

SYLABUS

Subject:	Dental Radiology		
Study Programme:	<i>Dental Medicine</i>	Semester:	<i>6. semester</i>
Valuation:	<i>exam</i>	Obligation:	<i>obligatory</i>
Number of hours:	<i>2 h.lectures and 2 h. practical/week</i>		<i>56 hours</i>

Place: Department of Stomatology and Maxillofacial Surgery
 1st Department of Stomatology
 Department of Stomatology and Maxillofacial Surgery and Specialized
 Hospital for Head and Neck Diseases, Academy of Košice, n.o

Lectures: Wednesday 11:15-12:45
 Lecture room PE

<i>Week</i>	<i>Lectures</i>	<i>Practical lessons</i>
1.	Fundamentals of radiation physics, Xray equipments. Films and processing. Radiographic quality and artefacts. 11.02.2026 doc. MUDr. Peter Kizek, PhD., MPH	Fundamentals of radiation physics, Xray equipments. Films and processing. Radiographic quality and artefacts.
2.	X-ray department – ewuipments, films, darkroom, film, processing, X-ray protection. 18.02.2026 doc. MUDr. Peter Kizek, PhD., MPH	X-ray department – wquipments, films, darkroom, film, processing, X-ray protection.
3.	Intraoral radiographic technics: paralleling technique, bisected angle technique, bitewing technique. Digital radiography (radiovisiography) 25.02.2026 doc. MUDr. Peter Kizek, PhD., MPH	Intraoral radiographic technics: paralleling technique, bisected angle technique, bitewing technique. Digital radiography (radiovisiography)

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4.	<p>Tomography. Dental panoramic tomography. Localization technics. Implant s radiology. Prosthetic radiographic evaluation of the teeth and edentulous jaws.</p> <p>04.03.2026 doc. MUDr. Peter Kizek, PhD., MPH</p>	<p>Tomography. Dental panoramic tomography. Localization technics. Implant s radiology. Prosthetic radiographic evaluation of the teeth and edentulous jaws.</p>
5.	<p>TMJ radiography – normal anatomy and pathological changes. Arthrography. Cephalometric radiography.</p> <p>11.03.2026 doc. MUDr. Peter Kizek, PhD., MPH</p>	<p>TMJ radiography – normal anatomy and pathological changes. Arthrography. Cephalometric radiography.</p>
6.	<p>Extraoral radiographic technics maxillofacial projections – indications. Skull projections (straight PA, Waters, lateral, full axial). Mandibular lateral projections. Occlusal radiography. Sialography. Angiography, lymphography. Specialized imaging techniques: contrast media, xeroradiography, radioisotope imaging, CT, NMR, ultrasound.</p> <p>18.03.2026 doc. MUDr. Peter Kizek, PhD., MPH</p>	<p>Extraoral radiographic technics (maxillofacial projections) – indications. Skull projections (straight PA, Waters, lateral, full axial). Mandibular lateral projections. Occlusal radiography. Sialography. Angiography, lymphography. Specialized imaging techniques : contrast media, xeroradiography, radioisotope imaging, CT, NMR, ultrasound.</p>
7.	<p>Periodontal tissues and periodontal diseases radiology – normal anatomy and pathological changes (the amount of bone present, bone loss in furcation areas, horizontal and vertical bone resorption, calculus deposits, overextended restorations, widening of the periodontal ligament space, periodontitis, etc).</p> <p>25.03.2026 doc. MUDr. Peter KIZEK, PhD., MPH</p>	<p>Periodontal tissues and periodontal diseases radiology – normal anatomy and pathological changes (the amount of bone present, bone loss in furcation areas, horizontal and vertical bone resorption, calculus deposits, overextended restorations, widening of the periodontal ligament space, periodontitis, etc).</p>

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8.	<p>Radiographic interpretation and evaluation of deciduous, mixed and permanent dentition. Developmental stages of the teeth and possible their anomalies, e.g. in the shape, size, number, position.</p> <p>01.04.2026</p> <p>MUDr. Andrej Jenča, PhD., MBA</p>	<p>Radiographic interpretation and evaluation of deciduous, mixed and permanent dentition. Developmental stages of the teeth and possible their anomalies, e.g. in the shape, size, number, position.</p>
9.	<p>Teeth and periapical tissues radiology – normal anatomy and pathological changes crowns, roots and root canals, incisive and mental foramens, antrum, mandibular canal, caries, restorations, periapical lexions, etc.</p> <p>08.04.2026</p> <p>MUDr. Andrej Jenča, PhD., MBA</p>	<p>Teeth and periapical tissues radiology – normal anatomy and pathological changes crowns, roots and root canals, incisive and mental foramens, antrum, mandibular canal, caries, restorations, periapical lexions, etc.</p>
10.	<p>Radiology of the developmental anomalies of the facial bones and the teeth position. Principles of cephalometric radiography.</p> <p>15.04.2026</p> <p>MUDr. Andrej Jenča, PhD.,MBA</p>	<p>Radiology of the developmental anomalies of the facial bones and the teeth position. Principles of cephalometric radiography.</p>
11.	<p>Skull and mandibular radiology – normal anatomy and pathological changes (fractures, tumours, cysts, osteomyelitis, sinusitis, impacted teeth – localization, etc). Differential diagnosis of radiolucencies and radiopacities Salivary gland radiology sialolitis, sialography, occlusion film).</p> <p>22.04.2026</p> <p>MUDr. Andrej Jenča, PhD.,MBA</p>	<p>Skull and mandibular radiology – normal anatomy and pathological changes (fractures, tumours, cysts, osteomyelitis, sinusitis, impacted teeth – localization, etc). Differential diagnosis of radiolucencies and radiopacities Salivary gland radiology sialolitis, sialography, occlusion film).</p>

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12.	Radiation biology (effects on cells, tissues and organs). Sources of radiation exposure (natural and artificial). 29.04.2026 MUDr. Andrej Jenča, PhD., MBA	Radiation biology (effects on cells, tissues and organs). Sources of radiation exposure (natural and artificial). Methods of dose reduction and X-ray protection. Dental radiography – general patient considerations including control of infection.
13.	Methods of dose reduction and X-ray protection. Dental radiography – general patient considerations including control of infection. 06.05.2026 MUDr. Andrej Jenča, PhD., MBA	. Methods of dose reduction and X-ray protection. Dental radiography – general patient considerations including control of infection.
14.	Repetition from all lectures. TEST FOR LECTURES 13.05.2026 MUDr. Andrej Jenča, PhD., MBA	

Specific conditions for passing the subject:

Completion of 100% participation in practical exercises and lectures. Continuous review with a record of assessment during clinical teaching. Passing a test from lectures with a minimum rating of 60%.

Final test with a grade of at least 60%.

References:

- Whaites, E.: Essentials of dental radiography and radiology, 1998
 Ďurovič, E. a kol.: Atlas stomatologickej rádiodiagnostiky, 1989
 Olaf E. Langland et al.: Panoramic radiology, 1989 Čihák, R.
 Anatomie I. Praha: Grada, 2001.
 Čihák, R. Anatomie II. Praha: Avicenum, 2002.
 Mráz, P. a kol. Pitevné cvičenia. Martin: Vydavateľstvo Osveta, 1995.
 Fehrenbach, M.J., Herring, S.W., Illustrated anatomy of the head and neck, 2012
 Sineľnikov, R. D.
 Atlas anatomie človeka I., II., III. Praha: Avicenum, 1982.
 Rohen, J.W., Yokochi, Ch. Anatomia človeka. Fotografický atlas systematickej a topografickej anatomie, 1991.
 Schumacher, G.-H., Anatomia pre stomatológov I a II, 1992
 Petra Köpf – Maier Wolf, Heidegger's atlas of Human Anatomy 2,
 2004 Baker, E.W., Schünke, M., et al. Anatomy for Dental
 Medicine., 2015