

Course: Dermatovenerology

Course Coordinator: Assoc.Prof. Sandra Peternel, MD, PhD (sandra.peternel@medri.uniri.hr)

**Department: Department of Dermatovenereology** 

Study program: Integrated Undergraduate and Graduate University Study of Medicine in English

Study year: 4th

Academic year: 2021/22

#### **SYLLABUS**

## Course description:

**Dermatovenerology** is a fourth-year compulsory course of the Integrated Undergraduate and Graduate University Study of Medicine in English. The course consists of 20 lectures, 10 seminars and 30 practicals and is worth 3 ECTS credits.

The **aim** of the course is to acquire knowledge of the most common skin diseases and sexually transmitted diseases through discussion-based lectures and seminars.

Upon successful completion of the course, students will be able to:

- 1. use professional terminology in the field of dermatology and venereology
- 2. examine the patient's dermatologic history
- 3. define the types of skin lesions and perform a valid physical examination of the skin, nails, hair and visible mucosal surfaces
- 4. explain the pathogenesis and clinical presentation of the most common skin and venereal diseases
- 5. distinguish the basic diagnostic techniques used in dermatovenerology and explain their applications
- 6. describe the treatment options and commonly used dermatosurgical procedures in the management of skin and venereal diseases

The schedule of lectures and seminars is given in the tables entitled "Course Teaching Plan" and "Course Schedule" (below). Class times may vary with prior notice and consultation with students.

Seminars require preparatory assignments, which will be posted on the Merlin platform. It is advisable that students log into the course on Merlin and check regularly for updates.

Assigned reading will be available through the Elsevier ClinicalKey website.

## Assigned reading:

- 1. Gawkrodger DJ. Dermatology: An Illustrated Colour Text, 7th Ed. Elsevier Ltd, 2021.
- 2. Bolognia JL, Schaffer JV, Duncan KO, KO CJ. Dermatology Essentials, Elsevier Inc., 2014.

## **Optional/additional reading:**

- 1. Bolognia JL, Schaffer JV, Cerroni L. Dermatology, Elsevier Ltd., 2018.
- 2. James WD, Elston DM, McMahon PJ. Andrews' Diseases of the Skin Clinical Atlas. Elsevier Inc., 2018.
- 3. Basta-Juzbašić A, and co-authors. Dermatovenerologija. Zagreb: Medicinska naklada, 2014.

## **COURSE TEACHING PLAN:**

## The list of lectures (topics and descriptions):

- 1. Basic science of the skin. Terminology of skin lesions. The skin exam. Learning outcomes: to develop student's knowledge of the structure and function of the skin and skin appendages as well as principles of dermatologic terminology; recognition and description of skin and mucosal lesions, history taking, physical examination and practical bedside diagnostic procedures.
- 2. **Principles of dermatologic therapy. Basic dermatologic surgery.** Learning outcomes: to learn the basic principles of topical and systemic therapy in dermatology, skin biopsy, cryotherapy, electrocautery, curettage, incision and drainage, elliptical excision.

- 3. **Bacterial skin infections. Lyme disease**. Learning outcomes: to develop student's knowledge of the most common bacterial skin diseases (including Lyme disease), their clinical presentation and the current diagnostic and therapeutic algorithm.
- 4. **Viral infections**. Learning outcomes: to develop student's knowledge of the most common viral skin diseases (warts, herpes, viral exanthems), including their clinical presentation, current diagnostic and therapeutic algorithms and methods of prevention.
- 5. Fungal infections (Dermatophytes and yeasts). Infestations. Leishmaniasis. Learning outcomes: to develop student's knowledge of fungal infections of the skin, protozoan and parasitic skin diseases (diagnostic and therapeutic algorithm, methods of prevention); to demonstrate methods of identification of fungal elements in KOH preparation of skin scrapings, identification of fungal species on Sabouraud agar, identification of Sarcoptes scabiei by dermoscopy and in skin scrapings, demonstration of the Wood light examination.
- 6. Atopic dermatitis. Learning outcomes: to develop student's knowledge of the pathogenesis of atopic dermatitis, clinical presentation of the disease depending on the age of the patients; to define major and minor clinical criteria and stigmata of the disease; to discuss therapeutic guidelines for topical and systemic therapy of atopic dermatitis.
- 7. **Urticaria and angioedema, hereditary angioedema. Skin prick test.** Learning outcomes: to develop student's knowledge on the classification of the different types of urticaria and angioedema, along with the corresponding diagnostic algorithm and current management options; to define methods of in vitro and in vivo allergy testing. To demonstrate and explain the principle and practical performance of the skin prick test.
- 8. **Drug eruptions. Erythema multiforme, Stevens-Johnson syndrome, Toxic epidermal necrolysis.**Learning outcomes: to develop student's knowledge about hypersensitivity reactions to drugs, describe the morphology of the most common drug rashes, describe key features of the potentially life-threatening drug reactions, discuss therapeutic management of drug rashes.
- 9. **Psoriasis**. Learning outcome: to learn about the etiopathogenesis, clinical and histological features of psoriasis, clinical subtypes of the disease, topical and systemic treatment.
- 10. **Lichen planus. Erythroderma. Parapsoriasis. Pityriasis rosea.** Learning outcomes: to develop student's knowledge of various erythematosquamous disease, classification of erythroderma, differential diagnosis and therapeutic approach.
- 11. Autoimmune blistering diseases (Pemphigus, Bullous pemphigoid, Dermatitis herpetiformis).

  Learning outcomes: to develop student's knowledge of the pathogenesis of autoimmune blistering diseases, differences in their clinical, histopathological and immunofluorescent features, therapeutic options; describe basic concepts of direct and indirect immunofluorescent analyses in the diagnosis of autoimmune skin diseases.
- 12. Autoimmune connective tissue diseases (Lupus erythematosus, Dermatomyositis, Scleroderma, Lichen sclerosus et atrophicus). Learning outcomes: to develop student's knowledge of autoimmune connective tissue diseases, differences in their clinical presentation, histopathologic and immunofluorescent features, current therapeutic options.
- 13. **Stasis dermatitis and leg ulcers**. Learning outcomes: to develop student's knowledge of chronic venous insufficiency, classification and differential diagnosis of leg ulcers, management of chronic wounds, use of color-doppler ultrasound of lower extremities.
- 14. **Petechiae, Purpura and Vasculitis**. Learning outcomes: to develop student's knowledge on the classification of cutaneous vasculitis, define different causes of bleeding in the skin, outline specific purpuric dermatoses, along with diagnostic and therapeutic algorithm.
- 15. **Syphilis (Lues)**. Learning outcomes: to develop student's knowledge of different stages of syphilis, diagnostic workup of the patient, performance and interpretation of serologic tests for syphilis, antibiotic treatment according to stage of the disease.
- 16. **Cutaneous manifestations of HIV infection**. Learning outcomes: to develop student's knowledge of HIV infection and skin manifestations of HIV/AIDS.

- 17. **Benign skin tumours, Melanocytic naevi**. Learning outcomes: to develop student's knowledge of benign tumours of keratinocytes, fibrous, adipose and vascular tissue, and naevi, application of dermatoscopy and ABCDE rule in the evaluation of pigmented skin lesions.
- 18. **Precancerous lesions, Basal cell carcinoma, Squamous cell carcinoma.** Learning outcomes: to develop student's knowledge of precancerous lesions (actinic keratosis, actinic cheilitis, leukoplakia) and non-melanoma skin cancer, differentiate between various clinical and histologic subtypes of basal cell carcinoma, choose appropriate therapeutic options, acquire basic knowledge about photodynamic therapy and radiotherapy of skin tumours.
- 19. **Melanoma**. Learning outcome: to develop student's knowledge of melanoma cliniopathologic subtypes, diagnostic and prognostic features, specify treatment options of localised and widespread disease.
- 20. **Primary cutaneous lymphomas**. **Pseudolymphoma**. Learning outcome: to develop student's knowledge of cutaneous lymphomas and pseudolymphomas clinical presentation, diagnostic workup, and treatment.

#### The list of seminars and practicals:

#### Seminars:

- 1. Irritant and allergic contact dermatitis. Dyshidrotic Eczema. Patch testing.
- 2. Asteatotic Eczema. Nummular Eczema (Nummular Dermatitis). Autosensitization Dermatitis (Id Reaction). Pruritus. Prurigo.
- 3. Photodermatoses. Phototherapy.
- 4. Vitiligo. Hair loss.
- 5. Acne. Rosacea and Periorificial dermatitis. Seborrheic dermatitis.
- 6. Ichthyoses and erythrokeratodermas. Palmoplantar keratodermas. Darier's disease (Keratosis Follicularis).
- 7. Panniculitis, Erythema nodosum. Granuloma anulare. Sarcoidosis.
- 8. Gonorrhea. Chancroid.
- 9. Anogenital Diseases.
- 10. Epidermolysis bullosa. Neurofibromatosis. Tuberous sclerosis.

## Practicals:

Specific practical diagnostic and therapeutic procedures used in dermatovenerology are integrated into the lectures and seminars. Practicals will include training of history taking, performing a physical examination, demonstration of diagnostic and therapeutic procedures performed during routine clinical work (see detailed list below).

## Students' obligations:

Students are required to attend all forms of classes (on-site and online) on a regular basis. Absence from classes is compensated by an oral colloquium on a related topic.

Each student will be assigned a seminar topic to prepare and present as a Power Point presentation to other students (10 minutes per presentation). The list of assigned reading for each seminar topic will be provided on the Merlin platform. All students are expected to actively participate in the seminars by discussing a given topic.

## Assessment (exams, description of written / oral / practical exam, the scoring criteria):

Instructors will evaluate student work during classes and the final exam. The final exam will consist of an online multiple-choice test on the Merlin platform and an oral exam administered on-site (or online via the MS Teams platform, depending on the epidemiological situation). Each student must score at least 50% on the online multiple-choice test to qualify for the oral portion of the final exam.

| Scoring criteria:               |     |   |
|---------------------------------|-----|---|
| Seminar                         | 10  | Each presentation will be scored as follows:  |
| presentation                    |     | sufficient = 4 points, good = 6 points, very good = 8 points, excellent = 10 points |
| Online multiple-<br>choice test | 20  | number of correct answers = number of points (minimum threshold is 10 points)       |
| Oral exam                       | 70  | Knowledge shown at the final oral exam will be scored as follows:                   |
|                                 |     | sufficient = 31-40 points, good = 41-50 points, very good =                         |
|                                 |     | 51-60 points, excellent = 61-70 points  |
| Total                           | 100 |   |

Final scores are as follows:

A (excellent): 90 - 100% points

B (very good): 75 - 89,9%

C (good): 60 - 74,9%

D (sufficient): 50 - 59,9% F (insufficient): 0 - 49,9%

## Other important information regarding to the course:

The course schedule and format may change depending on the current epidemiological situation and the recommendations from our Institute of Public Health, the Ministry of Science and Education and the University of Rijeka.

## COURSE SCHEDULE (for the academic year 2021/2022)

| Date        | Lectures                                      | Seminars   | Instructor  |
|-------------|---|--|---|
| 20.10.2021. | (time and place)<br>10-12 h (L1, L2)          | (time and place)                                 | Assoc.Prof. Sandra Peternel, MD, PhD  |
|             | online MS Teams                               |  |   |
| 21.10.2021. | 8-10 h ( <b>L3, L4</b> )<br>online MS Teams   |  | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 27.10.2021. | 8-10 h ( <b>L5, L6</b> )<br>Room 9            |  | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 27.10.2021. |   | 12-15 h ( <b>S1, S2, S3</b> )<br>online MS Teams | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 28.10.2021. | 10-12 h ( <b>L7, L8</b> )<br>online MS Teams  |  | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 04.11.2021. | 8-10 h ( <b>L9, L14</b> )<br>Room 15          |  | Prof. Larisa Prpić-Massari, MD, PhD   |
| 05.11.2021. | 10-12 h ( <b>L11, L12</b> )<br>Room 9         |  | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 10.11.2021. | 10-12 h ( <b>L10, L13</b> )<br>Room 4         |  | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 10.11.2021. |   | 12-14 h ( <b>S4, S5</b> )<br>Room 15             | Katarina Dujmović-Hasanbegović, MD  |
| 11.11.2021. | 8-10 h ( <b>L15, L16</b> )<br>online MS Teams |  | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 12.11.2021. | 10-12 h ( <b>L17, L18</b> )<br>Room 9         |  | Prof. Larisa Prpić-Massari, MD, PhD   |
| 15.11.2021. |   | 13-15 h ( <b>S6, S7</b> )<br>online MS Teams     | Prof. Larisa Prpić-Massari, MD, PhD   |
| 16.11.2021. |   | 8-10 h ( <b>S8, S9</b> )<br>Room 9               | Katarina Dujmović-Hasanbegović, MD  |
| 16.11.2021. | 10-12 h ( <b>L19, L20</b> )<br>Room 9         |  | Prof. Larisa Prpić-Massari, MD, PhD   |
| 17.11.2021. |   | 11-12 h ( <b>S10</b> )<br>Room 9                 | Assoc.Prof. Sandra Peternel, MD, PhD  |
| 23.11.2021. | 08:30-11:00<br>(P1-3) A                       | CHC Rijeka, Dept. of<br>Dermatovenereology       | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 24.11.2021. | 08:30-11:00<br>(P4-6) A                       | CHC Rijeka, Dept. of<br>Dermatovenereology       | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 26.11.2021. | 08:30-11:00<br>(P7-9) A                       | CHC Rijeka, Dept. of<br>Dermatovenereology       | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 30.11.2021. | 08:30-11:00<br>(P1-3) B                       | CHC Rijeka, Dept. of<br>Dermatovenereology       | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 01.12.2021. | 08:30-11:00<br>(P4-6) B                       | CHC Rijeka, Dept. of<br>Dermatovenereology       | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |

| 03.12.2021. | 08:30-11:00<br>(P7-9) B   | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
|-------------|---------------------------|--|---|
| 14.12.2021. | 08:30-11:00<br>(P10-12) A | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 15.12.2021. | 08:30-11:00<br>(P13-15) A | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 17.12.2021. | 08:30-11:00<br>(P16-18) A | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 21.12.2021. | 08:30-12:30<br>(P10-14) B | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 22.12.2021. | 08:30-11:45<br>(P15-18) B | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 18.01.2022. | 08:30-11:00<br>(P19-21) A | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 19.01.2022. | 08:30-11:00<br>(P22-24) A | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 21.01.2022. | 08:30-11:00<br>(P25-27) A | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 25.01.2022. | 08:30-11:00<br>(P19-21) B | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 26.01.2022. | 08:30-11:00<br>(P22-24) B | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 28.01.2022. | 08:30-11:00<br>(P25-27) B | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 08.02.2022. | 08:30-11:00<br>(P28-30) A | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |
| 09.02.2022. | 08:30-11:00<br>(P28-30) B | CHC Rijeka, Dept. of<br>Dermatovenereology | Assoc.Prof. Sandra Peternel, MD, PhD<br>Katarina Dujmović-Hasanbegović, MD<br>Marijana Vičić, MD, PhD<br>Nika Hlača, MD |

# List of lectures, seminars and practicals:

|     | LECTURES (Topics)   | Teaching hours | Location/Lecture room |
|-----|---|----------------|-----------------------|
| L1  | Basic science of the skin. Terminology of skin lesions. The skin exam.  | 1              | online MS Teams       |
| L2  | Principles of dermatologic therapy. Basic dermatological surgery.   | 1              | online MS Teams       |
| L3  | Bacterial skin infections. Lyme borreliosis   | 1              | online MS Teams       |
| L4  | Viral infections  | 1              | online MS Teams       |
| L5  | Fungal infections (Dermatophytes and yeasts). Infestations. Leishmaniasis.  | 1              | Room 9                |
| L6  | Atopic dermatitis   | 1              | Room 9                |
| L7  | Urticaria and angioedema, hereditary angioedema. Skin prick test.   | 1              | online MS Teams       |
| L8  | Drug eruptions. Erythema multiforme, Stevens-Johnson syndrome, Toxic epidermal necrolysis.                                | 1              | online MS Teams       |
| L9  | Psoriasis   | 1              | Room 15               |
| L10 | Lichen planus. Erythroderma. Parapsoriasis.   | 1              | Room 4                |
| L11 | Autoimmune blistering diseases (Pemphigus, Bullous pemphigoid, Dermatitis herpetiformis)                                  | 1              | Room 9                |
| L12 | Autoimmune connective tissue diseases (Lupus erythematosus, Dermatomyositis, Scleroderma, Lichen sclerosus et atrophicus) | 1              | Room 9                |
| L13 | Stasis dermatitis and leg ulcers  | 1              | Room 4                |
| L14 | Petechiae, Purpura and Vasculitis   | 1              | Room 15               |
| L15 | Syphilis (Lues)   | 1              | online MS Teams       |
| L16 | Cutaneous manifestations of HIV infection   | 1              | online MS Teams       |
| L17 | Benign skin tumours, Melanocytic naevi  | 1              | Room 9                |
| L18 | Precancerous lesions, Basal cell carcinoma, Squamous cell carcinoma   | 1              | Room 9                |
| L19 | Melanoma  | 1              | Room 9                |
| L20 | Primary cutaneous lymphomas. Pseudolymphoma   | 1              | Room 9                |

|     | SEMINARS (Topics)   | Teaching hours | Location/Lecture room |
|-----|---|----------------|-----------------------|
| S1  | Irritant and allergic contact dermatitis.                                   | 1              | online MS Teams       |
|     | Dyshidrotic Eczema. Patch testing.  |                | l' NAC T              |
| S2  | Asteatotic Eczema. Nummular Eczema (Nummular                                | 1              | online MS Teams       |
|     | Dermatitis). Autosensitization Dermatitis (Id Reaction). Pruritus. Prurigo. |                |                       |
|     | 5   |                | I: NAC T              |
| S3  | Photodermatoses. Phototherapy.  | 1              | online MS Teams       |
| S4  | Vitiligo. Hair loss.  | 1              | Room 15               |
| S5  | Acne. Rosacea and Periorificial dermatitis. Seborrheic                      | 1              | Room 15               |
|     | dermatitis.   |                |                       |
| S6  | Ichthyoses and erythrokeratodermas. Palmoplantar                            | 1              | online MS Teams       |
|     | keratodermas. Darier's disease (Keratosis Follicularis).                    |                |                       |
| S7  | Panniculitis. Granuloma anulare. Sarcoidosis.                               | 1              | online MS Teams       |
| S8  | Gonorrhea. Chancroid.   | 1              | Room 9                |
| S9  | Anogenital Diseases.  | 1              | Room 9                |
| S10 | Epidermolysis bullosa. Neurofibromatosis. Tuberous                          | 1              | Room 9                |
|     | sclerosis.  |                |                       |

|     | PRACTICALS (Topics)  | Teaching hours | Location/Lecture room |
|-----|--|----------------|-----------------------|
| 1.  | Recognition and description of cutaneous and visible           | 30             | CHC Rijeka, Dept. of  |
|     | mucous lesions.  |                | Dermatovenereology    |
| 2.  | Taking patient's history in dermatology and venereology.       |                |                       |
| 3.  | Physical exam in the diagnosis of skin and venereal diseases.  |                |                       |
| 4.  | Clinical scoring systems in dermatology (BSA, PASI, EASI,      |                |                       |
|     | SCORAD, UAS7, SCORTEN).  |                |                       |
| 5.  | Bedside diagnostics: vitropression, Nikolsky signs, Auspitz    |                |                       |
|     | sign, Darier sign.   |                |                       |
| 6.  | Bedside diagnostics: Wood light examination, skin and nail     |                |                       |
|     | scrapings, Tzank smear.  |                |                       |
| 7.  | Swab sampling in the diagnosis of venereal diseases.           |                |                       |
| 8.  | Identification of fungi in KOH preparation of skin scrapings.  |                |                       |
| 9.  | Fungal cultures on Sabouraud agar.                             |                |                       |
| 10. | Identification of Sarcoptes scabiei in KOH preparation of skin |                |                       |
|     | scrapings.   |                |                       |
| 11. | Identification of Leishmania in cytologic swabs and skin       |                |                       |
|     | biopsies.  |                |                       |
| 12. | Dermatoscopy. Principles of digital follow-up.                 |                |                       |
| 13. | Incisional and excisional skin biopsies, shaving biopsy, punch |                |                       |
|     | biopsy.  |                |                       |
|     | Curettage, incision and drainage.                              |                |                       |
| 15. | Color-Doppler ultrasound of lower extremities.                 |                |                       |
| 16. | Skin prick test. Prick-to-prick test.                          |                |                       |
| 17. | Provocation tests in the diagnostic workup of inducible        |                |                       |
|     | urticaria.   |                |                       |
| 18. | Epicutaneous (patch) test.                                     |                |                       |
| 19. | Direct and indirect immunofluorescent analyses in the          |                |                       |
|     | diagnosis of autoimmune diseases.                              |                |                       |
|     | Trichogram, trichoscopy.                                       |                |                       |
|     | Methods in dermatopathology.                                   |                |                       |
|     | Principles of topical therapy.                                 |                |                       |
|     | Wound dressings and management of chronic wounds.              |                |                       |
|     | Intralesional therapy.   |                |                       |
|     | Cryotherapy, electrocautery.                                   |                |                       |
|     | Lasers in dermatology.   |                |                       |
|     | EpiPen - indications and practical use.                        |                |                       |
|     | Phototherapy (narrowband UVB, PUVA, PUVA bath).                |                |                       |
|     | Photodynamic therapy.  |                |                       |
| 30. | Radiotherapy of skin tumours.                                  |                |                       |

|    | FINAL EXAM DATES |
|----|------------------|
| 1. | 22.02.2022.      |
| 2. | 15.04.2022.      |
| 3. | 06.07.2022.      |
| 4. | 02.09.2022.      |
| 5. | 16.09.2022.      |