1.	**Subject**	**ORTHOPEDICS**			
2.	**Code**	OM 512			
3.	**Study Program**	General medicine			
4.	**Organizing Institution (Unit, Institute, Chair, Department)**	UKIM-Faculty of Medicine Department of Orthopedics			
5.	**Educational degree (first or second cycle)**	Integrated cycle			
6.	**Study year /semester**	Fifth/IX	7.	Number of credits	2
8.	**Responsible teacher**	Prof. Dr. Anastasika Poposka, MD, PhD			
9.	**Preconditions:**	Necessary condition for enrolling in IX semester			
10.	**Teaching goals of the study program (competencies):** • The student should learn and master the skills concerning rational diagnosis and contemporary treatment embodied into the ethiopathogenesis of the diseases. • The student should be capable of clinical assessment and treatment of muscle-skeletal system diseases				

	• Contemporary clinical assessment should be founded on a rational diagnosis, especially on clinical examination, which can result in other examinations (laboratory, ultrasound, radiographic, computer etc). • Contemporary treatment will be done according to the newest achievements in medicine based on evidence.

<table>
<tr><td>11.</td><td colspan="4">Contents of the study program:

Theoretical course::

• Basics in orthopedic surgery
• Congenital disorders of the bone and joint system
• Inflammatory diseases of the bone and joint system
• Degenerative diseases of the bones and joints
• Normal and disturbed healing of the bone
• Tumors of the muscle-skeletal system
• Congenital and acquired diseases of the locomotor system (neck, spine, pelvis, thorax, shoulder, elbow, wrist, hand, knee, foot)
• Canalicular syndromes of the upper and lower extremities
• Orthopedic devices

Practical course:

• Practical applications and clinical skills in orthopedics
• Measuring of the size and length of the upper and lower extremities
• Clinical signs and tests for diagnosis knee injuries
• Clinical signs and tests for diagnosis osteoarthritis of the joints
• Practical course on phantoms
• Measurements and tests for diagnosis of spine deformities
• Podometric measurements, diagnosis and treatment of congenital foot deformities in children
• Clinical signs and tests for early diagnosis of congenital hip dysplasia in children
• Clinical approach for diagnosis of soft tissue and bone tumors
• Introduction into orthopedic surgical techniques</td></tr>
<tr><td>12.</td><td colspan="4">Methods of studying: Interactive lecturing, practical education/seminars</td></tr>
<tr><td>13.</td><td colspan="2">Total no. of hours:</td><td colspan="2">90 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of the available time</td><td colspan="2">45 hours lecturing, practical education/seminars 45 hours home studying</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Type of educational activity</td><td>15.1</td><td>Lectures-theoretical course</td><td>25 hours</td></tr>
<tr><td>15.2</td><td>Practicals (laboratory, clinical), seminars, team work</td><td>15 hours

5 hours</td></tr>
<tr><td>16.</td><td>Other types of</td><td>16.1</td><td>Project assignments</td><td>0 hours</td></tr>
</table>

	activities		16.2	Individual tasks	0 hours
			16.3	Home studying	45 hours
17.	**Assessment of knowledge:** 100 points				
	17.1	Tests	Continuous tests		min.-max. total... points 26- 45
		Final exam	Subject: Orthopedics exam		min.-max. Practical 26-45 points
			Oral exam		17-29 points
	17.2	Seminar work/project (presentation: written and oral)	works		min.-max. Seminar … points
	17.3	Active participation	Theoretical course Practical course		min.-max. points 5-10 points 12-16

* **presence during theoretic education:**

51% - 60% - 5 points;

61% - 70% - 6 points;

71% - 80% - 7 points;

81% - 90% - 8 points;
91% -100% -10 points.

** **practical education** (6 exercises in duration of 4 hours):

Presence: 2 points

Activity during exercises: 2 points.

*** **continued examination – 1 written test**

Theoretic elements in orthopedics – (26 – 45 points)

			**** **final examination:** practical + oral – (17 – 29 points) Practical part (examination of a patient, differential diagnosis and therapy, according to the catalogue of skills) + oral part of the examination where the integrative knowledge is verified. (For the marks: 6 = 17-19 points, 7 = 20-21 points, 8 = 2224 points, 9 = 25-26 points, 10 = 27-29 points).	
18.	Knowledge assessment criteria: (points/grade)		up to 59 points	5 (five) F
			60 to 68 points	6 (six) E
			69 to 76 points	7 (seven) D
			77 to 84 points	8 (eight) C
			85 to 92 points	9 (nine) B
			93 to 100 points	10 (ten) A
19.	Criteria for obtaining a signature and taking the final exam		**Conditional criteria for assessment of knowledge:** In order to get a signature, the student should obtain minimum points in both the theoretical and the practical courses and seminars and to win minimum of total points. In order to take the final exam, the student should pass the continuous tests or win minimum 60% of total points of the continuous tests; than the student may aproach to the final exam. The grade in the comprehensive exam is given according to the grading table, and on the basis of the sum of points obtained in all of the activities, continous tests and final exam.	

20.	Language of the course		Macedonian			
21.	Method for evaluation of the quality of education		Anonymous student's evaluation of the subject, teachers and collaborators involved in the educational activities			
22.	Literature					
	22.1	Mandatory textbooks				
			Author	Title	Publisher	Year
		1	A. Greenspan	Orthopedic Imaging -A Practical Approach	Government of RM	2012
		2	B.J.Zitelli, H.V. Davis	Atlas of Pediatric Physical Diagnosis (Chapter – Orthopedics 781-867)	Government of RM	2011
		3	R.E.Rakel	Textbook of Family Medicine: Orthopedics. 857915 p.	Government of RM	2011
	22.2	Additional literature				
			Author	Title	Publisher	Year
		1	Group of authors	Authorized lectures of the Department		2009
		2	I. Rushkovski	Orthopedics	Medicinska naklada Zagreb	1976

		3	P.B.Pynsent, J.C.T.Fairbank, E.J.Carr	Outcome Measures in Orthopedics and Orthopedic Trauma		
		4	Zafirovski Gj, Grkova V, Kamnar J, Nojkov J, Poposka A, Bozinovski Z, Samardziski M et al	Children's Orthopedics	Kultura Skopje	2003
		5	Z. Temelkovski	Shoulder Joint		
		6	A. Poposka	Ultrasound Diagnostics of the Child's Hip Congenital Dysplasia	Kosta Abrashevic Ohrid	1995