

BMC School Budapest
Rules and Regulations

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AIM OF THE PROGRAM

The 24-week premedical program is recommended to those students who do not have thorough knowledge in Biology, Physics and Chemistry from high school. The requirements of these condensed premedical science subjects are very rigorous, thus preparation prior to applying to any medical programs is recommended. Students successfully completing the course have the right to apply and have a high chance to successfully be admitted to the chosen medical university.

I. CODE OF CONDUCT

1. General Code of Conduct Concerning Students and Employees

- (1) It is a moral obligation of all students and employees to abide by all rules and regulations of the BMC School Budapest (BMCS).
- (2) The Code of Conduct contains norms determining constitutional values based on general human and voluntary agreements. Conduct and behavior discussed on the Code is deemed ethical when it is in consistency with the expectations listed. A breach of ethics occurs when expectations of the Code of Conduct are disregarded voluntarily or involuntarily.
- (3) All students and employees have a right to the protection of their human dignity and personal rights and it is at the same time their moral obligation to respect the human dignity and personal rights of others.
- (4) Students and employees are obliged to support each other in every permissible way in the performance of assignments. They should endeavor to cooperate and honor the work of others. A basic requirement in the work relationship is to support and honor each other.
- (5) BMCS is not committed to religious views, ideology of any kind and neutral and tolerant towards all nationalities, race, sex or sexual preferences.
- (6) The breach of rules concerning the protection of personal data is considered to be an ethical offence if no other serious infringement occurred. The protection of confidential information concerning the students and employees of the BMCS is considered to be of outmost information. Databases, records should be stored according to relevant rules and regulations. The acquisition and release of such information is an ethical offence. Information on wages, study results, personal life, political or religious views are to be treated confidential at all times.
- (7) It is expected of all foreign students and employees of the BMCS to adhere to Hungarian norms of behaviour (while retaining their own cultural norms at the same time) and enhance integration to the community to an extent necessary for their activities by getting familiar with our culture and traditions.

2. Code of Conduct in Education and Examinations

a) Ethical Norms Concerning Instructors

- (1) Instructors must complete their task in the best way they can and do everything in their power to ensure that the students acquire the necessary competences in the best possible way.
- (2) Instructors must follow and contribute to the development of their discipline and utilize methods supporting these competences.

- (3) Since their main task is to contribute to the students' academic and human development, it is their duty to ensure conditions for effective and high quality studies. Thus, it is their duty to take action against events or personal behavior violating these conditions.
- (4) Instructors are required to make objective decisions. They must avoid positive or negative judgement resulting from previous acquaintances or discrimination on the basis of sex, ethnicity, religion, political preferences or other.
- (5) They must be open to questions, professional, or other. They are required to share their official contact information and/or their office hours with the students at the beginning of the course.
- (6) Instructors can give orders to students only in educational matters.
- (7) Instructors may never take advantage of the teacher-student relationship.
- (8) Instructors are required to teach their classes indicated in the program under their name. They may send in a substitute only at exceptional cases.
- (9) Classes are to be held at the given time and place. The instructor must go to class well prepared. Students are to be informed of any changes well in advance.
- (10) Information during classes must be adapted to the level of the students.
- (11) Disabled students are to be given the necessary allowances during examination.

b) Requirements in Connection with Oral and Written Exams and their Evaluation

- (1) It is the duty of Instructors to inform students of all the requirements and prepare them for examinations. They must be clear in the type of achievement required, conditions, time and circumstances of the examination, and must adhere to these at all times. They must make up a list of topics and present it to the students at the beginning of the course if possible. The list must serve as the basis for examinations and should be adhered to at all times. They must make sure that the students have no access to the questions before examination.
- (2) The material of oral or written examinations is to be compiled in a way to be executed by all students completing the course or courses on which the exam is based. Contents of each test must be on the same difficulty level.
- (3) Examiners must ask students to present proof of identity before examinations.
- (4) Examiners must warn the student that in case prohibited means of help are used or one is caught and proved to be preparing to use these aids, the examination is annulled.
- (5) Special attention must be paid to students using permissible aids only, and not place honest students at a disadvantage because of the dishonesty of one of their fellow students.
- (6) Evaluation of tests should be on the basis of unified, impartial criteria published in advance.
- (7) In case of partial or complete failure of an exam, examiners are required to give reasons for their judgement and supply the correct answers upon request from the student.
- (8) Examiners must honor the oral examination event by dressing properly.
- (9) Examiners are required to observe rules of the treatment of student personal information and must not publish results without the students' consent.

c) Ethical Norms Concerning Students

- (1) Students may only use permissible aids during their work. Students acting otherwise gain unfair advantage and violate norms of correct professional activities.

- (2) The use of not permissible aids (books, notes or any electronic device) refers to:
 - a) The use or attempt of using aids not permitted at written tests or homework,
 - b) Receiving the correct answers at written or oral exams from others either in person or through other means of contact (e.g. mobile phones),
 - c) Asking another student to act as a substitute at exams, or attempting at doing the exam as a substitute to another student.
- (3) The student may not have unauthorized access or may not attempt to gain unauthorized access to questions of the examination.
- (4) Students may not represent work done in cooperation with another as one's own and should not give false impression on the rate of one's own contribution.
- (5) Written work or part of a written work submitted to an instructor with the aim of obtaining grades, credit scores or other may not be submitted to another instructor without the first instructor's permission, neither at the same time, nor later.
- (6) Knowledge obtained at the BMCS must not be used against the BMCS for wrong purposes such as the creation of computer viruses, unauthorized entry into a computer, the use of unsafe methods in planning.
- (7) Students must present a proof of identity at examinations.
- (8) Students must honor the oral examination event by dressing properly.
- (9) Students must not use, give to others or receive non permissible aids at examinations.
- (10) Students may only aid the work and professional advancement of others by honest means.
- (11) Personal data submitted (e.g. at applications) must always be accurate.
- (12) Students are required to supply a correct, deliberate and objective opinion when asked, especially during a student evaluation process.

3. Reporting the Violation of Rules Stated in the Code of Ethics

a) General Rules of Reporting the Violation

- (1) Violation of the Norms of Ethics may be reported orally or in writing to the International Education Office (IEO) by the offended party or anyone familiar with the happenings and is willing to give proof of the validity of such reporting with disclosure of his/her identity.
- (2) No anonymous reporting is considered by the IEO.
- (3) No procedures are to take place in cases when the event took place more than three months before. In cases of continuous ethical offense the date of the last event is to be considered with view of identical or similar cases happening in the past.
- (4) Reporting must be as specific as possible, including the name of the person involved, the place and date of the event and proofs available. It should aim at disclosing all details of the circumstances and all proofs available.

(b) General Rules of Proceedings

- (1) No proceedings or legal actions can be taken that would put the suspect of the case at a disadvantageous position in case of a suspicion without proof.
- (2) Suspects of each case must be heard, unless circumstances of the case clearly prove that the reporting is groundless.
- (3) The person reporting the offence must not face disadvantages. However, groundless reporting by the same person at a number of times is considered an ethical offense.
- (4) The IEO may take the following decisions:
 - a) State that the offence in question is a violation of the rules of the Code,
 - b) Order disciplinary proceedings in case the violation of norms impose the suspicion of disciplinary offence,
 - c) The IEO may file a criminal complaint in case of suspected criminal offence.
- (5) The Persons reporting the offence, the suspect and the victim must be informed of the Decisions of the IEO in writing within 8 days. As soon as the letters are delivered, sanctions may be carried out.
- (6) No appeals against the Decisions of the IEO are accepted.

II. EDUCATIONAL AND EXAMINATION REGULATIONS

1. General Provisions

a) Scope of the Regulations

The scope of Educational and Examination Regulations at the BMCS shall cover the study and exam-related matters of students.

b) Bodies and Individuals Authorized to Act on Study and Exam-Related Matters

The body of first instance authorized to act on academic and exam-related matters of the students is the IEO.

2. Provisions Concerning Educational Matters

a) The Schedule for the Academic Year

- (1) The duration/unit of class time (contact hour) is 45 minutes.
- (2) The Academic Year starts on the day defined and published by the BMCS.
- (3) The duration of the course period is 2 x 12 weeks.
- (4) The duration of the exam period is 2 x 3 weeks.

b) Course Requirements

- (1) The course curriculum follows the one set by the University of Debrecen as the curriculum of the Intensive Basic Medicine Course. The curriculum shall be published in Appendix IV.
- (2) The course requirement system shall comprise the following elements:
 - a) attendance and participation requirements,
 - b) requirements for mid-term tests, their number, approximate date, possibilities and means of retakes or the fact if they may not be retaken,
 - c) conditions for obtaining a mid-term grade, where the instructor's signature indicates class attendance,
 - d) the components that the final grade shall be based upon,
 - e) lists of required and recommended reading,
- (3) The course requirements shall be made available for the students in a written form during the first week of the course, comprising information on the dates of end-term tests, the deadlines for the fulfilment of end-term requirements and possibilities for making up or retaking them.
- (4) Course requirements shall be scheduled in such a way that the students should have sufficient time to fulfil them.

c) Attendance

- (1) Lectures constitute an organic part of the education process, therefore, the University expects the students to attend them regularly.
- (2) Attendance in the case of seminars is compulsory, with some variation depending on the actual specifications of the individual course requirements. Information concerning the acceptable extent and the consequences of absences and the ways to make up for missed classes shall be published in Appendix IV.
- (3) Instructors shall wait 20 minutes for students to show up for class. In case no students attend the class the instructor may leave the classroom and the class is considered to be given.
- (4) Students shall wait 20 minutes for the instructor to show up for class. After 20 minutes students may request the instructor to make up the class at a pre-defined and reasonable time.

3. The Testing and Assessing of Knowledge

a) The Examination Period

- (1) Upon commencement of the term-time, BMCS shall be required to publish the methods of student performance assessment and the related dates of such assessments during the given term, as well as the time schedule for the examination period, in particular, the first and the last day thereof. The instructors responsible for the coordination of individual courses shall publish no later than three weeks before the end of the term-time the dates set for the individual examinations, the names of the examiners, the dates and manner of registration for the examinations, and the date of publishing the results of the examinations.

b) The Chief Forms of Testing and Assessing Knowledge

- (1) The forms of testing and assessing knowledge shall be determined by the requirements and the curriculum.
- (2) Assessment of the student's knowledge of the teaching material may be carried out according to a five-grade scale: excellent (5), good (4), satisfactory (3), pass (2), fail (1);
- (3) Assessing forms of subjects/courses:
 - Self Control Tests: A successful mid-course test result can be counted in the end-term exam in the forms of:
 - offered grade,
 - extra points in the exam result,
 - An end-of-semester examination (ESE) and a final examination (FE) is the comprehensive assessment of the material of a subject/course, generally covering the course. It shall be assessed according to a five-grade scale.
- (4) If the teacher recognizes any not-allowed methods or tools on the student or the use of these during the examination that constitute the serious violation of academic obligations (e.g. to have deactivated electronic or telecommunication devices on, use of electronic or telecommunications devices), the test has to be suspended.

In the course of the examination, the student is obliged to co-operate with the supervising persons and act in accordance with his or her instructions, especially in case of the suspicion of owning or using not-allowed methods or tools. In order to keep the straightness of the examinations the student has to immediately present the tools (even on their bodies or on their clothes) on notification that may be used as subsidiary instruments, and temporarily give it to the supervising person, according to minutes, until the end of the possible investigation.

The student acknowledges that in case the suspicion of owning or using not-allowed methods or tools during the examination rises, entails the commencement of disciplinary proceedings.

- (5) In the case of examinations it is to be registered on the exam-sheet. In the case of other types of tests it is to be registered in writing.

c) The Order of Examinations

- (1) The student is obliged to arrive by the start time of the exam.
- (2) The examinee shall be provided a short time period before the examination to get prepared.
- (3) The examiner (or the chair of the examination board) shall be responsible for the proper circumstances and quiet atmosphere of the examination.
- (4) Students may submit a written proof of an excuse for missing an examination within three working days at the IEO. The IEO will delete their registration for the examination. Missing an exam shall not influence in any way whatsoever the assessment of the students' knowledge. If students fail to appear for the examination, their knowledge cannot be assessed.
- (5) Missing an examination without a legitimate excuse shall result in recording 'not appeared' on the exam sheet, by the IEO, and the "not completed" note will appear in the transcript.

The examination grade shall be determined according to the assessment principles announced in advance.

- (6) Exams can be taken only once in each subjects, no repeating or retaking of the final exams is possible.

III. MISCELLANEOUS AND CLOSING PROVISIONS

1. Application and Admission

a) Application

(1) In accordance with Sub-Section 40.§ (2) of Act CCIV of 2011 on Hungarian Higher Education (hereinafter: HHE Act) international students who have earned a high school diploma and meet the requirements stipulated in the present document may apply to the BMCS.

(2) University applications may be submitted either online or via letter-post addressed to the BMCS.

(3) Application deadline is 30 June for students who need a visa to enter Hungary, and 31 August for students who do not need a visa to enter Hungary for the subsequent September intake in each year.

The pre-medical program offered by the BMCS has a final application deadline as determined above, however, applications are received and assessed continuously, on a first come first served basis. Thus, the available program seats may reach capacity prior to the actual deadline. Nonetheless, late applications may be considered in case of vacancies.

(4) The following documents need to be submitted during the application procedure:

- Completed Application Form
- Scanned copy of high school diploma, school certificates, academic transcripts and detailed course descriptions of previous studies (all documents must be officially translated into English if necessary)
- Proof of English language proficiency in case of applicants from countries where the official/native language is not English (optional)
- Short CV
- Copy of passport
- One recent passport-size photo
- Medical certificate of general health status
- Application fee of 150 USD (non-refundable)
- Examination/Entrance fee of 150 USD (non-refundable)

(5) Applicants who are yet to complete their high school or university studies are required to provide a transcript during the application procedure with reference to their already finished studies. Final diplomas need to be presented in the course of the entrance examination or submitted to the BMCS subsequent to their obtainment.

(6) Applicants who are completing their high school studies simultaneously with taking the preparatory course at BMCS bear the responsibility for being able to present the required documentation by the time of the official application to the chosen university upon completing the course.

(7) Applications of underage applicants who have not completed a minimum of twelve years of primary and secondary education altogether, yet, but possess a high school diploma or any equivalent shall be assessed by a previously designated committee prior to the entrance examination. Should the committee come to a decision that the underage applicant does not qualify for being accepted as a university student at the University the application shall be rejected and the applicant informed accordingly.

b) Entrance Examination

- (1) For students applying to the BMCS it is obligatory to pass an entrance examination consisting of written tests in Biology, Chemistry and Physics. The written test contains multiple choice and other miscellaneous questions. The test shall be evaluated by the admission Committee of the BMCS.
- (2) Successful Applicants shall be admitted to the BMCS. In any other occurrence, the Applicant shall be rejected.
- (4) The entrance examination can be taken once in the same academic year.
- (5) The entrance examinations shall either take place in Debrecen or Budapest, Hungary, or at one of the recognized examination centers in a previously designated country.
- (6) Every Applicant is required to pay application and entrance examination fees. Payment of the application fee must be performed together with submitting the application form and any additional documents that are necessary to the BMCS. Applications will not be considered and processed until payment of the application fee has been received and confirmed by the BMCS.
- (7) The entrance examination fees must be transferred to the bank account of the BMCS or in case of an exam taking place abroad, to the local representative, prior to the examination in order to allow an Applicant to sit for the entrance examination.

c) Letter of Acceptance

- (1) Applicants admitted to the BMCS may start their studies in the year specified in their Letter of Acceptance (hereinafter: LOA). Applicants may request to postpone their studies in writing and for a maximum period of one year. Requests need to be submitted within one month subsequent to the entrance examination along with paying a non-refundable seat reservation fee of 1000 USD. Should the Applicant fail to register at the BMCS within the previously determined period, he/she shall only be allowed to start his/her studies if he/she has passed the newly taken entrance examination – in the event of its necessity –, completed the payment of the seat reservation fee and fulfilled any additional terms and conditions specified in the newly issued LOA. The LOA in this matter shall only be valid in the year of its issuance and shall be deemed as an official – that is legally binding – agreement between the Applicant and the BMCS.

2. Registration

- (1) International students admitted to the BMCS are required to register at the IEO in person at the beginning of the course.
- (2) During registration students need to submit the following documents to the personnel of the IEO:
 - a) Original copy of certificate of education (school leaving qualification, high school diploma, document of graduation or any equivalent; university or college diploma/certificate or any equivalent)
 - b) Passport
 - c) 1 passport photo
 - d) Proof of payment of the complete tuition fee.
- (3) Once the above documents have been submitted, students will receive their valid Health Insurance Card. The fee of the insurance is included in the tuition fee.

3. Fees

- (1) The tuition fee and other fees applicable in the subsequent academic year (starting in September) shall be defined and published by the BMCS no later than the beginning of the calendar year (January).
- (2) Students are asked to pay a one-time application fee of 150 USD. The application fee is non-refundable in all cases.
- (3) Students are asked to pay a one-time entrance examination fee of 150 USD. The entrance examination fee is refundable only in case the Applicant cancelled his/her application and withdrew from the entrance examination no later than 2 weeks before the date of the examination.
- (4) The tuition fee for the 24-week-course is 6000 USD. Students who need a visa to enter Hungary must pay the full amount of the tuition fee by 31 July, in case of students who do not need a visa to enter Hungary the payment is due by 15 September, for the subsequent academic year.

The extent of the tuition fee shall remain unchanged as defined in the LOA of the student, provided that he/she does not interrupt or postpone his/her studies.

The tuition fee shall include the fees concerning the compulsory health insurance and the seat reservation where applicable. The seat reservation fee serves the purpose of reserving the seat for a student for the duration of one academic year only – as indicated in the LOA.

- (5) In case the result of the English placement test written in the beginning of the course does not meet the minimum level an additional fee of up to 800 USD can be charged for extra language classes.
- (6) Applicants may request to postpone their studies in writing and for a maximum period of one year. By paying the seat reservation fee of 1000 USD. The seat-reservation fee forms a part of the tuition fee, and is non-refundable.

4. Initiating the Refund of Overpaid Amounts

- (1) In the case of an overpayment made by the student, the student may demand a refund according to the regulations stipulated herein.
- (2) In the case the student terminates his/her student status or if his/her student status gets terminated for any reason whatsoever, each started month of the respective semester the student was enrolled in shall be taken into account when calculating the extent of the refund due. Nevertheless, the BMCS shall not issue any refunds concerning overpayments made by students unless the particular student has been removed from the BMCS register definitively.
- (3) With the exception of a rejected visa application, no refund may be requested concerning the tuition fee paid by Visa-bound Students. Furthermore, the seat reservation fee paid by these students in principle, shall not be refundable. The only exception in this matter shall concern those cases when a particular student provides a written proof of his/her visa application being rejected by authorities or if exceptional circumstances, such as a serious disease, accident or injury, justify a request of such nature, and the student affected provides a written proof of this – including comprehensive medical documentation – verified by the medical examiner appointed by the BMCS.
- (4) The tuition fee shall only be refundable prior to the half of the course that is 12 weeks.
- (5) In the case of an overpayment made by the student with respect to the tuition fee the extent that exceeds the amount due may be refunded in the form of a bank transfer.

5. Entrance exam to universities after completing the preparatory course at BMCS

- (1) After passing your course at BMCS students take entrance examination(s) to the chosen universiti(es).
- (2) All the admission processes and document gathering will be done through BMCS admission department and the College will duly support students in this issue.
- (3) The type and structure of the entrance examination, the application and examination fees differ in different universities. Further information is available at the IEO.
- (4) The University of Debrecen reserves the right to conduct entrance examinations with interested students in the first place.

6. Legal Disputes, Change of Address and Documentation Addressed to the University

- (1) In the event of a legal dispute of any nature – unless stipulated otherwise by any legally binding contract, document or obligation – the BMCS shall only recognize the jurisdiction of the Budapest-Capital Regional Court (Fővárosi Törvényszék).
- (2) Students of the BMCS are required to report any changes in their Hungarian address within 15 days from their occurrence. Should a student fail to fulfill the aforementioned regulation, this violation shall be considered as a discipline offense and shall be reported to immigration authorities. Accordingly, the student shall bear every consequence resulting therefrom.
- (3) All statements, declarations, and requests addressed to the BMCS shall only be considered valid if submitted
 - a) in writing
 - b) in an English (or Hungarian) language document
 - c) personally, by e-mail or via registered mail addressed to the IEO.

7. Closing Provisions

- (4) These regulations were accepted and approved by the Directorate of BMC School Budapest Its provisions shall enter into force as of September 1, 2019.

IV. APPENDIX

1. Class Behavior

Students should not use cell phones to talk or text during class. Cell phones must be switched off or kept in silence mode during class. In seminars, students will be expected to participate in seminar discussions. Students are encouraged to ask questions related to the topic of the lectures discussed, and participate in solving problems related to the topic of the seminar. Some professors will ask for students to volunteer information, but some professors call on students randomly. It is, thus, a good idea to come to class prepared so as not to be embarrassed in front of the class. Students should not disrupt the class by talking to each other. If one continues to disrupt the class, the student may be asked to leave. The usage of electronic devices, textbooks and any form of interaction between students during the tests is strictly forbidden. Electronic devices (cell phones, tablets, dictionaries, etc.), except for approved simple calculators, must not be within the reach (in pocket, in the desk, etc.) of students during tests. It is the students' responsibility to stow these items before the test begins without specific warning by the supervising teachers. Violation of these above mentioned regulations results in an immediate and unconditional dismissal from the program.

2. Requirements

The course consists of lectures and seminars. Attending lectures is strongly recommended, attendance of seminars is compulsory and recorded. Everyone must attend the seminars with the group designated by the Admin Office.

Successful completion of the course guarantees automatic admission to desired program at the University of Debrecen.

Absence can significantly affect your understanding and can have serious implications of progression in your studies. One might have a maximum of three seminar absences per semester to have the opportunity to get exemption from the ESEs and FEs. Students missing 4 seminars per semester cannot be exempted from the End of Semester Examination (ESE) or Final Examination (FE), regardless of their score reached on the Self Control Tests. Students missing 5 or more seminars per semester are automatically dismissed from the course without any further notification and with immediate effect. Missed seminars cannot be made up, unless one obtains prior permission to be absent.

The knowledge of students will be tested 4 times during each semester using a written test system by Self Control Tests (SCT). The first semester is ended with an End of Semester Examination (ESE) covering the topics of all lectures and seminars of the first semester. Three dates will be set for the ESE during the winter examination period. Unsuccessful students may repeat the ESE twice (B and C chances). The ESE is not compulsory and even who fail may continue their study in the second semester, however, they lose their chance to receive bonus points. Exam exemptions and bonus point policy are to improve the students' performance on SCTs and give them a chance to get exemption of the FE (described below) even with SCT scores lower than 40% in the first semester. Exact details of the exemption of ESE:

- one's average score of the three best first semester SCTs is at least 70% for BMC-Medicine, 60% for BMC-Dentistry and 45% for BMC-Pharmacy, AND
- (s)he successfully completed all the SCTs at least with 40% for BMC-Medicine and BMC-Dentistry and 30% for BMC-Pharmacy, AND
- (s)he has a maximum of 3 seminar absences for each subject in the first semester.

The course ends with a Final Exam (FE) covering the whole material of the first and second semesters. A minimum of four FE dates will be set during the summer examination period. Unsuccessful students may repeat the FE twice (B and C chances, and the latter ends up with an oral examination part). Exemption from FE is offered for students who achieve excellent academic performance during their studies on the following base:

- the average score of the six best SCTs (out of 8) of the two semesters is at least 70% for BMC-Medicine, 60% for BMC-Dentistry and 45% for BMC-Pharmacy, AND
- passed all the SCTs with at least 40% for BMC-Medicine and BMC-Dentistry and 30% for BMC-Pharmacy, AND
- (s)he has a maximum of 3 seminar absences for each subject per semester.

OR

- the average of the ESE score taken 3 times plus the scores of the 3 best SCTs in the 2nd semester is at least 70% for BMC-Medicine, 60% for BMC-Dentistry and 45% for BMC-Pharmacy, AND
- passed all the SCTs with at least 40% for BMC-Medicine and BMC-Dentistry and 30% for BMC-Pharmacy in the 2nd semester, AND
- (s)he has a maximum of 3 seminar absences for a given subject per semester.

Bonus points will be added to the FE score (in %) of eligible students and calculated as follows:

The average of the ESE score three times and the best 3 2nd semester SCTs
OR the average of the best 6 SCTs

Bonus points (%)	BMC for Medicine	BMC for Dentistry	BMC for Pharmacy
1	45.00-49.99	40.00-43.99	40.00-40.99
2	50.00-54.99	44.00-47.99	41.00-41.99
3	55.00-59.99	48.00-51.99	42.00-42.99
4	60.00-64.99	52.00-55.99	43.00-43.99
5	65.00-69.99	56.00-59.99	44.00-44.99

Students who could not meet the above described conditions for exemption during the two semesters must sit for the FE from the whole material of the first and second semesters. The participation shall be preceded by ID confirmation (i.e. student's card, passport or driving license) before all forms of tests.

Self Control Tests, End of Semester Exams, and Final Exams will be assessed as follows.

BMC for Medicine	
Percentage (%)	Mark
0 - 59.99:	fail (1)
60.00 - 69.99:	pass (2)
70.00 - 79.99:	satisfactory (3)
80.00 - 89.99:	good (4)
90.00 - 100:	excellent (5)

BMC for Dentistry	
Percentage (%)	Mark
0 - 54.99:	fail (1)
55.00 - 59.99:	pass (2)
60.00 - 74.99:	satisfactory (3)
75.00 - 84.99:	good (4)
85.00 - 100:	excellent (5)

BMC for Pharmacy	
Percentage (%)	Mark
0 - 59.99:	fail (1)
60.00 - 69.99:	pass (2)
70.00 - 79.99:	satisfactory (3)
80.00 - 89.99:	good (4)
90.00 - 100:	excellent (5)

Absence for any reason counts as 0%.

3. Curriculum

Subject: **INTRODUCTION TO BIOLOGY**

Number of teaching hours:

Lecture: **96**

Seminar: **96**

1st week:

Lecture: The chemistry of life 1.

The chemistry of life 2.

Proteins, carbohydrates and lipids 1.

Proteins, carbohydrates and lipids 2.

2nd week:

Lecture: Proteins, carbohydrates and lipids 3.

Proteins, carbohydrates and lipids 4.

3rd week:

Lecture: Nucleic acids and the origin of life 1.

Nucleic acids and the origin of life 2.

Cells: the working units of life 1.

Cells: the working units of life 2.

4th week:

Lecture: Cells: the working units of life 3.

Cells: the working units of life 4.

Cell membranes 1.

Cell membranes 2.

5th week:

Lecture: Cell membranes 3.

Cell membranes 4.

Energy, enzymes and metabolism 1.

Energy, enzymes and metabolism 2.

Self Control Test

6th week:

Lecture: Pathways that harvest chemical energy 1.

Pathways that harvest chemical energy 2.

Pathways that harvest chemical energy 3.

The cell cycle and cell division 1.

7th week:

Lecture: The cell cycle and cell division 2.

The cell cycle and cell division 3.

Inheritance, genes and chromosomes 1.

Inheritance, genes and chromosomes 2.

8th week:

Lecture: Inheritance, genes and chromosomes 3.

Inheritance, genes and chromosomes 4.

DNA and its role in heredity 1.
DNA and its role in heredity 2.
Self Control Test

9th week:

Lecture: DNA and its role in heredity 3.
DNA and its role in heredity 4.
From DNA to protein: gene expression 1.
From DNA to protein: gene expression 2.

10th week:

Lecture: From DNA to protein: gene expression 3.
From DNA to protein: gene expression 4.
Regulation of gene expression 1.
Regulation of gene expression 2.

11th week:

Lecture: Gene mutation and molecular medicine 1.
Gene mutation and molecular medicine 2.
Gene mutation and molecular medicine 3.
Gene mutation and molecular medicine 4.

12th week:

Lecture: The cellular signaling and communication 1.
The cellular signaling and communication 2.
The mechanism of evolution 1.
The mechanism of evolution 2.

13th week:

Lecture: Fungi: recyclers, pathogens, parasites 1.
Fungi: recyclers, pathogens, parasites 2.
Differential gene expression in development 1.
Differential gene expression in development 2.
Self Control Test

14th week:

Lecture: Tissues, organs and organ systems

15th week:

Lecture: Physiology, Homeostasis and Temperature Regulation
Blood, a fluid tissue.

16th week:

Lecture: Circulatory systems
The human circulatory system.

17th week:

Lecture: The human circulatory system.
Immunology: gene expression and natural defenses.
Self Control Test

18th week:

Lecture: Immunology: gene expression and natural defenses.
Nutrition, Digestion and Absorption.

19th week:

Lecture: Energy balance, vitamins and minerals
Gas exchange in humans.

20th week:

Lecture: Salt and Water Balance Nitrogen Excretion.
Hormones

21st week:

Lecture: Neurons and Nervous system.
Self Control Test

22nd week:

Lecture: Neurons and Nervous system.
Sensory systems

23rd week:

Lecture: Effectors: How humans get things done.

24th week:

Lecture: Human reproduction and Human Development
The human reproduction system.
Self Control Test

Suggested book:

Sadava, Hills, Heller, Berenbaum: Life: The Science of Biology

Subject: **INTRODUCTION TO CHEMISTRY**

Number of teaching hours:

Lecture: **96**

Seminar: **96**

1st week:

1. Experimentation and measurement. The SI system of measurement. Unit conversions. (McMurry pp.34-50)
2. Introduction to general chemistry. Symbols for the elements. Physical and chemical properties. (McMurry pp.62-66)
The atomic theory. Structure of the atom, nuclear arithmetic (McMurry pp.69-79)

2nd week:

3. Mixtures and chemical compounds. Chemical formulas. Naming chemical compounds (McMurry pp.82-93,152-153)
4. Atomic, molecular and molar mass relationships. Percent composition and empirical/molecular formulas (McMurry pp.79-82, 119-124)

3rd week:

5. Chemical equations, stoichiometry (McMurry pp.106-118)

6. Summary of general chemistry 1

4th week:

7. The electromagnetic spectrum. Atomic spectra. The Bohr model of hydrogen atom. The quantum mechanical model of atom (McMurry pp.183-202)
8. Electron configurations and the periodic table. Classification of the elements (McMurry pp.202-211, 224-234)

5th week:

9. Chemical bonds: metallic, ionic, and covalent bonds. Electron-dot structures (McMurry pp.927-928, 234-240, 251-277)
10. VSEPR and valence bond theory (McMurry pp.290-306)

6th week:

11. Intermolecular forces (McMurry pp.306-318)
12. Summary of general chemistry 2

7th week:

13. The gaseous state (McMurry pp.387-411)
14. Liquid and solid state, phase changes. The chemistry of water (McMurry pp.439-445, 448-450, 146-152, 154-155)

8th week:

15. Solutions. Electrolytes and non-electrolytes (McMurry pp.140-145, 155-156, 476-489)
16. Chemical equilibrium 1 (McMurry pp.582-593)

9th week:

17. Chemical equilibrium 2 (McMurry pp.593-612)
18. Summary of general chemistry 3

10th week:

19. Acids and bases 1 (McMurry pp.632-648)
20. Acids and bases 2 (McMurry pp.649-663)

11th week:

21. Thermochemistry: internal energy and state functions. Enthalpy. Hess's law (McMurry pp.340-363)
22. Redox reactions. Activity series of the elements. Balancing redox reactions (McMurry pp.158-166, 785-788)

12th week:

23. Galvanic cells (McMurry pp. 789-801)
24. Summary of general chemistry 4

13th week:

25. The main group elements. s-, p-, d-block metals
26. Nonmetals: hydrogen, halogens and noble gases

14th week:

27. Nonmetals: oxygen, sulfur, nitrogen, phosphorus and carbon

28. Covalent bonding in organic compounds. Classification of organic compounds. Alkanes: nomenclature and isomerism

15th week:

- 29. Reactions of alkanes. Cycloalkanes
- 30. Summary of inorganic and organic chemistry 1

16th week:

- 31. Unsaturated hydrocarbons
- 32. Aromatic compounds: aromaticity, classification and nomenclature

17th week:

- 33. Aromatic compounds: reactions
- 34. Organic halogen compounds

18th week:

- 35. Alcohols and phenols
- 36. Summary of organic chemistry 2

19th week:

- 37. Ethers. Organic sulphur compounds
- 38. Aldehydes, ketones and quinones: nomenclature, physical properties, preparation

20th week:

- 39. Aldehydes, ketones and quinones: the reactions of carbonyl compounds
- 40. Nitrogen containing organic compounds: aliphatic amines

21st week:

- 41. Nitrogen containing organic compounds: heterocyclic amines. Amines with biological importance
- 42. Summary of organic chemistry 3

22nd week:

- 43. Carboxylic acids: classification, nomenclature, physical properties, acidity
- 44. Carboxylic acids: reactions, important carboxylic acids

23rd week:

- 45. Carboxylic acid derivatives: esters and amides
- 46. Carboxylic acid derivatives: halides and anhydrides; salts and detergents

24th week:

- 47. Stereochemistry
- 48. Summary of organic chemistry 4

Suggested book: McMurry, J., Fay, R.C. (2012): Chemistry, 6th Edition. Pearson Education, Inc., Upper Saddle River, NJ 07458.

Subject: **INTRODUCTION TO PHYSICS**

Number of teaching hours:

Lecture: **72**

Seminar: **72**

week	Title of lecture (2 hours/week)	Chapter	Title of seminar (2x2 hours/week)
1	1. Motion in one dimension, displacement, velocity, acceleration, motion diagrams. Freely falling objects.	1	1. Units, trigonometry and vectors. Standard of lengths, mass, time.
		2	2. Motion in one dimension, displacement, velocity, acceleration, motion diagrams.
2	2. Motion in two dimensions. Relative velocity.	2	3. Freely falling objects.
		3	4. Motion in two dimensions. Relative velocity.
3	3. The laws of motion. Newton's First, Second and Third Law.	4	5. The laws of motion. Newton's First, Second and Third Law.
		4	6. Application of Newton's Laws. Forces of friction.
4	4. Energy. Work. Kinetic energy and the workenergy theorem. Gravitational potential energy. Spring potential energy. Systems and energy conservation	5	7. Energy. Work. Kinetic energy and the workenergy theorem. Gravitational potential energy.
		5	8. Spring potential energy. System and energy conservation. Power. Work done by varying force.
5	5. Momentum and impulse. Conservation of momentum. Collisions. Elastic and inelastic collisions.	6	9. Momentum and impulse. Conservation of momentum.
		6	10. Collisions. Elastic and inelastic collisions.
6	6. Angular speed and angular acceleration. Rotational motion under constant angular acceleration. Centripetal acceleration.	7	11. Angular speed and angular acceleration. Rotational motion under constant angular acceleration.
		7	12. Centripetal acceleration.
7	7. Torque and the two conditions for equilibrium. The center of gravity. Rotational kinetic energy. Angular momentum.	8	13. Torque and the two conditions for equilibrium. The center of gravity.
		8	14. Rotational kinetic energy. Angular momentum.
8	8. Rotational kinetic energy. Angular momentum. Density and pressure. Variation of pressure	9	15. States of matter. Deformation of solids. The Young's, shear and bulk modulus.

	with depth. Pressure measurements. Buoyant forces and Archimedes's principle. Fluids in motion.	9	16. Density and pressure. Variation of pressure with depth. Pressure measurements. Buoyant forces and Archimedes's principle. Fluids in motion.
9	9. Temperature and the zeroth law of thermodynamics. Thermometers and temperature scales. Thermal expansion of solids and fluids. Macroscopic description of an ideal gas. The kinetic theory of gases.	10	17. Temperature and the zeroth law of thermodynamics. Thermometers and temperature scales. Thermal expansion of solids and fluids.
		10	18. Macroscopic description of an ideal gas. The kinetic theory of gases.
10	10. Energy in thermal processes. Heat and internal energy. Specific heat. Calorimetry. Latent heat and phase change. The first law of thermodynamics.	11	19. Energy in thermal processes. Heat and internal energy. Specific heat. Calorimetry. Latent heat and phase change.
		12	20. The first law of thermodynamics.
11	11. The second law of thermodynamics. Entropy. Refrigerators and heat pumps. Refrigerators and heat pumps. Elastic potential energy. Hook's law. Simple harmonic motion. Motion of a pendulum.	12	21. The second law of thermodynamics. Entropy. Refrigerators and heat pumps. Refrigerators and heat pumps.
		13	22. Elastic potential energy. Hook's law. Simple harmonic motion. Motion of a pendulum.
12	12. Waves. Frequency, amplitude and wavelength. Interference of waves. Reflection of waves. Sound. Energy and intensity of sound waves. Shock waves, standing waves. Doppler effect	13	23. Waves. Frequency, amplitude and wavelength. Interference of waves. Reflection of waves.
		14	24. Sound. Energy and intensity of sound waves. Shock waves, standing waves. Doppler effect
13	13. Properties of electric charges. Insulators and conductors. Coulomb's law. Electric field. Electric field lines. Electric flux and Gauss's law.	15	25. Properties of electric charges. Insulators and conductors. Coulomb's law.
		15	26. Electric field. Electric field lines. Electric flux and Gauss's law.
14	14. Electrical energy and capacitance. The parallel plate capacitor. Combinations of capacitors. Energy stored in capacitors. Capacitors with dielectric.	16	27. Electrical energy and capacitance.
		16	28. The parallel plate capacitor. Combinations of capacitors. Energy stored in capacitors. Capacitors with dielectric.

15	15. Electric current. Current and voltage measurements in circuits. Resistance and Ohm's law. Resistivity, temperature variation of resistance. Semiconductors and superconductors. Electrical activity of the heart. Defibrillators.	17	29. Electric current. Current and voltage measurements in circuits. Resistance and Ohm's law.
		17	30. Resistivity, temperature variation of resistance. Semiconductors and superconductors. Electrical activity of the heart. Defibrillators.
16	16. Direct current circuits. Resistors in parallel and series. Kirchhoff's rules and complex DC circuits. RC circuits. Conduction of electrical signals by neurons.	18	31. Direct current circuits. Resistors in parallel and series.
		18	32. Kirchhoff's rules and complex DC circuits. RC circuits. Conduction of electrical signals by neurons.
17	17. Magnetism. Magnetic field. Earth's magnetic field. Magnetic force on current carrying conductors. Torque on a current loop and electric motors. Magnetic field of a long straight wire and Ampere's law. Magnetic field between two parallel conductors. Magnetic field of loops and solenoids.	19	33. Magnetism. Magnetic field. Earth's magnetic field. Magnetic force on current carrying conductors. Torque on a current loop and electric motors.
		19	34. Magnetic field of a long straight wire and Ampere's law. Magnetic field between two parallel conductors. Magnetic field of loops and solenoids.
18	18. Induced emf and magnetic flux. Faraday's law of induction. Motional emf. Lenz's law. Generators. Self-inductance RL circuits.	20	35. Induced emf and magnetic flux. Faraday's law of induction. Motional emf. Lenz's law.
		20	36. Generators. Self-inductance RL circuits.
19	19. Alternating current. Resistors, capacitors and inductors in AC circuits. The transformer. Properties of electromagnetic waves. The spectrum of electromagnetic waves.	21	37. Alternating current. Resistors, capacitors and inductors in AC circuits.
		21	38. The transformer. Properties of electromagnetic waves. The spectrum of electromagnetic waves.

20	20. The nature of light. Reflection, refraction and dispersion. Total internal reflection and its medical applications. Lenses and mirrors. Flat mirrors. Images formed by spherical mirrors.	22	39. The nature of light. Reflection, refraction and dispersion. Total internal reflection and its medical applications.
		23	40. Lenses and mirrors. Flat mirrors. Images formed by spherical mirrors.
21	21. Thin lenses. Images formed by lenses. Lens aberrations. Wave optics. Conditions for interference, polarization of light. Diffraction. The camera, the simple magnifier, the compound microscope, the telescope and the eye.	23	41. Thin lenses. Images formed by lenses. Lens aberrations.
		24-25	42. Wave optics. Conditions for interference, polarization of light. Diffraction. The camera, the simple magnifier, the compound microscope, the telescope and the eye.
22	22. Quantum physics. Blackbody radiation, photoelectric effect, generation of X-ray. The dual nature of light and matter. The wave function. The uncertainty principle	27	43. Quantum physics. Blackbody radiation, photoelectric effect, generation of X-ray
		27	44. The dual nature of light and matter. The wave function. The uncertainty principle
23	23. Atomic physics. Early Models of the Atom. Atomic spectra. The Bohr Model. Quantum mechanics and the Hydrogen atom. The exclusion principle and the periodic table. Characteristic X-ray. Atomic Transitions and Laser.	28	45. Atomic physics. Early Models of the Atom. Atomic spectra. The Bohr Model. Quantum mechanics and the Hydrogen atom.
		28	46. The exclusion principle and the periodic table. Characteristic X-ray. Atomic Transitions and Laser.
24	23. Some properties of the nuclei. Binding energy. Radioactivity, the decay processes. Medical application of radioactivity. Nuclear reactions. Nuclear fission and fusion. Positron and other antiparticles. Mesons and quarks.	29	47. Some properties of the nuclei. Binding energy. Radioactivity, the decay processes. Medical application of radioactivity.
		30	48. Nuclear reactions. Nuclear fission and fusion. Positron and other antiparticles. Mesons and quarks.

Suggested book: Raymond A. Serway, Jerry S. Faughn, Chris Vuille: *College Physics, 9th Edition*. Brooks/Cole, Cengage Learning, 2012