AMENDMENT TO THE CALL FOR APPLICATION FOR ADMISSION TO THE SINGLE CYCLE DEGREE COURSE IN MEDTEC SCHOOL

Given the epidemiological emergency caused by COVID-19;

Given that the scale of the epidemic has affected the whole national territory and urgent measures, which have outlined Italy as a "protected zone", have become necessary to contain the contagion;

Humanitas University considers it appropriate and essential to postpone the admissions test to the single cycle degree course in MEDTEC School for the academic year 2020/21, on September 4th 2020, at 2 pm.

The registration procedures specified in this Call in Art. 3 remain valid.

Registrations for the new date are extended until August 26th 2020.

Registrations remain valid for candidates who have already completed their registration before the exam date change.

Candidates who wish to register and candidates who wish to complete the registration must complete all procedures by August 26th 2020.

Pieve Emanuele, March 16th 2020

CALL FOR APPLICATIONS, RESERVED FOR EU CITIZENS AND EU-EQUATED CITIZENS, FOR ADMISSION TO THE SINGLE CYCLE DEGREE COURSE IN MEDICINE AND SURGERY (Class LM-41) IN THE ENGLISH LANGUAGE OF HUMANITAS UNIVERSITY CALLED MEDTEC SCHOOL.

Academic Year 2020/2021

Foreword
This document is provided for the convenience of International Students. In the case of disputes, all candidates must refer to the official source "BANDO DI CONCORSO, RISERVATO AI CITTADINI COMUNITARI ED EQUIPARATI, PER L'AMMISSIONE AL CORSO DI LAUREA MAGISTRALE A CICLO UNICO IN MEDICINA E CHIRURGIA (Classe LM-41) IN LINGUA INGLESE DI HUMANITAS UNIVERSITY DENOMINATO MEDTEC School."

Art. 1 - Number of Places Available
For the academic year 2020/21, the number of available places for EU and EU-equated citizens (as specified in Article 2 of this announcement) is set at **50**. The number of places available is subject to possible change in accordance with a future decree of the Ministry of Education, University and Research (MIUR), in accordance with Law 2. August 1999, n. 264. The MIUR Decree could confirm, increase, or decrease the number of places specified in this announcement.

Art. 2 - Admission Requirements
Only candidates holding citizenship and education requirements specified below are eligible to apply.

Citizenship Requirements
Candidates who are:

- Citizens of Italy and of European Union member states;
- Citizens of Italy and of European Union member states in possession of additional citizenship of a country not belonging to the European Union;
- Citizens of the United Kingdom, Norway, Iceland, Liechtenstein, Switzerland, the Republic of San Marino;
- Non-EU citizens holding a residence card or a residence permit in Italy for employment or self-employment, family, political asylum, asylum for humanitarian or religious reasons (according to Article 26 of Law no. 189/2002);
- Non-EU citizens legally residing in Italy for at least one year in possession of a secondary or higher education qualification obtained in Italy (according to art. 26 of Law n. 189/2002);
- Non-EU citizens, resident anywhere, who hold a diploma from an Italian school or an International School, operating in Italy or abroad. **These schools must have bilateral**

agreements or specific regulations for the recognition of the study title, which satisfy the general conditions required by law for entry into Italy for educational reasons (according to art. 26 of Law n. 189/2002);

- Refugees and holders of subsidiary protection;
- Personnel in service in foreign diplomatic missions and in international organizations based in Italy - accredited by the Italian State or the Holy See - and their dependent family members.

Candidates who apply and are in violation of the citizenship requirements of this article will be excluded from the rankings and will not be able to enroll at Humanitas University.

Education Requirements

Candidates in possession of a secondary school diploma at the date of the test and candidates who will obtain a secondary school diploma in the 2019/2020 academic year are eligible to take the Admissions Test.

Candidates who have obtained/will obtain a foreign diploma are considered eligible if the diploma has been/will be obtained after at least 12 years of education. The diploma must be accompanied by a Declaration of Value issued by the Italian Embassy/Consulate or by the Comparability Certificate issued by the institution CIMEA.

In the event that the local school system provides for 11 years or 10 years of schooling, the diploma is considered valid if it is integrated with one or two years of university. Candidates must have passed all the university exams required during the years attended.

Candidates who apply and are in violation of the education requirements of this article will be excluded from the rankings and will not be able to enroll at Humanitas University.

With reference to the recognition of foreign qualifications, the University will take into account the indications provided by the Ministry of Education, University and Research **"Procedures for entry, stay and enrollment of foreign / international students in courses of higher education in Italy for the academic year 2019-2020 "**(Updated 11 March 2019, http://www.studiare-in-italia.it/studentistranieri)

Art. 3 - Admissions Test Registration and Deadlines.
Registration for the Admissions Test is open from **December 16th, 2019 to March 13th, 2020.**

To register, the candidate must complete the following procedures:

I. Online Registration and Test Registration on the Humanitas University Web Portal

1. **Register online on the Humanitas Web Portal, "MyPortal":** https://humanitas.esse3.cineca.it
   The candidate must register on MyPortal by creating a username and password that will be used by the student to access his/her own reserved area on MyPortal;
2. **Enroll for the test on MyPortal with the username and password** received upon online registration.

In this process, the candidate is required to **select the test center** where he/she will take the test (Test Center Locations are found in Article 14 of this Call) and to pay the Registration Fee of **€ 165.00** with a credit card.

At this time, the candidate will receive a pre-matriculation number. This number is his/her identification number in the published final ranking of the Admissions Test.

The choice of the test center cannot be changed once a candidate has completed registration. The registration fee will in no circumstance be reimbursed.

II. Completion of Registration on the Politecnico – Milano website

1. **Register online on the Politecnico – Milano Web Portal**. The candidate is directed to this web portal immediately following the completion of the Admissions Test Registration and payment of € 165.00 on the Humanitas University MyPortal.

   On completion of Politecnico – Milano Registration, the candidate will receive a <u>Personal Code and Password necessary for Test Day.</u>

   This <u>Personal Code and Password</u> received from the Politecnico – Milano are different from the Humanitas University credentials for MyPortal and must be brought by the candidate on the day of the test to be able to sit the Admissions Test.

III. Registration Receipt

1. The candidate will receive an e-mail containing the Registration Receipt with the **address of the test site**, the indication of the classroom assigned at the site, the start time of the test, and the **Personal Code** received from Politecnico - Milano. **Candidates are required to bring the Registration Receipt with them to the test.**

   To note, the **Password** is not included in this email, but is required to electronically access the test on Test Day. Candidates are advised to memorize or write down this password to avoid denied access to the test. Candidates are required to bring the Registration Receipt with them on Test Day.

Art. 4 - Date and Location of the Admissions Test

The test will be held on **March 20, 2020 at 2.00 pm at Politecnico – Milano.** Additional Foreign Test Centers (Art. 14 of this Call) are available. The address and starting time of the test for these Test Centers are indicated in the Registration Receipt received via email.

All candidates must present themselves at the chosen venue one hour before the start of the test.

Art. 5 - Exam Procedure

The candidate must (1) present him/herself in the room indicated on the Registration Receipt, (2) with an Identification Document, and (3) sign-in with the Exam Proctor. Only national identity cards, passports and driving licenses are accepted.

Reasons for not being permitted to sit the test on Test Day:
- Arriving after the test has started;
- Arriving to a different classroom from the one assigned and indicated on the Registration Receipt
- Arriving without a valid ID documentation

During the test, communication between candidates, verbally or in writing, is strictly prohibited; verbal communication is only permitted with the Exam Proctor present in the classroom. Candidates will also not be able to have in their possession: bags or backpacks, books or notes, paper, pens, mobile phones, tablets, smart watches, calculators and/or any other electronic devices. Those in possession of these items must store them in a place that will be indicated by the classroom Proctor at the beginning of the Admissions test. **Candidates found in possession of these items during the test will be immediately disqualified and asked to leave.** The classroom Proctor, along with the Commission, will ensure compliance with these rules and will take the appropriate measures if they are not observed.

Art. 6 – Test Content
The Admissions Test for the Degree Course in Medicine and Surgery called MEDTEC School, entirely in English, consists of sixty (60) multiple-choice questions with five answer choices, of which only one is correct.

The test is computer-based, divided in five parts, and has a total time of 100 minutes. Sections, Number of Questions, and Time divisions are found in Table 1.

Based on the topics specified in Annex A, the following number of questions is prepared on the topics listed here:

Table 1

Section	Number of Questions	Time Allotted
Mathematics	20	40 minutes
Text Comprehension and Critical Reasoning	10	25 minutes
Chemistry and Physics	10	20 minutes
Biology	10	10 minutes
Technical and Scientific Knowledge	10	5 minutes
Total	**60**	**100 minutes**

When a section of the test ends, the candidate will no longer be able to access it.

Candidates with specific learning disabilities or those with disabilities pursuant to the law L. 104/1992 have the right to extend the time in accordance with what is specified in Art. 12 of this Call.

Art. 7 – Test Results and Ranking List

The maximum achievable score is 1.000 points.

Table 2 indicates, for each section of the test, the points awarded for a correct answer and the points subtracted for an incorrect answer. No points are awarded or subtracted for an empty answer response.

Table 2

Sections	Correct Response	Incorrect Response	Empty Response

Mathematics	+ 16 points	- 4 points	0 points
Text Comprehension and Critical Reasoning	+ 24 points	- 6 points	0 points
Chemistry and Physics	+ 16 points	- 4 points	0 points
Biology	+ 16 points	- 4 points	0 points
Technical and Scientific Knowledge	+ 12 points	- 3 points	0 points

Admission to the Degree Course in Medicine and Surgery called MEDTEC School will be granted to candidates based on the number of places available and the position on the Ranking List.

The Ranking List is made in order from the highest score to the lowest score achieved on the exam. Only scores equal to or greater than 400 points will enter into the Ranking List. Scores below 400 points are excluded.

In the event of a score tie, the following decision criteria are applied:

a) The higher ranking position will be assigned to candidates who have obtained the highest score respectively in order of the following sections: Mathematics, Comprehension of the Text and Critical Reasoning, Chemistry and Physics, Biology, Technical-Scientific Culture;
b) in case of further equal scores, priority will be given to the youngest student.

Art. 8 - Publication of the Ranking List
The Ranking List, determined according to the methods in Art. 7 of this Call, will be published by Humanitas University on **March 30, 2020** on the Humanitas University Website, www.hunimed.eu, guaranteeing the anonymity of the candidates. Each candidate will be able to view his/her position in the Ranking List with the Pre-Matriculation Number generated during the Humanitas Admissions Test Online Registration. Furthermore, through the username and password of the Humanitas University MyPortal, each candidate will be able to view his/her score in their reserved area.

Art. 9 - Online Enrollment and the Waiting List
Enrollment will be possible between **March 30, 2020** to **April 6, 2020**. To be completed exclusively online.
During this time:
- Candidates with a ranking position from n.1 to n.20, who are eligible for a scholarship funded by the University, will automatically be considered as **pre-enrolled** until the Scholarship Winners are announced[1].
- Candidates with a ranking position from n.21 to n.50 are eligible to **enroll**
- Candidates with a ranking position from n.51 to n.65 are eligible for **conditional enrollment** (Waiting List).

Between March 30, 2020 and April 6, 2020, both **admitted** (position n.21 to n.50) and **conditionally admitted** (position n.51 to n.65) candidates, must complete the online enrollment process, which is confirmed with the payment of the First Installment of Tuition, a total amount of € **4.156,00.**

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[1] Further information regarding the Conditions of Enrollment can be found in the MEDTED Scholarship Rules and Regulations 2020 – 2021, to be published on our website in January 2020.

Candidates (both admitted and conditionally admitted) who fail to complete the enrollment process and pay the First Installment of Tuition within the given timeframe will be withdrawn from the Ranking List and will not be able to enroll at Humanitas University.

Waiting List

Admission of **conditionally enrolled candidates** from the Waiting List is based on the withdrawals of admitted students. **An update on enrollment status** will be sent via email on **April 7, 2020.**

Places not covered

In the case of available places following enrollment of all Waiting List candidates, the following procedure will take place:

- Number of available places will be published on the University Website;
- Admitted candidates from position n.66 in the Ranking List must complete their enrollment (refer to Art. 9) by the **deadline indicated in their Admissions Email**;
- This procedure will be repeated until all available places have been filled.

Admitted candidates who fail to complete the enrollment process and pay the First Installment of Tuition within the given timeframe will be withdrawn from the Ranking List and will not be able to enroll at Humanitas University.

Art.10 - Reimbursement of the First Installment of Tuition

Reimbursement of the First Installment of Tuition, an amount of **€ 4.000,00**, is only possible for conditionally-enrolled candidates on the Waiting List who are not admitted due to lack of withdrawals. **In all other cases the First Installment is not reimbursed.**

The Lombardia Regional Tax, amounting to **€ 140.00**, can only be reimbursed to candidates who enroll to the first year in Humanitas University after having already been enrolled in a prior university in Lombardia in the same academic year.

Art.11 – The Online Enrollment Procedure

To complete the Online Enrollment Procedure, admitted and conditionally-admitted candidates are required to:

1. Upload the following documents to Humanitas University MyPortal
   - National ID Card or Passport;
   - Italian Codice Fiscale (front and back of card), if in possession;
   - A passport-sized headshot of candidate
2. Self-declare the secondary education qualification obtained/to be obtained in the 2019/2020 academic year;
3. Accept the Privacy Rules and the Fee Regulations;
4. Complete the payment of the First Installment of Tuition.

Completion of Steps 1 – 4 confirms the candidate's enrollment to the First Year of the Degree Course in Medicine and Surgery called MEDTEC School.

Italian and foreign students with educational qualifications obtained abroad must submit to the Student Office of Humanitas University the Declaration of Value, which is the official translation and legalization in Italian of the education qualifications and diploma of candidate. This is issued by the Italian Embassy/Consulate of the country where the education qualification was obtained.

After enrolling to the first year of the course, candidates who have completed prior university courses are able to apply for Credit Transfer, to be evaluated by Humanitas University.

Art. 12 – Candidates with Disabilities and/or Learning Differences

Candidates with any kind of disability in need of extra means of support must formally request the support they will need for this test in relation to the extent of their disability. Candidates with learning disabilities can request the special terms foreseen in the Ministerial Decree DM 5669/2011 to guarantee equal opportunities during the test, including additional time.

Among the candidates with **disabilities,** the following are considered: candidates who are blind, suffering from complete blindness or with vision not exceeding one tenth in both eyes; candidates who are deaf, from birth or before learning to speak; candidates with percentage of civil disability equal to or higher than 66%, candidates with a handicap certificate of disability according to Law 104/92 as amended by Law 17/99. Disabilities must be certified by an appropriate medical certificate issued by relevant health authorities. Certificates will be accepted only in Italian or English.

Among the candidates with **learning differences,** the following are considered: candidates affected by dyslexia, dysgraphia, dyscalculia or dysorthography, certified by appropriate medical certificates, issued no earlier than 3 years prior by the National Health Service, by specialists or by accredited medical institutions. The additional time for completing the test for candidates with learning differences will be in the measure of 30% compared to the standard time for the test, according to the Ministerial Decree DM 5669/2011.

These requests must be specified when applying for the Admissions Test on MyPortal and the medical certificates must be attached in electronic format. **Certificates sent by e-mail will not be accepted.**

During the online procedure, after clicking on admissions test, candidates with disabilities and/or learning differences are required to request accommodations by selecting the relevant box and attaching the medical report where indicated.

Art. 13 - Commission for ensuring the regularity of insolvency proceedings
A Commission will be appointed to ensure the regular and correct execution of the insolvency procedures. In addition, a classroom Proctor will be appointed for each test room. The person in charge of the procedure is Dr. Massimiliano Laganà, email info@hunimed.eu. For information, interested parties can contact the Student Office at +39 02 82243777.

Art. 14 – Summary Table of Relevant Deadlines

Registration Opens for Admissions Test	16/12/2019
Registration Closes for Admissions Test	13/03/2020
Admissions Test Day	20/03/2020
Publication of Ranking List	30/03/2020
Enrollment Opens	30/03/2020
Enrollment Deadline	06/04/2020

Art. 15 – List of Test Centers (Country and City)

Country – City	Number of places
Italy – Milan	No limit
UK – London	6
France – Paris	4
Germany – Munchen	4
Germany – Frankfurt	4
Sweden – Stockholm	4
Switzerland – Zurich	4
USA – New York	2
Greece – Athens	8

Art. 16 - Data processing

Personal data will be processed in compliance with the provisions of EU Regulation No. 679/2016 concerning the protection of personal data. All data provided will be processed only for institutional purposes related to and instrumental for the registration procedure for the admission test to the Degree Course in Medicine and Surgery called MEDTEC. The complete information for the candidates is published at: **https://www.hunimed.eu/it/informativa-privacy/**

Annex A
Syllabi regarding the content of the MEDTEC School Admissions Test

Mathematics
The understanding and basic knowledge of the following topics are required.

Arithmetic and Algebra
Sets of Numbers: Naturals, Integers, Rational (decimals, fractions), Irrationals, Reals. Properties and operations on numbers and algebraic expressions. Percentage, absolute value, powers and roots. Operations on polynomials, factoring polynomials. Solving algebraic equations and inequalities. Operations on rational expressions, solving rational equations and inequalities.

Functions
Cartesian coordinate plane; graph of an equation, symmetries of a graph. Properties, graphing, solving equations and inequalities for: power, exponential, and logarithmic functions, trigonometric functions.

Logic
Propositional calculus: propositions, connectives, truth tables, laws involving connectives.
Predicate calculus: predicates, quantifiers, laws involving quantifiers.
Evaluating logical expressions. Inference rules. Proof by contraposition, proof by contradiction.

Geometry

Euclidean plane geometry and solid geometry: angles and their measure, degree-radian conversion; perpendicular lines, parallel lines, geometric transformations, similarity. Properties and main theorems about: triangles, quadrilaterals, parallelograms, regular polygons, circles, and their area and perimeter; spheres, cones, cylinders, prisms, parallelepipeds, pyramids, and their volume and surface area.

Analytic plane geometry: equation of straight lines, circles, conic sections. Right triangle resolution using trigonometric formulas.

Statistics

Describing a data set: absolute, relative, cumulative frequency; histograms, bar graphs, pie charts; average, median, mode, range, variance, standard deviation. Counting techniques: permutations and combinations. Probability using combinatorics.

Test Comprehension and Critical Reasoning

The aim of this section is:

1. the assessment of the ability to properly use the language used in the courses.

2. the ability to show logical reasoning in a manner consistent with the premises.

Type 1 questions (text comprehension) will be based on scientific non-fiction or on fiction by classical or contemporary authors, or on texts appearing in newspapers or in general or specialist magazines.

Type 2 questions (critical reasoning) will be set out in symbolic or verbal form through multiple-choice questions formulated with short sentences, discarding the incorrect, arbitrary, or less likely conclusions.

Chemistry and Physics

Chemistry

The understanding and basic knowledge of the following topics are required.

Structure of matter

Atoms, isotopes and molecules, elements and compounds.

Atomic theory of matter, chemical periodicity, quantum numbers and atomic orbitals. Electronic structure and atoms properties: Pauli exclusion principle, Hund's rule, "aufbau" principle. The periodic table and dependence of atomic properties on the electronic structure: atomic and ionic radius, ionization energy and electron affinity.

Chemical bonding: structure and properties of the substances. Ionic bond. Covalent bond and molecular geometry, VSEPR theory. Hybrid orbitals and steric number. Electronegativity according to Pauling and molecular polarity.

Intermolecular attractions, interactions and the properties of liquids and solids. Hydrogen bonding. Metallic solids, ionic solids, covalent solids and molecular solids. Inorganic chemical nomenclature.

Stoichiometry

Atomic and molecular mass. Mole and number of molecules: Avogadro's constant and molar mass. Chemical reactions and equations: types of chemical reactions, balanced chemical equations and stoichiometric calculations.
Ideal gases and mixtures gases. Avogadro's law.
Concentrations and stoichiometry of the reactions in aqueous solutions.

Oxidation-Reduction
Oxidation numbers and redox reactions: oxidizing and reducing agents.
Electrochemistry: balancing redox equations, using standard reduction potentials, cell voltage. Electrolysis and Faraday's law.

Solutions
Acids and bases: Arrhenius, Brönsted and Lewis definitions. Water and the pH scale: strong acids and strong bases, weak acids and weak bases. Acid-base neutralization and acid-base titrations. Buffer solutions. Dissolution and precipitation equilibria.

Organic chemistry
Classification, nomenclature, empirical, molecular and structure formula, isomerism, physical and biological properties of organic compounds: alkanes and cycloalkanes, alkenes and cycloalkenes, alkynes, benzene and its derivatives, alcohols and phenols, ethers and epoxides, thiols and sulfides, aldehydes and ketones, amines, carboxylic acids and derivatives (salts, anhydrides, esters, amides, acid halides, and nitriles). Oxidation and reduction of organic compounds.

Physics

The understanding and basic knowledge of the following topics are required.

Mechanics
The international system of units; changing units. Scalars and vectors.
Linear and angular motion of a particle (position, displacement, velocity, acceleration); free-fall acceleration, projectile motion, uniform circular motion.
Force, mass, Newton's laws. Linear momentum; conservation of linear momentum. Angular momentum; conservation of angular momentum.
Friction. Work; work done by the gravitational force and by a spring force. Kinetic and potential energies, conservation of mechanical energy. The simple pendulum.
System of particles (center of mass, linear momentum, angular momentum; collisions).
Newton's law of Gravitation. Kepler's laws.

Fluids
Density, pressure. Pascal's principle. Archimedes' principle. Bernoulli's equation.

Electromagnetism
Electric charge; conductors and insulators. Coulomb's law, electric field, Gauss' law, electric potential and electric potential energy. Capacitance, capacitors in series and in parallel.
Electric current, resistance, Ohm's law. Circuits, the EMF.
Lorentz force and magnetic field. Ampère's law.
Electromagnetic waves: wavelength, frequency, energy.

Optics
Fermat's principle; reflection, refraction and Snell's law. Prisms; mirrors and lenses; interference; diffraction.

Thermodynamics
Temperature; Celsius, Fahrenheit and absolute scales. Heat, specific heat, expansion. Avogadro's number, ideal gases. The laws of Thermodynamics; entropy. Thermodynamic cycles; thermal efficiency of a heat engine.

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.
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.

Technical and Scientific Knowledge
These questions will be focused on basic technical and scientific subjects to prove the candidates' knowledge and interest towards science and technology.