

CALL FOR ADMISSION AND TRANSFERS FROM OTHER UNIVERSITIES TO COURSE YEARS SUBSEQUENT TO THE FIRST ONE

RESERVED FOR EUROPEAN AND NON - EU CITIZENS REGULARLY RESIDENT IN ITALY

*Master's Degree Program in Medicine and Surgery
Academic Year 2020/2021*

PART I

ADMISSION TO THE FIRST YEAR

This document is the translation into English of the Call for Admission to the Master's Degree Program in Medicine & Surgery (Rector's Decree 22 November 2019, no.361). **The document written in English has no legal value. The Italian version is the official document regulating this Call.** In case of conflicting issues between the English and the Italian version, the Italian version succeeds. Admission to the Master's Degree Program in Medicine and Surgery is regulated by an evaluation procedure according to the number of available places as indicated here below:

40 places available for European citizens and NON - EU citizens regularly resident in Italy.

The number of places made available may vary as a result of the provisions of the Decree of the Ministry of Education, University and Research (M.I.U.R.) in compliance with Law 2 August 1999, no. 264. The University will make the relevant Ministerial Decree accessible from the University's website at www.unicampus.it/ammissioni. In case of a reduction in the number of available places as a result of the ministerial assignment, the candidates enrolled on the basis of the procedures set out in this Call for Admission will forfeit and compete for any available places in the modalities provided for eligible candidates.

1. ENROLLMENT REQUIREMENTS

The only candidates who can participate in the enrollment procedure are European citizens and NON - EU citizens regularly resident in Italy, who have obtained or will obtain in the academic year 2019/2020 the High School Diploma or another valid qualification obtained abroad to access to University (in accordance with the provisions published annually by the Ministry of Education, University and Research on the website www.studiare-in-italia.it/studentistranieri). In case of a reduction in the number of available places as a result of the ministerial assignment, the candidates enrolled on the basis of the procedures set out in this Call for Admission will forfeit and compete for any available places in the modalities provided for eligible candidates.

Candidates' Secondary School qualification is deemed as valid if obtained after at least 12 years of education, accompanied by the Declaration of Value issued by the Italian diplomatic authorities in their country of origin.

In the event that the local school system is structured in 11 or 10 years of schooling, the qualification is valid only if integrated with one or two years of university and the candidate must provide proof of the successful completion of the required exams for the attended academic years.

2. REGISTRATION TO THE ADMISSION TEST

The application form must be submitted exclusively online at www.unicampus.it/ammissioni.

In order to register to the Admission test, it is necessary to:

1. Complete the online form accessible at this webpage: www.unicampus.it/ammissioni, **from December 5, 2019 to February 28, 2020 within 1 pm (Central European Time – CET);**
2. Pay the application fee of € 170,00 **not later than February 28, 2020 within 1 pm (CET);**

Under no circumstances the application fee will be reimbursed.

To complete the form, it is necessary to proceed as follows:

- Insert your personal data;
- Insert information on your studies and language certification (if already obtained);
- Make payment of the application fee of **€ 170,00** (one hundred seventy/00).

The candidate will receive a confirmation email after each step of the application process and will be able to modify his/her personal data until **February 28, 2020 within 1 pm (CET)**.

It is the candidate's own responsibility to verify the correct entry of the data required by the admission procedure. Entering false or incorrect data, or failing to provide the required information, will result in the exclusion from the procedure and from the final ranking, as well as the loss of the right to enroll or the annulment of the enrollment. Campus Bio-Medico University of Rome reserves the right to verify all data and information provided by candidates.

For any information regarding the admission procedure (e.g. call for admission, notices of competition, instructions, etc.), please contact the appointed offices at +39 06.22.541.9281/9056/8124/9255/8715. For information on the enrollment procedure, please contact the Student Services Office (+39 06.22.541.9074/9047/9044).

Candidates with disabilities, pursuant to Law 104/92, and candidates with learning disabilities, pursuant to Law no. 170/2010, which require special conditions or special aids for the examination, must send a specific request to dsa@unicampus.it, attaching the related certification proving the disability or SLD level, issued in the country of residence and accompanied by a sworn translation in Italian or English that specifies the essential elements regarding the aforementioned benefits in order to enable the University to prepare accordingly to guarantee an equal participation in the tests. The University reserves the right to verify what the candidate has certified. Only certifications produced in Italian or English will be examined.

3. WRITTEN ADMISSION TEST

The Admission Test will be held on **March 10, 2020 at 10.00 A.M (CET)**. The candidates are required to be present at 08.30 A.M. The location of the test will be announced by February 28, 2020 on the University website www.unicampus.it/ammissioni.

The written test will have a duration of 2 hours and 30 minutes, it includes **100 multiple-choice questions** as follows: **Logical reasoning (50 questions), Biology (15 questions), Chemistry (15 questions), Physics and Mathematics (15 questions), General Knowledge (5 questions)**. Syllabuses for each discipline are listed in Annex A as part of this call. During the test, candidates are not allowed to use any electronic device.

Points are assigned as follows:

- 1 point for each correct answer;
- -0.2 point for each incorrect answer;
- 0 points for each not given answer;

The highest achievable score in the written test is 100 points.

4. ADMISSION TO THE MD PROGRAM

Candidates will be accepted to the MD Program in Medicine and Surgery on the basis of the total achieved score, in hundredths, which will determine the position in the final ranking list.

If two candidates achieve the same score, the one who obtained a higher score in Logical reasoning section prevails; In case of further tie, the candidate who obtained a higher score in Biology, Chemistry,

Physics and Mathematics will prevail. In case of a further tie, the place will be assigned to the younger candidate. In order to be eligible, candidates must score at least 20 points.

Candidates will be admitted to the MD Program on the basis of the final ranking until all available positions have been assigned. The final ranking based on merit order, will be issued by Rector Decree and will be published on the University website www.unicampus.it/ammissioni by **March 13, 2020**. Each candidate can verify their position in the ranking list by using the code “ID Domanda” assigned during the registration procedure.

From **March 16, 2020**, each candidate (including non-eligible candidates) can view the final score by accessing his/her personal page on the website www.unicampus.it/ammissioni with the credentials assigned during the admission test. They can also view the test results in each discipline and in case they have been assigned any additional learning obligations (OFA - Obbligo Formativo Aggiuntivo, see paragraph 6).

5. ENROLLMENT – PHASE 1

At the end of the admission test:

- The winning candidates have to enroll **between March 16, 2020 and not later than March 27, 2020 within 1pm (CET)** and are required to:

a) make payment of € 8.000,00 (eight thousand/00), corresponding to the first installment of the tuition fee, annually issued by Rector’s Decree, to be made by pre-filled debit note (MAV) available on the website www.unicampus.it/ammissioni as per instructions published on the same page;

b) deliver to the Student Services Office or fax at +39 06225411939 or send via certified email (PEC) to segreteria.studenti@postasicura.unicampus.it the receipt certifying the payment of the MAV referred to in point (a).

Winning candidates who do not make payment in accordance with the terms and conditions set out in points (a) and (b) shall be automatically deemed withdrawn. The first candidate in the ranking list with a yearly income (ISEE Diritto allo Studio) below € 60.000¹ is granted exemption from the payment of the tuition fee as beneficiary of the scholarship funded by the Campus Bio-Medico University of Rome, reserved for Italian and EU candidates aimed at the admission to the Master’s Degree Program in Medicine and Surgery for the academic year 2020/2021. In the event that the candidate who has been awarded the scholarship does not enroll, the allocation of this scholarship made available for the academic year 2020/2021 is carried out in order of ranking and it will be assigned to a candidate with a yearly income (ISEE Diritto allo Studio) below € 60.000.

- From **March 28, 2020**, according to the ranking order **any remaining places** (not assigned to the winners by March 27, 2020) **will be assigned to eligible candidates.**

The eligible candidates will be informed of the allocation of any remaining places by the Student Services Office through certified email (segreteria.studenti@postasicura.unicampus.it) to the e-mail address provided by each candidate on the application form to the admission test. **It is the candidate's own responsibility to ensure receipt of communications from the University within the appropriate time.**

The number of candidates called during the reallocation procedure as a result of non-enrollment or renunciation, is published on the University's website www.unicampus.it/ammissioni.

¹ To this purpose, when submitting the online application, ISEE Diritto allo Studio 2019 or alternatively ISEE Diritto allo Studio 2020 must be provided.

The eligible candidate, **within 24 hours** from the receipt of the communication from the Student Services Office, has the possibility to enroll and is required to:

- a) make payment of € 8.000,00 (eight thousand/00), corresponding to the first installment of the tuition fee, to be made by pre-filled debit note (MAV) available on the website www.unicampus.it/ammissioni as per instructions published on the same page;
- b) deliver to the Student Services Office or fax at +39 06225411939 or send via certified email (PEC) to segreteria.studenti@postasicura.unicampus.it the receipt certifying the payment of the MAV referred to in point (a).

Eligible candidates who, having been duly notified, do not make payment in accordance with the terms and conditions set out in points (a) and (b) shall be automatically deemed withdrawn.

Enrollment is considered subject to conditions until the publication of the Ministerial Decree regarding the allocation of the places available for the academic year 2020/2021 for admission to the Master's Degree Program in Medicine and Surgery at the Campus Bio-Medico University of Rome, and until the successful achievement of the high school diploma and the language certification. For the purposes of the aforementioned language certification, **only the certifications listed in Annex B are accepted**. **The requirement to possess the appropriate language certification must be met within the terms and conditions of paragraph 6. In the absence of this requirement, the student shall forfeit his or her enrollment and the tuition fee paid for the purposes of enrollment shall not be refunded. Therefore, these candidates are invited to ensure in good time to obtain, if they do not have it, the adequate certification.**

The amount of the first installment can only be refunded to:

- candidates who do not obtain the High School Diploma in the school year 2019/2020;
- candidates, enrolled under the abovementioned conditions, who, as a result of the reduction in the number of places assigned each year by the Ministry of Education, University and Research, are unable to complete their enrollment by complying with the requirements of paragraph 6 herebelow;
- candidates who are beneficiaries of a scholarship made available by Campus Bio-Medico University of Rome for the academic year 2020/2021, who have succeeded following the withdrawal of the exempted candidates.

6. ENROLLMENT – PHASE 2

- the candidates who have successfully completed PHASE_I in accordance with the terms and conditions specified in paragraph 5, **between July 10, 2020 and not later than July 24, 2020 within 1 pm (CET) are required to:**

- a) deliver to the Student Services Office or fax at +39 06225411939 or send via certified email (PEC) to segreteria.studenti@postasicura.unicampus.it the enrollment form available on the University's website www.unicampus.it/ammissioni, duly completed and signed;
- b) enclose to the enrollment form the receipt certifying the payment of the second installment of the tuition fee, equal to € 4.140,002 (four thousand one hundred and forty/00) and inclusive of the regional tax for the Right to University Studies, to be made by pre-filled debit note (MAV) available on the website www.unicampus.it/ammissioni; the third and last installment, equal to € 6.000,00 (six thousand/00), must be paid by March 26, 2021;
- c) enclose the self-declaration of achievement of the High School Diploma with the indication of the score, year and Institute that issued it. If the high school diploma has been obtained abroad, the same should be accompanied by the Declaration of Value;

² The € 140.00 regional tax for the Right to University Studies may vary depending on the deliberations made by the Lazio Region.

- d) enclose the renunciation of studies (art. 142 of Rector's Decree no. 1592 of August 31, 1933) or no impediment to transfer in case of enrollment at another University;
- e) attach the **language certification at least equal to level B2 CEFR** (Common European Framework of Reference of Languages) **as specified in Annex B**. Candidates who have attended at least one year of high school with didactics provided in English are exempt from the presentation of a language certificate. These candidates must provide a certificate of attendance issued by the High School with an explicit statement of the period of attendance and the language of delivery of the teaching. Candidates who have taken the BMAT test are also exempt. These candidates must provide the final evaluation report in Section 3 English.

Candidates who do not make payment within July 24, 2020 at 1pm (CET) shall be automatically deemed withdrawn.

- **From August 26, 2020**, according to the ranking order, **any remaining places** (not assigned to the winners by July 24, 2020) **will be assigned to eligible candidates.**

The number of candidates called during the reallocation procedure as a result of non-enrollment or renunciation, is published on the University's website www.unicampus.it/ammissioni.

The eligible candidates will be informed of the allocation of any remaining places by the Student Services Office through certified email (segreteria.studenti@postasicura.unicampus.it) to the e-mail address provided by each candidate on the application form to the admission test. **It is the candidate's own responsibility to ensure receipt of communications from the University within the appropriate time.**

The eligible candidate, within 24 hours from the receipt of the communication from the Student Services Office, has the possibility to enroll and is required to:

- a) deliver to the Student Services Office or fax at +39 06225411939 or send via certified email (PEC) to segreteria.studenti@postasicura.unicampus.it the enrollment form available on the University's website www.unicampus.it/ammissioni, duly completed in its entirety and signed;
- b) enclose to the enrollment form the receipt certifying the payment of the first and the second installment of the tuition fee, equal to € 12.140,00³ (twelve thousand one hundred and forty/00) and inclusive of the regional tax for the Right to University Studies, to be made by pre-filled debit note (MAV) available on the website www.unicampus.it/ammissioni; the third and last installment, equal to € 6.000,00 (six thousand/00), must be paid by March 26, 2020.
- c) enclose the self-declaration of achievement of the High School Diploma with the indication of the score, year and Institute that issued it;
- d) enclose the renunciation of studies (art. 142 of Rector's Decree no. 1592 of August 31, 1933) or no impediment to transfer in case of enrollment at another University;
- e) attach the **language certification at least equal to level B2 CEFR** (Common European Framework of Reference of Languages) **as specified in Annex B**. Candidates who have attended for at least one year a high school with didactics provided in English are exempt from the presentation of a language certificate. These candidates must provide a certificate of attendance issued by the High School with an explicit statement of the period of attendance and the language of delivery of the teaching. Candidates who have taken the BMAT test are also exempt. These candidates must provide the final evaluation report in Section 3 English.

Eligible candidates who, having been duly notified, fails to comply with the aforementioned 24-hour deadline shall be automatically deemed withdrawn.

³ The € 140.00 regional tax for the Right to University Studies may vary depending on the deliberations made by the Lazio Region.

For any information regarding the admission procedure (e.g. notices of competition, instructions, etc.), please contact the appointed offices at +39 06.22.541.9281/9056/8121/9255/8715. For information on the enrollment procedure, please contact the Student Services Office (+39 06.22.541. 9074/9047/9044).

Candidates enrolled according to the above procedures, who have not answered correctly at least half of the questions in a single discipline of the admission test (at least 7 in Biology, 7 in Chemistry and 7 in Mathematics and Physics) are admitted with **additional learning requirement** (Obbligo Formativo Aggiuntivo - OFA), limited to the discipline in question. Thence, those students are expected to follow a specific course aimed at fulfilling the training requirement before taking the exam provided for in the Study Plan, and in any case within the first year. The satisfaction of the OFA will be verified by the professors of the courses.

The tuition fee paid for enrollment purposes shall not be refunded other than in the cases explicitly provided for in this Call for Admission.

7. REQUIREMENTS TO RETAIN THE SCHOLARSHIP

Students who have been awarded the scholarship referred to in point 5 of this Call for Admission may retain the benefit in the years following the first one within the legal duration of the course if, by September 30 of each year:

- a) they have acquired at least the same number of Academic Credits (Credito Formativo Universitario - CFU) as shown in the table hereunder:

Course Year	no. Academic Credits (CFU)/Obtainable Academic Credits
II	42/53
III	106/123
IV	169/184
V	209/233
VI	272/292

- b) they have obtained a grade point average (GPA) in the exams relating to the total credits obtained at least equal to 28/30.

In the event of forfeiture, revocation or withdrawal by students who have been awarded a scholarship, the remaining places will be allocated to those students who have obtained the highest number of Academic Credits with the highest average in the year preceding the year of allocation. This procedure, eventually launched with a specific Call for Competition, is reserved for students enrolled at Campus Bio-Medico University of Rome in the academic year 2020/2021 who have a yearly income (ISEE Diritto allo Studio) below € 60.000.

PART II

TRANSFERS

The notice of any available places for transfers to the second year of the Master's Degree Program in Medicine and Surgery will be published by October 2, 2020 on the University's website www.unicampus.it/ammissioni.

Contextually, any registration procedure for the selection tests will be activated according to the modalities and terms indicated hereunder.

1. REQUIREMENTS FOR THE REGISTRATION TO THE ADMISSION TEST

Admission to the second year of the Master's Degree Program in Medicine and Surgery is **only allowed for transfers to the year of course directly following the year of origin** (e.g. a student enrolled in the first year of the MD Program in Medicine and Surgery participates in the admission for the transfer to the second year of this course).

Can participate in the admission test:

- students from other Italian universities enrolled in the first or second year of the course, respectively for the admission procedures to the second and third year of the course;
- students from non-Italian universities subject to verification of the programs of the courses held in the university of origin compared to those provided by the educational system of this university.

In order to transfer to the second year, the candidate must have obtained at least 35 Academic Credits (CFU), of which:

- at least 3 CFUs in the SSD L-LIN/12;
- at least 24 CFUs in the SSD BIO/09, BIO/10, BIO13 and BIO/16;
- at least 3 CFUs in the SSD FIS/07;
- at least 5 CFUs in SSD MED/01 INF/01.

2. REGISTRATION TO THE ADMISSION TESTS

Upon verification of the number of places available, registration to the admission tests requires:

- the online completion of the application form, available on the University's website www.unicampus.it/ammissioni **from October 5, 2020 to October 19, 2020 within 1pm (CET)**. It is required to enclose to the application form the certificate of exams done, accompanied, where necessary, by a sworn translation into Italian.
- payment of the registration fee of € 170.00 (one hundred and seventy/00) by pre-filled debit note (MAV) also available online, **no later than October 19, 2020 within 1pm (CET)**.

In order to register, each candidate must sign up at the University's website www.unicampus.it/ammissioni, obtaining a username and a password.

For any information regarding the admission procedure (e.g. notices of competition, instructions, etc.), please contact the appointed offices at +39 06.22.541.9281/9056/8124/9255/8715. For information on the enrollment procedure, please contact the Student Services Office (+39 06.22.541. 9044/9042/9043/9047).

Candidates with disabilities, pursuant to Law 104/92, and candidates with learning disabilities, pursuant to Law no. 170/2010, which require special conditions or special aids for the examination, must send a specific request to dsa@unicampus.it, attaching the related certification proving the disability or SLD level, issued in the country of residence and accompanied by a sworn translation in Italian or English that specifies the essential

elements regarding the aforementioned benefits in order to enable the University to prepare accordingly to guarantee an equal participation in the tests. **The University reserves the right to verify what the candidate has certified.** Only certifications produced in Italian or English will be examined

3. EVALUATION OF THE CURRICULUM STUDIORUM

Each candidate's curriculum studiorum will be awarded a maximum score of 20 points as indicated hereafter:

- | | |
|---|-----------|
| - arithmetic mean higher than or equal to 28/30 | 20 points |
| - arithmetic mean higher than or equal to 26/30 and less than 28/30 | 16 points |
| - arithmetic mean higher than or equal to 24/30 and less than 26/30 | 12 points |
| - arithmetic mean higher than or equal to 22/30 and less than 24/30 | 8 points |
| - arithmetic mean less than 22/30 | 4 points |

For students who come from non-Italian universities, the grades of the exams must be converted in advance according to the correspondence tables provided in the application form.

4. ORAL INTERVIEW

The interview, held in English, aims at assessing the candidate's overall cultural profile, also on the basis of the knowledge and skills documented in the curriculum studiorum. The interview will take place at Campus Bio-Medico University of Rome (Via Álvaro del Portillo, 21 - 00128 Rome), starting from October 28, 2020.

The Commission can grant up to 30 points for the assessment of the interview.

5. ADMISSION TO THE MD PROGRAM

Admission to the Master's Degree Program in Medicine and Surgery is based on the merit ranking defined according to the total score achieved by each candidate and expressed in fiftieths. Students with a minimum score of 34/50 are eligible for admission. In the event of a tie in the final ranking, the candidate with the highest score in the evaluation of the curriculum studiorum shall prevail. In case of further tie, the candidate with the highest arithmetic mean of the exam grades shall prevail. In the event of a further tie, the youngest candidate shall prevail.

The merit ranking of the winners, listed in alphabetical order, is issued by Decree of the Rector and published on the University's website www.unicampus.it/ammissioni.

The list of eligible candidates and the list of non-eligible candidates, compiled in order of ranking, are issued by Decree of the Rector and published on the University's website www.unicampus.it/ammissioni.

6. ENROLLMENT

Winning candidates, **within three working days from the publication of the results, in order to enroll are required to:**

- deliver to the Student Services Office or fax at +39 06225411939 or send via certified email (PEC) to segreteria.studenti@postasicura.unicampus.it the enrollment form available on the University's website www.unicampus.it/ammissioni, duly completed in its entirety and signed;
- enclose to the enrollment form the receipt certifying the payment of the first installment of the tuition fee, equal to € 6.140,00⁴ (six thousand one hundred and forty/00) and inclusive of the regional tax for the Right to University Studies, to be made by pre-filled debit note (MAV) available online;
- enclose the transcript from the previous university with the enrollment form;

⁴ The € 140.00 regional tax for the Right to University Studies may vary depending on the deliberations made by the Lazio Region.

- d) attach to the enrollment form a copy of the transfer application submitted to the University of origin.

Winners who do not enroll by the aforementioned date are automatically deemed withdrawn, and the remaining vacant places are made available to the eligible candidates according to the ranking order.

The eligible candidates will be informed of the allocation of any remaining places by the Student Services Office through certified email (segreteria.studenti@postasicura.unicampus.it) to the e-mail address provided by each candidate on the application form to the admission test. **It is the candidate's own responsibility to ensure receipt of communications from the University within the appropriate time.**

The eligible candidate, **within 24 hours** from the receipt of the communication from the Student Services Office, has the possibility to enroll according to the above-mentioned modalities.

Eligible candidates who, having been duly notified, fails to comply with the aforementioned 24-hour deadline shall be automatically deemed withdrawn.

Under no circumstances the installment of tuition fee already paid shall be refunded.

7. COMPULSORY VACCINATIONS

The winning student, at the time of enrollment, declares its commitment to undergo within 60 days from enrollment:

1. the tuberculin test to be done with the Mantoux technique, according to the guidelines for the control of tubercular disease and the D.P.R. 7.11.2001, no. 465, which regulates the anti-tubercular vaccination; this test must be performed at the ASL (Local Health Authority) of residence;
2. vaccination against viral hepatitis B, vaccination against diphtheria, poliomyelitis and tetanus.

Enrolled students must deliver to the Medical Surveillance of Campus Bio-Medico University of Rome a copy of the aforementioned vaccination certificates, **during the preventive medical examination, following the notification by email from the Medical Surveillance** for the checks aimed at receiving the medical certificate of eligibility.

Annex A

Syllabus regarding the content of the Admission Test

For admission to the course a general knowledge in the fields of literature, history, philosophy, social and institutional studies is required, as well as the ability to analyze written texts, logical and mathematical reasoning skills.

The knowledge and the skills required are, however, those promoted by educational institutions that organize educational and teaching activities consistent with the Ministerial Programs, especially in view of the State Examinations and also refer to the scientific disciplines of Biology, Chemistry, Physics, and Mathematics.

General knowledge and logical reasoning

Assessment of the ability to properly use the language used in the courses and of logical reasoning in a consistent manner with the premises as set out in symbolic or verbal form through multiple-choice questions formulated with short sentences, discarding the incorrect, arbitrary, or less likely conclusions.

The questions will be based on scientific essays or narrative by classical or contemporary authors, or on texts appearing in newspapers or in general or specialized magazines. Questions will also focus on abstract cases or problems, whose solution requires the adoption of different forms of logical reasoning. Questions related to general knowledge, covered during the study curriculum, complete this area of evaluation.

Questions related to history can refer also to the Twentieth Century history and current world events.

Questions related to social and institutional studies, which are consistent with the national guidelines and the activities carried out for “Citizenship and Constitution”, will be also related to the Constitution, communication and mass communication tools, economy and politics organization, state and government forms.

Biology

- The chemistry of living organisms.
- The biological importance of weak interactions.
- The organic molecules found in living organisms and their functions.
- The role of enzymes.
- The cell as the basis of life.
- Cell theory. Cell size. The prokaryotic and eukaryotic cell in animals and plants. Viruses.
- The cell membrane: structure and functions - transport through the membrane.
- Cellular structures and their specific functions.
- Cell cycle and cell division: mitosis and meiosis - chromosomes and chromosome maps.
- Bioenergetics.
- The energy assessment of cells: ATP.
- Redox reactions in living organisms.
- The energetic processes: photosynthesis, glycolysis, aerobic respiration and fermentation.
- Reproduction and heredity.
- Life cycles. Sexual and asexual reproduction.
- Mendelian Genetics. Fundamental laws and applications.
- Classical genetics: chromosome theory of heredity; patterns of heredity.
- Molecular Genetics: structure and replication of DNA, the genetic code, protein synthesis. The DNA of prokaryotes. The structure of the eukaryotic chromosome. Genes and regulation of gene expression.
- Human genetics: transmission of mono- and multifactorial characters; hereditary diseases linked to the X chromosome and autosomal
- Biotechnology: Recombinant DNA technology and its applications.

- Heredity and environment.
- Mutations. Natural and artificial selection. Evolutionary theories. The Genetic basis of evolution.
- Anatomy and physiology of animals and man
- Animal tissues
- Anatomy and physiology of systems and equipment in humans and their interactions.
- Homeostasis.

Chemistry

- The constitution of matter: states of matter; heterogeneous systems and systems homogeneous; compounds and elements.
- Ideal Gas Laws.
- The structure of the atom: elementary particles; atomic number and mass number, isotopes, electronic structure of atoms of different elements.
- The periodic system of elements: groups and periods; transition elements; periodic properties of the elements: atomic radius, ionization potential, electron affinity; metallic character. Relations between electronic structures, position in the periodic system of elements and properties.
- Chemical bonding: ionic bonding, covalent bonding, and metallic bonding. Energy binding. Polarity of bonds. Electronegativity.
- Fundamentals of inorganic chemistry: nomenclature and main properties of inorganic compounds: oxides, hydroxides, acids, salts.
- The chemical reactions and stoichiometry: molecular and atomic mass, Avogadro's number, mole concept and its application, stoichiometry elementary balance of simple reactions, the different types of chemical reaction.
- Solutions: solvent properties of water; solubility; The main ways of expressing the concentration of solutions.
- Equilibria in aqueous solution.
- Elements of chemical kinetics and catalysis.
- Oxidation and reduction: oxidation number, the concept of oxidant and reductant.
- Balance of simple reactions.
- Acids and bases: concepts of acid and base; acidity, neutrality or alkalinity of aqueous solutions; the pH. Hydrolysis. Buffer solutions.
- Fundamentals of organic chemistry: bonds between carbon atoms; formulas and rough texture, concept of isomerism. Aliphatic, alicyclic and aromatic hydrocarbons. Functional groups: alcohols, ethers, amines, aldehydes, ketones, carboxylic acids, esters, amides. Elements of nomenclature.

Physics

- Measures: direct and indirect measures, fundamental and derived quantities, physical dimensions of quantities, knowledge of the metric system and the CGS System of Units, Technician (or Practical) (ST) and International (SI) units of measurement (names and relations between fundamental and derived units), and multiples (names and values).
- Kinematics: kinematic quantities, various motions with particular regard to uniform and uniformly accelerated motion; uniform circular motion; harmonic motion (for all motions: definition and relationship between the kinematic quantities related).
- Dynamic: vectors and vector operations. Forces, motion of forces around a point. Vector composition of forces. Definitions of mass and weight. Acceleration of gravity. Density and specific gravity. Law of universal gravitation, 1st, 2nd, and 3rd laws of motion. Work, kinetic energy, potential energy. Principle of conservation of energy. Impulse and momentum. Principle of conservation of momentum.
- Fluid mechanics: pressure, and its unit of measure (not only in the SI system). Archimedes' principle, Pascal's and Stevin's laws.
- Thermology and thermodynamics: thermometry and calorimetry. Specific heat, thermal capacity. Mechanisms of heat propagation. Changes of state and latent heats. Ideal Gas Laws. First and second law of thermodynamics.
- Electrostatics and electrodynamics: Coulomb's law. Electric field and potential. Dielectric constant. Capacitors. Capacitors in series and in parallel capacitors. Current. Ohm's law. Electrical resistance and

resistivity, electrical resistors in series and in parallel. Work, Power, Joule effect. Generators. Electromagnetic induction and alternating currents. Effects of electric currents (thermal, chemical, and magnetic).

Mathematics

- Sets of numbers and algebra: natural numbers, integers, rational and real numbers. Sorting and comparison; order of magnitude and scientific notation. Operations and their properties. Proportions and percentages. Powers with integer exponents, rational and their properties. Radicals and their properties. Logarithms (base 10 and base e) and their properties. Elements of combinatorics. Algebraic expressions, polynomials. Major products, nth power of a binomial, factoring polynomials. Algebraic fractions. Algebraic equations and inequalities of the first and second grade. Systems of equations.
- Functions: fundamental notions about the functions and their graphical representations (domain, codomain, sign, maxima and minima, and monotonicity, etc.). Elementary functions: algebraic integer and fractional, exponential, logarithmic, trigonometric. Composite functions and inverse functions. Trigonometric equations and inequalities.
- Geometry: Polygons and their properties. Circumference and circle. Measurements of lengths, areas, and volumes. Isometries, similarities, and equivalences in the plan. Loci. Measure of angles in degrees and radians. Sine, cosine, tangent of an angle and their significant values. Trigonometric formulas. Solving triangles. Cartesian reference system in the plane. Distance between two points and the midpoint of a segment. Equation of the line. Terms of parallelism and perpendicularity.
- Distance of a point from a line. Equation of the circle, the parabola, hyperbola, of the ellipse and their representation in the Cartesian plane. Pythagorean Theorem. Euclid Theorem (first and second).
- Probability and Statistics: Frequency distributions depending on the type of character and the main graphical representations. Definition of random experiment and event. Probability and frequency.

Certifier	Level	English certifications for the 4 skills
Cambridge English Language Assessment	C2	Cambridge English: Proficiency (CPE)
	C1	Cambridge English: Advanced (CAE)
		Cambridge English: Business Higher (BEC Higher)
	B2	Cambridge English: First (FCE) Cambridge English Business Vantage (BEC Vantage)
City and Guilds (Pitman)	C2	Level 3 Certificate in International ESOL Diploma Mastery C2
	C1	Level 2 Certificate in International ESOL Diploma Expert C1
	B2	Level 1 Certificate in International ESOL Diploma Communicator B2
Edexcel / Pearson Ltd	C2	PTE General Level 5 Proficient
		PTE Academic Score ≥ 85
	C1	PTE General Level 4 Advanced
		PTE Academic Score 76-84
B2	PTE General Level 3 Upper Intermediate	
	PTE Academic Score 59-75	
IELTS	C2	IELTS band 8.5 - 9.0
	C1	IELTS band 7.0 - 8.0
	B2	IELTS band 5.5 - 6.5
TCL Trinity College London	C2	Integrated Skills in English (ISE) IV
	C1	Integrated Skills in English (ISE) III
	B2	Integrated Skills in English (ISE) II
TOEFL ETS	C1	TOEFL score 110-120
	B2	TOEFL score 87-109