Code: 10-1-02

NUTRITIONAL BIOCHEMISTRY

ECTS: 10

Course coordinator: Prof. Dr. Nataša Poklar Ulrih

Lecturers: Prof. Dr. Nataša Poklar Ulrih, Prof. Dr. Veronika Abram, Prof. Dr. Tadej Battelino, and invited lecturers

No. of hours: 250  Lectures: 20  Seminar: 30
Lab. work: /  Other: 200

2. Entry requirements:
General conditions for enrolment in doctoral studies.

3. Objectives of the course and intended learning outcomes:
(competences)
Educational outcomes: students will deepen their knowledge of the main metabolic processes of primary and secondary metabolisms, their regulation, function of selected tissues, organs and their metabolic pathways in different diseases.
Results: All the above should enable students to understand and connect complex processes of metabolism with proper diet.

4. Syllabus outline:
Metabolic (catabolic-anabolic) interrelationships in well-fed and starved states, under stress, trauma, body exercise; growing up; under cold conditions.
Digestion and absorption: digestive tract, digestion and absorption of proteins, digestion and absorption of carbohydrates, digestion and absorption of lipids; absorption physiology; biliary systems, urobilinogen cycle, enterohepatic circulation of bile acids, diet and cholesterol regulation of energy metabolism: the brain and energy metabolism; hormonic regulation of metabolism, alcohol and drugs, obesity.
Nutrigenomic and nutriomics, diet and health: effect of diet and drugs on atherosclerosis, diabetes, cardiovascular disease, diet and cancer.

5. Literature (in the case of books and monographs, study sources are only selected chapters from them):
6. Teaching methods:
Lectures. Seminars – team work and discussions.

7. Assessment methods:
Seminars. Written examination.

8. References:

Poklar Ulrih Nataša

Abram Veronika

Batellino Tadej