

**Study plan for the academic year 2012/13 for the follow-up master study programme BMCT, field of study Biomedical Engineering in English (full-time study)**

**Specialization: Medical Instrumentation**

**Valid for students who entered the study from the academic year 2012/13**

**Guaranteeing department:** Department of Biomedical Technology - KBT 17110, Head of the department: prof. Ing. Peter Kneppo, DrSc.

**Guarantor of the field of study:** doc. Ing. Karel Roubík, Ph.D. (Deputy guarantor: Ing. Martin Rožánek, Ph.D.)

| Code                                    | Course                                                                             | Obligation | Load    | Credits | Conclusion | Lecturer                                                         | Guaranteeing department |
|-----------------------------------------|------------------------------------------------------------------------------------|------------|---------|---------|------------|------------------------------------------------------------------|-------------------------|
| <b>1st year 1st semester (14 weeks)</b> |                                                                                    |            |         |         |            |                                                                  |                         |
| 17AMBAF1                                | Anatomy and Physiology I                                                           | P          | 2+2     | 5       | z, zk      | <u>prof. MUDr. Ivan Dylevský, DrSc.</u>                          | FBMI KLHO               |
| 17AMBNMP                                | Project Proposal and Management                                                    | P          | 1+1     | 2       | kl. z      | <u>doc. Ing. Jiří Hozman, Ph.D. a kol.</u>                       | FBMI KBT                |
| 17AMBBCH                                | Biochemistry                                                                       | P          | 1+1     | 2       | kl. z      | <u>Ing. Martina Vermachová</u>                                   | FBMI KBT                |
| 17AMBZS                                 | Imaging Systems                                                                    | P          | 2+2     | 4       | z, zk      | <u>doc. Ing. Jiří Hozman, Ph.D., Ing. Martin Rožánek, Ph.D.</u>  | FBMI KBT                |
| 17AMBZMB                                | Fundamentals of Molecular Biology                                                  | P          | 2+2     | 5       | z, zk      | <u>Mgr. Veronika Vymětalová, RNDr. Taťána Jarošíková, CSc.</u>   | FBMI KPO                |
| 17AMBLPZ                                | Medical Devices&Equipment                                                          | P          | 2+2     | 5       | z, zk      | <u>doc. Ing. Karel Roubík, Ph.D., Ing. Richard Grünes, Ph.D.</u> | FBMI KBT                |
| 17AMBBB                                 | Biomechanics and Biomaterials                                                      | P          | 2+2     | 4       | z, zk      | <u>Ing. Patrik Kutílek</u>                                       | FBMI KPO                |
| 17AMB???                                | Compulsory optional course<br>see the list below                                   | PV         |         | 3       | z          | see the list below                                               | FBMI                    |
| <b>1st year 2nd semester (14 weeks)</b> |                                                                                    |            |         |         |            |                                                                  |                         |
| 17AMBAF2                                | Anatomy and Physiology II                                                          | P          | 2+2     | 5       | z, zk      | <u>prof. MUDr. Ivan Dylevský, DrSc.</u>                          | FBMI KLHO               |
| 17AMBEBI                                | Ethics in Biomedical Engineering                                                   | P          | 2+0     | 2       | kl. z      | <u>Ing. Václav Navrátil</u>                                      | FBMI KLHO               |
| 17AMBPIZ                                | Work with Information Sources and Research Methodology                             | P          | 2+0     | 2       | kl. z      | <u>doc. Ing. Karel Roubík, Ph.D.</u>                             | FBMI KBT                |
| 17AMBBLs                                | Biological Signals                                                                 | P          | 2+2     | 4       | z, zk      | <u>doc. Ing. Vladimír Krajča, CSc.</u>                           | FBMI KBT                |
| 17AMBBTR                                | Biotransport                                                                       | P          | 2+2     | 4       | z, zk      | <u>prof. MUDr. Pavel Kučera, Ph.D.</u>                           | FBMI KPO                |
| 17AMBZPD                                | Fundamentals of Pathophysiology&Diagnostic Methods                                 | P          | 1+1     | 5       | z, zk      | <u>prof. MUDr. Leoš Navrátil, CSc.</u>                           | FBMI KLHO               |
| 17AMBOP                                 | Practical Training Placement (Hospital Homolka - Individual Agreement is Possible) | P          | 2 týdny | 5       | z          | <u>doc. Ing. Jiří Hozman, Ph.D.</u>                              | FBMI KBT                |
| 17AMB???                                | Compulsory optional course<br>see the list below                                   | PV         |         | 3       | z          | see the list below                                               | FBMI                    |

| 2nd year 3rd semester (14 weeks) |                                                            |            |      |         |            |                                                                                       |                         |
|----------------------------------|------------------------------------------------------------|------------|------|---------|------------|---------------------------------------------------------------------------------------|-------------------------|
| Code                             | Course                                                     | Obligation | Load | Credits | Conclusion | Lecturer                                                                              | Guaranteeing department |
| 17AMBAEM                         | Electromagnetic Field in Medicine                          | P          | 2+2  | 5       | z, zk      | <u>prof. Ing. Jan Vrba, CSc., Ing. Jan Vrba</u>                                       | FBMI KBT                |
| 17AMBLPZ                         | Medical Devices&Equipment II                               | P          | 2+2  | 5       | z, zk      | <u>doc. Ing. Karel Roubík, Ph.D., Ing. Richard Grünes, Ph.D.</u>                      | FBMI KBT                |
| 17AMBPNK                         | Design&Construction of Medical Devices/Practical Exercises | P          | 0+2  | 2       | kl. z      | <u>Ing. Roman Matějka</u>                                                             | FBMI KBT                |
| 17AMBLT                          | Clinical Laboratory Instrumentation                        | P          | 1+1  | 4       | z, zk      | <u>Ing. Martina Vermachová, Mgr. Iveta Horáčková, Ing. Zuzana Fílová</u>              | FBMI KBT                |
| 17AMBSPT                         | Equipment for Anaesthesiology and Resuscitation            | P          | 1+1  | 4       | z, zk      | <u>doc. Ing. Karel Roubík, Ph.D. a kol., Ing. Jakub Ráfl</u>                          | FBMI KBT                |
| 17AMBALB                         | Laser Applications in Biomedicine                          | P          | 2+0  | 2       | kl. z      | <u>prof. Ing. Helena Jelínková, DrSc.</u>                                             | FBMI KPO                |
| 17AMBSDP                         | Diploma Thesis Proposal                                    | P          | 0+4  | 5       | z          | <u>doc. Ing. Vladimír Krajča, CSc. + vedoucí DP</u>                                   | FBMI KBT                |
| 17AMB???                         | Compulsory optional course<br>see the list below           | PV         |      | 3       | z          | see the list below                                                                    | FBMI                    |
| 2nd year 4th semester (14 weeks) |                                                            |            |      |         |            |                                                                                       |                         |
| 17AMBDP                          | Diploma Thesis                                             | P          | 0+30 | 30      | z          | <u>doc. Ing. Vladimír Krajča, CSc. + individual supervisors of the diploma thesis</u> | FBMI KBT                |

**List of offered compulsory optional courses in 1st semester**

| Code     | Course                                | Obligation | Load | Credits | Conclusion | Lecturer                  | Guaranteeing department |
|----------|---------------------------------------|------------|------|---------|------------|---------------------------|-------------------------|
| 17AMBCC1 | Czech for Foreigners I                | PV         | 0+4  | 3       | z          | Hana Rogalewiczová        | FBMI KBT                |
| 17AMBJAA | English Language A                    | PV         | 0+4  | 3       | z          | <u>Mgr. Eva Motyčková</u> | FBMI KBT                |
| 17AMPVA1 | Presenting One's Results in English I | PV         | 0+4  | 3       | z          | <u>Mgr. Eva Motyčková</u> | FBMI KBT                |

**List of offered compulsory optional courses in 2nd semester**

| Code     | Course                                 | Obligation | Load | Credits | Conclusion | Lecturer                  | Guaranteeing department |
|----------|----------------------------------------|------------|------|---------|------------|---------------------------|-------------------------|
| 17AMBCC2 | Czech for Foreigners II                | PV         | 0+4  | 3       | z          | <u>Hana Rogalewiczová</u> | FBMI KBT                |
| 17AMBJAB | English Language B                     | PV         | 0+4  | 3       | z          | <u>Mgr. Eva Motyčková</u> | FBMI KBT                |
| 17AMPVA2 | Presenting One's Results in English II | PV         | 0+4  | 3       | z          | <u>Mgr. Eva Motyčková</u> | FBMI KBT                |

**List of offered compulsory optional courses in 3rd semester**

| Code     | Course                                | Obligation | Load | Credits | Conclusion | Lecturer                  | Guaranteeing department |
|----------|---------------------------------------|------------|------|---------|------------|---------------------------|-------------------------|
| 17AMBCC1 | Czech for Foreigners I                | PV         | 0+4  | 3       | z          | <u>Hana Rogalewiczová</u> | FBMI KBT                |
| 17AMBJAA | English Language A                    | PV         | 0+4  | 3       | z          | <u>Mgr. Eva Motyčková</u> | FBMI KBT                |
| 17AMPVA1 | Presenting One's Results in English I | PV         | 0+4  | 3       | z          | <u>Mgr. Eva Motyčková</u> | FBMI KBT                |

z assessment

kl.z. graded assessment

zk examination

P Optional course

PV Compulsory optional course