Higher education institution: Slovak Medical University in Bratislava

Faculty: Faculty of Medicine

Course code: GM 011A Course title: Medical Biochemistry (1)

# Type, extent and method of educational activity:

Number of hours per semester: Lectures: 28/2 hours per week Practices:28/2 hours per week

Number of credits: 5 credits

Recommended semester/trimester study: 2. Th

**Level of higher education study:** 1. + 2. Level

# Prerequisite courses:-

# Requirements for completion of the course:

Method of assessment and completion of the course: active attending of lectures and practical exercises. Final test: minimum thresholdof success: 60%. Evaluation: Evaluation: A:95% -100%, B: 88% -94% C: 77% -87%, D: 66% -76%, E:60% -65%.

Student workloads 69 hours.

#### Learning outcomes:

I. Biochemistry of Main Body Components

II. Metabolism

# Brief content of the course (syllabus):

Bochemistry of Main Body Components. Proteins. Saccharides. Lipids/Cholesterol. Enzymes.

Nucleotides/DNA/RNA. Hemoglobin. Vitamines, Trace Elements. Complex Lipids. Complex Saccharides.

Neurotransmitters. Metabolism. Catabolism of Lipids. Anabolism and Catabolism of Aminoacids. Fuels. Krebs Cycle. Bioenergetics. Water and Electrolytes Balance.

#### **Recommended literature:**

J. Baynes, M. Dominiczak: Medical Biochemisty, Mosby, London, 1999

P. Campbell, A. Smith: Biochemistry Illustrated, Churchill a Livingsstone, London 2001

Devlin: Textbook of Biochemistry with Clinical Correlations, Willey-Liss, New York, 1997

G. Kováč, A. Porubenová: Medicínska biochémia: základné princípy a ich klinické aplikácie: poznámky k prednáškam, SZU Bratislava, 2012, 1-258

D. Pritchard, B: Korf: Základy lékařské genetiky, Galén, 2007

# Language requirements:-

#### Notes:

The course runs in English language.

# Course assessment

Assessed students in total: 0

Α	В	С	D	E	FX
0%	0%	0%	0%	0%	0%

#### Lecturers:

prof. MUDr. RNDr. Gustáv Kováč, CSc., MBA,

Ing. Lucia Hudecova

Date of last modification:12. 6. 2016

**Supervised by:**prof. MUDr. Peter Šimko, CSc.

Higher education institution: Slovak Medical University in Bratislava

**Faculty:** Faculty of Medicine

Course code: GM 011B Course title: Medical Biochemistry (2)

# Type, extent and method of educational activity:

Number of hours per semester: Lectures: 28/3 hours per week Practices: 28/2 hours per week

Number of credits: 6 credits

Recommended semester/trimester study: 3. th

Level of higher education study: 1. + 2. level

Prerequisite courses: GM 011A Medical Biochemistry (1)

# Requirements for completion of the course:

Method of assessment and completion of the course: active attending of lectures and practical exercises, test. Final test: minimum thresholdof success: 60%. Evaluation: Evaluation: A:95% -100%, B: 88% -94% C: 77% -87%, D: 66% -76%, E:60% -65%. Exam. A, B, C, D, E, FX

Student workloadis 94 hours

# Learning outcomes:

III. Biochemistry of Organs and Functions

IV. Biochemistry of Processes

#### Brief content of the course (syllabus):

Bochemistry of Main Organs of Human body. Extracelular Matrix. Membranes. Gastrointestinal Tract. Bood. Liver. Endocrinne System. Bone. Muscle. Nervous System. Lungs. Biochemistry of Main Processes in Human Body. Recombinant DNA. Gene Expression. Hemostasis and Thrombosis. Proteosythesis. Acid Base Balance. Immune Response. Bio Signalling. Antioxidant Defense. Aging. Cancer.

### **Recommended literature:**

J. Baynes, M. Dominiczak: Medical Biochemisty, Mosby, London, 1999

P. Campbell, A. Smith: Biochemistry Illustrated, Churchill a Livingsstone, London 2001

Devlin: Textbook of Biochemistry with Clinical Correlations, Willey-Liss, New York, 1997

G. Kováč, A. Porubenová: Medicínska biochémia: základné princípy a ich klinické aplikácie: poznámky k prednáškam, SZU Bratislava, 2012, 1-258

D. Pritchard, B: Korf: Základy lékařské genetiky, Galén, 2007

# Language requirements:-

### Notes:

The course runs in Slovak and English language.

### Course assessment

Assessed students in total: 0

Α	В	С	D	E	FX
0%	0%	0%	0%	0%	0%

### Lecturers:

prof. MUDr. RNDr. Gustáv Kováč, CSc., MBA,

Ing. Lucia Hudecova

Date of last modification: 12. 6. 2016
Supervised by: prof. MUDr. Peter Šimko, CSc.