

## Course Outline: “3105 - Metabolism I”

### 1. General information

|  |   |                             |                 |
|--|---|-----------------------------|-----------------|
| <b>FACULTY/SCHOOL</b>                            | School of Physical Education, Sport Science & Dietetics   |                             |                 |
| <b>DEPARTMENT</b>                                | Department of Nutrition and Dietetics   |                             |                 |
| <b>LEVEL OF STUDY</b>                            | Undergraduate   |                             |                 |
| <b>COURSE UNIT CODE</b>                          | 3105  | <b>SEMESTER</b>             | 3 <sup>rd</sup> |
| <b>COURSE TITLE</b>                              | Metabolism I  |                             |                 |
| <b>INDEPENDENT TEACHING ACTIVITIES</b>           |   | <b>WEEKLY TEACHNG HOURS</b> | <b>CREDITS</b>  |
| Theory   |   | 2                           |                 |
| Tutorials  |   | 1                           |                 |
|  |   | <b>3</b>                    | <b>5</b>        |
| <b>COURSE TYPE</b>                               | Background Knowledge<br>Scientific Expertise  |                             |                 |
| <b>PREREQUISITE COURSES</b>                      | No  |                             |                 |
| <b>LANGUAGE OF INSTRUCTION</b>                   | GREEK   |                             |                 |
| <b>LANGUAGE OF EXAMINATION/ASSESSMENT</b>        | GREEK   |                             |                 |
| <b>THE COURSE IS OFFERED TO ERASMUS STUDENTS</b> | Yes   |                             |                 |
| <b>COURSE WEBSITE (URL)</b>                      | <a href="https://eclass.uth.gr/courses/DND_U_233/">https://eclass.uth.gr/courses/DND_U_233/</a> |                             |                 |

### 2. LEARNING OUTCOMES

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| <b>Learning Outcomes</b>   |
| <p>The course describes how the body metabolizes the macronutrients of food.</p> <p>Upon successful completion of the course, the student will have the knowledge to understand:</p> <ul style="list-style-type: none"> <li>• the metabolism of macronutrients at the molecular, cellular and body level, ie biochemical processes that lead to the conversion, storage of macronutrients or their breakdown for energy production</li> <li>• the connection of nutrition and metabolism of macronutrients with the functioning of body</li> <li>• the correlation of macronutrient metabolism with the development of diseases</li> </ul> |
| <b>General Competences</b>   |
| <ul style="list-style-type: none"> <li>• Acquisition of the appropriate theoretical cognitive background so that further education is possible</li> <li>• Search for, analysis and synthesis of data and information</li> <li>• Promotion of free, creative and deductive thinking</li> <li>• Working in an interdisciplinary environment</li> <li>• Individual/Independent work</li> </ul>  |

### 3. COURSE CONTENT

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| <ul style="list-style-type: none"> <li>• Introduction to macronutrient metabolism</li> <li>• Energy systems</li> <li>• Carbohydrate metabolism</li> <li>• Fat metabolism</li> <li>• Protein metabolism</li> <li>• Macronutrient metabolism in the postprandial stage</li> <li>• Macronutrient metabolism in the post-absorption stage</li> <li>• Macronutrient metabolism in the fasting stage and in the starvation stage</li> </ul> |
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- Adjustments of metabolism in special situations
- Energy balance and weight regulation

#### 4. TEACHING METHODS - ASSESSMENT

|  |   |                          |
|--|---|--------------------------|
| <b>MODES OF DELIVERY</b>                                 | Face-to-face  |                          |
| <b>USE OF INFORMATION AND COMMUNICATION TECHNOLOGY</b>   | -Use of PowerPoint presentation program during the educational process<br>-Support of the Learning Process through the e-class platform<br>-Communication with the students via email |                          |
| <b>COURSE DESIGN</b>                                     | <b>Activity/Method</b>  | <b>Semester workload</b> |
|  | Lectures  | 40                       |
|  | Study and analysis of bibliography  | 20                       |
|  | Self-directed Study   | 65                       |
|  | <b>Total</b>  | <b>125</b>               |
| <b>STUDENT PERFORMANCE EVALUATION/ASSESSMENT METHODS</b> | Written final exam (100%) which includes:<br>- Multiple choice questions<br>- Short-answer questions  |                          |

#### 5. SUGGESTED BIBLIOGRAPHY

- Διατροφή και Μεταβολισμός. Σκενδέρη Κ., Συντώσης Λ. Broken Hill Publishers Ltd, 2016
- Διατροφή και Μεταβολισμός. Gropper S., Smith J., Groff J. Broken Hill Publishers Ltd, 2008
- Βιοχημεία στην ιατρική 2 Μεταβολικά Διαγράμματα. Διονυσίου-Αστερίου Αλεξάνδρα, Τρούγκος Κωνσταντίνος. Broken Hill Publishers Ltd, 2003