**FACULTY OF MEDICINE I**

**STUDY PROGRAM 0914.1 RADIOLOGY AND IMAGING TECHNOLOGIES**

**DEPARTMENT OF MODERN LANGUAGES**

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| APPROVEDAt the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum Commission in MedicineMinutes No.\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_Chairman Andrei Padure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | APPROVEDAt the Counicl meeting of the Faculty of Medicine IMinutes No.\_\_\_\_\_\_\_ from \_\_\_\_\_\_\_\_\_\_\_\_Dean of Faculty dr. of med., professorBețiu Mircea\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
|  APPROVED At the Meeting of the Chair of Modern Languages Minutes No. 6 from 13.02.2025 Head of chair dr. of ped. Eșanu-Dumnazev Daniela \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**SYLLABUS
ENGLISH/FRENCH LANGUAGE**

**Integrated studies / Cycle I, Licence studies**

**Type of course : Compulsory**
The syllabus was developed by the team of authors :

Liuba Maxian, University Assistant
Veronica Voloșciuc, University Assistant

Chişinău, 2025

**INTRODUCTION**

* General presentation of the discipline: the place and role of the discipline in developing the specific competences of the professional training program/specialty.
* The "Modern Languages" discipline holds a significant place in the curriculum of the State University of Medicine and Pharmacy "Nicolae Testemițanu", with modern languages (English and French) being lingua franca and working languages of EU institutions. The Bologna Process and European standards require the assurance of linguistic quality and competence as a priority objective for integrating education into the European space. According to these standards, the "Modern Languages" discipline (terminological language) is a practical course aimed at students, designed to apply and actively use language in professional training and activities. The course is aligned with the linguistic competences established by the Common European Framework of Reference for Languages (CEFR) developed by the Council of Europe. The course focuses on acquiring essential medical terminology, equipping students with solid linguistic competences necessary for academic mobility, intercultural, and professional integration.
* **Mission of the Curriculum (Goal) in Professional Training**Studying a specialized foreign language contributes to the development of professional competences, capacities, knowledge, and attitudes through the exploration of other disciplines with diverse content.
* **Language(s) of Instruction**: English, French
**Beneficiaries**: First-year students, specialty of Radiology and Imaging Technologies
1. **COURSE ADMINISTRATION**

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| --- | --- |
| course code | **G.01.O.006 /G.0.2.0.O.1.6** |
| **Course Title**: | **English/French Language (for local students)** |
| **Course Coordinators**: | **Liuba.Maxian/Veronica.Voloșciuc** |
| Year | **I** | Semester(s) | **I/II** |
| **Total Number of Hours**: |  |
| Courses | **-** | **Practical/lab work**: | **-** |
| **Seminars**:  | **30/30** | **Individual work**: | **30/30** |
| **Evaluation Method**: | **C/E** | **Number of Credits**: | **2/2** |

1. **TRAINING OBJECTIVES IN THE COURSE**

By the end of the course, the student will be able to:

**Knowledge and Understanding**:

* Define the particularities of general medical language and terminology in a foreign language.
* Identify specialized symbols and the characteristics of medical language.
* Use authentic specialized vocabulary in current communication in professional contexts.
* Apply mechanisms for constructing and specifying a professional message or statement.
* Define the grammatical structures characteristic of the professional foreign language.
* Identify medical language to later use linguistic and communication competences (oral and written expression).
* Formulate basic principles and concepts in the medical field necessary for future collaboration and participation in international conferences/projects.

**Application Level**:

* Interpret ideas, projects, processes, theoretical and practical content of the discipline.
* Apply skills for different types of reading:
	+ Skimming (articles),
	+ Extensive reading (understanding the general content of a specialized text),
	+ Selective reading (synthesizing information),
	+ Detailed reading (complete understanding of the text's content).
* Reproduce specialized texts in the foreign language.
* Translate authentic specialized texts, articles, documents, prescriptions from/to the foreign language.
* Apply writing and oral expression skills in the context of doctor/patient, doctor/doctor communication.
* Develop skills for selecting, synthesizing, and summarizing information.
* Apply acquired knowledge in learning situations: dialogues, projects, local and international conferences, speeches, etc.
* Develop communication skills to initiate discussions, dialogues, thematic debates in professional situations.

**Integration Level**:

* Evaluate the role of the foreign language in a professional context in shaping the future radiology technician.
* Use communication knowledge and skills in a professional environment, employing specific health-related topics to promote intercultural and interdisciplinary dialogue.
* Implement acquired knowledge in research activities or writing specialized papers in the foreign language.
* Analyze and synthesize information from authentic sources and present it orally or in writing.
1. **PRECONDITIONS AND REQUIREMENTS:**
* Minimum level A2-B1 knowledge of foreign languages according to CEFR.
* Digital skills necessary for completing tasks, projects, and evaluations.
* Communication and teamwork skills.
* Autonomy in completing individual tasks.
1. **THEMATIC CONTENT AND DISTRIBUTION OF HOURS**

***Lectures, practical/laboratory work, seminars, and individual study***

***(English/French Semester I)***

| No.d/o | ТOPIC |  Number of Hours |
| --- | --- | --- |
| Lectures | Practical works | Individual work |
|  | Concepts of patient health and well-being. The profession of radiology technologist: profile and competences. CV and cover letter. Tips and writing. |  | 4 | 4 |
|  | The human body. Organ systems. Concepts. |  | 2 | 2 |
|  | The skeleton. Types of bones. |  | 2 | 2 |
|  | The respiratory system. |  | 4 | 4 |
|  | The cardiovascular system. Heart and blood vessels. |  | 2 | 2 |
|  | The digestive system. |  | 2 | 2 |
|  | The urinary system. |  | 2 | 2 |
|  | The muscular system. |  | 2 | 2 |
|  | The nervous system. |  | 4 | 4 |
|  | Anamnesis. Basic objectives. |  | 2 | 2 |
|  | Knowledge evaluation test. |  | 2 | 2 |
|  | Test |  | 2 | 2 |
| **Total** |  | **30 hours** | **30 hours** |
| **Total 60 hours** |  |  |  |

***Lectures, practical/laboratory work, seminars, and individual study***

***(English/French Semester II)***

| Nr.d/o | ТOPIC |  Numărul de ore |
| --- | --- | --- |
|  Lectures | Practical works | Individual workj |
|  | Radiology. An art. A science. Investigation methods. Generalities and description. |  | 4 | 4 |
|  | History of X-rays. Types of contrast agents in medical radiodiagnosis. |  | 4 | 4 |
|  | Magnetic resonance. |  | 4 | 4 |
|  | Computed tomography. |  | 4 | 4 |
|  | Ultrasonography. |  | 2 | 2 |
|  | Nuclear medicine. |  | 4 | 4 |
|  | Interventional radiology. |  | 2 | 2 |
|  | Conventional radiology. |  | 2 | 2 |
|  |  Final evaluation test. |  | 2 |  |
|  |  Exam |  | 2 |  |
| **Total** |  | **30 hours** | **30 hours** |
| **Total 60 hours** |  |  |  |

1. **ESSENTIAL PRACTICAL SKILLS ACQUIRED BY THE END OF THE COURSE**

**The essential mandatory practical skills include:**

* Performing medical imaging techniques.
* Correct usage of radiological equipment.
* Ensuring patient safety during radiological procedures.
* Interpretation and analysis of radiological images.
* Familiarization with medical terminology related to radiology.
1. **REFERENCE OBJECTIVES AND CONTENT UNITS**

| **Objective** |  **Content Units** |
| --- | --- |
| **Topic (Chapter) 1: Human Anatomy and Physiology** |
| * Define the specific terminology for each system of the human body and explain the key words associated with their structures and functions.
* Understand the structure, function, and pathologies of each system, identifying relevant information from scientific sources and medical articles.
* Demonstrate the ability to differentiate and correctly use specific terms in coherent sentences, both in writing and orally.
* Correctly apply medical terminology and knowledge in discussions and various contexts, as well as in presenting conclusions about the functioning of body systems.
* Integrate information about each system to conceptualize the interconnections between them and highlight the importance of medical English in scientific communication and international collaboration and international collaboration.
 | 1. **Introduction to the human body. Defining the concept of the human body and its major structures. Describing the general functions of the human body. Grammar: Article (I), Nouns for professions.**
2. **Concepts of health and patient well-being. Types of health.**
3. **The profession of radiology technologist: profile and competencies.**
4. **CV and Cover Letter: tips and writing.**
 |
| 1. **Respiratory System.** Description of the structures involved in respiration: lungs, trachea, bronchi. Gas exchange in the lungs. Factors regulating respiration. Grammar: Modal verbs, Imperative mood.
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| 1. **Cardiovascular System.** Structure of the heart. Types of blood vessels. Blood circulation. Main components of the cardiovascular system and their roles.

Grammar: Irregular verbs, Simple relative pronouns. |
| 1. **Digestive System.** Presentation of the organs involved in digestion: stomach, small intestine, large intestine, liver, pancreas. Description of digestion and nutrient absorption processes. Identification of the functions of the digestive system in the breakdown and absorption of food.

Grammar: Adverbs, Types of adverbs. |
| 1. **Urinary System.** Structure of the urinary system. Main components and their roles.

Grammar: Pronouns, Present active and passive forms. |
| 1. **Skeletal System.** Bones, joints, cartilage. Functions of the skeletal system. Main components and their roles in the body.

Grammar: Modal verbs, Pronominal verbs, Specificity of medical verbs. |
| 1. **Nervous System.** Structure of the central and peripheral nervous systems. Functions of the nervous system in transmitting impulses and controlling bodily functions. Types of nerve cells and their roles.

Grammar: Uncountable nouns, Active and negative forms of verbs.1. **Anamnesis.** Basic objectives.

Grammar: Prepositions. Types of prepositions. Simple and compound prepositions. |
| **Tema (capitolul) 2.** **Metode radiologice și imagistice de investigație** |
| * Define the main imaging investigation methods (X-ray, CT, MRI, ultrasound, scintigraphy, angiography) and explain the principles of operation for each method, including their advantages and limitations.
* Understand the clinical use and applications of different imaging and radiology methods (including computed tomography, magnetic resonance imaging, ultrasound, nuclear medicine, interventional radiology) for diagnosis, evaluation, and monitoring of conditions.
* Demonstrate competence in patient preparation and image interpretation obtained through various imaging techniques, ensuring the correct application of procedures and associated safety measures.
* Apply knowledge of imaging and radiology techniques in developing a diagnostic and treatment plan, integrating information obtained from images in patient evaluation and management.
* Integrate information from different investigation methods and radiological techniques to optimize diagnosis and treatment, ensuring the efficient use of imaging resources in clinical practice.
 | 1. **Investigation methods.** General incursions into imaging: X-ray, CT, MRI, ultrasound, scintigraphy, angiography used for diagnosing conditions and monitoring organs. Generalities and description.
2. Grammar: Article, Present tense verbs.

*Radiology: An art. A science. Concept of the word.* |
| 1. **Radiological investigation methods.** Radiological methods include radiography, CT, MRI, ultrasound, angiography, and scintigraphy, essential for diagnosis, detailed evaluation, and monitoring of conditions.

Grammar: Pronouns, Imperative mood.1. **History of X-rays. Types of contrast agents in medical radiodiagnosis.**

 Grammar: Active and passive verb forms. |
| 1. **Computed Tomography.** Principles of operation. Clinical indications, advantages, and limitations. Procedure and preparation, image interpretation. Safety and risks.

Grammar: Modal verbs, Feminine and plural forms of adjectives. |
| 1. ***Magnetic Resonance Imaging.*** *Principles of operation: Using magnetic fields. Technology used: image processing and reconstruction. Clinical indications: Diagnosing brain, spinal, muscular, and joint conditions, and evaluating tumors, injuries, and degenerative diseases.*

*Grammar: Adjectives, Simple and compound relative pronouns.* |
| 1. **Ultrasound.** Types of ultrasound. Specialized uses and technical aspects. Transducers: types and specific use for different exams. Practical aspects. Safety and contraindications.

Grammar: Modal verbs, Demonstrative adjectives. |
| 1. **Nuclear Medicine.** Diagnosis. Using radionuclides for functional imaging of organs and tissues. Therapy and functional evaluation. Treatment monitoring.

Grammar: Irregular verbs, Verbal forms in the past. |
| 1. **Interventional Radiology.** Minimally invasive procedures. Biopsies: Tissue sampling for analysis. Tumor management. Pain control.

Grammar: Adverbs.1. **Conventional Radiology.** Advantages and disadvantages. Therapeutic indications and contraindications.Types of simple and compound adverbs for place, time, and cause.
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1. **SPECIFIC PROFESSIONAL COMPETENCES (CPS) AND TRANSVERSAL COMPETENCES (CT)**

**Transversal Competences (CT)**:

**CT2**: Efficient use of informational and communication resources; professional linguistic interaction in a full range of societal and cultural contexts; identifying roles and responsibilities in a multidisciplinary team; applying techniques for effective teamwork and patient relationships.

**CT3**: The ability to support and promote an appropriate work environment, regardless of race, gender, culture, age, etc.; to work enthusiastically with all employees and beneficiaries at all levels; to value the contributions of individuals from diverse backgrounds; and to show respect for others' opinions and ideas.

**LEARNING OUTCOMES :**

* At the end of the course, the student will be able to:
* Understand and define professional terminology in the field of Radiological Technology.
* Appreciate and practice the qualities and behavior required for successful practice in the chosen field.
* Identify and define with ease the radiological examination methods.
* Use the English language correctly and effectively in a wide range of general, educational, and professional topics.
* Apply the studied methods in professional activity and daily life.
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| No. | Expected Outcome | Strategies for Completion | Evaluation Criteria | Deadline |
| 1. | Video document: "Be a radiology assistant. (The significance of the radiology assistant)" | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year**

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| 2. | Video document: "What is the Skeleton?

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 | **Watch the video and complete the tasks on the pedagogical worksheet.**

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 | **Oral comprehension, written and oral expression**

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 | **Throughout the year**

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| 3. | **Video document: "Human body. Systems."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 4.  | **Video document: "What is tomography?"** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 5. | **Video document: "Introduction to Magnetic Resonance Imaging (MRI)."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 6. | **Video document: "Ultrasound of the abdomen."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 7. | **Video document: "Is Nuclear Medicine dangerous?"** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 8. | **Video document: "Types of pulmonary diseases."**pulmonaires ou respiratoires. | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 9. | **Video document: "The heart and the vascular system."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 10. | **Video document: "Digestive system. Anatomy."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 11. | **Video document: "Urinary System in 7 minutes."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 12. | **Video document: "Skeletal System. 3D."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 13. | **Video document: "Neuroscience: Nervous System."** | **Watch the video and complete the tasks on the pedagogical worksheet.** | **Oral comprehension, written and oral expression** | **Throughout the year** |
| 14. | Study of specialized literature. | **Read specialized literature. Present an article.** | **Written comprehension, oral expression** | **Throughout the year** |
| 15. | Visit to the Department of Radiology and Imaging. | **Familiarize yourself with the medical staff of the Radiology and Imaging Department, medical equipment, and investigation methods.** |  | **Throughout the year** |
| 16. | **Project: "Technological Radiology – a new branch in the Republic of Moldova."** | **Present information about the studied field.** | **Oral expression, correctness, fluency, didactic support** | **Throughout the year** |

1. **SUGGESTIONS FOR TEACHING-LEARNING-EVALUATION METHODS**

***Teaching and learning methods used:***

* Exposition, conversation, exercise, demonstration, problem-solving, heuristic conversation, brainstorming; experiment.
* Interactive methods focusing on the pragmatic aspect of communication and creative exploration (brainstorming, free association, starbursting, value line, SINELG, T-graph, cube, Venn diagram, cinquain);
* Applied teaching strategies/technologies (specific to the discipline):
* Inductive strategies (from specific to general);
* Deductive strategies (from general to specific);
* Transductive strategies;
* Heuristic strategies to develop knowledge through personal thinking efforts, using problem-solving, discovery, modeling, hypothesis formulation, heuristic dialogue, investigative experimentation, and brainstorming, stimulating creativity.

**Evaluation methods (including the method for calculating the final grade):**

**Ongoing:**

* **Group or individual control** through:
* application of tests;
* problem-solving/exercises;
* case study analysis;
* role-playing based on discussed topics;
* **Project** (as a summative evaluation method);
* **Portfolio** (as a longitudinal evaluation method).

**Final:**

* Semester I – Annual average - 100% Colloquium.
* Semester II – Annual average - 50%, multiple-choice test - 20%, Exam - 30%.

 **Method for rounding grades in evaluation stages**

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| **Intermediate grade scale** (annual average, exam stage grades): | **National grading system** | EchivalentECTS |
| **1,00-3,00** | **2** | **F** |
| **3,01-4,99** | **4** | **FX** |
| **5,00**  | **5**  | **E** |
| **5,01-5,50**  | **5,5**  |
| **5,51-6,0**  | **6**  |
| **6,01-6,50**  | **6,5**  | **D** |
| **6,51-7,00**  | **7**  |
| **7,01-7,50**  | **7,5**  | **C** |
| **7,51-8,00**  | **8**  |
| **8,01-8,50**  | **8,5**  | **B** |
| **8,51-9,00**  | **9**  |
| **9,01-9,50**  | **9,5**  | **A** |
| **9,51-10,0**  | **10**  |

Annual grades and grades for all stages of the final exam (computer-assisted, oral response test) will be expressed in numbers according to the grading scale (as per the table), and the final grade will be expressed as a number with two decimal places, which will be recorded in the gradebook.

Failure to attend the exam without valid reasons will be recorded as "absent" and equates to a grade of 0 (zero). The student is entitled to two repeated attempts for an unpassed exam.

1. **RECOMMENDED BIBLIOGRAPHY:**

 *A.* ***Mandatory****:*

1. *English language course material (in the process of being edited) for Radiologic Technology students. Author: L. Maxian, Assistant Univ., 2025.*
2. *French language course material (in the process of being edited) for Radiologic Technology students. Author: V. Voloșciuc, Assistant Univ., 2025.*

*B.* ***Supplementary****:*

1. Dr. Tony Smith London, Dorling Kindersley. *The human body an illustrated guide to its  structure, function and disorders.*
2. Barbara Janson Cohen, Lippincott Williams and Wilkins. *Structure and function of the human body*. USA: Lippinkott Williams & Wilkins, 2005. 390 p.
3. Juanita J. Davies. *Essentials of Medical Terminology.* 3rd edition. USA: Delmar Cengage Learning, 2008. 518 p.
4. Stewart C. Bushong. *Radiologic science for Radiology Assistant.*
5. David Sutton. *Textbook of radiology and imaging. Seventh edition. 2002*
6. Dobrovici Viorica, Ioan Bostaca. *English in Medicine*. Polirom,1999, 320 p
7. Richard R. Carlton, Barry Burns. *Concepts in Medical Radiographic imaging.*
8. Bhawna Oberoi. *How to be a successful Radiology Assistant?*
9. Nancy M. Major. *A practical approach to Radiology.*
10. https// imagerie-medicale.com
11. https//doctissimo.fr
12. Santé-médecine.comCLE Internationa,l2004
13. Les 500 exercices de grammaire. Ivonne Delatour, Hachette, 2005
14. Le français des médecins, Thomas Fassier, 2008
15. https//em-consulte.com
16. www.passeportsante.fr