

|     |                                              |                                                             |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
|-----|----------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|
| 17. | Other forms of activities                    |                                                             | 17.1.                                                                                                                                                                                                                             | Project work: classes                                                                                                                                                                       |                      | 15            |
|     |                                              |                                                             | 17.2.                                                                                                                                                                                                                             | Individual work: classes                                                                                                                                                                    |                      |               |
|     |                                              |                                                             | 17.3.                                                                                                                                                                                                                             | Homework - tasks                                                                                                                                                                            |                      | 110           |
| 18  | Signature requirements                       |                                                             | To obtain a signature, attendance to at least 60% of the theoretical classes and demonstrated activity in the classes, attendance to at least 80% of the exercises, and a prepared and presented project assignment are required. |                                                                                                                                                                                             |                      |               |
| 19  | Method of the evaluation                     |                                                             |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
|     | 19.1.                                        | Tests: points                                               |                                                                                                                                                                                                                                   |                                                                                                                                                                                             | 30                   |               |
|     | 19.2.                                        | Seminar work/project, written and oral presentation: points |                                                                                                                                                                                                                                   |                                                                                                                                                                                             | 10                   |               |
|     | 19.3.                                        | Final exam: points                                          |                                                                                                                                                                                                                                   |                                                                                                                                                                                             | 60                   |               |
| 20  | Evaluation criteria (points/grade)           |                                                             |                                                                                                                                                                                                                                   | up to 59 points                                                                                                                                                                             |                      | 5 (five) (F)  |
|     |                                              |                                                             |                                                                                                                                                                                                                                   | from 60 to 68 points                                                                                                                                                                        |                      | 6 (six) (E)   |
|     |                                              |                                                             |                                                                                                                                                                                                                                   | from 69 to 76 points                                                                                                                                                                        |                      | 7 (seven) (D) |
|     |                                              |                                                             |                                                                                                                                                                                                                                   | from 77 to 84 points                                                                                                                                                                        |                      | 8 (eight) (C) |
|     |                                              |                                                             |                                                                                                                                                                                                                                   | from 85 to 92 points                                                                                                                                                                        |                      | 9 (nine) (B)  |
|     |                                              |                                                             |                                                                                                                                                                                                                                   | from 93 to 100 points                                                                                                                                                                       |                      | 10 (ten) (A)  |
| 21. | Method of monitoring the quality of teaching |                                                             |                                                                                                                                                                                                                                   | Self-evaluation by students, assessment of the achieved success of students at the colloquia conducted during the semester, as well as the pass rate of students who have passed the course |                      |               |
| 22. | Literature                                   |                                                             |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
|     | 22.1.                                        | Compulsory literature                                       |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
|     |                                              | Serial number                                               | Author                                                                                                                                                                                                                            | Title                                                                                                                                                                                       | Publisher            | Year          |
|     |                                              | 1.                                                          | E. Petkova - Ivanova, G. Kovachevska, B. Kapushevska, D. Veleski, J. Bundevska                                                                                                                                                    | Instruments and Appliances in Dental Laboratory                                                                                                                                             | Faculty of Dentistry | 2005          |
|     |                                              | 2.                                                          | E. Bajraktarova Valjakova                                                                                                                                                                                                         | Presentation slides                                                                                                                                                                         | Faculty of Dentistry |               |
|     |                                              | 3.                                                          |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
|     | 22.2.                                        | For further reading                                         |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
|     |                                              | Serial number                                               | Author                                                                                                                                                                                                                            | Title                                                                                                                                                                                       | Publisher            | Year          |
|     |                                              | 1.                                                          |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
|     |                                              | 2.                                                          |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |
| 3.  |                                              |                                                             |                                                                                                                                                                                                                                   |                                                                                                                                                                                             |                      |               |

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|--------------------|--------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Annex no. 3</b> |                                            | <b>First cycle study program</b>                                                    |
| 1.                 | Title of courses                           | Ergonomics                                                                          |
| 2.                 | Code                                       | PDTMER1                                                                             |
| 3.                 | Study Program                              | Professional Dental Technicians                                                     |
| 4.                 | Organizer of the study program (unit, i.e. | UKIM - Faculty of Dentistry – Skopje, Department of Dental Diseases and Endodontics |

|    |                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |          |   |
|----|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|----------|---|
|    | institute,<br>department,<br>division)                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |          |   |
| 5. | Degree (first,<br>second, third<br>cycle)                                                                      | First Cycle                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |          |   |
| 6. | Academic<br>year/semester                                                                                      | Year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1 | semester | 1 |
| 7  | Course load<br>expressed in<br>ECTS credits                                                                    | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |          |   |
| 8. | Teacher (in case<br>of multiple<br>teachers, a<br>responsible<br>teacher is<br>appointed)                      | Prof. Dr. Vasilka Rendzova<br>and teachers from the Department of Dental Diseases and Endodontics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |          |   |
| 9. | Course language                                                                                                | English                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |          |   |
| 10 | Necessary<br>prerequisites for<br>listening to and<br>passing the<br>course                                    | Attended all compulsory courses of First year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |          |   |
| 11 | Course<br>objectives<br>(competencies)<br>and learning<br>outcomes:                                            | The student will understand the ergonomic principles in dentistry for the proper design of the dental office and the work environment, will know the design of dental instruments, as well as the ergonomic aspects of the equipment in the workspace that will enable more efficient and quality performance of work tasks. The student will acquire knowledge about the basic principles of 4-hand dentistry, broader knowledge about the working position of the therapist and the patient, knowledge about the occurrence of risk factors for the development of occupational diseases, as well as their prevention and therapy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |          |   |
| 12 | Detailed content<br>of the course by<br>chapters and<br>units with<br>learning<br>outcomes for<br>each chapter | <p>Theoretical teaching</p> <p>Chapter 1-</p> <ul style="list-style-type: none"> <li>- Introduction to ergonomics and ergonomic principles in dentistry, definition of ergonomic concepts ..... 2 classes</li> <li>- Ergonomic design of the work space in dentistry<br/>..... 2 classes</li> <li>- Ergonomic design of instruments in dentistry ... 2 classes</li> <li>- Positions and movements at work of the dentist and his team and application of ergonomics at work ..... 2 classes</li> <li>- Visualization of the working field and the dentist's position when working with devices for increasing the working field ..... 2 classes</li> <li>- Protection of the dentist, the team and the patient and infection control<br/>..... 2 classes</li> <li>- Sterilization and disinfection in dentistry ..... 3 classes</li> </ul> <p><i>Outcomes of the 1st chapter: The student will be educated on the application of ergonomic principles in planning and organizing the work space, as well as the appropriate use of ergonomically designed instruments. The student will focus on the application of correct positions and movements at work, as well as methods of occupational protection, aseptic work, and infection control.</i></p> <p>Chapter 2</p> <ul style="list-style-type: none"> <li>- Ergonomic risk - factors in dentistry - causes of occupational diseases<br/>..... 2 classes</li> </ul> |   |          |   |

|    |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                |               |
|----|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
|    |                                                                          | <ul style="list-style-type: none"><li>- Musculoskeletal diseases and factors for their occurrence ..... 2 classes</li><li>- Musculoskeletal diseases of certain parts of the body caused by non-ergonomic position and work of the dentist..... 2 classes</li><li>- Prevention of musculoskeletal diseases resulting from exposure to risk factors in dentistry..... 2 classes</li><li>- Eye injuries and diseases related to the dental profession, venous circulation problems in the dental team and their prevention ..... 2 classes</li><li>- The Basics of 4-hand dentistry ..... 2 classes</li><li>- Modern way and modern ergonomic tools for dental work and realization of diagnosis and therapy process, visualization of the work field and computerization of the dental office ..... 3 classes</li></ul> <p><i>Results of Chapter 2.....the student will focus on education about risk factors in dental practice that are causes of occupational diseases. The student will acquire knowledge about prevention of musculoskeletal diseases, work within 4-hand dentistry as well as work with modern ergonomic tools in dental practice.</i></p> <p><b>Total: ..... 30 classes</b></p> |                                                                |               |
| 13 | Interrelationship of courses                                             | Relation to anatomy, physiology, psychology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |               |
| 14 | Detailed description of the teaching and working methods for the subject | Interactive teaching on ergonomic principles and their application in dentistry, guidelines and recommendations for ensuring optimal working conditions that will enable more efficient and faster performance of work tasks.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                |               |
| 15 | Total available classes fund                                             | 120 classes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                |               |
| 16 | Forms of teaching activities                                             | 16.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Lectures - theoretical teaching, classes                       | 30            |
|    |                                                                          | 16.2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Exercises (laboratory, classroom), seminars, teamwork: classes | /             |
|    |                                                                          | 16.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Practice: classes                                              |               |
| 17 | Other forms of activities                                                | 17.1.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Project work: classes                                          |               |
|    |                                                                          | 17.2.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Individual work: classes                                       | 30            |
|    |                                                                          | 17.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Homework - tasks                                               | 60            |
| 18 | Signature requirements                                                   | Attendance to 80% of the exercises and attendance to 60% of the lectures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                |               |
| 19 | Method of the evaluation                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                |               |
|    | 19.1.                                                                    | Tests: Points (2 tests X 20 points)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 40 points                                                      |               |
|    | 19.2.                                                                    | Seminar work/project, written and oral presentation: points                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 10 points                                                      |               |
|    | 19.3.                                                                    | Final exam: points                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 50 points                                                      |               |
| 20 | Evaluation criteria (points/grade)                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | up to 59 points                                                | 5 (five) (F)  |
|    |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | from 60 to 68 points                                           | 6 (six) (E)   |
|    |                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | from 69 to 76 points                                           | 7 (seven) (D) |

|     |                                              |                                                                                                                                                                                                           |                  |                                      |                                                    |      |
|-----|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|--------------------------------------|----------------------------------------------------|------|
|     |                                              | from 77 to 84 points                                                                                                                                                                                      | 8 (eight) (C)    |                                      |                                                    |      |
|     |                                              | from 85 to 92 points                                                                                                                                                                                      | 9 (nine) (B)     |                                      |                                                    |      |
|     |                                              | from 93 to 100 points                                                                                                                                                                                     | 10 (ten) (A)     |                                      |                                                    |      |
| 21. | Method of monitoring the quality of teaching | Self-evaluation by students, control of assistants in carrying out practical teaching and assessment of the achieved success of students, as well as the pass rate of students who have passed the course |                  |                                      |                                                    |      |
| 22. | Literature                                   |                                                                                                                                                                                                           |                  |                                      |                                                    |      |
|     | 22.1.                                        | Compulsory literature                                                                                                                                                                                     |                  |                                      |                                                    |      |
|     |                                              | Serial number                                                                                                                                                                                             | Author           | Title                                | Publisher                                          | Year |
|     |                                              | 1.                                                                                                                                                                                                        | Sonja Apostolska | Ergonomics                           | Sonja Apostolska                                   | 2014 |
|     |                                              | 2.                                                                                                                                                                                                        |                  |                                      |                                                    |      |
|     |                                              | 3.                                                                                                                                                                                                        |                  |                                      |                                                    |      |
|     | 22.2.                                        | For further reading                                                                                                                                                                                       |                  |                                      |                                                    |      |
|     |                                              | Serial number                                                                                                                                                                                             | Author           | Title                                | Publisher                                          | Year |
|     |                                              | 1.                                                                                                                                                                                                        | Denise C. Murphy | Ergonomics and the Dental Care Worke | Washington, DC: American Public Health Association | 1999 |
|     |                                              | 2.                                                                                                                                                                                                        |                  |                                      |                                                    |      |
|     |                                              | 3.                                                                                                                                                                                                        |                  |                                      |                                                    |      |

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| Annex no. 3 |                                                                             | First cycle study program                                                                               |   |          |   |
|-------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---|----------|---|
| 1.          | Title of courses                                                            | Nutrition and Oral Health                                                                               |   |          |   |
| 2.          | Code                                                                        | PDTENH1                                                                                                 |   |          |   |
| 3.          | Study Program                                                               | Professional Dental Technicians                                                                         |   |          |   |
| 4.          | Organizer of the study program (unit, i.e. institute, department, division) | UKIM - Faculty of Dentistry – Skopje, Department of Children and preventive dentistry                   |   |          |   |
| 5.          | Degree (first, second, third cycle)                                         | I cycle                                                                                                 |   |          |   |
| 6.          | Academic year/semester                                                      | Year                                                                                                    | 1 | semester | 1 |
| 7.          | Course load expressed in ECTS credits                                       | 3                                                                                                       |   |          |   |
| 8.          | Teacher (in case of multiple teachers, a responsible teacher is appointed)  | Prof. Dr. Ana Sotirovska Ivkovska and teachers from the Department of Children and preventive dentistry |   |          |   |
| 9.          | Course language                                                             | English                                                                                                 |   |          |   |
| 10.         | Necessary prerequisites for listening to and passing the course             | None                                                                                                    |   |          |   |
| 11.         | Course objectives (competencies) and learning outcomes:                     | The student gains knowledge about the impact of nutrition on developing teeth and functioning teeth.    |   |          |   |