



**Università
degli Studi
di Palermo**

Area Didattica e Servizi agli Studenti

**INTEGRATION AND AMENDMENT OF THE RECTOR DECREE n. 6710/2024
CALL FOR APPLICATIONS FOR THE BACHELOR DEGREE IN NURSING –
L/SNT1 OF THE HEALTH PROFESSIONS
(IN ENGLISH)**

ACADEMIC YEAR 2024/2025

THE RECTOR

- GIVEN** the Rector Decree n. 6710/2024 of July 8 2024, about the “*Call for applications for the Bachelor Degree in Nursing – L/SNT1 of the Health Professions Academic Year 2024/2025*”;
- GIVEN** the art. 18, paragraph 3- ter, of the Law Decree March 2 2024, n. 19, coordinated with the Conversion Law April 29 2024, n. 56 about: «Further urgent arrangements for the implementation of the National Recovery and Resilience Plan (NRRP)», which establishes the following: “In order to allow the rapid completion of admission tests for university courses, in the art. 4, paragraph 1, first sentence, of the Law August 2 1999, n. 264, the word: «sessanta» is replaced by: «trenta».”;
- GIVEN** the Ministerial Decree of July 31 2024, n.1116 about the “Definition of the procedures and contents of the admission tests for the university courses of the Health Professions in Italian and English language Academic Year 2024/2025”;
- GIVEN** the Ministerial Decree of August 1 2024, n. 1119, regarding the “Definition of the available places for access to the degree courses of the Health Professions Academic Year 2024/2025 in Italian and English language”;

DECREES

**Article 1
Available places**

The **final places** for the enrolment in the **Degree Course in Nursing** intended for applicants from EU countries and non-EU countries referred to in art.39, paragraph 5, Legislative Decree July 25 1998, n. 286 and to the candidates from non-EU countries, **are distributed as follows:**

- n. **35 (thirty-five)** places intended for the candidates from UE e non-UE countries and resident in Italy, as referred to in art. 39, paragraph 5 of the Legislative Decree July 25 1998, n. 286;
- n. **25 (twenty-five)** places intended for the candidates from non-UE countries residing abroad.

Article 2

Admission test for the NURSING Degree Course of the Health Professions

For the academic year 2024/2025, the admission to the Degree Course in Nursing - Nursing in English of the Health Professions to which are admitted the candidates from UE and non-UE countries as referred to in art. 39, paragraph 5 of the Legislative Decree July 25 1998, n. 286 and the candidates from non-EU countries residing abroad, is arranged by the University of Palermo and consists in the passing of a specific test regulated by the Ministerial Decree n.1116/2024. The admission test for the Nursing Degree in English language takes place on **September 9 2024 at 11:00 am**.

All candidates will be required to show up, according to the rectification of the art.6 of the Rector Decree n. 6710/2024, at 9:30 on September 9 2024 in the locations indicated in the institutional website.

This notice has the value of an official convocation.

For organizational reasons related to the beginning of the test, if the candidates should show up after the distribution of the test, although arriving in time for the start of the test, they will not be admitted to the procedures for personal identification.

Candidates will be admitted to the competition after showing a valid personal identification document. If the candidate is not included in the list of those admitted to the test, a necessary condition for admission, with reserve, he will have to present the payment receipt. The room Commission will identify each candidate, by recording in appropriate registers the details of the identification document.

The candidates are forbidden to interact with each other during the test, to introduce and/or use in the classrooms mobile phones, handhelds, smartphones, smartwatches, tablets, earphones, webcam or other similar equipment introduce and/or use pens, pencils, stationery (or any writing material) and/or introduce and/or use textbooks, school texts as well as partial reproductions of them, handwritten notes, blank sheets and reference material. If a candidate is found to have any of the above items during the course of the test, he/she will be excluded from the test and expelled from the classroom.

Furthermore, it is forbidden to bring bags, backpacks, books, notes, paper. The candidates, before the beginning of the test, must place the above mentioned objects outside the location of the competition.

The safekeeping of objects will not be guaranteed and the University will be not responsible for any possible theft or loss of them.

The admission test will consist in the solution of **sixty (60)** questions presenting **five (5)** answer options among which the candidate must identify only one, eliminating the wrong, arbitrary and less probable conclusions, on subjects as:

- Reading skills and knowledge acquired in studies;
- Logical reasoning and problem solving;
- Biology;
- Chemistry;
- Physics and Mathematics.

Based on the programs referred to in **Annex A**, of this announcement, the questions will be distributed as follows:

- four (4) questions regarding the reading skills and knowledge acquired in studies;
- five (5) logical reasoning questions;
- twentythree (23) biology questions;
- fifteen (15) chemistry questions;
- thirteen (13) physics and mathematics questions.

The admission test for the Course in Nursing Degree, in English language, will take place on **September 9 2024 at 11:00** and it is scheduled a time of **100 minutes**.

The candidates who participate to this competition, will be considered eligible only if they achieve a score **higher than zero (0) points**.

Candidates who have not provided any answer to any question are not included in the ranking list.

A maximum of **ninety (90) points** are awarded for the evaluation of the test and the following criteria are considered:

- **1.5 points for each correct answer;**
- **minus 0.4 (-0.4) points for each wrong answer;**
- **0 points for each omitted answer.**

For the Bachelor Degree in “**Nursing**”, the University of Palermo, based on the score achieved according to the criteria shown in this article, will draw up two different ranking lists, one for EU and non-UE candidates, pursuant to art. 39, paragraph 5 of the Legislative Law July 25 1998 n. 286, and the other one for non-UE candidates residing abroad.

In case of a tied score, the following criteria will be applied:

- a) the score obtained by the candidate in the solution, respectively, of the questions relating to the following topics prevails in decreasing order: biology, chemistry, physics and mathematics, logical reasoning, reading skills and knowledge acquired in studies;
- b) in case of a tied score between one or more disabled candidates in possession of a certificate of disability equal to or higher than 66% or disabled individuals with certification pursuant to law no. 104 of 1992 art. 3, paragraph 3 and one or more candidates not falling within the aforementioned categories, the disabled candidate(s) in possession of a certificate of invalidity equal to or higher than 66% or disabled individuals with certification pursuant to law no. 104 of 1992 art. 3, paragraph 3 will be preferred. The disabled candidate in possession of a certificate of disability equal to or higher than 66% or the disabled candidate with certification pursuant to law no. 104 of 1992 art. 3, paragraph 3 in possession of medical certification, even if not updated due to the limitation of the activity of the NHS for the COVID-19 emergency, which intends, in the event of a tied score with another candidate not falling within the aforementioned categories, to enforce this preference right is required to show to the University within the peremptory time limit of 15 (fifteen) days the certificate of disability equal to or higher than 66% or the certification referred to in law no. 104 of 1992 art. 3, paragraph 3 under penalty of exclusion from the national ranking. After this deadline has elapsed, the undocumented title of preference cannot be taken into consideration;
- c) Except for the hypothesis referred to in point b) of this article, in case of further tied score, the youngest candidate prevails.

Candidates who have not paid the compulsory fee of € 55,00 will not be admitted to the selective test. (art. 4 of the Rector Decree n. 6710/2024).

The participants are solely responsible for the correct indication of the data required for the admission procedures to the competition and are obliged to take note of this decree and the call, the Rector Decree n.6710/2024, in their entirety, available at the link:

<https://www.unipa.it/target/futuristudenti/accesso-programmato/corsi-accesso-programmato-nazionale/concorsi/>

II RETTORE
Prof. Massimo Midiri

Firmato digitalmente da: Enrico Napoli Motivo:
Su delega del Rettore, giusto D.R. del
02.11.2021 n. 4884/2021
Data: 05/08/2024 10:58:04

Allegato A

Programmes regarding the questions of the admission tests for the Bachelor Degree in NURSING A.Y. 2024/2025

For the admission to the courses, it is required the ability to understand and analyze written texts of various types, to conduct logical-mathematical reasoning, as well as a general knowledge, with a specific attention to the historical, geographical, social and institutional areas and disciplinary knowledge in mathematics, chemistry, physics and biology.

The required skills and knowledge refer to the preparation promoted by the educational institutions which arrange educational and didactic activities, in accordance with the National Guidelines for Secondary Schools and the Guidelines for technical and professional institutes, in particular in view of the High School Examination.

1. Reading skills and knowledge acquired in studies

The ability to understand written texts in the Italian language of different kind and with different communicative purposes constitutes a soft skill, given the fact that all types of questions will be formulated in Italian, even using symbolic language.

The following skills will be specifically tested:

- understanding abstract, uncommon or specialist vocabulary in real contexts;
- identifying the phenomena of textual cohesion and coherence;
- extracting and inferring specific information from the text.

These skills will be tested on short classical and contemporary scientific or narrative texts or from short news texts published in newspapers and general or specialized magazines.

Starting from short texts of various types and themes, the skills acquired in previous studies and the knowledge of general or of topics subject to contemporary public debate will be tested. In particular, the questions will aim to ascertain:

- the ability of orienting oneself in the space and time represented, or to place important historical-cultural events in space and time;
- the knowledge of the main national and international institutions;
- the understanding of legal, economic and citizenship matters.

2. Logical reasoning and problem solving

The questions aim at testing the ability to logically complete a reasoning, coherent with the premises. These are expressed in a symbolic or verbal form, focusing on cases or problems, even of abstract nature, whose solution requires the adoption of different forms of logical reasoning.

3. Biology

- The chemistry of the living.
- The biological importance of weak interactions.
- The organic molecules present in organisms and their respective functions. The role of enzymes.
- The cell as the basis of life. Cell theory. Cell size. The prokaryotic and eukaryotic animal and plant cell. The viruses.
- The cell membrane: structure and functions; transport across the membrane. Cellular structures and their specific functions.

- Cell cycle and cell reproduction: mitosis and meiosis - chromosome kit and chromosomal maps.

- Reproduction and Inheritance. Life cycles. Sexual and asexual reproduction.

- Mendelian genetics: Mendel's laws and applications.

Classical genetics: chromosomal theory of inheritance - inheritance models. Molecular genetics: DNA structure and duplication, 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; autosomal and X-linked hereditary diseases.

- Mutations. Natural and artificial selection. Evolutionary theories. The genetic basis of evolution. Heredity and environment.

- Biotechnology: recombinant DNA technology and applications.

- Anatomy and Physiology of animals and humans. Animal tissues. Anatomy and physiology of human systems and apparatus and their interactions. Homeostasis.

- Bioenergetics. The energy value of cells: ATP. Redox reactions in living beings. Energy processes: photosynthesis, glycolysis, aerobic respiration, and fermentation.

4. Chemistry

- The constitution of matter: the states of aggregation of matter; heterogeneous systems and homogeneous systems; compounds and elements.

- Laws about perfect gases.

- The structure of the atom: elementary particles; atomic number and mass number, isotopes, electronic structure of the atoms of the various elements.

- The periodic system of elements: groups and periods; transition elements. Periodic properties of the elements: atomic ray, ionization potential, electronic affinity, metallic character. Relations among between electronic structure, position in the periodic system and element properties.

- The chemical bond: ionic bond, covalent and metallic bond. Bond energy. Polarity of bonds.

Electronegativity. Intermolecular bonds.

- Fundamentals of inorganic chemistry: nomenclature and main properties of inorganic compounds: oxides, hydroxides, acids, salts.

- Chemical reactions and stoichiometry: atomic and molecular mass, Avogadro number, the concept of mole and its application, elementary stoichiometric calculations, balance of simple reactions, the different types of chemical reaction.

- The solutions: solvent properties of water, solubility, the main ways of expressing the concentration of the solutions.

- Balances in aqueous solution.

- Elements of chemical kinetics and catalysis

- Oxidation and reduction: oxidation number, concept of oxidant and reducing agent. Balancing simple reactions.

- Acids and bases: the concept of acid and base. Acidity, neutrality, and basicity of aqueous solutions. The pH. Hydrolysis. Buffer solutions.

- Principles of organic chemistry: bonds between carbon atoms, raw and structure formulas, isomerism concept. Aliphatic, alicyclic, and aromatic hydrocarbons. Functional groups: alcohols, ethers, amines, aldehydes, ketones, carboxylic acids, esters, amides. Elements of nomenclature.

5. Mathematics

- Numerical sets and algebra: natural, integer, rational, real numbers. Sorting and comparison; order of magnitude and scientific notation. Operations and their properties. Proportions and percentages. Powers with integer, rational exponent, and their properties. Radicals and their properties. Logarithms (base 10 and base e) and their properties. Elements of combinatorial calculus. Algebraic expressions, polynomials. Notable products, n-th power of a binomial, factorization of polynomials. Algebraic fractions. First and second-degree algebraic equations and inequalities. Systems of equations.
- Functions: fundamental notions about functions and their graphical representations (domain, codomain, study of the sign, continuity, maxima and minima, growth, and decrease, etc.). Elementary functions: integer and fractional algebraic, exponential, logarithmic, trigonometric functions. Compound functions and inverse functions. Trigonometric equations and inequalities.
- Geometry: polygons and their properties. Circumference and circle. Measures of lengths, surfaces, and volumes. Isometries, similarities, and equivalences in the plane. Geometric places. Measurement of angles in degrees and radians. Sine, cosine, tangent of an angle and their remarkable values. Trigonometric formulas. Resolution of triangles. Cartesian reference system in the plane. Distance of two points and midpoint of a segment. Straight line equation. Parallelism and perpendicularity conditions. Distance of a point from a straight line. Circumference, parabola, hyperbola, ellipse equations and their representation in the Cartesian Plane. Pythagorean Theorem. Euclid's Theorems (first and second).
- Probability and statistics: frequency distributions according to the type of character and main graphic representations. Concept of random experiment and event. Probability and frequency.

6. Physics

- Physical quantities and their measurement: Fundamental and derived physical quantities. Systems of measurement: International and Technical. Multiple and submultiples. Scientific notation. Main conversions among units of measurement of different systems. Scalar and vector quantities. Vectors and operations on vectors.
- Kinematics: Motion description. Velocity and angular velocity, acceleration, and centripetal acceleration. Uniform rectilinear motion, uniformly accelerated motion, uniform circular motion, harmonic motion.
- Dynamics: Concept of force as an interaction between bodies. Forces as applied vectors. The principle of inertia. Mass and the 2nd law of dynamics. Examples of forces: weight force, elastic force, static and dynamic friction. Action and reaction: the 3rd principle of dynamics. Pulse and momentum. Principle of conservation of momentum. Moment of a force and angular momentum. Work and kinetic energy. Conservative forces and potential energy. Principle of conservation of mechanical energy. Power.
- Mechanics of fluids: Fluid density and compressibility. Gases and liquids. Hydrostatics: pressure and principles of Pascal, Stevino and Archimede. Dynamics of liquids: one-dimensional motion, flow and flow rate, continuity equation. Ideal fluids and Bernoulli equation. Viscous forces in real fluids.
- Thermodynamics: Equilibrium, temperature concept, thermometers. Concept of heat and calorimetry. Modes of heat propagation. Thermal capacity and specific heat. Changes of state and latent heat. Laws of perfect gases. First and second law of thermodynamics.
- Electrostatics and electrodynamics: Electric charges. Forces between charges and Coulomb's law Electric field and potential, equipotential surfaces. Dielectric constant, capacitance, capacitors. Electrostatic energy. Series and parallel of capacitors. Generators. Electric voltage. Electric current. Resistivity, resistance, resistors. Ohm's law. Series and parallel of resistors. Kirchhoff's principles. Work, Power, Joule Effect. Direct and alternating

current. Period and frequency. Magnetic field of an electric current. Forces on electric currents in a magnetic field. Electromagnetic Induction.