



**“CAROL DAVILA” UNIVERSITY  
OF MEDICINE AND PHARMACY BUCHAREST**  
**Faculty of Dentistry**  
**Dental Medicine in English**



## DISCIPLINE GRID

### 1. Programme:

|      |                                                                       |
|------|-----------------------------------------------------------------------|
| 1.1. | <b>CAROL DAVILA UNIVERSITY OF MEDICINE AND PHARMACY BUCHAREST</b>     |
| 1.2. | <b>FACULTY OF DENTISTRY / 2<sup>nd</sup> DEPARTMENT</b>               |
| 1.3. | <b>DIVISION: Anatomical Pathology</b>                                 |
| 1.4. | <b>STUDY DOMAIN: Health, sectoral regulated within European Union</b> |
| 1.5. | <b>STUDY LEVEL: LICENCE</b>                                           |
| 1.6. | <b>STUDY PROGRAMME: DENTAL MEDICINE IN ENGLISH</b>                    |

### 2. Discipline:

|                    |                                                                                                                                                                                             |                  |            |                    |             |                            |              |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------|--------------------|-------------|----------------------------|--------------|
| 2.1.               | <b>DISCIPLINE NAME: Anatomical Pathology</b>                                                                                                                                                |                  |            |                    |             |                            |              |
| 2.2.               | <b>LOCATION: Colentina University Hospital, 19-21 Stefan cel Mare, sector 2, Bucharest</b>                                                                                                  |                  |            |                    |             |                            |              |
| 2.3.               | Lectures tenure:<br>Sabina Zurac (MD, PhD) – Professor<br>Alexandra Bastian (MD, PhD)- Associate Professor<br>Luciana Nichita (MD, PhD) – Lecturer<br>Claudiu Socoliuc (MD, PhD) – Lecturer |                  |            |                    |             |                            |              |
| 2.4.               | Practical classes tenure:<br>Luciana Nichita (MD, PhD) – Lecturer<br>Claudiu Socoliuc (MD, PhD) – Lecturer<br>Liana Sticlaru (MD, PhD) – Teaching assistant                                 |                  |            |                    |             |                            |              |
| 2.5.<br>Study year | <b>II</b>                                                                                                                                                                                   | 2.6.<br>Semester | <b>III</b> | 2.7.<br>Evaluation | <b>Exam</b> | 2.8. Type of<br>discipline | <b>CD/FD</b> |

### 3. Estimated total time (hours/semester)

|                                         |           |              |                     |                                |
|-----------------------------------------|-----------|--------------|---------------------|--------------------------------|
| No. hours/week                          | <b>5</b>  | out of which | <b>Lecture: 2</b>   | <b>Laboratory session: 3</b>   |
| Total hours out of<br>learning schedule | <b>70</b> | out of which | <b>Lectures: 28</b> | <b>Laboratory sessions: 42</b> |

| Time distribution                                                               | hours      |
|---------------------------------------------------------------------------------|------------|
| <b>Textbook study, lecture support, bibliography and notes</b>                  | 25         |
| <b>Supplementary documentation activity in the library, on online platforms</b> | 15         |
| <b>Practical activity support material, homework, portfolio and essays</b>      | 5          |
| <b>Tutorial activity</b>                                                        | 5          |
| <b>Examinations</b>                                                             | 2          |
| <b>Other activities</b>                                                         | 3          |
| <b>Total hours of individual study</b>                                          | <b>55</b>  |
| <b>Total hours per semester</b>                                                 | <b>125</b> |
| <b>Credits</b>                                                                  | <b>5</b>   |

## 4. Preconditions

|                    |                                                                                                                                                                                                                 |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.1. curriculum    | <ul style="list-style-type: none"><li>• Knowledge of anatomy</li><li>• Knowledge of histology</li><li>• Knowledge of biophysics</li><li>• Knowledge of biochemistry</li><li>• Knowledge of physiology</li></ul> |
| 4.2. proficiencies | To know histology techniques                                                                                                                                                                                    |

## 5. Conditions

|                              |                                                                                                              |
|------------------------------|--------------------------------------------------------------------------------------------------------------|
| 5.1. for lecture activity    | Amphitheater minimum 70 seats, computer, video projector                                                     |
| 5.2. for laboratory activity | Practical work room with individual microscopes, multi-head microscope, computer<br>Morgue with autopsy room |

## 6. Accumulated skills

|                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.1. Proficiencies<br><i>(knowledge and abilities)</i>                          | Knowledge acquired by the student: <ul style="list-style-type: none"><li>- correct definition from a histopathological point of view of the main diseases studied</li><li>- to differentiate reversible from irreversible cellular lesions</li><li>- identification and differentiation between the main types of histopathological lesions (circulatory disorders, dystrophies, inflammations and tumors)</li><li>- identification and differentiation between specific and non-specific inflammations</li><li>- identification and differentiation between tumor and non-tumor diseases</li><li>- identification and differentiation between benign and malignant tumors in terms of biological evolution</li><li>- correlation between histopathological lesions, pathophysiological mechanisms and clinical manifestations.</li><li>- Identification of the main equipment used in histopathological processing, macroscopic orientation and necropsy</li></ul> |
| 6.2. Transversal skills<br><i>(role, professional and personal development)</i> | <ul style="list-style-type: none"><li>- Identifying the type of a disease, knowing the lesion substrate and the evolutionary possibilities corroborated with the impact on the patient</li><li>- Identifying roles and responsibilities in a multidisciplinary team; applying effective relationship and work techniques within the team</li><li>- Efficient use of information sources and communication resources and assisted training</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## 7. Objectives (based on the grid of acquired specific skills)

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7.1. General Objective   | - Understanding and mastering the fundamental notions of general pathology (circulatory disorders, dystrophies, nonspecific and specific inflammations, tumors) and oral pathology                                                                                                                                                                                                                                                                                            |
| 7.2. Specific Objectives | <ul style="list-style-type: none"><li>- Presentation of histological lesions in correlation with pathophysiological mechanisms and clinical manifestations</li><li>- At the end of the course students should be able to present all the equipment used in pathological anatomy and all the diseases studied in the lectures (definition, classification as a type of predominant histopathological lesion, causes, macroscopic appearance, microscopic appearance)</li></ul> |

## 8. Content

| 8.1.1. Lecture (SEM. I/II)                                                                                                                                                   | No. hrs/topic | Teaching method                                                                                                                                 | Obs. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------|
| 1. CHAPTER I Introductory course: The object of study of pathological anatomy                                                                                                | 1             | Interactive presentation of the material according to the analytical program, using multimedia means, power point presentations, didactic films |      |
| 2. CHAPTER II Circulatory disorders                                                                                                                                          |               |                                                                                                                                                 |      |
| 2.1. Active hyperemia; congestion;                                                                                                                                           | 1             |                                                                                                                                                 |      |
| 2.2 Thrombosis, embolism                                                                                                                                                     | 2             |                                                                                                                                                 |      |
| 2.3. Reversible ischemic damage                                                                                                                                              | 0.5           |                                                                                                                                                 |      |
| 2.4. Infarcts                                                                                                                                                                | 1.5           |                                                                                                                                                 |      |
| 3. CHAPTER III Dystrophies                                                                                                                                                   |               |                                                                                                                                                 |      |
| 3.1. Hydroprotidic dystrophies                                                                                                                                               | 0.5           |                                                                                                                                                 |      |
| 3.2. Protein dystrophies                                                                                                                                                     | 1             |                                                                                                                                                 |      |
| 3.3. Lipid dystrophies                                                                                                                                                       | 1.5           |                                                                                                                                                 |      |
| 3.4. Carbohydrate dystrophies                                                                                                                                                | 1             |                                                                                                                                                 |      |
| 4. CHAPTER IV Inflammation:                                                                                                                                                  |               |                                                                                                                                                 |      |
| 4.1. General information on the inflammatory process.                                                                                                                        | 2             |                                                                                                                                                 |      |
| 4.2. Nonspecific inflammation.                                                                                                                                               | 2             |                                                                                                                                                 |      |
| 4.3. Specific inflammations (tuberculosis, congenital and acquired syphilis, acute and chronic rheumatoid arthritis, disease with cytomegalovirus inclusions, actinomycosis) | 2             |                                                                                                                                                 |      |
| 5. CHAPTER V Regeneration and repair processes:                                                                                                                              |               |                                                                                                                                                 |      |
| 5.1. Granulation tissue, healing of skin wounds                                                                                                                              | 0.5           |                                                                                                                                                 |      |
| 5.2. The evolution of a fracture focus                                                                                                                                       | 0.25          |                                                                                                                                                 |      |
| 5.3. Nerve regeneration processes                                                                                                                                            | 0.25          |                                                                                                                                                 |      |
| 6. CHAPTER VI Tumors                                                                                                                                                         |               |                                                                                                                                                 |      |
| 6.1. General. Tumor classification (benign epithelial tumors, benign conjunctival tumors, mixed tumors, epithelial malignancies, conjunctival malignancies)                  | 1             |                                                                                                                                                 |      |
| 6.2. Benign tumors.                                                                                                                                                          | 2             |                                                                                                                                                 |      |
| 6.3. Malignant tumors.                                                                                                                                                       | 3             |                                                                                                                                                 |      |
| 7. CHAPTER VII Oral histopathology                                                                                                                                           |               |                                                                                                                                                 |      |
| 7.1. Pathology of the dental pulp. Periodontal pathology.                                                                                                                    | 1.5           |                                                                                                                                                 |      |
| 7.2. Odontogenic tumors: ameloblastoma; odontogenic keratocyst                                                                                                               | 1.5           |                                                                                                                                                 |      |
| 7.3. Precancerous oral-maxillofacial lesions. Tumors of the oral cavity                                                                                                      | 2             |                                                                                                                                                 |      |
| <b>TOTAL</b>                                                                                                                                                                 | <b>28</b>     |                                                                                                                                                 |      |

| 8.2.1. Laboratory Session (SEM. I/II)                                                           | No. hrs/topic | Teaching method                                                                                                                                                                                                                                                     | Obs. |
|-------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>CHAPTER I Circulatory disorders</b>                                                          |               | Assistance to macroscopic orientation, the process of histopathological processing and sectioning, performing usual and special staining and IHC, examination of histopathological preparations, participation in autopsies and / or viewing of recorded necropsies |      |
| 1. Thrombus.                                                                                    | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 2. Chronic pulmonary congestion.                                                                | 1             |                                                                                                                                                                                                                                                                     |      |
| 3. Liver congestion.                                                                            | 1             |                                                                                                                                                                                                                                                                     |      |
| 4. Renal congestion.                                                                            | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 5. Reversible ischemic cell damage.                                                             | 1             |                                                                                                                                                                                                                                                                     |      |
| 6. Myocardial infarction.                                                                       | 1             |                                                                                                                                                                                                                                                                     |      |
| 7. Pulmonary infarction.                                                                        | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 8. Renal infarction.                                                                            | 0.5           |                                                                                                                                                                                                                                                                     |      |
|                                                                                                 |               |                                                                                                                                                                                                                                                                     |      |
| <b>CHAPTER II Dystrophies</b>                                                                   |               |                                                                                                                                                                                                                                                                     |      |
| 1. Intra- and extracellular hyaline.                                                            | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 2. Fibrinoid dystrophy (in the Aschoff nodule).                                                 | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 3. Gastric ulcer                                                                                | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 4. Renal amyloidosis.                                                                           | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 5. Hepatic steatosis.                                                                           | 1             |                                                                                                                                                                                                                                                                     |      |
| 6. Niemann-Pick disease.                                                                        | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 7. Gaucher disease.                                                                             | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 8. Intrahepatic cholestasis.                                                                    | 1             |                                                                                                                                                                                                                                                                     |      |
| 9. Atheroma plaque                                                                              | 1             |                                                                                                                                                                                                                                                                     |      |
|                                                                                                 |               |                                                                                                                                                                                                                                                                     |      |
| <b>CHAPTER III Nonspecific inflammation</b>                                                     |               |                                                                                                                                                                                                                                                                     |      |
| 1. Fibrinous pericarditis                                                                       | 0.25          |                                                                                                                                                                                                                                                                     |      |
| 2. Acute phlegmonous appendicitis.                                                              | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 3. Liver abscess.                                                                               | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 4. Acute purulent leptomeningitis.                                                              | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 5. Acute ulcerative hemorrhagic enterocolitis.                                                  | 0.25          |                                                                                                                                                                                                                                                                     |      |
| 6. Epidemic mumps.                                                                              | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 7. Granulation tissue.                                                                          | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 8. Infectious endocarditis                                                                      | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 9. Acute pyelonephritis                                                                         | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 10. Frank lobar pneumonia                                                                       | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 11. Bronchopneumonia                                                                            | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 12. Chronic hepatitis                                                                           | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 13. Liver cirrhosis                                                                             | 0.5           |                                                                                                                                                                                                                                                                     |      |
|                                                                                                 |               |                                                                                                                                                                                                                                                                     |      |
| <b>CHAPTER IV Specific inflammations</b>                                                        |               |                                                                                                                                                                                                                                                                     |      |
| 1. Tuberculous granuloma (pulmonary and lymph node tuberculosis)                                | 1.5           |                                                                                                                                                                                                                                                                     |      |
| 2. Rheumatic heart disease: Aschoff's granuloma (rheumatic myocarditis), rheumatic endocarditis | 1             |                                                                                                                                                                                                                                                                     |      |
| 3. Diffuse acute poststreptococcal glomerulonephritis                                           | 1             |                                                                                                                                                                                                                                                                     |      |
| 4. Foreign body granuloma.                                                                      | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 5. Luetic aortitis.                                                                             | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 6. Actinomycosis.                                                                               | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 7. Mycotic pyelonephritis.                                                                      | 0.5           |                                                                                                                                                                                                                                                                     |      |
| 8. Disease with cytomegalovirus inclusions.                                                     | 0.5           |                                                                                                                                                                                                                                                                     |      |

|                                                                                |           |  |  |
|--------------------------------------------------------------------------------|-----------|--|--|
|                                                                                |           |  |  |
| <b>CHAPTER V Benign tumors</b>                                                 |           |  |  |
| 1. Papilloma.                                                                  | 1         |  |  |
| 2. The polyp.                                                                  | 1         |  |  |
| 3. The nevocellular nevus.                                                     | 1         |  |  |
| 4. Breast fibroadenoma.                                                        | 0.5       |  |  |
| 5. Uterine leiomyofibroma.                                                     | 0.5       |  |  |
| 6. Pleomorphic adenoma of the parotid gland.                                   | 1         |  |  |
| 7. Neurinoma (schwannoma)                                                      | 0.5       |  |  |
| 8. Cutaneous capillary hemangioma.                                             | 0.5       |  |  |
|                                                                                |           |  |  |
| <b>CHAPTER VI Malignant tumors</b>                                             |           |  |  |
| 1. Basal cell carcinoma                                                        | 0.5       |  |  |
| 2. Squamous cell carcinoma.                                                    | 0.5       |  |  |
| 3. Malignant melanoma.                                                         | 0.5       |  |  |
| 4. Invasive ductal breast carcinoma.                                           | 0.5       |  |  |
| 5. Colon adenocarcinoma and lymph node metastases.                             | 0.5       |  |  |
| 6. Gastric carcinoma                                                           | 0.5       |  |  |
| 7. Hepatocellular carcinoma                                                    | 0.5       |  |  |
| 8. Bronchopulmonary carcinoma                                                  | 0.5       |  |  |
| 9. Clear cell renal cell carcinoma                                             | 0.5       |  |  |
| 10. Carcinoma of the uterine cervix                                            | 0.5       |  |  |
| 11. Malignant lymphomas - Hodgkin's lymphoma, nonhodgkin's malignant lymphomas | 0.5       |  |  |
| 12. Fibrosarcoma                                                               | 0.5       |  |  |
|                                                                                |           |  |  |
| <b>CHAPTER VII Oral histopathology</b>                                         |           |  |  |
| 1. Branchial cyst.                                                             | 0.5       |  |  |
| 2. Giant cell repair granuloma (epulis).                                       | 0.5       |  |  |
| 3. Lichen oral plan.                                                           | 0.5       |  |  |
| 4. Pleomorphic adenoma of the parotid gland.                                   | 0.5       |  |  |
| 5. Carcinoma occurring in a pleomorphic adenoma.                               | 0.5       |  |  |
| 6. Squamous cell carcinoma of the tongue.                                      | 1         |  |  |
| 7. Epidemic mumps.                                                             | 0.5       |  |  |
| 8. Disease with cytomegalovirus inclusions.                                    | 0.5       |  |  |
| 9. Periapical granuloma.                                                       | 0.5       |  |  |
| 10. Ameloblastoma                                                              | 1         |  |  |
| <b>TOTAL LABORATORY SESSIONS</b>                                               | <b>42</b> |  |  |
| <b>TOTAL DISCIPLINE</b>                                                        | <b>70</b> |  |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>8.3. Bibliography for lectures and laboratory/practical sessions</b>                                                                                                                                                                                                                                                                                                                                                            |
| 1. Kumar V, Abbas A, Aster J. Robbins & Cotran Pathologic Basis of Disease – 10th ed., Elsevier, 2020.<br>2. Strayer DS, Saffitz JE, Rubin E. Rubin's Pathology: Clinicopathologic Foundations of Medicine, 8th ed., Wolters Kluwer, 2019.<br>3. Slootweg P, Dental Pathology – A Practical Introduction, 2the ed, Springer-Verlag, 2013.<br>4. Virchows Archiv – Official Journal of the European Society of Pathology, Springer. |

## 9. Corroborating the contents of the discipline with the expectations of epistemic community representatives, professional associations and employers in the fields representative for the program

The professional training of the students for the higher years, with the acquisition of the information specific to the clinical-technical stages necessary for the subsequent theoretical and practical accumulations.

## 10. Evaluation

| Activity type                                 | Evaluation Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Methods of evaluation                                                                                                                                                | % out of final grade |
|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Lecture</b>                                | <b>A. Knowledge for mark 5:</b> <ul style="list-style-type: none"> <li>- to define correctly all the diseases studied in the course</li> <li>- to differentiate reversible from irreversible cellular lesions</li> <li>- to differentiate specific from non-specific inflammations</li> <li>- to differentiate tumor from non-tumor lesions</li> <li>- to differentiate benign from malignant tumors in terms of biological evolution</li> <li>- to know from oral pathology the main periapical lesions</li> <li>- not to make major mistakes</li> </ul> <b>B. Additional knowledge for mark 10</b> <ul style="list-style-type: none"> <li>- to present correctly all the diseases studied during the course (definition, classification as a type of predominant histopathological lesion, causes, macroscopic aspect, microscopic aspect)</li> <li>- to have in-depth knowledge about the histopathology of the oral diseases</li> </ul> | Theoretical exam – written examination: 10 subjects from all chapters of the analytical program<br><br>Or under special conditions multiple choice test 45 questions | <b>70%</b>           |
| <b>Laboratory Sessions</b>                    | At each seminar, before starting a new practical work, discussions to verify the acquisition of the notions presented in the previous laboratory sessions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Periodic check                                                                                                                                                       | 10%                  |
|                                               | <b>A. Knowledge for mark 5:</b> <ul style="list-style-type: none"> <li>- correct definition of the diseases</li> <li>- correct identification of the microscopic images of the main characteristic of the disease</li> <li>- not to make major mistakes</li> </ul> <b>B. Additional knowledge for mark 10:</b> Complete and correct presentation of the diseases (definition, classification as a type of predominant histopathological lesion, causes, macroscopic appearance, microscopic appearance) and identification of the microscopic images of the lesions characteristic for each disease.                                                                                                                                                                                                                                                                                                                                        | Practical examination: multiple choice test 10 questions with images of the diseases studied in laboratory sessions                                                  | 20%                  |
| <b>Minimum performance standards</b>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                      |                      |
| Elementary knowledge of the studied diseases. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                      |                      |

Date

04.09.2024

Chair of Anatomical Pathology  
Division  
Prof dr Sabina Zurac

Date of the approval in  
Department Board:

Department Director  
Prof dr Alexandru Bucur