

FORMAL REQUIREMENTS AND ADMINISTRATION OF DOCTORAL STUDIES

PhD program: **Biomedical Sciences**, Specialization: **Molecular Medicine**

Guarantor/Doctoral Committee head contact: **doc. MUDr. Mgr. Marek Mráz, Ph.D.**

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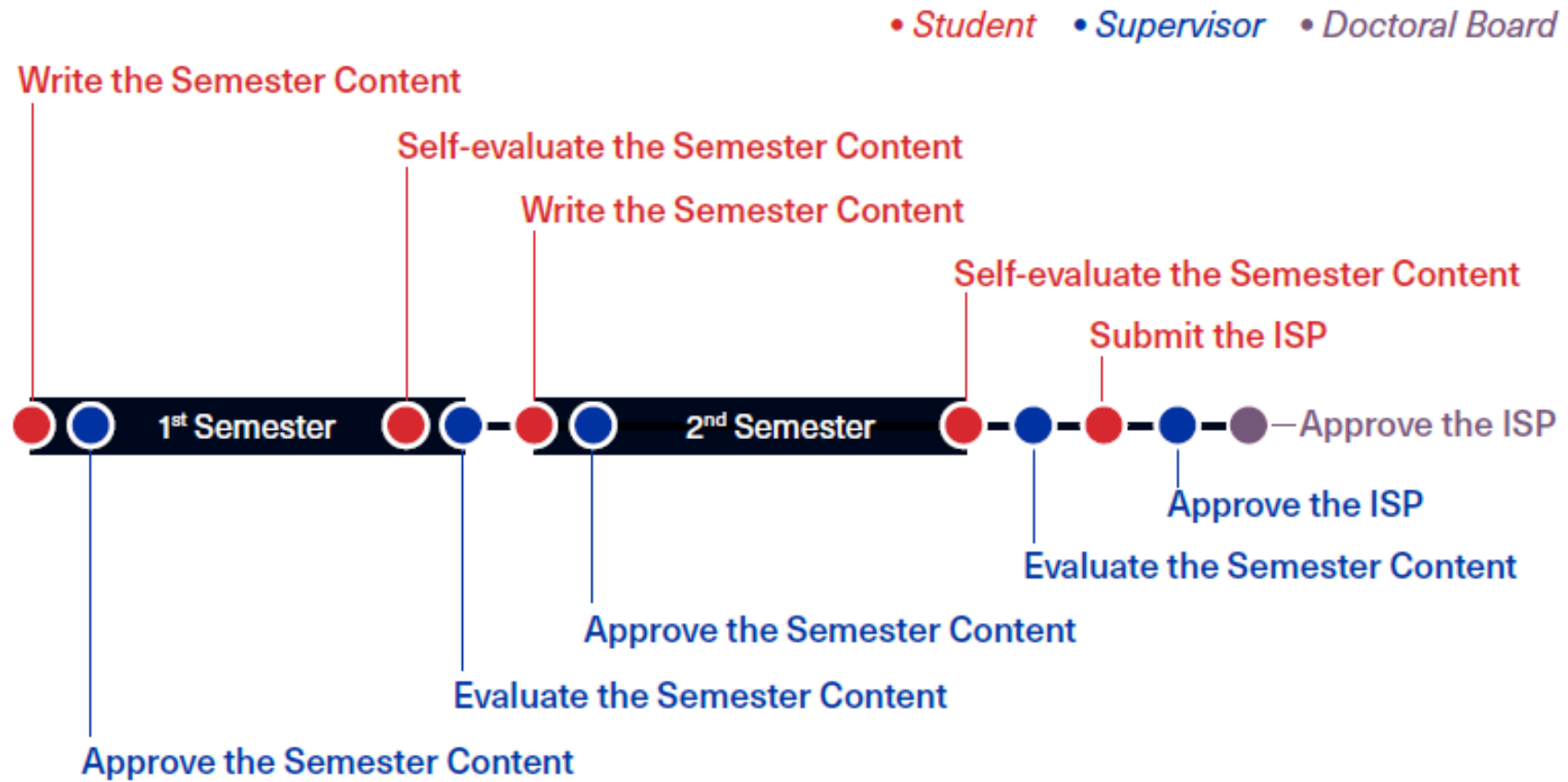
Requirements for students who started their studies after 1st September 2023

- Achieving **240 credits** (it is recommended to obtain an average of 30 credits per semester, maximum length of study is 8 years)
- Meeting the requirements of an **individual study plan** (see the timeline below)
- Successful completion of compulsory **Core courses** (see the list below)
- Successful completion of **at least 4 Common faculty-wide courses** (see below)
- Successful completion of **at least 4 Field-specific courses** (see below)
- Completing the **internship abroad**¹ in 1 month duration
- Participation in the [Annual PhD Conference in Biomedical Sciences](#)
- Participation in the [CEITEC PhD School Conference \(S5012\)](#)
- Participation in **teaching** within the maximum range of 150 hours during studies.
- Completing the [TAC meetings](#) according to the mandatory schedule (S5013)
- Participation in an **international conference** - students present their research outcomes (a talk or a poster) at the international conference of their choice at least once during their studies. Active participation at the conference is awarded by credits that the supervisor gives to the student within the course Professional Training (DSOP...).
- **Publication** of results of student's doctoral thesis in an international journal with an impact factor - before the thesis defence, the PhD student must have at least one first-author publication in an international research journal with an impact factor above the median IF in the field or have two first-author publications with the IF in Q3. Importantly, the affiliation of the Faculty of Medicine, Masaryk University, as well as of CEITEC MUNI, must be listed.

Further information can be found in the [Handbook](#) for PhD Students in Biomedical Sciences as well as on the faculty webpage (in [Czech](#), in [English](#)).

¹ Alternatively, students may actively participate in an international project with results published or presented abroad or may collaborate with international partners; this is evaluated individually by the vice-dean based on an official student's application. The application will be sent automatically for approval to the supervisor and the chair of the Doctoral Board. The Vice-Dean will make the final decision (approval/rejection) for Doctoral Studies.

Timeline for filling in the Individual Study Plan and Semester Content



The list of Core courses

- Doctoral thesis preparation I-VIII (DSDP016-026-036-046-056-066-078-088)
- Professional Training I-VIII (DSOP016-026-036-046-056-066-078-088)
- Publication Activity (DSPAz01)
- Teaching Assistance (DSVY01)
- Internship (DSZS01); this course should be registered retrospectively, once the internship has been completed.
- CEITEC PhD School Conference (S5012) – compulsory every spring semester
- TAC Meeting (S5013) – compulsory according to the schedule
- Friday CEITEC Ph.D. Seminary (S5010) – compulsory in the 1st and 2nd year of study

The list of fields of Common faculty-wide courses (mandatory is FRESHERS + 3 courses from 3 different subject-areas 1-5)

- FRESHERS: Skills for Research Careers - compulsory once during the study
- 1. **Ethics of Biomedical Research:** DSETz01 (highly recommended)
- 2. **Acquisition of scientific information:** DSAS01
- 3. **Organization of research projects and clinical trials:** DSAM051
- 4. **Data analysis:** DSAK051, DSAN01, DSAN02
- 5. **Computer Network User:** DSUP031

In case of enrolling in different courses, please consult with Petr Bureš (petr.bures@med.muni.cz, English study programme) or Tomáš Navrátil (navratil@med.muni.cz, Czech study programme).

The list of Field-specific courses

- MU Life Science seminars (DSCB060 and DSCC060) – mandatory 4 semesters
- Molecular Medicine (DSMolM01) – mandatory
- Suggested courses in English: Advanced Molecular Medicine (DSAMolM), Synthetic Biology (Bi9690en), Molecular mechanisms of cell aging (C3901), Structural biology methods (FB830), Biological X-ray Crystallography and Cryo-Electron Microscopy (C7270), Protein-RNA interactions (C9085), RNA metabolism (C9095), Methods in proteomics (CG990), Genomics (CG920), Modern Genomic Technologies (DSMGT01)
- Suggested courses in Czech: Nové trendy v patologické fyziologii (DSNTz01), Nové trendy v lékařské imunologii (DSTIz01), Molekulární fyziologie genomu (Bi8141), Molekulární diagnostika vrozených poruch (C7490), Molekulární podstata patofyziologických procesů (C8175), Molekulární embryologie (Bi8790), Buněčná a molekulární neurobiologie (Bi9260), Imunogenetika a imunogenomika (Bi9350), Molekulární mechanismy buněčného stárnutí (C3900), Regulace metabolismu (C7150), Buněčné signalizace (C8155)

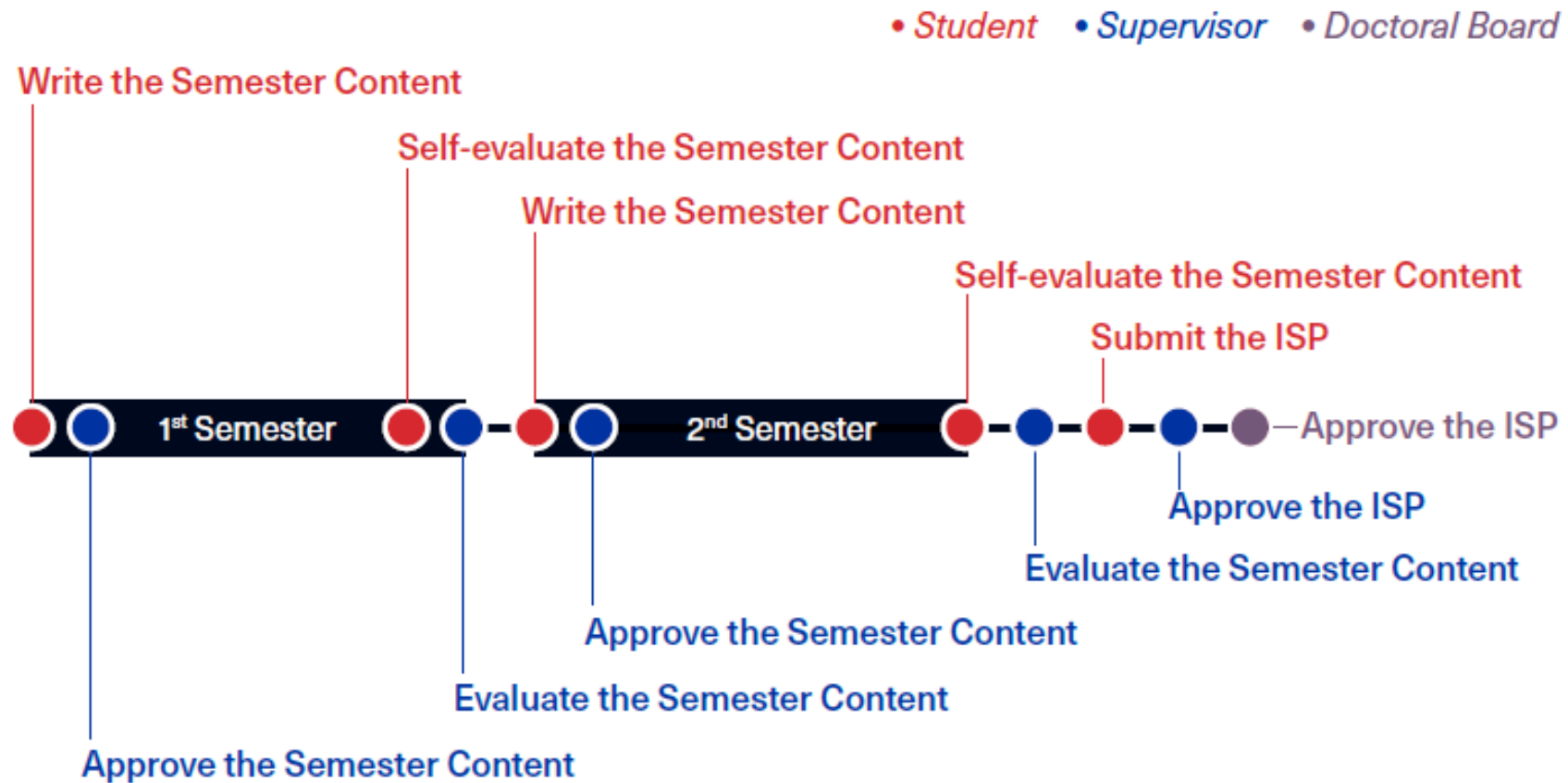
Requirements for students who started their studies **before 1st September 2023**

- Achieving **240 credits** (it is recommended to obtain an average of 30 credits per semester, maximum length of study is 8 years)
- Meeting the requirements of an **individual study plan** (see the timeline below)
- Successful completion of compulsory **Core courses** (see the list below)
- Successful completion of **at least 4 Common faculty-wide courses** (see the list below) + **English Language Course** (for students enrolled in Czech programme)
- Successful completion of **at least 4 Field-specific courses** (see the list below)
- Completing the **internship abroad**² in 1 month duration
- Participation in the [Annual PhD Conference in Biomedical Sciences](#)
- Participation in the [CEITEC PhD School Conference \(S5012\)](#)
- Participation in **teaching** within the maximum range of 150 hours during studies.
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The list of Common faculty-wide courses (at least 4 courses from 4 different areas)

- English Language Course (DSAJz01) - compulsory once during the study for students enrolled in the Czech programme
- Areas of Common faculty-wide courses:
 1. Scientific Information, medicine based on evidence: DSVIz01
 2. Ethical and legal aspects of research: DSETz01
 3. Organization of research projects and clinical trials: DSAM051
 4. Data analysis: DSAK051, DSAN01, DSAN02
 5. Publication, presentation, and grant-related skills: FRESHERS: Skills for Research Careers
 6. Computer Network User: DSUP031

In case of enrolling in different courses, please consult with Petr Bureš (petr.bures@med.muni.cz, English study programme) or Tomáš Navrátil (navratil@med.muni.cz, Czech study programme).

The list of Field-specific courses

- Molecular Medicine (DSMoIM01) – mandatory
- Optional courses (examples): Advanced Molecular Medicine (DSAMoIM); Introduction to Bioinformatics (DSIB01); Genomics (CG920); Modern Genomic Technologies (DSMGTO1); Proteomics (CG910); Methods in Proteomics (CG990); Synthetic Biology (Bi9690en); Molecular Mechanisms of Cell Aging (C3901)