Sveučilište u Rijeci • Fakultet dentalne medicine
University of Rijeka • Faculty of Dental Medicine

Course: General and Special Surgery
Course Coordinator: Aleksandra Pirjavec Mahić, MD, PhD, Professor
Department: Department of Surgery
Study program: Integrated undergraduate and graduate university study of Dental Medicine
Study year: 3th
Academic year: 2022-2023

SYLLABUS

Course description (a brief description of the course, general instructions, where and in what form the lessons are organized, necessary equipment, instructions for attendance and preparation for classes, student obligations, etc.):

The aim of Lectures on General Surgery is to give students the basic knowledge of work on surgery, including asepsis, sterilization, surgical instruments and suturing materials. The general part contains the pathophysiology of wound healing and surgical treatment of the wound is especially treated. In the special surgery chapters, the goal is to teach students about the surgical treatment of diseases and injuries, especially those that can affect dental practice. The teaching program is designed to meet the training needs of dentists, and introduces them to selected chapters of general and special surgery, especially acute surgical diseases, their diagnosis, provision of basic surgical assistance and methods of surgical treatment.

At the end of the lectures, the student will acquire theoretical knowledge about the tissue healing process, surgical infections, injuries and common surgical diseases. Students will be able to assess whether and what type of surgical therapy is appropriate; what is surgical therapy in general and what are the advantages and complications compared to non-surgical therapy. The student will also be able to judge whether there are contraindications for dental-medical treatment in more common diseases from the field of surgery. Students will acquire basic knowledge about the most common injuries in the field of traumatology, and the basic principles of treating isolated and multiple injuries, including resuscitation.

After completing the practicals, the student will acquire competencies in the surgical treatment of minor wounds, knowing the principles of antisepsis and asepsis, methods of sterilization, with the application of local anesthesia. He will be competent in dressing wounds and burns, with the proper use of dressings, sutures and classical surgical instruments. He will be able to apply adequate temporary immobilization in case of injuries and fractures, he will be trained to stop external bleeding using a compression bandage, Esmarch bandage or surgical hemostasis. The student will acquire competencies for setting up the infusion or transfusion procedure, blood access, intravenous drug administration and urinary catheter placement.

Assigned reading:

Schwartz SI, Shires GT, Spencer FC et al. Principles of Surgery. McGraw Hill, New York, 2015, 10th edition

Optional/additional reading:

McGrav Hill, New York, 2015.
Sebiston Textbook of Surgery: the Biological Bassis of Modern Surgical

Practice Hardcover – 16 February 2021.
Gray s Surgical Anatomy 1st Edition

COURSE TEACHING PLAN:

The list of lectures (with topics and descriptions):

L1 Introductory lecture
Learning outcome: describe historical facts in the development of surgery and the current state and directions of development of modern surgery.
L2 Sterilization, Asepsis and Antisepsis
Learning outcome: explain aseptic working conditions. Describe antisepsis procedures and basic methods of sterilization of materials used in surgery. Classify antimicrobial therapy and describe basic rules in perioperative antibiotic prophylaxis. List the types of surgical infections and arrange surgical principles of treatment of infections.
L3 Wound - types, healing, infections
Learning outcomes: Explain the mechanism of injury and the type of tissue damage. Classify types of wounds with regard to the mechanism of occurrence and their appearance. Explain the process of tissue healing and explain the basic principles of surgical wound treatment.
L4 Surgical materials and instruments
Learning outcome: Describe and classify materials in surgery. Describe and explain the categories and types of surgical instruments. List basic surgical instruments and suture materials. Use an adequate sewing material with regard to its properties and purpose, name different types of synthetic materials used as substitutes for tissue, or organ parts. Describe and explain limitations, shortcomings and chronic postoperative treatment and supervision of persons with implanted synthetic material.
L5 Principles in plastic surgery
Learning outcome: Describe the basic division of head and neck reconstructive procedures and possible ways of treating such patients.
Interpret and describe the coverage of soft frequent.
L6 Transfusiology
Learning outcome: define transfusionology and its connection with surgical treatment, coagulation, treatment of pathological changes in the blood count and coagulation, application of anticoagulant and antiplatelet drugs. Explain the immunology of erythrocyte blood groups, inheritance and distribution, clinical significance: ABO and Rh blood group systems, other erythrocyte blood groups. Illustrate transfusion treatment: indications and choice of blood products, making the right decision about transfusion treatment; risk assessment and effectiveness measurement. Define risks and side effects of transfusion treatment. Recognize early and late transfusion reactions in a timely manner and their effective treatment.
L7 Pathophysiological response to tissue injury
Learning outcome: Describe the process of normal wound healing, including levels of wound contamination and management principles, factors inhibiting the normal healing process, and various wound dressings. Demonstrate an understanding of the pathophysiology of thermal, chemical, and electrical burns, and describe the initial management for each type.
L8 Burns and frostbite
Learning outcome: Get acquainted with the mechanism of thermal injuries, learn the division of burns and identify 4 types of burns. Know the principles of emergency prehospital treatment of burns and frostbite, with special emphasis on the importance of inhalation injuries and early fluid and electrolyte replacement. Get acquainted with surgical methods of treatment and methods of reconstruction of skin defects. Describe the anatomical and functional features of the hand as an organ. List and explain types of hand injuries and methods of surgical treatment and reconstruction of tissue defects on the hand.
L9 Vascular surgery of the head and neck
Learning outcome:

List and interpret the connection between odontogenic infections and anatomical relationships. Explain methods of treating pathological processes of the head and neck. Describe the localization of vascular structures.

L10 Basics of traumatology

Learning outcome: Describe the principles of urgency. Describe diagnostic methods and tests. Describe surgical procedures in traumatology.

L11 Neck and thyroid surgery

Learning outcome:

Describe the nervous structures of the neck. Interpret possible neurosurgical approaches to the head and neck region.

L12 Microsurgery

Learning outcome: Describe and interpret the need and place of application of minimally invasive surgical procedures and microsurgery.

L13 Head and neck neurosurgery

Learning outcome: Explain anatomic and functional defects (from all causes) of the head and neck, including scalp, skull, forehead, periorbital (eyelids and orbit), cheeks, nose, lips, ears, midfacial and mandibular skeleton, facial nerve, upper airway and digestive tract. Describe basic surgical procedures in the neurosurgery and neurotraumatology. Describe the nervous structures of the neck. Interpret possible neurosurgical approaches to the head and neck region.

L14 Pediatric surgery

Learning outcome: Define anatomical relationships in childhood.

To analyze the possibilities and surgical approaches of the head and neck region in children.**L15**

L15 Skin tumors

Learning outcome: describe skin tumors, explain surgical plan treatment and procedures, Demonstrate an understanding of the classification system for skin, head, and neck neoplasms. Define types of skin tumors and know the principles of onco-surgical treatment of malignant skin tumors. Learn the causes of pressure ulcers, know the measures for the prevention of pressure ulcers and get acquainted with the surgical principles of treatment and methods of reconstruction of pressure ulcers.

L16 Breast surgery – carcinoma, aesthetic procedures

Learning outcome: describe and classify breast cancer, explain breast surgery procedures

L17 Breast reconstruction

Learning outcome:

Name, describe and explain procedures for breast reconstruction.

L18 Facial aesthetic medicine

Learning outcome: list facial esthetic procedures, descrive and explain methods in facial aesthetic

L19 Final lecture and exam preparation

Discuss about topisc

The list of seminars with descriptions:

The list of practicals with descriptions:

P1. Local anaesthesia

Learning outcome: differentiate local anaesthesia, apply local anaesthesia, discuss different types of anaethesia

P2. Excision of small skin tumors

Learning outcome: identify small skin tumors, explain surgical procedure

P3. Sutures for the skin
Learning outcome: describe various suture materials and various suturing techniques, review the methods for performing incisional and excisional biopsies of lesions of the oral cavity and skin in a manner appropriate to the specific lesion, perform suturing.
P4. Plastic and reconstructive surgery
Learning outcomes: Describe the basic division of head and neck reconstructive procedures and the possible ways of treating such patients. Interpret and describe and demonstrate on a model the coverage of soft frequent
P5. Traumatology
Learning outcomes: Argue the principles of urgency. Describe and apply diagnostic methods and tests. Demonstrate surgical procedures in traumatology.

Students' obligations:

Students are obliged to regularly attend lectures and exercises. The student will perform suturing, assisting in the operating rooms, assist in applying splints for fractured digits, change wound dressings, timing and removal of sutures.

Assessment (exams, description of written / oral / practical exam, the scoring criteria):
ECTS credit rating system:
Student grading is conducted according to the current Ordinance on Studies of the University of Rijeka.
The students' work will be evaluated and evaluated during the course and in the final exam. Out of a total of 100 points, a student can get 70 points during classes, and 30 points in the final exam. Students are evaluated using the ECTS (A-E) and numerical system (1-5). Grading in the ECTS system is carried out by absolute distribution, and according to graduate grading criteria.

Out of the maximum 70 grade points that can be obtained during classes, the student must collect at least 35 grade points in order to take the final exam. Students who collect 35 or less grade points (F grade category) must re-enroll in the course.
Student grades are earned through active participation in classes, completing assigned tasks, and taking mid-term exams as follows:
I. During the class, the following are assessed (maximum 70 points):
a) compulsory colloquium (up to 40 points)
b) compulsory test (up to 30 points)

A student can miss 30% of classes solely for health reasons, which is justified by a doctor's excuse. Attendance at lectures and exercises is mandatory. Compensation for exercises is possible with prior agreement with the leader.
a) compulsory colloquium (up to 40 points)
During classes all students are required to take a colloquium where they earn a maximum of 40 points (range of 22-40).

b) Compulsory test (up to 30 points)
The written test consists of 40 questions and carries 25 evaluation points (range of 15-25; the criterion for obtaining evaluation points is 50% of correctly answered questions).

Final exam (30 marks in total)
Students who have obtained more than 35 points during classes must take the final exam, where they can obtain a maximum of 30 points.

Who cannot take the final exam:
Students who obtained less than 35 points during classes do not have the right to sit for the final exam (they enroll in the second year course).
The final exam is an oral exam. It carries 30 evaluation points (range 15-30).
Success in the final exam is converted into grade points as follows:
rating rating points
Insufficient 0
Sufficient 15
Good 20
Very good 25
Excellent 30

In order to pass the final exam and the final evaluation (including the addition of previously achieved evaluation points during classes), the student must be positively evaluated on the final exam and achieve a minimum of 15 evaluation points (50%).

Grading in the ECTS system is done by absolute distribution, that is, based on the final achievement:
A – 90-100 grade points
B – 75-89.9 grade points
C – 60-74.9 grade points
D – 50-59.9 grade points
F– 0-49.9 rating points

The numerical grading system is compared with the ECTS system as follows:
Grades in the ECTS system are translated into a numerical system as follows:
A - excellent (5),
B – very good (4),
C – good (3),
D – sufficient (2).
F – insufficient (1).

Other important information regarding to the course:

Lectures are held Faculty of Dental medicine – Kresimirova 40 - 2ND FLOOR
Exercises are held in Sušak, Rijeka, Kantrida according to the schedule.

COURSE SCHEDULE (for academic year)

Date	Lectures (time and place)	Practicals (time and place)	Instructor
23.03.2023.	L1 08,45-09,30	Practicals 1 10,00. – 10,45	Prof.dr.sc. Aleksandra Pirjavec Mahić
30.03.2023.	L2 L3 L4	Practicals 2-4	Doc.dr.sc. Damir Grebić Prof.dr.sc. Harry Grbas

	08,45-09,30 09,30-10,15 10,15-11,00	11,15-13,30	
06.04.2023.	L5 L6 08,45-10,15 10.15-11.00	Practicals 5-7 11,15-13,30	Prof.dr.sc. Aleksandra Pirjavec Mahić Prof.dr.sc. Sanja Balen
13.04.2023.	L7 L8 08,45-09,30 09,30-11,00	Practicals 8-10 11,15-13,30	Prof.dr.sc Vlatka Sotošek Prof.dr.sc. Aleksandra Pirjavec Mahić
20.04.2023.	L9 L10 08,45-10,15 10,15-11,00	Practicals 11-13 11,15-13,30	Prof.dr.sc Miljenko Kovačević Prof.dr.sc. Aleksandra Pirjavec Mahić Simona Komen Mokrović, dr. med.
27.04.2023.	L11 L12 08,45-10,15 10,15-11,00	Practicals 14-16 11,15-13,30	Prof.dr.sc Franjo Lovasić Prof.dr.sc. Aleksandra Pirjavec Mahić
04.05.2023.	L13 L14 L15 08,45-09,30 09,30-10,15 10,15 – 11,00	Practicals 17-19 11,15-13,30	Prof.dr.sc Darko Ledić Doc.dr.sc. Ana Bosak Veršić Prof.dr.sc. Aleksandra Pirjavec Mahić
11.05.2023.	L16 L17 08,45-09,30 09,30-10,15 10,15-11,00	Practicals 20-22 11,15-13,30	Doc.dr.sc. Damir Grebić Prof.dr.sc. Aleksandra Pirjavec Mahić
18.05.2023.	L18 L19 08,45-10,15 10,15-11,00	Practicals 23-25 11,15-13,30	Doc.dr.sc. Damir Grebić Prof.dr.sc. Aleksandra Pirjavec Mahić

List of lectures, seminars and practicals:

	LECTURES (Topics)	Teaching hours	Location/Lecture room
L1	Introductory lecture,	1	CHC Rijeka
L2	Sterilization, Asepsis and Antisepsis;	1	CHC Rijeka
L3	Wound - types, healing, infections	1	CHC Rijeka
L4	Surgical materials and instruments	1	CHC Rijeka

L5	Principles in plastic surgery	2	CHC Rijeka
L6	Transfusiology	1	CHC Rijeka
L7	Pathophysiological response to tissue injury	1	CHC Rijeka
L8	Burns and frostbite	2	CHC Rijeka
L9	Vascular surgery of the head and neck	2	CHC Rijeka
L10	Basics of traumatology	1	CHC Rijeka
L11	Neck and thyroid surgery	2	CHC Rijeka
L12	Microsurgery	1	CHC Rijeka
L13	Head and neck neurosurgery	1	CHC Rijeka
L14	Pediatric surgery	1	CHC Rijeka
L15	Skin tumors	1	CHC Rijeka
L16	Breast surgery – carcinoma, aesthetic procedures	2	CHC Rijeka
L17	Breast reconstruction	1	CHC Rijeka
L18	Facial aesthetic medicine	2	CHC Rijeka
L19	Final lecture and exam preparation	1	CHC Rijeka
	TOTAL TEACHING HOURS	**25**	

	PRACTICALS (Topics)	**Teaching hours**	**Location/Lecture room**
P1	Local anaesthesia	5	CHC Rijeka
P2	Excision of small skin tumors	5	CHC Rijeka
P3	Sutures for the skin	5	CHC Rijeka
P4	Plastic and reconstructive surgery	5	CHC Rijeka
P5	Traumatology	5	CHC Rijeka
	TOTAL TEACHING HOURS	**25**	

	FINAL EXAM DATES
1.	22.05.2023.
2.	05.06.2023.
3.	27.06.2023.