| 1. | Subject | HYGIENE | | | | |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------|-------------------|---|--|
| 2. | Code | OM 225 | | | | |
| 3. | Study Program | General medicine | | | | |
| 4. | Organizing Institution (Unit, | UKIM-Faculty of | of M | Iedicine Cathedra | | |
| | Institute, Chair, Department) | of Hygiene | | | | |
| 5. | Educational degree (first or second cycle) | Integrated cycle | | | | |
| 6. | Study year/semester | Second/Fourth | 7. | Number of credits | 5 | |
| 8. | Responsible teacher | Dragan Gjorgjev, MD, PhD | | | | |
| 9. | Preconditions: | None | | | | |
| 10. | Teaching goals of the study program (competencies): | | | | | |
| | Environmental health, health risk assessment from air pollution, drinking water and surface water pollution, environmental health aspects of school environment Food safety and principles of proper nutrition of the population | | | | | |

11. **Contents of the study program:**

Theoretical course:

-Hygiene (parts and objectives of the environmental health)

- Ecological concept of health, dose-response reaction, changes in the organism - Some aspects of eco-toxicology, risk assessment and eco-oncology

- Environmental health

- Factors of the environment – impact to health: physical, climate, radiation, noise - Hygiene of air

- Environmental health aspects of drinking water and water supply
- Environmental health aspects of surface and waste waters
- Environmental health aspects of the soil and waste, with particular emphases on medical waste
- Hygiene of settlements and housing
- Environmental health aspects of school environment
- Characteristics of the school children morbidity
- Environmental health aspects health care institutions
- Hygiene of food safety and nutrition of population The basics of detotherapy

Practical course:

Environmental health: air pollution, methods of monitoring of air pollution and health statistics methods of monitoring of negative health effects; drinking water and monitoring of drinking water safety; ionizing radiation and health risk assessment; noise in environment, monitoring methodology and health risk assessment. - Hygiene in state of emergency: rapid detection and elimination of the risks of

| | different environment media | | | | |
|-----|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--|--|--|
| | - School hygiene: implementation and interpretation of questionnaire for hygiene in school environment | | | | |
| | - Hygiene of food safety and nutritio | n: methods of assessment of food safety, ments of nutritional status and dietotherapy | | | |
| 12. | Methods of studying: Lecturing, exercises/seminars | | | | |
| 13. | Total no. of hours: | 150 hours | | | |
| 14. | Distribution of the available time | 75 hours of lecturing, exercises and seminars | | | |
| | | 75 hours of home learning | | | |

| 15. | Type of educational activity | 1 5 1 | Lectures-theoretical course | 30 hours |
|-----|------------------------------------|-------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------|
| | | 1 5 2 | Practicals (laboratory, clinical), seminars, team work | 45 hours |
| 16. | Other types of activities | 1 6 1 | Project assignments | hours |
| | | 1 6 2 | Individual tasks | hours |
| | | 1 6 3 | Home studying | 75 hours |
| 17. | Assessment of knowledge: points | | | |
| | 17.1 Tests | | 3 Continuous tests Environmental health Food Safety and Nutri | minmax. total points 21 35 tion 15 25 |

| | | Final exam | Subject: Oral integra | tive exam |
|-----|---------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------|------------------------------|
| | | | exam | minmax. Oral 15 25 points |
| | 17.2 | Seminar work/project (presentation: written and oral) | Seminar works | minmax. points |
| | 17.3 | Active participatio | n Theoretical course | minmax. points 1-5 |
| | | | Practical course | points 9-15 |
| 18. | 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: The student must participate at the theoretical and practical courses in order to score minimum points to obtain signature. The minimum requirements for that are as follows: Theoretical course: 100% presence - 5 points 80% presence - 4 points 60% presence - 4 points 60% presence - 2 points 50% presence - 2 points 40% presence - 1 points Practical course : Presence at 11 exercise - 15 points Presence at 10 exercise - 13 points Presence at 9 exercise - 11 points Presence at 8 exercises or less – the student will be reevaluated for some of the exercises he/she missed. If positively reevaluated - the student will gain 9 points. | | | |
|-----|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|
| | | For the student to approach to the final exam, he/she should score min. 60% from continuous knowledge assessment. | | | |
| | | The final mark is formed as a sum of scores of all activities (presence at theoretical and practical course, continuous assessments 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 | 1 | | | |
| | 22.1 Mandatory textbooks | | | | |

| | | Author | Title | Publisher | Year |
|-----|-------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------|------|
| | 1 | Wallace RB. | Public Health and Preventive Medicine | New York: McGraw- Hill | 2008 |
| | 2 | Gjorgjev D, Kochubovs ki M, Kendrovski V, Ristovska G. | Hygiene and environmental health | Skopje: Faculty of Medicine | 2008 |
| | 3 | Gjorgjev D, Kendrovski V, Ristovska G, Dimitrovska Z. | Hygiene of food safety and nutrition | Skopje: Faculty of Medicine | 2008 |
| | 4 | Jackel JF. | Jekel's Epidemiology, Biostatistics, Preventive Medicine, Public Health, 3rd edition | Skopje: Tabernaku l | 2010 |
| 2.2 | Addit | ional literature | | 1 | |
| 2.2 | | Author | Title | Publisher | Year |

| | 1 | Tulchinski T. | The new public health | Skopje: Studentski zbor; | 2003 |
|--|---|---------------|-----------------------|-----------------------------|------|
|--|---|---------------|-----------------------|-----------------------------|------|

| 2 Gjorgjev D, Kendrovski V, Tozija F. | Enviromental Health Risk Assessment Studies. In: Zaletel- Kragelj L, Bizikov J, editors. Methods and Tools in Public Health. A handbook for teachers, researchers, health professionals and decisions makers. | Lage:Hans Jacobs Publishing Company http://www.s nz.hr/phsee/publicati ons.htm | 2010 |
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