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|  | **UNIVERSITY OF EAST SARAJEVO**  Faculty of Medicine | |  |
| ***Study program: medicine*** | |
| Integrated academic studies | III study year |

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| Full subject title | RADIOLOGY AND NUCLEAR MEDICINE |
| Department | Department of Propedeutics, Faculty of Medicine Foča |

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| **Subject code** | **Subject status** | **Semester** | **ECTS** |
|
| МЕ-01-1-027-6 | compulsory | VI | 8 |

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| Professor/ -s | Full professor Vera Artiko MD, PhD; Full professor Biljana Marković-Vasiljković MD, PhD; assistant professor Nataša Prvulović-Bunović, MD, PhD; assistant professor Jasmina Bajrović, MD, PhD; assistant professor Vedran Markotić, MD, PhD |
| Associate/ - s | Senior assistant Dragana Nikolić MD |

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| **Number of lectures/ teaching workload (per week)** | | | **Individual student workload (in hours per semester)** | | | | **Coefficient of student workload So[[1]](#footnote-1)** |
| **L** | **E** | **SP** | **L** | | **E** | **SP** | **L** |
| 4 | 3 | 0 | 4\*15\*1.3 | | 3\*15\*1.3 | 0\*15\*1.3 | 1,3 |
| total teaching workload (in hours, per semester)  4\*15+3\*15+0\*15=105 | | | | total teaching workload (in hours, per semester)  4\*15\*1.3+3\*15\*1.3+0\*15\*1.3=135 | | | |
| Total subject workload (teaching + student): 105+135= 240 hours | | | | | | | |

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| Learning outcomes | 1. By mastering this course, the student will be able to participate in practical training in clinical subjects  2. By mastering this course the student will be able to recognize all the essential morphological characteristics of pathological conditions  3. By mastering this course, the student will be able to follow the teaching and acquire knowledge from clinical subjects  4. By mastering this course the student will be able to recognize in practice the symptoms and signs of the disease and predict possible complications and the possible course of the disease |
| Preconditions | For taking exam - passed exams from pathology and pathological physiology |
| Teaching methods | Lectures, exercises, seminars |
| Subject content per week | **Lectures:**   1. Introduction to Radiology / Basics of Radioactivity and Protection from Ionizing Radiation - 4 hours 2. Radiological Physics, Equipment, and Terminology / Digitalization and Archiving of Medical Images / Contrast Agents in Radiology - 4 hours 3. Radiography / Computed Tomography - 4 hours 4. Ultrasound Radiological Diagnostics and Magnetic Resonance Imaging - 4 hours 5. Radiological Diagnostics of the Lungs - 4 hours 6. Radiological Diagnostics of the Heart and Blood Vessels - 4 hours 7. Radiological Diagnostics of the Digestive System - 4 hours 8. Radiological Diagnostics of the Urogenital System (3 hours) / Radiological Diagnostics of the Breast and Thyroid Gland (1 hour) 9. Neuroradiology - 4 hours 10. Radiological Diagnostics of the Musculoskeletal System - 4 hours 11. Basics of Interventional Radiology: Vascular and Non-Vascular Procedures - 4 hours 12. Basics of Nuclear Medicine: Physics and Equipment. Radionuclides and Radiopharmaceuticals - 4 hours 13. Special Nuclear Medicine Diagnostics in Endocrinology. Therapy in Nuclear Medicine - 4 hours 14. Special Nuclear Medicine Diagnostics in Oncology: PET/CT and SPECT/CT - 4 hours 15. Basics of Radiotherapy in Clinical Practice - 4 hours   **Exercises:**  Introduction to Radiology / Basics of Radioactivity and Protection from Ionizing Radiation  2. Radiological Physics, Equipment, and Terminology / Digitalization and Archiving of Medical Images / Contrast Agents in Radiology  3. Radiography / Computed Tomography  4. Ultrasound Radiological Diagnostics and Magnetic Resonance Imaging  5. Radiological Diagnostics of the Lungs – Analysis of X-rays (RTG) and CT Scans  6. Radiological Diagnostics of the Heart and Blood Vessels – Analysis of X-rays (RTG), CT, and MRI Scans  7. Radiological Diagnostics of the Digestive System – Analysis of Ultrasound (US), X-rays (RTG), CT, and MRI Scans  8. Radiological Diagnostics of the Urogenital System / Radiological Diagnostics of the Breast and Thyroid Gland – Analysis of Common Pathologies using Ultrasound (US), X-rays (RTG), CT, MRI, and Mammography  9. Neuroradiology – Analysis of CT and MRI Scans  10. Radiological Diagnostics of the Musculoskeletal System – Analysis of Ultrasound (US), X-rays (RTG), CT, and MRI Scans  11. Basics of Interventional Radiology: Vascular and Non-Vascular Procedures  12. Basics of Nuclear Medicine: Physics and Equipment. Radionuclides and Radiopharmaceuticals  13. Special Nuclear Medicine Diagnostics in Endocrinology. Therapy in Nuclear Medicine  14. Special Nuclear Medicine Diagnostics in Oncology: PET/CT and SPECT/CT  15. Basics of Radiotherapy in Clinical Practice |

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| **Compulsory literature** | | | |
| **Author/s** | **Publication title/ Publisher** | **Year** | **Pages (from-to)** |
| Gunderman R | Essential Radiology, 2 nd ed. Thieme | 2006 |  |
| Milošević N, Platiša M, Žikić D, Rajković N. | Biophysics in Radiology and Nuclear Medicine. Libri Medicorum. University of Belgrade, School of Medicine | 2016. |  |
| Sharp PF, Gemmell HG, Murray AD**.** | Practical nuclear medicine. Springer London | 2005. |  |
| Additional literature | | | |
| Author/s | Author/s | Author/s | Author/s |

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| **Student responsibilities, types of student assessment and grading** | **Grading policy** | **Points** | **Percentage** |
| Pre-exam activities | | |
| lecture/exercise attendance | 40 | 40% |
| Positively evaluated seminar paper | 10 | 10% |
| Final exam | | |
| Practical exam | 20 | 20% |
| Written exam | 30 | 30% |
| TOTAL | 100 | 100 % |

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| **Certification date** | December 13 th 2018 |

1. The coefficient of student workload So is calculated as it follows:

   а) for the study programs not going through the licensing process: So = (total workload in semester for all of the subjects 900 hrs – total teaching workload L+E in semester for all of the subjects 870 hrs)/ total teaching workload L+E in semester for all of the subjects \_\_\_\_\_ hrs = \_\_\_\_. Consult form content and its explanation.

   b) for the study programs going through the licensing process, it is necessary to use form content and its explanation. [↑](#footnote-ref-1)