. Fissure sealants, preventive fillings. Caries diagnosis, including x-ray (bite-wing), diagnosis of marginal irritation. Treatment of overhanging fillings, polishing. Examination of oral hygiene, index OHI-S. Colour detection of plaque. Diagnosis and elimination of dental calculus. Examination of the periodontal tissues, periodontal pocket - depth, loss of attachment, movement of teeth, articulation, CPITN, PBI. Hygiene, motivation.

OPERATIVE DENTISTRY AND ENDODONTICS:

Main objectives:

dental cavities - conventional and adhesive. Noncariogenic defects of dental hard tissues. Role of operative dentistry. Dental caries and its consequences. Classification of dental caries. Prevention in operative dentistry. Materials in operative dentistry. Principles of cavity design and preparation. Main instruments, auxiliary instruments and equipment for restorations. Pathology of pulp and its therapy. Endodontic treatment - techniques, disinfection, definite filling (methods of endodontic filling). Pathological disorders of dental pulp, periodontal diseases and their therapy. Postendodontic treatment.

Lectures:

Operative dentistry and endodontics. Histopathological picture of dental hard tissues, pathological changes of dental caries, etiology. Classification of dental caries, defects of hard dental tissues. Defensive mechanisms against dental caries, importance of fluoridation. Classifications of materials in operative dentistry, amalgam I. Definitive materials - amalgam II. Composite materials. Importance of luting materials. Glassionomers. Glassionomers-hybrids. Examination in operative dentistry. Principles of cavity design and preparation of dental hard tissues. Classification of Black's class cavities and other classification and their preparation, complication during preparation. Introduction to endodontics, basic principles of root canal treatment.

Practical training:

Operative dentistry and endodontics. Examination of patient clinical, x-ray. Preparation and filling techniques on phantom heads (amalgam, composites, glassionomers). Demonstration of treatment by definitive fillings materials (amalgam, composites, glassionomers). Step by step of endodontic treatment on models.

PROSTHETIC DENTISTRY:

Main objectives:

Importance of prosthetic dentistry. Examination in prosthetic dentistry. Preparation of jaws and teeth before prosthetic rehabilitation. Prosthetic materials. Defects of dentition and basic types of prostheses. Fixed dentures. Removable partial dentures.

Complete dentures, retention problems. Immediate dentures. Basic types of post-surgical appliances. Prosthetic rehabilitation of dentition with periodontal disease. Temporomandibular joint disorders. Articulation problems. Prosthetic solutions of abraded dentition. Prosthetic importance of dental implants. Problems of complex oral rehabilitation. Harmful influence of prostheses. Aesthetics in prosthetic dentistry. New materials, procedures and technologies. Prevention in prosthetic dentistry.

Lectures:

Role of prosthetic dentistry. Examination of prosthetic patients. Defects of dentition and basic types of prosthetic constructions. Preparation of teeth and jaws for future dentures. Overview of fixed prosthetic constructions. Metal crowns, onlays, inlays. Aesthetic crowns and dowel crowns, fixed bridges – indications, contraindications, biomechanics, construction elements. Working procedures for manufacturing fixed bridges. Preventive aspects and prosthetic treatment. The planning principles of removable partial dentures. Removable bridges.

Practical training:

Examination, documentation. Evaluation of the biological factors of teeth, diagnostics. Classification of dental defects (classes I – IV). Types of prosthetic constructions, construction elements. Preparation and impression techniques.

ORAL AND MAXILLOFACIAL SURGERY:

Main objectives:

Clinical examination- treatment scheduling. Anesthesia in orofacial region. Emergency treatment- management of medical compromised patients. Exodontia (simple, complicated), apicotomy, primary closure of oroantral communication. Inflammatory diseases in orofacial region. Salivatory glands diseases. Temporomandibular joint disorders. Cysts in orofacial region. Pre-malignant lesions and tumors in orofacial region. Maxillofacial traumatology. Maxillofacial anomalies. Pre-prosthetic surgery. Dental implantology- use of biomaterials in orofacial region. X-ray in dentistry. Coordination with other medical departments in complex treatment.

Lectures:

Local anesthesia in orofacial region and side effects. Exodontia, healing and side effects, management of medical compromised patients. Inflammation in orofacial region (periostitis, dentitis difficilis). Inflammation in orofacial region II (surgical and operative-surgical treatment). Oroantral communication, inflammation of Sinus Highmori. X-ray in dentistry- introduction. X-ray in dentistry- normal picture of teeth and jaws. X-ray in dentistry- pathologic picture of teeth and jaws. Base of oral and maxillofacial surgery (organization of treatment). Coordination with other medial departments in complex treatment.

Practical training:

Clinical examination. Application of local anesthesia in orofacial region. demonstration of exodontia.

PERIODONTICS AND DISEASES OF THE ORAL MUCOSA

Main objectives:

Anatomy and physiology of the periodontium. Etiology and pathogenesis of diseases of the periodontium. Classification, diagnosis and differential diagnostics. Epidemiology of periodontal diseases. Indications for extractions due to periodontological reasons. Examination of the patient: medical history, clinical examination, x-ray of the periodontium, auxilliary examination and tests. A comprehensive treatment plan. Treatment of diseases of the periodontium : conservative, surgical - prophylactic, therapeutic and cosmetic methods. Articulation disorders. Treatment of occlusion and articulation disorders of dentition accompanied by a disease of the periodontium. Oral hygiene and continuous long term home care of the periodontium. Prevention of diseases of the periodontium. Commonly prescribed drug treatment. Morphology of oral soft tissues. Physiology and pathophysiology of the oral mucosa. Pathological and anatomical changes of the oral mucosa. Common causes of oral diseases. Examination of the patient: medical history, examination procedures, mucosal efflorescence, auxiliary examination. Basic principles of general and local treatment. Cheilitis. Glossitis. Stomatitis - etiological causes, mechanical, physical, thermal, chemical, galvanic, infectious, immunological disorders, unclear etiology, disorders of epithelium keratinization, allergic and specific. False tumours. Disorders of salivary secretion. Manifestations of systemic diseases of the oral mucosa. Differential diagnosis of the most common diseases of the oral mucosa. Glossodynia and stomatodynia. Selected syndroms.

Lectures:

Examination of the patient, fundamentals of conservative and surgical treatment in periodontics.

Practical training:

Demonstration of an examination of a patient with a disease of the periodontium. Demonstration of basic procedures used to eliminate dental plaque and tartar. Demonstration of basic procedures used to determine the basic periodontal indexes (CPITN, PBI, OHI-S).

PEDIATRIC DENTISTRY

Main objectives:

Evolution of teeth and jaws. Basic terms in epidemiology of caries. Dental care about child. Primary, secondary and tertiary prevention. Fluoridation. Verbal and nonverbal communication with child patient. Guidance of child during dental treatment. Complex dental care about primary teeth in all steps of development. Complex dental care about permanent teeth in all steps of development. Traumatology of teeth and jaws in childhood. Periodontal and mucosal diseases in childhood. Symptoms of infectious diseases and other diseases in oral cavity in childhood. Prosthetics in childhood. Screening of patients with orthodontical disorders and collaboration with orthodontia. Oncology of childhood.

Lectures

Primary, secondary and tertiary prevention in pedodontics. Communication with child patient, psychological preparation of child for treatment. Fluoridation, disgenesis and

acquired changes of hard dental tissues. Preventive examinations , Caries Potenciality Index.

Restorative materials used in childhood. Preventive filling, fissure sealing. Special treatment of child patient.

Practical training:

Communication with child patient during dental treatment. Examination of child patient. Differences between primary and permanent dentition. Registration in sanitary documentation. Local prevention of caries – training of different methods of fluoridation. Training of correct oral hygiene.

ORTHODONTICS

Main objectives:

The development of normal occlusion and jaws. The etiology of malocclusions. Orthodontic diagnosis. Orthodontic treatment - theoretical base. Removable appliances. Fixed appliances. Extraction therapy (serial therapeutical extractions). Cleft defects, the aetiology, basic treatment principles. Major types of malocclusion treatment. Combined surgical and orthodontic treatment. Prevention in orthodontics. Collaboration between orthodontists and pedodontists, surgeons, orthopedists, paediatricians, genetists etc.

Lectures :

Prevention of orthodontic anomalies. Orthodontic treatment like protection against dental caries and destruction of periodontal tissues. Aesthetical aspects. Prevention of periodontal and TMJ damages.

Practical training:

Patients examination. Orthodontic impresions. Panoramic and intra-oral radiographs. Preparation of study casts. Work with orthodontic pliers and wire banding in laboratory - basic techniques.

Assesment methods:

Regular check up, fulfilment of minimal limits for practical procedures, passing th exam.

7.3 Title of the Course: **OPERATIVE DENTISTRY AND ENDODONTICS**

Course heads

1st Stomatological Clinic: Luděk Peřinka, Assist.Prof.,MUDr.,PhD.

2nd Stomatological Clinic: Ivan Dziedzic, Assist.Prof., MUDr.

Person in school who will explain and show this to the visitors:

1st Stomatological Clinic: Lucie Vondráčková , Assist.Prof., MUDr.

2nd Stomatological Clinic: Ivan Dziedzic, Assist.Prof., MUDr.

Course design :

Practicing of dental caries treatment and treatment of non-carious lesions.

Practicing of endodontics.

Curricular timing : 7th, 8th, 9th, 10th, 11th, 12th semesters – 4th, 5th 6th year

Semester	Study form	Hours per semester
7 th and 8 th	Lectures / Practical training	30 / 75
9 th and 10 th	Lectures / Practical training	14 / 75
11 th and 12 th	Practical training	245

Primary aims :

Determination of treatment plan, independent treatment in operative dentistry, patient motivation and instruction for selfcare. Students acquire the practical experience and skill in treating patients, complicated cases of filling restorations and endodontic treatment inclusive. Modern approach to caries treatment. Focal infection.

Main objectives :

Importance and goals of operative dentistry.
 Examination of patients in operative dentistry.
 Etiology and histopathology of dental caries and non - carious lesions.
 Classification of dental cavities.
 Caries diagnosis and its management.
 Traditional and modern conservative design of preparation.
 Treatment of non - carious defects in dental hard tissues (wear, attrition, abrasion, erosion).
 Diagnosis and treatment planning, treatment sequence.
 Differential diagnostics of pulp diseases.
 Principles of root canal treatment, obturation of root canals.
 Endodontic emergencies, diagnosis and treatment.
 Accidents in endodontic therapy (local and general).

Surgical endodontics (indication and contraindication).
 Hemisection and bicuspidization as a treatment variation in failed endodontics.
 Field isolation, direct anterior and posterior restoration.
 Inlays and onlays, cast restorations, CAD - CAM inlays (theory).
 Focal infection.
 Special stress is implicated on prevention of cross - infection control in dentistry, ergonomics and four - handed dentistry (theory).

Methods of teaching :

Lectures, seminars, individual consultations, practical demonstrations, videos, practical experience in dental surgery, chairside assisting.

Lectures :

7th semester :

Direct and indirect pulp capping. Classification of pathological stages of the pulp (histological and clinical classification). Indication and contraindication of endodontic treatment. X - ray examination in endodontics. Procedures in endodontic therapy step by step. Periodontitis acuta and chronica, clinical signs and therapy. Postendodontic reconstruction of the tooth.

8th semester :

Black´s cavities class I., II., III., IV., V. Alternatives of amalgam. Surgical endodontics. Treatment of caries by nonstandard acceses. Moisture control incl. rubberdam. Traumatic lesions of teeth and treatment. Inlay technique direct, semidirect and indirect.

9th semester :

Final treatment after endodontics. Timing the placement of permanent restoration, delayed restoring. Postendodontic reconstruction, endodontics posts, post space preparation, build ups, pins, root canal inlays. Complications of endodontic treatment, X - ray controls.

10th semester :

Adhesive connection of composite filling, principals, systems. Interdiscipline cooperation in operative dentistry with other dental branches. Fails in handling and storing restorative materials. Turbine handpiece, aerosols, contamination of dental surgery enviroment and its prevention.

Practical training :

4th year :

Examination of a patient, treatment planning, local anesthesia and application. Preparation of Black´s cavities class I. - V. (conservative approach whenever

possible). Permanent reconstruction of appropriate cavities (amalgam, composites, glassionomers). Endodontic treatment of single root teeth.

5th year :

Examination of a patient, diagnosis, treatment planning, local anasthesia, preparation of Black´s cavities. Placement of permanent fillings (amalgam etc.). Indirect inlays (when indicated) - clinical part. Endodontic treatment of multirooted teeth. Postendodontic reconstruction of the tooth. Conservative treatment of traumatic lesions of teeth.

6th year :

Examination of a patient, diagnosis, treatment planning, local anasthesia. Preparation of Black´s cavities. Placement of permanent fillings (amalgam etc.). Indirect inlays - clinical part. Endodontic treatment of multirooted teeth. Postendodontic reconstruction of the tooth. Conservative treatment of traumatic lesion of teeth. Frontal direct veneers.

Assessment methods :

Passing the subject exam in the eights semester, succesfull passing the State Rigorous Exam in the 6th year.

Recommended literature :

1. Základy záchovné stomatologie - Novák a kol., Avicenum 1981
2. Stomatologická rentgenologie - Hořejš, Avicenum 1985
3. Základy endodoncie - Komárek, UK Hradec Králové
4. Endodoncie - Mumford a kol., Quintessenz, Praha 1995
5. Amalgamová výplň v preklinické a klinické praxi - Novák, Komárek, UK Praha, 1988
6. Stomatologické materiály - Vacek, Bittner a kol., Avicenum 1980
7. Journals : Praktické zubní lékařství
Čs. stomatologie
Quintessenz Praha
8. Foreign dental literature and journals available in library.

7.4 Title of the Course: **ORAL AND MAXILLOFACIAL SURGERY**

Course heads:

1st Stomatological Clinic: Karel Hora, Assist.Prof.,MUDr.

2nd Stomatological Clinic: Pavel Hanek, Assoc.Prof., MUDr., PhD.,

Person in school who will explain and show this to the visitors:

1st Stomatological Clinic: Petra Weitochová, MUDr.

2nd Stomatological Clinic:: Pavel Hanek, Assoc.Prof., MUDr., PhD.,

Course design:

Our students are acquainted with basic of dentoalveolar and maxillofacial surgery and the basic of maxillofacial oncology.They are acquainted with interdisciplinary co-operation among maxillofacial surgeons and other dentists and among dentists and specialists in other fields of medicine.

Practical training is realised in the form of weekly periods with seminar.

Curricular timing: 7th, 8th, 9th, 10th, 11th, 12th semesters – 4th, 5th 6th year

Semester	Study form	Hours per semester
7 th and 8 th	Lectures / Practical training	30 / 75
9 th and 10 th	Lectures / Practical training	14 / 75
11 th and 12 th	Practical training	245

Main objective:

Clinical examination - plan of treatment

Anaesthesia in orofacial region

Emergency and first aid, treatment of risk patient

Tooth extraction / simple, complicated /, root tip resection,

Primary enclosure oroantral communication

Inflammations in orofacial region

Diseases of salivary glands

Precancers and tumours in orofacial surgery

Maxillofacial traumatology

Maxillofacial anomalies

Pre-protetic surgery
 Orofacial pain
 Illnesses of lymphatic nodes
 Systematic bone diseases
 Dental implantology
 Using biologic materials in orofacial surgery
 Dental radiology
 Interdisciplinary collaboration during treatment

Summary of practical training

Patients examination - plan of treatment
 Application of local anaesthesia
 Treatment of risk patient, sudden incidents
 Tooth extraction (simple, complicated), root tip resection, simple
 enclosure oroantral communication , stopping postextraction
 bleeding
 Treatment of dentitio difficilis
 Assistance during major surgery in total anaesthesia
 Made dental intraoral radiography
 First aid to the patient with maxillofacial injuries
 Techniques of interdental and intermaxillary splint
 Incision of inflammations in dental region
 Repair of alveolar process
 Suture wound in oral cavity

Lectures:

5th semester (included in Preclinical Dentistry)

Local anaesthesia into orofacial region
 Tooth extraction
 Complications of tooth extraction, healing of postextraction
 wounds

Treatment of risk patient

Inflammation's of orofacial region I. / periostitis, dent. difficilis /
 Inflammations of orofacial region II. / surgical procedures
 completing conservative treatment of teeth /

Oroantral communications, inflammations of maxillary cavity

6th semester (included in Preclinical Dentistry)

Dental Radiology- introduction

Dental Radiology- physiological picture of teeth and facial skeleton

Dental Radiology- pathological picture of teeth and alveolar process

Dental Radiology- pathological picture of facial skeleton

Basic dental and maxillofacial surgery / summary, organisation of treatment / . Interdisciplinary collaboration

7th semester

Cysts of orofacial region

Jaws anomalies I. / introduction, division, diagnostic procedures/

Jaws anomalies II. / plan of treatment, surgical approach /

Orofacial oncology-introduction

Orofacial oncology-diagnostic

Orofacial oncology-complex treatment

Temporomandibular joint illnesses

Illnesses of the lymphatic nodes of the head and neck

Pre-prosthetic surgery-introduction

Orofacial pain

8th semester

Treatment of injured patient, first premedical and medical aid

complications of injuries of facial skeleton

Injuries to the tooth and soft tissue

Luxation of temporomandibular joint

Traumatic shock, antitetanic prophylaxis

General rules treatment of injuries facial skeleton

Lower jaw fractures-diagnostic, treatment

Middle face fractures.diagnostic, treatment

9th semester

Sudden incidents in dental-surgery practice, preoperative preparation

Laser - therapy in dental surgery

Dental implantology

10th semester

Inflammations of orofacial region

Antibiotic therapy in surgery

A complex view of doctor-specialist in internal medicine in the axillofacial surgery

Complications of complex oncology therapy

Summary of practical training

8th semester

Simple and complicated tooth extraction

Treatment of dentitio difficilis

Reading of X-ray, made in intraoral X-ray

Injuries-examination, diagnostic, treatment to the dental injuries

Oncology prevention

Stopping postextraction bleeding

9,10th semester

Simple and complicated tooth extraction

Root tip resection

Treatment of dentitio difficilis

Immobilisation , interdental and intermaxillary splint

Suture of wounds in oral cavity

11,12th semester

Simple and complicated extraction

Root tip resection

Treatment of dentitio difficilis

Intraoral incision in region of alveolar process

Pre-prothetic surgery in region of alveolar process

Enclosure oroantral communication

Treatment to the dental injuries and simple fractures

Assistance during major surgery in total anaesthesia.

Assessment methods:

into 10th semester-theoretical examination

into 12th semester-State examination /practical and theoretical/

Educational literature:

Toman J., Halmoš J. Maxillofacial surgery 1984

Hořejš J. Dental radiography 1985

Mazánek J. Traumatology of orofacial region 1999

Tumours of orofacial region 1998

O. Mrázková, M. Doskočil Clinical anatomy for dentists

L.Lemež Topographical anatomy for stomatology

7.5 Title of the Course: **Prosthodontics**

Course heads:

1st Stomatological Clinic: Blanka Kozáková, Assoc.Prof.,MUDr.,PhD.
 2nd Stomatological Clinic: Pavel Pešata, Assoc.Prof., MUDr., PhD.,

Person in school who will explain and show this to the visitors:

1st Stomatological Clinic: : Blanka Kozáková, Assoc.Prof.,MUDr.,PhD
 2nd Stomatological Clinic: : Pavel Pešata, Assoc.Prof., MUDr., PhD.,

Course design:

A general knowledge of the basic principles of the oral rehabilitation with fixed and removable appliances based on the patients examination, treatment planning and practical realisation.

Curricular timing: 7th, 8th, 9th, 10th, 11th, 12th semesters – 4th, 5th 6th year

Mandatory:

Semester	Study form	Hours per semester
7 th and 8 th	Lectures / Practical training	30 / 50
9 th and 10 th	Lectures / Practical training	14 / 75
11 th and 12 th	Practical training	245

Nonmandatory:

Postoperative prosthetic appliances
 5th year – study form: practice – 1 hour per week

Assessment method: final discussion

Primary aims:

The aim is to prepare a dentist, who apart from satisfactory theoretical and practical stomatological erudition is equipped with adequate general medical knowledge.

Main objectives:

Importance of prosthetic dentistry.
 Examination in prosthetic dentistry.
 Preparation of jaws and teeth before prosthetic rehabilitation.
 Prosthetic materials.
 Defects of dentition and basic types of prosthetic appliances.
 Fixed appliances.
 Removable partial dentures.
 Complete dentures, retention problems.

Immediate dentures.
 Basic types of post-surgical appliances.
 Prosthetic rehabilitation of dentition with parodontal disease.
 Temporomandibular joint disorders.
 Articulation problems.
 Prosthetic solutions of abraded dentition.
 Prosthetic importance of dental implants.
 Problems of complex oral rehabilitation.
 Harmful influence of prosthetic appliances.
 Aesthetics in prosthetic dentistry.
 New materials, procedures and technologies.
 Prevention in prosthetic dentistry.

Methods of teaching:

Lectures, seminars, individual consultations, practical demonstrations on models and patients, practical experience with working procedures at the chairside and partly in the laboratory. Actual information: available internet databases (Medline), visits of dental exhibitions.

Assessment methods:

Passing the subject exam in the 10th semester, successful passing the State Rigorous Exam in the 6th year.

Strengths:

The graduates are able to treat the ambulant patients with all types of fixed and removable prosthetic appliances within the range of common dental practice immediately after finishing the university studies.
 Further advantage is the general medicine orientation of the studies.
 There is a special advantageous tariff for patients treated by students (20% discount).
 Availability of studies in English class for foreign students.

Weaknesses:

Insufficient number of hours for practical training.

Provided by:

1st and 2nd Stomatological Clinic, Charles University Prague,
 128 00 Praha 2, Kateřinská 32

Prosthodontics – Syllabus

Subject: Prosthetic Dentistry
 Semester: 7, 8, 9, 10 (subject exam),
 11, 12 (state rigorous exam)
 Laboratory practice: 1 week in the 11th semester

Lectures:

5th semester (included in Preclinical Dentistry):
 Basic knowledge of prosthetic dentistry:

Importance of the subject and examination of prosthetic patients. Defects of dentition. Basic types of prosthetic appliances. Preparation of jaws and teeth before prosthetic rehabilitation. Fixed prosthetic appliances: Metal crowns. Aesthetic crowns. Dowel crowns. Fixed bridges. Construction elements of fixed bridges. Basic types of fixed bridges.

6th semester (included in Preclinical Dentistry):

Fixed appliances – working procedure in dental surgery. Fixed appliances – working procedure in dental laboratory. Metaloceramic constructions. Extended fixed bridges – splints. Temporary and immediate fixed appliances.

7th semester:

Removable partial dentures. General characteristics of RPD. Construction elements of RPD, support elements. Precise attachments. Body of RPD. Connectors and bracing - reciprocal elements. Removable bridge. Dentures with dentomucosal support. Dentures with mucosal support. Hybrid dentures. Planning and design of RPD.

8th semester:

Complete dentures: General knowledge of complete dentures, indications, retention. Impressions and borders of complete dentures. Reconstruction of interjaw relations. Articular theories. Arrangement of artificial teeth – denture model. Adjustment and fitting complete dentures. Relining and repairs of complete dentures.

9th semester:

Special prosthetic treatment: Prosthetic treatment of dentition with parodontal disease. Fixed and removable splints. Prosthetic importance of dental implants, indications. TMJ disorders and prosthetic rehabilitation. Different solutions of partial and complete dentures.

10th semester:

Problems of complex treatment in prosthetic dentistry. Composition of treatment plan. Cooperation of prosthodontists and maxillofacial surgeons. Cooperation of prosthodontists and orthodontists. Gnathology: Basic gnathologic terms. Articulators and their practical applications.

Practice:

4th year:

Repetition of the examination, documentation. Biological value, treatment plan.
 First class defects – fixed bridges – abutments, frameworks, pontics.
 First class – preparation and impression techniques.
 First class – removable bridges, working procedures, materials.
 Second class – construction elements, working procedures, materials.
 Third class – construction elements, working procedures, materials.
 Fourth class – working procedures, problems.
 Denture repairs.
 Direct and indirect rebasing.

5th year:

Repetition of first class defects, working procedures.

Repetition of second class defects – working procedures, model analysis (surveyor), denture planning and design.

Repetition of third class defects – working procedures.

Impression method in fourth class defects.

Registration of interjaw relations in fourth class.

Fourth class dentures – fitting complete dentures, instructions for the patients.

Immediate dentures.

Dental implants.

6th year:

6 weeks of practice – 7 hours per day (block practice) including 1 week in the prosthetic laboratory.

Examination, treatment plan – individual project. Treatment of ambulant patients with fixed and removable appliances. Die method for temporary crowns. Adhesive appliances. Correction of the vertical dimension. Prosthetic treatment of patients with serious medical problems.

Recommended literature:

- 1) Andrik a kol.: Stomatologická protetika, Osveta, Martin 1983
- 2) Andrik P.: Stomatoprotetické terapeutické riešenia, Osveta, Martin 1986
- 3) Vacek, Bittner: Gnatologie, Avicenum, Praha 1986
- 4) Kolektiv autorů: Příručka stomatologa v praxi, Avicenum, Praha 1987

Journals: Praktické zubní lékařství
 Čs. Stomatologie
 Quintessence
 Progresdent

Foreign dental literature and journals

7.6 Title of the Course: **ORTHODONTICS**

Course heads:

1st Stomatological Clinic: Hana Tycová, Assist.Prof., MUDr.

2nd Stomatological Clinic: Jaroslav Racek, Prof., MUDr., DrSc.,

Person in school who will explain and show this to the visitors:

1st Stomatological Clinic: Jana Kopřivová, MUDr.

2nd Stomatological Clinic: Petra Hofmanová, MUDr.

Course design:

Goal of orthodontic treatment. Classification and etiology of orthodontic anomalies. Orthodontic diagnosis. Basic treatment principles.

Curricular timing: 9th, 10th, 11th, 12th semesters – 5th and 6th year

Semester	Study form	Hours per Semester
9 th and 10 th	Lectures/Practical training	6 / 25
11 th and 12 th	Practical training	70

Primary aim:

Acquisition of basic knowledge about diagnostics and treatment method in orthodontics important for the practical dentist who will co-operate with orthodontic specialist. Suitable age for the treatment of orthodontic anomalies.

Main objectives:

The development of normal occlusion and jaws. The etiology of malocclusion. Prevention in orthodontics. Irregularities in the position of individual teeth, groups of teeth, occlusal and skeletal diagnostics. Extraction and non extraction therapy. Removable appliances. Fixed appliances. Cleft defects, the etiology and basic treatment principles. Orthodontic-surgical co-operation in therapy of orthognatic surgery patients. Retention and relapse of treatment results.

Methods of teaching:

Lectures, practical training and seminars.

V. year:

Lectures:

- Removable appliance- types, parts and indications.
- Contemporary fixed appliances.
- Orthodontic and orthognatic surgery treatment.

Seminars:

Growth and development of jaws. Examination of orthodontic patient. Radiographic investigations in orthodontics. Extraction therapy in contemporary orthodontics. Suitable age for treatment. Types of orthodontic appliances.

Practicals:

Examination of orthodontic patients. Classification of orthodontic anomalies. Orthodontic impressions. Panoramic and intra-oral radiography analysis. Participation in orthodontic check-ups under teaching supervision (removable and fixed appliances).

VI. year**Seminars:**

Tissue changes during orthodontic therapy. The types of tooth movement. Retention of orthodontic treatment results. TMJ. Clefts. Co-operation with other specialists. Esthetics of the frontal part of dentition.

Practicals:

Analysis of models, cephalometric analysis, treatment plan. Banding and bracket bonding, arch replacement.

Weaknesses:

Limited amount of practical training hours, divided into blocks during the year. The students can not follow the treatment of the same patients.

Assessment methods:

State exam together with prosthetic dentistry – 6th year.

Recommended literature: Andrik Pavel: Čelustná ortopédia, 1981
 Kamínek Milan, Štefková Marie: Ortodoncie I., II., 1998
 Kamínek Milan: Současné fixní ortodontické aparáty, 1976
 Jedličková Olga: Snímací ortodontické přístroje, 1991
 Velíšková Eva: Diagnostika ortodontických anomálií, 1985
 Šubrtová I.: Vybrané kapitoly z ortodoncie, 1993
 Proffit William R.: Contemporary orthodontics, 1993

7.7 Title of the Course: **Periodontology and Diseases of Oral Mucous Membrane**

Course heads:

1st Stomatological Clinic: Irena Pipková, Assist.Prof.,MUDr.
Milena Nedvědová, Assist.Prof.,MUDr.
2nd Stomatological Clinic: Ladislav Korábek Assist.Prof., MUDr.

Person in school who will explain and show this to the visitors:

1st Stomatological Clinic: Irena Pipková, Assist.Prof.,MUDr.
2nd Stomatological Clinic: Ladislav Korábek Assist.Prof., MUDr.

Curricular timing: 9th, 10th, 11th, 12th semesters – 5th and 6th year

Semester	Study form	Hours per Semester
6 th and 7 th	Lectures/Practical training	6 / 75
11 th and 12 th	Practical training	140

Primary aims:

Students are taught to be able to diagnose and treat all types of periodontitis and be able to recognize basic affections on oral mucosa. High interest is paid to instruction of oral hygiene.

Main objectives:

Anatomy and physiology of the periodontium. Etiology and pathogenesis of diseases of the periodontium. Classification, diagnosis and differential diagnosis. Epidemiology of diseases of the periodontium. Indications for extraction due to periodontological reasons. Examination of the patient: medical history, clinical examination, x-ray of the periodontium, auxiliary examination and tests. Identification of a comprehensive therapy. Treatment of diseases of the periodontium: conservative, surgical-prophylactic, therapeutic and cosmetic methods. Articulation disorders. Treatment of occlusion and articulation of dentition with disease of the periodontium. Oral hygiene and continuous long term home care of the periodontium. Prevention of diseases of the periodontium. Commonly prescribed drug treatment. Morphology of oral soft tissues. Physiology and pathophysiology of the oral mucosa. Pathological and anatomical changes of the oral mucosa. Common causes of oral diseases. Examination of the patient: medical history, examination procedures, mucosal efflorescence, auxiliary examination. Fundamental principles of general and local treatment. Cheilitis. Glossitis. Stomatitis – etiological causes, mechanical, physical, thermal, chemical, galvanic, infectious, immunological disorders, unclear etiology, disorders of epithelium keratinization, allergic and specific. False tumours. Disorders of salivary secretion. Manifestations of systemic diseases of the oral

mucosa. Differential diagnosis of the most common diseases of the oral mucosa. Glossodynia and stomatodynia. Selected syndroms.

Methods of teaching:

Lectures and clinical instructions. Problems are explained during on seminars.

Lectures:

3 rd year (included in preclinical Dentistry):

Examination of the patient, fundamentals of conservative and surgical treatment in periodontics /included in prevent stomatology/.

5 th year:

An overview of surgical procedures in periodontics. Articulation and its significance in periodontics, principles of treatment. General principles of treatment of diseases of the oral mucosa. The most common diseases of the oral mucosa. Signs of bullous diseases of the oral mucosa. Oral signs of HIV infection.

Practicals:

3th year (included in Preclinical Dentistry):

Demonstration of an examination of a patient with disease of the periodontium. Demonstration of basic procedures used to eliminate dental plaque and tartar. Demonstration of basic procedures used to determine the basic periodontal indexes /CPITN, PBI, OHI-S/ - icluded in prevent stomatology.

5 th year: Anatomy and physiology of the periodontium. Etiology and pathogenesis of diseases of the periodontium. Classification, diagnosis and differential diagnosis of diseases of the periodontium. Examination of the patient: medical history, clinical examination, x-ray of the periodontium, auxiliary examinations and tests. Identification of comprehensive therapy. Treatment of diseases of the periodontium: conservative, assisting during surgical procedures. Motivation for oral hygiene and demonstration thereof. Examination of a patient with a disease of teh oral mucosa. Auxiliary examinations and tests – indication, methods, evaluation of results vis-a-vis clinical changes on the oral mucosa. Diagnosis of diseases of the oral mucosa.

6 th year: Anatomy and physiology of the periodontium. Etiology and pathogenesis of diseases of the periodontium. Classification, diagnosis, and differential diagnosis. Examination of the patient: medical history, clinical examination, x-ray of the periodontium, auxiliary examinations. Identification of a comprehensive therapy. Treatment of diseases of the periodontium: conservative, assisting during surgical procedures. Disorders of articulation. Motivation for oral hygiene and demonstration thereof. Commonly prescribed drug treatment. Examination of a patient with disease of the oral mucosa. Auxiliary examinations and tests – indication, methods, evaluation of changes vis-a-vis clinical changes on the oral mucosa. Local therapy of pathological lesions on the oral mucosa. General treatment of diseases of the oral mucosa.

7.8 Title of the Course: **PEDIATRIC DENTISTRY**

Course heads:

1st Stomatological Clinic: Irena Neffeová, Assist.Prof., MUDr.

2nd Stomatological Clinic: Jana Vášková Assist.Prof., MUDr.

Persons who will explain the curricula and present the department to the visitors:

Jana Vášková, Assist.Prof., MUDr.

Irena Neffeová, Assist.Prof., MUDr.

Lia Navarová, Assist.Prof, MUDr.

Course design:

Clinical aspects of growth and development of dentition, including pathology.

Principles of dental decay treatment in primary teeth and permanent immature teeth.

The management of injuries, periodontal diseases in children.

Curricular timing: 9th, 10th, 11th and 12th semester - 5th - 6th year

Semester	Study form	Hours per Semester
9 th and 10 th	Lectures/Practical training	6 / 25
11 th and 12 th	Practical training	105

Main objectives:

Development of the dentition and jaws

Basic concepts of caries epidemiology of primary and permanent teeth

Primary, secondary and tertiary prevention in view of child dental health

Using fluorides in stomatology

Verbal and nonverbal communication with children in a dental office

Practical care of a child during the treatment

Complex oral examination and taking care of primary and permanent teeth at all stages of development

Injuries of children's teeth and jaws

Periodontal diseases and diseases of oral mucosa in childhood, manifestations of infections and other maladies in the oral cavity

Indication and methods of prosthetics management of children

Abnormalities of the primary and mixed dentition, treatment, prevention, co-operation with orthodontists

Oncology in childhood

Methods of teaching:

Lectures and seminars, practical training with patients.

Assessment methods:

Regular check up of knowledge during practical exercises, fulfilment of minimal limits for therapeutic procedures, examination
Exam as a part of the state exam of “therapeutical stomatology“.

5th year**Lectures:**

Dental caries of primary teeth and its complications
Treatment of primary teeth
Dental caries and its complications of immature permanent teeth
Treatment of permanent teeth
Traumatology of children’s teeth
Injury of hard and periodontal tissues
X-ray
Extractions in childhood
Basic of prosthetics treatment of children
Co-operation with orthodontists
Oncology in childhood
Manifestation of infection and other diseases in children’s mouth
Demonstration of casuistics of paedodontics

5th year**Practicals:**

Methods of cavity preparation of primary teeth
Special types of decay in primary teeth
Deep caries and methods of treatment
Filling materials, indications and application
Anesthesia and sedation in treatment
Extractions of primary and permanent teeth
Fissure sealing and preventive filling - indications, performance, and filling materials
Therapy of gingivitis

6th year**Practicals:**

Endodontic treatment in primary dentition and in immature permanent teeth
Premedication of a child before treatment
Assistance during surgical interventions in paedodontics
Prosthetic treatment of children (fixed and removable appliances)
Esthetic treatment of traumatised anterior permanent teeth
Demonstration of knowledge from 3rd and 5th course in practice – complex treatment planning

Recommended literature

Komínek, J., Toman, J., Rozkovcová, E., et al.: Pediatric Dentistry (Czech). Avicenum, Prague, 1988.

Kilian, J., et al.: Prevention in Stomatology. 2nd ed., Karolinum, Prague, 1999.

SECTION 8 – Examinations, Assessments, and Competences

In compliance with Article 27, Section 1, Letter (b), and Article 33, Section 2, Letter (b), in Act No. 111/1998 of the Collection, i.e. the Act on Schools of Higher Education and on Changes and Amendments of Other Acts ("University Education Act"), the Academic Senate of the 1st Faculty of Medicine decided upon these Studies and Examination Regulations of 1st Faculty of Medicine as its internal rule.

8.1 INTRODUCTORY RULES

ARTICLE 1

This document regulates the conditions of studies at the 1st Faculty of Medicine (henceforth "Faculty") in Bachelor and Master degree studies programmes, as well as first-instance administrative procedures at the Faculty and concerning the decisions on students' rights and duties. Studies in Doctor degree studies programmes are regulated by Doctor Degree Studies Programmes Regulations, which is an internal document of the Faculty.

8.2 STUDIES IN MASTER DEGREE PROGRAMMES

ARTICLE 2

Programmes of Studies

- (1) The Faculty provides university education in accredited Master degree programmes of studies and accredited Master degree programmes of studies in Medicine and Stomatology.
- (2) The studies at the Faculty are implemented in Master degree programmes of studies in Medicine and Stomatology only as full-time studies, in other programmes also as combined studies.
- (3) Master degree programmes of studies are aimed at obtaining theoretical knowledge, based on contemporary state of scientific theory, research and development as well at mastering its application and deployment of abilities for creative activities. The standard duration of the course of studies in the programmes in Medicine and Stomatology is six years. The course of studies in Medicine and

Stomatology is properly finished with the State Rigorous Final examination, in other Master degree programmes with the State Final examination, which includes the defence of a Diploma Thesis.

ARTICLE 3

Curriculum

(1) The Curriculum specifies and implements the programme of studies; in particular it states the sequence of the studied subjects in time and contents, duration and forms of tuition and the ways of evaluation of the progress in the studies. The Curriculum cannot be altered during a given year of the studies.

(2) The Curriculum enumerates all study subjects (henceforth "subjects") required for completing the Studies in the specific field and the names of the teachers who are responsible for the teaching (subject principals). The subject principal is appointed by the Dean from the members of teaching staff at the faculty institute(s) that provide tuition of the respective subject; as a rule, these are the heads of the respective institutes.

(3) The Curriculum states which subjects are compulsory, compulsory-elective and optional (Article 4, paragraph 3), or recommended.

ARTICLE 4

Study Subject

(1) The study subject is a basic unit of the programme of studies, forming an integral part of it, and is concluded by the credit or credit and examination (or one part of State Final Examination or State Rigorous Final Examination).

2) The study subject is defined by:

- a) the place of the subject in the study plan of the field;
- b) the relation of the subject to the completion of the studies;
- c) the structure of the subject

(3) As to relation to the conditions of completion of the Curriculum, a subject can be:

- (a) compulsory - passing the subject is necessary to complete the Curriculum;
- (b) compulsory-elective - passing of one subject (or a certain number of subjects) chosen is necessary to complete the Curriculum;
- (c) optional - passing the subject is not necessary to complete the Curriculum but instruction becomes compulsory for a student in the subjects that he/she has enrolled for.

(4) The programme of a subject comprises the structure of the subject, with a possible division into blocks, a detailed description of the contents of the given subject, stating the major conditions which are necessary for passing of the latter. A shortened version of the programme of a subject is the syllabus.

(5) The programme of a subject may contain instruction blocks which take place at some other faculties of the University, or possibly at some other university-level educational institutions.

ARTICLE 5

Form of the Studies

(1) The form of the studies reflects whether the studies are

- (a) full-time internal,
- (b) external,
- (c) combined.

(2) In the full-time internal form of the studies it is presumed in the curriculum based on the programme of studies that the study is mainly organized in the form of lectures, practicals, seminars, courses, placements, laboratory training, tutorials and other forms of instruction, which are held according to a regular, usually weekly schedule, and enable the student to obtain new knowledge directly.

(3) In the external form of the studies it is presumed in the curriculum based on the programme of studies that the study is mainly implemented as a multimedia form of instruction and during the study the teachers are constantly or mostly separated from the students.

(4) In the combined form of the studies it is presumed in the curriculum based on the programme of studies that the study is mainly implemented in a form which comprises the application of principles of both internal and external studies.

ARTICLE 6

Organization of Studies

(1) The academic year lasts for twelve calendar months. Its beginning is stated by the Rector of the Charles University (henceforth "Rector").

(2) The academic year is divided into the winter and summer terms (semesters) and vacations. The beginning of semesters and vacations is stated by the Rector.

(3) The beginning of tuition, examination period and placements as well as further details pertaining to the division of the semester are stated - in compliance with these Regulations and following a consultation with the Rector - by the Dean of the Faculty. The deans of the faculties which implement a programme of studies in co-operation, according to article 22, paragraph 3(c) of the Statute of the Charles University in Prague (henceforth "University Statute") state these details following a mutual agreement.

(4) If stated so in the curriculum, placements, laboratory training, physical training courses, excursions etc. can be held within the vacations, however at least four free weeks must be ensured for the students.

ARTICLE 7

Progression of Studies

(1) The applicant becomes a student at the moment of enrollment to the University. The enrollment takes place at the Faculty.

- (2) Following the enrollment, the Faculty will issue a Study Record Book (index) and a Student's Card for the student. The student takes a Matriculation Oath (see the Faculty Statute, Appendix 6); the terms of matriculation ceremonies for particular faculties are appointed by the Rector.
- (3) A student has the right to take part at the lectures within the University.
- (4) A student has the right - in the framework of the curriculum which he/she has enrolled for and having fulfilled possible conditions stated in these Regulations or in the study programme - to take part at the practicals, seminars, courses, placements, laboratory training, excursions, tutorials and other forms of instruction, to get credits and undergo examinations.
- (5) Beyond the framework of the curriculum which he/she has enrolled for, a student has the right to take part in the forms of instruction which are listed in Section 4, to get credits and undergo examinations in compliance with the studies and examination regulations of the faculty where the instruction takes place.
- (6) In a study programme, the studies are subdivided into particular sections of studies so that the progress of studies as well as the enrolment can be regularly checked; the Dean appoints the terms of the enrolment, and these must be announced to public on the official notice board in advance, at least two months before. In Master degree programmes and full-time Bachelor degree programmes a section of studies is one study year; in combined Bachelor degree programmes a section of studies is one block, which means an integrated period of instruction and consultations.
- (7) A prerequisite to the enrolment for another section of studies is the fulfilment of all study obligations as stated in the curriculum. If a student does not enrol for the respective year of studies by the appointed date, will the Faculty announce the summons on the official notice board so that the student will turn up for a deferred enrolment on another date; this summons must be announced in advance at least ten weekdays before the respective date. If the student does not enrol even on the deferred date, it will be judged as the case described in Article 18 Section 1(b). This Section will not be taken into account if the student has not turned up for the deferred enrolment for strong reasons.
- (8) A student who has not fulfilled the conditions of enrolment for another study year may apply for the repetition of a study year by the last day of the enrolment period at the latest; the Dean can pardon the student if he/she fails to do so in time. The application is judged by the Dean.
- (9) During the studies, the repetition of a study year can only be permitted twice as a maximum, however another repetition of the same study year is not possible.
- (10) The student who is allowed to repeat a study year must complete instruction in all subjects taught in the particular study year, unless he/she has already completed the subject by a credit or examination whose result was "excellent" or "very good".
- (11) On a student's written application, the Dean can permit him/her for one study year or two study years to study according to an individual study plan, whose terms and conditions are also stated in the Dean's permission. This does not affect any other provisions of this Document. The details are given in Article 10.
- (12) On a student's written application, the Dean can recognize the fulfilment of a study obligation (Article 8, Section 2) on the condition that in the last ten years the

student has fulfilled an analogical study obligation at another faculty of the University, or at another university in the Czech Republic, or abroad.

(13) The maximum duration of studies in a programme of studies equals the standard duration of the respective programme plus an additional five years in the case of a Master degree programme that is not a follow-up of a Bachelor degree programme; in other cases plus an additional five years. If a student does not complete the studies properly within the maximum duration of studies, this is judged as the case which is described in Article 18, Section 1(b).

ARTICLE 8

The Interruption of the Studies

(1) The studies in a study programme may be even repeatedly interrupted.

(2) The Dean may interrupt the studies either on the student's request in the form of a written application, or on an own accord in any case when this is necessary to avert detriment to the student, provided its origin does not pertain to previous fulfilment of study obligations. If the student applies for interruption of the studies after having proved a successful fulfilment of study obligations in the given study year and before enrolling for another study year, and if a disciplinary procedure with the student has not commenced, the Dean will approve the application; in this manner, the studies can be interrupted for the period of at least one year. This does not affect the regulations stated in Section 6.

(3) On the day of the interruption of the studies, the respective student loses the status of a student, as described in the University Education Act, and the time limits for fulfilment of study obligations can neither commence nor continue. Following the interruption of the studies, the Dean will, if need be, decide on placing the student in a corresponding sections of studies. If during the period of interruption of the studies a change occurs in the curriculum according to which the student has studied, the Dean will, in compliance with these Studies and Examination Regulations as well as with the respective programme of studies, which study obligations must be fulfilled by the student and in what time limits; concerning this, the Dean can impose on the student the duty of passing differential examinations within a given time.

(4) At the moment of expiration of the period of interruption of the studies the person whose studies were interrupted becomes entitled to enrol for the studies again; if the reasons for the interruption cease, the Dean can - on a written application from the person whose studies were interrupted - terminate the interruption of the studies even before the appointed time. If the student does not enrol on the appointed date, action will be taken as in Article 7, Section 8.

(5) With the exception of very strong, in particular health reasons, the studies cannot be interrupted before the completion of the first study year.

(6) The possible longest period of interruption of the studies (Article 54, Section 1 of the University Education Act) equals such duration of time which, together with the actual duration of studies, will not exceed the maximum duration of studies. The actual duration of studies is the period of time that has passed since the date of enrolment at a university, excluding the period when the studies were interrupted.

ARTICLE 9

The Individual Study Plan

(1) On his/her request, the student may be allowed to follow his/her individual study plan. The decision on granting permission is made by the Dean.

(2) In the individual study plan, the following aspects of study may be particularly adjusted:

(a) the duration of the studies, which means that the duties listed in the curriculum for a particular study year may be completed in a time shorter or longer than two semesters, but at the most, within two years;

(b) organisation of the compulsory part of the studies.

(3) The individual study plan does not affect the extent of instruction that must be taken solely at the Faculty (laboratory work, dissection, clinical practice, etc.) or in health institutions (compulsory practice).

(4) The student is allowed to follow his/her individual study plan especially for these reasons:

(a) demonstration of extraordinary talent;

(b) simultaneous studies at another faculty or university;

(c) complicated health or social situation (such as pregnancy, child care, etc.).

(5) The rights and duties of the student following the individual study plan remain unchanged.

ARTICLE 10

The Individual Study Plan

(1) On his/her request, the undergraduate student may be allowed to follow his/her individual study plan. The decision on granting permission is made by the Dean.

(2) In the individual study plan, in particular the following aspects of study are adjusted:

(a) the duration of the studies, which means that the duties listed in the curriculum for a particular study year may be completed in a time shorter or longer than two semesters, but at the most, within two years;

(b) organisation of the compulsory part of the studies.

(3) The individual study plan does not affect the extent of instruction that must be taken solely at the Faculty (laboratory work, dissection, clinical practice, etc.) or in health institutions (compulsory practice).

(4) The student is allowed to follow his/her individual study plan especially for these reasons:

(a) demonstration of an extraordinary talent;

(b) simultaneous studies at another faculty or university;

(c) complicated health or social situation (e.g. pregnancy, child care).

(5) The rights and duties of the student who follows an individual study plan remain unchanged.

ARTICLE 11

The Forms of Instruction

The main forms of instruction at the Faculty are as follows:

- (a) lecture - attendance is recommended but not required for completion of the curriculum;
- (b) seminar - instruction with active participation of the students, attendance, up to an appointed extent, may be required for completion of the curriculum;
- (c) practicals - the student acquires practical skills and experience, attendance, up to an appointed extent, is required for completion of the course;
- (d) clinical placement - practical training in a clinical field, an appointed extent of participation is a condition required for completion of the course.
- (e) specialist practice - the student is involved in clinical work, an appointed extent of participation is a condition required for completion of the course.

8.3 THE REVIEW OF STUDY PROGRESS

ARTICLE 12

The Forms of Review of Study Progress

- (1) The forms of review to check the study progress are:
 - (a) current assessment;
 - (b) subject colloquy;
 - (c) credit;
 - (d) credit with marks;
 - (e) written test;
 - (f) examination;
 - (g) State Rigorous Final Examination or State Final Examination (henceforth "State Examination").
- (2) Credits, credits with marks and examinations are termed as "study obligations".
- (3) A written test may be either a prerequisite for a subject colloquy, credit or credit with marks, or it may equal an examination or a part of an examination.
- (4) The colloquium, in a form of student-teacher dialogue, concludes a certain study block provided that the block is not included in the requirements for the credit. The colloquium completion is certified by the word "započteno" (credit) entered in the Study Record Book (index) with the date and the examiner's signature.

(5) A credit is to certify that the student has fulfilled the requirements appointed for the given subject; these requirements are stated by the subject principal in a sufficient advance before their reviewing.

(6) A credit is marked "credit" or "no credit", and its completion is certified by the word "započteno" (credit) entered in the Study Record Book (index) with the date and the examiner's signature.

(7) In a credit with marks, beyond that, the level at which the student has fulfilled the requirements for the credits is evaluated and marked as in an examination.

(8) If the subject is concluded with an examination, the student must get the credit, at the latest, on the day of the examination, and that before its beginning. Unless the student is granted the credit, he/she may not take the examination.

ARTICLE 13

Examination

1) The examination form is determined by the subject principal. The form of the examination may be oral, written, practical or combined. The teacher shall regard such examination methods that ensure maximum objectivity.

(2) The subject principal makes the examination requirements including the study materials public in advance.

(3) An examination is to check the student's knowledge and/or skills; the basic requirements in the examination are stated in the curriculum, the details must be announced in a sufficient advance before the beginning of the examination period.

(4) An examination may be composed of a number of parts, each of them being evaluated autonomously.

(5) The examination result is evaluated according to the scale "výborně" (excellent, 1), "velmi dobře" (very good, 2), "dobře" (good, 3), "neprospěl(a)" (failed, 4). Whenever an average figure of the results is needed, all marks of all examinations, including all re-examinations, are considered in the calculation.

(6) A student can take an examination in a subject that he/she has enrolled for three times as a maximum, i.e. the student is entitled to two re-examinations. No extraordinary re-examinations (Article 68, Section 3(a) of the University Education Act) are allowed. The provision of first sentence does not imply that the student be entitled to a special date of examination appointed for him/her personally.

ARTICLE 14

The Order of Examination

(1) Examination is public.

(2) Authorized examiners are professors and/or associate professors of the Faculty who take part in teaching the respective subject. The Dean of the Faculty may also appoint other academic staff who take part in teaching the respective subject as examiners for a certain period of time.

- (3) The questions for the oral examination are drawn at random by the students; they are a guidance for the order in which the examination proceeds.
- (4) The student must be allowed appropriate preparation time for answering the questions.
- (5) The examination result is evaluated according to the following scale: "výborně" (excellent), "velmi dobře" (very good), "dobře" (good), "neprospěl" (failed). In evaluation all parts of the examination are considered.
- (6) If the examiner considers on the basis of prior criteria (such as non-completion of the entry test, unsatisfactory knowledge during the practical part of the examination) that the student's knowledge fails to reflect the minimum requirements, he/she can terminate the examination without even commencing the oral part and evaluates the student "failed".
- (7) The result of a successfully passed examination is entered by the examiner into the Study Record Book (index). The result is always written in words together with the date of the examination and the examiner's signature. The mark "failed" is not entered and the examiner only enters the date of the examination. The result of the examination is reported by the examiner in the prescribed manner to the Department of Studies of the Faculty.
- (8) The student must not be examined by the same examiner three times. It is recommended that the last re-examination be taken at a board of examiners, appointed by the subject principal.
- (9) The subject principal determines a sufficient number of examinations terms, so that the total examining capacity may exceed by 25 per cent the number of students to be examined and he/she also states the maximum number of students for each examination term. Further, he/she appoints the examiners and alternate examiners for particular examination terms.
- (10) In the examination period the dates of examinations are set at regular intervals till the end of the academic year, in combined studies till the end of the following winter semester). At least one examination term is set in the middle of the vacations. The total number of appointed examination terms must not be lower than three. The dates of examinations must not be announced later than on the day before the last day of enrolment session.
- (11) The examination term which the student has chosen and enrolled for is binding for both parties. The student who does not attend at the examination without appropriate apology and fails to apologize in a written form within five days after the examination term to the examiner can only enrol for another examination term with the subject principal's written consent.
- (12) Due to strong reasons, especially on the student's request, the student may be examined by a board of examiners. This manner of examination as well as the composition of the board is subject to the Dean's approval.
- 13) An examination held for the reason of improviy previous result is permitted only if in accordance with Article 16, Section 2(d) of these Regulations.

ARTICLE 15

State Examination

(1) The list of study subjects which are completed by a part of the State Examination is stated in the programme of studies. Apart from compulsory parts of the State Examination, the Dean may, in compliance with the study programme, also appoint some elective parts of the State Examination. The subject principal will announce in advance the requirements pertaining to the State Examination; these must comply to the programme of studies.

(2) The State Examination is held at an examining board (henceforth "Board").

(3) The course of a State Examination or of its part and the announcement of the results are public.

(4) The chairperson and the members of the Board are appointed by the Dean of the Faculty from professors, associate professors and other specialists approved by the Academic Board of the Faculty; the Chairperson is a member of the examining board. Other members are appointed by the Ministry of Education, Youth and Physical Education (henceforth "Ministry"). The course of the State Examinations or of its part is reflected in a written record, which is signed by the Chairperson or the deputy, and by all the board members present; the number of those present must not be lower than three. For one programme of studies (field), more boards may be constituted.

(5) The questions for the State Examination are drawn by the students at random. A student must be allowed appropriate preparation time for answering the questions.

(6) Evaluation of the State Examination according to the scale of marks is made by the Board in a closed session on the day of the examination. If there is no agreement, a vote is held on the mark proposed by the Chairperson, or possibly on the mark proposed by another member of the Board. In case of equal shares of the votes, the Chairperson's vote will decide.

(7) If the State Examination consists of a number parts, the Board will decide on the total resulting mark, considering the average of marks in the particular parts; the mark "failed" is given when at least one part of the examination has been marked so; if all parts of the examination have been marked "excellent", the total resulting mark will be "excellent" as well. If any part of the State Examination comprises more subjects, the mark for the part will be based on evaluation of those particular subjects.

(8) The parts and particular subjects in the State Examination, including compulsory-elective ones, are stated in the programme of studies. If the programme states that the State Examination comprises a Bachelor thesis, the defence of the latter is a part of the State Examination.

(9) The State Examination or its part cannot be held if disciplinary procedure is in course upon the student, in which the Disciplinary Board has proposed termination of studies as the penalty, unless the Dean has imposed a milder penalty or referred the matter back to the Board, or unless the Rector has abolished the Dean's verdict.

(10) One ordinary examination and two re-examination terms for the State Examination or its parts are appointed by the Dean. Each of these terms is announced on the official notice board in advance for one month at least. The examination term which the student has enrolled for and which has been allotted to him is binding for both parties. The student who does not attend at the State

Examination without appropriate apology or who fails to apologize in writing within five days after the examination term, can only enrol for another term with a written consent of the Chairperson of the Board.

(11) The State Examination or its part must be passed by the student not later than within two years from the first day of the calendar month following the date on which the student fulfilled the conditions so that he/she can take the examination or its part, otherwise the situation is judged as the case described in Article 18, Section 1(b). The day on which the student fulfilled the condition as mentioned in the first sentence here means the day of the first ordinary examination term he/she may enrol.

(12) A student of a Master degree programme of medicine or stomatology can submit and defend a diploma thesis as a voluntary part of the State Examination. This will be recorded in the Study Record Book (index) as a study obligation, and also in the Certificate of the State Examination, together with the title of the thesis. If the thesis is not defended successfully, this does not affect the result of the State Examination, and in such a case the diploma thesis is not recorded in the Certificate.

ARTICLE 16

The Evaluation of the Studies

(1) The average mark is computed as the quotient of the sum of all marks and the number of all terms.

(2) A student graduates "With Honours" if he/she meets the following conditions:

(a) he/she passes all the parts of the state examination with the mark "Excellent";

(b) during the whole studies, his/her average mark was 1.5 incl.;

(c) he/she has not taken any re-examination;

(d) he/she passed all examinations with the marks "Excellent" or "Very Good". Provided that during whole studies the student's examinations were no more than twice marked as "Good", the student, on his/her request, may be allowed by the Dean to take the examinations once again.

8.4 TERMINATION OF STUDIES

ARTICLE 17

Regular Termination of Studies

(1) The studies are regularly terminated by graduation in the respective programme of studies. The date of the termination of studies is the day when the State Examination or its last part was passed.

(2) The document of a regular termination of studies and obtaining the respective academic degree is the University Diploma, which will be issued for the graduates by the University, stating their programme of studies or study field, and the Certificate of the State Examination or the Certificate of the State Doctor's Degree Examination and of the Defence of the Thesis. If the student does not turn up at the graduation

ceremony, the University will issue the diploma for him/her in the manner stated by the Rector. At own request, the graduate will be given an Appendix to the Diploma; as a rule, the Appendix to the Diploma certifies the examinations passed and the marks.

(3) The graduates in a Bachelor degree programme are awarded the academic degree "Bachelor" (in abbreviation "Bc." before the name).

(4) The graduates in the Master degree programme in medicine and stomatology are awarded the academic degree "Doctor of Medicine" (in abbreviation "MUDr." before the name), in other Master degree programmes the degree of "Master" (in abbreviation "Mgr." before the name).

ARTICLE 18

Other Termination of Studies

(1) The studies are further terminated by -

(a) leaving the study;

(b) the failure to meet the requirements resulting from the programme of studies according to these Regulations and from the Examination Regulations of the University; the date of the termination of studies is the day when the decision on the termination, taken within the time stated by these Regulations, gained legal power;

(c) withdrawal of the accreditation for the programme of studies; the date of the termination of studies is the day when the the deadline stated by the decision of the Ministry expires.;

(d) cancelation of the accreditation for the programme of studies; the date of the termination of studies is the day when the Charles University in Prague announces the cancelation of the programme;

(e) dismissal from the studies according to the conditions set by Law or by the Disciplinary Regulations of the Faculty; the date of the termination of studies is the day when the decision on the dismissal gained legal power;

(2) The decision according to Section 1(b) is made after the respective fact occurred. The facts which are, considering the particular curriculum of the given programme of studies (field), regarded as a case described in Section 1(b), are as follows:

(a) failure to comply with the conditions for enrolment in a further year of studies (Article 7, Section 8), unless the repetition of the study year has been allowed;

(b) failure to enrol in a further year of studies (Article 7, Section 7);

(c) failure to comply with the conditions of the individual study plan;

(d) exceeding the maximum duration of studies (Article 7, Section 13);

(e) failure to pass the State Examination or any of its parts within the time stated in Article 15, Section 11).

(3) For the student who terminated the studies for the reasons described in Section 1, the Dean will issue the précis on the student's own request, listing the study obligations fulfilled, also mentioning duration of time the student studied and the fact that he/she did not complete the studies.

ARTICLE 19

The Recognizance of Examinations

- 1) The former student of the Medical Faculty that was accepted following a new admission procedure may have his/her previous examinations recognized by the Dean, considering their results and time of their completion.
- (2) The examinations may be recognized provided that no more than ten years have passed from the completion of each of them (Article 7, Section 12).
- (3) The Dean determines the student's placement in the appropriate study year on the basis of the recognized examinations.

8.5 STUDENTS' RIGHTS AND DUTIES; FIRST-INSTANCE PROCEDURES

Article 20

Students' Rights and Duties

The Rights and Duties of the students who have enrolled at the Faculty are regulated by Articles 62 and 63 of the University Education Act, the Statute and other internal regulations of the University, and the Statute and other internal regulations of the Faculty.

Article 21

Authorization of the Faculty

First-instance procedures concerning the students' rights and duties (henceforth "procedures") take place at the Faculty.

Article 22

Commencing of a Procedure; Dean's Decisions

- (1) A procedure concerning the interruption of studies open at the Dean's own accord (Article 8, Section 2), a procedure concerning the dismissal from the studies according to the Article 67 of the University Education Act, and a procedure concerning the imposition of differential examinations according to the University Education Act, Article 68, Section 3(d) commence on the day when the announcement of commencing the respective procedure is handed in to the student.
- (2) A procedure according to Article 68, Section 3(f) of the University Education Act, concerning the failure to fulfil the requirements implied by the programme of studies according to Article 18, Section 1(b) only commences on the day when a decision was issued.
- (3) A procedure concerning the matters which are not specified in Sections 1 and 2 commences on the day when the student handed the respective application in at the Department of Studies of the Faculty. This application must include the data which are necessary for issuing the decision.

(4) If need be, the Dean will request that the student completes the application or gives necessary explanations. For these actions to be taken, the Dean will appoint an appropriate length of time.

(5) The decision will be issued by the Dean within 30 days from the moment the procedure commenced; in this period, the length of time appointed according to Section 4 will not be included. The decision according to Article 68, Section 3 of the University Education Act must be in writing and include the provision, substantiation and guidance on possible appeal against the decision.

(6) Unless the decision is one according the second sentence of Section 5, the student is given the information about how the application has been processed at the Department of Studies in the office hours; the fact of transmitting the information will be entered in the records on the student which are kept by the Faculty.

8.6 APPELLATE PROCEDURE

ARTICLE 23

Appellate Procedure

The appellate procedure is regulated by the Studies and Examination Regulations of the University.

8.7 APPENDED AND FINAL PROVISIONS

ARTICLE 24

Appended Provisions

(1) The provisions of Parts V and VI of these Regulations do not apply to decisions made according to Article 68, Section 3, Letters (a), (e) and (g) of the University Education Act.

(2) The Dean's decisions according to the second sentence of Article 22, Section 5 and the Rector's decisions in appellate procedures are served to the addressee as Personal according to Article 35 of the University Statute, however the Dean's decisions according to the Article 68, Section 3, Letters (f) and (h) cannot be handed in to any other person, not even against a proxy (Article 35, Section 4 of the Statute).

(3) The Dean's and Rector's decisions are entered in the records on the student which are kept by the Faculty.

(4) A decision comes into effect on the day following after the day when the time for appealing expires in vain, or on the day following after the day when the student resigned in writing the claim to appeal, or on the day following after the day when the Rector's decision was served to the addressee.

ARTICLE 25

Final Provisions

- (1) Unless other implications follow from Article 26 of the University Statute, these Regulations also pertain to the students who are foreign nationals.
- (2) These Regulations were approved by the Faculty Senate on 28th June, 1999, and are made valid on the day when they are approved by the Academic Senate of the University.¹
- (3) These Regulations come into effect on the day following after the day when they were made valid.

¹ See Article 9, Section 1(b) of the University Education Act. The Academic Senate of the University approved these Regulations on 24.9.1999

SECTION 9 – Other Influencies

9.1 Regional Oral Health Needs

Oral health disease patterns in Czechoslovakia (respectively Czech Republic – since 1993) have changed over past 40 years. Water fluoridation was introduced in the 50ies and continued till the end of 80ies. The improvement of oral health referred either to caries experience, or to the level of accomplished treatment – restorative indices. The caries experience in group of 12 – year - old children was – in 1987 – 3.31 DMF, almost 37% of preschool children was cariesfree and only 0.02% of 18 – year - old adolescents had permanent tooth extracted due to sequelae of neglected caries.

After 1989, the whole system of dental health care delivery has been changed. The systematic care for children and water fluoridation ceased. The system of reimbursement also changed. Nowadays the dental care for children is paid by insurance entirely but for adults only partially. New is the possibility of free choice of the dentist. The dental practices are mostly private.

After the analysis performed in 1994 and 1997 by the Dental Research Institute the oral health condition is stabilized. In 12 – year - old children, DMF was 3.07 (in 1994) and 3.2 (in 1997). Only in the group of 6 – year - old children the caries prevalence increased substantially. There was a probability of caries experience impairment in younger children. There is a very regrettable fact that there does not exist any community program of primary preventive care. The prediction of further development of oral health condition is therefore very difficult to estimate. Oral health depends on the level of selfcare of patients and on the level of dental services. That is why the students of our University are taught to educate and motivate the patient to homecare, to change of nutrition and to visit the dentist regularly.

SECTION 10 – Research and Publications

10.1 Publications in refereed journals (1997-1999)

Publications 1997

- Bartoň, T.: Mc Spadden´s method of the root canal filling.
Čes.Stomat., 97, No. 2, p. 52-60.
- Bartoň, T.: Bite wing and preventive dentistry.
LKS, 6, 1997, r.7, p. 8.
- Brázda, O.: Hygienic regime in the dental surgery and
HIV/AIDS epidemy.
Stomatologické zprávy, 38, 2, 113, 1997.
- Brázda, O.: Aesthetic dentistry.
Stomatologické zprávy, 38, 2, 113, 1997.
- Brázda, O.: Water fluoridation over the world.
Progresdent, 3, No. 1, p. 14-16, 1997.
- Lekešová, I.: Current view and opinions on drinking
water fluoridation abroad.
Praktické zubní lékařství, 45, 5, p.86-91,1997.
- Lekešová, I.: Fluor in dental caries prevention.
Časopis lékařů českých, 137,1997, 7, p.201-206.
- Lekešová, I., Šalandová,M.: Results of the questionnaire investigations in
Prague. Česká Stomatologie, 97, 1997, 1, p.16-22.
- Mazánek, J.: Inflammation of orofacial region – general view.
Progresdent, 2, 1997, p. 15-18.
- Mazánek,J.: Diseases of salivary glands.
Progresdent, 4, 1997, p. 7-9.
- Mazánek, J. Traumatology of orofacial region – I. General
part, injuries of soft tissues.
Progresdent, 6, 1997, p. 8-11.
- Peřinka, L.: Anticariogenic properties of filling.
Progresdent, 1, 1997, ISSN 1211-3859
- Šmucler, R.: Practical and simple answers to basic questions
concerning laser treatment.
Progresdent, 3, 97, p. 8-9.

- Šmucler, R.: Lasers is for lasers.
Progresdent, 4, 97, p. 14-15.
- Šmucler, R., Mazánek, J.: 1064/1319 Nd: YAG laser in maxillofacial surgery.
SPIE Proceedings, Vol. 3193, No 54.
- Šťastný K.: Acute events in dental practice.
LKS, 7, 1997, No 3-10.
- Krejsa, O., Broukal, Z., Handzel, J.:
Anketa k aktuálním otázkám stomatologické péče o děti a dorost v České republice (Public inquiry on topical questions of dental care for children and adolescents in the Czech Republic) Čes.Stomat., 97, 1997, No. 4, p. 153-156
- Marková, M., Dolejší, J., Zvárová, J.: Agenesis of the third molars
Int.J.Med.Inform., 45, July 1997, No. 1-2, p.131
- Racek, J.: Prof. MUDr. V. Borovanský, DrSc. odešel
(Prof. MUDr. V. Borovanský, DrSc., deceased)
Čes. Stomat., 45, 1997, 5, str. 230
- Marková, M., Dolejší, J., Zvárová, J.: Agenesis of the third molars
Int.J.Med.Inform., 45, July 1997, No. 1-2, p.131
- Vacek, J.: Plast - Press JV, The High Pressure Flask For Processing Plastic Materials.
The Proceedings of the European Prosthodontic Association 19th Annual Meeting
Tübingen, Germany, September 19 - 21, 1996 (vyšlo v roce 1997)
- Vacek, J.: Evropští protetikové v Tübingenu
(Czech specialists in prosthetics in Tübingen)
Čs. Stomatol., 97, 1997, č. 6
- Vacek, J.: Protetická stomatologie Včera, dnes a zítra
(Prosthetic dentistry: Yesterday, today and tomorrow)
Časopis LKS, 7, 1997, č. 4
- Vacek, J.: Česká společnost protetické stomatologie (ČSPS)
/The Czech Society of Prosthetic Dentistry (ČSPS)/
Časopis LKS, 7, 1997, č. 11 - příloha, str. 2
- Zavřel, V.: Kombinace aminfluoridu a fluoridu cínatého - nový fenomen mezi přípravky pro prevenci a podporu terapie ve stomatologii
(Combination of natrium fluoratum and stannum fluoratum – new phenomenon among means for prevention and therapy promotion in dentistry)
Progresdent, č.3, 1997, str. 24-25
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(Volume and structure of dental care of pre-school children in individual districts of the Czech Republic)
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(Optimal fluoride intake in the critical developmental period of enamel of frontal teeth)
Sborník abstrakt Stomatologického preventivního sympozia, Brno 1999
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Proc. 2nd. Congress of ABSTD, Abstr. No. 23, Barcelona 1999
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Proc. 25th. Congress of ADEE, Abstr. No. 97, Milan 1999
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(Oral health of children in the Czech Republic today and 40 years ago)
Sborník přednášek - Reimanové dny, Prešov, 1999
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Proceeding of BIOS 99, SPIE, San Jose, SPIE, Vol.3593,36-43, ISSN 0277 - 786 X/99

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10.2 Research - Grants

Grant č. 209/95 GA UK Praha pro roky 1995 - 97

Název: Ageneze třetích molárů ve vztahu k agenezím ostatních stálých zubů u člověka
(Project title: Relationship of third molars agenesis to agenesis of other permanent teeth in
man)

Hlavní řešitel (Head): Marková, M.

Spoluřešitelé (Co-workers): Rozkovicová, E., Dolejší, J.

Odevzdání závěrečné zprávy 6.4.1998. Tato zpráva byla vyhodnocena v kategorii „A“.

(Final report was worked out and evaluated in the category A.)

Grant č. 5005 – 5 IGA MZ ČR

Název: Možnosti kombinované ortodontické a protetické léčby – longitudinální studie
(Project title: Possibilities of combined orthodontic and prosthetic treatment – a longitudinal
study)

Hlavní řešitel (Head): Dostálová, T.

Spoluřešitelé (Co-workers):

Racek, J., Roušalová, M., Dolejší, M.

Grant č. 6 – 1528/98 (Fond rozvoje vysokých škol)

(Grant of the Fund of Universities Advancement)

Název: Moderní pracoviště propedeutické a preklinické stomatologie
(Project title: Modern workshop of propedeutic and preclinical dentistry)

Hlavní řešitel (Head): Handzel, J.

Spoluřešitelé (Co-workers): Racek, J., Hanek, P., Škopek, J.

Grant ukončen s hodnocením „splněn výborně“.

(Grant was finished in the classification group „excellent!.)

Interní grant UK 92/96

((Internal grant of Charles University)

Hlavní řešitel (Head): Prof.MUDr. Jaroslav Racek, DrSc.

Název projektu: Sledování změn v počtu, morfologii a postavení zubů. Pátrání po asociacích.

Nové léčebné postupy u těchto anomálií.

(Project title: Observation of changes in the number, morphology and positions of teeth. Searching
for associations. New treatment methods in these anomalies)

Obhájeno v roce 1999 v kategorii A.

(Defenced in the year 1999 in the category A)

Grant IGA UK č. 82/1999

Grant of Internal Grant Agency of Charles University)

Hlavní řešitel (Head): Prof.MUDr. Jaroslav Racek, DrSc.

Název projektu: Sekulární trend ve stavbě lebky a jeho vliv na utváření obličejových struktur.

(Project title: Secular trend in the skull construction and its influence **on** the formation of facial
structures)

Grantový projekt pokračuje druhým rokem.

(Grant project continues in the second year)

IGA MZ 4191-3: New modification of Nd

Mazánek, J. Šmucler, R.::

YAG and CO₂ Laser for Maxillofacial Surgery and

Dentistry. 1997-1999.

IGA MZ 4091-3: Modulation of laser beam frequencies compare to biological and therapeutical possibilities of laser. 1997-1999. Kučerová, H., Dostálová, T., Himmlová, L., Krejsa, O., Mazánek, J.:

Scientific program 206021-01

(Grant for three years started 1999-)

Bartoň, T.: Evaluation of instruments for preparation used in operative dentistry.

Bartoň, T.: Electrogalvanic irritation in oral cavity.

Kovářová, Š., Dobrová, M., Lekešová, I.: Midazolam sedation for anxious children.

Kozáková, B., Pehrová, A.: Soft relining materials and complete dentures.

Mazánek, J., Šmucler, R.: Development of modifications of Nd: YAG laser for orofacial oncology.

Mazánek, J., Šmucler, R.: Interstitial hyperthermy in location of neck and head by laser.

Peřinka, L., Bartůšková, Š.: Various methods of endodontic treatment.

Vondráčková, L.: Hg level in waste of stomatological practices.

Section 21: Quality Development

The pre-graduate education of future stomatologists has, in comparison with the teaching of general medicine, a number of specific singular features. After graduation, the graduate of the stomatological branch must be capable of working independently, albeit under the supervision of an experienced specialist. That is why during the pre-graduate professional training there must be great emphasis on the theoretical and practical tuition of stomatological disciplines. Of course, the high quality professional training in the fields of theoretical, pre-clinical and general medicine is no less important.

In order that education in stomatology in the Czech Republic preserve its good level, above all, greater emphasis must be put on practical training in stomatological disciplines. This is not a question of additional tuition hours - most of the Faculties need considerable investments into equipment, from teaching simulators (phantoms) for pre-clinical instruction, to equipping the medical offices with modern dental furnishings, which enable the stomatologist to work seated, in compliance with the principles of ergonomics. Most of the stomatological departments suffer from lack of space. In large university towns (Prague, Brno) tuition at a single Faculty is conducted at two stomatological departments with a full number of specialized divisions. The question is whether future development is likely to lead more to the merging of clinical divisions of the same speciality, something that is now being considered in

A serious problem of all the FM where stomatology is taught, is the shortage of patients suitable for the instruction of students. A patient who agrees to be treated by a student as part of the student's education, gains no advantages from this. This causes problems for the practical training of all the stomatological disciplines, but especially of stomatological prosthetics. In university towns with a dense network of private dental surgeries, patients prefer to be treated there. Those who do come to school clinics are usually high risk patients, in need of complicated treatment, which - as a rule - cannot be performed by a student. The students therefore find it difficult to accomplish the requirements of specified practical training activities.

Another serious problem continues to be posed by the question of the economic balance of educational workplaces, to which the same economic rules as those valid in the whole health system are applied, regardless of the fact that a student usually uses up a greater amount of material, and that his work is more demanding as far as time and energy are concerned. These problems, which the Faculties cannot solve on their own, must be resolved through interdepartmental negotiations on the level of the Ministries of Education and Health.

Section 23: Profile of a Graduate

Official material of Czech Association of Dental Educators (1997)

In the course of pregraduate instruction, students acquire knowledge of etiopathogenesis, prevention and therapy of illnesses both of the hard and soft tissues of the oral cavity and face to the extent corresponding to the level current in dental medicine. Every graduate must be capable of applying the basics of prevention, diagnosing pathological states and of applying acquired knowledge to the treatment plan. Knowledge obtained during the study of other medical disciplines make it possible for the student to carry out the essential synthesis of information and its practical utilization taking into account to the overall state of health of the patient.

A. General Background

1. Knowledge of the principles of adequate interpersonal communication and medical ethics.
2. Examination of the patient (taking a case history, objective examination based on appearance and palpitation).
3. Establishment of a diagnosis and treatment approach.
4. Independent preparation and interpretation of intraoral X rays, interpretation of extraoral X-raygrams of the skull.
5. Indication and practical utilization of basic laboratory investigative methods.
6. Hygiene in the dental office.
7. Basic orientation in the care of high-risk patients, first aid in the case of emergency in dental office.
8. The ability to actively take part in interdisciplinary cooperation with doctors in related fields.

B. Conservative Dentistry and Endodontics

1. Examination of an adult patient, diagnostics of developmental and acquired changes, the proposal of a treatment plan.
2. Knowledge of tools, implements and materials used in conservative dentistry, knowledge of the technology of their preparation and how to work with them in the dental office.
3. Care of dental decay, preparatory approaches, indications for filling material, treatment of pulpal diseases.
4. Diagnostics and treatment of pathologic states of non - carious defects of hard dental tissue.
5. Pathology and therapy of periodontitis and its complications.
6. Theoretical and practical knowledge of methods of care of tooth canals, possibilities of treatment , techniques of filling, complications, surgical methods as supplement of conservative care.
7. Theoretical and practical knowledge of clinical examination of focal infection.

C. Paedodontics

1. Examination of child patients, proposal for a plan of treatment.
2. Knowledge of the principles of the prevention of dental decay and parodontitis as it appears in children.
3. Mastery of prophylactic operations (motivation, local flouride treatment, sealing of fissures, preventive operations).
4. Theoretical and practical knowledge of methods of consevative tooth care in childhood.
5. Theoretical and practical knowledge of the care of tooth injuries in children.
6. Diagnostics and treatment of periodontal diseases in childhood.

D. Periodontology

1. Examination of the gums and the oral mucous membranes, indexes, principles of oral hygiene, hygienic training.
 2. Differential diagnostics in periodontology.
 3. Treatment of gingivitis.
 4. Principles of conservative treatment of periodontitis, indications of surgical methods.
 5. Principles of prevention of periodontal diseases, removal of local irritating influences (calculus etc.).
- Differential diagnostics and treatment of illnesses of the mucous membranes.

E. Prosthodontics

1. Establishment of a diagnosis and plan for prosthetic treatment.
2. Basic knowledge of dental materials used in prosthetic dentistry, knowledge of technological approaches in the dental office and laboratory.
3. Knowledge of standard therapeutic approaches and ability to carry them out independently (preparation of the teeth, methods for taking impressions, registration and reconstruction of intermaxillary relations).
4. Knowledge of basic principles of gnathology and the ability to apply them independently in the construction of all types of prosthesis, in diagnostics and prevention of myoarthropathy.
5. Prevention in dental prosthetics.

F. Orthodontics

1. Establishment of clinical diagnoses in orthodontics.
2. Knowledge of diagnostic and modern therapeutic methods used in orthodontics.
3. Knowledge of the appropriate period for the beginning of orthodontic treatment.

It is not assumed, that the graduate will be able to make a plan of orthodontic treatment and carry it out independently.

G. Oral and Maxillofacial Surgery

1. Application of local anesthesia in the orofacial area. Management of local and overall complications of local anesthesia.
2. Tooth extraction including the care of the most common local complications.
3. The care of current odontogenic inflammation (intraoral incision, rational dispensing of antibiotics)
5. Simple preprosthetic surgery.
6. First aid in traumatology of tooth and jaws (replantation of teeth, simple dental splints, sutures of wounds of the face and oral mucous membranes.
7. Basic principles of maxillofacial oncology, oncological prevention and dispensarisation.

Good theoretical knowledge of diagnostic and therapeutic approaches in oral surgery is assumed, including orientation in problems of treatment of soft tissue inflammations, illnesses of the mucous glands, knowledge of maxillofacial traumatology, oncology and surgery of jaw anomalies.

The current graduate of Dental Branch is an Oral Physician with a solid theoretical base and partial practical independence, who is able to work at an accredited workplace under the supervision of an experienced and qualified dentist.



DENTED VISIT TO PRAGUE

CHARLES UNIVERSITY
1st MEDICAL FACULTY

April 15th-19th 2000

Part II Visitors Comments

Chairman: Gerard Levy - Paris, France
 Rapporteur: Patricia Reynolds - London, UK
 Visitors: Asterios Doukoudakis - Athens, Greece
 Heikki Murtomaa - Helsinki, Finland
 Patrick Ferillo, Illinois, USA

Section 1 Introduction & General Description

Visitors Comments:

Prague, once the capital of the Austro-Hungarian Empire, still exhibits its high culture through its wealth of historical assets, remarkably preserved in time. This is despite a century of revolution, rebellion and change. The traditions of training at Charles University, dating back to 1348, have survived to provide a firm foundation for the Stomatology Course that was established in 1828. The DENTED visitors recognise the progress made by the School since the last political upheaval in 1989 in this rapidly changing society.

Renowned names in medicine and dentistry such as Purkinje and Carabelli influenced the developments of the Faculties. The Museum of Stomatology houses some fascinating artefacts such as transparencies of maxillofacial injuries treated by Jesensky during the First World War. He also founded the Postgraduate Institute for Dentistry in 1928. Although the Faculty of Medicine was closed during the Second World War by the Nazis, it was re-opened with a second and new Stomatological Department in 1945. There are therefore two Stomatological Clinics within the First Faculty of Medicine (A Second and Third Faculty of Medicine also exists). The Institute of Dental Research was founded in 1924 and in 1999 became part of the First Medical Faculty. It is therefore now closely linked to the Stomatology Clinics, and so inevitably provides access to research potential for the students.

The visitors were able to see those facilities utilised by the undergraduate dental students including the historical Anatomy Department housed in a separate building with its priceless

collection of comparative anatomy, dissections and models from antiquity. Although all these buildings are of splendid external appearance, their internal decoration and equipment is basic and lacking in modernity in many areas. However, the Research Institute, funded by the Department of Health (rather than Education) is much better equipped.

The classical stomatology curriculum is thus underpinned by a very strong medical and biological background. The full course takes 6 years, is taught in blocks with the clinical period commencing in the fourth year. It culminates in the MUDr degree (the same degree as awarded to the medical students). A further 2 years of supervised postgraduate work is required before independent practice is undertaken. The visitors noted the advantages that this strong biomedical background gave but felt that there could be a greater degree of integration between the biomedical sciences and the dental clinical sciences. Additionally the time taken in acquiring all the detailed aspects of the biomedical sciences means that there is less emphasis on the more dentally related topics. The visitors felt that a shift in emphasis towards dental clinical sciences based on the concept of core competences and comprehensive patient care would be beneficial to the education of the dental students. Additionally a central focus on Preventive Dentistry would provide a valuable hub for each subject area.

The two Stomatology Clinics appeared to run comparable courses, with approximately a dozen students in each clinical year attending each clinic. The visitors considered that some economy of effort and finance might be afforded by considering a plan to combine these under the same roof. This should be measured with the general curriculum review. This review should also consider the ongoing shift towards more interactive educational delivery methods eg from lectures to small group and self directed learning.

As the Czech Republic moves towards membership of the EU, it becomes increasingly more important to offer transferable skills of its dental graduates across member states. This means that EU dental courses should have comparable training quality and outcomes, although their curricula may be organised differently for reasons of beneficial local factors and influences. The visitors represented a wide range of dental training backgrounds, from Hungary in the East to the USA in the West and from Scandinavia in the North to Greece in the South. France and the UK gave a mid-European point of view. The visitors were greatly impressed by the professionalism and dedication of the staff who were considered one of the greatest assets of the Institute of Stomatology. It is clear that the leadership has a vision for the future and that the largely Junior Faculty would follow and invest this wisely. The new generation of dental students are growing up in a rapidly changing environment and will thrive as the challenges of the task ahead are met effectively.

Section 2

Physical Facilities & Planned Developments

The overall impression by the visitors is that the facilities available in 1st Medical Faculty in Prague are in need of refurbishment. The visitors noticed the valuable educational resources with historic value particularly in anatomy. However, contemporary and new equipment was evident in the Research Centre. In addition the following observations were made.

2.1. Clinical and preclinical facilities

Strengths: There seems to be adequate space to deliver the teaching programme but it could be rearranged to create better learning environments. There is a continuous effort to improve the learning environments as shown by the new study area and the clear intention to continue to improve these facilities. The clinics are situated close to the preclinical and other

teaching facilities. The university has supplied all instruments for the practical preclinical work, and a few new clinical units are available in the Stomatological and Research Clinics.

Weaknesses: The dental units mainly allowed only one student to work in each without assistance. This is inefficient and may be a hazard to cross infection control if not closely monitored. The number of dental chair units did seem limited for the anticipated aims of the curriculum. The majority of the units are outdated.

The equipment for radiographic examination in the clinics could be significantly improved. The X-ray machines lacked long rectangular collimators and there were two X-ray machines in one room without radioprotective separation. Also although lead aprons were in evidence, a radioprotection screen for the operator was not used during exposures. Furthermore, the nursing stations were not clearly defined and the design of the clinic impeded patient privacy.

Recommendation: At least for certain treatments in the student clinics, a four handed approach should be introduced, one student being the dentist, the other the assistant. Some rearrangement of the facilities appears necessary with renewal of the outdated units and separate nursing stations in the clinics.

The use of specially designed manikins for the practical preclinical training of oral radiographic procedures is recommended.

The X-ray machines should have long rectangular collimators added. All radiological procedures should be checked to be in accordance with radioprotection regulations.

We strongly encourage the plans to replace and renew the dental units, radiological equipment and the pre-clinical areas.

We support all efforts to finance these improvements

Account should be taken of the facilities on all sites in order to allow effective development of the curriculum in the future.

2.2 Other facilities

Strengths: The Lecture Theatres are acceptable in the Stomatological and Research Centre. Space and equipment for research activities seems to be adequate.

Weaknesses: The library seems adequate in space, however, the international literature is sparse and the number and variety of textbooks is limited. There is IT equipment available for students. However, they are not encouraged to use it for learning, other than an additional activity. The students who would use electronic scientific databases search at the research centre where only one computer is available.

Recommendations: To increase the number of textbooks and to use more textbooks especially in English in the Stomatological Clinics. The subscription of more international scientific journals in English is recommended.

The acquisition of a small number of desktop computers has allowed Internet access and is much appreciated by the students and should be expanded and embedded in the curriculum.

Section 3. Organisational Structures

The visitors found that the Administration appeared to be effective and well organised in supporting Faculty but wish to emphasise one observation. The administration of Clinic I and

Clinic II, as indicated in the Self Assessment Document, appears to be complicated and independent. The visitors accept this as a well-founded self assessment.

Recommendation: We recommend a curriculum commission meets regularly, perhaps monthly, to undertake a thorough review of curriculum with greater integration within the medical and dental clinical curricula. The commission should incorporate junior staff into Faculty management and foster their development. We also recommend to streamlining of administration/communication between Clinic I & Clinic II.

Section 4 Staff issues

The visitors were aware of the relatively short history of dental training in Prague after the recent great and rapid changes in the society. The present and future of this society is still full of rapid changes that inevitably reflect on employees and their working conditions in the Stomatology Clinics. It is difficult to predict how these influences will affect the staff, although the friendly, hospitable atmosphere perceived by the visitors within the Central Administration of the University should allow the best possible support by enhancing and improving the physical and mental working environment of the staff.

However, the visitors were concerned with the limited financial support for all, and in particular junior staff. The budget constraints, a universal problem shared by almost all European dental schools, can be at least partly be addressed by urgently and carefully reorganizing the strategy for staff development. Lack of a Faculty development plan, including didactic principles, and the absence of Middle Faculty creates a vacuum for individual development and personal growth. The future of the School is dependant on Junior Faculty and their output. The visitors share the evident concern of a motivated Junior Faculty regarding opportunities to enhance their academic careers. It was also clear that Junior Faculty were very much appreciated by the students and that the clinical training of undergraduates seemed to be heavily dependent on Junior Staff. Solving this issue is a crucial challenge for the prosperity of the School. Furthermore Junior Staff should be incorporated into Faculty management.

Allowing for the prevailing financial situation, a review of financial support for all Faculty is also encouraged by the visitors. It is difficult for the visitors to see that the enthusiasm and commitment of the staff will continue unless proper incentives can be created for them. The visitors also encourage the School to carefully consider the benefits of combining the activities of the two Clinics. This would create a larger critical mass of staffing resources that could more effectively deliver the dental training.

Section 5 - 8 Biological Sciences, Para Clinical Sciences and Human Disease

Visitors comments

The visit was too short to give a full insight into the details of the "Biological Sciences" programme, namely General Anatomy, Clinical Anatomy for dental students, Biophysics, Medical Chemistry; Biology and Genetics, Histology and Embryology, Biochemistry and Physiology. The visitors were impressed with the wide range of information on Biological Sciences given to the dental students. The visitors also believed that the very solid and

learned background of basic "Biological Sciences" gave an excellent medical base for dental education. The teachers of biological sciences were very enthusiastic to achieve the highest levels of knowledge and understanding by their dental students.

However, the visitors felt that the excessive weighting of basic biological sciences did was disproportionate to the overall dental curriculum. Also there appeared to be a lack of true integration between biological sciences and dental sciences. There is a clear need for emphasising those aspects of basic medical science that are relevant to Dentistry. The basic concepts of Oral Biology and its relationship to Biological Sciences should also be given more consideration. The curriculum should be restructured to decrease the amount of non-relevant data and increase the number of hours given the more dentistry related topics. This would greatly enhance the standards of dental education. The visitors believe that relying heavily on traditional learning and educating methods should be replaced – at least partly - with more active student participation, for instance, by introducing more self-learning and collaborative activities such as PBL etc.

Educational objectives were summarized according to each subject. However, it might be useful to identify the outcome and expectation for the students themselves. This could equally be applied to both the pre-clinical medical sciences and the clinical curriculum.

Didactic Courses

Highly qualified teaching staff provide the majority of general medical information for the dental students, but the segmented departmentalised teaching seems to lack the connection between the relevant medical and dental subjects. Improving the collaboration between the general and dental departments by reconsidering the relevance of the given information to dentistry would further improve the level of education. This is especially true from the aspect of Pathology which completely lacks specific lectures on Oral Pathology. Preventive Dentistry should have greater emphasis to increase the preventive aspects of dentistry in all fields of the curriculum. The earlier introduction of Preventive Dentistry into the curriculum should also stimulate student interest in specific dental sciences.

Sections 9-14 Dental Clinical Sciences

The visitors believed that dental students meet the minimum requirements as required by the different departments, and these provide them the necessary skills to practice as a general dentist in the future. There is only one exception which should be taken into consideration by the decision makers of the Medical Faculty. The curriculum lacks practical education of Oral Radiology as a distinct subject. Hence the competencies of graduated students are restricted in these aspects compared to the EU standards. Students collect the basic information on Dental Radiography within the framework of several subjects, but it appeared that the graduating dentist was not familiar and not authorised to produce their own radiographs.

The visitors encourage the wider usage of modern dental materials and techniques in the daily practical work of students, although the visitors were well aware of financial constraints.

Contemporary standards of infection control should be firmly established and emphasised in theory as well as in daily clinical practice.

The teaching of Oral Medicine is combined with the subject of Periodontology, which is a common tradition in Eastern Europe. Visitors believe that separation of the two subjects

would fit in better with the modern European (and U.S.) norms, and the strong medical background of the Faculty would support it efficiently.

Section 15

Integrated Patient Care and Emergencies

Both aspects of this section represent fundamentally important aspects of the training of any dental student. They should be able to safely deliver effective and comprehensive care to all their patients.

Integrated Patient Care

The visitors noted that the block system of delivery of the curriculum did not preclude the concept of integrated (and hence comprehensive) patient care, but it did present some logistical difficulties. This was reflected by the staff and students who found it possible, but often difficult, to treat individual patients through different departments and over time. Staff were generally very enthusiastic and had a clear appreciation for this approach. They considered that it would allow greater interdepartmental integration and a better understanding for the students in managing the patients holistically.

The curriculum review that the Institute wishes to undertake should consider facilitating this important aspect of student learning. Indeed, the Propaedeutics Course in Dentistry and the Preclinical Dentistry Course (including Preventive dentistry) already introduces the student to all the dental disciplines, and this provides a solid foundation for further integration. The visitors consider that a move towards a more integrated curriculum would greatly facilitate an emphasis on comprehensive patient care, allowing the student to devise the total management strategy and experience the follow up of their patients across specialities.

By way of defining comprehensive patient care, the visitors would include the following:

- Taking a thorough patient history, including dental, medical, social and family histories
- Patient assessment by appropriate examination, special tests and investigations
- Reaching a diagnosis
- Formulation of a comprehensive treatment plan and notating accurate records
- Delivering effective care including referral for expert opinion where necessary
- Assessment of long-term care and outcome of that care

The visitors believe that the Institution would be greatly enhanced by embracing further the concept of comprehensive patient care.

Emergencies

The strong medical background to the Stomatology Course gives great advantages to ensuring all personnel are fully trained in dealing with all medical emergencies arising in a dental patient. The First Aid Course – Clinical Aspects is a good example of integrating the aspects of different clinical specialties in the management of medical emergencies.

However, it is important that this is reinforced for all personnel at regular intervals – at least annually and preferably every six months. This not only maintains contemporary standards for all, but empowers all dental personnel to be able to at least initially manage all such events.

The presence of oxygen cylinders in the clinics was very encouraging, and a quality assurance policy (See Section 21) should ensure that contemporary emergency medication

is readily and universally available for use by all trained dental personnel. Some measures are routinely taken for treating medically compromised patients, such as diabetics. The visitors feel that a quality assurance policy (See Section 21) in this area also would enable guidelines to be formulated for the safe and effective management of all such patients. This is also an example of how the integration of the medical components of the course can be directly relevant to the safe management of all dental patients.

Section 16 Competences

In broad terms the Institution should play a leadership role in defining the competencies to enable the newly qualified graduates to work in an accredited dental workplace. More specifically the Institution must organize and develop a wide discussion to identify the image and professional abilities of the students who complete their studies at the stomatological clinics. In this discussion they should incorporate all available information which can be provided by several sources. These can be some of the following:

1. Dental health needs of the community
2. Resources of the Stomatological clinic
3. Faculty resources
4. The curriculum
5. The governmental presumptions of the Dental profession
6. The vision of the School
7. The existing European Union competencies for graduates of Dental Schools.

In discussing these issues and analyzing the information a broad participation is necessary from senior and junior faculty members, students, recent graduates, administration, government officials representing the ministers of health and education, Representatives of the professional Dental Association and Public Health. The information and the representative groups will formulate the profile of the young dentist who will possess the necessary competencies, to enter the profession. Based on this result a curriculum review must take place in order to help achieve the goal of educating a dentist who will truly serve the society and the art and science of Dentistry.

Section 17 Examinations and Assessments

Examinations are performed using the traditional methods of written and oral evaluations. There is a great need to develop self-assessment methods for the students and self-instruction techniques. Examination in the format of individual case reports and study reports, which will stimulate the students to search the international literature and formulate an opinion based on the contemporary evidence, must be encouraged.

Questionnaires, which examine the opinion of faculty members, students, recent graduates, supervising dentists and patients may provide an excellent assistance in evaluating teaching programs and outcome results of the overall educational process.

Section 18

Other Influences on the Curriculum

Students and Faculty members seem to have limited input in the design of the curriculum, and as a result the curriculum is heavily shifted towards biomedical and medical courses. The oral health system detracts patients from seeking treatment at the Institute and creates a problem in finding the patients necessary to complete the educational activities of the students. The role of the Institution as treatment centre and centre of clinical excellence must be outlined in the community in an effort to attract more patients. Since the local cultural influences are rich they should play an important role in attracting guest lecturers from other parts of Europe and the rest of the world. This will also help to stimulate contacts with other institutions and promote faculty and student exchanges, which are greatly needed.

Teamwork with nurses and hygienists should be promoted and should become the important part of student training. The team approach is greatly enhancing the quality of care for the patients and helping the student to realize that patient well being is the main issue of the dental profession.

Section 19

Student Affairs

The students are motivated enthusiastic with professional attitude but they have very limited input in their studies and curriculum changes. Integration of International and national students may create a better learning environment and can motivate the students, to participate in international exchanges. Students must have access to international literature and must be introduced to evidence based learning.

The addition of the Dental Research Institute as part of the University, creates the possibility of introducing student to research procedures. A research day, which can be organized every two years where students can present their activities, may stimulate the interest of students to participate in research. Although there is a dental student association it seems that it is inactive. Students must be encouraged to participate in their association, which must organize programs and events with broad student and or faculty participation.

The results of the student's questionnaire were inconclusive. The only obvious point is that they are differences between the two stomatological clinics and the experiences that they provide for their students.

Section 20

Research and Publications

The research output of the School in general appeared to be influenced by basic sciences. The shortage of funds, personnel and time seemed to be reflected in lack on publications in international dental journals. Despite of the obvious ability of staff and availability of modern equipment, the visitors recognized need to develop a policy to optimise expertise and to focus on areas of excellence in research.

The developing liaison between the Dental Research Institute and the School should continue to expand and thrive for the benefit of all. The visitors encourage the School to

continue to pursue the acquisition of new equipment for research technology and to recruit new staff members with scientific interest. Incorporation of student activities as an integrated part of the curriculum would enhance better understanding of the scientific background of dental care and would stimulate interest in research careers. Housing all the facilities and administration under one roof in the future would also facilitate better utilization of existing resources for research and for learning opportunities.

Section 21

Quality Development Issues

In order for the Institute to ensure attainment of its stated goals/objectives, it should consider developing a program of assessment that is formal and ongoing. The following areas should be assessed: achievement of competencies, patient care, research, and service to the community. There was no evidence of any formal instruments in place that could be utilized for assessment.

Surveys that include input from both students and graduates of the institution could be used to assist them in determining whether they are achieving the stated competencies. Information from the preceptors with whom the graduates work for two years following graduation would be also valuable information to gather. The Curriculum Committee could also use this information as it reviews the program on regular basis.

To ensure the quality of the teaching program is maintained the Institution may want to consider developing a process by which the faculty are formally evaluated. This process may include input from students, peers and department heads. Regular meetings with the individual Faculty may help further develop the Faculty especially the Junior Faculty. As previously stated it is critical that the Junior Faculty is assisted in their development as contributors to the overall mission of the school.

A quality assurance program directed towards patient care should be developed. The faculty and students stated that it was hard to attract patients to the clinic since they can easily obtain care from the private sector. The assessment of the patient care may help the institution to determine areas for improvement. They maybe able to determine better the needs of their patients and therefore make the clinics a more desirable alternative to receiving care than the private sector.

The School should develop specific measurement for achieving the research goals. This may include the number of published articles, the number of grant applications submitted and the number of grants approved. The assessment should also include a thorough review of equipment and space.

Section 22

Overall comments on the School

It was quite evident to the visiting committee the School was committed to achieving its goals. The school volunteered itself to this self-evaluation and review is strong evidence of its commitment for improvement. The committee has identified many strengths which have been cited throughout the report. They are as follows:

- Historical commitment to excellence
- A classical stomatology curriculum

- A Research Institution with contemporary equipment
- Adequate space
- Dedicated and knowledgeable staff
- Excellent medical bases for dental education
- A motivated and professional student body

At the same time the committee did feel that there are areas of weakness and/or for improvement. They have been pointed in the body of this report but are presented are summarized as follows:

- Enhance the emphasis on the dental related topics
- Two separate dental clinics
- Lack of a general curriculum review
- Improve the students and faculty input into the curriculum
- Improve the defined competencies for a new dentist
- Lack of true integration between biological and clinical sciences
- Increase the emphasis of Preventive Dentistry
- Move towards greater integration of patient care
- Lack of a clear definition of comprehensive patient care
- Improve student self-evaluation
- Needs new equipment for the two clinics with radiography and infection control as high priorities
- Enhance the library holdings
- Enhance communications between the two clinics if they are retained
- Enhance the faculty development program
- Enhance the collaboration between the departments
- Lack of student participation in research
- Further develop the liaison between the Dental Research Institute and the School
- Improve the overall assessment program

The visiting committee appreciates the School's efforts prior, during and after our visit. For us it was a very productive activity. The hospitality extended to all of us was extraordinary. We also enjoyed the culture of the city. We encourage the School to continue to use us as resource. We hope that our dialogue will continue.