



**Medical University  
of  
Gdańsk  
Poland**

**Dental School**

**DentEdEvolves**

**School Visit**

**VISITORS**

<b>Chairman</b>	<b>David Edmunds</b>	<b>Cardiff</b>
<b>Rapporteur</b>	<b>John Appleton</b>	<b>Liverpool</b>
	<b>Juha Ruotoistenmaki</b>	<b>Helsinki</b>
	<b>Corrado Paganelli</b>	<b>Brescia</b>
	<b>George Slawinski</b>	<b>Liverpool</b>

**25-29 May 2002**

## Site Visits

**Visitors Comments are inserted at the end of the relevant Sections throughout the report. A Visitors' Executive Summary is to be found on page 108 – 110.**

### Preliminary Data from Dental Schools

#### 1.7. Basic data on students

a) Average number of dental students qualifying per year: <b>76</b>
b) Average number of dental students admitted to the first year <b>80</b>
c) length of course in years and/or semesters <b>10</b> years/semesters
d) Is there a separate period of vocational training following graduation as a dentist in your country? <b>YES</b>
e) If yes to d) above, is that organized by the University/Dental School? <b>YES</b>

**1.8.** List the Departments or if more appropriate sections within departments in the School and in brackets the total number of whole time equivalent clinical academic staff (i.e. a full-time staff member = 1, a part-time staff member who attends for one half day per week = 0.1, two half days = 0.2 etc.) and assigned to each one

	Departments of Dental School (Subfaculty of Dentistry)	WTE academic staff
1	Conservative Dentistry	( 34 )
2	Prosthetic Dentistry	( 26 )
3	Maxillo-facial Surgery	( 10 )
4	Oral Surgery	( 11 )
5	Peadiatric Dentistry	( 15 )
6	Orthodontics	( 11 )
7	Periodontology and Oral Mucosa Diseases	( 13 )
8	Oral Microbiology	( 11 )

#### Departments of Medical Faculty taking part in education programme for dental students

1.	Clinical Anatomy	( 4,5 )
2.	Histology and Cell Physiology	( 2,6 )
3.	Immunology	( 0,5 )
4.	General Chemistry	( 2,4 )
5.	Biochemistry	( 3,0 )
6.	Biology and Genetics	( 1,0 )

7.	Physiology	( 2,5 )
8.	Biophysics	( 1,9 )
9.	Embryology	( 0,8 )
10.	Laboratory and Medical Informatics	( 1,0 )
11.	Laboratory of Mathematics and Biostatistics	( 0,4 )
12.	Hygiene and Epidemiology	( 1,0 )
13.	History and Philosophy of Medical Sciences	( 0,7 )
14.	Public Health and Social Medicine	( 0,2 )
15.	Sociology of Medicine and Social Pathology	( 0,7 )
16.	Laboratory of Psychology of Medicine	( 0,4 )
17.	Pathomorphology	( 1,2 )
18.	Pharmacology	( 1,3 )
19.	Forensic Medicine	( 0,3 )
20.	Pathophysiology	( 0,7 )
21.	Internal Medicine, Endocrinology and Haemostatic	( 2,9 )
22.	Internal Medicine and Toxicology	( 3,5 )
23.	Infectious Diseases	( 1,8 )
24.	Pulmonology and Tuberculosis	( 0,7 )
25.	Anaesthesiology and Intensive Therapy	( 1,6 )
26.	General, Gastroenterological and Endocrinological Surgery	( 6,2 )
27.	Ophthalmology	( 0,9 )
28.	Dermatology	( 1,3 )
29.	Otolaryngology	( 1,6 )
30.	Paediatrics, Haematology, Oncology and Endocrinology	( 2,8 )
31.	Oncology and Radiotherapy	( 0,5 )
32.	Neurology	( 0,8 )
33.	Psychiatry	( 0,5 )
34.	Obstetrics and Gynaecology	( 0,9 )
35.	Radiology and Nuclear Medicine	( 1,4 )
36.	Emergency and Disaster Medicine	( 0,7 )
37.	Foreign Languages	( 5,7 )
38.	Sport & Physical Exercise	( 1,4 )

**1.9. Number of auxiliaries trained each year**

	Annual Output	Length of course (years)
a) dental nurses	-	
b) technicians	-	
c) hygienists	-	
d) dental therapists	-	
e) other expanded duty auxiliaries*	-	
* please explain	-	

**1.10. Specialist and Higher degree training courses.\*\***

Subject/Speciality	Degree Awarded	Length of Course	Annual Output

## Staff and Resources

### 1.11. Breakdown of staff numbers in Dental School/Hospital (*avoid double counting of any individual*)

		Male	Female
a)	Heads of Departments	3	5
b)	Senior Clinical Academic Staff (Professors, Associate Professors, Readers, Senior Lecturers or their equivalent [in whole time equivalents])	1	19
c)	Senior Research/Academic Staff (excluding those in a) and b) above)	-	5
d)	All other Clinical Teaching Staff (in whole time equivalents)	20	32
e)	All other academic/teaching staff (in whole time equivalents)	-	-
f)	All administrative and secretarial staff	-	16
g)	All nursing and auxiliary staff	-	40
h)	Dental Technical Laboratory staff	2	-
i)	All clinical staff with exclusively service commitments, excluding those listed and who are not involved in academic dentistry	2	5

### 1.12.

	Male	Female
Total number of all staff employed in Dental School (including those listed in question 11 above	28	122

### 1.13.

Annual total salary budget for all staff of institution (1998) in Euros (include all costs even if covered by another faculty/school/institution)	700.000,- Euros
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### 1.14.

What is the approximate ratio of full-time staff to part-time staff in supervision of students' clinical training	1:0
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1.15. What is the average number of hours per week spent by full time **senior** clinical academic staff in treating patients? **6** per week.

### 1.16.

Please indicate the number of hours students spend in <u>patient</u> treatment* (on average) per week:	
a) year 1	-
b) year 2	-
c) year 3	<b>1.5</b>
d) year 4	<b>13</b>
e) year 5	<b>24</b>
f) year 6	<b>(Post graduated ) 40 practice</b>

\* Patient treatment includes oral/dental treatment of actual patients and not simulation or time spent in pre-clinical laboratories.

**1.17.**

Please indicate the number of hours students spend in "simulated" patient treatment (on average) per week (such as mannikin or phantom head laboratory): hours:

a) year 1	-
b) year 2	<b>1.0</b>
c) year 3	<b>4.5</b>
d) year 4	-
e) year 5	-
f) year 6	-

**1.18.**

Total number of patient visits to the Dental School/Hospital per year by department or clinic

	Name/ Department/ Unit	Number of patients
1	Dental Surgery	<b>13.073</b>
2	Conservative Dentistry	<b>14.538</b>
3	Prosthetic Dentistry	<b>6.531</b>
4	Paediatric Dentistry	<b>6.217</b>
5	Periodontology	<b>4.000</b>
6	Orthodontics	<b>8.761</b>
7	Microbiology	<b>450</b>
Overall total (all departments)		<b>53.570</b>

## **Section 1 – Introduction**

### **1.1 Background**

The Medical University of Gdańsk was founded in 1945 and since then has enjoyed the status of a state academic school in this historical city, which is over one thousand year old. It is now one of the largest medical university on the southern coast of the Baltic Sea and is one of the most modern institutions of this kind in Poland. The Division of Dentistry was set up within the Faculty of Medicine in 1947 and forms an integral part of that faculty.

The University continues a long standing tradition of the natural and medical sciences of the Gdańsk Gymnasium (*Gymnasium Gedanense*), set up in 1558, and later renamed as Academic Gymnasium or Gymnasium Academicum. The Academic Gymnasium had a Chair of Medicine and Anatomy headed by distinguished doctors, the most famous of whom was Joachim Oelhafius, a native citizen of Gdańsk, who was widely acclaimed for, among other things, the first public post mortem examination in Poland and northern Europe in 1613. The list of the Gymnasium celebrities also includes Jan Adam Kulmus, a renowned professor of anatomy, who in 1732 edited a big anatomical atlas "*Tabulae anatomicae*" translated into several languages. The Gdańsk Academic Gymnasium boasted a high level of teaching and its graduates were accepted as third-year students at Western European universities.

Between the years of 1935 and 1939, The School of Practical Medicine (*Die Staatliche Akademie fur Praktische Medizin*) functioned in Gdańsk and was turned into Medical Academy (*Medizinische Akademie*) during the World War II (1939-1945). After the war, in 1945, the Medical Academy of Gdańsk was set up by the Polish authorities to be renamed in 1950 to the present name of Medical University of Gdańsk. Among the senior teaching staff of the new University were many distinguished Polish scientists previously active at the Stefan Batory University in Vilnius, who came to Gdańsk after the annexation of Vilnius by the Soviet Union.

Since its foundation, Medical University of Gdańsk has been undergoing of constant growth and dynamic development, with many new departments and clinics coming into life. The University's medical equipment has been modernised and some new buildings have been built, including the student campus, the Main Library. The building that houses the pre-clinical and biological sciences is noteworthy for its three lecture halls and twelve organizational units, that are well-equipped with modern instruments for teaching and research.

In 1998, major renovation and upgrade was performed of four important premises housing some of the departments of the Subfaculty of Dentistry.

Today Medical University of Gdańsk has about 3000 students at three Faculties: Faculty of Medicine with Subfaculties of Dentistry and Nursing, Faculty of Pharmacy, and the Intercollegiate Faculty of Biotechnology. The length of studies at the Medical University of Gdańsk is six years for medicine and five years for dentistry, pharmacy and biotechnology.

Teaching at the Medical University of Gdańsk is carried out by more than 900 academic teachers, over 130 of them being professors. The university campus is fairly compact and vast majority of the academic facilities of the Faculty of Medicine are located within short walking distance. There are three Public Clinical Hospitals affiliated to the University, which altogether have 32 clinical departments with about 2400 hospital beds. The clinics are not only involved in teaching activities for undergraduate and graduate students of medical Faculty and Subfaculty of Dentistry, but also provide highly specialised diagnostic and therapeutic services for the citizens of Gdańsk and neighbouring regions. In fact, the whole population of the central-northern regions of Poland benefit from our University's services, which include, for example, open heart surgery (over 1000 surgeries per year) and bone marrow and kidney transplantation.

An important role in the research and teaching activities of the University is played by the Main Library, whose set of books amounts to 551,500 volumes, and the number of titles of domestic and foreign journals totals 660. The Library provides a computerised, scientific medical information from several world data bases. In recent years the University has gained a broad access to internet and the number of active terminals amounts now to 700.

### **1.2 The primary functions of the institution are:**

- Clinical training and education of undergraduate and postgraduate dental students
- Training and education of dental nurses, dental technicians and dental hygienists
- Research
- Clinical services for patients; the dental clinics serve 1330 patients weekly, approximately 95%-99% of whom are treated by undergraduate students

### **1.3 Visitors comments**

#### **1.4 Curriculum**

As all other dental schools in Poland, also the Subfaculty of Dentistry of the Medical University of Gdańsk has its own, "unique" curriculum, however compliant with general directives from the Ministry of Health.

The revision of curricula was introduced two years ago. There are still many aspects which need to be further refined and developed. At present, all the dental schools in Poland, and also our Subfaculty of Dentistry in Gdańsk, are in the process of major reforms of their curricula, whose aim is to make them compatible with both the changing national requirements and EU standards in dental education at the university level.

#### **General Aims**

- To produce dentists who on graduation are capable of carrying out the independent practice of dentistry at the primary care level, including: oral diagnosis, restorative dentistry, periodontology, orthodontics, oral surgery, oral medicine and pathology, within the context of prevention and health promotion
- To provide an environment that encourages self-learning, scientific analysis, moral values and recognition of societal responsibilities within a broadly-based modern university
- To provide future dentists with an ethical and appropriate scientific foundation for lifelong learning and professional development
- To ensure that the educational programmes fulfil national and EU requirements

#### **General Objectives**

*(these are set out in detail under the different subject headings in section 5-16 inclusive and are only covered in broad outline in this introductory stage of the report)*

- To provide sufficient education and training in the pre-clinical and para-clinical sciences in order to understand and acquire the knowledge and skills required for a competent dentist



- To ensure that students have appropriate understanding of the basic and biological sciences sufficient for them to understand the clinical and para-clinical sciences and also to provide them with a taste of scientific approach to problems in health sciences
- To provide them with appropriate body of knowledge in the science on dental materials compatible with modern dentistry
- To provide competence in and knowledge of human diseases to a level that is compatible with the appropriate and safe management of dental patients including those who require first aid and cardio-pulmonary resuscitation
- To promote a responsible attitude both for the individual and the profession in the identification of ethical priorities in the delivery of oral health services and prevention
- To encourage the recognition of one's limitations in the provision of treatment for patients without recourse to a defensive attitude to patient care.

### **Strengths**

- Integrated implementation of the curriculum
- Involvement of entire staff with marked student input
- Pre-clinical teaching carried out by teaching staff of the Faculty of Medicine within the Faculty's own facilities
- Continuous improvement

### **Weaknesses**

- There is no integrated patient care in curriculum
- There is no PBL (Problem-Based Learning) or SCL (Student-Centered Learning) in educational programme

### **Innovations**

- Clinical Point system based on ECTS
- Student assessment of staff performance
- Revision of the curriculum

### **Visitors Comments**

## **Section 2 - Facilities**

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

### **2.1 Clinical Facilities**

General Explanation

Dental School is placed in four buildings located close each other in the University district. Each dental department has it's own clinic with different number of units ( total number 69):

Conservative dentistry	– 18 units
Prosthetic dentistry	– 13 units
Dental surgery	- 15 units
Pediatrics dentistry	– 7 units
Orthodontics dentistry	– 9 units
Periodontology	– 7 units

Maxillo-Facial Clinic with operating room and 23 beds and 3 dental units

#### **Strengths**

Integrity and sharing facilities with the Faculty of Medicine, Medical University of Gdansk .As a subfaculty of the Faculty of Medicine, Dental School has access to facilities available at all the clinical departments of the Medical University of Gdańsk.

#### **Weaknesses**

- Insufficient space available for dental clinics
- Limited budget

#### **Planned Developments and Innovations**

In 1998 three Dental School buildings were renewed. And new equipment was set up. We are planning to renovate the clinical facilities of the Department of Orthodontics within this year. A new clinical department of Oral Implantology with 5 units will also be created.

#### **Visitors Comments**

**All the clinics in the constituent buildings of the Dental School were bright and cheerful as were all the public areas. However it was clear that there was an insufficient number of dental operatories and insufficient equipment for the numbers of students in training. This has the result that the students work in pairs or as threesomes with a high level of observation rather than direct hands-on experience of patient treatment. The visitors concede that paired operating has educational value but gained the impression that the level employed was excessive. Trained Dental Nursing support was also very limited and the equipment did not appear to allow the use of modern seated, assisted operating techniques.**

### **2.2 Teaching Facilities**

General Explanation

Dental School has access to all of the teaching facilities of Medical University, Gdańsk. In addition The Dental School has its own premises:

- 1 Lecture Room
- 5 Seminar Rooms
- 2 pre-clinical training rooms (simulation models)

### Strengths

Advantage of full usage of teaching facilities of the Faculty of Medicine, Medical University of Gdańsk

### Weaknesses

- Insufficient space available for pre-clinical dental teaching laboratories
- Limited budget

### Best Practices

Lectures, seminars and practical training sessions in both basic (pre-clinical) and clinical subjects are carried out in the University's own facilities of high standard of premises and equipment.

### Visitors Comments

**Teaching facilities within the dental school are inadequate but are supplemented by the use of the lecture theatres of the Medical University which are large and equipped with modern audio visual aids such as video projectors. The visitors believe that the lack of a suitably equipped pre-clinical dental teaching laboratory (phantom head room) is a major deficiency and must be addressed if students are to effectively learn modern operative techniques. The lack of small rooms for teaching and learning purposes will limit the school's ability to introduce more student-oriented learning and teaching techniques.**

## 2.3 Teaching Laboratories

### General Explanation

The classes and practical training sessions in basic and pre-clinical subjects for students of the Dental School take place within the teaching laboratories of the Faculty of Medicine, Medical University, Gdańsk: anatomy, physiology, chemistry physics, biochemistry, histology, immunology, embryology, pathology, physiopathology. In addition the school has: 36 workshop places for pre-clinical dental training in prosthetics and conservative dentistry.

### Strengths

- Economic approach to usage of teaching materials and aids – optimisation on the costs for both the University and the Subfaculty of Dentistry
- Interaction between medical and dental students at the site of learning

### Weaknesses

- Models and simulations are used in pre-clinical training of dental students only in two departments: prosthodontics and conservative dentistry.
- Insufficient space available for dental teaching laboratories
- Lack of sufficient quantity of good quality equipment (models of heads and special units for pre-clinical training)

### Best Practices

The laboratory for pre-clinical training in prosthodontics is equipped with video facilities (camera and monitors), which enables simultaneous viewing of the presentations by several students. Presentations of prosthetic works are carried out by experienced dental technicians.

The laboratory also has a unit for patients who require prosthetic services discussed at the lessons.

#### Innovations

It is our intention to set up a new model and simulation laboratory for dental students, with 18 head models and all necessary equipment for practical dental training.

#### Visitors Comments

### **2.4 Research Laboratories**

#### General Explanation

In their scientific work, the academic staff of the Subfaculty of Dentistry can take advantage of all laboratories of the Medical University. The Dental School has Oral Microbiology Department, with its own laboratory able to perform research concerning candida, aerobic, microaerophilic, and anaerobic bacteria.

#### Strengths

There are agreements between heads of many departments of the Faculty of Medicine and Dental School on scientific collaboration and availability of the well-equipped laboratories of the Faculty for the academic staff of the Subfaculty of Dentistry. Such collaboration is fully supported and encouraged by the authorities of the University.

#### Weaknesses

- Limited resources for research grants

#### Best Practices

Most of research in the area of dentistry, leading to theses at the Ph.D. and D.Sc. levels, are performed in these own research laboratories

#### Innovations

#### Visitors Comments

### **2.5 Library**

#### General Explanation

The Main Library of the Medical University of Gdańsk belongs to a network of academic libraries in Poland. The library building houses 129 reading places, several computerised retrieval stands and 540.000 volumes on a total area of 3.979 sq.m.

Among the volumes there are 347.000 books, 95.000 volumes of journals and approximately 10.300 volumes of other publications.

The Library purchases 629 journals, in that number 305 international and 324 Polish.

The number of dental journals available at the library is 24: 9 of them Polish, and 15 international.

The users of the local academic network benefit from the access to databases: Medline, Embase, Polish Medical References, IDEAL database of full-text journals Academic Press, Churchill Livingstone and W.B. Saunders, full-text journal database SPRINGER LINK, SYNERGY full-text journal database of Blackwell Science and Munksgaard.

The Main Library offers two Current Contents databases with abstracts, updated weekly.

#### Strengths

- Online access to Medline and other publication retrieval systems
- Decent quality reading room for students

#### Weaknesses

- Very limited resources available for purchase and subscription to renowned medical and dental journals
- Insufficient level of computerisation

#### Best Practices

#### Innovations

#### Visitors' Comments

**The library was a very pleasant, modern building, being both light and airy. It appeared that there was an adequate number of study places for the students. However, there were insufficient copies of the standard textbooks for the students to borrow with resultant long waiting lists for books. The visitors understood that books are expensive and that the students relied on being able to borrow them from the library but that they often had to wait for up to three weeks for a copy to become available.**

**The visitors learned that there were only five Internet-linked computers available for the three thousand students in the Medical University. There was also an insufficient range of current scientific dental and medical journals available.**

**It is the opinion of the visitors that these serious deficiencies of books, journals and Internet-linked computers should be addressed by the University if a more student centred and evidence based approach to learning is to be adopted and if continuing professional development is to take place. The lack of mainstream international journals can also be expected to impact on the ability of the staff to undertake clinical dental research.**

### Section 3: Organisational and Administrative Structures

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

Name: Bereznowski Zdzisław

e-mail: zberezn@amg.gda.pl fax: \_\_\_\_\_

Please explain (in simple diagram form if possible) the organisational structures under which the school operates including its relationship to hospital, university, medical school/faculty as well as the departmental structures within the dental school.

Please explain what information technology systems your school employs in respect of student education/training, patient records, management and finance systems. Explain if any of these systems are innovative or potentially useful to other dental schools.

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The Medical University of Gdańsk

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Fax.: 48 58 301-61-15

e-mail: rector@amg.gda.pl

#### Senior Administrative officers

Rector: Prof. dr hab. med. Wiesław Makarewicz

Vice-Rectors:

Prof. Roman Kaliszan

Prof. Andrzej Rynkiewicz

Prof. Stanisław Mazurkiewicz

#### Faculties:

Medical Faculty with Subfaculty of Dentistry and Subfaculty of Nursing (1895 students)

Faculty of Pharmacy offering education in pharmacy, pharmaceutical analytics and clinical analytics (568 students)

Intercollegiate Faculty of Biotechnology University of Gdańsk /Medical University of Gdańsk(182 students)

#### Authorities of the Faculty of Medicine:

Dean Prof., Janusz Galiński

e-mail: deanmed@amg.gda.pl

Vice-Deans:

Prof. Stanisław Bakula

Prof. Janusz Moryś

Prof. Jan Skokowski

Prof. Zdzisław Bereznowski

Prof. Wojciech Bogusławski

Head of Subfaculty of Dentistry

Head of Subfaculty of Nursing

## System of education in Medical Faculty

Six-year medical curriculum leading to degree of medical doctor (MD)  
Five-year curriculum in dentistry leading to degree of dental doctor (MD)  
Five-year curriculum in nursing leading to master's degree

## Subfaculty of Dentistry

The subfaculty comprises: 8 departments with their own outpatient clinics and Maxillo-Facial Clinic.

The specialised outpatient clinics at the departments form together an administration unit named Dental Outpatient Clinic (DOC). This organisation has its own, separate administrative authorities, subordinate to Rector of Medical University. In the various outpatient clinics forming the DOC, all academic staff members are employed part time. The heads of departments are at the same time chief physicians of the outpatient clinics.

Total number of all staff employed in Dental School (Subfaculty and Dental Out-Patient Clinic) 150

Departments	number of dental units in specialist clinics
Conservative Dentistry	18
Prosthetic Dentistry	13
Paediatric Dentistry	7
Oral Surgery	15
Maxillo-Facial Surgery	2
Periodontology	7
Orthodontics	9
Oral Microbiology	-

Student numbers 2000/2001 378

- a) Average number of dental students qualifying per year: 76  
b) Average number of dental students admitted to the first year 80  
c) length of course in years and/or semesters 5 years/ 10 semesters

### Strengths

- Integrated implementation of the curriculum
- Involvement of entire staff with marked student input
- Teaching in basic sciences, medical pre-clinical and clinical subjects carried out by teaching staff of the Faculty of Medicine within the Faculty's own facilities
- Major renovation and upgrade was performed in four important premises housing some of the departments of the Dental School.
- Continuous improvement

### Weaknesses

- Insufficient space available for dental clinics and teaching laboratories
- Lack of sufficient quantity of good quality equipment (models of heads and special units for pre-clinical training)
- Limited budget

- There is no integrated patient care in curriculum
- There is no PBL (Problem-Based Learning) or SCL (Student-Centered Learning) in educational programme

#### Innovations

- Clinical Point system based on ECTS
- Student assessment of staff performance
- Revision of the curriculum
- New department “Oral Implantology and Dental Technique” will be created
- A new model and simulation laboratory for dental students, with 12 head models and all necessary equipment for practical dental training.



## **Section 4: Staffing**

### **1.19. List of Senior Staff** (Heads of Department, their e-mail or fax addresses)

#### Maxillo-Facial Dentistry

Name		stanowisko
1.	Prof. Józef Zienkiewicz M.D., PH.D.	head of department <a href="mailto:e-mail.ziuk@amg.gda.pl">e-mail.ziuk@amg.gda.pl</a>
2.	dentist Izabela Oleszkiewicz M.D.	senior lecturer
3.	Dentist Jolanta Kotowicz-Kadyszewska M.D.	adiunct
4.	doctor of medicine Barbara Drogoszewska	assistant
5.	dentist Joanna Filipowicz	assistant
6.	dentist Katarzyna Maciejewska	assistant
7.	dentist .Anna Starzyńska-Toboła	assistant
8.	dentist .Adam Zedler	assistant
9.	dentist .Adam Ziemelewski	assistant
10.	Doctor of medicine Krystyna Dyksta	assistant
11.	Janusz Ugniewski	technician
12.	Andrzej Dulewicz	technician
13.	Dietrych Barbara	auxiliary staff
14.	Bożena Wiercińska	auxiliary staff
15.	Krystyna Szydlik	auxiliary staff
16.	Beata Steciuk	administrative staff
17.	Joanna Dzedzic	nurse

#### Oral Surgery

18.	dentist Maciej Dijkiewicz M.D.	head of department
19.	dentist Jadwiga Gawrońska-Skorkowska M.D.	adiunct
20.	dentist .Violetta Szyk	lecturer
21.	dentist .Wojciech Kiewlicz	assistant
22.	dentist .Krystian Krupski	assistant
23.	dentist .Robert Kucharski	assistant
24.	dentist .Dominik Łoś	assistant
25.	dentist .Anita Pawłowska	assistant
26.	Dentist Katarzyna Rutkowska	assistant

27.	dentist Grzegorz Rzemieniuk	assistant
28.	dentist Bożena Soroka-Letkiewicz	assistant
29.	Joanna Engel	nurse
30.	Janina Maciejowska	nurse
31.	Robakowska –Kummer	rtg technician.
32.	Elżbieta Jackiewicz	administrative staff
33.	Jolanta Brzosko	dental hygienist
34.	Alina Malek-Podjaska	dental hygienist
35.	Lidia Obarska	dental hygienist
36.	Ewa Umińska	dental hygienist
37.	Renata Umińska	dental hygienist

#### Oral microbiology

38.	Prof. Anna Kędzia M.D., Ph.D.	head fo department
39.	Master biol. Alina Gębska	assistant
40.	Master biol. Marta Ziółkowska-Klinkosz	assistant
41.	Master chem..Ewa Kwapisz	senior research
42.	Master biol. Dorota Niezgoda	senior research
43.	Master biol.Maria Wierzbowska	senior research
44.	Elżbieta Szulc	technician
45.	Lidia Szymczak	technician
46.	Mariola Knyszewska	technician
47.	Danuta Zalewska	auxiliary staff
48.	Barbara Bandos	auxiliary staff

#### Orthodontics

49.	dentist Anna Rosnowska-Mazurkiewicz M.D.	head of department
50.	dentist Anna Wojtaszek-Słomińska M.D.	adiunct
51.	dentist .Jolanta Jurkiewicz-Kokosińska	assistant
52.	dentist Beata Kaiser-Ziorkiewicz	assistant
53.	dentist Anna Kienitz-Orzelska	assistant
54.	dentist .Bogna Racka-Pilszak	assistant
55.	Anna Rogańska	dental hygenist
56.	Maria Wasiak	dental hygenist

57.	Mariola Pikulska	administrative staff.
58.	Stępnia Małgorzata	administrative staff
59.	Ewa Sułek	auxiliary staff

Prosthetic dentistry

60.	Prof. Halina Tejchman M.D., Ph.D.	head of department
61.	dentist. D. Zdzisław Bereznowski M.D.,Ph.D.	adiunct
62.	Dentist Wiesława Czerwińska M.D.	senior lecturer
63.	dentist Maria Prośba-Mackiewicz M.D.	adiunct
64.	dentist Janina ŚramkiewiczM.D.	adiunct
65.	dentist Zofia Majdańska M.D.	adiunct
66.	dentist .Jolanta Jasiel	assistant
67.	dentist Cezary Kłosiński	assistant
68.	dentist .Anna Lasecka	assistant
69.	dentist Michał Nawrocki	assistant
70.	dentist Ewa Płończak	assistant
71.	dentist Filip Roszkowski	assistant
72.	dentist Marcin Bogurski	assistant
73.	dentist Izabela Borys	assistant
74.	dentist Izabela Chlebus	assistant
75.	dentist Magdalena Ziemełwska	assistant
76.	dentist Violetta Zadrozna	assistant
77.	Bolesław Klepacz	dental technician
78.	Tomasz Ziarkiewicz	dental technician
79.	Bożena Sikora	dental hygienist
80.	Elżbieta Rytłewska	nurse
81.	Danuta Górka	administrative staff.
82.	Janina Kwidzińska	administrative staff.
83.	Butkiewicz Regina	administrative staff
84.	Wiesława Nowicka	auxiliary staff
85.	Grażyna Okwieka-Wera	auxiliary staff

Pediatrics dentistry

86.	Prof. Barbara Adamowicz-Klepalska . M.D., Ph. D	Head of department
87.	dentist Katarzyna Emerich-Poplatek M.D.	adiunct
88.	Dentist Izabela Maciejewska M.D.	adiunct
89.	dentist. Maciej Bodal	assistant
90.	dentist. Cezary Jakubowski	assistant
91.	dentist. Marek Olejniczak	assistant
92.	dentist. Leszek Sawicki	assistant
93.	dentist. Beata Wierchoła	assistant
94.	Katarzyna Krypa	dental hygienist
95.	Irena Krysa	dental hygienist
96.	Małgorzata Malinowska	dental hygienist
97.	Agnieszka Zyska	dental hygienist
98.	Barbara Noga	administrative staff
99.	Danuta Mazurek	administrative staff
100.	Bożena Baryłka	auxiliary staffi

Conservative dentistry

101.	Prof. Edward Witek. M.D.,Ph. D.	head of department
102.	dentist Barbara Kochańska M.D.	adiunct
103.	dentist Aida Kusiak M.D.	adiunct
104.	dentist Ewa Borowska-Afeltowicz M.d>	senior lecturer
105.	dentist Barbara Góra M.D.	senior lecturer
106.	dentist Barbara Kręglewska M.D.	senior lecturer
107.	dentist Halina Nowalska-Kwapisz M.D.	senior lecturer
108.	dentist Gabriela Romankiewicz-Woźniczko M.D.	senior lecturer
109.	dentist Lucyna Zajączkowska-Białowąs M.D.	senior lecturer
110.	dentist Agnieszka Bogusławska-Kapała	assistant
111.	dentist Alicja Cackowska-Lass	assistant
112.	dentist .Marzena Gidzińska-Głódkowska	assistant
113.	dentist .Bogusław Lipka	assistant
114.	dentist. Anna Rutkowska	assistant
115.	dentist. Adam Wąsek	assistant

116.	dentist. Elżbieta Zedler	assistant
117.	dentist Agata Żółtowska	assistant
118.	Master biol Jolanta Ochocińska	senior reaserch staff
119.	Mgr biol. Mirela Łukaszewska	senior reaserch staff
120.	Stefania Błaszowska	auxiliary staffi
121.	Teresa Pereć	auxiliary staff
122.	Katarzyna Brańko	rtg technician
123.	Alicja Bliczak	nurse
124.	Ewa Grabowska	dental hygienist
125.	Magdalena Janecka	dental hygienist
126.	Maria Klejna	nurse
127.	Helena Krajewska	nurse
128.	Alina Laska	dental hygienist
129.	Anna Matusiewicz	dental hygienist
130.	Maria Mazurowska	auxiliary staff
131.	Barbara Rutkowska	nurse
132.	Irena Sochacka	nurse
133.	Małgorzata Wera	administrative staff
134.	Elżbieta Wesoly	administrative staff

#### Periodontology

135.	Prof. Jadwiga Sadlak-Nowicka. M.D.,Ph.D.	head of department
136.	Dentist Hanna Antkiewicz	assistant
137.	Dentist Mariusz Bochniak	assistant
138.	Dentist Konrad Czubak	assistant
139.	Dentist Halina Kempa	assistant
140.	Dentist Beata Szumska	assistant
141.	Dentist Sebastian Tyrzyk	assistant
142.	Dentist Urszula Kunicka	assistant
143.	Jadwiga Mycio	administrative staff
144.	Garbowicz Maria	nurse
145.	Kużma Ewa	auxiliary staff

146.	Mieszczuk Jolanta	administrative staff
147.	Woszczyzna Barbara	dental hygienist

Secretarial staff of Dental School

148.	Mocka Joanna	dean secretary
149.	Krawiec Grażyna	clinical staff secretary
150.	Magdalena Moczyńska	clinical staff secretary

## Section 5 - The Biological Sciences

- **5.1 Biochemistry**
- **5.2 – Molecular biology**
- **5.3 - Genetics**
- **5.4 General and Organic Chemistry**

### **5.1 Biochemistry**

Professor Julian Swierczynski

Email: [juls@amedec.amg.gda.pl](mailto:juls@amedec.amg.gda.pl)

#### **1. Introduction**

As the biochemistry treats of chemical processes taking place at the molecular level in cells of various tissues/organs it constitutes the basis for building a model of human structure and function. Thus it is very important part of dental undergraduate education. The subject of interest of this course is nucleic acids, proteins, carbohydrates, lipids and nitrogenous compounds metabolism. Six practical sessions illustrate and consolidate the theoretical problems.

#### **2. Primary Aims**

The course aims to provide an understanding and knowledge of the core principles and topics of biochemistry and their application in human body function. It also aims to introduce students to some clinically relevant aspects of biochemistry.

#### **3. Main Objectives**

At the end of the Biochemistry course each student is supposed to:

- a) have an essential knowledge of the transformations of main chemical compounds in physiological conditions;
- b) know structures of important metabolites, names of enzymes catalyzing key reactions and mechanisms of their activity regulation;
- c) understand the interrelationships of transformations and terminal oxidation of protein, carbohydrates and lipid metabolism products;
- d) understand molecular basis of energetic processes, in particular oxidative phosphorylation;
- e) know the basic cellular transduction systems, functions of the membrane and intracellular receptors;
- f) know processes leading to cell death (apoptosis, necrosis);
- g) know molecular basis of the certain diseases.

#### **4. Hours in the Curriculum**

The total number of hours devoted for one year Biochemistry course is 170 (75 hours of lectures, 35 hours of seminars and 60 hours of practical trainings).

#### **5. Method of Learning/Teaching**

The discussion with some elements of problem-based-learning, supplemented with lectures and visual aids as appropriate.

#### **6. Assessment Methods**

Final written and oral exam. Seminars and practical trainings are credited according to the point system.

## 7. Strengths

A close liaison between present and previous Heads of the Biochemistry Department facilitates a continuing in evaluation of the material and delivery mode. It allows the continuous course improvement.

## 8. Weaknesses

One of the course aims is to build the knowledge and understanding of some processes taking place in human organism on the molecular level. However the great part of the material is not used in the future dental practice.

## 9. Innovations and Best Practices

The present course is meant for medical students in a wide sense of the word, so it is not constructed especially for dental students. Though there are plans to create it more relevant for the students of dentistry.

## 10. Plans for Future Changes

It is our intention to create a database for the curriculum so that individual disciplines will be able to identify the exact extent and location of their specific material in the whole curriculum and thereby ensure continuity and vertical integration without duplication or significant omission.

## **5.2 Biology And Genetic And Parasitology**

Prof. Janusz Limon, MD, PhD

Email: [jlimon@amg.gda.pl](mailto:jlimon@amg.gda.pl)

### 1. Introduction

Genetics is a multidisciplinary science so the course should facilitate understanding genetic aspects of other medical disciplines. We introduce basis of genetic regulation in viruses and bacteria as well as structure and function of eukaryotic organisms (including man). Information on principles of mutations are discussed. General mechanisms of origin and consequences of genetic defects in man are introduced at the examples of genetic diseases. Basic criteria of autosomal monogenic inheritance and of X-linked inheritance are introduced. Likewise, mechanisms leading to human chromosomal aberrations and principles of recording these changes, according to international agreements, are explained.

Furthermore, students learn bases of other sections of genetics, not mentioned above, such as: multifactorial inheritance, genetics of blood groups and serum proteins, sex determination in man and mechanisms of basic disturbances of this process, genetics of neoplasia, methods of molecular genetics, ecogenetics, immunogenetics and eugenics.

Due to „historical” reasons, trainings in parasitology are also carried out, during which students learn about life cycles, general structure and basic nosologic symptoms of diseases caused by the common human parasites.

### 2. Primary aims

- Understanding the basis of genetic inheritance and gene regulation
- Understanding the principles of clinical genetic in human – monogenic and multifactorial inheritance, genetic of cancer



### **3. Main objectives**

By the end of the course students should learn:

- Essentials on classical genetics in human
- Problems related to presence of mutagens and cancerogens in natural environment of man and types of genetic tests detecting their genotoxic action.
- Description of normal human karyotype and pathologic karyotypes of the most frequent chromosomal aberrations in man.
- Mechanisms of origination of human diseases caused by gene and chromosomal mutations.
- Essential methods of molecular biology and their application in medicine.
- Fundamental problems of sex determination in man and disturbances to this process.
- Importance of different genes polymorphism in drugs and chemical mutagenic compounds metabolism in human organism.
- Problems of genetics of blood groups and serum proteins and their application in medicine.
- Methods of detecting and essential symptoms of diseases caused by the most frequently encountered parasites.

### **4. Hours in the Curriculum**

Total of 80 hours in the second year (3<sup>rd</sup> and 4<sup>th</sup> semester)

### **5. Method of Learning / Teaching**

The course include 25 hours of lectures, 40 hours of seminars and 15 hours of practical training

### **6. Assessment methods**

All material is assessed in the end of term – written exam (test form).

### **7. Strengths**

Students learn about progress in genetic sciences with a special emphasis on practical usage of the knowledge in their future medical practice.

### **8. Weakness**

Numbers of practical training hours is not sufficient. There is no possibility to enlarge it because of limited lab space and too numerous groups of students

### **9. Innovation and Best Practice**

### **10. Plan for Future Changes**

#### **5.3 Clinical Genetics**

Prof. Janusz Limon, MD, PhD

Email: [jlimon@amg.gda.pl](mailto:jlimon@amg.gda.pl)

### **1. Introduction**

Clinical genetics is a multidisciplinary science so the course should facilitate understanding aspects of the genetically determined diseases – their classification, diagnosis and treatment with a special emphasis on the oral and dental defects. It includes etiology and symptomatology of the common autosomal and X-linked monogenic diseases as well as connected with chromosomal aberrations. The course also presents methodology for the

cytogenetic and molecular diagnostic of the genetically determined diseases. It covers ethical and moral problems associated with the above listed issues.

## 2. Primary aim

Principles of genetic disorders of man with regard to oral and dental diseases

## 3. Main objectives

By the end of the course students should learn:

- Molecular genetics of anomalous tooth development
- Genetic diseases affecting dentin
- Genetic diseases affecting root cement and the periodontal structures
- Genetic diseases affecting the dental pulp
- Genetic defects of teeth enamel
- Genetic aspects of cleft lip and cleft palate
- Advances of clinical genetics

## 4. Hours in the Curriculum

Total of 10 hours in the fourth year (7<sup>th</sup> semester)

## 5. Method of Learning / Teaching

The consists of 10 hours of lectures including 4 hours of facultative lectures

## 6. Assessment methods

All material is assessed in the end of the term – non-marked credit

## 7. Strengths

## 8. Weakness

There is no chance to conduct practical training because of limited laboratory space

## 9. Innovation and Best Practice

10. Plan for Future Changes

## 5.4 General and Organic Chemistry

**Prof. Michał Woźniak, M.D., Ph.D.**

Person responsible for the course:

**Prof. Wojciech Bogusławski M.D., Ph.D.**

e-mail: [wbogus@amg.gda.pl](mailto:wbogus@amg.gda.pl)

### ***Characteristics of the course:***

Course is designated for the students of the 1-st year, semester 1 of stomatological studies

### ***Course workload:***

Total 90 hours, incl. 30 hrs of lectures and 60 hrs of practical trainings.

### ***Credit points:7.1***

### ***Subject of the cours:***

Comprises physical, inorganic and organic chemistry of compounds and reactions taking place in living organisms. Structure, properties and possibilities of transformantion of the animated nature compounds are taught.

Knowledge of these issues is indispensable for understanding further material of Biochemistry and Clinical Biochemistry as well as Physiology and Pathophysiology. During

the course, each student acquires data and skills concerning basal elements of general chemistry and biochemistry. Namely:

Components of the human body.

Interatomic reactions in chemical particles and intermolecular reactions.

Electrolytic dissociation.

Phase systems.

Energetics and kinetics of chemical reactions Electrochemistry, processes of oxidation and reduction ( including peroxidative processes

Methods for quantitative and qualitative study content of organic compounds

Chemical properties of carbohydrates, lipids, aminoacids, oligopeptides and proteins.

***Type of final credit:***

Marked credit equivalent to exam; practical trainings and seminars are also credited with marks.

***General teaching aims:***

At the end student should possess knowledge of interdependence of structure and mechanisms of reaction of the biologically important compounds and be able to convey this knowledge to the reactions taking place in human body.

Possess knowledge sufficient for learning essential biochemistry, clinical biochemistry, pathophysiology and clinical subjects.

***Strenghts:***

There is close cooperation between Medical Chemistry and Biochemistry Departaments., which allows for constant evaluation of the material and mode of delivery and facilitates continous improvement of outcome.

***Weaknesses:.***

A review of the content is currently taking place as some of these seems to be somewhat irrevelant to dental students in recent years. More elements of the core dental chemistry should be added.

***Plans for future changes:***

It is our intention to create a database for the curriculum, so that individual disciplines will be to identify the exact extent and location of their specific material in the whole curriculum of stomatological studies and thereby ensure continuity and vertical integration.

**Visitors' Comments on the Biological Sciences**

**The visitors were met with great courtesy, usually by the Head of Department but on occasions by his or her representative. It was very impressive that everyone we met was a dedicated and committed teacher of dental students. It was apparent to us that the Head of Department for each of these disciplines was responsible for the curriculum in his or her area. The visitors were firmly of the view that a large part of these long established curricula were irrelevant to the needs of modern dental students, most of whom will enter general dental practice. There was little evidence of the inter-departmental collaboration or co-operation in curriculum design that is necessary to reduce unnecessary repetition and duplication. In many areas there was positive resistance to any suggestion by the visitors of possible change, particularly to the possibility of a reduction in teaching hours and practical classes.**

**It was regrettable that that no aspect of the teaching was student centred. Assessments, in the view of the visitors, were too frequent and were essentially tests of factual recall rather than deep learning.**

**The visitors were able to meet with the Head of the Department of Biophysics despite the fact that there were no details of this course included in the Self Assessment Document. It was very clear that the teachers of this subject were very committed and enthusiastic. However, the visitors believe that this largely technical course is irrelevant to the needs of dental students and that which was relevant was a duplication of teaching by other departments e.g. the nature of the unit cell membrane.**

## **Section 6 - Pre-Clinical Sciences**

- **6.1 - Anatomy**
- **6.2 - Physiology**
- **6.3 - Histology**
- **6.4 – Embryology**
- **6.5 - Immunology**

### **6.1 Anatomy**

#### **1. Introduction**

The role of anatomy, being one of the oldest medical sciences, is describing the structure and function of human body.

Anatomy is introduced in at the start of the dental undergraduate course. A course is designed for the students of the first year (semesters I and II). Lectures (2 hours weekly) and practical training (2h15min twice a week) are held.

Normal anatomy taught during the course presents essential information on structure of body organs and systems in living persons. More detailed information consider issues of dentist anatomy, in particular structure of the head and neck.

#### **2. Primary Aim**

- a) To provide students with a knowledge of essentials of normal anatomy, topography of organs, vessels and nerves with emphasis on dentist anatomy.
- b) To study students for taking benefit of acquired knowledge in further clinical education.

#### **3. Main objectives**

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

- Acquainting with the structure and function of the human body.
- Acquainting with anatomical nomenclature.
- Recognising pictures in intravital examinations (such as x-ray, Ct, MRI) of various body regions emphasised head.
- Being able to unite knowledge of the organs and systems structure and function.
- Understanding of pathological changes and processes taking part in the organism, discussed in further clinical education.
- Acquainting with topography of organs, vessels and nerved during prosectory training.

#### **4. Hours in the Curriculum**

Total: 200 hours, including 60 hours of lectures and 140 hours of practical training

#### **5. Method of Learning/Teaching**

The head of Department of Clinical Anatomy (Chair of Anatomy) holds lectures with the help of audio-visual equipment. Lectures proceed the practical prosectory training. Training are splitted into 7 thematic parts. In the second semester students attend training concerning mostly anatomy of head and neck, inclusive dentist anatomy. All training is proceeded by theoretical introduction. Students are obliged to study for all training.

Anatomical models, specimens, charts, slides, CD-ROM and various atlases are used to develop the effectiveness of teaching.

#### **6. Assessments methods**

The test follows all thematic part. It consists of practical (multiple-choice or short-answer questions) and theoretical part.

To be eligible for taking the exam, students must attend all the training and consecutive credits and receive marks at least sufficient (min. average mark 2,5).

Final exam consists of the:

- Practical part – recognising detailed structures marked on cadavers or based on x-ray or MRI.
- Theoretical part, written – short answer questions,
- Oral part.

Final mark is based also on marks from student's work throughout the course and marks received at the exam.

## **7. Strengths**

- Training fits the lectures perfectly (students get feedback on the quality of their learning).
- Practical training domination (70% of the course).
- The scope of the training is clearly defined.
- Students are well prepared for the training.
- Using various teaching aids.

## **8. Weaknesses**

- Too less space in dissecting room.
- University budget's constraints.
- Student's groups are too large.

## **9. Innovations and best practices**

- Programs of teaching permanent development.
- The best students in anatomical circle.
- European Credit Transfer System implementation.

## **10. Plans for Future Changes**

- Teaching and learning methods further development.
- Widening of CD-ROM and Internet using in education process.
- Attending didactic conferences.
- Optional lectures and training implementation (co-operation with clinical departments).

## **6.3 Histology**

Chair: Professor Andrzej Myśliwski MD, PhD

Leader of the dental part of the curriculum: prof. Zbigniew Kmiec, MD, PhD

### **1. Introduction.**

Cytology and histology describe the structure of cells, tissues and organs at the ultramicroscopic and microscopic levels. Acquisition of that knowledge is a prerequisite for further studies of cell and organ functions. The course of histology is taught throughout the first year to both the students of Medicine and Dentistry via lectures and laboratory classes.

## **2. Primary aims.**

The subject of course of histology is to develop in the students the understanding of how the cellular structures and organs' microarchitecture define the major functions of tissues and organs. This knowledge is essential for further studies of biochemistry and physiology.

## **3. Main objectives.**

At the end of the course the students should be able to describe, recognize and understand:

- I. Structure, including ultrastructure, as well as basic functions of the eukaryotic cell.
- II. Regulatory mechanisms of the cell cycle and cell proliferation processes.
- III. Structure and functioning of membrane and intracellular receptors as well as cellular transduction systems.
- IV. Microscopic structure of tissues and organs, confronting both information presented during lectures and own study of literature with individual slide observation during practical trainings.
- V. Morphologic and functional correlations of the discussed tissues and organs.

The acquired knowledge of the subject is intended to be the basis for further study of physiology, cytogenetics, pathomorphology, pathophysiology and indirectly – clinical disciplines.

## **4. Hours in the curriculum.**

Total 137 hours, including 60 hours of lectures and 77 hours of practical training during microscopic classes. 10 hours of practical classes are devoted to the histophysiology of the teeth and mouth that are based on the original in-home prepared course.

## **5. Method of learning/teaching.**

The course is given in a form of lectures that are common to the students of medicine and dentistry, and practical training that is based on microscopical examination of 90 slides of all major tissues and organs including tooth development and structure as well as the histological structure of gingiva, salivary glands and tongue.  
Assessment methods.

The course ends in an examination that is divided into practical part (where students have to recognize at least 10 out of 15 microscopic slides) and written exam. During the course of histology there are 4 colloquia that check the progress of student's learning.

## **6. Strengths.**

The lectures are given before the practical training takes part so that the students get the general orientation in each specific subject. The teaching team consists of highly-qualified teachers including 3 professors, 3 post-docs and 4 PhD students. The practical training is organized in small groups (15 students are taught by one teacher) and each student has a separate set of microscopic slides for the whole course.

Each group of students receives one set of histological slides for in-home use.

## **7. Weaknesses**

We have run and modified the course of histology for students of dentistry for the last six years and find it optimally suited for delivering both major knowledge of histology and

specified knowledge of structure and function of teeth. No major weaknesses can be seen by us.

## **8. Innovations and best practices**

The information given to the students of medicine and of dentistry is diversified by introducing into the course 4 practical classes dealing with tooth and mouth structure for the students of dentistry only.

Students of dentistry can acquire teeth-related knowledge on the basis of specially prepared readings-book 'Histophysiology of Teeth and Mouth" by professor Kmiec from our Department.

## **9. Plans for future changes**

To introduce 2 additional practical training classes dealing with more detailed description of the structure and function of the periodontal tissue.

### **6.4 Embryology**

#### **1. Introduction**

Human embryology - science of ontogenesis of the human species, from the biological perspective closely related to genetics and molecular biology. Moreover, for medical doctors embryology is nowadays interesting due to the highly topical problem of innate defects.

For teaching purposes, embryology is divided into developmental biology, general (concerning ontogenesis from the fecundated egg cell to the development of primary organs) and detailed embryology – the study of organogenesis. The course is designed for first year students.

Due to the rapid scientific development, teaching the molecular fundamentals of the developmental mechanisms (including the realisation of genetic information encoded in parental genomes, phenomena of cell growth and death and its molecular regulation, differentiation of the primary cells until the final formation of tissues and organs) to medical students has become a real challenge.

Knowledge of these mechanisms is essential for the understanding of both the normal and pathologic process of development.

#### **2. Primary aims**

The aim of the course is to present the problems of embryo and fetus development in a multiangle perspective to prepare students for further understanding of the clinical issues, apart from the essential knowledge of embryology itself.

The teaching method should enable each student to integrate the acquired knowledge of the basic science with the relevant clinical discipline. The acquired knowledge should point out the straight bonds connecting embryology to obstetrics and paediatrics. When learning the chronology of prenatal development, each student should understand the benefit of this knowledge for his further education.

#### **3. Main objectives**

- **SELECTED PROBLEMS OF MOLECULAR MECHANISMS OF DEVELOPMENTAL BIOLOGY** (sex determination; gametogenesis; molecular aspects of cell growth, cell differentiation and death)

- **GENERAL EMBRYOLOGY** (molecular aspect of fertilisation, cleavage, implantation ,embryonic disc,differentiation of the extraembryonic structures and embryonic layers)

- **SYSTEMIC EMBRYOLOGY AND TERATOLOGY** (Pharyngeal region and its derivatives;



development of the face and oral cavity; outline of the: alimentary tract, respiratory system, endocrine glands, vascular system, nervous system, lymphatic system, urogenital system, skeletal and integumentary system development; fetal period of the development; teratology; selected elements of the sense organs development

#### 4. Hours in the Curriculum

**The course of Embryology is designed for the students of first year and consists of lectures (15 hours) and tutorials (25 hours).**

#### 5. Methods of learning

Lectures supplemented by tutorials. During tutorials some students prepare subjects which are discussed by others. At the end of the course each student has to prepare a poster presenting some embryological problems.

#### 6. Assessment methods

Credit for the course is given based on:

- a) attendance at lectures and tutorials
- b) positive marks received during the semester
- c) positive marks from the final, end-of-year test
- d) preparing a poster concerning a given subject of embryology

#### 7. Strength

It is an entirely modern programme, the contents of teaching being gradually improved and enriched with new data, in accordance with the growth of knowledge.

In addition, stomatology students have the possibility to thoroughly study a selected problem related to the development of the oral cavity, face and head, and present it in the form of a poster.

#### 8. Weakness

The author of the programme is afraid that the carrying out of the programme may be threatened by some external conditions

- a) a clear tendency of the School Authorities to reduce the number of hours (in spite of the dynamic growth of the knowledge of developmental biology and its practical importance)
- b) small number of teachers of the subject
- c) scanty financial resources

#### 9. Innovations and Best Practices

In the years 1996-2000 the programme was completely modernized as regards its contents (a new section was introduced: developmental biology, and wherever possible – explanation of molecular events in the development).

Since 2000 an entirely new method of conducting practical classes has been used, making it possible for students to actively and self-reliantly participate in them (see Item 7).

#### 10. Plans for future changes

It is planned to continue innovating and perfecting the contents and form of instruction where this is needed (suggested by the growth of knowledge) and allowed by the resources allocated to this purpose.

### **6.5 Immunology**

Professor Jolanta Myśliwska & Dr Joanna Więckiewicz  
e-mail: jolmys@amg.gda.pl ; jwiec@amg.gda.pl

## **Introduction**

The last decade is associated with a rapid development of immunology. Many papers concerning the importance of immunological processes in diseases of gingivae and teeth were published. Interrelationship between oral hygiene and systemic diseases was proved. New immunological techniques assessing the patient's immunological status are being introduced into clinical practice both for medical doctors as well as dentists.

## **Primary aims**

- **Learning the main mechanisms operating in the immune system**
- Learning the local and systemic immune mechanisms in selected dental and periodontal diseases
- Acquiring the ability to select the immune tests for the appreciation of the immune state of the patient

## **Main objectives**

1. The main humoral and cellular components of the immune
2. Development of the T lymphocyte lineage
3. TH1 type immune response
4. TH2 type immune response
5. Antibodies as protectors of the mucosal surfaces
6. Etiopathogenesis of the periodontal disease
7. **Relationship between periodontal disease and other diseases**

## **Hours in the curriculum**

30 hours

## **Methods of learning / teaching**

Lectures with visual aids and seminars with discussion on the subject

## **Assessment methods**

Students are assessed at the end of the fifth term.

## **Strengths**

Immunology is taught by an experienced team working on immunology and clinical immunology for many years.

## **Weaknesses**

Lack of communication between teachers of immunology and those responsible for the professional stomatological subjects. No suggestions as to the priority of themes.

## **Visitors' Comments on the Pre-Clinical Sciences**

**The visitors were able to meet with staff from all the pre-clinical sciences except Embryology. Again the visitors were impressed by the commitment and enthusiasm of the teachers in all these disciplines and their recognition of the particular requirements of dental students. However, the same comments concerning the size and inappropriateness of much of the curriculum, the teaching methods employed, the number of assessments and the resistance to**

**change apply as above in relation to the Biological Sciences. The leader of the Dental Histology curriculum, who felt that there were no weaknesses at all in the course, exemplified this attitude.**

**It was apparent that the facilities in Anatomy were inadequate and below an acceptable standard with a serious lack of space, a shortage of cadavers and a lack of modern teaching aids.**

**The leaders of the Immunology course regretted the lack of communication between departments, a sentiment the visitors would support strongly.**

## Section 7 - Para-Clinical Sciences

- 7.1 - Pharmacology
- 7.2 - Microbiology
- 7.3 - General pathology
- 7.4 - Pathophysiology

### 7.1 Pharmacology

**Prof. dr Jacek Petruszewicz**

email: jacekpet@eniac.farmacja.amg.gda.pl

#### 1. Introduction

The Pharmacology course for dental students comprises 45 hours of lectures and 45 hours of practical trainings. The course is designed for students of the third year. Students learn the drug action mechanisms, side effects, drug interactions and adequate administrations in particular therapeutic situations.

#### 2. Primary aims

To provide dental students with:

- an understanding of principles of drug absorption, distribution, metabolism, excretion, mode of action and adverse drug reactions
- practical skills of choosing an appropriate drug of the group, according to the state of the circulatory system, kidney and liver metabolic efficiency

#### 3. Main objectives

By the end of the course unit students will have knowledge of:

- the drug actions, absorption, distribution, metabolism and excretion
- the principles of drug action on the autonomic system
- the action of analgesics
- the action of local and general anaesthetics
- the actions of chemotherapeutics in bacterial, viral and fungal infections
- the treatment the acute peripheral circulatory insufficiency (shock)
- the use of drugs during pregnancy, and at the extremes of age

#### 4. Hours in the Curriculum

The course, which comprises 45 hours of lectures and 45 hours of practical trainings, starts in October and continues throughout the following nine months.

#### 5. Methods of learning / teaching

Students learn Pharmacology from traditional lectures and from Pharmacology books. They also learn treatment of various diseases during the practical training programme which is continuously reviewed and updated.

#### 6. Assessment methods

The knowledge of students is assessed at the end of the course (examination). The exam is taken in the written form. It consists of 60 test questions. The students, who answer 66% of the questions correctly, pass the exam.

## **7. Strengths**

The practical trainings promote knowledge concerning drug action and application

## **8. Innovation and better practice**

Teaching of pharmacology in the integrated form with physiology, pathophysiology and microbiology.

## **9. Plans for future changes**

Introduction of computer, audio-visual aids and internet in pharmacology teaching, all of which require financial resources.

### **7.2 Microbiology**

Dr. Anna Kędzia

#### **1. Introduction**

The oral cavity provides excellent conditions for microbial life. The oral flora consists of a complex mixture of microbial species which include bacteria, fungi, viruses and protozoa. The commensal organisms normally inhabiting the body may on occasion become pathogenic. Some bacterial strains, components of the normal oral flora, but under certain conditions, including destruction of tissue, poor circulation or impaired host defense, they may be responsible of local or disseminated ( e.g. periodontal disease, gingivitis, endodontitis, post-extraction infections ) as well as in systemic infections, such as pulmonary infections, coronary heart disease, brain abscess ) oral anaerobes and aerobes are frequently associated in polybacterial suppurative processes.

#### **2. Primary Aims**

Course workload included lectures and practical training. Each student should possess:

- general knowledge on structure, biological properties and classification of microorganisms; knowledge of microbiologic bases of rational antibiotic therapy and methods of collecting and sending material to be investigated.
- Ability to choose adequate kind of diagnostic investigation; knowledge of essential epidemiology of infectious diseases and opportunistic infections; acquire knowledge of methods and possibilities of prophylaxis of infectious diseases, including active and passive immunisation.

#### **3. Main objectives**

- Morphology and physiology of microorganisms, their growth, reproduction, genetics, influence of the environment on bacteria and methods of culturing.
- Method of sterilization and methods of sterilization control.
- Principles of classification, morphology and pathogenesis of viruses.
- Principles of classification, morphology, pathogenesis, diagnostics and therapy of fungi.
- Pathogenic protozoa.
- Infection immunology ( mechanisms, antigens, antibodies, cells of the immune system, vaccines and immune sera).
- Kinds and species of oral microorganisms, antagonisms between oral microorganisms.

- Microorganisms causing oral infections ( dental caries, dental pulp, periapical tissues, periodontitis and prosthetic stomatopathies ) and antibiotics used in dentistry.
- Action of saliva on microorganisms and protective mechanisms of the saliva.
- Cross –infections in dentistry and methods of preventing them.

#### **4. Hours in the Curriculum**

Course is designed for the students of III rd year (semester V ). Course workload total – 105 hrs, with 45 hrs of lecture and 60 hrs of practical training.

#### **5. Method of Learning/Teaching**

Course consists of lectures and practical trainings. Students are obligated to prepare for every training according to the programme. During practicals students' knowledge is examined through questioning and discussion. Practical are credited with full attendance and through evaluation of students' activity. Lectures are obligatory. Material covered during lectures is discussed during the course.

#### **6. Assessment Methods**

Type of final credit – oral theoretical and practical exam. Final exam covers material of all lectures and practical training.

#### **7. Strengths**

At the end of the course each student should acknowledge: elementary information on general microbiology; essential notions of detailed microbiology concerning most important microorganisms; informations on oral microbiology, including that concerning oral microorganisms and infections caused by them, principles of antibiotic therapy, prophylaxis and method preventing cross -infections in dentistry.

#### **8. Weaknesses**

#### **9. Innovations and Best Practices**

Final written exam ( 1<sup>st</sup> term ) and oral exam ( 2<sup>nd</sup> term ).

### **7.3 Pathology**

**Dr Kaz Jaskiewicz**  
email: [kaz@amedec.amg.gda.pl](mailto:kaz@amedec.amg.gda.pl)

#### **1 Introduction**

The theoretical and practical course of pathology is taught throughout the third year for three hours once a week. This allows to understand basic pathological processes and experience in basic gross and microscopical pathology. The practical course is taking place in the department of pathology. Case presentation and lectures in pathology allows experience in the development of skills in further practice.

#### **2 Primary Aims**

Introduce each student to pathologic terminology in latin and english, understand autopsy findings as well as cyto- and histopathological diagnoses.

Develop in the students an understanding of human diseases (embracing etiology, pathogenesis, pathological lesions and its relation to clinical symptoms and prognosis) that is

required for a dental practitioner in addition to experience from general medicine and surgery to safely care for patients.

Enable the student to understand pathological processes and diagnostic requirements to diagnose specific diseases.

### **3 Main Objectives**

The main objectives of this course are to convey the knowledge that should enable students understanding pathologic process, create the habit of medical thinking inevitable in professional practice and post-graduation self-education.

Students should have a clear understanding of the general pathology, particularly circulation disorders, adaptive and regressive changes, infections, inflammation, autoimmune disorders and proliferative lesions neoplasms included.

They should understand the pathology of oral cavity such as pulpitis, parodontitis, stomatitis, anomalies of facial head bones, caries, cysts and pathology of the salivary gland.

Understand systemic pathology: disorders the heart, vessels, hematopoietic system, respiratory system, GIT tract, genitourinary tract, nervous system, bones and joints, skin.

### **4 Hours of the Curriculum**

**75 hours, included 30 hours of lectures and 45 of tutorials**

### **5 Methods of Learning/Teaching**

Tutorials are followed after core lectures. The team of tutors helps groups of students in practical exercises in microscopical practical room. Other group of students is involved in the mortuary with gross examination of the tissues.

### **6 Assessment Methods**

The pathology course is assessed by regular practical and theoretical tests. In addition, discussions are used in groups of students consisting of 13-15 persons. At the examination at the end of the year a practical and theoretical skills are assessed by multiple choice test, essays practical exams and discussions.

### **7. Strengths**

This course is organized by large medical school in busy Department of Pathology with medically qualified and specialised consultants with very large and diverse surgical pathology material. Additional advantage is the fact that students know the tutors and lecturers and working together whole course.

### **8 Weaknesses**

The Dental School is in some distance from Department of Pathology and there is not much of direct cooperation between. The lecture theater does not possess necessary equipment for lecturing. The number of tutors is too small for the course. the optimal number 6-7 students for the tutor could be more productive, than existing 15-17. The Department of Pathology is not able to commit more tutors for the course due to diagnostic and teaching work overload.

### **9. Innovations and Best Practices**

Close cooperation of the Department of Dental Surgery with the Department of Pathology with joint sessions included.

### **10 Plans for Future Changes**

Introduction of problem (case)-based learning and more active participation of students in solving most common problems existing in dental practice.

### **11 Visitors Comments**

## **7.4 Department of Pathophysiology.**

Chair: Professor Anzelm Hoppe MD, Ph.D.

### 1. Introduction.

Pathophysiology is the science of causes, mechanisms and course of diseases, providing a theoretical basis for clinical medicine. The course of pathophysiology is taught throughout the third year to both the students of Medicine and Dentistry via lectures and seminars.

### 2. Primary aims.

The subject of our course of pathophysiology is to develop in the students the understanding of major disturbances of the body functions and their expression (symptoms) in course of various diseases. This understanding is essential for logical medical thinking "at the patient's bed", necessary for adequate diagnosis and therapy.

### 3. Main objectives.

At the end of the course, our students should:

- Understand essential notions concerning disease and its course
- Understand and be able to explain control mechanisms of homeostasis in conditions of health and disease at various structural levels
- Know and be able to explain functioning of the basic defense mechanisms of human body
- Learn and be able to explain pathogenesis of bodily regulation disturbances including shock, respiratory failure, acute renal or hepatic failure, AIDS and coma.
- Know the pathomechanisms of essential diseases of the circulatory and respiratory systems, as well as renal, haemopoietic and haemostatic disturbances.
- Learn and understand the pathobiology of malignant neoplasms, problems of diagnosis and treatment of the commonest malignant neoplasms in man.

### 4. Hours in the curriculum.

Total 55 hours, including 15 hours of lectures and 40 hours of seminars. Interested students can participate in additional 10 hours of facultative lectures/seminars that deal with the problems from the field of pathophysiology that were beyond the scope of the basic course.

### 5. Method of learning/teaching.

The course is given in a form of lectures (with the information drawn from the current world literature of the subject) and interactive seminars. The students are encouraged to prepare and present short talks on chosen subject relevant to the topic of each seminar and a problem-solving approach is initiated.

### 6. Assessment methods.

The course ends in a test examination that touches every aspect taught during the course. Three additional tests (corresponding to 1/3 of the curriculum each) are given at proportional intervals. The ability of individual students to understand the detailed pathomechanisms is routinely assessed and marked during the seminars.



## 7. Strengths.

After two “preclinical” years of studying by mostly memorizing facts, the course of pathophysiology is the first one requiring the students to actually use the knowledge they already acquired, to supplement it with new one concerning the pathomechanisms and to link the two together in order to obtain a clear picture of causes, course and consequences of the diseases and disturbances. Specific subjects within the course are taught so that each student receives the same information from the member of our teaching team being by virtue of professional/scientific interests the most qualified specialist in the field. The information given to the students of medicine and of dentistry is virtually the same for the seminars under the same headings.

## 8. Weaknesses

Due to smallness of our teaching group, lack of seminar rooms and the number of students of both medicine and dentistry, and the amount of knowledge that we believe is necessary to be discussed and mastered during the seminars, our teaching groups are currently too large to effectively introduce the PBL in our curriculum.

## 10. Innovations and best practices

The seminar materials were recently prepared in a bound form of a single-use student book with spaces provided for comments and remarks. This practice allows not only interaction of student with the written material, but also constant modification (actualization) of the material on a yearly basis.

## 11. Plans for future changes

To develop the PBL as main mode of teaching. To incorporate important, but currently somewhat neglected fields into the curriculum.

## **Visitors’ Comments on the Para-Clinical Sciences**

**The visitors met with the Heads of the Departments of Microbiology, Pathomorphology and Pathophysiology but did not meet with a representative from Pharmacology. The visitors were pleased to note that Oral Pathology specimens were used in the teaching of pathological diagnostic principles. In the pathology disciplines, there was a very positive attitude towards the design of teaching specifically for the dental students. There was an open and receptive attitude to ideas on rationalisation and integration of courses, possibly as a result of the wide international experience of the senior staff.**

## **Section 8 - Human Diseases**

General Medicine, Surgery and Pathology (includes Anaesthesiology and Sedation)

- **8.1 - General medicine**
- **8.2 - General surgery**
- **8.3 - Anaesthesiology**
- **8.4 - Otolaryngology**
- **8.5 - Emergency and Disaster Medicine**
- **8.6- Emergency and Disaster Medicine**
- **8.7- Dermatology and Venerology**
- **8.8 - Okulistyka**
- **8.9 – Tuberculosis**
- **8.10 - Forensic Medicine With Elements Of Law**
- **8.11 – Neurology**
- **8.12 General Psychiatry**
- **8.13 Paediatrics**

### **8.1 General Medicine for Dental Students**

#### **1. Introduction**

General medicine is taught throughout the third (term V and VI) and the fourth year (term VIII).

The general medicine course is carried out in form of lectures, seminars and practical bedside teaching.

The third year – 50 hours of lectures and 105 hours of seminars followed by practical bedside teaching.

The fourth year – 30 hours of lectures and 45 hours of seminars followed by practical bedside teaching.

#### **2. Primary Aims**

- a. The students should gain the essential knowledge of general medicine that is required for a dental practitioner.
- b. They should recognise the signs and symptoms of systemic diseases and realise in which way the course and treatment of these diseases may influence dental procedures.

#### **3. Main Objectives**

- a. The students should develop skills of history taking and examination.
- b. They should know how to interpret results of important laboratory tests and know the normal ranges.
- c. They should recognise the symptomatology of the chosen systemic diseases (see List 1) and their possible influence on dental procedures.

#### **4. Hours in the Curriculum**

Semester VIII:

The course is organised at the Department of Internal Medicine, Endocrinology and Hemostatic Disturbances of Medical University of Gdańsk.

Head of Department – Prof. Eugenia Cześtochowska.

Seminars with practical bedside teaching – 3 hour sessions once a week for 15 weeks.

Lectures – 2 hours once a week for 15 weeks.

## **5. Method of Learning/Teaching**

- a. 1 hour of seminar – a specialist in the given field presents the subject to a group of 12-15 students – followed by
- b. 2 hours of practical bedside teaching in a medical ward in groups of 5-6 students led by one of the clinic assistants.

These 3- hour sessions take place once a week for 15 weeks.

- c. Lectures for all the students carried out by one of the professors of Medical University of Gdańsk – a specialist in the given field.

## **6. Assessment Methods**

Oral examination at the end of the course of lectures, seminars and practical teaching (after the eight term).

## **7. Strengths**

Term VIII – Department of Internal Medicine, Endocrinology and Hemostatic Disturbances,  
Head of Department: Prof. E. Częstochowska.

Term V and VI – Department of Internal Medicine and Acute Intoxications,  
Head of Department: Prof. Z. Chodorowski.

## **8. Weaknesses**

The groups of students are too numerous.

## **9. Innovations and Best Practices**

See §10

## **10. Plans for Future Changes**

Preparation of common, complementary teaching programme, in cooperation with the specialists in other clinical fields (pediatrics, surgery, psychiatry).

Preparation of a written assessment method in form of multiple choice tests.

Preparation of a special manual in general medicine for dental students.

### **List 1**

#### **Subjects of lectures and seminars in general medicine for dental students**

1. Disorders of hematopoiesis
  - anemias
  - leukemias
  - leukocytosis and symptomatic leukopenia
  - malignancies of lymphoid cells
2. Disorders of hemostasis
  - physiology of hemostasis
  - hemorrhagic diathesis
  - thrombosis and embolism
3. Major diseases of the cardiovascular system
  - endocarditis and valvular heart diseases
  - rheumatic fever
  - ischemic heart disease
  - disorders of rhythm

- hypertension
- 4. Oncology
- 5. Unconscious patient
- 6. First aid in medical emergencies
- 7. Diseases of the thyroid gland

## **8.2 General Surgery** **for Dentistry Students**

### **1. Introduction.**

General surgery is taught throughout the fifth, sixth and seventh semester. The first semester covers the most basic introduction to the problems of surgery that may be useful in private dentistry practice. The sixth semester presents problems of general surgery while the last one gets students accustomed with more complex surgical problems (incl. examination, diagnosis and treatment) and prepares the students for the final examination.

### **2. Primary aims**

To develop in the students basic knowledge and abilities concerning surgery that would be important in every-day dentistry practice (*i.e.* suturing, perisurgical antibiotic therapy, sterilisation, aseptics and antiseptics).

To teach the signs and symptoms of surgical diseases that should be adequately recognized when presented in every-day practise.

To enable the understanding the pathogenesis of the surgical diseases and to be familiar what surgical treatment might be introduced and what risk it may carry for the patient.

### **3. Main objectives.**

#### 3. 1. Fifth semester.

- surgical disease documentation, diagnostics in surgery
- aseptics and antiseptics, techniques for injection (intravenous, intramuscular and subcutaneous), general and local complications
- blood and fluids, indications and complications
- pre- and postoperative treatment of the surgical patient
- shock, pathogenesis and treatment

#### 3. 2. Sixth semester

- bone and joint trauma – diagnosis, first aid, surgical treatment
- head, thorax and spine trauma – diagnosis, first aid, surgical treatment
- abdominal trauma – diagnosis, first aid, surgical treatment
- thermal injuries – diagnosis, first aid, surgical treatment
- soft tissue inflammations – contributing factors, diagnosis and treatment
- peritonitis – pathogenesis, diagnosis and surgical treatment
- ileus – pathogenesis, diagnosis and surgical treatment

#### 3. 3. Seventh semester

- peptic ulcer of stomach and duodenum – pathogenesis, diagnosis and treatment
- stomach and duodenal neoplasms – pathogenesis, diagnosis and treatment
- diseases of gall bladder and bile ducts – pathogenesis, diagnosis and treatment
- acute pancreatitis – pathogenesis, diagnosis and treatment

- big intestine diseases – pathogenesis, diagnosis and treatment
- abdominal herniae – diagnosis and treatment
- multiorgan failure – pathogenesis, diagnosis and treatment
- breast neoplasms – pathogenesis, diagnosis and treatment
- surgical endocrinology
- vessels diseases – pathogenesis, diagnosis and treatment

#### **4. Hours in the Curriculum**

60 hours in the third year (semesters fifth and sixth) – 5 hours of lectures and 55 hours of seminars and bed-side practice

54 hours in the fourth year (semester seventh) – 9 hours of lectures and 45 hours of seminars and bed-side practice

#### **5. Method of Learning / Teaching**

The didactics take part at the Department of General, Gastroenterological and Endocrine Surgery, Medical University of Gdansk. The didactics are divided into: 60 minutes practice at the bedside (4 – 6 students per group), 90 minutes seminars (15 – 20 students per group) and 90 minutes lectures (90 students).

The students are also obliged to take part in one, 8-hour emergency duty per semester. During the duty they have an opportunity to assist the emergency operations, attend the ward routines and be involved in diagnostic procedures in patients administered to Emergency Department.

#### **6. Assessment Methods**

The oral half-examination is being performed at the end of the sixth semester.

The whole curriculum is finished at the end of the seventh semester with the examination that involves:

- test examination
- surgical history of disease collected during the last period of practise
- oral examination

#### **7. Strengths**

This course is organised by experienced teaching staff, also preparing schedules for medicine students. The centre the classes take part at is one of the most experienced surgical centres in Northern Poland. The curriculum covers many important aspects and is organised in three parts that are important for the dentistry students: i) in their every-day practice, giving them knowledge and ability for the para-surgical activities every dentist performs, ii) giving knowledge and experience a medically educated person should have in first aid in aspects that may happen in every-day practice and even more in every-day life, and iii) broadening their horizons for the diseases and surgical treatment that may be presented by their patients and may influence the effectiveness and specificity of their practice.

#### **8. Weaknesses**

The curriculum may be noticed as overloading the students with more information than the most essential minimum, but as the students receive after graduation a title of dentistry doctor, it should have the extent as presented.

The hospital is not located in the same complex as the others, but the transportation facilities are sufficient for easy and fast communication.

It is impossible to plan the number and specificity of patients that will be administered and / or operated during the Emergency Duty, and therefore some of the students get less opportunity to assist the operations than the others. Although they always have a possibility to attend the duty once again.

The examination procedure is quite complex and may be perceived as too difficult, but is proved to assess the knowledge obtained by the students very reliably.

## **9. Innovations and Best Practices**

The curriculum of the course is being innovated yearly with respect to the newest evidence of progress in surgery. The tutors are continuously trained in order to teach more effectively. The headquarters tend to minimise the number of students in a bed-side practice group and in emergency duty group in order to enable them to get as much as possible from the time they spend at the hospital.

## **10. Plans for Future Changes**

The teaching team has prepared an authorised manual for the students that describes briefly the main subjects of the curriculum. The manual was illustrated with a number of illustrations and schemes that would simplify the memorising the material. The manual is currently being *in press*.

There is a plan for equipping the operating theatre with digital cameras that would provide the views from the operations to the seminars for the students. This way, it will be possible to attend the operations for more than just few students. Moreover, the visual equipment and material obtained from other operations and from endoscopic examinations can be presented and analysed *ex post*.

## **11. Visitors Comments**

## **12. Names, Qualifications and Emails of Staff for the Department**

dr Andrzej Łachiński – [alach@amg.gda.pl](mailto:alach@amg.gda.pl)

dr Andrzej Babicki

**IN CASE OF NEED FOR IMMEDIATE CONTACT USE:**

[klchirla@amg.gda.pl](mailto:klchirla@amg.gda.pl)

## **8.4 Otolaryngology**

### **Introduction**

Otolaryngology is the clinical discipline of which fields of interest are diseases of the ears, nose and paranasal sinuses, throat and larynx as well as salivary glands, oesophagus and bronchi. Range of principal activity in this speciality includes general and detailed diagnostics of the ears and upper respiratory and alimentary tracts' diseases, conservative treatment of these diseases (in the first place in inflammations and post-inflammatory complications), surgical treatment of inflammatory diseases and congenital defects. Diagnostic and surgical or combined treatment of neoplastic diseases of the upper respiratory and alimentary tracts deserves particular attention in otolaryngology. To accomplish these tasks, otolaryngologists closely collaborate with specialists in other medical fields, such as pathologic anatomy, oncology, rentgenodiagnostics, neurology and neurosurgery, ophtalmology, stomatology, immunology and nuclear medicine.

8.2

### **Primary Aims**

Develop in the students an understanding of head and neck pathology, surgery as well as pharmacology and microbiology that is required for a dental practitioner to safely care for patients.

Enable the student to recognize the signs and symptoms of systemic diseases ascertained in history taking from and observation of a dental patient and to implement prophylactic measures

8.3

### **Main objectives**

- developing of history taking, communication and examinations skills in dentist faculty students which enable them to recognize major symptomatology of ENT diseases
- ability of taking a relevant and succinct medical history
- acknowledgement of methods and techniques of the ears, nose throat, larynx and neck examination basing on topographic anatomy of the organs of the head and neck.
- learning and understanding of the symptomatology of the ears' and upper respiratory and alimentary tracts' diseases, in particular of neoplastic diseases and complications of inflammatory diseases of the upper respiratory and alimentary tracts
- the ability to diagnose commonest otolaryngologic diseases
- acknowledgement and understanding of pathogenesis of otolaryngologic diseases and ability to make decision as to sending the patient to the specialist
- knowledge of essential medical procedures in emergency and life-threatening conditions.

8.4

### **Hours in the Curriculum**

45 hours in the IX semester at The ENT Department of Medical University of Gdańsk.

15 hours of clinical lectures and 10x 3 hour sessions of clinical lessons (2 hours of clinical exercises at the bedside and 1 hour of tutorial).

8.5

### **Methods of Learning/Teaching**

Particular groups of students (18 persons) follow the ENT clinical lessons once a week throughout 10 weeks in ENT Department. They consist of practical elements such as history taking, ENT examinations, discussing diagnostic methods and treatment modalities at the bedside and in the operation theatre (students work in small groups, each one with ENT clinician) as well as tutorials.

8.6

### **Assessment methods**

The students are permanently assessed during practical exercises (practical skills like history taking, basic examination of the ear, nose, throat and larynx are assessed). At the end of IX semester there is an final examination consisting of practical and theoretical part.

8.7

### **Strengths**

The practical exercises are organized at ENT Department of Medical University of Gdansk, where students have an opportunity to be taught by high qualified staff , at the bedside and in the operation theatre, where several maxillo-facial surgery procedures take place.

8.8

### **Weaknesses**

During practical exercises at the bedside one ENT clinician is working with a group of 5 – 6 students, that may give less opportunity for each student to develop some practical skills and clinical experience.

8.9

### Innovations and Best Practices

The students may gain more experience by exercising on different phantoms.

8.10

### Plans for Future Changes

As we find the numbers of students in one practising group too high, our affords are to reduce it to 1 – 2 students per ENT clinician for exercises at the bedside. This would give students more chances to active assistance during small otorhinolaryngological surgical procedures.

### **8.3 - Anaesthesiology**

Maria Wujtewicz

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#### **1. Introduction.**

All the students of subfaculty of dentistry are going through a course of anaesthesiology in the second and fourth year of studying.

The course in the second year is concerned with first-aid and elements of nursing. The course in fourth year is concerned with general anaesthesia, conscious sedation and bases of intensive care. In that year the students have the possibility of building on the knowledge they have already gained in anatomy and physiology, human diseases and pharmacology.

#### **2. Primary Aims**

The students are taught to give first medical aid to patient with unforeseen complication. The course aims are understanding of problems associated with the commonly used forms of anaesthesia and sedation and the distinction between conscious sedation and general anaesthesia.

#### **3. Main Objectives**

Students will be facilitated in learning:

- basis of reanimation
- first-aid
- the causes, signs and symptoms of anxiety or phobia
- the criteria and techniques of assessment of patients' suitability for conscious sedation and the indications and contraindications to the use of sedation
- to care for the patient until fully recovered and to appreciate the importance of and use of appropriate monitoring
- to assimilate the principles of:
  - regional and general anaesthesia
  - modern methods of pain therapy including dental problems
  - shock therapy
- the criteria of admission to intensive care units

#### **4. Hours in the Curriculum**

In second year student spends on average three hours (180 minutes) each week for three terms

In fourth year student spends three hours forty five minutes (225 minutes) each day for one week.

#### **5. Method of Learning/Teaching**

In the second year the didactic component includes an introductory course of reanimation and first-aid. The clinical course in that year consists of practical exercises of reanimation on phantom and first-aid.

In the fourth year the didactic component includes an introductory course of five lectures on sedation, anaesthesiology and shock. The clinical course in that year will consist of chairside tutorial and demonstration, but now it consists only of attendance



at general anaesthetic operating sessions and “hand on” experience of intravenous and inhalational sedation techniques.

Prescribed reading material includes textbook and current literature material.

#### **6. Assessment Methods**

After the fourth year every student takes the written (test) examination in anaesthesiology. In the second year the attestation is based on practical skills assessment.

#### **7. Strengths**

The course is taught in a clinical context. The students are divided into small groups. The course is led by anaesthetists with university appointments.

#### **8. Weaknesses**

The students are not sufficiently educated in the practical techniques of sedation and regional anaesthesia.

#### **9. Innovations and best practices**

#### **10. Plans for Future Changes**

The chairside tutorial and demonstration and sedation techniques will be added to program of fourth year.

### **8.5 Forensic Medicine With Elements Of Law**

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

Maciej Krzyżanowski MD, PhD

#### **1. Introduction**

Forensic medicine with elements of law is taught as an independent subject in our curriculum. Course is designed for the students of fourth year (semester VII). Forensic medicine is demonstrated as the bridge between natural sciences (medicine, biological sciences) and law.

#### **2. Primary aims**

The course aims to point an awareness of the full range of possibilities of modern forensic medicine, both theoretical and practical application for the state administration of justice and prosecution. The role of forensic medicine in various medico-legal aspects is underlined, including: problem of death (estimating time, cause and mechanism of death), identification of unknown human corps and remains. It also aims to show students possibilities of molecular biology (genetical analyses in investigations of biological traces and cases of disputable parenthood) also forensic toxicology, including alcohol and drugs intoxication.

#### **3. Main Objectives**

Students will be facilitated in learning:

- methods of blood collecting to estimate alcohol concentration in living person and the ability to interpret the result obtained;
- principles of preserving biological material for chemical and toxicological investigations;
- living person examination for the purpose of penal certification, preparing medico-legal opinions with respect of legal qualification of injuries; estimating mechanism and

circumstances of injuries and kinds of used tools, especially in cases requiring dentistic or maxillo-facial surgeon's consultation;

- methods of necessary clinical examination to state death, filling in the death certificate, inspection of the corps at the scene of disclosure and evidence of body injuries;
- ability to apply knowledge of dentistry for the purpose of identifying unrecognised human corpses;
- inspection of clothes left preserved as exhibit as at the crime scene, preservation of biological traces for further investigations;
- principles of forensic genetics in view of identification: cases of disputable parentage and analysis of biological traces.

#### **4. Hours in the Curriculum**

Course includes 15 hours of practical trainings.

#### **5. Methods of learning /Teaching**

The course consists of five sessions (2 groups together – about 40 persons per session); it lasts 3 hours per session (including a break).

#### **6. Assessment Methods**

Non-marked credit at the end of semester VII.

Attendance at all sessions is necessary for receiving the final credit.

#### **7. Strengths**

There is the only contact with extremely wide field of forensic medicine during the studies, which serve to deliver students basic medico-legal knowledge, especially concerning forensic odontology (identification).

#### **8. Weaknesses**

troubles with housing conditions

#### **9. Innovations and Best Practices**

Close liaison with forensic odontologists from National Board of Forensic Medicine from Stockholm, Sweden.

#### **10. Plans for Future Changes**

Continuation and closer liaison with forensic odontologists from National Board of Forensic Medicine from Stockholm, Sweden.

### **8.6 Emergency and Disaster Medicine**

Dr hab.med. Andrzej Basiński

#### **1. Introduction**

Emergency medicine and disaster medicine are taught under the title “emergency and disaster medicine” in our curriculum in the third year for dentistry faculty. Emergency medicine deals with all possible life-threatening situations regardless the causes. It focuses on preserving and supporting life functions, reducing patients suffering as widely as possible.

Disaster Medicine is a science concerning planning and medical supplies, rescue tactics and therapy in case of catastrophe or other mass accidents.

## 2. Primary aims

Students are expected to recognize the signs and symptoms of life-threatening states and to demonstrate skill in immediate rescue management to victims and first aid methods in sudden ailments in patients in dentistry practice.

## 3. Main objectives

Students should be able to diagnose and manage emergencies with specific reference to:

- recognize life-threatening states, especially common clinical cases in dentistry practice
- support cardio-pulmonary resuscitation based on BLS and ALS methods
- deliver first aid in the cases of accidental events, injury and sudden ailments
- know principles of delivering medical care to victims of mass accidents with regard to segregation rules

Students are expected to demonstrate skills ;

- in taking the patient's history and physical examination
- in certain procedures frequently used in emergency medicine (e.g. suturing, intubation, splinting, IV placement etc.)

## 4. Hours in the Curriculum

Total - 54 h    26 h lectures /2 h per week

6 h seminar

20 h practical training

Students spend 90 min. each week for 10 terms of the third year on practical training

### a. Methods of learning/teaching

Lectures, Seminars, Discussions

#### Practical classes

Films, computer simulation

Literature

### b. Assessment methods

Theoretical knowledge is included in the final examination in the subject "Emergency medicine" and practical test with the use of "dummy" after practical classes.

### c. Strengths

Big interest students in the subject

Self-testing practical skill in CPR on dummies

Simulations of disaster events and mass accidents

### d. Weaknesses

Too large groups of students during practical classes : group of 15 students instead 7-8

Limitation time of the practical training

Lack of exposure on real life situations in any clinic, students don't see patients in emergency department.

### e. Innovations and Best Practices

Possibility to do computer simulations comparable to real life simulations

### f. Plans for future change

More realistic approach to the care of the acutely ill or injured patient could be achieved in the clinical setting. Students can be exposed to the environment of the emergency department, where the emergency physicians would demonstrate "step by step" the continuum of care for a particular problem.

There is proposal to involve students in the after hours emergency on call service on the fifth year according to the needs of students.

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

### **8.7 Dermatology and Venerology**

Aneta Szczerkowska Dobosz M.D.

#### **1. Introduction**

Dermatology and Venerology are taught throughout the fourth year of Dental Faculty of Medicine. The theoretical part of the course is taught during lectures. Practical skills are obtained by students at the bedside.

#### **2. Primary Aims**

To teach students how to recognize symptoms of the most important and common skin diseases especially those involving oral mucosa

#### **3. Main Objectives**

- to understand basic science and principles of dermatologic diagnosis structure and function of the skin types of skin lesions
- to be capable to evaluate patient medical history
- to understand diagnostic tests in skin diseases especially biopsy and histopathologic examination
- to understand immunodermatology and immunology tests performed in immunological and autoimmunological skin diseases
- to be familiar with diseases of the oral mucosa and the lips, particularly precancerotic changes, neoplastic tumors and bacterial, viral and candidal diseases involving mucosa
- to get students know allergic skin reactions-especially angioedema, contact dermatitis and atopic dermatitis
- to be familiar with sexually transmitted diseases, especially those affecting oral mucosa
- to know systemic, external and physical methods of treatment

#### **4. Hours in the curriculum:** ten hours of lectures, twenty hours of exercises within five weeks

#### **5. Methods of learning/teaching**

The exercise sessions involve small group teaching at the bedside for 240 minutes in Dermatological ward and practical skills teaching in the out-patient ward. The lectures present main problems and most important skin diseases; each lasting 90 minutes.

#### **6. Assessment**

A very good mark after the bedside teaching and lectures attendance is required to assess dermatology. In other cases exam in dermatology and venerology has to be passed.

#### **7. Strengths**

The dental course in Dermatology and Venerology is held within the Dermatology Department of Medical University of Gdańsk by the qualified staff of tutors, lecturers and medical doctors basing on well equipped laboratories and comfortable in-patient wards (separate for males, females, kids) including dermatosurgery ward.

#### **8. Weakness**

The out patient ward is not convenient for teaching because of its local conditions. Out patient ward is planned to be rebuilded and probably will be closed for a period of time.

9. **Innovations and Best Practices:** no
10. **Plans for future Changes:** no
11. **Visitors comments**
12. **Names, Qualifications and Emails of staff for this Department**

Jadwiga Roszkiewicz- professor  
Adam Włodarkiewicz- professor  
Roman Nowicki- assistant professor  
Aleksandra Wilkowska –M.D.  
Elżbieta Grubska-Suchanek –M.D.  
Aleksandra Siedlewicz –M.D.  
Elżbieta Wojszwiłło-Geppert - M.D.  
Aneta Szczerkowska-Dobosz- M.D.  
Elżbieta Jasiel-Walikowska -M.D.  
Maria Czubek - M.D.  
Jacek Tobała –M.D.  
Magdalena Lange –M.D.  
Anna Witkowska – M.D.  
Anna Gołębiowska – M.D.  
Magdalena Sztaba-Kania - Ph.D.  
Bogusław Nedoszytko – Ph.D.

## **8.8 Okulistyka**

### 1. Introduction

The course comprises 15 hours of practical training in ophthalmology. It includes practical exercises on ophthalmologic equipment and basic eye testing. It enables students to become acquainted with principle methods of examination of patients and gives basic ideas about fundamentals of eye diseases.

### 2. Primary Aims

Develop in students basic understanding of ocular pathology and its involvement in dental diseases as well as knowledge of principle methods of eye-testing.

### 3. Main objectives

- To know essential methods of eye examination
- To be capable of delivering first aid in eye – injuries
- To know principles of ocular anatomy and pathology
- To be capable of taking relevant medical history in ocular diseases
- To be able to detect basic ocular diseases: iritis, glaucoma, cataract
- To know basics about optics and refraction
- To be acquainted with basic surgical techniques in ophthalmology
- To be able to advise patients in basic eye-problems

### 4. Hours in Curriculum

15 hours of practical training a year, cumulated in one block of 5 consecutive days (3 hours a day)

## 5. Methods of Learning/Teaching

Tuition is delivered via practical exercises. It involves examining patients, self – testing on ophthalmologic equipment and teaching the theoretical part on that basis. One session lasts 3 hours and is conducted in groups of 5 students.

## 6. Assessment Methods

Students knowledge is assessed instantly during sessions and also by the final oral test at the end of the block. The test is non-marked and valued 1,0 credit.

## 7. Strengths

The course is carried out at the same location as the rest of the subjects (Medical University of Gdańsk) and taught by experienced academic tutors, who are familiar with clinical work on the daily basis. This provides high quality of tuition and stress on its practical, particularly helpful part.

## 8. Weaknesses

The main weakness is relatively few number of hours and lack of separately conducted lectures or seminars.

## 9. Innovations and Best Practices

- Stress on the practical exercises, what makes the course more interactive and interesting
- A method of tuition by student's self- testing, which provides better understanding of techniques of examination
- A visit to the operation theatre and presenting basic techniques of surgery in ophthalmology
- Close liaison to Medical University (tuition gives wider perspective on different specializations)

## 10. Plans for Future Changes

- To increase number of hours of tuition
- To introduce seminars and lectures

## **8.9 Tuberculosis**

### **1.1 Tuberculosis**

Prof. J. M. Slominski and Dr L. Wolska-Goszka  
jmslomin@amg.gda.pl

#### **1. Introduction**

The theoretical part of this course is taught throughout the fourth year via practical part and seminar part (practical training 10 hours, seminars 5 hours). This allows experience at examining patients and the development of clinical skills at tuberculosis epidemiology.

#### **2. Primary Aims**

Develop in the students understanding of tuberculosis that is required for a dental practitioner to safely care for patients.

Enable the student to recognise the signs and symptoms of tuberculosis. Develop epidemiological history taking and implement prophylactic measures.

### **3. Main Objectives**

- The main objectives of this course are to develop epidemiological history taking and examination skills in our students so that they can recognise clinical problems of tuberculosis.
- They should be capable to understand tuberculosis epidemiology, basis of bacteriology Myc.tuberculosis and basis of radiology.
- They should understand pathogenesis of tuberculosis, ways of spreading disease, immunological responses to Myc.tuberculosis invasion, clinical symptoms and basis of differential diagnosis.
- Be familiar with modern standards treatments of tuberculosis.

### **4. Hours in the Curriculum**

5 hours of seminars, 10 hours of practical training in Department Pneumology and Tuberculosis Medical University of Gdansk.

### **5. Method of Learning/Teaching**

Seminars are classical form in groups 20-30 students. Practical training involves small group teaching at the bedside.

### **6. Assessment Methods**

Tuberculosis course is assessed by written examination. In case of failure is corrected via oral form.

### **7. Strengths**

This course is organised in experienced medical unit which has attachment to Medical University of Gdansk. This means that the tutors, lectures and consultant staff can create practical approach to all problems.

### **8. Weaknesses**

The course is dominated by classical forms of teaching. The number of medical and paramedical students using the facilities in Department Pneumology and Tuberculosis means that patients and tutors are over expose to students.

### **9. Innovations and Best Practices**

Organisation of tuberculosis course in one, experienced department of university hospital.

### **10. Plan for Future Changes**

In next 2-3 years we will try to build PBL component in our course.

### **11. Visitors Comments**

### **12. Names, Qualifications and Emails of Staff for this Department**

#### **J. M. Slominski – professor**

B.Cynowska – MD, PhD – adjunct

A.Sieminska – MD, PhD – adjunct

I.Damps – MD, PhD – assistant

K.Kuziemski – MD – assistant

M.Sulzycka – MSc. – assistant in microbiology

M.Porzezinska – MD – assistant

E.Jassen – MD, PhD – docent

L.Wolska-Goszka – MD, PhD – senior lecturer

Email of Department Head: jmslomin@amg.gda.pl

### **8.10 Forensic Medicine With Elements Of Law**

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

Maciej Krzyżanowski MD, PhD

### **4. Introduction**

Forensic medicine with elements of law is taught as an independent subject in our curriculum. Course is designed for the students of fourth year (semester VII). Forensic medicine is demonstrated as the bridge between natural sciences (medicine, biological sciences) and law.

## **5. Primary aims**

The course aims to point an awareness of the full range of possibilities of modern forensic medicine, both theoretical and practical application for the state administration of justice and prosecution. The role of forensic medicine in various medico-legal aspects is underlined, including: problem of death (estimating time, cause and mechanism of death), identification of unknown human corps and remains. It also aims to show students possibilities of molecular biology (genetical analyses in investigations of biological traces and cases of disputable parenthood) also forensic toxicology, including alcohol and drugs intoxication.

## **6. Main Objectives**

Students will be facilitated in learning:

- methods of blood collecting to estimate alcohol concentration in living person and the ability to interpret the result obtained;
- principles of preserving biological material for chemical and toxicological investigations;
- living person examination for the purpose of penal certification, preparing medico-legal opinions with respect of legal qualification of injuries; estimating mechanism and circumstances of injuries and kinds of used tools, especially in cases requiring dentistic or maxillo-facial surgeon's consultation;
- methods of necessary clinical examination to state death, filling in the death certificate, inspection of the corps at the scene of disclosure and evidence of body injuries;
- ability to apply knowledge of dentistry for the purpose of identifying unrecognised human corpses;
- inspection of clothes left preserved as exhibit as at the crime scene, preservation of biological traces for further investigations;
- principles of forensic genetics in view of identification: cases of disputable parenthood and analysis of biological traces.

## **4. Hours in the Curriculum**

Course includes 15 hours of practical trainings.

## **5. Methods of learning /Teaching**

The course consists of five sessions (2 groups together – about 40 persons per session); it lasts 3 hours per session (including a break).

## **6. Assessment Methods**

Non-marked credit at the end of semester VII.

Attendance at all sessions is necessary for receiving the final credit.

## **7. Strengths**

There is the only contact with extremely wide field of forensic medicine during the studies, which serve to deliver students basic medico-legal knowledge, especially concerning forensic odontology (identification).



## 8. Weaknesses

troubles with housing conditions

## 9. Innovations and Best Practices

Close liaison with forensic odontologists from National Board of Forensic Medicine from Stockholm, Sweden.

## 10. Plans for Future Changes

Continuation and closer liaison with forensic odontologists from National Board of Forensic Medicine from Stockholm, Sweden.

### 8.11 Neurology

#### 4. Introduction

Neurology is taught in the fifth year (10<sup>th</sup> semester) of the Dental Curriculum. The course consists of 15 hours of lectures and 15 hours of practical training (bedside teaching).

#### 5. Primary Aims

Achieving by the students the knowledge of neurology that is required for a dental practitioner to safely care for patients.

#### 6. Main Objectives

- Students should achieve full competency in the basic neurological exam of adult and pediatric patient, including history taking, examination of the cranial nerves, upper and lower extremities and the trunk.
- They should have a good grasp of the basic clinical neurological symptoms.
- Should be able to formulate the differential diagnosis independently.
- Have the knowledge of treatments for selected syndromes relevant to the dental practice.
- Have the knowledge of treatments with particular emphasis on neurological emergencies and life threatening conditions.
- Understand normal function of the nervous system.
- Referring the patient to a specialist in neurology.

#### 7. Hours in the Curriculum

In total, the neurology programme takes 30 hours that comprise 15 hours of lectures and 15 hours of practical training in Department of Neurology.

#### 8. 5. Metod of Learning/Teaching

All topics will be covered in the lectures and practical sessions. The practical training involves small group students at the bedside for 180 minutes in neurology ward.

#### 9. 6. Assessment Methods

Attendance at all lectures and practical sessions is mandatory. The course can be taken pass/fail or for a grade. Form of evaluation – written final exam. If the students fail the final written exam they may retake the oral exam with the course director.

#### 10. 7. Strengths

Students will be evaluated daily on their participation in practical sessions and discussion with the teaching assistant. Only those students who satisfied attendance and participation requirements and who show adequate mastery of the material, as judged by the teaching assistant, will be permitted to take the final written exam. No credit will be given until the student has completed the total of 30 hours lectures and practical sessions. If the student is unable to attend one of the sessions

because of extenuating circumstances, he /she may arrange a make-up session in the afternoon with the teaching assistant.

The course is taught by faculty on staff in the Neurology Department at Medical University.

**11. 8. Weakness**

The time of practical training is in our opinion too short.

**12. 9. Innovations and Best Practices**

Introduction the final written exam as a new form of evaluation. The main practical topics are supported by video demonstration.

**13. 10. Plans for Future Changes**

Increase the number of hours of practical sessions at the bedside.

## **8.12 General Psychiatry**

prof. Zbigniew Nowicki, Janusz Jakitowicz M.D.

email: [psychbio@amg.gda.pl](mailto:psychbio@amg.gda.pl)

### 1. Introduction

Psychiatry is medical science concerned with mental disturbances and their familial, genetic, constitutional, biological, psychological and social conditionings. It comprises aetiology, pathogenesis, symptomatology, clinics and treatment of these disturbances.

Psychiatry is by tradition divided into general symptomatology and detailed psychopathology i.e. proper psychiatry. Within the latter, nowadays numerous subdivisions are made due to many sections gaining independence, such as clinical psychiatry (of adults and of children and adolescents), social, environmental, consultation (liaison), forensic psychiatry, criminal psychopathology, penitentiary, geriatric, cultural and transcultural psychiatry. In its theoretical and practical research, psychiatry derives largely from the achievements of neurology, neurophysiology, neurochemistry, genetics, nuclear biology, anthropology, psychology, sociology as well as from numerous philosophic schools and trends.

### 2. Primary Aims

The aim of the course is to convey information on psychic disturbances, forming the skill of diagnosing and treating patients with psychiatric disturbances and send them to appropriate specialistic institutions.

### 3. Main Objectives

- Posses the ability to make an empathic contact with patient, avoiding iatrogenicity at the same time.
- Know the principles of taking information concerning the patient's psychic and physical state, sufficient for commencing adequate management.
- Be able to diagnose psychoses and neuroses in general and know the principles of therapeutic management of the mentally disturbed persons, with emphasis on cases of urgency.
- Learn to establish appropriate relations between the patient and the doctor, which facilitate therapy and above all, learn to reduce anxiety both in children and adults.

### 4. Hours in the Curriculum

Total: 20 hours during year,

4 x 2,5 hour sessions in Department of Biological Psychiatry and  
4 x 2,5 hour sessions in I Department of Psychiatry

#### 5. Method of Learning /Teaching

There are two major parts of didactic, including 10 hours of practical trainings and 10 hours of seminars.

Practical training takes place in I Department of Psychiatry – 10 person groups training at the bedside in four clinical wards: 1. day hospital, 2. neurotic, 3. male psychotic, 4. female psychotic.

Seminars (in Department of Biological Psychiatry) including: 1. General psychopathology, 2. Detailed psychopathology, 3. Psychotherapeutical aspects of the patient-doctor relationship, 4. Problems of anxiety and fear in dentistry patients, including their personality traits (causes, importance, methods of reduction)

#### 6. Assessment Methods

- Attendance at all sessions is obligatory.
- Missed sessions (due to explained reasons) during academic year may be attended with other groups; if not more than two practicals are missed, students may attend afternoon duties instead of practicals.
- Practicals are credited with full attendance and through evaluation of students' activity.

#### 7. Strengths

This course is jointly organised by two psychiatric departments (Department of Biological Psychiatry and I Department of Psychiatry) with highly qualified staff.

#### 8. Weaknesses

There is too little audiovisual equipment. There is too little place for such big group of students, there is no place for individual talking with patients and no special places for students to rest during breaks.

#### 9. Innovations and Best Practices

Organisation of additional psychological and therapeutical sessions and lectures requested by the students.

#### 10. Plans for Future Changes

Course is being monitored and revised continuously, we are planning to develop new forms of teaching, including audiovisual methods.

#### 11. Visitors Comments

#### 12. Names, Qualifications and Emails of Staff for this Department

Zbigniew Nowicki – professor, M.D., psychiatry specialisation, Regional Expert

email: znow@amg.gda.pl

Janusz Jakitowicz – MD. psychiatry specialisation, Mentalhealth Network Expert

email: jjakit@amg.gda.pl

### **8.13 Paediatrics**

Department of Paediatrics, Haematology, Oncology and Endocrinology  
Head of the Department: Prof. Anna Balcerska, M.D., Ph.D.

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

Name: EWA BIEŃ

e-mail: ebien@amg.gda.pl

1. An introductory single paragraph explaining the course and its timing in the curriculum (sufficient information to explain the course taught)
2. Primary Aims – no more than two
3. 6-10 main objectives (list in brief sentences)
4. Hours in Curriculum – if a clinical subject identify the estimated number of hours students actually spend treating patients per week per year of training)
5. Methods of learning/teaching (one/two paragraphs)
6. Assessment methods (one paragraph)
7. Strengths (one paragraph)
8. Weaknesses (one paragraph)
9. Innovations and Best Practices – list no more than five
10. Plans for future changes (one paragraph)

#### **1. Introduction**

Paediatrics is taught to the students of the Subfaculty of Dentistry of Medical University of Gdańsk during their IVth year of studies, throughout the semester VIII. Both theoretical and practical parts of this course have been designed, prepared and delivered by the tutors employed in the Department of Paediatrics, Haematology, Oncology and Endocrinology, Department of Paediatric cardiology and Department of Paediatric Nephrology. This allows good experience at examining paediatric patients and development of clinical skills at the bedside as well as vast up-to-date medical knowledge concerning various problems and diseases of childhood.

#### **2. Primary Aims**

- To develop in the students the understanding of various paediatric diseases that is required for a dental practitioner to safety care for the children patients (in term of necessary preparation of the patient before dental procedure or the implementation of suitable prophylactic measures for both patient and doctor)
- To enable the student to recognise and interpret the signs and symptoms of serious paediatric states and diseases that require urgent paediatrician's assistance.

#### **3. Main Objectives**

- the main objectives of this course are to develop history taking, communication and examination skills in our students so that they can recognise major system symptomatology and the sequelae that this might have for the dental treatment of their paediatric patients
- the students should become familiar with normal development, proper nursing and feeding of a child with a special commitment to the neonatal and early infancy periods.
- they should be able to properly estimate the child's general state with the aim of breath rate, pulse rate and blood pressure monitoring
- they must acquire a theoretical and practical knowledge of life threatening diseases of childhood, including symptomatology and management of convulsive state, unconsciousness, acute abdomen syndrome, anaphylactic reactions and respiratory insufficiency)

- the students are taught to pay a special attention to the problems of paediatric haematology and oncology concerning common physical and laboratory signs of anaemia, haemorrhagic diatheses and immunological disorders secondary to the neoplastic disease as well as its oncological treatment.
- they are to get to know selected problems of paediatric endocrinology with a special stress to the symptomatology of growth disturbances, hypothyreosis and diabetes mellitus type I
- they are expected to understand normal function of the urinary and cardiovascular systems and be aware of the common acute and chronic disorders associated with these systems, including the congenital defects.
- the students are also presented the psychological aspects of dentistic visit in paediatrics, especially as regards children suffering from chronic and/or serious disease.

#### **4. Hours in the Curriculum**

The total course workload covers 60 hours. It comprises 15 hours of tutorial lectures and 45 hours of practical training.

#### **5. Methods of Learning/Teaching**

The major didactic part of the course is delivered by the scheduled lectures performed to each student group once a week for 15 consecutive weeks. After the lecture the students are subdivided into smaller groups for more effective practical training.

The practical training involves small group teaching at the bedside for 45 minutes a day. Throughout the course every subgroup gets acquainted with patients treated in each of the following paediatric wards: oncological, haematological, neonatal, endocrinological, of infectious diseases, cardiological and nephrological. During sessions of practical training students have an opportunity for additional lectures connected with examined patient's case.

#### **6. Assessment Methods**

The paediatrics course is assessed by a number of different methods. The attendance at all lectures and sessions of practical training is obligatory and certified. Each missed lecture or practical training has to be explained and credited according to the decision of the relevant tutor.

The final credit comprises a written examination, that consists of 60 multiple choice questions ( 1 question = 1 mark). The attendance at all course lectures is credited a bonus of 10 extra marks at the final examination.

#### **7. Strengths**

The course of Paediatrics for dental students is organized by tutors of the Department of Paediatrics, Haematology, Oncology and Endocrinology, Medical University of Gdańsk, with the support of assistants of two other departments also constituting the Institute of Paediatrics: Department of Paediatric Cardiology and Department of Paediatric Nephrology. Such an organisation of the course assures best qualification of lecturers, very good practical experience and proper delivery of clinical skills as well as vast up-to-date medical knowledge concerning all the problems and diseases of childhood.

#### **8. Weaknesses**

The course of Paediatrics is delivered to the students during their VIIIth semester of studies. Because this is the only course presenting problems of childhood, it has to contain both physiology and pathology. We think it would be much better for the students to have the course organized and delivered in two separate parts. The first one should be dealing mainly with the problems of child's development, feeding and prophylaxis. It would provide strong basic knowledge of the patient's examining and history taking. The second part of the paediatric course might focus on the diagnostic, prognostic and treatment problems of a

variety of children disorders and diseases. Perhaps such an organization of the course would produce more thorough knowledge of paediatrics.

### **9. Innovations and Best Practices**

Being aware of the special importance of proper dental procedures performed in children suffering from cancer, we try to focus on this problem not only during our course of Paediatrics. Acting in a cooperation with the tutors of Paediatric Dentistry course, we have the opportunity to present our oncological patients to the students of the Vth year of studies (semester IX and X).

### **10. Plans for Future Changes**

Free topics of lectures or additional lectures focusing on problems proposed and selected by students.

### **Visitors' Comments on Human Diseases**

**The visitors gained the impression that few staff were aware of the DentEd visitation in advance and very few were available to meet them at short notice. We were, however, able to meet:**

<b>Department of Neurology</b>	<b>Head of Department and the staff member who taught dental students</b>
<b>Department of General Surgery</b>	<b>member of staff who taught dental students</b>
<b>Department of Anaesthesiology</b>	<b>previous Head of Department</b>
<b>Department of General Medicine</b>	<b>two members of staff who taught dental students</b>

**It was apparent in all cases that the Head of Department was responsible for laying down the curriculum in his or her area. There appeared to have been little change in the curricula over the last ten years. There did not appear to be any mechanism for co-ordinating the material taught by these departments in order to reduce duplication, nor did there appear to be an effective means of discussing curriculum content with staff from the Dental School to ensure that the material taught was relevant and timely to the needs of dental students. Specific illustrations of these problems are:**

- **at least two departments taught cardio-pulmonary resuscitation.**
- **theoretical instruction in regional block analgesia was provided by the Department of Anaesthesiology and later repeated by those departments within the Dental School who provided the practical instruction**
- **a significant amount of teaching was provided by the Departments of Neurology and General Surgery but with little relevance to the needs of practicing general dentists.**

**All the departments maintained detailed records of student attendance and performance in line with what appeared to be the requirement and policy of the**

**University. Assessment appeared to be of attendance and factual recall rather than deep learning and understanding.**

## **Section 9 - Orthodontics and Child Dental Health**

- **9.1 Orthodontics**
- **9.2 Child Dental Health**

### **9.1 Orthodontics**

Dr. Anna Rosnowska-Mazurkiewicz  
Tel./fax (+4858) 349 21 46

#### **1. Introduction**

The fourth year students have one lecture on prophylaxis in orthodontics .  
Every week fifth year students have one clinical class , a seminar and one lecture. Classes in pediatric dentistry are held also ones a week .  
Every effort is made to integrate the treatment of children .

#### **2. Primary Aims**

Graduating students should be able to perform an appropriate diagnosis for all forms of malocclusion and evaluate the need for orthodontic treatment .They should also learn how to prevent malocclusion in children they are going to treat after they graduate .

#### **3. Main Objectives**

- To identify normal growth and development .
- To develop a knowledge of abnormal development of the dentition .
- To understand the relationship between development of the dentition and facial growth.
- To appreciate the use of functional appliances in orthodontics .
- To emphasize the integration of orthodontics , pediatric dentistry and oral surgery in treatment of the child .
- To recognize those conditions which need to be referred for secondary care .

#### **4. Hours in the Curriculum**

Fifth year students spend 90 hours per academic year treating patients in the orthodontic clinic apart from that , students also 30 hours of lectures on orthodontics .

#### **5. Method of Learning/Teaching**

Problem-based learning is used throughout the undergraduate curriculum. Orthodontics is an integral part of the problem-based learning programme.

Case-based learning has been introduced into the fifth dental year . The purpose of the case-based learning course is to allow students to apply acquired knowledge to solve clinical problems .

The cases selected are clinically based and some of the cases require orthodontic intervention.

Students learn orthodontic diagnosis and treatment planning in the clinic.

To enable the students to gain sufficient clinical practice in diagnosing patients they examine children in kindergartens and the youngest children in primary schools .

#### **6. Assessment Methods**

Theoretical knowledge is assessed before every clinical session – students write short answer questions.

Clinical activity is assessed after each 2,5 hour clinical session .

At the end of each problem –based learning block knowledge is assessed using short answer questions and structured questions .

Students must pass every tests .

After fifth academic year students have a practical and theoretical exam .



## **7. Strengths**

The structure of program allows students to develop knowledge of normal and abnormal development of occlusion .

Graduating students can perform the appropriate diagnosis for all forms of malocclusion and evaluate the need for orthodontic treatment .

## **8. Weaknesses**

Too few hours of clinical orthodontics . Practical training in clinical orthodontics should start already in the fourth year .

## **9. Innovations and Best Practices**

Students have an opportunity to diagnose problems and carry out orthodontic treatment under supervision . students gain experience in the use of removable , functional and fixed appliances .

## **10. Plans fore Future Changes**

Students should benefit from attending in orthodontic clinic from the fourth dental year .

We plan to introduce integral classes in orthodontic and pediatric dentistry .

## **Visitors Comments on Orthodontics**

**The Department of Orthodontics was situated in a somewhat gloomy building, allowing nevertheless, an efficient service to be provided to the population. The principal goal was to teach the students to recognise the possible treatment needs of their patients. This is in line with the practice elsewhere in Europe. Students gained experience in the use of removable appliances only. They did observe some fixed appliance work although this form of treatment is severely limited by economic constraints.**

## **Visitors' Comments on Child Dental Health**

**The visitors had extensive discussions with staff at all levels within this department and were impressed by their enthusiasm and commitment to the teaching of dental students. The experience gained by the students appeared to be comparable to that gained in other European dental schools.**

## **Section 10 - Public Dental Health and Prevention**

### **PUBLIC HEALTH AND PREVENTION**

Dr med. Marzena Zarzeczna-Baran  
e-mail: mazar@amg.gda.pl

#### **1. Introduction**

Department offers undergraduate teaching on Public Health in IX semester (5<sup>th</sup> year) to the students of sub-faculty of Dentistry.

Teaching form is topic seminars uses a contextual, integrated, multidisciplinary approach to education. Areas of public health covered include legal and economic aspects of the policy framework, management and delivery of dental care, preventive, health promotion, bioethics issues and outcome evaluation including health and social gain. Outcome evaluation also includes epidemiological analysis, monitoring the effectiveness of programmes or strategies and recognizing the barriers in sub groups or whole populations.

#### **2. Primary Aims**

- a) To provide students with a broad theoretical knowledge and practical skills of public health, especially population health, health care service management and health promotion
- b) To enable students to organize their future dental enterprises.

#### **3. Main Objectives**

- a) basic subjects of public health and social medicine
- b) health promotion and preventive medicine
- c) main health problems in Poland
- d) health and social policy
- e) organization of dental services in Poland
- f) legal and economic aspects of health care
- g) bioethics
- h) pharmacy market – main legal and economic rules.

#### **4. Hours in the Curriculum**

The estimated number of hours provide in our Department is 35 on the 5<sup>th</sup> year of Dentistry.

#### **5. Method of Learning/Teaching**

Topic seminars are used throughout the course, they provide learning with audiovisual means. It also encourages students with self directed and evidenced-based learning, complementing by literature.

#### **6. Assessment Methods**

Final assessment is used to measure theoretical and practical knowledge. The assessment is carried out using short answer questions. The individual student's participation is marked at each seminary.

#### **7. Strengths**

Public Health and Prevention are incorporated into the whole curriculum and not separated as an isolated discipline. Students are taught by full time staff and also by staff from the community services, thus giving a balanced view of the systems operating in the country.

#### **8. Weaknesses**

Ideally students should have more time for discussion and individual presentation.

#### **9. Innovations and Best Practices**

Up-to-date knowledge of legal aspects in individual private dental enterprises and programme management in dentist market.

#### **10. Plans for Future Changes**

The education related to the process connected with an European Integration, especially concerning low aspect of public health and opportunities for medical professionals which are due to integration process.

## Section 11 - Restorative Dentistry

- **11.1 - Conservative dentistry**
- **11.2 - Endodontics**
- **11.3 - Prosthodontics**
- **11.4 - Dental occlusion and function**
- **11.5 - Paediatric dentistry**
- **11.6 - Physiology of the stomatognathic system**
- **11.7 - Stomatologic Prophylaxis**

### 11.1 - **Conservative dentistry**

#### CONSERVATIVE DENTISTRY WITH ENDODONTICS

##### **1. Introduction**

The program of the preclinical study in the 4<sup>th</sup> term of the second year contains the following issues: a) anatomy and physiology of the masticatory system, dental morphology; b) outfit of dental surgery, dental work safety, dental ergonomics, dental team; c) dental equipment and instruments - operational procedures and the principles of their sterilisation and disinfection, infectious prevention in dental practice (issues of cross-infection); d) dental drugs and dental materials (properties and handling); e) emergency case procedure (syncope, circulatory collapse, epileptic seizure and others); f) medical document circulation in dental practice.

The program in the third, fourth and fifth years introduces the students to the diagnosis, management, treatment and prevention of dental hard tissue, pulp and periapical tissue diseases, patient examination (oral and dental examination) and history taking as well as treatment planning. The students should have the theoretical knowledge about etiopathogenesis, symptoms and incidence of different dental diseases. They should have a good knowledge of the basic science also, so that they may be able to interpret pathological changes - that is to recognize abnormal physiology and histology. They must be able to understand and interpret pathological processes in an exact way, so that they can successfully treat them.

The students develop understanding of dental emergencies and develop the skilful and compassionate management of patients in pain or who are suffering from acute dental conditions.

Preclinical exercises: In the 5<sup>th</sup> term of the third year the students learn about different methods, techniques and procedures of treatment and prophylaxis, which are used in conservative dentistry (operative dentistry) and in endodontics. After demonstration and discussion the students learn them in practice, individually carrying them out in the clinical skills laboratory under supervision. They use and inspect radiographs (RTG, RVG) for diagnosis or length estimation of the root canal (alternative means of length estimation are also introduced and practised).

Clinical exercises: In the following four terms the students continue to practice clinical skills, i.e. unaided examination of the patients, making diagnosis of dental diseases, treatment planning and treating of the patients under supervision (during the treatment the students provide local anaesthesia). They instruct the patients also about the prevention of dental diseases and about the home care of the mouth and teeth and also advise as to proper diets.

##### **2. Primary Aims**

- Knowledge and understanding of the biological basis for common hard dental tissue, pulp, periapical tissue diseases and the rationale steps for their prevention, management and treatment.

- Development of clinical and communication skills necessary for students to competently diagnose the common hard dental tissue, dental pulp, periapical tissue diseases and correctly undertake treatment or prevention.
- Develop the diagnostic and clinical knowledge and skills required to carry out operative dentistry procedures and endodontic procedures.
- Understand the basis of cross-infection control and its routine application to modern dental practice.

### 3. Main objectives

- Theoretical knowledge and clinical skill in oral diagnosis (oral examination) and treatment planning.
- The mouth and teeth - anatomy, histology, physiology with regards to pathology.
- Theoretical knowledge and clinical skill in diagnosis, management, treatment and prevention of dental caries.
- Theoretical knowledge and clinical skill in diagnosis, management, treatment and prevention of hard dental tissue diseases (attrition, abrasion, erosion) or structural disorders.
- Operations for restoring the teeth affected by caries, trauma and other disorders.
- Theoretical knowledge and clinical skill in diagnosis, management, treatment and prevention of dental pulp and periapical tissue diseases (together with endodontic procedures).
- Prevention of diseases of the teeth and oral cavity
- Dental team and its aims.
- Drugs in dentistry. Dental materials.

### 4. Hours in the Curriculum

- Year 2 (4<sup>th</sup> term) – 30 hrs (with 20 hrs in the clinical skills laboratory included).
- Summer training period after year 2 - 120 hrs (1 month) - the students work in the clinic as dental assistant.
- Year 3 (5<sup>th</sup> term) – 75 hrs (with 60 hrs in the clinic skills laboratory included)
- Year 3 (6<sup>th</sup> term) - 60 hrs (with 45 hrs in the clinic - treating the patients included)
- Year 4 (7<sup>th</sup> and 8<sup>th</sup> terms) – 165 hrs (with 150 hrs in the clinic - treating the patients included)
- Summer training period after year 4 - 60 hrs (two weeks) - the students work in the clinic and treat the patients
- Year 5 (9<sup>th</sup> or 10<sup>th</sup> term) - 120 hrs (with 105 hrs in the clinic - treating the patients included)
- After year 5 - four months of training period in the clinic.

### 5. Method of Learning/Teaching

- **Year 2** – lecture series, demonstration in the clinical skills laboratory and in the clinic, practical learning in the clinical skills laboratory, PBL.
- **Summer training period after year 2** - work in the clinic as a dental assistant under supervision of specialist teacher.
- **Year 3 (5<sup>th</sup> term)** – Lecture series, demonstration of all common methods of treatment and procedure and their practical learning in the clinical skills laboratory, PBL
- **Year 3 (6<sup>th</sup> term)** – lecture series, small group of students practically learning in the clinic – the students unaided, examine the patients, plan treatment and treat the patients under direct supervision of specialist teachers.

- **Year 4** - lecture series, small group practically learning in the clinic – the students unaided, examine the patients, plan treatment and treat the patients under direct supervision of specialist teachers.  
Case-Based-Learning, Topic-Based-Learning connected with PBL
- **Summer training period after year 4** - the students unaided treat the patients fully under direct supervision during two weeks.
- **Year 5** - lecture series, small group practical learning in the clinic – the students unaided, examine the patients, plan treatment and treat the patients under direct supervision of specialist teachers.  
Case-Based-Learning, Topic-Based-Learning connected with PBL and other clinical, medical and dental disciplines.

## 6. Assessment Methods

Continuous assessment:

- **Year 2 (4<sup>th</sup> term)** – preclinical competence test, some Problem Based Learning questions.
- Summer training period after year 2 - preclinical competence credit.
- **Year 3 (5<sup>th</sup> term)** – preclinical competence credit (test of theoretical knowledge necessary to work in the clinic + checking of practical skills).
- **Year 3 (6<sup>th</sup> term)** - clinical competence credit (test of theoretical knowledge and the fulfilling of a fixed amount of clinical procedures).
- **Year 4 (7<sup>th</sup> and 8<sup>th</sup> terms)** – clinical competence credit (test of theoretical knowledge and the fulfilling of a fixed amount of clinical procedures).
- Summer training period after year 4 - clinical competence credit.
- **Year 5 (9<sup>th</sup> or 10<sup>th</sup> term)** - clinical competence credit (test of theoretical knowledge and the fulfilling of a fixed amount of clinical procedures).

**At the end of the whole course - final 3 part examination of theoretical and practical knowledge (written, oral and practical examination).**

- After year 5 - clinical competence credit (test of theoretical knowledge and the fulfilling of a fixed amount of clinical procedures) + writing of a paper.

## 7. Strengths

Modern equipped clinical and diagnostic work stations available for every students, also during the holidays.

Possibility of full and modern treatment of a large amount of patients - possibility of using different methods as well as diagnostic and treatment procedures in practice.

Well motivated clinical and laboratory teaching staff.

Individual and small group teaching in clinic.

Wide access to the Main Library of Medical University of Gdańsk.

## 8. Weaknesses

Old fashioned clinical skills laboratory.

Lack of modern audio-visual equipment.

Impossibility of using interactive computer program learning

## 9. Innovations and Best Practices

Clever connection of theoretical knowledge and matters from PBL, with clinical practice.

Creating for students the possibility of full and complex patient treatment

The capability to integrate the principles and practice of conservative dentistry with those of biological science and other clinical, medical and dental disciplines.  
The program relates the topics learned to the everyday practice of general restorative dentistry.

## **10. Plans for Future Changes**

Modernising of old fashioned clinical skills laboratory.  
Development of computer-based interactive learning programs.  
Equipping with modern audio-visual appliances.  
Increasing the amount of treatment work stations.

### **11.3 Prosthodontics**

(Fixed and Removable Prosthodontics Endentulous State)

Professor Halina Tejchman, Dr. Wiesława Czerwińska, Dr. Maria Prośba Mackiewicz, Dr. Janina Śramkiewicz.

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## **1. Introduction**

Prosthetic dentistry is a medical speciality that encompasses prophylaxis and management of the morphological and functional disorders of the stomatognathic system. Major areas of competence within the speciality are: general and detailed diagnostics of the morphological and functional disorders of the stomatognathic system, detection and management of clinical types of traumatic occlusion, recognizing and eliminating causes of these disorders, management of postoperative patients and patients with malocclusion. To fulfill the mentioned aims, prosthetic dentistry specialists cooperate with those of other dental specialties, such as: conservative dentistry, periodontology, orthodontics and dental surgery, as well as with those of the following specialties of the general medicine: laryngology, oncology, dermatology and neurology.

The course is designed for students of I st, II nd, III rd, IV th, and V th year and is composed of two parts: 1. preclinical course  
2. clinical course

## **2. Primary Aims**

The main aims of this course are:

- Taking scrupulous case history and performing patients examination, analysis of the denture supporting area, designing on appropriate plan of prosthetic treatment and essential clinical skills concerning management of patients with elementary prosthetic restorations (complete and partial removable dentures and fixed prosthesis.
- Knowledge of essential laboratory stages of prosthetic works and evaluation of laboratory adequacy of prosthetic works completions.

## **3. Main Objectives**

- Complex dental treatment of occlusion and articulation disorders.
- Principles of planning treatment and prophylaxis in various types of partial removable dentures and fixed dentures.
- Analysis and assessment of denture supporting area and preparing the oral cavity for prosthetic management prophylaxis.

- Splinting teeth by fixed Prosthodontics as a caries and periodontal and traumatic occlusion prophylaxis aspects.
- Rational shaping of denture bases as a basis of successful prosthetic management.
- Anatomical and functional disorders of the stomatognathic system – etiology, pathogenesis, treatment prophylaxis and methods of parafunction eliminations.
- Partially edentulous treatment using removable dentures.
- Prosthetic management of edentulous patients
  - Criteria for functional and anatomical assessment of edentulous oral cavity and denture supporting area as cavity and denture supporting area as conditions of obtaining proper construction, stabilization and retention of prosthetic restoration.
  - Role of the oral cavity soft tissues in full dentures.
  - Types of the impression and materials used in cases of edentulous patients.
  - Method for establishing centric occlusion.
  
- Dental implants
- Maxillo – facial prosthetics.
- Immediate dentures
- Prosthetic stomatopathes.
- Prosthetic treatment of juvenile patients.

#### 4. Hours of the Curriculum

The preclinical course is designed for students of I<sup>st</sup>, II<sup>nd</sup>, III<sup>rd</sup> and IV<sup>th</sup> year and comprises of 230 hours, incl. 55 hours of lecture and 175 hours of practical training.

I <sup>st</sup> year (sem I)	- 40 hours of practical training
II <sup>nd</sup> year (sem III)	- 30 hours of practical training and 10 hours of lectures
III <sup>rd</sup> year (sem VI)	- 70 hours of practical training and 15 hours of lectures
IV <sup>th</sup> year (sem VII)	- 35 hours of practical training and 30 hours of lectures

The clinical course is designed for students for IV<sup>th</sup> and V<sup>th</sup> year and comprises 235 hours, incl. – 30 hours of lectures and 205 hours of practical training

- IV<sup>th</sup> year (sem VIII) – 35 hours of practical training
- V<sup>th</sup> year (sem IX, X) – 170 hours of practical training and 30 hours of lectures

#### 5. Method of Learning/Teaching

- The lectures are multimedial.
- Supervised laboratory exercised.
- Supervised clinical exercised.

#### 6. Assessment Methods

The conditions of receiving credit for semesters I, III, VI and VII (preclinical course) are:

- active participation in practicals with proof of required theoretical knowledge and practical skills
- performing required number of interventions of phantom models
- positive marks received at written test

The conditions of receiving credit for semesters VIII, IX and X (clinical course) are:

- active participation in practicals with proof of required theoretical knowledge and practical skills
- performing required number of interventions – curative procedure in patients (supervised by the assistant)
- obeying the principles of medical ethics



Type of final credit – final exam at the end of semester X, consisting a practical and theoretical part.

### **7. Strengths**

Most of the lectures are multimedial Implants for the support of removable prostheses.

### **8. Weaknesses**

Insufficient local base

### **9. Innovations and Best Practices**

The lectures are multimedial

Simulation of prosthetic treatment on the phantoms

### **10. Plans for Future Changes**

Integrating the options offered by implants for the support of removable prostheses into the teaching programme, via lectures (demonstration clinical cases)

## **11.5 Paediatric dentistry**

*Teaching unit: Department of Paediatric Dentistry*

*Head of the unit: Prof. Barbara Adamowicz-Klepalska, M.D., Ph.D.,*

### **1. Introduction**

Paediatric dentistry is one of the youngest disciplines of stomatology. Its genesis and current rapid development is associated with the scientific progress in management of the oral cavity diseases. Moreover, promotion of the oral cavity sanitation, prophylaxis of dental caries, diseases of the parodontium and oral mucosa as well as prophylaxis of dental and occlusion defects, all contribute to development of this discipline. Paedodontics encompasses physiologic and pathologic conditionings of the stomathognathic system development, nearly from the moment of conception to maturity. These, altogether with the consequent, long-term health promotion prophylaxis, interdisciplinary treatment and rehabilitation of children and adolescents, allow students to consolidate the acquired elements of theoretical and clinical knowledge.

### **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**

#### **Year 4**

At the end of the course each student should:

- Be able to perform the objective and subjective examination of the child's stomathognathic system
- Be able to make diagnosis concerning pathology of the tooth's tissues
- Be able to perform professional prophylactic and curative procedures concerning the tooth's tissues affected by disease or developmental abnormality.
- Be able to employ current indexes of the deciduous and permanent dentition caries and of the oral cavity hygiene
- Be able to understand the child as a growing individual in all respects.
- Be able to develop patient management skills so that the child patient can develop a positive attitude to his/her dental health.

*Detailed teaching programme of the clinical trainings*

- Caries of the deciduous and permanent teeth-prophylaxis and management with use of new procedures, drugs, materials and technologies of filling caries and non-caries defects
- Assessment of the condition of deciduous and permanent dentition, state of the parodontium and hygiene of the oral cavity, based on current indices employed in epidemiological research

### **Year 5**

At the end of the course each student should be able to:

- Individually take medical history, with emphasis on problems influencing development of the stomatognathic system in children
- Perform the objective examination of the child, with emphasis on the dental age
- Diagnose and treat caries of the deciduous and permanent teeth
- Diagnose and treat pulp diseases in deciduous and permanent teeth with respect to permanent teeth of unfinished development
- Diagnose and treat diseases of the periapical tissues in deciduous and permanent teeth, with respect to permanent teeth of unfinished development
- Analyse and interpret radiological documentation of the intraoral and ortopantomographic films in children
- Diagnose disorders of occlusion in deciduous and permanent teeth
- Diagnose and treat diseases of the parodontium and oral mucosa in children and adolescents
- Know elementary methods of preventing dental caries and diseases of the parodontium as well as the principles of promoting oral cavity sanitation among children and adolescents
- To emphasize the integration of orthodontics and paediatric dentistry in the treatment of the child.

#### *Detailed teaching programme:*

- Psychostomatology
- Systemic development of the child and development of the stomatognathic system
- Morphology and physiology of the child's oral cavity, with respect to deciduous and permanent dentition
- Developmental pathology of the oral cavity, comprising disturbances of the calcium-phosphate metabolism, disorders and developmental defects of the stomatognathic system, disorders of teething, dentition abnormalities, nosological syndromes of the dentition developmental pathology
- Epidemiology of diseases and anomalies of the stomatognathic system
- Caries of deciduous and permanent teeth.
- Diseases of the deciduous and permanent teeth pulp. Endodontics. Complications
- Chemomechanical methods of elaborating the carious dentin (Carisolv, CX and others)
- Traumatic lesions of deciduous and permanent teeth. Curative management and reconstruction techniques in paediatric dentistry.
- Diseases of the parodontium and oral mucosa in children and adolescents, comprising those in the course of systemic diseases
- Interpretation of radiological extra and intraoral films
- Focal-derived disease in children and adolescents
- Anaesthesia in children and adolescents
- Disabled children and dentistic care
- Promotion of the oral cavity sanitation and health promoting education
- Laser therapy in developmental stomatology

#### **4. Hours in the Curriculum**

##### **Total amount of hours:**

15 hours of lectures, 85 hours of practical trainings

**Year 4:** 25 hours incl. –15 hours of lectures, 10 hours of practical training

**Year 5:** 75 hours, all of practical training

#### **5. Method of Learning/Teaching**

Problem-Based-Learning is used throughout the undergraduate curriculum. Paediatric dentistry is an integral part of the Problem-Based-Learning programme particularly in the fifth year. Students treat patients in the clinic. Beginning clinical trainings is conditioned by passing the entrance test (first practical), then receiving credit for the theoretical and practical skills and attendance at all trainings. All missed classes (due to acceptable reasons) must be attended at other dates. The treatment plan when developed is presented by the student to the clinical teacher. When finalised it is explained to the child and parent before being formally entered in the chart and signed up.

The recall and scheduled maintenance appointments after the provision of the basic care treatment package are valuable learning experiences and allow discussion of treatment outcomes.

Topic Based Learning items in paediatric dentistry are scheduled in the fifth year.

#### **6. Assessment Methods**

Continuous assessment is used to measure both theoretical knowledge and skills acquisition. The individual student's participation in the process of PBL is marked at each session. Clinical activity is assessed after each 3-hour clinical session. Theoretical knowledge is assessed using short answer questions and structured questions at the end of each Problem-Based-Learning block.

Competence tests are carried out in the fourth and fifth dental years. Year 4 has non-marked credit based on the student's attendance at clinical trainings. Volunteers are eligible for marked credit. Year 5 has final exam consisting of a practical and a theoretical part.

#### **7. Strengths**

The student is being introduced to the management of a child dental patient earlier in the dental course than in a new impressive environment

#### **8. Weaknesses**

Due to the same localisation of a prosthodontic and restorative dentistry clinics (the same building) the provision of visual evidence of a child friendly atmosphere when the full clinic is scheduled for child patients is a challenge.

#### **9. Innovations and Best Practices**

Comprehensive care on a continuous basis for the growing child with an emphasis on prevention is being provided.

#### **10. Plans for Future Changes**

Students should benefit from attending the Child Dental Health Clinic from the fourth dental year. Changes in the curriculum, which facilitate students continuing the care of patients from the fourth year to the final year, should enhance students understanding of growth and development. Changes currently taking place should also improve patient care.

#### **11. Visitors Comments**

#### **12. Names, Qualifications and Emails of Staff for this Department**

- **Prof. Barbara Adamowicz-Klepalska**
- **Dr n. med. Katarzyna Emerich-Poplatek**
- **Dr n. med. Beata Wierchoła**
- **Dr n. med. Dorota Wojda**
- **Lek. stom. Marek Olejniczak**
- **Lek. stom. Maciej Bodal**
- **Lek. stom. Cezary Jakubowski**
- **Lek. stom. Leszek Sawicki**

## 11.6 Physiology of the stomatognathic system

*Teaching unit: Department of Paediatric Dentistry*

*Head of the unit: Prof. Barbara Adamowicz-Klepalska M.D.,Ph.D.*

### 1. Introduction

The physiology course in the dental undergraduate curriculum introduces the students to all aspects of normal function. This course also includes general histology and special dental histology. Physiology of the stomatognathic system is the science of its functioning in conditions of health both at rest and on exercise. Knowledge of essential physiological processes permits understanding and explaining the clinical pathophysiology of particular nosologic entities of the stomatognathic system and explaining their therapy. During the course, the following meritorical considerations are covered:

- Presentation of physiological functions of systems constituting the masticatory organ at subsequent stages of ontogenesis – development, mature and senile
- Proving their interrelations of these systems which influence each other in constant biofeedback
- Pointing out the integration of this complex system with other systems of the human body at different life periods

### 2. Primary Aims

To provide students with a thorough knowledge of the essential elements of normal function of the stomatognathic system.

To ensure that students understand the relationship between histological structure and function so that they may proceed to the study of the diseases which disrupt the normal pattern.

### 3. Main Objectives

At graduation students are expected to have an understanding of the following based on a knowledge of the physiology and its relation to the histology and the ultrastructure of the tissues and systems:

- Development of the stomatognathic skeleton
- Odontogenesis
- Calcium-phosphate metabolism and role of fluoride in mineralisation of the tooth's hard tissues
- Development of occlusion during odontogenesis
- Physiology of parodontium and oral mucosa
- Role of hormones and vitamins in physiology and pathology of the stomatognathic system
- Biochemical processes taking place in oral cavity
- Immunological processes taking place in oral cavity
- Physiological functions in which participates the stomatognathic system
- Radiological anatomy of the stomatognathic system
- Essential physiology of the muscular and nervous system of the masticatory organ
- Temporomandibular articulation – development, anatomy, biomechanics
- Course is designed for students of 2<sup>nd</sup> Year, semester III
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### 4. Hours in the Curriculum

- 30 hours of seminars

#### • **Method of Learning/Teaching**

- *course crediting conditions:*

- attendance at all four seminars is obligatory
- missed seminars, due to acceptable reasons, must be attended at other dates or credited individually
- students repeating the academic year, who received credits with at least good mark (4,0) in previous credits

## **6. Assessment Methods**

Marked credit based on written test carried out during the last seminar. Marked credit at the end of semester III.

## **7. Strengths**

The teaching of histology and tooth development is an excellent platform on which to build dental anatomy and detailed tooth morphology.

## **8. Weaknesses**

There is a need to manage the teaching process more streamline for the students

## **9. Innovations and Best Practices**

The achievement of integration of physiology of the stomatognathic system with other basic sciences and the emphasis placed on their role in clinical practice

## **10. Plans for Future Changes**

Evaluation and close monitoring of the content and student response to the course will enable modification to be made as necessary.

## **11. Visitors Comments**

### **12. Names, Qualifications and Emails of Staff for this Department**

- **Prof. Barbara Adamowicz-Klepalska**
- **Dr n. med. Katarzyna Emerich-Poplatek**
- **Dr n. med. Beata Wierchoła**
- **Dr n. med. Dorota Wojda**
- **Lek. stom. Marek Olejniczak**
- **Lek. stom. Maciej Bodal**
- **Lek. stom. Cezary Jakubowski**
- **Lek. stom. Leszek Sawicki**

## **11.7 Stomatologic Prophylaxis**

*Teaching unit:* **Department of Paediatric Dentistry**

*Head of the unit:* **Prof. Barbara Adamowicz-Klepalska, M.D., Ph.D.,**

### **1. Introduction**

Stomatologic prophylaxis, together with promotion of the oral cavity sanitation and general health-promoting education, forms a complex system in the overall health care. Modern dentistry sees superiority of causal management over symptomatic treatment. Elementary responsibilities of dentists of all specialities include preventive measures, taken in healthy persons as well as in patients with the already treated and rehabilitated stomatognathic system. Progress in dentistic prophylaxis can be noticed in all its subspecialities, not only paediatric dentistry. Meritoric range of the course includes: orthodontic prophylaxis, prophylaxis of parodontal and oral mucosa diseases, prophylaxis of the masticatory organ neoplasms, functional disorders and related to the masticatory system rehabilitation, preventing infections in dental office and enviromental risks to the dentist`s working.

### **2. Primary Aims**

- The primary aims of the undergraduate training programme are:
- To provide students with a knowledge and understanding of assumptions and strategies of health promotion, aims of the National Health Programme, WHO programmes concerning health of the oral cavity and interdisciplinary prophylactic programmes.
- To enable students to understand, and evaluate preventive programmes at the community and individual level

### **3. Main Objectives**

To provide a general introduction to prevention, epidemiology and health care economics. Also to create awareness in students of the needs and responsibilities of each individual prophylaxis in the community and of the forces which modify the delivery of a comprehensive health care prophylaxis by the state.

To obtain a general understanding of current health status, barriers to health care and social issues that influence health outcomes and prevention

The course is design for the students of IVth Year, semester VII.

#### **4. Hours in the Curriculum**

Total amount of hours: 20 hours of lectures

#### **5. Method of Learning/Teaching**

Problem-Based-Learning is used throughout the undergraduate curriculum, it provides learning in a contextual sense with the acquisition of knowledge and understanding of the basic of the prevention It also encourages self directed and evidenced-based learning. Lectures complement the Problem-Based-Learning format.

#### **6. Assessment Methods**

Interdisciplinary written marked test at the end of semester VII

#### **7. Strengths**

Public Health and Prevention are incorporated into the whole curriculum. Students are taught by full time staff. The integration of the social, ethical and interdisciplinare issues throughout the curriculum results in dental prophylaxis issues being seen as relevant to all aspects of dental practice and all types of dental practitioner.

#### **8. Weaknesses**

Students should have a broader experience gained outside the school, working in the community clinics or institutions.

#### **9. Innovations and Best Practices**

Research projects are able to start for the Fourth Year students providing practical experience in research methodology, computer skills and working in the community. Students are given the opportunity to present their research at conferences. Topic based learning provides a comprehensive review of key subject areas.

#### **10. Plans for Future Changes**

Students will be provided with an understanding of the evidenced based approach to preventive care; how audit, accountability, clinical governance will influence care; a broader experience of general and community dental practice and the need for life long learning.

#### **11. Visitors Comments**

#### **12. Names, Qualifications and Emails of Staff for this Department**

- **Prof. Barbara Adamowicz-Klepalska**
- **Dr n. med. Katarzyna Emerich-Poplatek**
- **Dr n. med. Beata Wierchoła**
- **Dr n. med. Dorota Wojda**
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### **Visitors' Comments on Restorative Dentistry**

#### **Conservative Department**

The visitors met with enthusiastic and committed members of staff. They agreed with the staff's own assessment that the pre-clinical facilities in the Phantom Head Laboratory were cramped and in need of major renovation. The visitors had sight of the records kept of students' clinical work, from which it appeared that their experience was comparable to that in schools elsewhere in Europe.

## **Prosthodontic Department**

The visitors felt that it was highly regrettable that the Head of Department was not prepared to meet them at any time during the site visit. Conversations with both the staff they did meet and with students revealed some discrepancies over the perceived level of clinical experience that had been gained by the time of graduation. It would appear that the experience was reduced in comparison with the majority of European dental schools. Clinical space was limited for the number of students and it appeared that there was a high level of observation by the students rather than direct hands-on treatment of patients.

Teaching on dental occlusion, function and dysfunction was shared with the Periodontology Department. This topic was not mentioned in the self-assessment document. The visitors gained the impression that there was substantial duplication and lack of co-ordination in the teaching of the subject.

## **Implantology Department**

The visitors were informed that a new department in this discipline had been created and would begin work shortly. The visitors commend this initiative.

## Section 12 – Periodontology

### 1. Introduction

The main purpose of teaching periodontology is to acquaint the graduates with broad theoretical knowledge of the subjects such as: morphology, physiology and periodontal pathology, as well as to achieve practical ability necessary in general patient's care. It also includes advanced knowledge of diagnosis, treatment and periodontal prophylaxis, understanding connections between periodontal and general diseases – conscious and active health promotion in society, with special emphasis put on the consideration of oral health promotion.

### 2. Primary aims

- giving theoretical knowledge such as anatomy and microscopic structure of periodontium and its function in stomatognathic system. Teaching about epidemiology, ethiology and pathogenesis of periodontal diseases: their results and complications in situ and possible pathogenic influence on general health condition.
- Student's practical preparation for individual examination and diagnosis in periodontium and their general treatment (scaling, root planning, curettage) as well as abilities to instruct patients and motivate them to proper oral hygiene as the main factor in oral health.

### 3. Main Objectives

Student should have ability:

- to acquire excellent knowledge of periodontal anatomy with microscopic structure and function,
- to describe clinical and microscopic features of periodontal disease and know current classification of periodontal diseases,
- to present part of microflora existing in etiopathogenesis in periodontal diseases, especially major groups of bacteria, non oxygen bacteria, and immunological conditionings and systemic factors favourising periodontal pathologies,
- to acquire assesment of clinical status of periodontal disease ( API, GI, CPITN ) destructions in X-rays and ability of early diagnosis and treatment plans of general and specialistic treatment,
- to act in acute states (periodontal abscess, ulcerative gingivitis, Endoperio syndrome)
- to perform professional self- dependent general treatment on patients with periodontal diseases ( scaling, root planning, curettage) and prepare patients for surgical treatment
- to perform the knowledge of periodontal diseases influence on general health condition and systemic factors that are favourable for progress in pathology in periodontium and to combine dental and general treatment
- to be perfectly aware of prophylaxis principles of periodontal diseases( I st, II nd, III rd degree) and promote them among patients.

### 4. Hours in Curriculum

Students should have direct contact with patients and periodontology during the classes in orthodontics, conservative dentistry, prosthetics. The main professional workshops are performed by stomatologists who are specialists in periodontology.

The classes start in IV year and include lectures(17 hrs) and clinical classes (10 hrs). In V year clinical classes are to be continued in the amount of 75 hrs. In total 85 hrs for clinical classes are devoted for oral mucosa and parodontal treatment.

### 5. Methods of Learning / Teaching

Methods of teaching include lectures, discussions, that are to be held at the beginning of clinical classes, and direct contact with the patient. All procedures are performed individually by students supervised by the assistants.

### 6. Assesment Methods

Basic teaching in periodontium, anathomy, histology and physiology is to take place during I,II,III years of studies. After the IV-year-clinical classes students are obliged to take written



examination with its evaluation and after the V year student's are to take the practical examination (diagnostic and treatment abilities) and the oral examination as well.

#### 7. Strengths

The special commitment of academic teachers – in periodontology, and excellent conditions of work ( modern units, professional instruments, special surgery room, Digora- system, biostimulation laser, library and audiovisual system), full partnership among students and teachers, help in creating proper study atmosphere as well as holistic patients care. Good cooperation with other dental and medical clinics allows for complete care and treatment of patients, however we don't have separate lecture hours for integrated treatment.

#### 8. Weaknesses

- program should start at the III rd year ( part of lectures and classes)
- there is not enough time for practical classes
- there are no separate hours for integrated treatment
- there are no hygienists employed for the classes therefore students are not prepared to work in dental teams.

#### 9. Innovations and Best Practices

- giving up-to-date information
- encouraging students to use different knowledge sources to broaden their interests.
- encouraging students to work for scientific associations
- promoting the best students, especially on the Clousing Celebration ( Absolutorium)

#### 10. Plans for Future Changes

Initiation of:

- "oral medicine " in the III year ( lectures, classes in medical clinics- internal diseases, dermatology, nephrology, cardiology, rheumatology)
- work on periodontological phantoms in the IV year
- increasing the general number of classes in the IV and V year to improve practical and manual skills
- interactive teaching in the clinical classes for the V year .

### **Visitors' Comments**

**There may be some merit in using some of the time becoming available with the reduction of medical and paraclinical teaching, to introduce earlier contact with patients than currently occurs. Simple periodontal treatment might be an ideal way of introducing the students to the care of patients, possibly during years 1 or 2 although this will have implications for the use of the limited clinical space.**

## Section 13 - Oral Surgery and Dental Radiography and Radiology

- **13.1 Oral Surgery**
- **13.2 Radiography and Radiology**
- **13.3 Department of Oncology & Radiotherapy**

### 13.1 Oral and Maxillofacial Surgery

#### 1. Introduction

Oral Surgery is introduced into curriculum in the 4<sup>th</sup> and 5<sup>th</sup> years in the form of lectures and clinical practice.

Maxillofacial Surgery is introduced in the 5<sup>th</sup> year in the form of lectures and attendance of students in the operating theatre in the Maxillofacial Surgery Ward.

The foundation for the course is provided in the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> years with introduction in the Basic Sciences, Pathology, Pharmacology, Microbiology etc. General Surgery, Internal Medicine, Oral Pathology, Pediatrics, Anaesthesiology, Otolaryngology and many others are taught parallel in the 4<sup>th</sup> and 5<sup>th</sup> years.

#### 2. Primary Aims

To develop in the student an awareness of the need for accurate diagnosis in relation to oral surgical problems.

To develop in the student an awareness of the need for careful and gentle handling of soft and hard tissues during all dental procedures and to develop the skills for the proper extraction of teeth.

#### 3. Main Objectives

The student should understand at the completion of the course:

The principles of surgical anatomy, pathology and physiology which relate to the practice of oral surgery.

The principles of sterilisation as it applies to oral surgery practice.

The principles of the control and management of dental pain.

The principles of controlling post – extraction haemorrhage.

Be capable of performing exodontia using forceps and elevators.

Be capable of performing minor oral surgical procedures as would apply to dental practice.

#### 4. Hours in the Curriculum

The Department offers in 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup>, 10<sup>th</sup> semester teaching on oral and maxillofacial surgery in the form of lectures (60 h) and clinical practice (120 h in 7, 8 semester, 195 h, in 9, 10 semester).

#### 5. Methods of Learning

Practical hands – on oral surgery is provided in the 4<sup>th</sup> and 5<sup>th</sup> year with an oral surgery clinic devoted to dental extractions in the 4<sup>th</sup> year. Performing 30 extractions and 20 minor oral surgery procedures is obligatory minimum for every student. Assessment clinics, more advanced oral surgery and maxillofacial surgery is carried on in the final year. Theoretical part is delivered in the form of lectures, practical part is introduced by attendance in the operating theatre in the maxillofacial ward.

#### 6. Assessment Methods

In the 4<sup>th</sup> year students have to complete 4 colloquys. In the 5<sup>th</sup> year after completing 4 colloquys and clinical competency tests in exodontia and minor oral surgery procedures students sit for the final, verbal examination.

#### 7. Strengths

Sessions for exodontia in small groups (5 students). Possibility of watching on TV screen surgical procedures in oral surgery directly from the operating theatre with explaining procedure to the students.

#### 8. Weaknesses

An adequate number of patients for exodontia sometimes reveals as a problem.

## 9. Innovations and Best Practices

Attendance of students at implantology sessions in the operating theatre.

## 10. Plans for future changes

Possibility of watching on TV screen surgical procedures in maxillofacial surgery, directly from the operating theatre with explaining procedures to the students.

## 13.2 Radiography and Radiology

Name: prof. dr hab. Michał Studniarek

e-mail: mstud@amedec.amg.gda.pl

### 1. Introduction

Radiography and radiology are taught in the fourth year of studies mainly as a combined theoretical and clinical course.

### 2. Primary aims

The primary aims of the course in radiography is to give the students the knowledge about X-rays sources, techniques used in X-ray imaging, especially in stomatology, biological effects of ionizing radiation and methods of protection. The main aims of the course in radiology are to make the students familiar with radiological anatomy of maxillofacial region, pathological processes occurring in that region and methods of imaging (including TK, USG, MRI).

### 3. Main Objectives

- the student should understand the indications and contraindications for radiographic imaging in stomatology
- the students should know the basic views used in radiography
- the student should know how artifacts are created
- the student has to know anatomy of structures visualised on radiographs of maxillofacial and cranio-cervical region and be able to assess common pathological processes

### 4. Hours in the Curriculum

Year 4 - lectures in radiation physics, radiobiology and methods of imaging used in diagnosis of diseases of maxillofacial and craniocervical region

- seminars in anatomy and diagnosis of pathological conditions of paranasal sinuses, salivary glands, temporomandibular joints, teeth, mandible and maxilla, diagnosis of traumatic lesions, inflammations, neoplasms

- practical training in examination rooms

### 5. Method of Teaching

- lectures, seminars in small groups

### 6. Assessment Methods

Theoretical knowledge is assessed by final test examination on radiology.

### 7. Strengths

The course is being held in the institute with modern equipment. It deals with wide spectrum of imaging modalities used in stomatology and oral surgery, underlines advantages and disadvantages of diagnostic methods. The course gives knowledge about radiological anatomy and basic pathological processes.

### 8. Weaknesses

The course is mainly theoretical. The seminars are based on radiographs and imaging only, without concomitant clinical examination. Practical training is difficult to carry out as stomatological clinics are distant to institute of radiology. The institute cooperates with clinics of maxillofacial surgery.

9. Innovations and Best Practices

10. Plans for the Future

We are open to any suggestions which can improve the way of teaching

### **13.3 Department of Oncology & Radiotherapy**

1. Introduction

Clinical oncology for students of the Dentist Faculty is taught throughout the fifth year. Lectures and practical trainings including also presentation of the cases explain problems of prophylaxis, diagnosis, symptom management and treatment of cancer with special emphasis on the neoplasms of the head and neck.

2. Primary aims

The aim of the course is to provide students with theoretical knowledge of cancer biology and clinical characteristic as well as practical skills in oral cavity examination for the prevention, detection or treatment of cancer or different sequelae of chemotherapy and/or radiotherapy delivered to the region of head and neck.

3. Main objectives

After finishing the course all participants should have the knowledge of cancerogenesis, etiopathogenesis and epidemiology of cancer. They are also expected to be competent in performing clinical examination of the oral cavity as well as simple nursing and rehabilitation procedures in cancer patients. They should be familiar with symptoms of the oral cavity cancers, and methods of prevention and early detection. They should understand differences between various treatment methods depending on the type of cancer and clinical stage of the disease.

4. Hours in the Curriculum

Ten hours of lectures and ten hours of practical trainings (two times 5 hour sessions) held at the Department of Radiotherapy and Clinical Oncology of SPSK 1 (the general teaching hospital for the Faculty).

5. Method of learning/teaching

The major didactic part is complemented by a number of lectures given for all the students in three three-hour sessions. The practical skills are being taught through direct contact with patients during two five-hour sessions for small groups of students (up to five students/group).

6. Assessment methods

After finishing the course students are given non-marked credits based on the attendance and individual activity during practical trainings.

7. Strengths

The course is organized by the staff members of the Dept. of Radiotherapy and Clinical Oncology. Practical trainings take place in the above-mentioned department, which is well equipped and prepared for the high quality treatment of the head and neck cancer.

8. Weakness

Having practical trainings at the main teaching hospital for the Faculty means that patients as well as tutors are often overexposed to students. Although clinicians do appreciate the need for good cooperation with dental practitioners the time they spend on practical "hands-on" part of the course might be too short to facilitate developing habits of cancer oriented examination.

### **Visitors' Comments on the Department of Oral and Maxillofacial Surgery**

**Under the Polish system, there seems to be a positive distinction made between Oral Surgery and Maxillofacial Surgery. It was apparent to the visitors that there was considerable uncertainty regarding the division of responsibilities between these disciplines and in the training that is appropriate to each. Accession to the EU may influence the final decision made on these matters.**

**The visitors noted with some surprise that all tooth extractions, including those on young children even, were carried out in the same clinic with little privacy being provided between operatories.**

**Section 14 - Oral Medicine and Oral Pathology**

- **14.1 Oral Medicine**
- **14.2 Oral Pathology**

## Section 16 - Behavioural Sciences

- [16.1 Behavioural Sciences](#)
- [16.2 Communications](#)
- [16.3 Ethics & Jurisprudence](#)
- [16.4 Practice Management](#)
- **16.1 Statistics**
- **16.2 History Of Medicine With Elements Of Medical Ethics**
- **16.3 History phylosoph**
- **16.4 Informatics**
- **16.5 Department of Hygiene and Epidemiology**
- **16.6 Psychology of Medicine**
- **16.7 Sociology of medicine as a behavioural science**

### **16.1 Statistics**

Mgr Marian Tosik

#### **1. Introduction**

Medical statistics is a subject stimulating logical thinking that allows to correctly assess empirical data and reports from medical literature.

The subject endows students with knowledge of the essence and aims of statistics in medicine and paves the way to carry out medical investigations and their implementation.

#### **2. Primary Aims** of teaching statistics:

- endowment students with the skills of collecting, presentation and interpretation of empirical data
- mastering the skills of posing the problems as statistical hypotheses, their verifications and drawing correct conclusions

#### **3. Main Objectives**

Elements of descriptive statistics and statistical deduction:

##### 1. Descriptive statistics

- 1.1. Populations and statistical characteristics
- 1.2. Recording and presentation of empirical data
- 1.3. Analysis of the structure of populations: measures of location and dispersion
- 1.4. Multicharacteristic investigations; correlation and linear regression

##### 2. Statistical deduction

- 2.1. Continuous random variables and their theoretical distributions
- 2.2. Statistical hypotheses and their formulation
- 2.3. Parametric and non-parametric significance tests
- 2.4. Errors committed when taking statistical decisions
- 2.5. Significance level, critical regions

#### **4. Hours in the Curriculum:** a total of 15 hours of classes

#### **5. Method of Learning/Teaching**

Classes are conducted in the form of oral introduction and training

#### **6. Assessment Methods**

The subject is credited following a written colloquium

#### **7. Strengths** of the subject: acquainting the students with basic statistical notions used in medicine

#### **8. Weaknesses** of the subject

- too small number of hours
- absence of lectures
- overcrowded student groups
- impossibility of application of computerized statistical programs

#### **9.**

**10.** Efforts have been made to introduce lectures into the curriculum and to conduct classes in a computerized laboratory (workshops in the laboratory)

## **16.2 History Of Medicine With Elements Of Medical Ethics**

Department of History and Philosophy of Medical Sciences

Name: Professor Zbigniew Machaliński, Ph.D.

1. Course is designed for the students of 1<sup>st</sup> year, semesters I and II.  
Course workload: Total: 40 hours of lectures.
2. Primary aims  
General teaching aims  
The aim of the course is presenting development of medicine, treatment and medical sciences throughout centuries, from antiquity to contemporary time. Particular emphasis is made upon the progress of medical sciences and personal patterns. Finally, principles of medical ethics are taught.
3. Main objectives
  - Informative and useful function of history of the medical sciences development;
  - Evolution of ancient medicine;
  - Medieval medicine;
  - Period of the scientific revolution of the XVI - XVIIth century
  - Contemporary medicine;
  - History of Polish medicine.
4. Hours in the curriculum  
The course of history includes: 40 hours of lectures
5. Methods of teaching  
Two hours per week-lectures
6. Assessment methods  
Written non-marked credit at the end of semester II. Facultative possibility of receiving marked credit.

## **16.3 History of Philosophy -**

Department of History and Philosophy of Medical Sciences

Name: Professor Zbigniew Machaliński, Ph.D.

1. Introduction  
The problems covered by the BS studies are presented to the students of our university within its organizational framework throughout the whole course of the undergraduate studies. Students are taught the separate subjects of philosophy, deontology, psychology and sociology of medicine. Our Department teaches a course in the history of medicine and a course of philosophy; in the Polish secondary school young people are not taught history of philosophy. The latter course encompasses the elements of axiology, methodology and philosophy of medicine.
2. Primary aims
  - To enable the student to develop his/her sensitivity to humane studies and to improve his/her understanding of culture.
  - To create the student's ability to organise his/her own methodological system.
3. Main objectives



- to introduce the student to the main problems of philosophy,
  - to improve his empathy, so much desired in his future professional career,
  - to emphasise the need to prioritise patient welfare in all aspects of medical practice,
  - to prepare the future member of the medical profession for vicissitudes in his career.
4. Hours in the curriculum  
The course in philosophy includes: 10 hours of lectures and 30 hours of seminar. The course takes place during the second year of studies, in the fourth semester.
  5. Method of learning/teaching  
The main method applied are lectures and then discussions at the seminar.
  6. Assessment Methods  
Assessment takes place during an oral test /in philosophy/ after the course.
  7. Strengths  
A greater awareness on the part of our graduates of participating in the fundamentals of the European culture.
  8. Weaknesses  
Insufficient number of hours devoted to the basics of philosophy.

## **16.4 Informatics**

**Dr. Andrzej Wiszniewski**

email: [awisz@amg.gda.pl](mailto:awisz@amg.gda.pl)

### **1. Introduction**

During the course of informatics students are learning the use of IBM type computers in order to: write texts, make graphs, make use of databases and various programmes of benefit in medicine, preparing them to take advantage of modern ways of scientific data acquisition. Therefore during the classes emphasis is put upon presenting applications, important for medical doctors and dentists, which are available in the *Internet*.

### **2. Primary Aims**

At the end of the course each student should get acquainted with methods of using different computer programmes so as to be able to run each of them having only the instructions of use.

### **3. Main Objectives**

Each student should:

- be able to use: tool programmes and operative systems (in particular – *Windows* type), word processor, spreadsheet, database and other commonly used programmes,
- be able to use the electronics mail system,
- be able to find information in the Internet.

### **4. Hours in the Curriculum**

35 hours (2 hours a week).

## **5. Method of Learning/Teaching**

All classes are held at the lab with the use of the Pentium – type computers, all of them joined with the internal net and connected to the *Internet*. The teaching programme is modified every semester by elimination of teaching the skills previously learned by students (e.g. at high schools) and introduction of updated versions of computer programmes

## **6. Assessment Methods**

## **7. Strengths**

## **8. Weaknesses**

Varied level computer operating skills in high school graduates beginning their medical studies is a major problem during the course. This implicates the need to equalise these skills, which in turn hinders the process of teaching the programmes currently used by medical informatics. This state is subject to gradual, however slow, change and every semester will bring much time for introducing the profession - related skills and knowledge in place of teaching essentials of the subject.

## **9. Innovations and Best Practices**

## **10. Plans for Future Changes**

Continuous modernization of the hardware and software.

## **16.5 Department of Hygiene and Epidemiology**

Professor Leszek Zaborski  
e-mail: lzabor@amg.gda.pl

## **4. Introduction**

Epidemiology is a fundamental science of preventive medicine and public health. Epidemiologic research has traditionally focused on questions of disease causation through population studies for both infectious and chronic diseases. The range of topics now addressed by epidemiologic methods includes hygiene, disease prevention, and assessing the quality of health care. At Department of Hygiene and Epidemiology, Medical University of Gdansk these programmes, from dental health perspective, are currently conducted for dental students.

### **5. Primary aims**

- To enable students to acquire a detailed understanding of the principles of epidemiology
- To enable students to become familiar with environmental and occupational aspects of health

### **6. Main Objectives**

- To introduce principles and methods of epidemiological investigation of both infectious and noninfectious diseases,
- To promote the development of student's understanding of clinical research methodology,
- To help students to demonstrate an ability to critically appraise the medical literature,

- To create an ability to apply the principles of clinical epidemiology to clinical practice
- To develop an ability to critically evaluate the health programmes for better health for employees and the community,
- To assist the development of understanding of specific food and water hygiene problems in all aspects of dental practice,
- To facilitate an understanding of occupational health problems and how to reduce the impact of workplace injury and disease

#### **7. Hours in the curriculum**

Lectures	11 h
Practical training	28 h
Seminars	16 h

#### **8. Method of learning/teaching**

The method of delivery depends on subject. Hygiene and occupational health are taught through workshops and exercises. Seminars are used for teaching epidemiology. For both subjects lectures are provided as well.

#### **9. Assessment methods**

Assessment is performed using oral assignments and tests for final examination.

#### **10. Strengths**

#### **11. Weakness**

#### **12. Innovations and best practices**

#### **13. Plans for future changes**

#### **14. Visitors comments**

#### **15. Names, qualifications and e-mails of staff for this Department**

### **16.6 Psychology of Medicine**

Dr Waldemar Budziński.

#### **1. Introduction**

The psychology of medicine comprises knowledge and psychological skills useful in a course of disease, prevention, diagnosis, treatment, rehabilitation, teaching and personality development of medical students and medical personnel.

The subject includes selected knowledge about the organization and structure of psychological mechanisms and processes (personality) and also psychological and medical criteria of their disorders.

The elements of psychology of medicine have been included for third year of studies. The knowledge of development and mental health is an integral part of this programme.

#### **2. Primary Aims**

- To enable graduates explain medical questions and problems in psychological terms and let them become reliable dental practitioners committed to the bio-psycho-social model of health care delivery.
- To enable graduates develop psychological skills and attitudes which will be useful in dentist's performance and enable them assess and accept the own emotional limitation and psychological strengths.

#### **3. Main Objectives**

- Knowledge of psychological concepts of man, personality and mechanisms of behaviour.

- Perception of psychological problems of a patient and empathic contact with him.
- Knowledge of selected psychic predispositions and emotional limitations significant in a dentist's performance.
- Ability to carry on conversation and diagnostic interview with a patient according to psychological criteria.
- Perception of positive and negative iatrogenic influences on the psychological state of a patient.
- Ability to affect favourably the psychological state of a patient, particularly a patient in distress or suffering from disorders conditioned by psychological factors.
- Knowledge of the psychological specification of a dental patient.
- The skill of collaboration with a psychologist in clinical practice.

#### **4. Hours in the Curriculum**

As the curriculum is currently run the total number of hours is all together 30: 4 hours are in lecture and 26 hours in seminar format.

#### **5. Method of Learning/Teaching**

The main method of delivery is seminar with some workshops and lecture.

#### **6. Assessment Methods**

Assessment is incorporated in the final oral or written exam. The final exam is attended by those students who have no outstanding liabilities in attendance and didactic material. The date of set the examination will be set up at the beginning of the semester.

#### **7. Strengths**

Programme of Psychology of Medicine is concentrated on practical knowledge and psychological skills useful in dentist's performance.

#### **8. Weaknesses**

The laboratory is dissatisfied with the lack of audiovisual equipment for workshops and students attending workshop groups.

#### **9. Names, Qualifications and Emails of Staff for this Department**

Dr Waldemar Budziński [wbudzin@amg.gda.pl](mailto:wbudzin@amg.gda.pl)  
Mgr Małgorzata Tartas [mtartas@amg.gda.pl](mailto:mtartas@amg.gda.pl)  
Mgr Joanna Szymczak [joaszym@amg.gda.pl](mailto:joaszym@amg.gda.pl)

#### **16.7 Sociology of medicine as a behavioural science.**

E-mail: [marlat@amedec.amg.gda.pl](mailto:marlat@amedec.amg.gda.pl)

##### **1. Introduction.**

Introduction sociological perspectives to programme of medical knowledge on Dental Department has in view preparation of graduates to different rules, for example: a rule dentist-doctor in account to patient and local environment.

It goes also for formation ethical and pro-social attitudes, as essential component of optimum communication leaning on confidence.

Together with evolution from the biomedical model of disease to the holistic model of health and disease at taking into account of results of civilization social changes it is necessary to lay bigger emphasis on integration dental care with health care system, at simultaneous maintenance autonomy of dental profession.

## **2. Primary aims.**

A) Formation of behaviours and attitudes in range of knowledge of conducting with patient and location of dental-care system health-care system.

B) Delivering to students three-dimensional bio-psycho-social model of individuality of man and knowledge of working medicine in the process of social-change.

## **3. Main Objectives.**

A) Preparation of students not only to concentration on testifying service, but also on wide fan of needs which refer to raising qualities of life and delivering of psychical comfort, especially in range of patient rights and promotion of health. Close by practice rule, to dentist rule belong also rules of adviser and educator.

Regarding mentioned rules parts across referencing them to example of active doctor and active patient in account dentist-patient.

B) Example of personal dentist should take into account, close by qualifications essential also qualifications moral: subordinating of own business to consumer business, and skills of communication oneself with environment, and also ability to abstract thinking.

C) Turning attentions to students on self-evident dependence among hygiene and with appearance of oral cave and quality of personal-interaction. It should have this translated on preparation of patients to self-estimation their state of dental health. Other aspect this occurrences relies on encouraging patients to realization consumer model, what in period of transformation meets on self-evident hindrances from regard on low level of incomes well-known parts of society.

D) Essential meanings has also exhibition following dependence among care for prophylaxis and with possibility of diminishing costs for dental service. Problem of using promotional action of media and publicities for the health education, and their estimation from side of quality and caused expenses in household budgets.

E) Turning attention to fact enough yet general occurring caries in Poland. The caries belongs to diseases about indirect social basis, what means, that in etological model is connected with life style, in this responsibility of parents for state of dental health their children.

It will demand regarding in considerable degree educational famile function on background of other institution: schools, curative agencies etc. Binding oneself with this problems of prophylaxis and promotion of health step out in wider context of local community.

## **4. Hours in the curriculum.**

So far existing number of hours 30 of seminars is inadequate.

## **5. Methods of learning.**

The main method realized on seminars is joining of pronouncement students (reports)- with discussion based on recommended to them literature of object.

## **6. Assessment of methods.**

Lack of hours on occupations in local environment, and of audio-visual equipment to learning realization of anamneses with patients.

### **7, 8. Strengths and weaknesses.**

Successful experiences with activation of students. Giving to them bases of complex understandings and moving oneself in medical system.  
Difficulty in breaking attitudes of students, which come on studies with lesser perception of role of dentist, as narrow specialist and practice.

### **9, 10. Innovations and best practices. Plans for future changes.**

Enlargement of pressure on introduction social-medical investigations results connected with dental practice, problems of occupation and reconciling different rules in aspect changing social expectations. Position of pressure on slow transformation from patient-orientation to consumer-orientation.

### **11. Names, qualifications, e-mail workers of institution**

Prof. dr. hab. of humanistic science Marek Latoszek –the manager of institution,  
Doctor of humanistic science Janusz Iskierski - tutor  
Master Science of sociology Magdalena Lemska - assistant  
Master Science of sociology Katarzyna Kurdziel - assistant

## **Section 17: Examinations, Assessment and Competences**

Evaluation of students' knowledge as required by the University Regulations takes place in the form of examinations or credit. These may consist of a theoretical and practical part. Grades are awarded on a scale from 2 (Fail) to 5 (Very Good), with 6 possible for top outstanding students. In the case of failure at first approach, students are allowed to resit an examination not more than twice.

In order to qualify as a dentist the student pass a certain numbers of tests and examinations according to the requirements of the teaching curriculum. After the successful completion of the whole 5-year course, the graduates are obliged to complete one-year professional training clerkship.

Examination sessions take place after every semester (i.e. in February and June). Student is allowed to sit for an examination only after completion of all obligatory teaching sessions within a given subject (seminars and practical workshop or patient training). Student progress in the subject is assessed periodically with partial tests.

### **Weaknesses**

Lack of interdisciplinary dental examinations.

### **Plans and Innovations**

In the near future external (state-organised) final exam is to be introduced after the one-year practical professional training. Having obtained successful results at the examination, the graduates will be allowed to register as dentists and obtain a licence for practice from the Chamber of Physicians.

## **Visitors' Comments**

**The visitors believe that at, all stages of the course, there are too many assessments. If the burden of assessment was to be reduced, some of the time made available could be devoted to private study and mature reflection in what is at present a very crowded curriculum.**

**The visitors believe that the purpose of assessment should be considered and more appropriate methods introduced. In our opinion, there should be less reliance on simple memory testing and more on the assessment of deeper learning and understanding. These attributes will also prepare students for life-long learning and continuing professional development.**

**The issue of competency, particularly in the clinical context, should be addressed in designing a revised assessment process for the school.**

**The visitors believe that the use of viva voce examinations, as held by Heads of Departments in most areas of the University to determine student progress, is manifestly unfair and could not be defended as part of any modern assessment system.**

## **Section 18: Other Influences**

### **18.1 Regional oral health needs**

The results of epidemiological studies showed the condition of oral health in our region is rather poor. Clinical training of students is performed on a large number of patients.

### **18.2 Evidence based treatment**

### **18.3 Involvement in other university activities and sport**

The students are represented in Medical University by their organisations, which are completely independent, and self-governed by the students. The representatives of all grades at the Subfaculty belong to the Student Parliament Medical University of Gdańsk. The Parliament has its representatives in the University Senate and Faculty Board.

The Students' Scientific Society is an organisation uniting Student Scientific Groups active at various clinics and teaching departments. The students willing to pursue their interests and to develop their knowledge or practical skills can work under the guidance of academic teachers in any selected field. A yearly International Scientific Conference for Students and Young Doctors, during which students from whole Poland and abroad present papers and results of their research work is organised every year in May. At some departments of the Dental School such student scientific groups also exist.

### **18.4 Recreation**

Recreation and entertainment is one of the fields where the Polish Student Association is particularly active. This problem will be presented by students' representatives.

The University Sport Association of Poland with its section of handball, football, volleyball, swimming, yachting and other disciplines helps the student to preserve fitness. The popular meeting place is "MEDYK" student club situated at the campus.

### **18.5 Student selection procedures**

Candidates are required to sit a nationwide admission examination – the same and organised at the same time at all medical universities in Poland – containing multiple-choice questions in biology, chemistry and physics.

Those candidates who score the highest number of points are admitted, according to numerus clausus set by the Senate of the university.

### **18.6 Labour Market Perspectives**

Graduates may undertake employment in the public or private sector.



## **Section 19: Students Affairs**

### **Names of Students representatives who will discuss this**

Final Year: Makowska Magdalena, group III A  
Fourth Year: Pakieła Tomasz, group I A  
Third Year: Korcala Radosław, group III B  
Second year: Zajczyk Magdalena, group X B  
First year: Lenarczyk Piotr group XIII

### **19.1 Basic Data from the Dental School**

- a) Average number of dental students qualifying per year 76:
- b) Average number of dental students admitted to the first year 80:
- c) Length of course in year/or semester: 5 years / 10 semesters
- d) Is there a separate period of vocational training following graduation as a dentist in your country? YES
- e) Is that organised by the University? Yes, partly. Some students complete the vocational training at the outpatient clinics of the departments of the Dental School, while others do it at other public or non-public dental clinics.

### **19.2 List different postgraduate courses**

Programmes for those graduates who undertook specialization in all dental areas: General Dentistry, Periodontology and Oral Medicine, Oral Surgery, Maxillofacial Surgery, Prosthodontics and Orthodontics.

The Polish Dental Association Division of Gdańsk organises monthly meetings aiming at continuous education of dental practitioners. The staff of our Dental School actively participate in these meetings.

The Medical University organises doctoral courses lasting 4 years during which graduates prepare a doctoral dissertation. Since 2002 year Subfaculty of Dentistry can attend every year one graduate for doctoral course. Actually one graduate attends this course.

## **Visitors' Comments on Student Affairs**

**The visitors understood that there are student representatives on the Senate of the University but that none of these were dental students.**

**The visitors were delighted to meet with a large number of representatives of the student body. Very full and frank discussions took place after assurances were given that individual confidentiality would be respected. At this meeting the students were divided into groups such that, so far as was possible, each visitor met with representatives of each year group. It became clear that there were common concerns that were expressed by each group, namely:**

- **the irrelevance of a large part of the pre-clinical, paraclinical and medical curricula. Particular examples were given and these have been referred to in other parts of this document**
- **the lack of dental clinical experience and patient contact**
- **the excessive number of assessments and examinations**
- **the use and unfairness of the viva voce to determine progress**
- **the absence of adequate pastoral support**
- **inadequate library facilities and access to the Internet**

**The visitors recommend that the University and Dental School authorities address these concerns as a matter of urgency.**

## Section 20 Research

### Visitors' Comments

There are no dedicated research laboratories in the Dental School itself but clearly there is collaboration with departments in the Medical School. The visitors noted that most of the publications were in Polish journals and this was explained by the fact that there were language difficulties for most authors. The visitors would encourage authors not to be deterred by this problem since editorial support would probably be available with most journals.

It was clear to the visitors that funding of research was a problem and that little additional financial support was available from non-governmental sources within Poland. The visitors encouraged the School to seek support more widely.

The visitors suggest that serious consideration be given to including provision for research laboratories within any new dental school building.

Host school should set out the publications of all staff according to the sections set out below strictly confined to past 36 months - please exclude abstracts and articles in non-scientific or non-refereed journals

- 20.1 number of publications in refereed journals  
**83**
- 20.2 number of textbooks published by staff  
**2**
- 20.3 number of chapters in books  
**1**
- 20.4 grants received > € 1,000  
average 10.000 euros
- 20.5 Number of invited presentations at international meetings (excluding abstracts)  
-

### List of published articles

1. **E.Witek, A. Bogusławska-Kapała, A. Żółtowska, E. Zedler, G. Jaworowska**  
*Niektóre zmiany patologiczne w jamie ustnej w przebiegu cukrzycy. Wpływ cukrzycy na strukturę i czynność gruczołów ślinowych oraz na ilość i jakość wydzielanej śliny.*  
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2. **E.Witek, A. Bogusławska-Kapała, A. Żółtowska, E. Zedler, G. Jaworowska**  
*Niektóre zmiany patologiczne w jamie ustnej w przebiegu cukrzycy. Częstość próchnicy, zmiany w przyzębiu oraz w składzie i aktywności płytki bakteryjnej.*  
-Czas. Stomat. 1999, 52,444-450
3. **B. Góra, G. Romankiewicz-Woźniczko, E. Witek, H. Nowalska-Kwapisz,**

- M. Pellowska-Piontek**  
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4. **B. Góra, E. Witek, E. Zedler G. Romankiewicz-Woźniczko, H. Nowalska-Kwapisz, A. Kusiak, A. Żółtowska, G. Jaworowska, R. Gogolewska M. Kowalska**  
*Wczesna ocena kliniczna pasty Endomethason N stosowany w endodontycznym leczeniu zębów.*  
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5. **A. Cackowska-Lass, B. Kochańska, K. Czubak, J. Krajka-Lauer, J. Sadlak-Nowicka**  
*Niektóre problemy z zakresu patologii i terapii jamy ustnej u chorych z zespołem Sjogrena.*  
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6. **B. Kochańska, R. T. Smoleński, N. Knap**  
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7. **B. Kochańska**  
*Release of N-acetyl-D glucosamine chitosan in saliva.*  
Advan Chtin Sci, 2000,4, 291-294
8. **1 B. Kochańska, A. Kędzia W. Kamysz, Z. Maćkiewicz, G. Kupryszewski**  
*The Effect if Statherin and Its Shortened Analogues on Anaerobic Bacteria Isolated From the Oral Cavity.*  
-Acta Microb. Polonica 2000,49, 243-251
9. **B. Kochańska, M. Gidzińska-Głódkowska**  
*Ocena maksymalnych sił żucia u osób w wieku 21 – 24 lat leczonych aparatami stałymi z powodu stłoczenia zębów w odcinku przednim szczęki i żuchwy.*  
-Czas. Stomat. 2000,LIII, 680-686
10. **B. Kochańska, E. Borowska-Afeltowicz, R. Gogolewska, M. Kowalska**  
*Ocena cech użytkowych materiału do wypełnień Arabesk Firmy VOCO.*  
-Czas. Stomat. 2000,LIII, 395-398
11. **B. Kochańska A. Kędzia, W. Kamysz, I. Wojciechowska, Z. Maćkiewicz, G. Kupryszewski**  
*Ocena wrażliwości niektórych bakterii beztlenowych wyizolowanych z kieszonek patologicznych i z jamy ustnej na syntetyczne oligopeptydy stanowiące C – końcowe fragmenty stateryny.*  
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12. **B. Kochańska**  
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19. **H. Tejchman, J. Rabenda**  
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20. **H. Tejchman, J. Rabenda**  
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21. **H. Tejchman, R. Szulc**  
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22. **H. Tejchman, J. Jasiel**  
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23. **H. Tejchman**  
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24. **Z. Bereznowski**  
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- Czas. Stomat. 2001, L, IV, 8, 536 – 541
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36. **K. Emerich –Poplatek, B. Adamowicz-Klepalska, J. Kaczmarczyk, M. Maraszkiwicz-Kulesza**  
*Stan pierwszych zębów trzonowych stałych 12-letnich dzieci oraz młodzieży w wieku 18 lat z województwa gdańskiego w badaniach z 1995 roku.*  
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43. **B. Adamowicz-Klepalska, Z. Bereznowski, J. Śramkiewicz, M. Olejniczak**  
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50. **B. Adamowicz-Klepalska, D. Wojda, T. Melkowski**  
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66. **Jolanta Jurkiewicz – Kokosińska**  
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- Czas. Stomat. 2001, LIV 12
67. **W. Bednarz, S. Tyrzyk, E. Kaczmarska, J. Sadlak-Nowicka, M. Ziętek**  
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68. **M. Słomińska, M. Niekra, E. Kaczmarska, S. Tyrzyk, M. Weber, M. Szczęśniak**  
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Mikologia Lekarska. 2001, 8(2), 1

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(Chapter in the book)

## **Section 21 Quality Development**

Doctors beginning their employment at the University are expected to carry out teaching and research work. They improve their professional qualifications specialising at selected disciplines of dentistry. Assistants are supposed to do research, publish the results, to be awarded doctoral degrees within 8 years. Having received doctoral degree they should continue their research to reach habilitation degree level within the next 9 - 12 years. The Senate Commission evaluates progress in research.

### **International liaisons:**

Up till now our Dental School has no cooperation with foreign universities. We are preparing clinical point based on ECTS. It will let us to sent our student to foreign universities which cooperates with The Medical Faculty of Medical University of Gdańsk and admit foreign students to our Dental School.

## **VISITORS' EXECUTIVE SUMMARY**

### **Introduction**

The visitors would like to take this opportunity to thank the senior officers of the University and the staff of the Dental School for the warmth of their welcome and the courtesy and hospitality extended to them throughout the site visit. In particular, thanks are due to Professor Zdzislaw Bereznowski, the Dean of the Dental School and to Professor Barbara Adamowicz-Kepalska who were in attendance throughout the visit to organise the timetabling changes required to ensure that the visitors were able to meet with as many staff as possible.

The Dental School operates in the context of a dedicated Health Care University. We were impressed by the obviously supportive relationship with senior managers of the University and by the dedication and expertise of all the staff we were able to meet.

The School's initiative in inviting this visit demonstrates a positive outlook towards the development of dental education in a European context. The visitors were therefore somewhat surprised that information about the visit and its purpose did not seem to have been widely disseminated in the School although the preparation of the self-assessment document had clearly involved the input of many people. At the initial meeting with staff and for the presentation of the preliminary report, only a relatively small number of people were present.

### **Curriculum Development**

We have referred in earlier sections of this report to problems we perceive in the content and delivery of the curriculum. It appears that there is little co-ordination between individual departments and between the Dental School and those departments providing education in biological, pre-clinical, para-clinical and medical subjects over curriculum content. This has had the result that much of the material taught is not relevant to the needs of dental students, the majority of whom will practice general dentistry subsequent to graduation. There is also considerable duplication of teaching in many areas.

The curriculum is extremely congested. The students appear to have little time for study and reflection. This problem is exacerbated by the physical separation of the constituent buildings of the Dental School itself which means that students regularly have to move between buildings at the end of teaching sessions.

The visitors were informed that there is an annual meeting of the Deans of all Polish dental schools and that one function of this meeting is to standardise curricula between schools. We understand that this Council has recommended a radical revision of the allocation of teaching hours between dental subjects on the one hand and pre-clinical, para-clinical and medical subjects on the other, with a reduction in teaching hours for the latter. The visitors strongly support this proposal and understand that it will be instituted in Gdansk in September 2002. We were concerned, however, that little information was available concerning the redistribution of the hours

gained for dental subjects in this way. We would suggest, however, that consideration be given to providing time within the curriculum for personal study and the introduction of some earlier contact with patients, at least as far as the limited clinical facilities will allow.

### **Proposal for a Board of Dental Studies**

The visitors are strongly of the opinion that the University should establish a Board of Dental Studies or Curriculum Committee which should include in its remit the following:

- undertake a review of the content of the entire curriculum to ensure relevance and to reduce repetition
- establish and review the distribution of teaching hours
- establish sub-committees to review major areas such as pre-clinical and para-clinical studies with representation from the staff of the dental school and the departments themselves
- review the system of assessment to ensure that it fosters deep learning and understanding
- consider the introduction of modern, student-centred learning and teaching techniques
- monitor developments in educational methods and research
- monitor student progress
- introduce and maintain a process of “Appraisal of Teaching” by dental students and develop a mechanism for considering and implementing change suggested as a result of this process
- review the departmental structure of the dental school periodically to ensure that it remains relevant to developments in the wider profession
- establish a process of Quality Assurance to ensure that the courses offered are “fit for purpose” and of the highest possible standard so that the quality of the degree offered by the Medical University of Gdansk is recognised as being among the best available

The visitors recommend that the membership of such a Board or Committee should include representatives of staff of all grades and student representation also. There might also be some merit in including some external representation, perhaps from the local dental profession.

### **Staffing**

The visitors were impressed by the enthusiastic, well-motivated staff of the School and by the good staff:student ratios in the dental clinical departments. It appears that recruitment of staff at junior level is satisfactory, largely because this provides young graduates with the opportunity to undertake specialist training. However retention of staff is a serious problem. We were made aware that a number of staff had resigned recently and that others would

be leaving shortly. This problem we understand is largely related to the very low salary levels of all staff but particularly of those at intermediate level. We were informed that the majority of "full time" staff worked in private practice in addition to their academic appointments and that this was for most an economic necessity. This situation has some real or potential adverse effects:

- the age profile of the staff of the school is skewed with a number of senior staff close to retirement age at one extreme and many very junior staff at the other with few middle grade staff who might in due course expect to assume the leadership of the School
- it seems that, although opportunities exist to undertake research, the time is limited by the economic necessity to undertake additional employment and the research productivity of the School in relation to the numbers of staff is suffering in consequence.

The visitors understand also that the staff spend a great deal of their time treating patients in order to provide income for the Dental School and to further supplement their own low salaries. This requirement appears to be additional to their work in private practice.

The visitors understand that these problems are not limited to the Gdansk School but are common to all Polish schools. A further consequence of these factors is the lack of mobility of staff between dental schools. It appears that the majority of staff in all Polish schools are graduates of the school in which they work. This is likely to foster insularity, hinder the dissemination of ideas and good practices and stifle innovation.

### Facilities

In earlier sections of this report the visitors have referred to shortcomings in the physical facilities of the School. The most serious of these is the separation between five sites of the Dental School itself. This separation is clearly a factor contributing to the the lack of integration in departmental activities and responsibilities. We were informed that there was the possibility, in the medium term, of a single, new, custom built building to house all the departments of the Dental School. Any such initiative would have the strong support of the visitors since it would help to resolve many of the problems the institution faces. Whilst not ignoring the financial aspects of any proposed development, we would suggest that consideration be given to:

- incorporating teaching rooms to accommodate small groups to enable more modern, student centred teaching techniques to be adopted
- increasing the number of dental operatories. In the opinion of the visitors the current 56 operatories are inadequate for an intake of 80 students per year. The anticipated increase in hours for the teaching of dental subjects will increase the pressure on these facilities and this will be exacerbated further if the desirable earlier introduction to patient contact is to be introduced
- the incorporation of research laboratory space and facilities.