



UNIVERSITY OF LJUBLJANA
FACULTY OF MEDICINE
DIVISION OF STOMATOLOGY

Ljubljana, Slovenia

DentEd Visit

20-24 May, 2000

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INFORMATION FOR DENTED VISITORS

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SECTION 1

Introduction and General Description

1. INTRODUCTION

1.1 Background

The study of Stomatology at University of Ljubljana began in 1949, when Faculty of Stomatology was established as a part of Medical High School. In 1954 the Faculty of Stomatology became the Division of Stomatology of Faculty of Medicine at the University of Ljubljana. The Faculty of Medicine was established in 1919 and is the only one in Slovenia.

The undergraduate dental programme has been changing through the years, it has been following the demands of the profession and the public health service needs for the new dentists.

From the year 1949 to 1989 the length of dental training was 5 years. In 1989 the medicine and stomatology curricula extended from 5 to 6 years. The changes in oral pathology, in particular caries decline in children, demanded new stomatology curriculum with the emphasis on prevention of oral diseases.

The study of stomatology has been a part of undergraduate programme at the Faculty of Medicine for almost 50 years. Due to the recent research confirming the close relationship between oral pathology and systemic diseases, co-operation of stomatological sciences with other branches in medicine and basic sciences will be needed. The long tradition of Ljubljana dental education inside the Faculty of Medicine may be in this respect observed as an advantage.

The dental clinical training is carried out mostly at the Dental Clinic and other Departments and Institutes at University Clinical Centre.

1.2 General Aims

General Aims are:

- to provide future dentists with appropriate education
- to develop research work
 - to educate postgraduate students
 - patient services

1.3 Hours of the Curriculum

Duration of the undergraduate programme is 6 years. The programme has 5500 hours, which includes 2010 lectures, 3085 hours of clinical training, 90 hours of seminars, and 180 hours of physical education. After graduation the academic title is Doctor of Stomatology (D.M.D.)

The undergraduate programme takes place at the Institutes and University

Departments. Institutes are concerned with teaching (mainly pre-clinical) and research (mainly basic). University Departments are concerned with teaching (mainly clinical), research (mainly clinical), and professional medical services. University Departments are in fact University Hospitals affiliated to the University Medical Centre in Ljubljana.

Special stomatological subjects are carried out at the Division of Stomatology (Dental Clinic), which includes Department of Child and Preventive Dentistry, Department of Dental Diseases, Department of Oral Medicine and Periodontology, Department of Prosthetic Dentistry, Department of Dental and Jaw Orthopaedics and Department of Maxillofacial and Oral Surgery. Stomatological Departments are involved in teaching, research and in development and up-dating of professional oral health services.

General Objectives

They are set out in detail in sections 5-16:

- to ensure that the dental student has a sufficient, appropriate understanding and training in the pre-clinical and para-clinical sciences;
- to provide the dental student with sufficient theoretical and practical knowledge of the clinical stomatological sciences.

Strengths

- Medical and stomatological study are interrelated and connected;
- Assessment methods complement educational objectives and methods;
- Good educational and research work;

1.6 Weaknesses

- Due to the fact that the study of stomatology is the most expensive study at the University of Ljubljana, there are not enough funds granted from Ministry of Education for renovation of dental equipment.
- The lack of academic staff at certain Departments of stomatological sciences.

1.7 Innovations and Best Practices

- Planned implementation of the Credit System
- Better clinical facilities in the last years
- Increased number of students from 40 to 48 in the year 2000

VISITORS' COMMENTS

The visitors were informed that, following the award of the DMD degree graduates entered vocational training for one year after which they sat the State Licensing Examination. This examination is purely theoretical but there are plans to introduce a practical component.

Section 2

Facilities

2.1 CLINICAL FACILITIES

1. General Explanations

Division of Stomatology is sharing the building with Dental Clinic. The Dental Clinic in Ljubljana is a separate building, but it is a part of the University Clinical Centre, located in its proximity. Its basic design is half a century old, but later it was renewed and extended and today it has a total floor area of 2000 sq. meters. It is a two-floor building and is divided in central hall and four main corridors.

There are six separate Department clinical areas. Each Department has seven to eight dental units. All together 46 dental units are devoted to students. In addition there are 15 separate dental offices for staff.

Since last year a new operative hall for dental care under general anaesthesia for handicapped patients is available.

The radiology unit has 2 x-ray apparatus and 1 Orthopantomograph.

In the same building there is a Clinic for Maxillofacial and Oral Surgery with four ambulances, two operative halls and stationary.

During their education students also have access to many other clinics (Clinic for Dermatovenerology, Infectious diseases, Cardiology, Endocrinology, Ophthalmology, Otorinolaringology, Traumatology, Neurology, Gerontology, Rheumatology, Gynaecology, Psychiatry) which are part of the Clinical Centre.

There are also a number of outreach facilities, including three ambulances for paediatric dentistry in Ljubljana and two schools, where students of the 6th year observe preventive actions in the younger population.

2. Strengths

The location of Dental Clinic in the middle of Clinical Centre enables close collaboration particularly with other Institutes and Medical Departments and Clinics.

3. Weaknesses

There is not enough space at the Dental Clinic, therefore some activities are limited. We need new dental units at two departments and more seminar rooms and rooms for students residents and staff.

4. Innovations

New hall for pre-clinical training with 24 phantom heads.

New general anaesthesia hall, where handicapped children are treated under general anaesthesia.

Planned renovations of the Child and Preventive Dentistry and Dental Diseases Departments.

VISITORS' COMMENTS

The total number of chairs available for undergraduate training is 46, which appears less than ideal for the training of 48 students per year although the staff insisted that this does not constrain the clinical experience gained by the students. The students however considered that the number of chairs was inadequate. The students also felt the departmentalisation of the Division of Stomatology made it difficult for them to carry out total patient care. There is a plan for the refurbishment of the various clinics but this is only partially complete and the visitors would commend the completion of this programme as a priority. Consideration might be given to the provision of a Polyclinic which would facilitate the approach to total patient care.

The visitors commend the school on the recent provision of a facility for providing treatment under general anaesthesia for “Special Needs” patients which is a very forward looking innovation from both clinical and educational perspectives.

2.2 TEACHING FACILITIES

1. General Explanations

Students have access to all of the teaching, recreational and cultural facilities of the Faculty of Medicine and University of Ljubljana.

During their pre-clinical study (the first three years) the lessons are given mainly in the two lecture rooms (250 seats and 150 seats) and seminar rooms of Faculty of Medicine building, located in the nearby of the Dental Clinic. Dental students are visiting lectures together with medical students during this time.

Later on, the lectures are put in the Lecture Theatre in the Dental Clinic which can accommodate up to 80 people. There is also one multidisciplinary seminar room at the Dental Clinic Library, a special seminar room on the Department of Orthodontics and a seminar room on the Department of Dental Diseases.

Part of the clinical lectures is held in the lecture theatre of the Clinical Centre, which accommodates 150 people.

2. Strengths

-Clinical facilities in Dental Clinic are located near the main Lecture Theatre.

3. Weakness

-The limited number of seminar rooms and space available for students in the Dental Clinic.

VISITORS' COMMENTS

Lecture theatre facilities for the combined teaching of Medical and Stomatological pre-clinical subjects are outstanding. The Division of Stomatology might like to consider how more facilities suitable for small group teaching might be provided in the future. This will be essential if any curriculum change in this direction is to become possible.

2.3 TEACHING LABORATORIES

1. General Explanations

There are following teaching laboratories associated with the pre-clinical years of the course in the Faculty of Medicine: anatomy, histology with embryology, pathology, forensic medicine, microbiology and immunology, physiology, pathophysiology, biochemistry, pharmacology, cell biology, biophysics, biomedical information.

On the Dental Clinic there is also a new 24 unit multidisciplinary teaching laboratory, equipped with 24 manikin heads and dental units, which provides shared facilities for prosthodontics, restorative dentistry and endodontics. On the Department of Prosthodontics there is also a teaching laboratory where the students are getting insight in the technical phases of the prosthetic work.

2. Strengths

-There is a new multidisciplinary laboratory for multi-purpose use being built currently.

3. Weakness

-There is no pre-clinical training program on manikin heads for periodontal procedures and oral surgery yet.

VISITORS' COMMENTS

The multi-disciplinary laboratory equipped with manikin heads is a new facility and is well suited to its purpose.

2.4 RESEARCH LABORATORIES

1. General Explanations

Most research activities are carried out on the Centre for Dental Research at the Institute of Jozef Stefan, three kilometres from the Dental Clinic. The Centre for Dental Research has two laboratories; Laboratory for the Oral Biology and Laboratory for the Dental Materials. The Centre is located in the middle of the most important research centre in the country (Institute of Jozef Stefan), where researchers from the Dental Clinic can collaborate in synergy with scientists from other interdisciplinary areas important for stomatology (biophysics, biochemistry, dental ceramics). There is also a close collaboration with Faculty of Veterinary Medicine where joint periodontal research is performed on beagle dogs.

The important part of research activities is carried out on the different Institutes of Faculty of Medicine, located nearby the Dental Clinic. Numerous institutes also employ several dental graduates (Institute for Anatomy, Histology and Embryology, Pathology, Forensic Medicine, Physiology) what enables the interdisciplinary research activities with stomatologists from the Division of Stomatology.

2. Strengths

-Research activities are placed in the middle of other research centres, so interdisciplinary collaboration is facilitated.

3. Weakness

-There is no special space devoted to research laboratories at the Dental Clinic.

VISITORS' COMMENTS

The research laboratories are predominantly located in geographically remote Institutes and the visitors did not have the opportunity to visit them because of time constraints. We were assured by the staff of those Institutes that contribute to undergraduate education, that the facilities are open to and are used by undergraduate students of Stomatology undertaking elective research projects and by members of staff of the Division of Stomatology working for higher degrees. We understand that, although there are precedents, it is unusual for Institute staff members to be involved as Research Supervisors for Division of Stomatology staff. However, interdisciplinary research with Institutes both within and separate from the Faculty of Medicine has become more frequent in recent years.

2.5 LIBRARY

1. General Explanation

The Central Medical Library (CMK) of the Faculty of Medicine is the main biomedical library in Slovenia. It provides the most important information resources to the Faculty of Medicine and its Department of Dentistry.

CMK mission is to foster the advancement of education, research, professional practice in biomedicine and dentistry by assuring access to the world's biomedical literature, promoting effective utilisation of information and knowledge and educating users in information management.

CMK acquires and offers access to information sources in the following fields: clinical medicine, biomedical sciences, dentistry and public health. CMK comprises about 200.000 items in the main collection with 950 current periodical titles, 39 from dentistry. A special attention is given to providing and regular updating of textbooks intended for undergraduate and postgraduate studies at the Faculty of Medicine and its Division of Dentistry. Electronic textbooks and multimedia are systematically acquired to support self-directed learning skills. Monographs collection represents about 95.0000 items, 5.000 from the dentistry.

CMK is incorporated into the national library information system COBISS, which includes online library catalogue searchable on Internet. COBISS enables each user to check the borrowed items and loan periods and to renew monographs. The library has been computerised including the catalogue and circulation system.

CMK offers its users a comprehensive Web site. Its menus provide information on general issues, services, information resources and news. The menu electronic request forms allow timeless and quality service which is available 24 hours a day. The menu Internet resources offer a digest of links to medical and dentistry resources of high standard. Subscription databases available on Internet are directly accessible. CMK has got license for more than 900 electronic journals including two full text databases and has offered them on the Webster.

Computer room offers 6-networked multimedia PCs giving access to Internet, e-mail, literature searching facilities, electronic textbooks, etc. 10 public terminals offer access mainly to the library catalogue and COBISS. There are photocopy and self-service copying facilities.

2. Strengths

- CMK offers a comprehensive literature collection for education, research and clinical practice on the field of biomedicine and dentistry.

- Extensive CMK website available 24 hours a day guides users to use library resources and services more effectively.

- A growing collection of electronic journals and textbooks promises users to have more information on the desktop.

- The interlibrary loan service offers high realisation of requests and quick response time by electronic document delivery.

3. Access to Other Library Resources

COBISS includes union catalogue database, which now integrates about 200 library catalogues in Slovenia. So users can get online information about material available in academic, research, specialised and public libraries. COBISS enable access to OCLC catalogue and some First Search databases. CMK users have also online access to social science, humanistic and technical bibliographical databases mounted on the servers of the National and University Library and Central Technical Library.

CMK continually improves its interlibrary loan service. Most important partners in document delivery are British Lending Library and US National Library of Medicine (NLM).

4. Information Service

Bibliographic databases are indispensable for successful information retrieval. CMK offers its users the following databases: MEDLINE, Science Citation Index, Current Contents, which are in co-operation with the Institute of Biomedical Information available in local network and some over the Internet.

5. Weaknesses

-The space in the library is too limited. The library facilities don't dispose with open access to collections except for the current year of periodicals. There are not enough seats in the reading room.

-There are not enough computer workstations to fulfil the needs of students.

-Technical support is not sufficient to efficiently support electronic services and development of digital library.

6. Best Practices

User Education

CMK participates in student education at undergraduate and postgraduate levels. The emphasis is on information retrieval, literature-searching facilities; using library catalogue, website and services.

Courses for efficient use of library catalogue are held once a month. Individual education and training of users in better solving their information needs is every day practice.

Information Resources Catalogues

Foreign journals are recognised to be the most important information resource for patient care and research. CMK regularly prepares alphabetic and subject listing of journals on the Web and in print form.

Catalogues of textbooks held in CMK for medical and dentistry students are available on the Web and in print form.

A growing collection of electronic resources available in library needs some directions. A guide with short description of accessible databases was elaborated to support use of computer workstations.

7. Innovation

-Library services should follow development of information technologies, advancement of biomedicine and dentistry. They should take into consideration growing information needs of patrons.

-Interlibrary loan has become more important in the last years as users are faced with increasing demands for continuous education and to follow recent advances in their disciplines. So CMK established collaboration with NLM in 1999 and enabled patrons to use interface LoansomeDoc. Faster document delivery by e-mail is made possible by purchasing program Ariel and improving hardware and software equipment.

In the year 2000 CMK acquired a license to online access of two full text databases Proquest Medical Library and Health Module that comprise more than 400 journals.

Access analysis showed that the CMK website excited increasing user interest especially among the Slovene biomedical community. Therefore we regularly update and review the structure and content of the website. Recently we have introduced a subject listing of monograph news and a collection of frequently asked questions.

Today's library is a rapidly evolving environment. New information resources and services have been established on regular basis to meet patron needs better. Therefore we have realised the importance of finding ways to present the library benefits to users. CMK has generated users distribution lists to currently inform them by e-mail.

VISITORS' COMMENTS

The visitors were impressed with the extent of learning material available in the library; textbooks, national and international journals and computer assisted learning were well represented. The library staff pointed out that space for open access to materials by students, however, was limited as was reading space, but that this situation is under review. The faculty assured us that additional computers linked through an intranet were available in other departments, which makes up for the restricted space in the library building.

Section 3

Administration and Organisation

3. ADMINISTRATION AND ORGANISATION

- 3.1 Academic Organisational Structure
- 3.2 Academic Administrative Structures

Informational Technology

Personal Computer Access for Students:

- 12 PCs in Library Computer Room (24-30 seats)
- Lecture theatre with possibility for computer projection

VISITORS' COMMENTS

The administration of the course is primarily instituted through the Faculty of Medicine and we were impressed by the effectiveness of the co-operation between the Administrative and Medical/Stomatological staff of the Faculty of Medicine. The interests of the Division of Stomatology are represented by one of three Vice-Deans who meet weekly with the Dean of the Faculty and senior Administrative Officers. This committee determines policy which is subsequently ratified by the Senate of the Faculty of Medicine. This Senate consists of 60 members of staff from the various departments, usually full Professors, of whom 6 are from the Division of Stomatology. Every department within the faculty is represented by its head. The senate has no responsibility for financial matters. There are no student representatives on the Faculty Senate at present although we were informed by the Rector of the University of Ljubljana that there are student representatives on the University Senate. The visitors recommend that student representatives be appointed to the Faculty Senate. Staff in the School of Stomatology are examining possible mechanisms for giving students a voice in the affairs of the School.

The Faculty of Medicine employs a legally qualified Chief Administrative Officer who manages a team of 30 clerical staff. The managerial responsibility of the Division of Stomatology is delegated to a Deputy Chief Administrative Officer.

A large proportion of all courses appear to be lecture based (approximately 40 per cent of the total hours of the D.M.D. programme). Attendance at lectures in the Faculty of Medicine is not compulsory and all of the groups of staff we met reported that attendance at this type of teaching is poor, in some instances less than 50 per cent. Attendance at seminar, tutorial and practical sessions, however, is compulsory and attendance levels are much higher. Although there are obviously significant resource implications for both staff and for suitable accommodation, the Faculty may wish to reconsider this aspect of their teaching methods. In our meeting with the students the opinion was expressed strongly that small group based teaching techniques such as Problem Based Learning were preferable to lecture based teaching and should be used more widely even

though they were fully aware that this method implies more commitment on their part.

The students were also unhappy that examinations were often remote from the courses that initiated them. The holding of examinations at a time remote from the time of course delivery caused stress that could be avoided with improved organisation.

We were informed that monthly subject review meetings for all courses in the Faculty of Medicine take place in the Committee for Study Affairs. However, many of the staff groups that we met were of the opinion that there was little interaction between clinical staff in the Division of Stomatology and the Basic, Pre-Clinical, Paraclinical and Human Disease teaching staff. The comment was made that the time allocations to the various disciplines were arrived at up to 15 years previously and that little had changed since then, although it was apparent to the visitors that some informal discussions have taken place in a number of areas and course content has been subject to some modification. Developments in this area may be complicated by the fact that the funding of preclinical departments is directly proportional to the number of contact hours provided by each department.

The visitors would suggest that a formal Curriculum Development Committee be instituted to replace the informal process that occurs currently and this proposal was accepted as important by the members of the Faculty who are initiating appropriate procedures.

Section 4

Staffing

4. STAFFING

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Mara Bresjanac, M.D., Ph.D.
Neva Crne-Finderle, B.Sc., Ph.D.
Samo Ribari, M.D., Ph.D.

Teaching Assistant

Marko Živin, M.D., Ph.D.

INSTITUTE OF PHARMACOLOGY

Professors

Metka V. Budihna, M.D., Ph.D., Head
Marija Carman Krzan, B.Sc., Ph.D.

Associate Professors

Tatjana Irman Florjanc, B.Sc., Ph.D.
Lovro Stanovnik, M.D., Ph.D.

Assistant Professors (Docent)

Ilonka Ferjan, B.Sc., Ph.D.
Mojca Krzan, M.D., Ph.D.

Teaching Assistants

Ladko Korosec, M.D., M.Sc.
Metoda Lipnik Stangelj, B.Sc., Ph.D.

DEPARTMENT OF INTERNAL MEDICINE

Professors

Andreja Kocijancic, M.D., Ph.D, Head
Janez Prezelj, M.D., Ph.D.
Pavel Poredoš, M.D., Ph.D.

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Igor Kranjec, M.D., Ph.D.
Aleksandra Markovic-Predan, M.D., Ph.D.

Assistant Professors (Docent)

Dušan Andoljšek, M.D., Ph.D.
Radoslav Kveder, M.D., Ph.D., Head
Marko Medvescek, M.D., Ph.D.

Teaching Assistants

Borut Kocijancic M.D., Ph.D.
Tom Ploj, M.D.
Matjaz Sinkovec, M.D., M.Sc.
Srečko Stepec, M.D., M.Sc.
Jelka Zaletel, M.D.

DEPARTMENT OF INFECTIOUS DISEASES AND EPIDEMIOLOGY

Professors

Franc Strle, M.D., Ph.D.

Associate Professor

Milan Cizman, M.D., Ph.D.

Franjo Pikelj, M.D., Ph.D. Head

Assistant Professors (Docent)

Janez Tomazic, M.D., Ph.D.

Ludvik Vidmar, M.D., Ph.D.

DEPARTMENT OF RADIOLOGY

Professor

Vladimir Jevtic, M.D., Ph.D., Head

Associate Professor

Milos Surlan, M.D., Ph.D.

Assistant Professors (Docent)

Erika Brencic, M.D., Ph.D.

Ziva Zupancic, M.D., Ph.D.

Pavel Berden, M.D., Ph.D.

DEPARTMENT OF DERMATOVENEROLOGY

Professors

Majda Lunder, M.D, Ph.D,

Teaching Assistants

Igor Bartenjev, M.D, M.Sc.

Mateja Dolenc-Voljc, M.D.

Vlasta Dragos, M.D.

Tomaz Lunder, M.D., M.Sc. Head in charge

DEPARTMENT OF NEUROLOGY

Professors

Martin Janko, M.D., Ph.D., Head

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David B. Vodusek, M.D., Ph.D.

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Anton Mesec, M.D., Ph.D.

DEPARTMENT OF PSYCHIATRY

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Onja T. Grad, B.A., Ph.D.
 Martina Zmuc Tomori, D.M.D., Ph.D., Head
 Vukosav Zvan, M.D., Ph.D.

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Zdenka Cebasek, Travnik, M.D., Ph.D.
 Blanka Kores Plesnicar, M.D., Ph.D.
 Maja Rus Makovec, M.D., Ph.D.

DEPARTMENT OF SURGERY

Professors

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 Vinko Dolenc, M.D., Ph.D.
 Eldar Gadzijev, M.D., Ph.D.
 Vladislav Pegan, M.D., Ph.D.
 Slavko Rakovek, M.D., Ph.D.
 Stane Repse, M.D., Ph.D.
 Vladimir Smrkolj, M.D., Ph.D. Head

Associate Professors

Andrej Baraga, M.D., Ph.D.
 Borut Prestor, M.D., Ph.D.
 Bojan Trsinar, M.D., Ph.D.

Assistant Professors (Docent)

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 Borut Geršak, M.D., Ph.D.
 Mirko Omejc, M.D., Ph.D.
 Lojze Pleskovic M.D., Ph.D.
 Martin Tonin, M.D., Ph.D.

Teaching Assistants

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 Janez Erzzn, M.D., M.Sc.
 Uros Golobic Ahcann, M.D.
 Ciril Oblak, M.D., Ph.D.
 Franci Planinsek, M.D., M.Sc.

DEPARTMENT OF OPHTHALMOLOGY

Assistant Professors (Docent)

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 Marko Hawlina M.D., Ph.D. Head
 Branka Stirn-Kranj, M.D., Ph.D.

Teaching Assistants

Barbara Cvenkel, M.D., M.Sc.
 Mirna Stabuc-Silih, M.D., M.Sc.

DEPARTMENT OF ONCOLOGY AND RADIOTHERAPY

Professor

Zvonimir Rudolf, M.D., Ph.D., Head

Assistant Professor (Docent)

Hotimir Lesnicar M.D., Ph.D.

DEPARTMENT OF PAEDIATRICS

Professor

Ciril Krzisinik, M.D., Ph.D, Head

Assistant Professors (Docent)

Tadej Battelino, M.D., Ph.D.

David Neubauer, M.D., Ph.D.

Teaching Assistants

Borut Bratanic, M.D., M.Sc.

Polona Brcar-Strukelj, M.D., M.Sc.

Janez Jazbec, M.D., M.Sc.

Uros Mazic, M.D., M.Sc.

Zvonka Rener-Primec, M.D., M.Sc.

DEPARTMENT OF OTORHINOLARYNGOLOGY,

Professors

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Miha Zargi, M.D., Ph.D., Head

Assistant Professors (Docent)

Irena Hocevar, M.D, Ph,D

Avgust Zupevc, M.D., Ph.D.

Teaching Assistants

Anton Gros, M.D., Ph.D.

Jernej Podboj, M.D.

DEPARTMENT OF GYNAECOLOGY AND OBSTETRICS

Professors

Helena Meden-Vrtovec, M.D., Ph.D.

Stelio Rakar, M.D., Ph.D.

Tomaz Tomazevic M.D., Ph.D.

Associate Professor

Ziva Novak-Antolic, M.D., Ph.D.

Assistant Professors (Docent)

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Martina Ribic-Pucelj, M.D., Ph.D.
Andrej Vogler, M.D., Ph.D., Head

Teaching Assistants

Assistant Borut Kobal, M.D., Ph.D.
Assistant Eda Vrtacnik-Bokal, M.D., Ph.D.

DEPARTMENT OF HYGIENE, SOCIAL AND OCCUPATIONAL MEDICINE

Professor

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Mojca Juncic, M.D.
Barbara Kramar, D.M.D., M.Sc.
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DIVISION OF STOMATOLOGY
Professor Uros Skaleric D.M.D., Ph.D., Vice-Dean, Head

DEPARTMENT OF PREVENTIVE AND PAEDIATRIC DENTISTRY

Assistant Professor (Docent)

Narcisa Kosir, D.M.D., Ph.D., Head

Teaching Assistants

Alenka Pavlic D.M.D., M.Sc.

Rok Kosem, D.M.D., M.D.

Tomaz Rotar, D.M.D.

DEPARTMENT OF DENTAL AND JAW ORTHOPAEDICS

Professor

Franc Farcnik: D.M.D., Ph.D., Head

Teaching Assistants

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Maja Ovsenik, D.M.D., M.Sc.

Mojca Velikonja Vagner, D.M.D.

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DEPARTMENT OF DENTAL DISEASES

Professor

Dominik Gaspercik D.M.D., Ph.D., Head

Assistant Professor (Docent)

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Teaching Assistants

Janja Jan, D.M.D., M.Sc.

Nataša Jevnikar, D.M.D.

Janez Leskovec, D.M.D., M.Sc.

Igor Potocnik, D.M.D., M.Sc.

Mirela Rode, D.M.D., Ph.D.

DEPARTMENT OF ORAL MEDICINE AND PERIODONTOLOGY

Professor

Uros Skaleric D.M.D., Ph.D., Head

Assistant Professor (Docent)

Dušan Groselj, D.M.D., Ph.D.

Teaching Assistants

Boris Gaspirc, D.M.D., M.Sc.

Marija Kovac Kavcic D.M.D., M.Sc.

Milan Petelin, D.M.D., Ph.D.
Rok Schara, D.M.D., M.Sc.

DEPARTMENT OF MAXILLOFACIAL AND ORAL SURGERY

Associate Professor

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Zvone Zajdela, D.M.D., M.D., Ph.D.

Teaching Assistants

Andreja Eberlinc, M.D.
David Dovašk, M.D.
Matija Gorjanc, M.D., D.M.D.
Nataša Ihan Hren, M.D., Ph.D.
Andrej Kansky, D.M.D., M.Sc.
Borut Sotosek, M.D., M.Sc.

DEPARTMENT OF PROSTHODONTICS

Associate Professors

Ljubo Marion, D.M.D., Ph.D., Head
Nenad Funduk, D.M.D., Ph.D.

Teaching Assistants

Branko Crevatin, D.M.D.
Peter Jevnikar, D.M.D., M.Sc.
Igor Kopac, D.M.D., M.Sc.
Milan Kuhar, D.M.D., M.Sc.
Cedomir Oblak, D.M.D., M.Sc.
Ksenija Rener, D.M.D., M.Sc.
Ecijo Sever, D.M.D.
Franc Svete, D.M.D., M.Sc.
Dušan Sustercic D.M.D., M.Sc.

4.2 Staff Statistics

Professors	49 full time, 1 part time
Associate Professors	33 full time, 1 part time
Assistant Professors	51 full time, 1 part time
Teaching Assistants	98 full time, 2 part time

Auxiliary Staff at Division of Stomatology

Dental Nurses	15
Dental Technicians	7
Photographer	1
X-ray Engineer	1
Chemist's Assistant	1
Secretary	1

VISITORS' COMMENTS

Although the total number of teaching staff contributing to the education of Stomatology students is high (233) it appears that purely Stomatological staff numbers are significantly less (41). Nonetheless it appears that staff/student ratios generally for clinical supervision are favourable. The students we met were of the opinion that there was some variability between Departments within the Division of Stomatology in the level of staffing actually achieved on the clinics.

Staff career pathways have the following structure. A young staff member first embarks on a part taught, part research based two-and-a-half year programme leading to the award of a Masters degree. Upon satisfactory completion of the thesis, which is often worthy of publication in International peer reviewed publications, the staff member starts a further three – five years of research and clinical residency in parallel with each other. The successful candidate can then apply for a post as Assistant Professor. (Docent)

The staff were generally satisfied with the numbers of Dental Nurses available although the introduction of a dedicated Dental Nurse Training Course was a welcome future development as is the proposal to introduce training of Dental Hygienists.

It would appear from the documentation provided that secretarial support within the Division of Stomatology is markedly deficient.

Section 5

The Biological Sciences

5.1 BIOCHEMISTRY I

Name: Prof. Radovan Komel, B.Sc.,Ph.D.,
 Assoc. Prof. Helena Lenasi, B.Sc., Ph.D.
 Assoc. Prof. Matjaz Zorko, B.Sc., Ph.D.
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1. Introduction

The course is common to the students of medicine and stomatology with some separate lectures (6 hours) covering specific subjects for the students of stomatology. In addition we offer three optional short courses with more extended selected topics of biochemistry entitled "Biochemistry of steroids", "Structure and function of selected proteins", and "Selected topics of bone and teeth biochemistry"; the last listed optional course is aimed primarily but not exclusively to students of stomatology. Student can take any of optional courses separately but also two or all three together.

2. Primary Aims

-As an introductory and fundamental first year course Biochemistry I provides students with basic concepts of biochemistry and molecular logic of life in general and is mainly oriented to structure and function of biomolecules. As such the course provides a substantial foundation for teaching of metabolism and molecular biology in scope of Biochemistry II, as well as for better understanding of important subjects of Physiology, Pathological Physiology, Microbiology, Pharmacology and of clinical courses. It further provides student with some knowledge of the chemical nature of materials used in dentistry.

3. Main Objectives

By the end of the course the student should have:

- basic knowledge of physico-chemical concepts that control biochemical processes in organisms (chemical equilibrium, rate of reactions, oxidoreduction, coupled reactions),
- knowledge of the structure and understanding of the function of biomolecules (lipids, carbohydrates, peptides, proteins and nucleic acids, including with their building-block molecules and some other biologically important small molecules as vitamins, neurotransmitters, hormones etc),
- rather detailed knowledge of enzymology including the regulation of enzyme activity,
- general overview of signal transduction mechanisms in the cell,
- understanding functional relationships of biomolecules and complex cell structures,
- substantial skill to work with chemicals and to use fundamental biochemical techniques,
- fairly good information on structure and function of organic and inorganic

components of bone and tooth and their integration in mineralised tissue (only those students who take additional optional course "Selected topics of bone and teeth biochemistry").

4. Hours in the Curriculum

The course comprises 90 hours of lectures, 30 hours of seminars and 90 hours of laboratory work. The amount of self-directed learning varies largely from student to student but the average is estimated to be from 100 to 200 hours. Each optional course consists of additional 15 hours of lectures and seminars.

5. Method of Learning/Teaching

Although teaching procedure combines lectures, seminars and laboratory work, lectures still represent the significant mode of teaching. The lecturers try to update subjects from textbooks with recent research findings and introduce modern lecturing techniques such as computer assisted presentations. Teachers are available for discussions with students either directly (fixed and flexible hours each week) or by Internet. Seminars give students the opportunity to improve their communication and presentation skills. Rather extended laboratory work is aimed to support understanding the subject of lectures and it should also improve general skill of the students in handling different chemicals and carrying out procedures.

6. Assessment Methods

During the year there are three in-course assessments that can bring to a student up to 100 points each. Additionally, each student has to prepare a seminar and present it in front of his colleagues and one of the teachers; seminar brings up to 50 additional points. Students should collect at least 55% of 350 points in order to be allowed to attend the final exam, which consists of written (10 short essay-style questions, 60 minutes) and oral part. Students who perform particularly well during the year and collect 85 or more percent of points from in-course assessments and seminar are allowed to take oral examination without the written exam. Oral examination contributes a major part to the final mark that is assessed by the examiner. Grades are 1 to 10, 6 being the minimal passing mark and 10 the maximal.

7. Strengths

-Students get substantial and broad background knowledge of structure and function of biomolecules and enzymology that allows them to better understand subjects of pre-clinical and clinical courses given in next five years of studies. Their knowledge is not restricted to specific problems of stomatology but is rather general what might be favourable in times of the shift of stomatology from predominantly caries oriented praxis towards more general issues of oral medicine. On the other hand, optional course "Selected topics of bone and teeth biochemistry" give students the opportunity to obtain deeper knowledge of structure and function of the components of mineralised, tissue.

8. Weaknesses

-Some specific topics might be less relevantly covered, partly because of weak connections between teachers of biochemistry and teachers of clinical dental courses, partly because of difficulties with appropriate text-books and partly because none of lecturers of biochemistry works in the field more closely related to stomatology research, although all of them are active researchers. A lack of small group teaching facilities in the form of tutorials is a general drawback in Medical Faculty of Ljubljana. We also notice a relative low interest of students to attend the optional course that is stomatology oriented.

9. Innovations and Best Practices

-Seminars were introduced in the curriculum last year and already proved to be very useful and stimulating for the students. Some improvements in lecturing techniques have been introduced recently including the use of computer programs to present 3D structures of small molecule and especially macromolecules and their interactions. The availability of teachers through E-mail has intensified their contacts with students and provided them with additional feedback.

10. Plans for Future Changes

-Faculty is in the preparation to introduce integrated study both in medical and stomatology curriculum. The main task in the scope of these changes will be to establish adequate position of biochemistry in future teaching schemes.

5.2 BIOCHEMISTRY II

Name: Prof. Katja Breskvar, B.Sc., Ph.D.

Assoc. Prof. M. }škelj-Mavrič B.Sc., Ph.D.

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1. Introduction

Biochemistry is taught at the Faculty of Medicine, Division of Stomatology, University of Ljubljana for two years. In the first year Biochemistry I offers the student some basic knowledge of biomolecules, physical chemistry and enzymology while Biochemistry II covers the intermediary metabolism and its regulation as well as molecular biology with genetic basis of disease. For students of stomatology some special topics concerning formation and maintenance of dental tissues, the role of saliva as well as the metabolism of oral bacteria are covered.

Students enter the course of Biochemistry II after having successfully completed the first year of the study. Several aspects of biochemical teaching are used and extended during the courses of physiology, immunology and microbiology, pathological physiology, pharmacology and specialised clinical courses for students of stomatology.

2. Primary Aims

-The course aims to give the student basic knowledge and understanding of biochemistry and molecular biology with special emphasis on information pathway mechanisms. In addition it introduces the student to the theoretical and practical aspects of the basic biochemistry and molecular biology techniques in scientific research. Special attention is given to biochemistry and molecular biology of saliva, dental tissues as well as oral micro-organisms.

3. Main Objectives

By the end of the course the student should have:

- Basic knowledge of the metabolism of carbohydrates, amino acids, lipids and nucleotides.
- An understanding how metabolic processes are integrated and regulated.
- Basic knowledge of bioenergetics
- Basic knowledge of signal transduction and the role of individual hormones
- An understanding of the basic concepts of molecular biology and molecular basis of disease.
- An understanding of the composition and the role of saliva.
- Basic knowledge of the composition of dental tissues with special emphasis on biomineralization
- An understanding of the metabolic activities of oral bacteria and biochemical aspects of caries.

4. Hours in the Curriculum

The course involves 135 hours including practical course (75 hours of lectures and 60

hours of the practical laboratory course). Additional 15 hours covering "Regulation of metabolic processes at some physiological conditions of the organism" can be selected.

5. Method of Learning /Teaching

The significant mode of teaching at the course is lecture. In addition to the factual information the lecturers aim to provide their personal view on each topic and especially in the topics on molecular biology, signal transduction and special topics concerning hard oral tissues indicate where the research has gone beyond the concepts of the textbooks. In addition lectures are supported by the seminars which are prepared by the students and discussed in small groups. Practical course is selected to add to the understanding of the material taught. Students also have the opportunity to come to their lecturers during special hours and ask them questions they did not understand.

6. Assessment Methods

All aspects of the course are assessed and the pass mark is 6 (55%). During the year there are two assessments of the theoretical aspects of the practical course and seminars. Each test has ten short questions or calculations (60 min). Those students who fail to pass these tests have to pass an additional test (10 short questions, 60 min.) before being able to take the final examination. This consists of a written test of 10 short questions covering the main objectives of the course (first 7-8 questions are the same as for medical students with 2-3 questions specific for students of stomatology, 60 min.). Written exam is followed by oral part of the exam. The final mark for the exam depends on both parts of the examination and is assessed by the examiner.

7. Strengths

-The students are taught together with the students of medicine with approx. 15% of the lectures devoted separately to dental students. Special topics have been selected from recent literature. During the practical work dental students form separate groups, although the program is the same as for students of medicine. During the seminars the students have an opportunity to discuss with their teachers interesting topics from recent literature. Student/staff meetings (twice a year) and student questionnaires provide an opportunity for student feedback and course improvements.

8. Weaknesses

-As on one side weakness of the course could be that most of the program is the same for medical students and students of stomatology this might represent an advantage for the future since the students will need more basic knowledge to be able to cure diseases of the oral cavity and not just treat caries. Although the course is taught within research active department, none of the lecturers is working on the fields that could be of special interest for students of stomatology (problems within the oral cavity). In addition more feedback information about the knowledge needed by the students would be desirable from the lecturers of more specialised clinical courses that follow.

9. Innovations and Best Practices

The textbook "Special topics from Biochemistry II for stomatologists is in preparation at the department and will be published before the end of the summer term. It will help students to better understanding of the topics discussed.

10. Plans for the Future

It is our intention to introduce some topics interesting for students of stomatology at the seminars in order to be able to encourage more relevant discussion. At the time the new textbook might enable better use and extension of the special topics introduced at Biochemistry II later during the study.

VISITORS' COMMENTS

At present the courses are common for Medical and Stomatological students. Optional courses specific to Stomatology are a recent innovation in the first year. In the second year, the courses are more separate with approximately 30 per cent of the course content being specifically related to Stomatology.

The teachers are Basic Scientists and concentrate on presenting basic concepts.

Some small group teaching takes place where the students prepare topics and present them, in pairs, to groups of 15 students.

Formal meetings with the Division of Stomatology are held in an attempt to ensure that topics with particular relevance to Stomatology are included but these meetings are infrequent, the last being 3 years ago.

A textbook including the special stomatological topics is in preparation and is a welcome development.

Division of Stomatology staff use the facilities of the Biochemistry and Biophysics Laboratories for aspects of their research work.

5.3 BIOPHYSICS

Name: Prof. Saša Svetina, B.Sc., Ph.D.

E-mail: sasa.svetina @biofiz.mf.uni-lj.si

1. Introduction

The course Biophysics is part of the first year's curriculum of students of dentistry at the Faculty of Medicine in Ljubljana. The course is taught in the first semester. The required previous knowledge is the knowledge obtained within the framework of the high school programmes of the subjects Physics and Mathematics.

2. Primary Aims

-In the course Biophysics the students are at an advanced level informed about the physical aspects of natural phenomena. The emphasis is on those physical laws which are relevant to dentistry.

3. Main Objectives

At the end of the course the students should have:

1. Some basic understanding of the origin of biological structures and of the functioning of biological systems.
2. A knowledge of the physical properties of the environment which affect the state of living organisms.
3. A knowledge of the physical description of phenomena which form in the bases of different physiological processes.
4. A knowledge of selected theoretical and experimental methods used in dental diagnostics and therapy.
5. An ability to treat physical and other phenomena in a quantitative manner.

4. Hours in the Curriculum

The course currently involves 60 hours of lectures, 30 hours of practical work and 15 hours of tutorial, giving 105 hours of teaching time.

5. Method of Learning/Teaching

The lecture course and the practical course are the main modes of teaching. Lectures are given to the whole class, and take the students systematically through the basic chapters of classical physics. The emphasis is on the description of biological phenomena and the examples from medicine and dentistry. The presence at lectures is not obligatory. The practical course is with groups of up to 12 students, where each student is working individually on his own exercise. The presence at the exercises is obligatory. Absence is excusable in the case of illness, however, all scheduled exercises must be performed.

6. Assessment Methods

The work at practical exercises is evaluated weekly. Before the end of the semester the students have to present a positive knowledge of all performed exercises. At the end of the course the students have to pass the exam consisting of written and oral parts. Within the written part a student has to answer 25 test questions (75%) and to solve two problems (25%). In order to obtain a positive grade at the written part of the exam the student has to accomplish 51% of the total.

7. Strengths

-The program of the course to some degree overlaps with the program for students of medicine as it is believed that the basic background in the natural sciences for both groups of students should be similar. Some lectures and practical exercises are adapted for the specific needs of the students of dentistry.

8. Weaknesses

-The course is taught in a compressed manner during the first semester of the first year of dentistry studies. In general, the students are not yet accustomed to the university type of learning. In addition, there are too large variations in their previous knowledge so that part of the course has to be devoted to the repetition of basic physics. A two-semester course with the same amount of teaching hours would enable the tutorial work to be more efficient.

9. Innovations and Best Practices

1. One a week the students can have individual meetings with the members of the teaching staff. These consultations are as scheduled or by an appointment.
2. The practical exercises are being constantly renewed, i. e. whenever the budget and the manpower allow, the old exercises are replaced with the new ones which are aimed to be more relevant for medicine and dentistry.
3. The Biophysics course is taught within a research active department, ensuring that students receive a relevant information.

10. Plans for Future Changes

Future changes should involve more practical exercises which are specific for the students of dentistry. It should also be appropriate that part of the course is given in one of the later years of studies after the students have learned more about the dentistry.

VISITORS' COMMENTS

In Biophysics, tutorials are used to fill gaps in the knowledge of some of the students which are apparent at the time of their admission to the course.

Meetings with Division of Stomatology staff to discuss curriculum content would be advantageous.

5.4. CELL BIOLOGY

Name: Prof. Kristijan Jezernik, B,Sc., Ph.D.

E-mail: jezernik@ibmi.mf.uni-lj.si

1. Introduction

The course continues at the Medical Faculty at the division stomatology in the first year as the undergraduate programme. Teaching is being means of lectures, practical classes and the seminars. It present a comprehensive overview of modern cell biology as it is related to understanding human diseases.

2. Primary Aims

The aim of this course is to present the cell biology in a precise and sufficient fashion, which will enable students to fully understand the cellular and molecular basis of disease processes.

To implant principles and concept of modern cell biology and to show how these principles apply to cell function especially to the oral tissues.

3. Main Objectives

Our objective is to ensure that students will understand the molecular details of cell structure and function, communication between cells, the basis of development, growth and differentiation. This themes are applied especially to the cells structures of the hard and soft tissues. We provide the students with the following concepts: structure and function of the plasma membrane, cell-cell contact, the concept of extracellular matrix, cytoplasmic membrane system and membrane trafficking, cell cytoskeleton, cell cycle and its regulations, development, differentiation and cancer cell, mitosis, meiosis and recombination, basic principles of mutations and Mendelian and non-mendelian genetic.

4. Hours in the Curriculum

The course currently involves 75 hours of lectures and 60 hours of practical in the first year including 15 hours of elective course.

5. Method of Learning/Teaching

The students are learned by formal lecture and at practical by personal experience with microscopy and with different methods and techniques used in laboratory investigation of cells. The students prepare seminars at the elective hours choosing some hot topics in the field of cell biology.

6. Assessment Methods

Assessment are carried out in the formal examination consisting of written papers and oral examine. A practical examination includes practical work with the different technique and methods in the field of cell biology.

7. Strengths

The course is taught by basic scientists of all of them are researchers in the field of cell biology. We have sometimes guest teacher which is experiences clinicians. We would like to developed the teaching staff that would integrate basically oriented cell biology with that of clinically one.

8. Weaknesses

Our wishes to integrate basic scientific approach with experiences of clinicians are for now greatly limited because of limited number of staff.

9. Innovations and Best Practices

10. Plans for Future Changes

To extend taught into the basic principles of the genetic, especially human genetic.

VISITORS' COMMENTS

Elective topics in Cell Biology give the opportunity for Stomatological students to prepare and present relevant material to the group.

It is intended to develop a course in basic genetics for students of stomatology and the visitors would support this development.

Section 6

Pre-Clinical Sciences

6.1 ANATOMY

Name: Assist. Prof. Erika Cvetko, D.M.D., Ph.D.
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1. Introduction

The anatomy course is introduced in at the first year of the dental undergraduate study. The course culminate in examination at the end of the first year. In the first term the anatomy of the head and neck and central nervous system is presented at lectures (2 hours per week), seminars (1 hour per week) and classes (4 hours weekly) where prosected specimens representative for descriptive and topographic anatomy are used.

In the second term the anatomy of locomotor system thoracic and abdominal organs is introduced in at lectures (2 hours weekly), seminars (1 hour weekly), classes (2 hours weekly) and detailed craniofacial structure at optional course (extra curriculum) (1 hour weekly).

2. Primary Aims

- a) To provide students with a basic knowledge of the structure of the systems and organs of the human body appropriate to understanding of important diseases.
- b) To provide the students with a detailed understanding of the craniofacial structure during optional course (extra curriculum) of anatomy (15 hours).

3. Main Objectives

Anatomy course is divided into four units. Students are required to have an appropriate knowledge of descriptive and regional (topographic) anatomy of following:

- head and neck
- the skeletal system, including joints
- the muscles of the head and neck
- the oral cavity, nasal cavity and sinuses, pharynx, larynx, glands
- the blood supply and lymphatic drainage of the head and neck
- the cranial nerves
- central nervous system
- the structure of the cerebral hemispheres, brainstem, cerebellum and spinal cord
- the major afferent and efferent pathways of the CNS
- the blood supply of the CNS and the circulation of cerebrospinal fluid
- upper and lower extremity (locomotor system)
- skeletal system, including joints
- muscles of both extremities including muscles of thoracic and abdominal wall and diaphragm

- blood supply and innervation
- thoracic and abdominal cavity organs
- the trachea, bronchial tree and lungs,
- the heart and great vessels, structures in posterior mediastinum
- the organs in abdominal cavity with particular emphasis on their topographic relations
- blood supply, lymph drainage and innervation of organs

Cross-sectional anatomy have been included to stimulate students to think in terms of three-dimensional anatomy, which is important in the interpretation of CT scans and radiographs.

4. Hours in the Curriculum

Total contact hours are 195.

lectures: 60 seminars: 30 classes: 90 optional course (extra curriculum): 15

5. Method of Learning/Teaching

Students attend lectures, seminars and classes.

Two introductory lectures deal with tissues and systems. Topics of lectures precede and are closely related to topics at classes.

At the seminars the staff members introduce the topics dealt with at classes.

During classes students use prosected specimens, bones, models, charts, atlases of anatomy, textbook of anatomy and other material provided.

The staff members discuss the topics with the students in small groups, draw schemes of topographic anatomy and discuss them.

Topics are planned in a sequence designed to ensure the gradual development of an overall understanding of the interrelationship of structures of the body.

6. Assessment Methods

Since the whole anatomy course is divided into four units students' knowledge is assessed at the end of particular unit using multiple choice questions and short answer questions. Passing all four assessment enable students to attend the final exam at the end of the first year.

Students not passing particular assessment during school year have to repeat it before doing the exam.

At the end of the first year there is a written examination, lasting two school hours, with five descriptive questions and five schemes (illustrations), which cover mostly topographic anatomy.

Positively written exam (the overall pass mark 50%) is followed by oral examination, lasting half an hour, consisting of questions of descriptive and topographic anatomy. Final mark (6 - 10) depend on knowledge exhibited at both written and oral examination.

For those students who fell the exam already twice an external examiner is conducted to ensure that they are not unfairly treated.

7. Strengths

Project work.

- Quality and representative prosected specimens.
- Work in small groups, so that students can get immediate and continuous feedback on the quality of their learning and have opportunities to remedy deficiencies.
- Drawing schemes at classes, enabling understanding of regional anatomy.

8. Weaknesses

- Not sufficiently clinically oriented anatomy.
- In subsequent years of study anatomy is not integrated in clinical course or practice.

9. Innovations and Best Practices

- Introducing cross sectional specimens.
- Access (every Friday morning) to material (bones, models, charts and cross sectional specimens) enable students to strengthen and revise their knowledge.

10. Plans for Future Changes

It is intended to expand the range of dissected specimens and to include sections in sagittal and frontal planes to stimulate students as much as possible to think in terms of three dimensional anatomy, to introduce clinical applied anatomy related as much as possible to understanding of function and diseases.

VISITORS' COMMENTS

Although there are common courses for medical and stomatological students, the course for stomatologists is shorter. There is an opportunity for students to electively perform head and neck dissections at the end of the second term.

Anatomy is taught by a member of staff who is a Stomatologist which constitutes a great advantage for students of stomatology. The extensive course was justified by the staff because of the nature of later courses, such as that in Internal Medicine.

The visitors felt that a course in applied surgical anatomy would be a useful innovation. The Visitors also encourage the department to pursue better horizontal integration of the Preclinical Sciences and Vertical Integration with the Clinical Sciences.

6.2 PHYSIOLOGY

Name: Prof. Vito Starc, M.D., Ph.D., Prof. Martin Štrucl, M.D., Ph.D.

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1. Introduction

The physiology course is run in the second year of dental and medical undergraduate curriculum to instruct students to understand human body function on the basis of biophysical, biochemical and morphological concepts and principles from the molecular to the organ level, basically achieved in the first year courses. The physiology constitutes the major component for the student in the second year. About a half of the course is devoted to lectures and another half to laboratory work, consisting of non-invasive measurements of physiological functions, data analysis and interpretation and partly computer simulations. Besides of the compulsory part the course also includes elective (optional) courses and seminars on more specialised, focused themes.

2. Primary Aims

To provide students with a thorough knowledge, skills and attitude to understand the integrative function of tissue organs and organ system, to understand the relationship between morphological structures and function, to improve their capacities to solve problems, to prepare the student to further pathophysiological and clinical courses as well as to self education.

3. Main Objectives

At the end of the courses the student should have:

- Critical reasoning on measurement methods and measurement problems in physiology /medicine.

- A knowledge of homeostatic regulation systems and of cellular membranes and transmembrane transport mechanisms.

- Some understanding of the physiology of excitable cells and membrane potentials and a knowledge of contractile mechanism of muscle cells.

- A knowledge of cardiovascular system, respiratory system and kidneys with special emphasis on regulation of heart beat, haemodynamics, control of breathing, body fluids and regulation of acid-base balance.

- A knowledge of the somatic and vegetative nervous system: the physiology of peripheral and central neurone, synaptic transmission, sensory and motor systems, an outline of cerebral cortex and higher functions of the nervous system.

- A knowledge of gastrointestinal system functions, metabolism and nutrition, with emphasis on salivation, swallowing and mastication.

- A knowledge of endocrine system with emphasis on regulation of calcium and phosphate metabolism.

8. The ability to explain and discuss experimental results from laboratory work in terms of physiological principles.

4. Hours in the Curriculum

The course involves 120 hours of lectures (120 hours contact teaching lectures time) and 120 hours of practical work. The practical results have to be written up and discussed. Elective courses involve 30 hours, partly lectures and partly seminars.

5. Method of Learning/Teaching

The lecture course is the primary mode of teaching, and is supported by the practical course. The latter is composed of twelve exercise modules, covering main physiological topics. Twenty students do the same practical together, assisted by an assistant professor. The course is examined by three in-course assessments, mainly in multiple choice form. The averaged score more than 50 % must be achieved (with no test score under 30 %) to be allowed to do the final exam. Students who do not perform well during the year are given the opportunity to improve before each final examination, during which student are required to answer 100 multiple choice questions covering all topics. If the test score above 50 % is achieved, each student is allowed to do oral examination for his final mark.

6. Assessment Methods

7. Strengths

The course is traditional medical rather than dental physiology course. In this sense it covers rather extensively all functions of the body. In holistic aspect of integral body function this is certainly an advance over the reduced dental course. In last part the course is separated to give the dental students more relevant topics on physiology of oral cavity and calcium metabolism. The emphasis on practical laboratory work, in spite of ongoing financial and organisation problems, should be considered as a strength.

8. Weaknesses

The overall score in physiological exams is relatively low, most likely due to the uncoordinated practical and theoretical course and insufficient knowledge reinforcement opportunities. In spite of prescribed international textbooks (mostly in English language) there is a need of home made condensed syllabus covering all lectures.

The success in in-course assessments with appropriate bonus should be included in final mark to motivate the students.

9. Innovations and Best Practices

1. The development and use of computer programmes to simulate physiological processes and concepts.

2. The elective course are proven to be most successful when combining physiological concepts with real problems of environmental physiology (i.e. diving courses, selected clinical problems)

10. Plans for Future Changes

1. The reorganisation is going on towards the intensified practical laboratory work with smaller group of students.
2. The efforts are made to modernise practice work with new equipment.

VISITORS' COMMENTS

This is an extensive course common to medical and stomatological students, except for the final month where topics of particular relevance to stomatologists are introduced. The staff reported that the students are overloaded in second year and that this affects their final examination performance. Later discussions with the students confirmed this opinion.

Lecture attendance is poor (approximately 50 per cent) and the staff and students would prefer to introduce a more problem based approach.

Interactive computer programmes are used to teach neurophysiology and some cardiovascular topics. The department has developed some of its own programmes and there are 6 PCs in the Department to enable this form of learning.

There is no formal mechanism for discussion with Division of Stomatology staff over course content and the visitors would recommend that such meetings should be instituted.

6.3 HISTOLOGY AND EMBRYOLOGY

Name: Assoc. Prof. Rudder Zorc-Pleskovi, D.M.D., Ph.D.

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1. Introduction

The previous knowledge of biology of cell and microscopy techniques is required for the study of histology and embryology for the students of stomatology. At our institute they are acquainted with the complex analysis of human histology for the first time.

In the second semester the students get the knowledge of general histology, which is needed for the comprehension of special human histology in the third semester. Together with some clinicians we emphasise the importance of histology in the diagnostics of different disorders as well as for the treatment of the patients.

2. Primary Aims

- a. To acquaint the students with the basic facts, terminology, methods and theories used in the field of histology and embryology.
- b. To present the basic knowledge of the microscopy to the students by describing and analysing the microscopic picture.
- c. To show the way for searching literature data and other sources of information
- d. To use the basic knowledge of histology and embryology for the solution of medical problems.

3. Main Objectives

The students are required to have an appropriate understanding and knowledge of special and general histology and embryology.

4. Hours in the Curriculum

in the 2nd semester/first year.	Total hours:	60	Lectures:	15
Seminars:	15	Practical:	30	Extra curriculum:

3rd semester/second year	Total hours:	75	Lectures:	15	Seminars:
15	Practical:	30	Extra curriculum:	15	

5. Method of Learning/Teaching

The lectures of general and special histology are held in the modern lecture-hall and each student has his own microscope and the collection of 175 slides.

The subject of histology is divided into lectures (2 hours per week), seminars (1 hour per week) and practically (2 hours per week). During that period the students achieve theoretical knowledge of histology and embryology. The assistants are present at practice work in the group of 12 students and all the problems are discussed over . Large videomonitors are used for the demonstration of the slides which can be

always seen on the individual microscopes in front of them.

The lectures are held in the main hall at Medical faculty, Korytkova 2, Ljubljana, from 11 am to 1 pm on Monday and from 1 pm to 2 pm on Tuesday.

The practice work is held at the Institute of histology and embryology, Medical faculty, Korytkova 2, Ljubljana, every day from 8 am to 12 am in the groups.

The seminars are held at the Institute of histology and embryology, Medical faculty, Korytkova 2, Ljubljana, each day from 8 am to 12 am. Students get the time-table at the beginning of each semester.

6. Assessment Methods

Students have to pass 3 tests each year, and every test is divided into 2 parts (30 theoretical questions and 30 slides - multiple choice questions).

Each year there are 5 exam periods (in January, March, June, September, November). The exact time of exams is determined in agreement with Institutes of anatomy, physiology and biochemistry.

The marks: Students pass the exam if their marks are from 6-10. For the positive mark they have to achieve more than 60% of the points. The results of the exams are announced on the blackboard within 24 hours.

Application for the exam: From 18th to 25th in the month before the exam

Cancellation of the exam: At the Institute of histology and embryology, Medical faculty, Korytkova 2, Ljubljana.

The attendance at the practice work: They are compulsory. The practice work is not repeated. The students have some extra microscopy time for those who want to compensate with the help of our assistants the practice work when they were absent.

The student must be prepared in advance for the practice work. The knowledge for the practice work can be achieved at the seminars and from some books: 3 Slovene books (The histology and embryology, written by Prof. Kališnik, The practicals, written by Prof. Kaališnik and Prof. Vraspir-Porenta as well as The practicals, written by Prof. Zorc-Ples, Prof. Vraspir-Porenta and Prof. Wíblar-Martinũĩ and 3 English books: Histology, text and atlas, written by Michael H. Ross, Basic Histology, written by Luis Carlos Junquiera and Human Embryology, written by William J Larsen.

7. Strengths

To reach better motivation the students should work in the smaller groups, possibly in the group of 6 students. In this way the students should get immediate and continuous feedback on the quality of their learning and have the opportunities cover up the deficiencies.

8. Weaknesses

The lack of financial sources for the modern teaching equipment. We could introduce the problem based learning if more professional teachers were employed.

9. Innovations and Best Practices

Each student works on the individual set of slides (175), made from human material.

More hours for teaching embryology should be introduced in the combination with teratology.

10. Plans for Future Changes

Traditional study of histology and embryology should be substituted by problem-based-learning accompanied by the solution of clinical problems.

VISITORS' COMMENTS

This is a combined course for stomatological and medical students. The course concentrates on general histology and embryology. Oral histology is not covered in great depth in this course but is delivered later in a specific course within the Division of Stomatology. Embryology is covered in a sufficient level of detail to understand developmental defects of both the oral cavity and upper GIT and other systems.

6.4. BIOMEDICAL INFORMATION

Name: Assoc. Prof. Janez Stare, B.Sc., Ph.D.

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1. Introduction

The course of BIOMEDICAL INFORMATICS is divided in two parts, each taking one semester:

Scientific information with computer communications basics (SICC)

Introduction to biostatistics (BS)

2. Primary Aims

In the course of two semesters the following goals are achieved:

SICC: After the course the student should be able to independently use some tools for the information storage and retrieval in local and network environments. He or she should understand the functioning of health information systems supporting the research and clinical work.

BS: Students learn to use the most common univariate statistical techniques for data description and analysis. They get practical experience with sampling, randomising and planning experiments, and should be able to evaluate results of their research work.

3. Main Objectives

-To learn about the consequences of the information explosion and get acquainted with the classical and contemporary methods of information storage and retrieval, relational, bibliographic (Medline), and document databases, among them.

-To learn about the basics of the computer networks, including the security of information transfer.

-To hear about health information systems and decision support systems in medicine.

-To get practical experience with the most important concepts of scientific information and computer communications.

-To learn the principles of statistical hypotheses testing.

-To get practical experience with the most commonly used biostatistical methods .

-To learn basics of designing clinical experiments.

4. Hours in the Curriculum

Course duration: 2 semesters:

1. semester	lectures	15 hours per semester	1 hour per week
	sections	15 hours per semester	1 hour per week
2. semester	lectures	15 hours per semester	2 hours per week
	sections	15 hours per semester	1 hour per week

Place and time of lectures:

The Great lecture hall of the Medical Faculty.

1. semester - Friday 12 – 13 2. semester - Friday 8 - 10

Place and time of sections:

Computer lecture room of the Institute for Biomedical Informatics, the date and time depends on particular group, as a rule sections take place on Wednesday and Thursday.

5. Method of Learning/Teaching

Lectures and exercise sections.

6. Assessment Methods

Written test with the open-type questions for SICC and a written test with closed and open type questions for BS. Students must achieve more than 50% of the points on both tests in order to get a positive grade.

7. Strengths

By learning the basics of scientific information and biostatistics, students are, from the very beginning of their studies, capable of understanding the principles of scientific work and are able to acquire literature that they need for studies and for their own written works.

8. Weaknesses

Biostatistics is taught in the first year when the students are not aware of its usefulness in medical research.

9. Innovations and Best Practices

10. Plans for Future Changes

The scientific information and computer communications part of the curriculum for the course is being constantly upgraded as the software and hardware develops and new information services are coming into use, therefore no particular changes could be planned in advance.

The course of biostatistics is adapted to new versions of statistical software.

VISITORS' COMMENTS

The perceived lack of interactive programmes would seem to be a disadvantage for an institution that has a well developed course in Medical Informatics and Biostatistics.

We would reiterate the need for an increased number of PCs to be made available for the use of undergraduate students.

6.5. HISTORY OF MEDICINE AND STOMATOLOGY

Name: Assist. Zvonka Z. Slavec, M.D., M.Sc.

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1. Introduction

Development of medicine and stomatology through time is presented to students: from prehistoric times, antique medicine, medieval, Arabic, renaissance and first of all medicine after the age of enlightenment and in the 19th and 20th century. The stress is pointed to the last two centuries, especially to stomatology and to moral-ethical basis of medical occupation through space and time. Students are also acquainted with the development of medicine at Slovenians and our health institutions, education of professional staff, transfer of knowledge from world to Slovenia.

We teach them in the second semester.

2. Primary aims

We want to draw near the importance of the role of physicians and dentists through time and their work for patients. We want them to become deep-rooted in their profession, teach them about philosophical and scientific basis, tradition and acquaint them with people representing the turning points and achievements in the development of medicine and stomatology in the world and in Slovenia, as well as with the medical mission.

3. Main Objectives

- to acquaint the beginners with the history of their profession
- to present the historical relationship between medicine and stomatology through time
- to acquaint them with the medical tradition through time
- we want them to become inveterate as the members of the Slovenian stomatology chain
- to present them the historical development of stomatology round the world
- to present them the symbols of their profession, their origin
- to show the extremely fast progress of the profession as a result of strong interdisciplinary connection

4. Hours in the Curriculum

15 hours

5. Method of Learning/Teaching

Lectures, accompanied by video pictures, seminary work and visits of:

Institute for the History of Medicine, the very beginning of the Slovenian Health museumka(s Pharmaceutical Collection in the pharmaceutical factory Lek most interesting places in Ljubljana where curing in the past was performed, and teaching

of obstetrics, army surgery, surgery and medicine Slovenian Dental Collection in Celje older Slovenia. Slovenian pharmacy in the monastery of Olimje church at Sladka Gora with the richest votive medical paintings in Slovenia

6. Assessment Methods

It's a good idea to combine lecturing ex cathedra with different excursions. Students like

to visit important medical places, places where history of stomatology took place. They pay attention also to pharmaceutical background. So, the course tries to introduce the background and tradition of the whole medicine.

7. Strengths

On one hand the strength of the course of the History of Medicine and Stomatology lies in the fact that it appears at the very beginning of the study. This helps students to pick up quickly the philosophical background of their future profession, its tradition and help them understand their new mission.

8. Weakness

On the other hand there is also weakness of listening to our course at the beginning of the study. There are many terminological difficulties, sometimes a teacher is much limited by the lack of medical and stomatological knowledge of the students. So lectures have to be simplified, otherwise students would(t understand them! They hardly follow lectures on the philosophy of medical science due to the above mentioned reasons.

9. Innovations and Best Practices

- to motivate students for more independent work
- to make them interested in finding out the history of their profession where they live
- to make them feel being a part of the national stomatological association and to participate as colleagues there
- to be aware of the importance of their professional background.

10. Plans for Future Changes

We would appreciate to teach our course later in the curriculum, counting on more medical and stomatological background knowledge.

VISITORS' COMMENTS

The visitors were very interested and impressed by the concept of a separate course for Stomatology students dealing with the history, philosophy and scientific basis of the profession. The course also discusses alternative medicine and the concept of holistic treatment.

Section 7

Para-Clinical Sciences

VISITORS' COMMENTS

As a general comment, the visitors would suggest that more regular discussions between paraclinical scientists and clinicians would be desirable to facilitate curriculum change and development and to ensure that relevant topics are covered.

Staff commented that students may be overburdened in third year.

Staff were also of the opinion that better vertical and horizontal integration of these topics would be desirable and the visitors would commend such an approach, recognising that a fundamental review of the curriculum would be necessary for this to be possible.

7.1 PATHOPHYSIOLOGY

Name: Prof. Janez Sketelj, M.D., Ph.D.

1. Introduction

The pathophysiology course is taught in both semesters of the 3rd year of study. It is positioned between pre-clinical and clinical courses and provides students with understanding of the

mechanisms of dysfunction's, diseases and basic principles of their management. The students which enter the course have completed the courses in Physiology and Biochemistry which provide basic knowledge for the course of Pathophysiology.

2. Primary Aims

a) to provide students with understanding of the mechanisms of general pathologic processes and systemic dysfunctions which occur also in, or are of importance to, oral pathology and contribute to the professional build-up of a future dentist (e.g. inflammation, edema, cancer, pain, bleeding, disorder, hypotension etc.);

b) to give the knowledge about the pathophysiological basis of important metabolic and organ system diseases in order to prepare the future dentists for their work on people with other organ diseases, to make them understand possible repercussions of their illness on oral pathology and vice versa, and to given them the basis for communication with medical doctors for the benefit of their common patients.

3. Main Objectives

Pathophysiology of:

a) systemic and metabolic disorders, general pathophysiology (Disorders of body

fluids, Starvation, Diabetes, Hyperthermia, Adaptation to stress and heavy injury, Disorders of pH regulation, Inflammation, Cancerogenesis and biology of cancer cell. Cell death, Free radicals).

b) Renal disorders (Chronic renal failure)

c) Respiratory diseases (Hypoxia, Cyanosis, Respiratory failure, Asthma, Cough and Dispnoea)

d) Blood and cardiovascular diseases (Bleeding disorders, Thrombosis, Arteriosclerosis, hypertension, Heart failure, Haemorrhage and shock, Orthostatic hypotension and vasovagal syncope);

e) Gastrointestinal and hepatic disorders (Ulcer disease, Vomiting, Constipation and diarrhoea, Malabsorption, Hepatic biotransformations of drugs and hepatotoxicity, Hepatic failure, Jaundice, Cirrhosis. Ascites, Alcohol abuse)

f) Disorders of the nervous system (Neuromuscular transmission dysfunction, Pain, Unconsciousness, Headache, Psychosomatic diseases, Parkinson's disease, Alzheimer's disease, Disorders of locomotion)

g) Disorders due to physical agents (Burns, Radiation disease, Electric injury)

4. Hours in the Curriculum

The course involves 45 hours of lectures, 30 hours of seminars with tutorials, and 60 hours of practical (in small groups). Active participation as practical and seminars is obligatory.

5. Method of Learning/Teaching

An overview of individual topics of the course is given in lectures. A systemic approach is used and examples of problem solving are given. In practical, an experiment involving a pathological problem is used as a means to develop the pathophysiological way of thinking (causal, mechanism oriented, relying on basic sciences). They are focused on an important clinical and pathophysiological problems, take place in small groups, and provide ample time for individual discussions between students and teachers. The students who had to study the prescribed literature before the practical are asked to elaborate on explanations of presented experiments and seek correlation's with related human disorders. Seminars stimulate students for active learning in a self-teaching situation under tutorial guidance of a supervisor, and provide a team work experience. They result in preparation of a written essay, and involve public presentation and defence of the work by students.

6. Assessment Methods

There is a short multiple choice question test after each practical, and another similar test in the middle of the semester, to check the acquired knowledge during that part of the course, and to stimulate permanent study. Students must acquire at least 50% of total possible score in order to be allowed to take the exam at the end of the course. The exam is written (30 multiple choice questions) and oral.

7. Strengths

- the course stimulates causal thinking of students about the mechanisms of the disease;
- it bridges the pre-clinical and clinical knowledge and integrates them;

- the course enforces active student learning and is largely organised as a small group teaching for better efficiency;
- it gives to dentistry students the feeling of unity of human body in health and disease and broadens their perspective in regard to their future function as a health oriented professional

8. Weaknesses

- motivation of students is not fully exploited, possibly because of too theoretical approach, constant increase of knowledge, and insufficient problem orientation;
- we feel that in some parts of the course topics more relevant for dentistry are not represented in sufficient extent;
- students with unfinished obligations of the previous year are not engaged enough in the activities of the course because of lack of time and interest.

9. Innovations and Best Practices

- integration of basic physiological and biochemical knowledge with clinical perspective is favoured throughout the course;
- intensive and individualised discussions at practical give opportunity for reinforcement of scientific, causal way of thinking about the clinical problems.

10. Plans for Future Changes

We plan to change the seminars to be more focused on problems and build the explanations around them (in spite of loosing some advantages of the systematic approach) in orders to attract more attention by the students. Contents of the curriculum and put a little bit more emphasise on topics specifically related to the work of future dentists but without loosing the idea of general unity of human body.

VISITORS' COMMENTS

This course teaches the functional approach to disease processes. There are separate courses for medical and stomatological students. That for the stomatological students is a shorter course introduced 15 years ago. Some interactive computer simulations of clinical conditions are used in teaching.

7.2 PHARMACOLOGY

Name: Assoc. Prof. Lovro Stanovnik, M.D., Ph.D., Assoc.Prof. Tatjana Irman-Florjanc, M.D., Ph.D.

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1. Introduction

Pharmacology course for dental students is given in their third year of their curriculum on the Faculty of Medicine. It is comprised of lectures, practical class, including laboratory work, and learning of prescription writing for drugs commonly used in clinical practice, and tutorials. After the course the students must show an appropriate understanding of pharmacology and therapeutics

2. Primary Aims

-To provide students with pharmacological knowledge which will aid students to develop safe and effective drug use in dental practice:

- To provide an understanding of principles of drug action
- To provide an understanding of pharmacokinetic principles (ADME).
- To provide an understanding of the routes of administration, mode of drug action, potential side effects, adverse reactions, drug interactions, the use of drugs and precautions with extreme age groups and their use in lactation and pregnancy.
- To provide the knowledge of prescription writing for drugs commonly used in clinical practice.

3. Main Objectives

On completion of the formal teaching and prescribed reading, students will be able to:

- describe methods of drug absorption, distribution, metabolism and excretion;
- describe the principles of drug action;
- describe the mechanisms of action, metabolism, therapeutic uses and side effects of major groups of therapeutic agents;
- describe the precautions in prescribing drugs for pregnant and lactating women
- describe the precautions in prescribing drugs for patients particularly susceptible because of their age or a prevailing medical condition.
- correctly write a prescriptions for a dental patient

4. Hours in the Curriculum

Lectures: 60 hours (2 hours weekly) Tutorials: 15 hours (1 hour weekly in winter semester) Practical class: 30 hours (2 hours weekly in winter semester) Practical class (in the laboratory): 30 hours (2 hours weekly in summer semester)

5. Method of Learning/Teaching

Students learn pharmacology in traditional lectures (in general pharmacology and selected topics in systemic pharmacology), in tutorials and in individual study (pharmacology textbooks). The practical session is used to introduce the concepts of

prescription writing, laboratory work is used to introduce the concepts of drug action, evaluation of drug effects and analysis of data derived from such trials.

6. Assessment Methods

The knowledge of students is assessed during the school year and with a final examinations. The tests are conducted at the end of each class work period and tutorials and deal with subjects of the respective block. The final assessment has two components: a written examination (2 hours duration) and an oral examination. The written examination is divided into two sections: prescription writing (6 given examples) and questions from the knowledge of pharmacology (10 questions). Each question gets 1 mark. Students who have passed written examination (> 60% at each component) are invited to the oral examination.

7. Strengths

The course is provided for Dental students by the members of academic staff who are experts in their field. This programme is supplemented by traditional lectures in general pharmacology and some selected topics in systemic pharmacology.

8. Weaknesses

The pharmacology teaching occurs in year 3 when full integration with topics in medicine and clinical practice, which are taught in year 4 and later, is not possible.

9. Innovation and Best Practices

During tutorials, the elements of problem based learning (PBL) were successfully introduced; in this type of teaching, the motivation of students is extremely important and it is more easily achieved than with classical forms of teaching.

10. Plans for Future Changes

To introduce more PBL programme. The success of this depends on small group discussions, which require more space and more teachers. It also requires the availability of adequate library, audio-visual and internet facilities, all of which require financial resources. The problems and assessment methods must be continuously reviewed and facilities provided for teachers to continuously update themselves and attend workshops wherever possible.

VISITORS' COMMENTS

The visitors were informed by the staff that the standard of knowledge of the stomatological students is slightly lower than that of medical students. The subject is taught in third year but the examination does not have to be passed until the end of fourth year. Attendance at lectures is very poor which calls into question the value of this type of teaching. Small group sessions however are compulsory. Lectures are generic but more stomatological material is presented in small group sessions. The course concentrates on pharmacology with very little therapeutics. The staff would like to co-operate with clinicians to provide such teaching at a later stage of the Stomatological course. The staff would also prefer for pharmacology to be taught in fourth year when the relevance to clinical problems would be clearer to the students.

7.3 MICROBIOLOGY AND IMMUNOLOGY

Name: Prof. Marija Gubina, M.D., Ph.D.,
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1. Introduction

The students get acquainted with microbes of the normal flora and mechanisms involved in pathology phenomena in specific places. Microbes, which cause infections in mucosa, in sterile liquids and infections in the specific anatomical areas will be discussed. The agents of disease common to humans and their immunological responses will be presented. The significance of representative infectious sample taking will be demonstrated. The various groups of antibiotics and methods of determining the sensitivity on antibiotics will also be presented.

2. Primary Aims

Knowledge of cell biology, physiology of microbes and their pathogenesis.

The subject matter is medicinal and practical oriented.

Cross-infection control is specially stressed.

3. Main Objectives

- Structure of bacteria, pathogenesis of microbial disease
- Diagnostic microbiology
- Normal flora of human body and normal oral flora
- Bacteria of relevance to dentistry: aerobes, anaerobes
- Viruses relevant to dentistry: DNA viruses, RNA viruses,
- Basic immunology: the immune system, the immune response, immunity and infection
- Infection of relevance to dentistry: viral hepatitis, HIV
- Skin and wound infection, Infections of soft and solid tissues
- Bacterial infections of respiratory organs, gastrointestinal tract, genitourinary tract
- Fungi and parasites of relevance to dentistry
- Biofilm, problem of implants, opportunistic infections
- Oral microbiology: dental care, periodontal disease, and dentoalveolar infection
- Antibiotics; functioning and mechanisms of bacterial defence against antibiotics

4. Hours in the Curriculum

The microbiology and immunology comprehends course of 90 hours, which take place in the 2. Year: in the third semester there are 60 hours of tutorials and 15 hours of practical work in laboratory and in the fourth semester 15 hours of tutorials, 15 hours of practical work in laboratory and 15 hours of optional subject: Prevention of nosocomial infections.

5. Method of Learning / Teaching

The subject is divided into 3 parts. At the end of each there is a final written examination.

- a. Bacteria relevant for dentistry and diagnostic methods. Written test.
- b. Immune system, immune response, vaccination, viral structure, DNA viruses, RNA viruses, pathogenesis of viral infection. Written test

Infections relevant to dentistry: normal flora, fungi relevance to oral health, infections of skin and wounds, CSF, sepsis, GIT, GUT. Selected subject from parasitology, cross infection and control: sterilisation and disinfection. Infection control procedures. Written test.

6. Assessment Methods

Students are assessed after each part. Each of 3 written tests consists of 5-10 questions of short essay type. The average of all 3 written tests represents the final assess, but to get better mark the oral examination is performed. The assessment of the practical laboratory exercises is based on PBL tutorials.

7. Strengths

The basic aim of teaching the subject is to get the students acquainted with basic terminology of microbes and to give them the basic knowledge of specific significance of micro-organisms in oral cavity. With the reformation of the subject into 3 parts with 3 separate written exams, we attracted the student's attention and got the permanent contact with students. While there are only 30-40 students in a class, we can have good overview of their attendance and they accept the supervision positively. PBL is in introduction.

8. Weaknesses

Introduction of rather a lot of new words (names of microbes), theoretical marks and understanding of the specific mechanisms are difficult at the beginning. So, we have started with an active participation in PBL tutorials, but we have a specific difficulty: nobody of our teachers of Microbiology and Immunology has a diploma of undergraduate dentistry. So, the PBL is not oriented particularly just on oral cavity, but more generally.

9. Innovations and Best Practices

In the period of the last two years, we have re-formed the subject (the subject is divided into 3 parts with 3 separate written exams). The new mode of examination attracted student's attention, which results in permanent contact with the subject and better final knowledge.

10. Plans for Future Changes

PBL will be introduced in 3 written tests. Final oral examination would be optional. We try to attract more dentistry students for students research projects.

VISITORS' COMMENTS

The course is shorter than that for medical students and concentrates on bacteria of importance to the mouth.

7.4 PREVENTION OF INFECTIONS IN DENTISTRY

(Elective Subject)

Name: Prof. Marija Gubina, M.D., Ph.D., Prof. Sre Gubina, M.D., Ph.D., Prof. Sreko Koren, M.D., Ph.D., Prof. Vladimir Kotnik, M.D., Ph.D.

1. Introduction

Students get acquainted with microbes the most frequently cause infections in dentistry. They get acquainted the risk factors and the methods for prevention, how to protect himself and the patients.

Quick diagnostic methods for infection revealing and the essential position of microbiological laboratories for supervision of infection prevention.

2. Primary Aims

Introduction cross infection control procedures practical techniques with Recommendations for practical work.

3. Main Objectives

- Transmission of infections
- Infections in concern in dentistry: AIDS, hepatitis B,C, CMV, and herpes simplex type 1.
- Objectives and strategy: critical, semi critical and non-critical items
- Patient screening,
- Staying healthy: immunisation, hand care, hand washing, hand disinfecting,
- Personal protection: gloves, masks, eye protection,
- Aseptic techniques,
- Disinfection and disinfectants in dentistry,
- Sterilisation and chemical solutions,
- Sterilisation of instruments, Dental equipment.

4. Hours in the Curriculum: 15 hours in 2 year

5. Method of Learning / Teaching

The subject of Prevention of infections in dentistry is functionally included in the obligatory course.

Assessment Methods

Three questions in the last written test at the main course: Microbiology and Immunology

Strengths

The subject of the course is finally recapitulated with 3 hours of discussion by diapositives.

8. Weaknesses

The course has to be on the program when students have some practical clinical experience and can accustom himself with practical problems. But, for presentation the basic microbiology and immunology we have not enough time. So we practice the combination – obligatory course and the selected course. The Course could be more practical.

9. Innovations and Best Practices

We bought the small autoclave "Sterimaster" that students may use it.

10. Plans for Future Changes: PBL will be introduced in 3 written tests.

VISITORS' COMMENTS

Currently, this is an elective course and deals with the problems of infection control. The visitors felt that it could, with advantage, be re-named as "Cross-infection Control in Dentistry" and that it should be made obligatory.

7.5 MEDICAL IMMUNOLOGY

(Elective Subject)

Name: Prof.Dr. Vladimir Kotnik

1. Introduction

Immunology is one of the most fascinating subjects interpreting how the human body distinguish between self and non-self. Importance of a basic and applied immunology knowledge for understanding clinical situations and to get the tools for helping physicians to choose the most appropriate tests in attempts to solve their diagnostic problems and dilemmas are discussed. The course is clinically oriented emphasising the co-operation between clinician and laboratory expert.

2. Primary Aims

- to give the students basic knowledge of anatomy and function of the immune system,
- to introduce the students to problems of the laboratory practice,
- to encourage the students to interpret the laboratory findings in connection with clinical findings.

3. Main Objectives

- haemopoetic organs and evolution of lymphoid cells
- classes and sub-classes of immunocompetent cells
- antigen – antibody reactions as a principle of the immune response
- co-operation between natural and acquired immunity
- cytokines - signalling molecules of the immune system
- cytotoxicity as the final event in the immune response
- Hypersensitivity as the another side of the immunity
- interpretation of immunity from the viewpoint of the dentist
- interpretation of immunity from the viewpoint of the otholaringologist
- interpretation of immunity from the viewpoint of the dermatologist
- interpretation of immunity from the viewpoint of the pathologist
- interventions in immunity dependent diseases.

4. Hours in the Curriculum

The Medical immunology course contents 15 hours: which take place in the 4th year of study.

5. Method of Learning / Teaching

The subject is presented by teachers who are experts in special fields of clinical science and immunology. Students are encouraged to discuss the problems presented in the lectures from their point of view and stage of knowledge. Seminars are optional. The presence at the lessons is monitored.

6. Assessment Methods

Positive note is: passed. Oral discussion of the immunological problem presented by the student himself, or a written test consisted of five questions is expected for the examination.

7. Strengths

At this time no back information is available.

8. Weaknesses

9. Innovations and Best Practices

Discussion in the classroom is anticipated.

10. Plans for Future Changes

To motivate the students to come into the laboratories and participate in the performance of laboratory tests and to co-operate in the interpretation of the results, similar as to be the physician involved in a treating the patient under the investigation.

VISITORS' COMMENTS

This too is an elective course. Again, the visitors consider that this very important course should be obligatory.

7.6 ORAL MICROBIOLOGY

Name: Prof. Marija Gubina, M.D., Ph.D.

1. Introduction

Many microbes from normal oral flora may cause infections in oral cavity and elsewhere. The agents of diseases in immunocompetent and immunodeficient patients and their consequences will be discussed. The significance of a representative sampling, interpretation and understanding of the microbiological results will be debated.

2. Primary Aims

Presentation of microbes and their pathogenesis essential for oral region

The subject is clinically oriented

Discussion of infections important to dentistry practice

3. Main Objectives

- Normal flora of human body and oral cavity
- Bacteria of relevance to dentistry: aerobes, anaerobes
- Viral infections of relevance to dentistry: herpes viruses, hepatitis viruses, HIV
- Pathogenesis of oral infections
- Focal and systemic infections and their consequences
- Hypersensitivity and its clinical considerations
- Oral microbiology: dental caries, periodontal disease, and dentoalveolar infections
- Sterilisation and disinfecting procedures in dentistry
- Prevention of infections in dentistry

4. Hours in the Curriculum

The Oral Microbiology course is comprised of 15 hours: which take place in the 4. Year.

5. Method of Learning / Teaching

The subject is presented by active collaboration with students. Students present seminars in written form, orally and at the end answer questions of lecturer and their colleges. The discussion supplemented by teacher's explanations and comments concludes the specific subjects. The presence of the students is monitored.

6. Assessment Methods

Positive note is: passed. Presentation of the seminar and the attendance of 80 % at the lectures is assessed as passed. It is also possible to pass by writing a test consisted of five questions.

7. Strengths

Students respond to the proposed type of lessons and supervision positively. They are enthusiastic to get the seminar work. The discussion after the presentation is good and the attendance at the presentation is 95 % in average.

8. Weaknesses

9. Innovation and Best Practices

Discussion in the classroom is permanently encouraged.

10. Plans for Future Changes

Seminars would be available for everybody and students have the possibility to look for the literature using the MEDLINE or world web.

11. Visitors Comments

7.7 GENERAL PATHOLOGY

1. Introduction

The Pathology Course is running in the 2nd semester of the second year and in the 1st semester of the third year as a separate Dental Course. The students attend basic pathology lectures in the first part of the course, and the organ systems pathology lectures including oral pathology, in the second part of the course.

Pathology is examined in the 2nd semester of the third year.

2. Primary Aims

- To provide an appropriate basis for understanding the mechanisms of diseases,
- covering tissue damage, inflammation and repair, hemodynamic disorders, immune processes, genetic diseases, neoplasia.
- To teach organ systems pathology, with special emphasis on Oral Pathology.

3. Main Objectives

- To teach how changes in the structure and function of organs relate to the clinical presentation and management of diseases.
- To define the basic characteristics of diseases (including etiology, pathogenesis, epidemiology, and morphology) of all organ systems with special emphasis on Oral Pathology (cysts of the oral region, odontogenic tumours, epithelial disorders, infections, immune mediated diseases, salivary gland diseases).

4. Hours in the Curriculum

90 hours (45 hours for general pathology, 33 hours for organ systems pathology and 12 hours for oral pathology) 15 hours optionally for autopsies

5. Method of Learning/Teaching

Lectures (2 or 3 hours per week), practical classes (2 hours of histopathology or gross pathology per week). The classes are held using multi-head microscope and individually (with supplied handouts the students to work their way through samples easily).

6. Assessment Methods

- 4 class examinations
- at the end of the course MCQ and oral examination

7. Strengths

Course is taught by experienced staff actively practising Oral Pathology and Surgical Pathology.

8. Weaknesses

- The Course is running in the 2nd semester of the second year and in the 1st semester of the third year.
- The Course is introduced too early for a productive link-up with clinical courses.
- Insufficient integration with Oral Surgery and Oral Medicine Teaching.
- Not enough hours for to Oral Pathology.

9. Innovations and Best Practices

- Recent review of entire Pathology Course with a group of qualified staff to examine and refine exactly what is relevant in this area to dental education.
- Practical course is designed to assist the theoretical course, with detailed handouts.

10. Plans for Future Changes

- The Course should run in the 3rd year.
- We plan to dedicate more hours to Oral Pathology (this year we will dedicate 23 instead of 13 to Oral Pathology).

VISITORS' COMMENTS

There is a separate course for stomatological students and it includes some oral pathology. The teaching staff expressed the view that better vertical integration with clinical courses is desirable.

Section 8

Human Diseases

VISITORS' COMMENTS

We were informed that this aspect of the course was set up some 30 years ago and that it has changed very little since that time. All staff were agreed that there should now be discussions with the Division of Stomatology with a view to revising the curriculum.

Both teaching staff and the students we met are supportive of the concept of the stomatologist as a physician and feel that it is important for stomatologists to have substantial knowledge of many of the disorders that are considered in these courses. The existence of these courses, some of which are very much more extensive than those commonly encountered elsewhere in Europe, are central to the arguments put forward in justification of the stomatological rather than the odontological approach to dental education. However, the visitors gained the impression from the staff teaching them that they are delivered at a lower level and are less comprehensive than would be appropriate for medical students. This would seem to undermine the arguments justifying their inclusion to the extent that they are. This in itself does not refute the concept of stomatology but it calls into question what is the precise justification for it.

8.1 GENERAL SURGERY

Name: Prof. Vladimir Smrkolj, M.D., Ph.D.

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1. Introduction

The surgery takes place in fourth year and consists of abdominal surgery, traumatology, plastic and reconstructive surgery, military surgery and general surgery

2. Primary Aims

The primary aims are to understand the surgical diseases, which might have impact on oral cavity health.

3. Main Objectives

- learn the theoretical basis of those branches of surgery for oral cavity and face
- to get knowledge of basic operative techniques
- to get knowledge of surgical materials used in oral surgery
- learn the wound healing
- learn the emergency situation in oral cavity
- surgical infections in oral cavity

4. Hours in Curriculum

50 hours in winter half and 30 hours in summer half

5. Method of Learning/Teaching

In the 4th year of study the course has the form of seminars in blocks, the most lectures have consultants and professors.

6. Assessment Methods

Students have the examination (writing MCQ with 30 questions) at the end of each block of lectures and the final exam (writing MCQ and oral exam).

7. Strengths

-We have a good teachers team and the best part is block with hours of aseptic technique, basic surgical technique, surgical materials, surgical infections

8. Weaknesses

-We haven't yet teaching in small groups, the practical work is minimal. The course has not any integration or co-operation with teaching maxillofacial surgery and oral surgery.

9. Innovations and Best Practices

The innovation in the past two year was teaching in blocks and assessment on the end of each block.

10. Plans for Future Changes

- teaching in small groups
- problem solving based teaching
- more practical work

VISITORS' COMMENTS

The teachers expressed the view that more directed teaching would be desirable and that the standard of knowledge demonstrated by stomatological students is lower than is desirable even though this level is already below that that would be expected of medical students.

8.2 ANAESTHESIOLOGY

Name: Prof. Aleksander Manohin, M.D., Ph.D.

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1. Introduction

Although in many departments some kinds of sedation (especially conscious sedation) are included in the teaching process at undergraduate level in stomatology, we do not include them; from our point of view it is namely professional not allowable. We mean that the teaching in regarding sedation should be included as a whole, so that the student can distinguish between different levels of sedation from conscious sedation to general anaesthesia, which can frequently occur completely unexpected. Furthermore the student has to know, how to maintain the selected level of sedation and how to prevent accidents as for instance the loss of conscious and breathing. Also the student has to be schooled in treating any complications, which may occur, even if there is not at hand a qualified specialist anaesthesiologist. (The teaching of sedation as only one of the procedures for achieving analgesia continues together with other subjects in education of anaesthesiology at least 1-2 year, so it is inappropriate to teach the sedation in courses of short duration only). We mean, that the student at undergraduate level should be theoretically and practically educated in basic life support, airway management, peripheral i.v. cannulation and defibrillation using a semiautomatic defibrillator. Especially should be emphasised some urgent cases in stomatology that can cause the respiratory and cardiac arrest.

2. Primary Aims

The primary aims of teaching are:

- to provide adequate knowledge in recognising and avoiding events causing respiratory and / or cardiac arrest,
- to ensure an acceptable level of resuscitative skills.

3. Main Objectives

- to recognise and eliminate warning signs and symptoms for respiratory and / or cardiac arrest,
- to check the level of unconscious,
- to check and maintain open airway with or without instruments (face-mask, laryngeal mask, nasopharyngeal and oropharyngeal airway),
- to check and maintain circulation (chest compression and semiautomatic defibrillator),
- to insert peripheral intravenous canulla and to administer intravenous infusion of crystalloids or colloids.

4. Hours in the Curriculum

The programme is divided into 2 parts.

Part 1 is organised in 1st school year with 4 hours of lectures on topics relating to

basic life support, followed by 6 hours of practical skills training in small groups of students (5-6).

Part 2 is organised in 6th school year with 1 hour of introductory lecture on topics relating to resuscitation equipment and to some urgent cases in stomatology that can cause the respiratory and cardiac arrest, and followed by 4 hours of practical skills training in greater groups of students (10-11).

5. Method of Learning / Teaching

The lectures are prepared as multimedia presentations with simultaneously demonstrations of procedures using the resuscitation mannequin.

The practical work in 1st school year includes a short repetition of basic life support procedures (including videotape), followed by practical sessions in placement of peripheral intravenous cannula on a model, basic life support procedures on a resuscitation mannequin, airway management (mouth-to-mouth and face-mask ventilation), and an oral test.

The practical work in 6th school year includes a short repetition of basic life support procedures, followed by practical sessions in placement of peripheral intravenous cannula on a model, basic life support procedures on a resuscitation mannequin, airway management on a model (mouth-to-mouth and face-mask ventilation, insertion of nasopharyngeal and oropharyngeal airway), defibrillation using a semiautomatic defibrillator on a model, and an oral test.

6. Assessment Methods

An oral test at the end of practical session and a competence final MCQ test in basic life support will be undertaken by each student. The MCQ test will be analysed by the aid of our own computer programme, so the teacher and student can check the correct answers and the answers of each student.

7. Strengths

The strengths are:

- the lectures are prepared as multimedia presentations with simultaneously demonstrations of procedures using resuscitation mannequin,
- the practical sessions are organised in small groups of students with checking of acquired knowledge immediately after the session and also with the final test.

8. Weaknesses

The basic medical knowledge of the students of stomatology is unfortunately not comparable with the knowledge of medical students, so it is not possible to teach them in a similar way - the level has to be adjusted, some basic principles should be added.

9. Innovations and Best Practices

Innovation is the programme introduced in the last school year. This allows the students to build on the knowledge they have already gained in biology, physiology, anatomy, pharmacology. In addition, students may be expected to have attained a reasonable degree of clinical maturity at this stage.

10. Plans for Future Changes

In the future we wish to organise postgraduate resuscitation refresher courses, and postgraduate courses regarding sedation, including the matter as a whole and not as small courses.

VISITORS' COMMENTS

There is no programme relating to general anaesthesia or sedation. The course is more orientated towards basic life support and the management of medical emergencies in dental practice.

There is no support for the concept of teaching conscious sedation techniques to stomatological students because it is felt that their basic knowledge is not at present adequate to ensure patient safety. The responsible staff feel that the students would require a specific course of 1-2 years duration and that this should be provided at postgraduate level. The visitors consider this to be a deficiency in the course, especially since there is such a heavy emphasis in the Human Disease course on aspects of patient care that appear less relevant to the practice of stomatology, for example gynaecology and military surgery, and also because this would seem to be out of step with general trends in dental education within Europe.

8.3. GENERAL (INTERNAL) MEDICINE

Name: Asist. Prof. Dušan Andoljšek, M.D., Ph.D.

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1. Introduction

Internal medicine and clinical examination is taught in the third year, both in winter and summer semester.

The continuing of medical studies is conditioned upon successful completion of the examination in the subject.

Students get acquainted with the problems related to internal diseases which they are likely to encounter during their professional practice later on. Further, they gain knowledge and experience related to clinical examination of the patient.

2. Primary Aims

- achieving understanding of and knowledge on most common internal diseases, which is an indispensable requirement for stomatologists' adequate and secure treatment of their patients,

- getting acquainted with the method of recognising symptoms and signs of a disease through a conversation with the patient (anamnesis) as well as the methods of clinical investigation,

- getting acquainted with the principles of the diagnostic procedure.

3. Main Objectives

- to understand the essence of diagnostic procedure: the value of a conversation with a patient with stomatological problems (that will be later on treated by another specialist the patient will be advised to visit), and recognition of signs of a disease through clinical investigation,

- to get acquainted with most common types of anaemia; symptoms and signs of acute, chronic leukaemia, and malignant lymphomas and the consequences thereof; the consequences of treatment with cytostatic drugs and X-ray; physiology and pathophysiology of haemostasis, von Willebrand(s disease and haemophilia; bleeding tendency caused by uraemia, liver cirrhosis, drugs and anticoagulation,

- to diagnose a heart disease patient, including urgency cases such as myocardial infarction, acute pulmonary edema, sudden death; to get acquainted with the valvular heart disease; prevention and treatment of bacterial endocarditis; to obtain reanimation skills,

- to get to know common lung diseases such as chronic obstructive lung disease, asthma, pneumonia's, cancer and the principles of their treatment,

- to get to know gastrointestinal diseases such as peptic ulcer, inflammatory diseases of gastrointestinal tract, cancer and being aware of the consequences thereof; acute virus hepatitis, liver cirrhosis and the prevention of infections therewith,

- knowing the symptoms and signs of renal diseases and the problems related to acute and chronic renal failure,

- knowing the symptoms and signs of endocrine diseases, with special regard to diabetes mellitus and the principles of its treatment,

-getting to know the symptoms and signs of rheumatic diseases, with special regard to diseases affecting the facial area, mouth and the upper gastrointestinal tract.

4. Hours in the Curriculum

The lecturing encompasses the period of 105 hours or 30 weeks, accordingly. The fifteen (15) weeks of the winter semester contain 45 hours of propedeutics lecturing. In the 15 weeks of the summer semester there are 60 hours dedicated to lectures in internal medicine.

5. Method of Learning/Teaching

The lecturing in the winter semester takes place in small groups of 5-6 students, 3 hours per week alongside the patients' bed in hospital departments. Each group is taught by its own assistant professor. The groups are mixed, comprised of medical and dental students.

The aim of the work in direct contact with the patients is to obtain conversational skills required to set the patients' anamnesis, learn the method of clinical investigation, basic principles of diagnostic methods and get aware of the most common symptoms, signs, syndromes and their causes.

The summer semester curriculum comprises of 8 thematic scopes, giving information on most common diseases. The lecturing takes places 4 hours a week, in the form of seminars, discussions and (usual) lecturing. The activities take place in the main lecture room for all students simultaneously, the number of students in the group being large.

All the contents can be found in the 'Kocijani A, Mrevlje F eds. Internal Medicine. Ljubljana: EWO DZS, 1998.'

6. Assessment Methods

At the end of the winter semester the students are examined in the form of a colloquium, in written (with multiple choice questions) and oral form, by their assistant professor.

The final examination comprises of a theoretical and a practical part. The practical part is an investigation of a patient with a disease common in practice and the problems related to it, such as ischemic heart disease or valvular heart disease and anticoagulant treatment, liver cirrhosis, ITP, leukaemia and the problems related to cytostatics or X-ray treatment.

The theoretical part is oral, performed by a single examiner, the exam questions are covering all the areas of internal medicine.

7. Strengths

- The targets of the programme are well set,
- the lecturing is done by the assistant professors and professors of the Board for Internal Medicine,

- there is textbook available,
- almost half of the lecturing takes place alongside individual patients' beds in hospital departments,
- the programme is being currently adjusted to the needs of the teaching process.

8. Weakness

- The second scope of lecturing providing information on most common diseases, takes place in large groups of students due to the lack of teaching staff. The lecturing is done simultaneously for all students.
- Problem oriented approach in teaching is sometimes lacking.

9. Innovations and Best Practices

- The lecturing for both, medical and dental students, is performed by the same members of the teaching staff of the Board for Internal Medicine.
- The programme is problem oriented and is regularly being adjusted to the current needs of dental students.
- The lecturing takes place throughout all departments of of Klinini Center.

10. Plans for Future Changes

- Increase in the level of problem oriented teaching,
(written form of the theoretical part of the final examination comprising of freely chosen questions that have previously been published.

VISITORS' COMMENTS

The course would seem to be more than adequate. The students expressed the opinion that, since they were sitting the same examination as their medical student counterparts, they should have the same opportunity for clinical training.

8.4 INFECTIOUS DISEASES AND EPIDEMIOLOGY

Name: Assoc.Prof. Franjo Pikelj, M.D., Ph.D., Prof. Franc Strle, M.D., Ph.D.

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1. Introduction

The subject Infectious diseases and epidemiology for stomatology students is placed in the 6th and 7th semesters of undergraduate studies. It gives an overview of epidemiology of infectious diseases, the type and course of infections, relations between macro and micro organisms, characteristics of symptoms of clinically most important and most frequent infectious diseases, basic principles of medical treatment and the possibilities and methods of prevention of their spreading. Special emphasis is given to local and systemic infectious diseases of which the symptoms are manifested in the oral cavity, on the head and the neck, as well as to diseases of which the origin are often infections of the mouth and the pharynx.

2. Primary Aims

The primary aims of this course are the presentation of the fundamentals of epidemiological, pathophysiological and clinical characteristics of infectious diseases in otherwise healthy patients or immunodeficient patients and the acquisition of the necessary knowledge and skills for their prevention and treatment from the aspect of sound stomatological practices.

3. Main Objectives

The main topics of discussion enable the students to comprehend and acquire the basic knowledge of:

- etiopathogenesis of infectious diseases;
- pathophysiology of infectious diseases;
- bacterial inflammatory syndromes;
- major viral infectious diseases;
- infections of immunodeficient and HIV-infected patients;
- infections in artificial implant recipients;
- antibiotics, antiviral and antifungal drugs, their use and precautionary and therapeutical indications;
- hospital and outpatients' department hygiene.

4. Hours in the Curriculum

30 periods of lectures including a short presentation of a typical patient within the topical subject which should, if possible, accompany each lecture.

30 periods of clinical practical exercises during which 7th semester students independently examine the selected patients and present their findings to their tutors and colleagues at the seminar.

5. Method of Learning/Teaching

Lectures, presentations of typical patients, clinical practical exercises.

6. Assessment Methods

Checking of theoretical knowledge at oral examinations after the completed 7th semester.

7. Strengths

The strength of the course lies in the time co-ordination of lectures and practical exercises in one and the same institution (Clinic for infectious diseases and fever conditions).

8. Weaknesses

The weakness of the practical part of the course in the 7th semester represents its block organisation since students have no opportunity to get familiar with the patients' condition on the basis of the whole theoretically discussed subject in such a short period of time.

9. Innovations and Best Practices

Modernisation by means of sophisticated (electronic and pictorial) teaching aids, especially in dealing with the traditional infectious diseases in risk patients.

10. Plans for Future Changes

Adapting of the study program to the innovations and development of the line.

VISITORS' COMMENTS

This seems to be the part of the course in which cross-infection control, central to the practice of modern dentistry, is taught principally. The visitors were very concerned to note that this appears to be an elective course and would strongly urge that it be made a compulsory requirement.

The students' evaluation of the course is predominantly favourable.

8.5 DERMATOVENEROLOGY

Name: Assist. Tomaz Lunder, M.D., M.Sc.

E-mail: Tomaz.Lunder, M.D., M.Sc.

1. Introduction

Dermatovenereology for stomatologists is given in the 7th semester. The course gives a general overview of skin diseases and sexually transmitted diseases. Special attention is paid on disorders affecting the head, especially those related to oral cavity and stomatology.

2. Primary Aims

Primary aims of the course are to provide the student a basic knowledge of skin diseases and sexually transmitted diseases, and to familiarise the student with dermatovenereological conditions that might influence therapeutic approaches and/or decisions in stomatology.

3. Main Objectives

-To gain basic theoretical and practical knowledge on skin diseases and sexually transmitted diseases.

-To gain multidisciplinary knowledge to provide a comprehensive patient care in acute and chronic diseases of oral mucosa.

4. Hours in the Curriculum

30 hours lectures; 30 hours practical work (patients' demonstrations and examination of patients by the students, but students themselves do not treat patients)

5. Method of Learning/Teaching

Approximately half of the curriculum is spent in lectures, another half in practical work involving also the discussion of the examined patients by the students and the teacher.

6. Assessment Methods

The knowledge of the students is tested using an oral final examination. It consists of an assessment of skin and sexually transmitted diseases (examination of patients and/or photographs), as well as of theoretical questions.

7. Strengths

The teaching of dental students in dermatovenereology is separated from the training of medical students and is adapted to their overall training programme.

8. Weaknesses

The students are not equally motivated to participate in the course.

9. Innovations and Best Practices

A multimedia dermatology images database is prepared for presentation on WWW. It is aimed primarily for teaching purposes (i.e., study, self-testing of students, assessment tool).

10. Plans for Future Changes

See 9.

VISITORS' COMMENTS

This course concentrates on those conditions which might present in the mouth and the skin and genital tract and also on sexually transmitted diseases.

8.6 NEUROLOGY

Name: Prof. David B. Vodusek, M.D., Ph.D.

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1. Introduction

Neurology for stomatologists is given in the 7th semester.

The course concentrates on explaining how the neurological diagnosis is reached, and on the relevance of neuroanatomy and neurophysiology for understanding neurological dysfunction. It gives a general overview of neurological diseases. The course concentrates on conditions involving or affecting the head, and dysfunction related to oral cavity and stomatology. In particular, the pain syndromes involving the head, neuromuscular conditions affecting the face, mastication and swallowing, and generalised diseases with some sensory-motor dysfunction in the head region are concentrated upon.

2. Primary Aims

Primary aims of the course are to provide to the student a basic understanding of neuromuscular system function in health and disease, and to familiarise the student with neurological conditions that might influence therapeutic approaches and/or decisions in stomatology.

3. Main Objectives:

- a. Understand the function and dysfunction of cranial nerves,
- b. Understand the function and dysfunction of somatic somatosensory system,
- c. Understand function and dysfunction of muscle and lower motor neurone,
- d. Understand function and dysfunction of the upper motor neuron, and the extrapyramidal system.
- e. Gain basic knowledge of headaches and facial pain.
- f. Gain basic knowledge on syncope and neurological conditions with loss of consciousness including epilepsy.

4. Hours in the Curriculum

30 hours lectures; 15 hours practical work/seminars. Patients' demonstrations are included, but students themselves do not examine or treat patients. Each student has to prepare (take part in the preparation of) one neurological seminar.

5. Method of Learning/Teaching

Approximately half of the curriculum is spent in lectures and demonstration of patients. Approximately half is spent in critical evaluation of seminars, which are presented by the students and This course is designed specifically for stomatology students and deals with the applied physiology of pain, swallowing and associated disorders.

discussed by the students and the teacher.

6. Assessment Methods

The students are assessed twice:

their knowledge and proficiency in preparation of the seminar is assessed.

b) Finally their overall knowledge is tested (written exam).

7. Strengths

The course includes not only passive teaching with demonstrations but includes active involvement of students (in preparation of seminars).

8. Weaknesses

The students are not uniformly motivated to participate in the course.

9. Innovations and Best Practices

Introduction of teaching aids (electronic teaching material etc.) would be welcome.

10. Plans for Future Changes

See 9.

VISITORS' COMMENTS

This course is designed specifically for stomatological students and deals with the applied physiology of pain, swallowing and associated disorders.

8.7 PSYCHIATRY

Name: Assoc. Prof. Martina ZmucTomori, M.D., Ph.D.

E-mail: martina.tomori@guest.arnes.si

1. Introduction

The subject is taught in the 4th year of study. The curriculum focuses to their issues in the domain of mental disorders with special importance for stomatology.

2. Primary Aims

Primary aims of the study are to introduce the characteristics of normal and pathological mental functioning and to equip the students with knowledge in recognition, professional approach and basic treatment methods in work with the persons with mental disorders in stomatologic practice.

3. Main Objectives

-The main objectives of teaching:

-aetiology, simptomatology and clinical picture of the main groups of mental disorders

-basic diagnostic and treatment methods

-stress, reaction to pain, subjective experience of acute and chronic illness

-motivation of the patient for co-operation, anxiety, self-image

-crisis intervension methods

-specific psychological methods in stomatological practice

4. Hours of the Curriculum

30 hours of the curriculum: lectures on psychiatric theory and presentation of clinical cases

No personal treatment of the patients.

5. Method of Learning/Teaching

Theoretical issues are presented in lectures (with case presentations). Teaching is partially based on seminar work in small groups of students. Teachers encourage the students to develop their own initiative and independent attitudes to the treated knowledge.

6. Assessment Methods

Mode of assessment of the acquired knowledge: oral examination in the form of colloquium.

7. Strengths

The issues studied are tailored to the needs of stomatologist's practical work with patients. The study enables him/her with the skills and knowledge necessary in

preventing possible complications when implementing stomatological interventions in subjects with reactive, acute and/or chronic mental disorders.

8. Weaknesses

-The insufficient pre-existent expertise of the students in the normal mental functioning and in the elements of medical psychology (the subject is introduced not earlier than in the 6th year).

-too small number of the hours of the curriculum stress coping skills flexible approach to the individual emotional and behavioural response of the patient help in patient's coping with pain and anxiety motivation of the client for co-operation

9. Innovation and Best Practices

10. Plans for Future Changes

Plans for future changes: more practical training in motivational skills and in coping with adverse responses of the stomatological patient.

VISITORS' COMMENTS

The visitors felt that this was a very worthwhile course.

8.8 OPHTHALMOLOGY

Name: Assist. Prof. Marko Hawlina, M.D., Ph.D.

E-mail: marko.hawlina@mf.uni-lj.si

1. Introduction

Course gives an overview of clinical ophthalmology with emphasis to those diseases which may coincide with dental or paranasal pathology.

2. Primary aims:

- To teach the student rational approach to most common eye diseases and emergencies
- To teach the student to examine the eye

3. Main Objectives

Main objectives are to teach the student:

- To measure visual acuity and assess refraction
- To understand basic principles of corrective lenses
- To understand the mechanisms of ocular trauma
- To know the causes of most common surface infections-the red eye
- To know the possible mechanisms of ocular inflammation (including dental sources)
- To teach the student about most common causes of nontraumatic visual loss
- To give the student an overview of retinal diseases and symptoms with neurologic implications
- To give the student the overview of most common systemic diseases affecting the eye
- To give the student an overview of operative and conservative treatment of eye diseases

Hours in the Curriculum

Total 30 h (1 semester-half year): 15 hours of lectures, 15 hours of exercises with direct approach to the patients

5. Method of Learning/Teaching

Curriculum has two parts:

the first part is a set of interactive lectures with video cases and operations and photo documentation.

The second part is a set of practical exercises under supervision of the mentor, giving the students an opportunity to learn practical skills and see the typical ophthalmic pathology by examining the inpatients.

6. Assessment Methods

By oral examination. Students are given 5 theoretical questions.

7. Strengths

Excellent photo documentation and illustrative videos and computer assisted CD's . Well equipped examination room with possibility to project the bio-microscopical images of the examined eye on video screen thus enhancing the understanding of eye pathology without unnecessary strain to the patients.

8. Weaknesses

No major weaknesses

9. Innovations and Best Practices

Multimedia presentations

10. Plans for Future Changes

With moving to the new premises of University Eye Clinic, we are acquiring the most modern equipment and examination facilities.

VISITORS' COMMENTS

This course explores inter-related eye and oral conditions

8.9 ONCOLOGY AND RADIOTHERAPY

Name: Prof. Zvonimir Rudolf, M.D., Ph.D.

E-mail: zrudolf@onko-i.si

1. Introduction

Oncology and Radiotherapy for dental practitioners is taught in the 5th year at the Faculty of medicine. The students should have the basic knowledge of clinical medicine.

2. Primary Aims

In the clinical teaching, special emphasis is placed on epidemiology, prevention, early diagnosis, palliative treatment, psychological aspects of cancer treatment, practical skills and diagnostic procedures in order to provide the students with the basics in oncology.

3. Main Objectives

To understand the basic principles of multidisciplinary approach in cancer treatment

4. Hours in the Curriculum

Oncology and radiotherapy for dental practitioners is taught in winter term (1 term only), 1 hour per week (every Tuesday, 14:00 p.m. – 14:45 p.m.).

5. Method of Learning / Teaching

The didactic part of the Oncology and Radiotherapy is delivered by lectures on major fields of oncology.

6. Assessment Methods

The exams may be taken all the academic year round, i.e. from October to June, every Thursday, at 8:00 a.m. Maximum 4 students at a time may enrol for examination. The examination is oral without the presence of a patient.

7. Strengths

The subject is delivered by the lecturers who are all distinguished and highly skilled experts in the field, thus providing the students with detailed knowledge and the latest experiences.

8. Weaknesses

No practical training.

9. Innovations and Best Practices

10. Plans for Future Changes

Changing the concept of didactic work, from delivering lectures to seminar work.

VISITORS' COMMENTS

There was no opportunity to meet the staff involved in the teaching of this course.

8.10 PAEDIATRICS

Name: Prof. Ciril Kržišnik, M.D., Ph.D.

E-mail: ciril.krzisnik@kclj.si

1. Introduction

The Paediatrics for stomatologists is given in the 10th semester. Students learn about growth and development from the new-born to adolescent period, principles of nutrition requirements, nutritional disorders and vitamin deficiencies, allergy and immunology, haematological and nepotistic diseases, neonatology, cardiovascular disorders, respiratory and gastrointestinal disorders, endocrinopathies, neurological and neuromuscular diseases and principles of social, adolescent and preventive paediatrics.

2. Primary Aims

Primary aims of the course are to provide students a basic understanding of the normal development and the most common dysfunction's and diseases during different development periods in the childhood that might influence therapeutic approaches in the stomatology.

3. Main Objectives

- Gain the knowledge in basic history taking
- Performing basic physical examination of the child
- Formulating a working diagnosis
- Discussing additional investigations and differential diagnosis.

4. Hours in the Curriculum

One semester, 10 lectures in 2 hours sessions per week (Thursday 12.15 p.m. – 13.45 p.m.). Patients demonstration are included, but students do not examine or treat patients.

5. Method of Learning/Teaching

Lectures with case reports.

6. Assessment Methods

Oral exam at the end of semester.

7. Strengths

Students are actively involved in history taking, examination and formulating working diagnosis and therapeutic approaches during live case demonstrations and lectures.

8. Weaknesses

Only minority of students are motivated to active participate in the course.

9. Innovations and Best Practices

10. Plans for Future Changes

VISITORS' COMMENTS

This was one of the shorter courses but in the opinion of the visitors it is an aspect of general medical training which does deserve greater attention.

8.11 OTORHINOLARYNGOLOGY

Name: Prof. Lojze Šmid, M.D., Ph.D.

E-mail: lojze(mf.uni-lj.si)

1. Introduction

The course of otorhinolaryngology is given during the fifth year (9th semester) of study. It provides the student with basic examination skills and knowledge of the head and neck pathology.

2. Primary Aims

The primary aim of the otorhinolaryngology course is to acquaint the future dentist with basic principles of pathogenesis, detection, treatment and prevention of some common otorhinolaryngological diseases that he will occasionally have to deal with during his practice of dentistry.

3. Main Objectives

Our main objectives of the course in otorhinolaryngology are to teach the students to:

- be acquainted with basic anatomy and physiology in the head and neck region
- be familiar with head and neck physical examination,
- critically assess the disease and decide whether to treat it on their own or to refer the patient to a specialist,
- be capable to deal with urgent treatment procedures in the case of emergency,
- know the risk factors for head and neck cancer and to consider the possibility of early malignancy when appropriate,
- have a knowledge and understanding of hearing and speech disorders, especially those, related to dental pathology

4. Hours of the Curriculum

The course of otorhinolaryngology consists of fifteen lectures and 45 hours of practical training. The lectures take place through the whole semester, one each week. Practical part is concentrated into two weeks.

5. Method of Learning/Teaching

Lectures represent the theoretical part of the course. Students are acquainted with common ENT pathology and its treatment. Practical part takes place in groups of ten students, who are taught physical examination and are presented some representative patients.

6. Assessment Methods

The exam is oral only. It consists of assessment of student's examination skills and theoretical knowledge. In the first part, the student examines a patient and reports of his or her findings. After passing practical part, student is asked to answer three broad theoretical questions.

7. Strengths

Main strengths of the course are related to its practical part. Significant experience in recognition of pathological processes is gained through the presentations of patients. The students actively participate in this part of the course.

8. Weaknesses

In spite of carefully chosen topics of lectures (aimed at the future dentists) the students are too passive throughout the theoretical part of the course.

9. Innovations and Best Practices

10. Plans for Future Changes

Lectures could be partly replaced by a more active form of learning process - small groups of students, helped and supervised by their mentor, could be asked to prepare and present certain topics.

VISITORS' COMMENTS

The course focuses on malignant disease. In Slovenia, there is no sharp demarcation between the responsibilities of maxillo-facial surgeons and those in this speciality.

8.12 GYNAECOLOGY

Name: Assist. Borut Kobal, M.D., Ph.D.

E-mail: Borut.Kobal@guest.arnes.si

1. Introduction

Gynaecology & Obstetrics are taught separately in our curriculum. The theoretical part of this course is taught throughout the fifth year of the study via the lectures and practical training. This allows getting basic information about gynaecologic diseases as well as basic knowledge of pregnancy and parturition.

2. Primary Aims

-Develop in the students an understanding of gynaecologic diseases and normal and pathologic pregnancy and parturition that is required for a dental practitioner to safely care for patients.

-Enable the student to recognise the signs and symptoms of certain gynaecologic diseases ascertained in history taking from and observation of a dental patient and specifically to enable the student for proper management of a pregnant dental patient.

3. Main Objectives

-The main objectives of this course are to develop history taking, in our students so that they can recognise the connection between certain gynaecologic and dental diseases and pregnancy induced changes that might influence the dental treatment of their patients.

-They should be capable of taking a relevant reproductive history.

-Have a clear understanding of sexually transmitted diseases with possible manifestation in oral cavity.

-Be familiar with the common emergency gynaecologic conditions.

-Be familiar with common gynaecologic cancers their prevalence, signs and symptoms, possibilities for screening and early detection and treatment

-Understand the physiologic changes in pregnancy.

-Be familiar with pathologic conditions in pregnancy.

-Understand the limitations of diagnostic and therapeutic procedures in pregnancy.

-Recognise the signs of labour, have the knowledge of normal and abnormal labour.

-Understand the normal and pathologic puerperium and have the basic knowledge of lactation.

-Get the basic information in Human Genetics.

4. Hours in the Curriculum

15 hours of lectures and 5 hours of practical training in a delivery room for a student

5. Method of Learning/Teaching

The didactic part of the Obstetrics&Gynaecology course is delivered by lectures on major fields in Obstetrics & Gynaecology. The practical training consist of participation in the delivery room together with the tutor.

6. Assessment Methods

The Obstetrics&Gynaecology course is assessed by a test examination marked done or failed.

7. Strengths

The lectures are organised and delivered by the teachers who are the best experts in their field in Obstetrics & Gynaecology, thus providing students with best Ob/Gyn knowledge possible.

8. Weaknesses

-Because of the highly skilled teachers some lectures might be too subspecialistic, so the students lose the interest to communicate with the teacher about their implication into the field.

-Practical training in the delivery room depends on tutor's engagement.

-No practical training in gynaecologic emergency unit.

9. Innovations and Best Practices

-Practical training in a delivery room enables communication between the patient, tutor and student about normal and pathologic labour in the real time when the labour progresses.

-Close attachment of practical training to lectures makes the theoretical information more transparent.

10. Plans for Future Changes

Changing the concept of theoretical part from lectures to seminar work especially for the fields where Gynaecology&Obstetrics and Dental diseases meet together.

VISITORS' COMMENTS

The dental care of the pregnant patient was emphasised during this course.

Section 9

Orthodontics and Child Dental Health

9.1. ORTHODONTICS

Names: Prof. Francnik, D.M.D., Ph.D., Assist. Maja Ovsenik, D.M.D., M.SC., Assist. Martina Drevenšek, D.M.D.

E – mails: farcnikk@mf.uni-lj.si

1. Introduction

The department for orthodontics comprises orthodontics and dentofacial orthopaedics. A departmental Teaching Committee oversees the management of the courses. The pre-clinical phase begins in the second term of the fourth year together with the skills laboratory course, and then a structured introduction to the clinics beginning in the first term of the fifth year. Seminar instruction and clinical practice in orthodontics last until the summer term of the fifth year (18 months in total).

The course is fully described in the Departmental Course Handbook.

2. Primary Aims

The integrated nature of the course means that there are general aims and objectives, covering Orthodontics, Behavioural Science, Communication, Epidemiology and Statistics, and Dental Public Health teaching.

3. Main Objectives

The overall objectives of the course of orthodontics are to produce a graduate who:

- Understands normal patterns of growth and development, recognises deviations from the normal and knows how to manage them appropriately. Knows what are the most critical periods and where are the most critical localisations for the development of malocclusions.

- Can examine, diagnose, classify, plan treatment at all developmental stages of child (s dentition: deciduous, mixed and permanent. Has knowledge of the incidence and prevalence of malocclusions according to the national pathology.

- Is familiar with comprehensive orthodontic treatment of adult patients.

- Recognises basic diagnostic procedures in orthodontics:

- Study cast analyses

- Radiology diagnosis

- Photo analyses

- Cephalometric analyses

- Can use the occlusal indices in order to evaluate treatment priority, need for treatment and treatment outcome.

- Recognises stages of normal occlusal development and malocclusion,

- Provides the interceptive orthodontic treatment, removable appliances treatment (plates and functional appliances) as well as fixed orthodontic treatment.

- Recognise the need for the Interdisciplinary treatment planning with prosthodontist,

periodontist and maxillofacial surgeon.

4. Hours in the Curriculum

Lectures These start during the second term of the fourth year and continue to the end of the fifth year. Seminars These start during the first term of the fifth year.

Skills laboratory Laboratory teaching starts prior to clinic entry.

Clinic 2 hours per week for 18 months during the 4th and the 5th year in the Dental School. Undergraduates have an opportunity to observe higher specialist trainees working on clinics.

5. Method of Learning/Teaching

Lectures There are 16 introductory lectures of 45 minutes duration.

Seminars These are the principal method of student interaction. The lecture and seminar topics are all detailed in the departmental handbook which is available to all undergraduates in the library.

Skills Laboratory Traditional phantom head approach.

Clinical Instruction Chairside instruction in the clinical management of child and adult orthodontic patients. Three to four students attend at a chairside together with a teaching assistant.

6. Assessment Methods

Academic: Periodic class tests. These vary in format from multiple choice through short answer questions to essay questions.

Clinical: Each item of clinical work undertaken is recorded and simultaneously graded.

7. Strengths

- Pre – clinical seminars on topics presented at clinical demonstrations.
- Clinical cases - interdisciplinary approach.
- Sessions on the same patient treatment from the beginning to the end.
- Introduction of Problem Based Learning.

8. Weaknesses

- Small number of staff means difficulty in providing instruction or supervision of teaching process on pre – clinical and clinical grounds.
- Problem based learning.

9. Innovations and Best Practices

- Electronic capture of clinical activity
- Problem based learning
- Better planning of staff policy

10. Plans for Future Changes

VISITORS' COMMENTS

The students observe orthodontic treatments and take impressions, record jaw relationships and register occlusion. Growth and development is emphasised and cephalometric analyses are demonstrated. The aim is give students diagnostic skills but not treatment skills. Problem Based Learning has been introduced recently. The visitors considered that a move toward a more multi-disciplinary approach should be adopted.

9.2. CHILD DENTAL HEALTH

Name. Assist. Prof. Narcisa Košir, D.M.D., Ph.D.

E-mail: n.kosir@animus.mf.uni-lj.si

1. Introduction

The Department of Preventive and Paediatric Dentistry comprises Paediatric Dentistry, Oral Dental Health Care Education and Preventive Dentistry in Children and Adolescents. The pre-clinical teaching begins in the first term of fourth year with corresponding teaching how to approach the patient. The lectures and clinical practice continues until the end of second term of the fifth year.

2. Primary Aims

The student on graduation should be able to recognise and treat the oral health needs of the average child in a sympathetic and preventively oriented manner.

3. Main Objectives

Students should be able to:

- to understand the normal pattern of growth and development (physical, emotional, psychological, social and dental) and recognise deviations and their appropriate treatment,
- to develop young patients positive attitude to his/her oral health,
- to understand and have knowledge about epidemiology and etiopathogenesis of major oral disease and disorders in children,
- to have skills for clinical oral diagnosis and treatment of children,
- to co-operate with other specialities.

4. Hours in the Curriculum

Lectures last for 60 weeks/ 1hour per week. Clinical practice last for 60 weeks/2 hours per week.

5. Methods of Learning/Teaching

LECTURES: 15 introductory lectures of 45 minutes duration

SEMINARS: In the sixth year the principle method of student interaction is seminary work. All seminary work are completely printed and collected in the department.

CLINIC: Chair side instruction in the clinical management of child and youth is sometimes completed with slides or video projection with the commentary of the teaching assistant.

6. Assessment Methods

ACADEMIC: Periodic class tests - at the beginning and the end of the 4th year, and beginning of the 5th year.

CLINICAL: Clinical testing during clinical work in the 4th and 5th year.

7. Strengths

- Seminar on specific topics.
- Interdisciplinary approach of some clinical cases.
- Demonstration of handicapped child dental treatment under general anaesthesia.

8. Weaknesses

1. Need for more teaching assistants.
2. Difficulties in providing a new equipment.

9. Innovation and Best Practices

10. Plans for Future Changes

- Electronic evaluation of patient data.
- PBL to the all parts of the departmental teaching.

VISITORS' COMMENTS

The paediatric dentistry course has a preventively oriented approach to total care for the child. Many of the children have behavioural problems. Treatment is co-ordinated with the Orthodontic Department or with Orthodontists working in the community.

The supply of patients is not really adequate to satisfy the range of treatments required to ensure comprehensive training.

Patients with hypodontia are treated with a preventive approach and the restorative phase is dealt with when the child is older by the Prosthodontic Department.

It would be an advantage for conscious sedation techniques to be available for Paedodontic specialists and for undergraduates to be exposed as part of the educational process.

The Department is to be congratulated on setting up the special facility for providing dental care under general anaesthesia for "Special Needs" patients.

Better vertical integration within the curriculum would be an advantage and the staff would like to introduce prevention at a very early stage in the course.

No pre-clinical laboratory training is available in Paediatric Dentistry and the visitors would suggest that this be considered.

Practical skills are assessed by means of continuous observation of clinical performance but there are no formal assessments of practical competence. The range of practical procedures carried out by each student is recorded.

Developmental aspects are shared with the Department of Orthodontics.

Section 10

Public Dental Health and Prevention

10.1 SOCIAL MEDICINE

Name: Asist. Prof. Marjan Premik , D.M.D., Ph.D.

E-mail: marjan.premik@mf.uni-lj-si

1. Introduction

Knowledge of Public Dental Health and Prevention for students of stomatology is acquired within lectures of two subjects at the Faculty of Medicine in Ljubljana: Social medicine - Social environment and health (12th semester), and Hygiene - Physical environment and health (12th semester).

2. Primary Aims

- Understanding of interactions between environment and health of population, to be acquainted with methods of evaluation of health of population and risk factors;
- Preparation of Proposals for public health interventions and their evaluation.

3. Main Objectives

- Health Model - Ill Health Model,
- Major health problems (contagious and non-contiguous diseases, injuries, mental disorders),
- Determinants of health,
- Health care system, organisation of health care services, financial issues in the field of health care,
- Health research, with a special emphasise on demography and epidemiological methods,
- Health and dental health education,
- Oral health (goals, strategies, information system...).

4. Hours in the Curriculum

Social medicine - Social environment and health (60 hours of lectures, 15 hours of practice),

5. Method of Learning/Teaching:

Lectures, Seminars (prepared by students), Laboratory practice, fieldwork.

6. Assessment methods

Examination: essay type questions and oral examination; mark scale from 1 to 10.

7. Strengths

Preparation of students to work in different circumstances.

8. Weaknesses

Both subjects are lectured only in the 12th semester what is effectively too late: too much material at the end of the study when the majority of students are mentally and practically oriented towards clinical work.

9. Innovations and Best Practices

- Direct application of the existent health-information system (indicators...),
- Each student should carry out at least one health-educational lecture,
- Direct discussion with health insurance on funding health security,

10. Plans for Future Changes

Arrangement of Public Dental Health theory and practice over the entire study of stomatology course.

10.2 HYGIENE AND NUTRITION

Name: Prof.Drazigost Pokorn, M.D., Ph.D.

E - mail: Drazigost.Pokorn (mf.uni-lj.si

1. Introduction

Student learns to look at questions of healthy and unhealthy issues from ecological aspect, nutrition and becomes familiar with epidemiological nature of acute and chronic diseases.

2. Primary Aims

Purpose and aim of the study is due to width, variety and linkage of hygiene with hygiene of nutrition, the students needs to be widely informed and able to follow, define and research of natural and socio-economic environment of modern man.

3. Main Objectives

Students becomes aware of natural, working and living environment including influence of air, micro and macro climate, water, soil, waste, food, noise, radiation and other influences of environment on human's health. Students becomes aware of public, communal and personal hygiene, nutrition of healthy and ill person.

4. Hours in the Curriculum

The duration of study is one semester, 4 hours per week, lectures 3 hours and 1 hour of practice with the assistant.

Method of Learning/Teaching

Lectures, seminars and practices.

6. Assessment Methods

At the end the students pass a colloquium (for the practice), which is evaluated by assistant. Then they have a written examination with multiple choice questions.

7. Strengths

The lectures and workshops are organised and delivered by the professor, two assistant and external colleagues who are the best expert in their field in hygiene and nutrition.

8. Weaknesses

The institute should have minimum 3 professors and more assistants due to very wide field of hygiene and nutrition and better quality of lectures and practices.

The institute lacks modern laboratories and cabinets for practical lectures and workshops specially for nutritional field. Equipment is old and not modern.

9. Innovations and Best Practices

10. Plans for Future Changes

The subject Hygiene will be merged with social medicine in one single subject Public Health.

VISITORS' COMMENTS

There are two courses, one in Social Medicine and one in Hygiene and Nutrition.

There is a shortage of staff for teaching both medical and stomatological students. Staff reported that there is very little collaboration with Public Health specialists and social scientists. Student motivation is poor because the course is delivered late in the course. The visitors suggest that teaching should be spread over earlier parts of the course.

Staff expressed the opinion that auxiliaries should be introduced into the public service.

10.3 PREVENTIVE DENTISTRY IN CHILDREN AND ADOLESCENTS

Name: Assoc. Prof. Narcisa Košir, D.M.D., Ph.D.

E-mail: n.kosir@animus.mf.uni-lj.si

1. Introduction

The Department of Preventive and Paediatric Dentistry comprises Paediatric Dentistry, Oral Dental Health Care Education and Preventive Dentistry in Children and Adolescents. The course introduce students to the prevalence, pathogenesis and preventive of oral and dental diseases of young patients. The course take place in the 12th semester.

2. Primary Aims

The student on graduation should be able to evaluate preventive programmes at the young patients.

3. Main Objectives

The students should be able to:

- to understand the principles of prevention, epidemiology and oral health care in children and adolescents,
- to recommend appropriate preventive programmes,
- to evaluate the influence of socio-economic factors on oral health of young patients,
- to understand the role of government in the delivery of health care.

4. Hours in the Curriculum

The lectures last for 15 weeks/1 hour per week and include seminars on preventive dentistry in children and adolescents.

5. Methods of Learning/Teaching

15 hours lectures including seminars and practical work at the community dental officers.

6. Assessment Methods

Evaluation of individual seminars.

7. Strengths

Preventive Dentistry in Children and Adolescents is incorporated into whole curriculum and not separated as an isolated discipline. Students are taught by full time staff and also by staff from the community dental offices-services, thus giving a balanced view of the systems operating in the country.

8. Weakness

1. Need for more teaching assistants.
2. Difficulties in providing a new equipment.

9. Innovations and Best Practices

10. Plans for Future Changes

1. Electronic evaluation of patient data.
-PBL to the all parts of the departmental teaching.

11. Visitors Comments

10.4 PREVENTIVE DENTISTRY IN ADULTS

10.4.1 ORAL MEDICINE & PERIODONTOLOGY

Name:

Prof. Uros Skaleric, D.M.D., Ph.D.

E-mail: skaleric@ibmi.mf.uni-lj.si

1. Introduction

The course introduces students to the prevalence, pathogenesis, treatment and prevention of oral mucosa diseases, salivary glands disorders and periodontology disease in adults and elderly. The course takes place in the 12th semester of the 6th year.

2. Primary Aims

-to inform students about the prevalence of oral mucosa diseases, salivary glands disorders in periodontal diseases in older population and possibilities of prevention

3. Main Objectives

Students should learn and be able to understand and have knowledge about:

- prevalence, pathogenesis and prevention of oral cancer in adults and elderly,
- the aetiology, signs and prevention of xerostomia in adults and elderly,
- the aetiology, prevention and treatment of halitosis
- the prevalence of periodontal disease in adults and elderly
- the relationship between systemic diseases and periodontal diseases in adults and elderly and prevention,
- the oral hygiene measures in adults and elderly

4. Hours in the Curriculum

The course lasts for 7 weeks/1 hour per week

5. Method of Learning/Teaching

7 hours lectures

6. Assessment Methods

Essay test at the end of the course

7. Strengths

Well motivated teachers

8. Weaknesses

The course is too late in the Curriculum

9. Innovations and Best Practices
10. Plans for Future Changes
-Introduction to measurement to xerostomia and halitosis.
11. Visitors Comments

10.4.2 CONSERVATIVE DENTISTRY & ENDODONTICS

Prof. Dominik Gaspersic, D.M.D., Ph. D., Assist. Prof. Franek Klemenc, D.M.D., Ph.D.

E-mail: dominik.gaspersic@mf.uni-lj.si, franek.klemenc@mf.uni-lj.si

1. Introduction

This course introduces the students to the preventive management of dental caries in the population of adult patients. As an example of dental treatment to patients with special requirements, a preventive and curative treatment of patients, which were irradiated because of cancer in head and neck region, is included. The course takes place in 12th semester of study.

2. Primary Aims

- student recognises the basic etiopathogenesis of dental caries
- student gets knowledge of the preventive management of dental caries

3. Main Objectives

- to describe the etiopathogenesis of caries
- to know basic epidemiologic data of oral health in Slovenia
- to know general approach for assessment of caries risk and diagnostics as a basis of causal treatment
- to know measures of oral health maintenance by the cariology aspects
- to know the principles of preventive and curative measures at patients, which were irradiated because of cancer in head and neck region

4. Hours in the Curriculum

The course lasts for 7 weeks 2 hours per week.

5. Method of Learning/Teaching

The course consists of 5 hours of lectures and 9 hours of pre-clinical practice (demonstration of clinical procedures in the diagnosis of caries, following by their practical performance on colleagues as being patients, then evaluation of the results).

6. Assessment Methods

At the end of the course there is a test at the teaching staff, containing short essay questions.

7. Strengths

After previous mainly curative courses through 7th - 11th semesters, dealing with frequently difficult therapy of caries, students and teaching staff are well motivated.

8. Weaknesses

-The course is of too short duration and it is not performed on patients. There is also a shortage of didactic equipment.

9. Innovations and Best Practices

-Introduction of caries risk tests.

10. Plans for Future Changes

-Introduction of small groups of students, at least a few hours of course performed on patients.

-The extension of contents to the prevention of some chronic injuries of teeth, such as erosions, etc.

-Making more accents on the gerodontic aspect of prevention.

11. Visitors Comments

Section 11

Restorative Dentistry

11. 1. CONSERVATIVE DENTISTRY (DENTAL DISEASES)

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1. Introduction

The students began with the »Propedeutics of dental diseases« in the fourth semester. Here, they learn the instruments and burs in conservative dentistry and general knowledge of dentistry.

In following 5th and 6th semesters they practice all operative procedures of cavity preparations (classic and adhesive technique) as well as using plastic materials for fillings in inter- and transcanine sector in the »Phantom head« laboratory.

In following: 7th, 8th, 9th, 10th and 11th semesters, the students do their clinical work on patients. So every student must do in clinical practice till the end of his study about:

10 fillings of class I 25 fillings of class II 10 fillings of class III 5 fillings of class IV
10 fillings of class V

2. Primary Aims

- to introduce the student to the theoretically updated manner of conservative and aesthetic dentistry
- to make the student also practically competent in caries restoration

3. Main Objectives

- understanding etiology, therapy and prevention of dental caries
- be familiar with the operative principles of caries management
- to know the majority of materials, today used in restorative dentistry
- to know how to protect themselves as well as patients at work with high risk patients
- to know how to manage the medical emergencies in dental office
- to know the basic principles of ergonomics in dentistry

4. Hours in the Curriculum

4 th semester:	15 time 1 hour lectures	15 time 1 hour practices
5 th semester:	15 time 2 hours lectures	15 time 4 hours practices
6 th semester:	15 time 2 hours lectures	15 time 3 hours practices
7 th semester:	15 time 3 hours practices	

8 th semester: 15 time 3 hours practices
 9 th semester: 15 time 6 hours practices and 15 hours of study on free chosen themes
 10 th semester: 15 time 6 hours practices 15 time 1 hour of seminar work
 11th semester: 15 time 4 hours practices
 12th semester: 2 hours of individual work with each student because of her (his) writing work

5. Method of Learning/Teaching

The teaching method includes formal lectures, hold by Assist. Prof. and supervised pre-clinical and clinical practice by assistants, specialists in restorative dentistry and endodontics. There are also small-group seminars and written work colloquiums. Sometimes there is also a clinical demonstration of some phase, or the whole work, or the video projection of some topics.

6. Assessment Methods

Every student has its booklet about his clinical work. At the end of year 2, a colloquium of the Propedeutics of the dental diseases is obligatory. After a »Phantom« course there is also a exam, before the beginning of clinical work. After twelfth semester, there is a final exam, consisting of practical part (discussion about practical work in connection with writing work about all clinical cases) and theoretical part in term to state, that the candidate is w

ell skilled in restorative dentistry.

7. Strengths

- the students start with clinical work after »Phantom« course on the very modern machines
- pre-clinical and clinical work is very good controlled by staff
- enough patients with the variety of pathology, so everyone can do the demanding work

8. Weaknesses

- many mechanical failures on the old machines
- very difficult is to obtain new materials
- there is no »intra-light« system on our machines

9. Innovations and Best Practices

10. Plans for Future Changes

- new machines with »intra-light« system
- new materials with modern adhesives

VISITORS' COMMENTS

It appears that the individual departments are not integrated enough for them to be able to carry out total patient care. This is recognised to be a problem by the staff. The visitors would suggest that consideration should be given to making a polyclinic available.

The volume of clinical work completed by the students is comparable with the rest of Europe. However, more facilities and a reorganisation of the curriculum are required. Prevention should be introduced into 2nd Year and opportunities for clinical work should be extended into 6th Year.

Assessment of practical competence: log books are maintained and the quality as well as quantity of clinical work is documented.

Dental Materials Science: the visitors suggest that a dedicated materials scientists would be useful for undergraduate education and also as an engine for dental materials research.

Evidence Based Dentistry: the student mainly use textbooks. It is an aspiration of the department to move towards the use of primary sources. This already happens with Residents.

Cranio-mandibular dysfunction is dealt with by Oral Surgery.

11.1.1 TOOTH MORPHOLOGY

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1. Introduction

Time commitment for 2nd year dental students to this programme is 15 weeks, starting in October. Teaching staff is from the Department of conservative dentistry and endodontics. This is the first time that a student of stomatology is introduced with a field of stomatology. The course is divided in two parts: dental anatomy and dental histology.

2. Primary Aims

- to provide students with a knowledge of the anatomy of primary and permanent teeth, and the basis of occlusion
- to provide students with a knowledge of the structure, physical properties, chemical composition, function and age-related changes of dental tissues

3. Main Objectives

Students are required to:

- recognise different permanent and primary teeth
- sketch different teeth
- know morphological variability of teeth
- know the basis of occlusion

- know the structure, chemical composition, physical properties, function, age-related changes of hard dental tissues, dental pulp, periodontium, gingiva and alveolar bone
- know topographic relationships of dental roots towards their surroundings

4. Hours in the Curriculum

Time commitment to this programme is 75 hours: 41 hours for dental anatomy and 34 hours for dental histology. There are additional hours of practice before the exam.

5. Method of Learning/Teaching

Dental anatomy has 12 hours of lectures, 4 hours of seminars and 25 hours of practice. Dental histology has 12 hours of lectures, 2 hours of seminars and 20 hours of practice. Clinical relevance is incorporated into the lectures. Lectures are correlated with practice (material covered at lectures and practice is the same). At seminars, more important topics are covered, just before the exam. Students are stimulated to participate actively during lectures. The professor gives lectures and seminars. An assistant with a technical collaborator, and one demonstrator (a student from the 6th year) give practical hours. There are 6-8 students in one group. At dental anatomy practice, students are learning from extracted teeth or plaster casts. Teeth, which students collect from dental offices, are also helpful for learning at home. At dental histology practice, students recognise different dental tissues with the light microscope. Teachers and assistants are always at disposal for questions and discussion.

6. Assessment Methods

At the end of the course of dental anatomy there is a practical exam where student recognises teeth, and a written exam with short essay questions and sketches of teeth. Results of the practical and written part are summed up for the evaluation. At the end of the course of dental histology there is a practical part of the exam, where student recognises dental tissues with the light microscope. At the oral part of the exam student describes structure, physical properties, chemical composition, function and age-related changes of dental tissues. Results of the practical and oral part are summed up for the evaluation. Results of the dental anatomy and dental histology are summed up for the final evaluation.

7. Strengths

Students are very motivated, because this is the first dental subject, and also the assessment is just after the finished lectures and practice. Emphasis is on sketches of teeth and their anatomical variability, learning at home with teeth collected from dental offices. Teachers and assistants do clinical work also, and their research work is also involved with dental morphology.

8. Weaknesses

Students do not learn from teeth in the patient's mouth, they do not model teeth, and there is not enough of the dental radiology. This programme is too far apart in time from the main preclinical programmes and restorative dentistry programme. There is

also lack of contemporary didactic equipment, especially for dental histology, and an out-of-date textbook of dental anatomy in Slovene. There is lack of time for the modelling of teeth, and that is why the anthropological and forensic importance are neglected. The same problem is with the comparing morphology.

9. Innovations and Best Practices

Sketches of teeth, more emphasis on root anatomy, a new Slovene textbook of dental histology.

10. Plans for Future Changes

To get in contact with patients during the programme of dental anatomy, more of the dental radiology, to update the textbook of dental anatomy and dental histology (with coloured pictures), to update didactic equipment.

11. Visitors Comments

11.1.2 TOOTH DEVELOPMENT, DENTAL DEVELOPMENTAL DEFECTS AND DENTAL INJURIES DURING THE FUNCTION PERIOD IN ADULTS

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1. Introduction

Time commitment for the 4th year dental students to the part of programme dealing with tooth development is 15 weeks and to the part of programme dealing with dental developmental defects and dental injuries during the function period in adults is 15 weeks. Teaching staff is from the Department of conservative dentistry and endodontics.

2. Primary Aims

- to provide students with a knowledge of the development of oral cavity and tooth development
- to provide students with a knowledge of dental developmental defects and dental injuries during the function period in adults

3. Main Objectives

Students are required to have an appropriate understanding in the following:

- the development of upper and lower jaw, tongue, palate, temporomandibular joint, salivary glands
- the early tooth development, development of hard dental tissues, dental pulp,

gingiva, periodontium, and alveolar bone

- eruption schedule
- main principles of regulation of tooth development
- etiopathogenetic mechanisms of dental developmental defects and injuries during the function period in adults
- errors in eruption schedule, in number, size and shape of the teeth
- dental developmental defects of enamel and dentin
- acute and chronic dental injuries during the function period in adults
- to make a diagnose, to perform a therapy and to give a prognosis of dental developmental defects and dental injuries during the function period in adults

4. Hours in the Curriculum

Time commitment to the part of programme dealing with tooth development is 15 hours in the 7th semester, and to the part dealing with dental developmental defects and dental injuries during the function period in adults is 30 hours in the 8th semester.

5. Methods of Learning/Teaching

Programme dealing with tooth development has 14 hours of lectures, 1 hour of practice, and programme dealing with dental developmental defects and dental injuries during the function period in adults has 21 hours of lectures and 9 hours of practice. Practice hours are usually just after each lecture, where material covered at the lecture is discussed, with the aid of radiographs, plaster casts, and photographs. Students are stimulated to participate actively during lectures. Clinical relevance is emphasised. At practice in the end of the course students examine radiographs, plaster casts, extracted teeth, histological tissue sections from the field of embryology, dental developmental defects and dental injuries during the function period in adults. There is a textbook available. The professor gives lectures and practice; at practice there is also a technical collaborator. Teacher is always at disposal for questions and discussion.

6. Assessment Methods

At the end of the programme dealing with dental developmental defects and dental injuries during the function period in adults there is a test. Final evaluation of the complete subject is after the 6th year of the study. Exam is in a written form with short essay questions or/and viva voce.

7. Strengths

A logical linkage between dental development and dental developmental defects. At that time students are also faced with patients, and are beginning with their clinical experience. Research work of the professor is involved with dental development and dental developmental defects.

8. Weaknesses

This programme is far apart in time from the programme of dental anatomy and histology (2nd year), so there is a lack of knowledge to follow lectures of embryology

adequately. The final evaluation is also too far ahead, so students are not stimulated to work hard. There is not enough practice, especially with patients, and there are too many students in one group. A lack of contemporary didactic equipment.

9. Innovations and Best Practices

Textbook of tooth development in Slovene, to update the material covered in dental developmental objects and dental injuries during the function period in adults.

10. Plans for Future Changes

Textbook of dental developmental defects and dental injuries during the function period in adults, to update collection of radiographs, plaster casts and photographs,, histological tissue sections and teeth, that are needed for this programme. To update didactic equipment. t are needed for this programme.

Visitors Comments

11.1.3 ENDODONTICS

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1. Introduction

Endodontology is concerned with the study of the form, function and health of injuries and diseases of the dental pulp and periradicular region, their prevention and treatment. The teaching of endodontology in Ljubljana is exhibited together with Conservative dentistry, divided between the pre-clinical course and clinical work.

In the fourth semester the students began with Endodontics. They learn about the endodontic instruments in the course of »Propedeutics of dental diseases«.

In following: filth and sixth semester, they do the »Phantom head« course, where they do all endodontic procedures on single and multirooted teeth.

In following 7th, 8th, 9th, 10th and 11th semesters the students do their clinical work on patients. So every student must do in clinical practice till the end of his study about:

- 5 endodontically treated single rooted teeth
- 2 endodontically treated first upper premolars (two canals)
- 3 endodontically treated molars (three canals)

with definitive root filling and x-ray before and after filling and control x-ray after a longer period than 6 months.

2. Primary Aims

- to introduce the student to the theoretically updated manner of endodontics
- to make the student also practically competent in endodontics

3. Main Objectives

- to be familiar with etiology and epidemiology of the diseases of the pulp and periradicular tissues
- to provide the student with experience in the examination of patients and the diagnosis of pulp and periradicular diseases
- to provide the knowledge and experience of endodontic treatment itself, including root filling procedures and problems, connected with this topics

4. Hours in the Curriculum

The endodontic course is exhibited in Ljubljana together with the conservative dentistry, so it is impossible to determine the total time spent in work on pure endodontics.

Hours, that are for endodontics too, are the same as in chapter 11.1.

5. Method of Learning/Teaching

The teaching method includes formal lectures and supervised pre-clinical and clinical practice. There are also small- group seminars and written work colloquiums. Sometimes there is also a clinical demonstration of some interesting or specially demanding work, or its step, or the video projection of some topics.

6. Assessment Methods

Every student has its booklet about his clinical work. At the end of year 2, a colloquium of the »Propedeutics of dental diseases« is obligatory. After a »Phantom« course there is also an exam, before the beginning of clinical work. After twelfth semester, there is a final exam, consisting of practical part (discussion about practical work in connection with written work about all clinical cases, with special regard on the control x-rays and dependent evaluation of the success of endodontic treatment) and theoretical part in term to state, that the candidate is well skilled in endodontics.

7. Strengths

- the students start with clinical work after »Phantom« course on the very modern machines
- clinical work is very good controlled by staff
- enough patients, with the variety of pathology, so everyone can do the demanding work

8. Weaknesses

- many mechanical failures on the old machines
- very difficult is to obtain new materials
- there is no »intra-light« system on our machines

9. Innovations and Best Practices

10. Plans for Future Changes

Our big desire is to obtain the surgical-endodontic microscope and system for machine canal preparation, with termoplastic system for root-canal obturation.

11. Visitors Comments

11.2 PROSTHODONTICS

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11.2.1 DENTAL MATERIALS AND TECHNOLOGY (PRECLINICAL PROSTHODONTICS)

1. Introduction

The course in Preclinical Prosthodontics is a pre-clinic subject covering the basic knowledge of prosthetic dental materials and technologies, consisting of theory and laboratory practice. The course starts in 4th semester and concludes in 6th. The course consists of the three parts:

- Biologic foundation of Prosthodontics (Applied anatomy for Prosthodontics),
- Fixed prosthetic materials and laboratory technology,
- Removable prosthetic materials and laboratory technology of partial dentures

2. Primary Aims

Student develops some psychomotoric skilfulness (dexterity) necessary for future performing of prosthodontics and understands the role of prosthesis in the oral environment and the nature and properties of prosthetic materials and is taught techniques necessary for production of prosthesis.

3. Main Objectives

Main objectives are that students:

- realise for prosthodontics applied anatomy of stomatognathic system,
- realise the system of prosthetic dental materials and techniques,
- understand the nature and properties of matters and particularly prosthetic dental materials,
- realise the system of fixed prosthodontic restoration,
- develop necessary skills in crown preparation, realise the shapes of different fixed appliances and necessary equipment and instruments,
- develop skill of basic laboratory procedures: model and die production, waxing, casting, veneering, polishing

4. Hours in the Curriculum

Preclinical Prosthodontics starts in 4th and concludes in 6th semester of study. It has two hours lectures in 4th and one hour in 5th and 6th semester, having practical work 3 and 4 hours respectively in second and third year of study. All together has Pre-clinical Prosthodontics 60 hours of lectures and 165 hours of practices and seminars, i.e. 225 hours of study.

5. Method of Learning/Teaching

ex cathedra lectures seminars and literature study laboratory demonstration of procedures and techniques practices on the phantom head and at laboratory bench

6. Assessment Methods

- permanent assessments of practice on phantom head and in the dental lab
- final examination: presentation of all works, practical, written and oral exam

7. Strengths:

new phantom heads and laboratory benches and new programme for practice

8. Weaknesses:

- too much ex cathedra lecturing
- not enough seminars and self teaching or problem oriented learning
- students have not enough room for study and lecturing in department, AV learning, computers and internet,
- pre-clinical lab is not contemporary equipped in auxiliary rooms with instruments, equipment's and materials.

9. Innovations and best Practices

- recently introduced new phantom heads and lab benches and consequently new practical program in fixed prosthetic preparation
- having good book about dental alloys in Slovenian language by professor R.Sedej

10. Plans for Future Changes

- instructors (assistants) from clinical departments will teach also pre-clinic courses and continue in clinics
- producing of digital and AV teaching aids.

11. Visitors Comments

11.2.2 FIXED PROSTHODONTICS

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1. Introduction

The course in the Fixed prosthodontics is a clinical subject covering the basic knowledge of fixed restorative treatments (indirect restorative), consisting of theory, and supervised clinical practice. The course starts in 7th semester and concludes in 11th.

2. Primary Aims

The aims of the course are that student is able to independently makes prosthodontic diagnostics, treatment planning, performs clinical procedures of fixed prosthetics treatment and got basis for the permanent study of Crown and Bridge literature and for critical evaluation of various techniques and treatment modalities.

Student knows various modern fixed prosthodontic laboratory and clinical techniques, could choose the appropriate one for the patient, performs basic preparative (preprosthetic) procedures on oral tissues, knows the concept of temporary and permanent fixed prosthetics, performs combined fixed-removable treatment modalities and is informed about prosthetical treatment on osseointegrated implants.

3. Main Objectives

Main objectives are that student is fully acquainted in:

- prosthodontic diagnostic procedures,
- treatment planning and indicating the appropriate treatment modality,
- preprosthetic treatments,
- understand the importance of preventive measures and healthy periodontal tissues for durability and quality of fixed prosthodontic appliances,
- preparation, impression, model and die preparation, temporaries, cementation of restoration: adhesive and temporary and permanent classic ones,
- performing basic gnathological techniques: face bow and jaw relation registration, articulator mounting, articulator programming, diagnostic wax up and indicate the concept of occlusion,
- different crown and bridge techniques, combined fixed-removable treatments,
- aesthetic dentistry, parodontal-prosthetic treatment, geriatric prosthetic,
- understands the importance of prosthetic occlusion for the health of stomatognathic system and for the whole body.

4. Hours in the Curriculum

Fixed prosthetic starts with the clinical propedeutics in 7th semester of study and consists of lectures, seminars and students exercises on each other: intraoral diagnostics, registration of findings, impression making, model casting, articulator mounting, treatment planning's. Two hours per week, i.e. 30 hours in semester,

in 8th semester student starts clinical practice on patients, 2 hours per week, i.e. 30 hours in semester,

clinical work on patients lasts three hours per week from 9th till 11th semester, i.e. 45 hours per semester, 135 hours altogether. Most of them usually prolong clinical practice into winter holidays and into 12th semester, approximately 30 hours to complete the program,

ex cathedra lectures start in 7th semester and conclude in 10th, one hour per week, 60 hours altogether. Student could choose 30 optional hours of this subject.

For Fixed Prosthetics is devoted 60 hours of lectures and 225 hours of clinical practices and seminars.

5. Methods of Learning/Teaching

ex cathedra lectures seminars and literature study clinical and laboratory demonstration of cases and techniques clinical patients treatment

6. Assessment Methods

-written and oral test before clinical treatment of patients starts, at the end of 7th semester,

-permanent assessments of clinical practice and protocols, control of amount of treatments and variety of techniques used,

-final examination: written and oral presentation of patients treated, written and oral examination

7. Strengths

-Three to four students to one assistant (instructor) at clinical patient treatment

-enough patients available for clinical treatment by students

8. Weaknesses

-Too much ex cathedra lecturing,

-the teaching of the subject is not condensed enough, despite it lasts five semesters up till four hours per week, students study only techniques and practical procedures not the entire theory during this time,

-not enough seminars and self teaching or problem oriented learning neither intermediate assessments of knowledge. Students are waiting for final exam to complete the knowledge and we to assess the knowledge, what is late.

-no students own laboratory work done for patients because of lack of space and equipment,

-students have not enough room for study and lecturing in department, AV learning, computers and internet,

-weak co-ordination between departments regarding patients schedule of treatment, students do not perform enough comprehensive dental treatments.

9. Innovations and Best Practices

- introduction of gnathological techniques in the curriculum performed by students
- switch from classic full metal&resin crowns to PFM and full ceramics, emphasis on aesthetic and adhesive dentistry (white and pink aesthetics), more inlay/onlay treatments and integrated fixed-removable treatment,
- some patients are comprehensively treated by one student through all departments

10. Plans for Future Changes

- would like to condense lectures and theory on 4th year of study, having two hours per week instead of one and more seminars (problem based and self learning) concluded by the theoretical examination.
- In 9th, 10th and 11th semester would not be any lectures, only clinical practice and seminars in so called Comprehensive Adult Dental Clinics (endo, perio, restorative, fixed and removable) concluded by the examination in all specialities emphasised on practice and case presentation,
- emphasise problem based learning and integrated approach,
- introduction of study models and all documentation as teaching aids,
- production of AV teaching aids,
- write a book of Fixed prosthodontic propedeutics,
- students follow up and control previously treated patients by former students.

11. Visitors Comments

11.2.3 REMOVABLE PROSTHODONTICS

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1. Introduction

Removable prosthodontics programmes introduce the student to the options available for restoration and rehabilitation of partially dentate, and edentulous patients. These programmes develop the principles involved in assessment and construction of the removable types of prostheses, and management of edentulous state. Students are theoretically and clinically trained in designing the prostheses, required clinical procedures and - at the last year of the study - some laboratory skills. The clinical protocol for removable prosthodontics requires the student to carry out all the clinical restorations under the supervision of specialist teachers, and to have each stage formally proved by them. A clinical session each week in the fourth year, fifth year, and in the winter term of the sixth year is dedicated to this task.

2. Primary Aims

The primary aim is to provide a sound basic training for the undergraduate students that will enable them to carry out removable prosthetic treatments according to the criteria of the general dental practice.

3. Main Objectives

- The capability to integrate the theoretical principles of complete and partial dentures into the clinical procedure.
- To be able to examine edentulous and partially edentulous patient's mouth.
- Knowledge and skill in making of first and second impression and all the subsequent steps of the edentulous patient rehabilitation.
- To be informed about wire clasp partial dentures and to be able to plan metal-framework partial dentures.
- To be able to provide patient with a correct relining and repair of the total and partial dentures.
- The capability to advise patients on preventive measures and care of their removable prostheses.

4. Hours in the Curriculum

4th year - 30 lectures, 60 clinical practice
 5th year - 30 lectures, 75 clinical practice
 6th year - 45 clinical practice and laboratory work

5. Method of Learning/Teaching

Recommended reading Lectures Clinical demonstrations & instructions
 Laboratory demonstrations Supervised clinical practice Supervised seminars in
 small groups on designing of partial dentures

6. Assessment Methods

- Pre-clinical competence
- Obligatory attendance at the clinical and laboratory demonstrations
- To pass the test before starting clinical practice in 4th year
- Final Examination:
 - Before a candidate has offered himself to the oral examination following criteria must be fulfilled:
 - 4 full dentures (clinical procedure)
 - 1 full denture (clinical and laboratory procedure)
 - 4 partial removable dentures with metal framework
 - relinings of full denture
 - 1-2 reparatures of full and partial removable dentures respectively.
 - All the above mentioned prosthetic treatments must be documented and proved by the Department assistant.

7. Strengths

-In the 6th year every student is obliged to manage his full denture patient from clinical and laboratory point of view. Laboratory procedures are supervised by a senior dental technician.

8. Weaknesses

Fixed and removable partial prosthodontic clinical practice for students are not integrated. There are not enough clinical cases available for some areas of removable denture rehabilitation (e.g. immediate dentures, overdentures etc.)

9. Innovations And Best Practices

Supervised seminars in small groups on designing of partial dentures. Seminar emphasises the importance of analysing the master casts according to proposed chewing forces. Well accepted by students.

10. Plans for Future Changes

To surpass the problems mentioned under "Weaknesses".

11. Visitors Comments

11.2.4 OCCLUSION AND FUNCTION OF THE MASTICATORY SYSTEM (GNATHOLOGY)

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1. Introduction

The course in Gnathology is a pre-clinical and clinical subject covering the basic knowledge of function and anatomy of stomatognathic system, jaw relation, occlusal (gnathological) techniques, diagnostics and treatment of occlusal dysfunction's. The subject consists of theory with pre-clinical and clinical practice. The knowledge of this course can be applied to other restorative, orthodontic and periodontic practices. The course starts in 5th semester and concludes in 7th.

2. Primary Aims

-Student realises the complexity of jaw relation and function of SGS and could apply the knowledge of the occlusion into all dental treatments.

-Student can make occlusal diagnostics and some treatments of occlusal disorders, use basic occlusal (gnathological) techniques (face bows, articulators, jaw relation registration...) and prescribes concept of occlusal restoration.

3. Main Objectives

1. Gnathological anatomy and physiology of SGS

- occlusal health,
- functional occlusal morphology
- neurophysiology of occlusion
- temporomandibular joint
- occlusal positions
- mandibular kinesiology, border movements,
- occlusal determinants and relations between them,
- chewing
- electrognathographic normatives of occlusal movements

2. Basic gnathologic techniques

- articulators, face bows
- bite (jaw) relation registration, occlusal determinantes registration
- clinical and instrumental bite analysis
- programming of occlusion
- wax on technique

3. Clinical gnathology

- occlusal interferences and occlusal contacts determination methods
- teeth wear
- trauma of occlusion
- parafunctions and bruxism
- temporomandibular dysfunctions
- treatment of disorders, occlusal splints, occlusal adjustments

4. Hours in the Curriculum

Occlusion has 15 hours of lectures in 5th, 6th and 7th semester. Pre-clinical practice starts in 6th semester and has 45 hours of practice. Clinical practice has 45 hours in 7th semester

Altogether has Occlusion 135 hours of study.

5. Methods of Learning/Teaching

- ex cathedra lectures seminars and literature study clinical and laboratory demonstration of occlusal techniques (electrognathography, pantography)
- students perform occlusal diagnostics and analysis of occlusion on each other
- patients are not treated in this course, but students use occlusal diagnostics and treatments methods at clinical practices of other subjects.

6. Assessment Methods

- Test in functional anatomy of occlusion (6th semester),
- permanent assessments of practice and protocols (7th semester),
- final examination: written and oral exam.

7. Strengths

I think that our students realise the importance of occlusion for the health of SGS

8. Weaknesses

- too strong emphasis on ex cathedra lecturing
- not enough seminars and self teaching or problem oriented learning
- students have not enough room for study and lecturing in department, AV learning, computers and internet,
- students profoundly study the subject not earlier as before the final exam.

9. Innovations and Best Practices

- We started with the independent subject of Occlusion as the first one in this part of Europe and introduced Denar articulators in daily routine for students and staff in Dental school and in Slovenia
- Good occlusion is one of the main objectives in the mind of young dentists
- We developed our own software for electrognathographic 3D tracing of mandibular movements, called COSIG

10. Plans for Future Changes

- To produce digital teaching aids
- To intensify and increase practice activities and students self learning when listening the subject of Occlusion and not at the end

11.

Visitors Comments

Section 12

PERIODONTOLOGY

Name: Prof. Dr. Uros Skaleric

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1. Introduction

Periodontal curriculum is aimed to help student to understand theoretical basis at periodontal diseases and to become competent in clinical periodontology at the level of general practitioner. Exposure to periodontology starts in the second year when dental anatomy and histology is taught and continues in the 3rd year with periodontal propedeutics. The didactic learning continues in the fourth year (aetiology, pathogenesis, initial therapy) and in the fifth year complex treatment and maintenance phase). Clinical training starts in the fourth year and continues in the 5th year and first half of the sixth year.

2. Primary Aims

- to introduce students to the epidemiology aetiology, and pathogenesis of periodontal disease and its consequences for oral homeostasis and systemic health.
- to enable the student to diagnose and treat periodontal disease in holistic approach according to the needs of the individual and the community

3. Main Objectives

At the end of the course the student should:

- be able to describe macro and micro anatomy of periodontal tissues in health,
- be able to describe the role of oral micro-organisms in initiation and development of periodontal disease,
- be able to describe the role of host response in periodontal disease
- be able to describe the role of behavioural and social factors and systemic illnesses in periodontal disease
- be able to diagnose, document and prepare treatment plan for patients with periodontal disease
- be able to describe and carry out the initial therapy of periodontal disease
- be able to describe indications and procedures of surgical periodontal therapy and principles of wound healing
- be able to describe the influence of periodontal inflammation on systemic diseases
- be able to monitor and carry out maintenance phase of periodontal therapy program
- be able to describe principles of osseointegration and indications for implant dentistry

4. Hours in the Curriculum

Students have 90 hours of lectures and 165 hours of clinical training supervised by periodontists in 4th, 5th and 6th years of the study.

5. Method of Learning/Teaching

Lectures are provided for the whole group of students for each academic year. Clinical training is provided by periodontists in a ratio of one teacher per 4-6 students.

6. Assessment Methods

Students are continuously assessed during the clinical training. They have to provide history, diagnosis and treatment plan for 5 patients and have to defend their documented cases at the time of final exam. Final oral exam covers questions of all aspects of etiopathogenesis, diagnosis and treatment of periodontal disease.

7. Strengths

Well motivated full time periodontists and teachers involved in different areas of basic and clinical periodontal research with emphasis on holistic approach in periodontal medicine.

8. Weaknesses

The exposure to patients is relatively late (in the fourth year). Students see in periodontology different patients than at endo or prosthodontics departments. We are missing integrated oral health care for adults and School for Dental Hygiene. We did not have problem based learning yet.

9. Innovations and Best Practices

Since 1995 student clinical training hours were increased from 60 to 165 hours. Students are now able to describe and carry out effectively periodontal diagnosis, initial and maintenance phase of periodontal therapy.

10. Plans for Future Changes

Practical training of root scaling and planning on phantom heads.
-Introduction to practical training of minor periodontal surgery.

VISITORS' COMMENTS

The staff recognise that the undergraduates' experience of periodontal surgery is limited.

Section 13

Oral Surgery and Oral Radiology

13.1. ORAL AND MAXILLOFACIAL SURGERY

Name: Prof. Vesna Kozelj, D.M.D., Ph.D.

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1. Introduction

The undergraduate course in Oral and Maxillofacial surgery extends over 2 years of the course, commencing in February of the fourth year.

2. Primary Aims

Student must learn the technique of extracting teeth and roots in local anaesthesia and mastering the related possible complications. Get knowledge of dentoalveolar surgery used in treatment of impacted teeth, periodontitis apicalis chronica and odontogenic cysts. Student must also learn principles of management of acute and chronic odontogenic inflammations and of soft tissue injuries, injuries of teeth and facial skeleton. Student must learn to recognise the most frequent diseases in maxillofacial area and be familiar with treatment procedures and prevention possibilities.

3. Main Objectives

- learning the skills of history taking and adequate clinical examination
- principles of asepsis
- basics of pain and fear control, general anaesthesia
- local anaesthesia in oral cavity, its technique and mastering complications related to anaesthesia
- extractions of teeth and roots (instruments, procedures, indications and contraindications)
- prevention and management of early and late complications after teeth extraction
- principles of diagnostic and management of unerupted and impacted teeth
- principles of periapical surgery, indications and contraindications
- management of cysts in facial bones
- management of acute and chronic odontogenic infections
- management of soft tissue injuries and fractures of teeth and facial bones, necessary diagnostic and therapeutic procedures
- preprosthetic surgery and implantology
- tumours of the head and neck
- congenital anomalies
- facial deformities
- salivary gland diseases
- diseases of temporomandibular joint
- facial pain

4. Hours in the Curriculum

Students have 60 years of lectures, 30 optional teaching hours and 195 hours of clinical training in 4th, 5th, and 6th year of the study.

5. Method of Learning/Teaching

Formal didactic teaching is illustrated with hospitalised patients who are invited into the lecture room. Students take medical history, examine the patient and evaluate diagnostic test results and they are stimulated to integrate their previous knowledge when discussing the case.

Practical teaching takes place at the exodontic clinic, clinic for dentoalveolar surgery, consultant clinic and in the operating theatre and on ward.

The students receive a theoretical teaching about local anaesthesia and extraction technique before starting simulated teeth extractions. Before starting extractions on patients they have to pass the examination. A "feed back session" is organised after this examination to discuss the questions. They perform routine exodontia under close supervision of teaching staff at the exodontic clinic. At the clinic for dentoalveolar surgery they are involved in the diagnosis and management of patients referred for routine dentoalveolar surgery (i.e. impacted teeth, periapical surgery, implant and dentoalveolar surgery) They assist the operation. In the consultant clinics students get the insight into whole range of maxillofacial pathology concerning diagnostics, treatment and follow up (maxillofacial trauma, malignancy, congenital and dentofacial anomalies, TMJ pathology). In the operating theater they watch the major operating procedures. On the ward they follow the patient(s) postoperative treatment.

The practical studies is held in groups of three to four students. They last in blocks of 1 week for three hours a day at different places of the Department of Maxillofacial and Oral surgery for the duration of the clinical course.

6. Assessment Methods

Students have to pass the test before they start the routine extractions and they are continuously assessed during clinical training. The final examination is written and oral and is possible after all formal teaching. During clinical training student has to perform the prescribed minimal number of tooth extraction, local anaesthesia, history taking, assistance at dentoalveolar surgery.

7. Strengths

The strengths of the course is that students can see and experience the whole range of Oral and Maxillofacial surgery (from routine exodontia to patients undergoing major resection and reconstructions for head and neck cancer). They get the insight of the results of research of the senior members of the staff and their implication into the practice.

8. Weaknesses

Our equipment is depreciated and we are cramped for space.

9. Innovations and Best Practices

This year the students had for the first time the possibility of train extractions on phantom heads. We started to present some topics problem oriented.

10. Plans for Future Changes

VISITORS' COMMENTS

There is a combined course in Maxillo-facial Surgery and Oral Surgery.

Practical skills: the student has to be able to extract teeth and roots and have a knowledge of diagnostics.

There is theoretical instruction and observation of Implantology.

Some overlap exists with with courses in Anaesthesiology, Medical Emergencies etc.

The visitors consider that consultations with Medical Teachers and others about curriculum content would be advantageous.

13.2 ORAL RADIOLOGY

Name: Prof. Vladimir Jevti, M.D., Ph.D.

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1. Introduction

The Department of Radiology is part of Medical Faculty of the University of Ljubljana. It has a major responsibility in teaching students of the Department of Stomatology. The teaching programme extends from the end of the 4th semester till the end of 5th semester.

2. Primary Aims

The teaching programme will provide the theoretical and practical training in Dental Radiology and Ionising Radiation Protection and Regulations.

3. Main Objectives

To produce a graduate who:

- Is competent in decision-making regarding clinical criteria for dental radiological procedures.

- Understands the basic principals of a modern radiological imaging techniques and their application insolving clinical stomatological problems.

- Understands the main principals of Radiological Quality Assurance and quality control.

- Understands and appreciates the role of different modern radiological imaging modalities.

- Is competent in regarding the hazards of the ionising radiation and is competent in using protective measures for the patients and the staff.

4. Hours in the Curriculum

The teaching programme comprises:

Lectures	14 hours minimum	Seminars & Interpretations	44 hours
Practical radiography 100 hours in total (small groups of 3 participants)			

5. Method of Learning/Teaching

Methods of learning include lectures, groups seminars, practical instructions of radiographic techniques, processing and radiation protection in small groups.

6. Assessment Methods

Final examination (at the end of the 5th semester).

7. Strengths

- The content of teaching is constantly updated.
- Integration of theory and practice.
- Integration with other parts of clinical radiology.

8. Weaknesses

- Shortage of qualified staff.
- The lack of funds makes difficult introduction of a modern teaching equipment.

9. Innovations and Best Practices

10. Plans for Future Changes

- Publishing of a new textbook of oral radiology.
- Introduction of modern audio-visual teaching equipment.
- Development of on-line radiology library including images of clinically relevant and didactic cases.
- Increasing the number of teaching staff which will decrease the number of participants within small groups

VISITORS' COMMENTS

Oral Radiology deals with radiation protection and diagnosis and teaches techniques of radiography. An oral examination is held but there is no formal test of practical ability. The visitors would suggest that a test of competence be developed.

Section 14

Oral Medicine

14.1 PROPEDEUTICS FOR ORAL MEDICINE

Name: Prof. Uros Skaleric D.M.D., Ph.D.

E-mail: skaleric@ibmi.mf.uni-lj.si

1. Introduction

Propedeutics for Oral Medicine Course consists of the fundamentals of the interview, the principles and procedures of clinical examinations, the methods of identifying oral disease and the rationale for oral pathology.

2. Primary Aims

To provide dental student sufficient knowledge for taking dental and medical history, clinical examination of oral and periodontal tissues and teeth, radiographic and supplementary examinations and elements of the diagnostic methods and treatment planning.

3. Main Objectives

The student should be able to:

- recognise signs and symptoms of oral diseases
- take medical and dental history
- perform clinical oral examination of soft tissues, periodontium, teeth and occlusion
- interpret normal landmark and pathological finding of ortopan and intraoral radiographes
- to understand needs for supplementary bacteriological, blood, urine and biopsy examination of patient with oral disease
- make diagnosis and treatment planing for oral diseases

4. Hours in the Curriculum

15 hours of lectures in the 6th semester of the 3rd year

5. Method of Learning/Teaching

Year 3 – 15 hours of lectures

6. Assessment Methods

Written test with 25 multiple choice questions at the end of the Course.

7. Strengths

Dedicated clinical staff teach course before clinical training in Oral Medicine and Periodontology.

8. Weaknesses

Students do not have possibilities for pre-clinical training of rootscaling and planning on phantom heads.

9. Innovations and Best Practices

10. Plans for Future Changes

Clinical

l training of propedeutics among students and pre-clinical training of RSP on phantom heads.

11. Visitors Comments

14.2 ORAL MEDICINE

Name: Prof. Uros Skaleric, D.M.D., Ph.D.

E-mail:skaleric@ibmi.mf.uni-lj.si

1. Introduction

The Oral Medicine Course include teaching of the full spectrum of oral mucosa and salivary gland diseases and disorders

Primary Aims

The primary aims of the course is to provide the dental student with sufficient knowledge for diagnosis and basic management of the most common oral mucosa and salivary gland diseases and disorders and recognition of manifestations of systemic diseases and drug therapies in the oral cavity.

Main Objectives

The students should be able to understand aetiology, clinical presentation and management of the following oral mucosa disease and disorders:

- Developmental anomalies and genetic disorders
- Oral lesions due the drugs
- Diseases of the tongue
- Diseases of the lips
- Viral infections including HIV
- Bacterial infections
- Fungal infections
- Diseases with oral ulcers manifestations
- Lichen planus and visiculo-bulhors disorders
- Haematological disorders
- Nutritional disorders
- Manifestations of endocrine diseases
- Benign tumours and precancerous lesions
- Malignant neoplasm's
- Salivary gland disorders

Hours in the Curriculum

15 hours of lectures and 30 hours at clinical training in the 9. semester of the 5th year.

5. Method of Learning/Teaching

Besides 15 hours of lectures, students have the possibility to see and diagnose cases sent to clinic of Oral Medicine during 4th, 5th and 6th years of training.

6. Assessment Methods

Diagnosis of 3 oral mucosa diseases or disorders from the slides and assessment of the aetiology, pathogenesis and basic management of the disease and disorders presented

at the slides.

7. Strengths

Dedicated teaching staff specialised in Oral Medicine.

8. Weaknesses

Limited number of patients with different oral mucosa diseases and disorders. Time table rarely permits long term follow-up of patients with chronic conditions.

9. Innovation and Best Practices

The Oral Medicine is serving as a Consultant Department for patients with Dermatological, Haematologic, Diabetic and Infectious Diseases Clinic at the Clinical Centre Hospital.

10. Plans for Future Changes

It is intended to involve dental students in the management of high risk dental patients with infectious diseases and the immune compromised.

11. Visitors Comments

14.3. ORAL PATHOLOGY

Name: Prof. Nina Gale, M.D., Ph.D., Assit. Prof. Nina Zidar, M.D., Ph.D.

E-mail: gale@ibmi.mf.uni-lj.

1. Introduction

Oral pathology is taught in the 1st semester of the third year as a separate Dental Course. The students attend oral pathology lectures including block of practical classes.

Pathology is examined in the 2nd semester of the third year.

2. Primary Aims

-To develop an appropriate understanding of oral disease processes from the basic mechanisms of diseases

-To develop a knowledge of the most frequent oral lesions of both hard and soft tissue including oral manifestations of systemic diseases

3. Main Objectives

- To teach how changes in the structure and function of organs relate to the clinical presentation and management of diseases of the mouth

- To define the basic characteristics of diseases (including etiology, pathogenesis, epidemiology, and morphology) with special emphasis of the need for clinicopathological correlation

- To give dental students a knowledge of the range of diseases which may present in the oral cavity and associated tissues (cysts of the oral region, odontogenic tumors, epithelial disorders, infections, immune mediated diseases, salivary gland diseases).

4. Hours of Curriculum

12 hours for oral pathology 15 hours optionally for autopsies

5. Methods of Learning/Teaching

Lectures (2 or 3 hours per week), practical classes (2 hours of histopathology or gross pathology per week). The classes are held using multi-head microscope and individually (with supplied handouts to work their way through samples easily).

6. Assessment Methods

- 4 class examinations

- at the end of the course MCQ and oral examination

7. Strengths

Course is taught by experienced staff actively practicing Oral Pathology and Surgical Pathology.

8. Weaknesses

- General Pathology is running in the 2nd semester of the second year and the Course of Oral pathology in the 1st semester of the third year.
- The Course is introduced too early for a productive link-up with clinical courses.
- Insufficient integration with Oral Surgery and Oral Medicine Teaching.
- Not enough hours for to Oral Pathology.

9. Innovations and Best Practices

- Recent review of entire Pathology Course with a group of qualified staff to examine and refine exactly what is relevant in this area to dental education.
- Practical course is designed to assist the theoretical course, with detailed handouts.

10. Plans for Future Changes

- The Course should run in the 3rd year.
- We plan to dedicate more hours to Oral Pathology (this year we will dedicate 23 instead of 13 to Oral Pathology).

VISITORS' COMMENTS

This course deals with history taking and the diagnosis of oral and dental diseases. There seems to be little collaboration with Internal Medicine. The course refines knowledge gained earlier and relates it specifically to dentistry.

There are plans for pre-clinical training of scaling and root planing techniques on manikins.

The curriculum now places more emphasis on Oral Medicine.

Oral Pathology is not a special course but is studied in General Pathology although the course is specifically designed for stomatology students. It is difficult for students at that relatively early stage of the course to relate this to clinical conditions that they will not encounter until later in the course. The staff felt that some degree of vertical integration would be desirable and the visitors agreed with this view.

Section 15

Medical Emergencies

15. MEDICAL EMERGENCIES

Name: Assoc. Prof. Andrej Baraga., M.D., Ph.D.

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1. Introduction

Medical Emergencies is aimed to help student to understand the state of health (injuries and some diseases), which sudden menace human's health and life. The curriculum provides the student with the basic knowledge for sufficient help, which is expected from the student of Stomatology. Besides the practical knowledge students get acquainted with the emergency state, which is taught at clinical subjects in details.

2. Primary Aims

- to introduce students to the diseases, which endanger human's health
- to enable the students to rescue human's life

3. Main Objectives

At the end of the course the student is acquainted with the emergencies steps for life rescue:

- be able to prevent suffocation,
- be able to stop bleeding
- to know the basic methods of reanimation, basic methods with injuries, fractures, at poisoning and at internal emergencies.

4. Hours in the Curriculum

Winter and summer half: 45 hours; Lectures - 30 hours, practical - 15 hours.

5. Method of Learning/Teaching

Lectures once a week in winter half and summer half, 4 hours of reanimation. Practical in summer half in small groups, 4 hours seminars of reanimation in groups (5-6 students), 11 hours practical from surgery emergencies in 4 parts (2-3 hours, 13 students in group).

6. Assessment Methods

Students have the test and practical demonstration of the reanimation a week before the exam from medical emergencies. The anaesthesiological part of the exam they pass at the Department of Anaesthesiology and Resuscitation, the writing part (MCQ) at the Department of Surgery. If the students pass the first part, they can do the final exam.

7. Strengths
8. Weaknesses
9. Innovations and Best Practices
10. Plans for Future Changes

VISITORS' COMMENTS

The teaching of some aspects of this course is shared with the Department of Anaesthesiology and other disciplines. The course is regarded as being useful to the community in providing a cohort of professionals who have a measure of skill in assisting in emergency situations.

Section 16

Behavioural Sciences

16.1 FORENSIC MEDICINE

Name(Assist. Prof. Branko Ermenc, M.D., Ph.D.

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1. Introduction

The course is held one semester in 6th year of the study and students get basic information about forensic pathology, identification of deceased person, forensic toxicology, head injuries and penal and health jurisprudence. Students also get practical lessons about identification procedures, the role of dental records, bite marks and dentures and the role of odontologist in the mass disasters.

2. Primary Aims

To ensure that stomatologists should be familiar with legal and forensic principles relating to practice and that they will be able to assist the police in the identification of deceased person.

3. Main Objectives

- basic information about forensic pathology
- understanding of mechanisms of injuries, especially cranial, facial and teeth injuries
- the role of expert work in the odontological practice
- being familiar with main identification procedures and use in practical work
- being familiar with health laws and human and patients rights
- to learn about rules, responsibilities and rights in own practice

4. Hours in the Curriculum

30 hours of lectures and 15 hours of practical teaching

5. Methods of Learning/Teaching

Mainly by formal lectures and demonstrations (including autopsy demonstration).

6. Assessment Methods

Final exam (multi-choice questions test or short essay)

7. Strengths

Teaching give the best results in small groups in a case-based way with use of multimedia by staff familiar with practice.

8. Weaknesses

Limited staff time, material resource and available time for the course.

9. Innovations and Best Practices

10. Plans for future changes

VISITORS' COMMENTS

In Forensic Medicine, basic information about forensic pathology is provided and the course concentrates on forensic aspects of stomatology. Interactive computer teaching techniques are employed. Attendance at some autopsies is obligatory.

The course is not popular with the students.

Professional Indemnity Insurance was made compulsory by law this year.

16.2 ETHICS, LAW, DEONTOLOGY

Name: Assist. Prof. Joze Balazic, M.D., Ph.D.

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1. Introduction

The following information describes the deontological and ethics teaching in the existing medico-stomatodental curriculum. This course is managed by the deontological staff of the Department of forensic medicine and medical deontology and occurs in the second year of the dental study and is a 15-week course. This is an interactive small group session involving the use of video and practical cases.

Primary Aims

To establish and understanding of the subjects of deontology and ethics as they relate to dentistry.

Main Objectives

- the student will have a clear understanding of some key principles underlying the ethical and deontological practice of dentistry
- the student will be able to apply these principles to dental cases
- the student will be able to discuss ethical and deontological dilemmas in an informed way and form a view as to an ethical course of action

Hours in the Curriculum

Year 2 – stomatodeontology, ethics and law

-15 hours over 15 weeks, allocated to a combination of lecture, seminar and joint preparation time

Method of Learning/Teaching

Mainly by formal lecture and demonstration

Assessment Methods

From time to time deontological and ethical and legal questions are set in the Finals Examination

7. Strengths

8. Weaknesses

Limited staff time to develop this subjects area in the future

9. Innovations and Basic Practices

-improved continuity and coherence to the course resulting from the appointment of appropriate teaching staff

- improvement in students ability to present balanced arguments on issues by the end of the course
- the introduction of a new teaching format (lecture-seminar-essay) from previous format of lectures and short-note class test.

10. Plans for Future Changes

- To integrate more fully wiith a course encompassing ethics, deontological, law, jurisprudence and forensic matters.

11. Visitors Comments

16.3 PSYCHOLOGY

Name: Assoc. Prof. Onja Tekavcic, B.A., Ph.D.

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1. Introduction

Medical psychology is taught in the 6th year of the study of stomatology (30 hours in the summer semester). The curriculum provides the student with the basic knowledge of the human mental functioning.

2. Primary Aims

Primary aims are to introduce the characteristics of human feelings, behaviour, motivation and cognition and how to understand the mutual influence between the physical and psychological functioning of the stomatologic patients.

3. Main Objectives

- The main objectives of teaching the medical psychology are:
- what is psychology and how it can help the practising stomatologist,
- understand: the basic theories of personality, motivation, emotions, defence mechanisms,
- how to understand and react to different psychological reactions connected to pain, illness, stress, different crisis connected to the present illness,
- life cycle and its influence on the patient (child, adolescent, adult, elderly)
- communication between the patient-dentist-family-other members of the team and the influence of these relations to the well being of the patient.

4. Hours in the Curriculum

30 hours in the summer semester - lectures, based on presenting the case studies to illustrate theory, but no practice.

5. Method of Learning/Teaching

Lectures with possibility of personal and group consultation. Dividing into small groups and exercising on some case material.

6. Assessment Methods

Assessment is done by a written MCQ.

7. Strengths

Stomatologists can learn the basic knowledge with some case vignettes on human psychological functioning and become aware of their own input into the liaison between the patient and the professional to get the best result in terms of treatment of the patient.

8. Weaknesses

- Besides the lecture hours the students should be able to have more time to practise their communication skills and their practical work with different kind of patients.
- One teacher is not enough to expand the curriculum.

9. Innovations and Best Practices

Offer different topics to the students in forms of active seminars and workshops.

10. Plans for Future Changes

Offer consultation and supervision on the particular stomatologic patients where students are met with some psychological problems or obstacles in their own treatment (individually and possibly in groups). The basic requirement for expanding would be more teachers for the subject.

Section 17

Examinations, Assessments and Competencies

17. EXAMINATIONS, ASSESSMENTS AND COMPETENCIES

Name: Prof. Uros Skaleric

17.1 Overall Approach of Assessments

Student awards the Doctor of Stomatology degree at Faculty of Medicine after successfully pass all compulsory obligations and exams. Until graduation comprehensive assessment procedures are in place to monitor subjects knowledge, practical skills and professional attitude of each student.

All examination and assessment procedures until graduation are in accordance with the standing orders of the University of Ljubljana and are defined in Examination Regulations of Faculty of Medicine.

According to these regulations, there are different possible forms for assessment of student(s) knowledge: final exams, colloquies, seminar works and evaluation of practical skills.

At final exams all the knowledge's, fixed in the study plan are assessed. Final exam could be performed in written, oral or practical form or any possible combination of these formations. In the study plan the form for any particular exam is precisely defined. The exam is assessed by single examiner of examination commission. The person who participate in these examination procedures should be the habilitated university teacher. The examination commission is employed if the student is performing the exam fourth, fifth or sixth time or if the student lodges the complaint about the examination procedure.

Oral examinations are public. The mark of such an exam should be announced at the day of the occurrence.

Written examinations should last at least an hour and at most four hours. The value of each question should be indicated. The mark of such an exam should be announced in five days. Each student has the rights of insight into his/her own censored written exam.

If the exam is performed in written and oral or practical form, the positive mark of the written exam is prerequisite for accession to the oral or practical exam. The positive mark of the practical exam is the prerequisite for the accession to the oral exam. If the student is performing the exam third, fourth, fifth or sixth time, he/she is permitted to accede the oral exam despite the negative mark at written or practical exam.

In order to verify the simultaneously progression in students knowledge there are also colloquies, seminar works and evaluation of practical skills during the semester beside the final exams. The student is allowed to enter the final examination only after successfully passed these inter-semester obligations and/or successfully completed

the practical work and fulfil all the requirements of treated cases. The number of the inter-semester examinations varies among different subjects, but in each clinical subject it is an obligation before the beginning of the clinical work. Practical work is registered during the course on specially designed booklets or protocols and clinical cases treated during clinical practice are presented and discussed during the final exam. All the principles as for final exams are considered at these inter –semester assessments.

According to the standing orders of the University of Ljubljana, the assessment is performed on the basis of the following numerical grade scale:

- 1 to 5 – insufficient knowledge,
- 6 – sufficient knowledge,
- 7 – good knowledge,
- 8 or 9 very good knowledge,
- 10 – excellent knowledge.

For some subjects, the assessment of passing the exam is descriptive (passed or not-passed).

To pass the exam in general 55% of correct answers is required and for better grades additional 10 % is required. There are also some exceptions regarding this instructions because of different formats of assessment.

The mark obtained is entered into the examination protocol and also into the index if the mark is positive. Before the entry, the mark should be explained to the student. If the student considers, he/she could get the better mark, he/ she has the rights to withdraw the exam.

If the student considers that he/she was unjustly evaluated, he/she has the opportunity to complaint to the dean. The dean nominates the three-members commission which evaluates student(s) knowledge again within the defined period. The complaint against the commission mark is not possible.

If the student does not pass the exam successfully, he/she has the opportunity to repeat the exam four times (in special circumstances five times). It is not possible to repeat the exam in the same examination term, but it is possible to repeat it in the same examination period if the examination terms are at least two weeks apart. The fourth and the fifth repetition of the exam is evaluated by commission of two members and the sixth repetition is evaluated by the commission of at least three members.

At the public announcements of the examination results, the chippers should be used instead of the students names.

At the beginning of each school year students representatives are gathered with professors and teachers in order to set up the examination terms. The examination terms are ordinary and extraordinary.

There are three ordinary examination periods (winter, spring, autumn) and ordinary

examination terms should be within these periods. There should be at least three examination terms per year available to perform each exam and these should be located in the period between the end of the lectures and the end of the inscription term for the next year.

The design and content of the exams are tailored to the characteristics of the subject.

Examination review sessions provide feedback and a useful learning opportunity for the students.

17.2 How much does the Faculty rely on Exams to motivate Students?

Passed inter-semester examination are the prerequisite for assessment to the final exam. This way the continuous learning is stimulated in as least threatening manner as possible. Before clinical work such examinations are obligatory, because students cannot accede to patients without required knowledge.

Practical work is assessed continuously through the collaboration of students and teachers during the practical course. This way the transgression from theoretical knowledge to practical work is facilitated. On the end of the practical course the student's knowledge is evaluated by the teacher.

Additional motivation is also achieved because the student has to fulfil all the required conditions

(pass all the compulsory exams) if he/she wants to progress in the next study year.

REQUIRED EXAMS FOR THE PROGRESSION IN THE NEXT STUDY YEAR:

Second year

Biophysics, Biochemistry 1, Cell Biology, Anatomy

Third year

Histology & Embryology, Tooth Morphology, Biochemistry 2, Physiology, Microbiology & Immunology

Fourth year

Pathology, Pathophysiology, Pre-clinical Prosthodontics, Colloquium for Oral Diseases, Colloquium for the Tooth Diseases and Endodontics

Fifth year

Gnathology & Occlusion, Pharmacology, Internal Medicine

Sixth year

Infectious Diseases and Epidemiology, Dermatovenerology, Otorinolaringology, Ophthalmology

17.3 Strengths

-Collaboration of students and teachers in setting the date of exams enables harmonisation of studying obligations and enables the students to prepare well for each final or inter-semester exam.

-Continuous collaboration of the student with teachers during the clinical work enables progression in students skills synchronous with evaluation of their knowledge in non-threatening manner.

-Members of our staff attend courses on education and assessment in order to ensure quality of tuition. All assistants have to pass the exam of High Educational Didactic on University of Ljubljana.

-Optional oral exam is enabled to achieve better marks if students are unsatisfied with the mark. It is possible to invite external observer to such examinations.

17.4 Weaknesses

-There are too many assessments and examinations and these need to be reduced in time.

-Rigidity of the assessment methods, because they should be in accordance with the standing orders of the University of Ljubljana.

17.5 Plans for Future Changes

More comprehensive assessment of the clinical work would be desired, to separately evaluate different aspect of clinical work (theoretical knowledge, practical skill, professional ethics).

17.6 Involvement of External Examiners

There are no external examiners involved in the assessment procedures.

17.7 Formal Completion of an Exam Required of the Faculty for Students to Qualify and Register as Dentists

Student awards the diploma of Doctor of Stomatology after successfully pass all compulsory obligations and exams. After graduation one year clinical internship under supervision of mentors is an obligation to accede to state exam on

VISITORS' COMMENTS

The students are subjected to examinations in 48 subjects in total. A "Final Examination" as such does not take place. The student may graduate once all of the 48 intermediate assessments have been completed.

Course leaders have the power to determine the nature of the assessment at the end of a course. Short answer questions and MCQs form the basis of the assessments at the end of most didactic courses. On the basis of continuous assessment schemes, 20 per cent of students are exempted from the written examinations in some subjects and receive only an oral examination.

The Dean of the Dental School expressed the opinion that a system of External Examiners would be beneficial, but language would be a problem and there was little enthusiasm elsewhere for the idea.

We were told by the senior staff of the Department of Stomatology that poor students may be required to repeat one or exceptionally two years of study. The students themselves confirmed that only a minority of students graduated on time after 6 years, with most requiring at least one extra year. This appears to be a consequence of the overcrowded curriculum, particularly first and third years. In the opinion of the visitors this is a problem which needs to be addressed as a matter of urgency.

Competency is regarded as being more important than numbers of individual procedures and the school is currently developing a system of competency assessment.

Section 18

Other Influences

18. OTHER INFLUENCES

18.1 Regional Oral Health Needs

The results of the epidemiological surveys conducted in Slovenia show a substantial decline in dental caries, pronounced mainly in children and adolescents. According to these surveys, 30% of the six years olds were caries free, at 12 years DMFT index was 1.8, at 18 years 72% were without extractions and at 65 33% were edentulous. This is attributed to a growing programme of preventive measures that encompass increasing proportion of our population (fluoride treatment, dental health education, fissure sealing).

In contrast to dental caries, periodontal disease remained widespread in our population. In general 97% of population has some form of periodontal disease and 20 % require complex periodontal therapy. Thus the most rational approach to the problem of periodontal disease lies in prevention, which should be directed mainly into better oral hygiene. The need for the School for Dental Hygienists is emphasised.

Orthodontics anomalies occur in every third individual between 6 and 18 years. Since they are to a large extent unpreventable, prevalence cannot be substantially reduced.

Disorders of the oral mucosa are comparatively rare. Cancer incidence and survival of cancer patients has been monitored by the cancer registry of Slovenia since 1950. In the period of 1961-1991 the incidence of the lip cancer in man decreased (from 5.1/100.000 in 1961 to 2.3/100.000 in 1990) while that of the tongue (from 2/100.000 in 1961 to 3.9/100.000 in 1990) and oral cavity cancer (from 1.5/100.000 in 1961 to 5.8/100.000 in 1990) increased. The incidence of lip cancer is four times lower and for tongue and oral cavity cancer ten times lower in females in the same observation period (1961-1990).

18.2 Involvement In Other University Activities and Sport

Students spend their study years within the University environment and they have access to all recreational and cultural facilities of the Faculty of Medicine and University of Ljubljana. Some students participate in the Chorus of the Faculty of Medicine, Orchestra of the Faculty of Medicine and sport teams of the Faculty of Medicine for different sports disciplines. These way students have close social, sporting and cultural ties with the other Faculties, comprising University of Ljubljana.

SIDSIC is a association for the international activities of the Slovene dental students founded in 1992. It is a member of the International association of dental students (Iads) and European dental students organisation (Edsa). It(s main activity is to organise students practices in different countries, like Spain, Germany, Sweden and Macedonia. SIDSIC also organises practice for foreign dental students, visiting our country, and it also other activities for these students (ski-week, picnic,...).

18.3 Recreation

Students of the Faculty of Medicine have access to many recreational facilities of University of Ljubljana. These sporting facilities are swimming pool, gym-hall, fitness centre and others and in general students avail of them. During the first three years one hour participation per week in one sport discipline is an obligation and later an option for the students. Students of Division of Stomatology have a strong sporting reputation in many fields and over the years some were represented the Faculty of Medicine in different sport activities.

18.4 Students Selection Procedures

From 1961 till 1995 the selection of students was based on the entrance exam including chemistry, biology, physics and foreign language. In that period 50 students were admitted out of 140 to 150 candidates.

Since 1995 the students are selected according to the maturation exam results and according to the marks obtained during the last two years of secondary school. From 100 – 120 candidates, 40 with the best results have been selected.

In the year 2000 we are planning to increase the number of students to 48 in the first year.

18.5 Labour Market Perspectives

There is 1276 registrated dentists in Slovenia and more than half of them are at least 50 years old. Female dentists represent 65 % and male dentists 35% of the total population.

Currently there is difficult for our graduates to be employed in Health Centre in Ljubljana, but there is enough possibilities to get a job elsewhere in Slovenia.

In the next ten years the decrease in the ratio dentist/patients is expected.

VISITORS' COMMENTS

We were told that the motivation of young graduates has changed in recent years. In the past an academic career was the aspiration of the best graduates and young people were attracted by good professors. Nowadays, the attractions of private practice, particularly the economic aspects, mean that recruitment of academic staff is becoming a serious problem. The visitors and the staff of the Department of Stomatology all recognised that this is becoming a worldwide problem.

Section 19

Students Affairs

19. STUDENTS AFFAIRS

Name of the students representatives who will meet the visitors:

Sixth year:	Mr. Vogelnik Joze
Fifth year:	Mr. Matjaz Recelj
Fourth year:	Mr. Jure Poglajen
Third year:	Miss Stegel Petra
Second year:	Mr Jamsek ure
First year:	Miss Jerse Tina

VISITORS' COMMENTS

Student Opinions

- **There appears to be no effective staff/student committee. The students believe that they should be given the opportunity to contribute more effectively to decision making within the Division of Stomatology: particularly with regard to the timing of examinations, teaching and learning methods and the implementation of total patient care.**

The visitors would strongly support this view.

- **Basic medical training is acknowledged to be very strong but the students feel that some subjects are studied in too great a depth. However, the students do believe that their extensive medical training allows them to treat their patients with greater confidence.**
- **The students expressed the opinion very forcibly that there are too many examinations with not enough time in the appropriate years for the examinations to be completed, with the result that they had to be deferred and taken in later years. The problem would appear to be most extreme in 3rd Year but we were told that the 4th and 5th Years are also very congested. The students often have to defer taking examinations until the 6th Year. This creates difficulties because the teaching is then temporally separated from the examination. The students believe that a complete change in the system is required and they believe also that individual courses should be compressed and each closely followed by the relevant examination. All medical subjects should be completed by the end of 5th Year.**
- **The students informed us that they do not have enough time for total patient care and that not all departments are supportive of this concept. The maintenance of separate departmental waiting lists makes this aspect of teaching even more difficult.**
- **Staff/student ratios in the departments of the Division of Stomatology are very variable.**

- They reported that there is a lack of clinical facilities which results in very limited opportunities for clinical practice for 6th Year students at a time when their practical skills are reaching a peak and they are beginning to concentrate on their future careers. They claimed to have too much study time when they should be preparing instead for independent clinical practice.

Nonetheless it appears to the visitors that the clinical experience gained by students in Ljubljana is comparable to that achieved by dental students elsewhere in Europe.

- The students reported that there was considerable variation amongst the stomatology staff in the amount and usefulness of the feedback provided.
- There does not appear to be any provision for student support services to help those students experiencing difficulties with the course or those who may have any other problems of an emotional or financial nature for example, except for those services provided by the University Student Union. These services are difficult for stomatology students to access because they are located elsewhere in the city.
- With regard to career intentions there appeared to be a clear differentiation between those students from a dental family background and those from other sections of society. The former appeared to see their future in private practice whereas the latter were more prepared to consider an academic career which appeared to them to offer more predictable career opportunities.

Opinions of Junior Staff and Recent Graduates

- A lack of facilities and suitable patients and supervisory staff in Oral Surgery is a problem. There is also limited experience of fixed prosthodontics, made worse by the lack of integration of Departments. The length of waiting lists does not mean that patients are actually available for treatment by students, the other problems of staff and facilities being a more important limiting factor. Extending the working day might help. Lack of experience of periodontal surgery also.
- No problem with amount of medical training.
- Junior staff spend at least 12 hours per week in clinical supervision and 20 hours treating patients. This leaves nominally 8 hours for research (one day per week) although this time was often eroded by the necessity to cover patient and teaching duties.
- Salary levels are low and problems of recruitment are just starting.
- There are no research facilities within the dental clinic.
- Intra-mural private practice or permitted sessions in outside private practice were desirable as a means of addressing the discrepancy between academic salaries and those in private practice.
- It was felt that the disproportion between academia and private practice will get worse over time. Already, staff are leaving.

- **Opportunities for attending meetings may be limited. Although it is possible to travel, especially if staff are presenting, it is difficult to obtain results because research time is limited and travel funds are scarce.**
- **90 per cent of students take 7 years or more to graduate. The problem is that students get held up in first year. Third Year is also seen to be difficult. Biochemistry, pathophysiology, pre-clinical prosthodontics and dental materials are seen to cause particular problems.**
- **Research is also constrained by lack of basic facilities such as office and desk space and computer equipment.**

Opinions of Intermediate Grade Staff

- **In theory one day per week is allocated for research but this time is not effectively protected.**
- **The visitors would suggest that staff should have protected time for research.**
- **Research is important not only for the individual and his/her promotion but also for the University and so the University should ensure that time and appropriate facilities are available.**
- **Intra-mural private practice would improve the attraction and retention of academic staff.**
- **Integrated restorative care is possible.**
- **Basic science and medical courses are not orientated towards dentistry.**

19.1 Basic Data from Faculty of Medicine – Division of Stomatology

Number of dental students graduating per year: 35-45

Average number of dental students qualifying to the first year: 48

Length of course: from 1949 -1989: 5 years after 1989: 6 years

Is there a separate period of vocational training following graduation as dentist in your country? YES

If yes to d) above, is that organised by the University/ Dental School?

NO

19.2 Postgraduate Courses

- Master of Stomatology Sciences (2 years)

- Speciality of Dental Diseases and Endodontics (3 years)

Speciality of Periodontology (3 years)

Speciality of Prosthodontics (3 years)

Speciality of Orthodontics and Jaw Orthopaedics (3 years)

Speciality of Preventive and Paediatric Dentistry (3 years)

Speciality of Oral Surgery (4 years)

Speciality of Maxillofacial Surgery (6 years)

- two semesters postgraduate Course in Preventive and Paediatric Dentistry

- one semester postgraduate Course in Periodontology

19.3 Auxiliary/Technology/other Courses and State Number who qualify per Year

For dental assistants a 6 month course after graduation from secondary school for medical nurses is needed.

Dental technicians have a separate school on the secondary level. There are 30 graduates per year.

There are plans to open the School for Dental Hygienists

VISITORS' COMMENTS

The visitors met with with Nursing and Dental Technology Staff and were impressed by the obvious dedication and enthusiasm they displayed.

Nursing Staff

Within the Department of Stomatology there are a total of 33 nurses. Half are employed by the Ministry of Education and half by the Ministry of Health. There is no functional distinction dependent upon the employing authority.

Education:

- **There is, at present no specific programme, for dental nurses although there are plans to introduce such a programme later in the year 2000. There is some concern amongst the nursing staff over the mechanism for funding this proposed course.**
- **Head Nurses on clinics are Registered Nurses who have undergone a minimum of three years General Nurse training.**

Cross-infection control:

- each department has its own sterilising facilities.
- all nurses are immunised against Hepatitis B.
- standardised instrument packs are employed.
- there are special arrangements rather than “universal precautions” for known HIV patients although “universal precautions” are employed for the remainder.
- within the Division of Stomatology there is a weekly meeting of the Chairman of the Department, the Head Nurse and representatives of dental and X-ray technicians.
- There is good support for the concept of the Dental Hygienist. Entry should be for trained General Nurses who have undergone additional Dental Nurse training.

Technical Staff

- there are 25 in total in separate specialised laboratories. 7 are funded by the Ministry of Education and the remainder by the Ministry of Health. There is no functional distinction between the groups with different employing authorities.

Section 20

Research and Publications

Number of publications in refereed journals:

Publications for each Department by Year: 1997

1998

1999

total

Department of Preventive
and Paediatric Dentistry

1*

0

0

2**

1*

2**

Department of Dental and
Jaw Orthopaedics

0

0

0

2**

0

2**

Department of Maxillofacial
and Oral Surgery

1*

6**

0

1**

5*

1**

6*

8**

Department of
Dental diseases

2*

8**

0

4**

4*

10**

6*

22**

Department of Oral Medicine and Periodontology

1*
 1**
 2*
 23**
 1*
 3**
 4*
 27**

Department of
Prosthodontics

3*
 6**
 1*
 7**
 2*
 1**
 6*
 14**

Total

8*
 21**
 3*
 35**
 12*
 19**
 23*
 75**

* number of publications in international refereed journals

** number of publications in national refereed journals

Number of textbooks published by staff: 2

20.3.Number of chapters in books: 1

20.4.Grants received over 1000 Euro: 6

20.5.Number of invited presentations at international meetings: 21

Visitors Comments

Considering the demands on the faculty, the visitors were encouraged by the amount of research , as evidenced by the amount and quality of articles published in national and international peer reviewed journals. This may be, at least in part, due to promotion to docent being contingent on strict publication.

Section 21

Quality Development

21. QUALITY DEVELOPMENT

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1. Introduction

Quality development is an integral part of a continuous monitoring of education programme. Quality development of educational process is based on continuous evaluation of the course content, staff and student progress.

2. Course Content

Curriculum of stomatology was reshaped eleven years ago when extension from five to six years course was introduced. The curriculum put emphasise on prevention of oral and dental diseases. However, these subjects are probably taught to late in the curriculum (in the sixth year). The problem based learning and treatment are only in the early stage of development.

3. Staff Development

-All new staff must attend the course at University Didactic Programme, where knowledge about teaching and examinations are taught.

-All staff have once a week seminar where each member of the staff once a year report of his/her research results in the last year.

-In the last two years University introduced a comprehensive questionnaire for students answering about assistants and professors performance during the last academic year.

4. Student Progress

Student's progress is monitoring continuously during the course and particular attention is given to clinical skills.

Stomatology curriculum as a part of Faculty of Medicine offers to students close interrelationship with students of medicine and put an emphasis on the holistic approach and connections between oral and systemic health.

pharmacology and therapeutics

CLINICAL CENTRE
Dental Clinic for Oral and Maxillofacial Surgery

CENTRAL MEDICAL LIBRARY

SENATE OF FACULTY OF MEDICINE

ADMINISTRATION BOARD OF FACULTY

FACULTY OF MEDICINE

Dean of Faculty of Medicine

Three Vice - Deans

UNIVERSITY OF LJUBLJANA

Rector of University

DIVISION OF STOMATOLOGY

DIVISION OF MEDICINE

FACULTY SECRETARIATE

Chief Administrative Officer

- Institute of Anatomy
- Institute of Biophysics
- Institute of Biochemistry
- Institute of Cell Biology
- Institute of Biomedical Information
- Institute of Pharmacology
- Institute of Physiology
- Institute of Histology & Embryology
- Institute of Microbiology and Immunology
- Institute of Pathology
- Institute of Patophysiology
- Institute of Forensic Medicine and Deontology
- Institute of History of Medicine and Stomatology
- Institute of Hygiene, Social and Occupational Medicine
- Department of Infectious Diseases and Epidemiology
- Department of Internal Medicine
- Department of Surgery
- Department of Neurology
- Department of Psychiatry
- Department of Dermatovenerology
- Department of Radiology
- Department of Paediatrics
- Department of Gynaecology and Obstetrics
- Department of Otorhinolaryngology
- Department of Ophthalmology
- Department of Oncology and Radiotherapy
- Department of Anaesthesiology and Resuscitation
- Department of Preventive and Paediatric Dentistry

Committee for Students Affairs
Committee for Scientific and Research Activities
Department of Dental and Jaw Orthopaedics
Committee for Publishing
Department of Dental Diseases
Committee for Central Medical Library
Committee for Personnel
Department of Oral Medicine and Periodontology
Committee for Faculty Experts Opinions
Commission for Doctorates of Sciences
Department of Prosthodontics
Committee for Research on Laboratory Animals
Department of Oral and Maxillofacial Surgery
CHIEF ADMINISTRATIVE OFFICER
Personnel Service
Service for Students Affairs
Technical Service
Procurement
Service for Accounts and Bookkeeping

Visitors' Executive Summary on the School

Section 22

The DENTED visiting team would like to thank the Rector of the University of Ljubljana, the Dean of the Faculty of Medicine, Professor Miha Zargi, and the Vice-Dean and Head of the Division of Stomatology, Professor Uros Skaleric, together with the staff of the Faculty of Medicine for their generous welcome and hospitality on the occasion of the visit to Ljubljana. We would like also to express our appreciation of the detailed documentation provided in advance of the visit.

The University of Ljubljana consists of a number of faculties in separate locations in the city. The total number of students is close to 40,000. There are 1200 undergraduate students in the Faculty of Medicine of whom 280 are students of Stomatology

The curriculum in Ljubljana is based on an evolution from a traditional one where special training in Stomatology was acquired following a basic medical qualification. In general terms the course consists of three years of predominantly basic and pre-clinical sciences, followed by three years of predominantly clinical studies. The degree awarded after six years is the Doctor of Stomatology (D.M.D.). The visitors feel that this title is appropriate, bearing in mind the similarity in course length and content to the medical curriculum. This undergraduate training is followed by a year of Vocational Training and a State administered Licensing Examination which is predominantly theoretical, although it is intended that an assessment of practical skills should be introduced in the near future.

There are two funding streams for the staff of the Faculty of Medicine. The Ministry of Education provides funding on the basis of a per capita payment for the number of students, although the actual bureaucratic mechanism is for hours of education provided. The second funding stream is from the Ministry of Health and is related to the clinical service provided. There seems to be some variability in that 80 per cent of medical funding comes from the Ministry of Health for Medical staff, whereas in the Division of Stomatology, the ratio is 50 percent from each of the Ministries of Education and Health. Professor Skaleric has a dual role in that he is the Head of the Academic Division of Stomatology and also Director of the Dental Clinic in the Clinical Centre.

In common with many other institutions, the sources and implementation of the funding were not immediately clear to the visitors. However, the Faculty seemed satisfied that Stomatology receives its fair share of the available resources and felt that their representation on decision making bodies within the Faculty and University does not disadvantage Stomatology.

Although those from an odontological background may have difficulty in appreciating the relevance of many of the purely medical aspects of the course, such as obstetrics and gynaecology and ophthalmology, this was justified by the proponents of the modern stomatological approach, based on recent findings linking oral and systemic diseases, such as the linkage between periodontal and cardiovascular disease.

The clinical facilities in the Division of stomatology seem to be generally satisfactory although the planned programme of refurbishment is only partially complete. A number of groups we met questioned whether the facilities are adequate for the number of students who are required to use them. The visitors consider that a Polyclinic would not only alleviate this problem but have substantial advantages in allowing the teaching and provision of total patient care which is an area where the curriculum might be considered to be deficient.

The visitors commend the school on the recent provision of a facility for providing treatment under general anaesthesia for "Special Needs" patients which is a very forward looking innovation from both clinical and educational perspectives.

The lecture theatre facilities for the provision of basic and pre-clinical sciences are outstanding but the Division of Stomatology might like to consider how facilities for small group teaching might be made available since a number of those whom we met indicated that changes in teaching methods towards this type of teaching are under consideration. The multi-disciplinary laboratory equipped with manikin heads is a new facility and is well suited to its purpose.

Lecture based teaching appears to account for approximately 40 per cent of the programme which seems excessive and indeed we were informed that student attendance at lectures is low. A change to other techniques would seem to be necessary.

The visitors would strongly suggest that the Faculty of Medicine consider the establishment of a committee for curriculum development since it appears that discussion between the various interest groups involved in stomatological education is not well developed.

In some departments, clinical and didactic teaching duties, particularly for junior staff, seem to constrain the abilities of the staff to pursue research. This will have an increasingly detrimental effect on staff promotion prospects and we understand that difficulties in recruitment and retention of staff are already becoming apparent.

The Division seems to be well served by its nursing staff and the visitors welcomed the suggestion that dedicated stomatological nurse training is to be introduced and that consideration is being given to the training of hygienists.

It would appear to the visitors that the Basic Science, Para-clinical and Pre-clinical courses might be considered to be excessive in the pan-European context and they appear to cause considerable problems for the students, apparently accounting for many students taking up to two extra years to complete a nominal 6 year course.

With regard to the Human Disease we were informed that this aspect of the course was set up some 30 years ago and that it has changed very little since that time. All staff were agreed that there should now be discussions with the Division of Stomatology with a view to revising the curriculum with particular regard to introducing some teaching in relation to conscious sedation which is an area where the School is significantly out of step with the remainder of Europe.

The purely dental aspects of the curriculum appear to be very adequately dealt with. The visitors however would strongly advise increasing the emphasis on small group teaching methods and providing greater opportunities for total patient care.

We were very impressed by the students we met who were strongly supportive of their teachers and the Division of Stomatology in particular. The visitors noted

however that here is very little opportunity for the student body to voice its opinions with regard to their course. Since the students of the University of Ljubljana now have representation on the University Senate it would seem appropriate to introduce a mechanism within the Division of stomatology for student opinion to have formal representation.

Finally, the visitors wish to congratulate the staff of the Faculty of Medicine of the University of Ljubljana on the quality of the graduates and the educational programme they provide.