



# [Medicinski fakultet u Rijeci]

# **Curriculum 2021/2022**

[Za kolegij]

# Otorhinolaryngology

Study program: Medical Studies in English (R)

[Sveučilišni integrirani prijediplomski i diplomski studij]

Department: [Katedra za otorinolaringologiju i kirurgiju glave i vrata]

Course coordinator: izv. prof. dr. sc. Velepič Marko, dr. med.

Year of study: 5
ECTS: 4.5
Incentive ECTS: 0 (0.00%)

Foreign language: Possibility of teaching in a foreign language

#### Course information:

Otorhinolaryngology is a mandatory course in the fifth year of the Integrated undergraduate and graduate university study of Medicine in English. It consists of 30 hours of lecture classes, 15 hours of seminar classes, and 30 hours of practical classes, which is a total of 75 hours (4.5 ECTS). Classes are held at the Clinic for Otorhinolaryngology and Head and Neck Surgery of the Clinical Hospital Center in Rijeka.

The aim of the course is to acquire basic knowledge in the field of otorhinolaryngology and to familiarize the students with the ENT doctor's field of work; disease diagnostics, medicamentous and surgical treatment. Special emphasis is placed on training students to perform examinations of the patient's head and neck and solving the most common and urgent ENT pathologies. The objective is to familiarize the students with the organization in the operating room, wards, and the polyclinic.

#### Course content

An overview of the ENT and head and neck surgery field of work. Diagnostics and treatment of otological, rhinological, pharyngolaryngological disorders and pathology of the neck, with a special reference to emergencies in ENT

#### Class performance

Classes are performed through lectures, seminars, and practicals. The estimated duration of classes is five weeks. During practical classes, the teacher monitors student participation during their examination and treatment of patients. Teachers discuss with students the specific pathological conditions of individual patients at the clinic. During classes, student active participation and acquired knowledge will be assessed through oral examinations during seminars and practicals, oral colloquium, and oral final exam.

#### List of assigned reading:

Braut T., Velepič M., Kujundžić M., Marijić B., Maržić D., Oštarijaš E.: Emergencies in ENT – e-teaching material. Sveučilište u Rijeci, Medicinski fakultet, Rijeka, 2021.

. Cummings Otolaryngology: Head and Neck Surgery, e-teaching material available at Clinical Key base, enabled by the Faculty of Medicine's Library.

# List of optional reading:

Johnson JT, Rosen CA, Bailey BJ. Bailey's head and neck surgery - otolaryngology.

Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, 2014.

Additional e-teaching material available at Access Medicine and Clinical Key bases (e.g. Cummings Pediatric Otolaryngology, ENT guidelines, etc.)

#### **Curriculum:**

#### [Predavanja] list (with titles and explanation):

#### L1 Introduction to ENT; ENT anatomy and physiology

To discover the ENT and head and neck surgery field of work. To recall previous knowledge of anatomy and physiology of the ENT region. To describe the connection between embryological, anatomical, and physiological units with possible pathological phenomena.

#### L2 Introduction to ENT; ENT anatomy and physiology

To discover the ENT and head and neck surgery field of work. To recall previous knowledge of anatomy and physiology of the ENT region. To describe the connection between embryological, anatomical, and physiological units with possible pathological phenomena.

#### L3 Emergencies in ENT

To identify emergencies in ENT. To describe the symptomatology of basic emergencies in ENT. To define the basics of clinical examination for recognition and differential diagnostics of emergencies in ENT. To identify the basic causes of inspiratory stridor and to describe treatment options for respiratory distress (conicotomy/tracheotomy). To describe the management of other emergencies in the ENT region.

# L4 Emergencies in ENT

To identify emergencies in ENT. To describe the symptomatology of basic emergencies in ENT. To define the basics of clinical examination for recognition and differential diagnostics of emergencies in ENT. To identify the basic causes of inspiratory stridor and to describe treatment options for respiratory distress (conicotomy/tracheotomy). To describe the management of other emergencies in the ENT region.

#### **L5 Infections in ENT**

To name inflammatory and infectious diseases in the field of otorhinolaryngology. To describe the etiology, clinical manifestations, propagation of inflammatory processes, and complications in deep neck spaces and, consequently, to define diagnostic procedures and treatment options.

#### **L6 Infections in ENT**

To name inflammatory and infectious diseases in the field of otorhinolaryngology. To describe the etiology, clinical manifestations, propagation of inflammatory processes, and complications in deep neck spaces and, consequently, to define diagnostic procedures and treatment options.

#### L7 Rhinological allergology

To describe allergic rhinitis (medical history, clinical manifestations, diagnostic methods, and therapy). To identify hyperreactive rhinopathy and drug-induced rhinitis

# L8 Rhinological allergology

To describe allergic rhinitis (medical history, clinical manifestations, diagnostic methods, and therapy). To identify hyperreactive rhinopathy and drug-induced rhinitis

# L9 Rhinological disorders in everyday practice; Epistaxis

To list symptoms of rhinological disorders and to explain the range of diagnostic procedures (anterior and posterior rhinoscopy, endoscopy of the nose and sinuses, rhinomanometry, olfactometry) and basic treatment methods. To name the basic causes of epistaxis and methods of stopping nosebleeds. To describe the treatment of patients with epistaxis.

#### L10 Rhinological disorders in everyday practice; Epistaxis

To list symptoms of rhinological disorders and to explain the range of diagnostic procedures (anterior and posterior rhinoscopy, endoscopy of the nose and sinuses, rhinomanometry, olfactometry) and basic treatment methods. To name the basic causes of epistaxis and methods of stopping nosebleeds. To describe the treatment of patients with epistaxis.

#### L11 Aesthetic surgery; Surgical treatment of skin tumors

To describe aesthetic and reconstructive procedures of the head and neck. To explain the treatment of skin tumors.

# L12 Aesthetic surgery; Surgical treatment of skin tumors

To describe aesthetic and reconstructive procedures of the head and neck. To explain the treatment of skin tumors.

#### L13 Benign and malignant tumors of the larynx

To identify risk factors for the development of benign and malignant laryngeal disorders. To classify laryngeal disorders, to describe their clinical presentation, TNM classification and basic diagnostic methods.

#### L14 Benign and malignant tumors of the larynx

To identify risk factors for the development of benign and malignant laryngeal disorders. To classify laryngeal disorders, to describe their clinical presentation, TNM classification and basic diagnostic methods.

#### L15 Metastatic neck disease

To describe the diagnosis of local and distant malignant neck metastases and their treatment.

#### L 16 Laryngeal surgery

To describe different types of laryngeal surgical procedures (sparing and radical)

#### L17 Non-surgical aesthetic medicine

To recognize non-surgical aesthetic procedures like botulinum toxin and fillers.

#### L18 Outer and middle ear disorders

To describe the etiology of acute outer and middle ear inflammations, the connection of otitis media with upper respiratory tract disorders and pharyngeal obstruction (enlarged tonsils), Eustachian tube dysfunction (cleft palate), etc. To list symptoms of acute outer and middle ear inflammations (anamnestic, otoscopic). To describe prevention and treatment of acute outer and middle ear inflammations.

#### L19 Outer and middle ear disorders

To describe the etiology of acute outer and middle ear inflammations, the connection of otitis media with upper respiratory tract disorders and pharyngeal obstruction (enlarged tonsils), Eustachian tube dysfunction (cleft palate), etc. To list symptoms of acute outer and middle ear inflammations (anamnestic, otoscopic). To describe prevention and treatment of acute outer and middle ear inflammations.

#### L 20 Otogenic complications

To describe the complications of ear infections (intratemporal, intracranial, cervical, systemic). To recognize their symptoms and signs and to describe treatment methods.

# L21 Causes and diagnosis of deafness and vertigo

To identify different causes and types of hearing impairment and dizziness. To describe their diagnosis and pharmacological and surgical therapy.

# L22 Anatomical anomalies and other selected chapters on pediatric ENT

To describe the basic anomalies of the ENT region and their treatment options. To differentiate clinical features of relevant ENT pathological conditions between children and adults, as well as the specific pathology of the ENT region depending on the developmental age.

# L23 Voice and speech rehabilitation

To identify laryngectomy club. To describe voice rehabilitation and laryngectomy. To describe prostheses and speech cannulas.

#### L24 Modern otosurgery; Implantable hearing aids; Cochlear implants

To list types of otoscopic procedures. To define modern otosurgery. To describe postoperative patient monitoring. To name implantable hearing aids and to define the indications for prescribing them. To recognize indications for cochlear implantation.

# L25 Selected chapters on the inner ear

To list symptoms of inner ear disorders and the basics of their treatment.

#### L26 Thyroid gland tumors

To describe the course of the disease and the prognosis in different histological types of benign and malignant thyroid tumors. To describe the surgical treatment of thyroid glands.

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To describe the course of the disease and the prognosis in different histological types of benign and malignant thyroid tumors. To describe the surgical treatment of thyroid glands.

#### L28 Pharyngeal tissue; Tonsillar disorders; Pharyngeal neoplasms

To define tonsillar disorders and the Waldeyer's ring. To define indications for tonsillectomy – history-taking, swabs, AST-O, peritonsillar abscess. To define indications for adenotomy. To list various causes of pharyngeal disorders and pharyngeal tumors and to describe diagnostic procedures and treatment options.

### L29 Pharyngeal tissue; Tonsillar disorders; Pharyngeal neoplasms

To define tonsillar disorders and the Waldeyer's ring. To define indications for tonsillectomy – history-taking, swabs, AST-O, peritonsillar abscess. To define indications for adenotomy. To list various causes of pharyngeal disorders and pharyngeal tumors and to describe diagnostic procedures and treatment options.

#### L30 Functional endoscopic sinus surgery

To define modern sinus surgery. To list types of endoscopic procedures and to describe postoperative patient monitoring. To recognize indications for functional endoscopic surgery.

# [Seminari] list (with titles and explanation):

#### S1 Introduction to ENT; ENT anatomy and physiology

To discuss the field of ENT and head and neck surgery. To recall the basics of head and neck anatomy and physiology and their connection with the symptomatology and pathology of the ENT region.

# S2 Introduction to ENT; ENT anatomy and physiology

To discuss the field of ENT and head and neck surgery. To recall the basics of head and neck anatomy and physiology and their connection with the symptomatology and pathology of the ENT region.

### S3 Emergencies in ENT; Rhinological allergology

To discuss ENT emergencies. To distinguish the basic clinical signs and the basics of clinical examination for their recognition and differential diagnostics. To describe the management of ENT emergencies. To discuss the symptomatology, diagnosis, and treatment methods in rhinological allergology.

# S4 Emergencies in ENT; Rhinological allergology

To discuss ENT emergencies. To distinguish the basic clinical signs and the basics of clinical examination for their recognition and differential diagnostics. To describe the management of ENT emergencies. To discuss the symptomatology, diagnosis, and treatment methods in rhinological allergology

# S5 Outer and middle ear disorders

To describe the etiology and symptomatology of acute outer and middle ear inflammations. To explain prevention and treatment of acute outer and middle ear inflammations.

#### S6 Outer and middle ear disorders

To describe the etiology and symptomatology of acute outer and middle ear inflammations. To explain prevention and treatment of acute outer and middle ear inflammations.

#### 57 Pediatric ENT and anatomical anomalies; Otogenic complications; Implantable hearing aids

To explain the differences in clinical features of relevant pathological ENT conditions between children and adults, as well as the specific pathology of the ENT region depending on the developmental age. To illustrate the basics of anatomical anomalies in the ENT region.

#### S8 Pediatric ENT and anatomical anomalies; Otogenic complications; Implantable hearing aids

To explain the differences in clinical features of relevant pathological ENT conditions between children and adults, as well as the specific pathology of the ENT region depending on the developmental age. To illustrate the basics of anatomical anomalies in the ENT region.

### S9 Plastic and reconstructive procedures in ENT

To discuss the possibilities of basic reconstructive and plastic surgery in the ENT region.

#### S10 Pharyngeal lymphatic tissue and tonsillar disorders; Pharyngeal neoplasms

To illustrate the physiology and pathophysiology of Waldeyer's ring and to discuss indications for adenotomy, tonsilloadenoidectomy and tonsillectomy. To discuss the basics of symptomatology and to describe the diagnosis and treatment methods for the most common pharyngeal neoplasms

#### S11 Pharyngeal lymphatic tissue and tonsillar disorders; Pharyngeal neoplasms

To illustrate the physiology and pathophysiology of Waldeyer's ring and to discuss indications for adenotomy, tonsilloadenoidectomy and tonsillectomy. To discuss the basics of symptomatology and to describe the diagnosis and treatment methods for the most common pharyngeal neoplasms

### S12 Surgery of thyroid and parathyroid tumors

To distinguish different histological types of benign and malignant thyroid tumors and to discuss protocols for surgical treatment of thyroid and parathyroid glands.

#### S13 First aid on laryngectomees

To explain the necessity of everyday help to patients with laryngectomy. To know how to perform first aid to a larygngectomized

#### S14 Laryngeal tumor - from diagnosis to treatment

To discuss the diagnosis and oncological and surgical treatment of various benign and malignant laryngeal disorders and to explain the importance of patient follow-up.

#### S15 Sleep apnea

To describe sleep apnea and its main symptoms. To discuss diagnostic procedures and treatment options for sleep apnea.

# [Vježbe] list (with titles and explanation):

#### V01

ENT practicals are performed at the Clinic for Otorhinolaryngology and Head and Neck Surgery and the Department of Audiology and Phoniatrics of the Clinical Hospital Center Rijeka. Students get acquainted with ENT pathology and basic patient examination in the presence of an assistant, using a headlight, otomicroscope, and endoscope. Students discuss differential diagnostics and treatment options for patients in the outpatient department, patients at the clinic scheduled for surgical treatment, and patients treated at the Department of Audiology and Phoniatrics. Students follow their mentors on a hospital round and participate in the patient treatment at the clinic and postoperative follow-up. They are introduced to the organization at the polyclinic, subspecialist clinics, and at the Department of Audiology and Phoniatrics, where they will learn about the daily work of an ENT doctor, especially in solving urgent and more frequent pathologies.

# V02

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#### **V25**

Vježbe iz kolegija Otorinolaringologija izvode se na Klinici za otorinolaringologiju i kirurgiju glave i vrata te Zavodu za

audiologiju i fonijatriju Kliničkog bolničkog centra Rijeka.

Studenti se upoznaju s ORL patologijom i osnovnim pregledom, uz prisutnost asistenta, te uče pregledu pomoću čeonog svjetla, otomikroskopa, endoskopa, raspravljaju o diferencijalnoj dijagnostici i mogućnostima liječenja pacijenata u polikliničkoj službi, kao i pacijenata klinike naručenih na operacijsko liječenje te pacijenata obrađivanih pri Zavodu za audiologiju i fonijatriju. Studenti uz svoje mentore prolaze kroz vizitu, sudjeluju u obardi pacijenta pri prijemu na kliniku, kao i postopertivnom praćenju. U polikliničkoj službi prisustvuju u radu subspecijalističkih ambulanti (endoskopska, otomikroskopska, ultrazvučna) kao i pri zavodu za audiologiju i fonijatriju, kako bi se što više uključili u svakodnevni rad otorinolaringologa, posebice riješevanje hitnih i češćih patologija.

#### **V26**

ENT practicals are performed at the Clinic for Otorhinolaryngology and Head and Neck Surgery and the Department of Audiology and Phoniatrics of the Clinical Hospital Center Rijeka. Students get acquainted with ENT pathology and basic patient examination in the presence of an assistant, using a headlight, otomicroscope, and endoscope. Students discuss differential diagnostics and treatment options for patients in the outpatient department, patients at the clinic scheduled for surgical treatment, and patients treated at the Department of Audiology and Phoniatrics. Students follow their mentors on a hospital round and participate in the patient treatment at the clinic and postoperative follow-up. They are introduced to the organization at the polyclinic, subspecialist clinics, and at the Department of Audiology and Phoniatrics, where they will learn about the daily work of an ENT doctor, especially in solving urgent and more frequent pathologies.

#### **V27**

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#### **V28**

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#### **V29**

ENT practicals are performed at the Clinic for Otorhinolaryngology and Head and Neck Surgery and the Department of Audiology and Phoniatrics of the Clinical Hospital Center Rijeka. Students get acquainted with ENT pathology and basic patient examination in the presence of an assistant, using a headlight, otomicroscope, and endoscope. Students discuss differential diagnostics and treatment options for patients in the outpatient department, patients at the clinic scheduled for surgical treatment, and patients treated at the Department of Audiology and Phoniatrics. Students follow their mentors on a hospital round and participate in the patient treatment at the clinic and postoperative follow-up. They are introduced to the organization at the polyclinic, subspecialist clinics, and at the Department of Audiology and Phoniatrics, where they will learn about the daily work of an ENT doctor, especially in solving urgent and more frequent pathologies.

#### V30

ENT practicals are performed at the Clinic for Otorhinolaryngology and Head and Neck Surgery and the Department of Audiology and Phoniatrics of the Clinical Hospital Center Rijeka. Students get acquainted with ENT pathology and basic patient examination in the presence of an assistant, using a headlight, otomicroscope, and endoscope. Students discuss differential diagnostics and treatment options for patients in the outpatient department, patients at the clinic scheduled for surgical treatment, and patients treated at the Department of Audiology and Phoniatrics. Students follow their mentors on a hospital round and participate in the patient treatment at the clinic and postoperative follow-up. They are introduced to the organization at the polyclinic, subspecialist clinics, and at the Department of Audiology and Phoniatrics, where they will learn about the daily work of an ENT doctor, especially in solving urgent and more frequent

pathologies.

# Student obligations:

Students are obligated to regularly attend and actively participate in all forms of classes.

# Exam (exam taking, description of the written/oral/practical part of the exam, point distribution, grading criteria):

Student grading is conducted according to the current Ordinance on Studies of the University of Rijeka and the Ordinance on Student Assessment and Evaluation at the Faculty of Medicine in Rijeka.

Student work will be assessed and evaluated during course classes and on the final exam

Students can obtain 50 grade points during classes and 50 grade points on the final exam, which totals 100 grade points. Students are evaluated according to the ECTS (A- F) and numerical systems (1–5). Evaluation according to the ECTS system is conducted according to the absolute redistribution.

Out of the maximum of 50 grade points possible to obtain during classes, the student must obtain at least 25 grade points to access the final exam. Students who obtain less than 25 grade points during classes (F grade), must re-enroll the course.

Grade points can be obtained by active participation during classes and by performing the assignments as follows:

- I. Evaluation during classes (maximum of 50 grade points):
- a) class attendance (up to 25 grade points)
- b) participation in practicals (up to 25 grade points)
- a) Class attendance (up to 25 grade points)

Students can be absent from 30% of classes provided they have a justifiable cause, i.e., a doctor's note. Attending lectures, seminars, and practicals is mandatory. Compensation of practicals is possible with a prior agreement with the course coordinator. If a student is absent from more than 30% of classes, whether it is justifiable or not, they cannot continue to participate in the course and cannot access the final exam. In that case, the student is graded with 0 ECTS credits and an F grade.

Grading class attendance at practicals will be performed as follows:

% of attendance	grade points
85–100%	15
75–84%	10
< 74%	5

Grading class attendance at seminars will be performed as follows:

% of attendance	grade points
94-100%	5
87-93%	4
80-86%	3
< 80%	2

Grading class attendance at lectures will be performed as follows:

% of attendance	grade points
90-100%	5
< 90%	3

b) Participation in practicals (up to 25 grade points)

Practical knowledge of all students will be evaluated during classes, for which they can obtain a maximum of 25 grade points (13–25). The examination is performed during practicals.

During the examination, the course coordinator evaluates each student's acquired knowledge and skills during their ENT patient examination. Grades are assigned as follows:

grade	grade points
excellent	25
very good	21
good	17
sufficient	15

#### II. Final exam (maximum of 50 grade points):

Who can access the final exam

Students who obtained at least 25 grade points during classes are obligated to access the final exam on which they can obtain a maximum of 50 grade points.

Who cannot access the final exam

Students who obtained less than 25 grade points and/or were absent from more than 30% of classes cannot access the final exam and have to re-enroll the course next year.

The final exam consists of an oral examination. A maximum of 50 grade points can be obtained at the final exam (25-50).

Success at the final exam is converted into grade points as follows:

grade	grade points
excellent	50
very good	42
good	33
sufficient	25
insufficient	0

In order to pass the final exam and final evaluation (including the previously obtained grade points during classes), the student must be positively evaluated and obtain at least 25 grade points on the final exam. Grading in the ECTS system is performed according to the absolute grading system, i.e., based on the final success:

Grades in the ECTS system are converted into numerical grades as follows:

A = excellent (5) B = very good (4) C = good (3) D = sufficient (2) F = insufficient (1)

# Other notes (related to the course) important for students:

Teaching content, exam dates, and all information regarding the course can be found on the website of the Department of Otorhinolaryngology.

# **COURSE HOURS 2021/2022**

Otorhinolaryngology

[Predavanja]	[Vježbe]	[Seminari]
(Place and time or group)	(Place and time or group)	(Place and time or group)

# List of lectures, seminars and practicals:

[PREDAVANJA] (TOPIC)	Number of hours	Location
L1 Introduction to ENT; ENT anatomy and physiology	1	
L2 Introduction to ENT; ENT anatomy and physiology	1	
L3 Emergencies in ENT	1	

L4 Emergencies in ENT	1	
L5 Infections in ENT	1	
L6 Infections in ENT	1	
L7 Rhinological allergology	1	
L8 Rhinological allergology	1	
L9 Rhinological disorders in everyday practice; Epistaxis	1	
L10 Rhinological disorders in everyday practice; Epistaxis	1	
L11 Aesthetic surgery; Surgical treatment of skin tumors	1	
L12 Aesthetic surgery; Surgical treatment of skin tumors	1	
L13 Benign and malignant tumors of the larynx	1	
L14 Benign and malignant tumors of the larynx	1	
L15 Metastatic neck disease	1	
L 16 Laryngeal surgery	1	
L17 Non-surgical aesthetic medicine	1	
L18 Outer and middle ear disorders	1	
L19 Outer and middle ear disorders	1	
L 20 Otogenic complications	1	
L21 Causes and diagnosis of deafness and vertigo	1	
L22 Anatomical anomalies and other selected chapters on pediatric ENT	1	
L23 Voice and speech rehabilitation	1	
L24 Modern otosurgery; Implantable hearing aids; Cochlear implants	1	
L25 Selected chapters on the inner ear	1	
L26 Thyroid gland tumors	1	
L27 Thyroid gland tumors	1	
L28 Pharyngeal tissue; Tonsillar disorders; Pharyngeal neoplasms	1	
L29 Pharyngeal tissue; Tonsillar disorders; Pharyngeal neoplasms	1	
L30 Functional endoscopic sinus surgery	1	

[VJEŽBE] (TOPIC)	Number of hours	Location
V01	1	
V02	1	
V03	1	
V04	1	
V05	1	
V06	1	
V07	1	
V08	1	
V09	1	
V10	1	

V11	1	
V12	1	
V13	1	
V14	1	
V15	1	
V16	1	
V17	1	
V18	1	
V19	1	
V20	1	
V21	1	
V22	1	
V23	1	
V24	1	
V25	1	
V26	1	
V27	1	
V28	1	
V29	1	
V30	1	

[SEMINARI] (TOPIC)	Number of hours	Location
S1 Introduction to ENT; ENT anatomy and physiology	1	
S2 Introduction to ENT; ENT anatomy and physiology	1	
S3 Emergencies in ENT; Rhinological allergology	1	
S4 Emergencies in ENT; Rhinological allergology	1	
S5 Outer and middle ear disorders	1	
S6 Outer and middle ear disorders	1	
S7 Pediatric ENT and anatomical anomalies; Otogenic complications; Implantable hearing aids	1	
S8 Pediatric ENT and anatomical anomalies; Otogenic complications; Implantable hearing aids	1	
S9 Plastic and reconstructive procedures in ENT	1	
S10 Pharyngeal lymphatic tissue and tonsillar disorders; Pharyngeal neoplasms	1	
S11 Pharyngeal lymphatic tissue and tonsillar disorders; Pharyngeal neoplasms	1	
S12 Surgery of thyroid and parathyroid tumors	1	
S13 First aid on laryngectomees	1	
S14 Laryngeal tumor - from diagnosis to treatment	1	

S15 Sleep apnea	1	
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# **EXAM DATES (final exam):**