

TRANSNATIONAL REPORT ON CURRICULA UNDERGRADUATE NURSING COURSE

Developed by the
University of Targu Mures

In the framework of the Innovative Skills for Nurses European Project

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ABSTRACT:

The research of the curricula from the twelve countries is part of the project “Innovative skills for nurses” from the Erasmus+ Program. In this report we performed an analysis of the curricula from different nursing education universities from twelve countries (Poland, Austria, Romania, Portugal, Italy, Spain, Greece, Croatia, the Netherlands, France, Belgium, Germany) in order to find and compare the curricula, to find the similarities, the differences, the strong points, the weaknesses, the number of years, semesters, the number of hours, ECTS. The aim of this research is to find which of these elements could be taken and implemented in the new curricula for up-skilling specialist nurses (SN) and advanced practice nurses (APN), or which could be improved in the new curricula. The curricula of Poland and Austria have a very clear structure and several areas dedicated to deepen and prepare nurses in many medical disciplines, but the main approach is theoretical for the one from Poland, while the one from Austria is focused on practical skills proven by the daily practice foreseen in its implementation. The curricula from Poland has the discipline Medical law, Ethics and communication, discipline very important in the daily practice of nurses, and the one from Austria prepare nurses with essential competencies for managing all special cases they will meet in clinical practice, while the one from Romania has many hours of theoretical activities and not so many for practical activities. The exam, which is compulsory to be passed at the admission based on a test, could be considered in our future curriculum development.



1. Introduction

In Europe, the concept of specialist nurse (SN) has also evolved as a response to healthcare needs and SNs achieved their expertise working in the clinical field where they received proper training and education for developing skills and competencies for a specific field of health-care (4) (*Dury C, Hall C, Danan J-L, Mondoux J, Aguiar Barbieri-Figueiredo MC, Costa M a. M, et al. Specialist nurse in Europe: education, regulation and role. Int Nurs Rev. 2014 Dec;61(4):454–62.*). The main existing problem is that it is difficult to create convergence in higher education since the curriculum structures, length of educational programs and learning outcomes differ among European countries resulting in considerable confusion in terms of nursing specialization and the interchangeability of SNs throughout Europe(4) (*Dury C, Hall C, Danan J-L, Mondoux J, Aguiar Barbieri-Figueiredo MC, Costa M a. M, et al. Specialist nurse in Europe: education, regulation and role. Int Nurs Rev. 2014 Dec;61(4):454–62.*). Thus, our project might have a clarifying impact by eliminating these differences at least among partner countries since it aims to implement the same educational program for the development of SNs. In Europe, nursing profession defines three different professionals: the specialist nurse (SN), the registered nurse (RN) and the advanced practice nurse (APN). Nevertheless, in Europe, the levels of nursing practice and the differentiation between roles of a SN and APN are still debatable and challenging(5) (*Begley C, Elliott N, Lalor J, Coyne I, Higgins A, Comiskey CM. Differences between clinical specialist and advanced practitioner clinical practice, leadership, and research roles, responsibilities, and perceived outcomes (the SCAPE study). J Adv Nurs. 2013 Jun;69(6):1323–37.*).

Purposes of the research

Considering the above context, the project will develop a coherent curriculum among the partner countries for the formation of specialist nurses (SN) and advanced practice nurses (APN) as well as country-specific and EU-wide policy recommendations for a general framework for SNs and APNs training, certification and cross-country employability.

Through this curriculum, our aim is to strengthen the strategic and structured cooperation between several higher education institutions from partner countries. Taking into account the major lack of SNs worldwide, the development of this curriculum is extremely relevant for the labor market and for the wider society. The purpose of this research was to analyze the most appropriate curricula for SNs and APNs and to select the most important disciplines/themes which could be relevant for the new curricula for SNs/APNs. So it was analyzed the curricula from twelve different countries of the European Union (EU), to compare the curricula of undergraduate training and to find the strengths and the weaknesses of this curricula and to find the most suitable points which could be implemented in the curricula of SNs and APNs.

Methodology applied

The research was conducted by analyzing the curricula of the medical school from Poland, Austria, Romania, Portugal, Italy, Spain, Greece, Croatia, the Netherlands, France, Belgium, Germany, a summary of the principal elements which can be taken into consideration. There were analyzed the criteria of admission, the learning outcomes, the programme, the language, the number of years and



ECTS, the examination methodology and relevance. Therefore it was selected, sorted and integrated the curricula from the analyzed countries.

2. Main Findings

Country 1 Poland

The curriculum for nurses in Poland (*Polish Academia Czestochowie*) usually is for *Bachelor's Degree* and has 6 semesters (3 years), 180 ECTS credits, 60 credits for each year and the language of this program is only in Polish. After the graduation of these studies, they are general nurses.

Admission for bachelor program consist of a motivation letter that must reflect the candidate's academic and social potential. In the admission file, it is not necessary to have citizenship, but the age will be between 18 to 25 years, they must have English Language Proficiency certificate and candidates must demonstrate a strong will to participate in the study program and all candidates must have a clear criminal record.

The strong points consist of the fact that the candidates must have English Proficiency Certificate, while the main weak point is that the admission is based only on a motivation letter.

Main learning outcomes: the disciplines and courses included in the curriculum are preclinical, general disciplines like anatomy, physiology, microbiology, parasitology, pharmacology, etc., clinical disciplines like Internal Medicine, Surgery, Obstetrics and Gynaecology, Anaesthesiology, Paediatrics, Geriatrics and also very particular discipline in nursing (i.e Basics of nursing, Long-term care nursing, Rehabilitation and nursing of the disabled, Pathology, Research in Nursing, Information system in health care, Basics of medical rescue, etc). The students must acquire the learning outcomes in terms of competencies, knowledge and skills achieved by the end of the curriculum or course as following:

Knowledge:

- basic knowledge in nursing and complementary areas
- modern medical knowledge based on up-to-date courses
- integrative holistic approach of nursing in all medical related fields

Skills:

- plan and implement nursing care
- provision of general health care
- administration of treatments according to doctor's prescriptions
- self-education and responsibility for the educational process

Competences:

- to cooperate with the therapeutic team
- carrying out prevention and health education activities
- social - to communicate with the patient efficiently and with empathy
- awareness of the necessity for permanent continuing education
- health promotion, prevention of illness and care of ill, disabled and dying people
- health promotion in relation to a healthy and ill person
- prepare for participation in the implementation of health policy
- sensitize to providing nursing care in accordance with the principles of professional ethics

- use up-to-date knowledge to ensure safety and high level of care, provide benefits regarding health promotion and preservation as well as disease prevention, independently exercise the profession in accordance with the principles of general professional ethics and holistic approach to the patient considering respect of his rights, organize his own work: establish cooperation in health care teams as well as initiate and support health-related activities of the local community

Strong points of knowledge consist of obtaining solid knowledge in nurses area and also integrative holistic approach of nurses in all medical fields.

Strong points of skills consist of conceiving and implementing a therapeutic plan of nursing care.

Strong points of competences consist of obtaining competences in carrying out prevention and health education activities, cooperating with therapeutic team, promotion of health, prevention illness, health promotion, providing nursing care in accordance with professional ethics.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.

The strengths of the main learning outcomes consists of multiple specific learning areas in nursing such as Long-term care nursing, Research in Nursing, Basics of medical rescue, etc. Nevertheless, among the weak points we can recall too much unspecific domains.

The particularities of the curricula in that country are:

The courses included in the curriculum: Anatomy, Physiology, Nursing ethics, Basics of nursing, Pedagogy, Psychology, Sociology, Biochemistry, Biophysics, Public health, Genetics, Medical law, Basic healthcare, English, Basics of Nursing, Library training, Dietetics, Microbiology and parasitology, Pharmacology, Health promotion, Nosocomial infections, Surgery and surgical nursing, Internal diseases and internal nursing, Pediatrics, Long-term care nursing, Rehabilitation and nursing of the disabled, Pathology, Research in Nursing, Information system in health care, Basics of medical rescue, Collaboration in healthcare teams, Anesthesiology and nursing in life-threatening situations, Geriatrics and geriatric nursing, Neurology and neurological nursing, Psychiatry and psychiatric nursing, Obstetrics, gynaecology and obstetrics and gynaecological nursing, Radiology, Palliative care, Organization of nursing profession, Preparation of thesis and preparation to diploma exam

The Contents of the curriculum

Semester I

Anatomy (60 hours), Physiology (25 hours), Nursing ethics (40 hours), Basics of nursing part 1 (120 hours), Pedagogy (35 hours), Psychology (40 hours), Sociology (30 hours), Biochemistry (30 hours), Biophysics (15 hours), Public health (70 hours), Genetics (25 hours), Medical law (20 hours), Basic healthcare part 1 (45 hours), English part 1 (30 hours)

Practical activities: Exercises on Basics of Nursing, Library training

Semester II

Dietetics (20 hours), Basics of Nursing part 2 (100 hours), Physiology part 2 (35 hours), Microbiology and parasitology (50 hours); English part 2 (30 hours), Pharmacology part 1 (40 hours), Practical activities: Health promotion 2 (20 hours), Basic healthcare 2, 3

Semester III

Pharmacology 2 (35 hours), Nosocomial infections (30 hours), Surgery and surgical nursing 1 & 2 (15 hours), Internal diseases and internal nursing - part 1 & 2 (75 hours), Pediatrics 1 & 2 (75 hours), Long-term care nursing - part 1 and 2 (15 hours), Rehabilitation and nursing of the disabled (15 hours), Pathology (40 hours), Research in Nursing - part 1 (15 hours), English part 3 (60 hours)

Practical activities: Physical examination 1 (30 hours), Information system in health care (20 hours)

Semester IV

Practical activities: Surgery and surgical nursing 3 & 4, Internal diseases and internal nursing - part 3 & 4, Pediatrics 3 & 4, Basic healthcare 4, Long-term care nursing - part 3

Semester V

Basics of medical rescue (25 hours), Collaboration in healthcare teams (30 hours), Anesthesiology and nursing in life-threatening situations - part 1 & 2 (50 hours), Geriatrics and geriatric nursing - part 1 (50 hours), Neurology and neurological nursing - part 1 (50 hours), Psychiatry and psychiatric nursing - part 1 (50 hours), Obstetrics, gynecology and obstetrics and gynecological nursing - part 1 (45 hours), Radiology (20 hours)

Practical activities: Palliative care (35 hours), Organization of nursing profession (20 hours), Preparation of thesis and preparation to diploma exam - part 1, Research in nursing - part 2 (25 hours), including seminar

Semester VI

Practical activities: Anesthesiology and nursing in life-threatening situations - part 3, Palliative care part 3, Geriatrics and geriatric nursing part 2 & 3, Neurology and neurological nursing - part 3 and 4, Psychiatry and psychiatric nursing - part 2 & 3, Obstetrics and gynecology and gynecological nursing - part 2 & 3, Preparation of thesis and preparation to diploma exam - part 2

Courses from the curricula – Preclinical disciplines 1555 hours (33.44 %), Specialized disciplines in nurses 160+520+500+500 = 1680 hours (36.12 %), Clinical specialties 660+320+235+200 hours = 1415 hours (30.43 %); Number of practical activities 170+280 +152 + 824+ 110 +704 = 2240 hours (55.93 %), Number of theoretical hours 585 + 295 +485+400 = 1765 hours (44.06 %)

The strong point of this curriculum consists in especially in its clear structure and the existence of several areas dedicated to deepen and specified preparation of nurses like: Nursing ethics, Basics of nursing, Long-term care nursing, Rehabilitation and nursing of the disabled, Pathology, Research in Nursing, Information system in health care, Basics of medical rescue, Collaboration in healthcare teams, Organization of nursing profession, and also medical and surgical specialties: Nosocomial infections, Surgery and surgical nursing. All these areas could be extremely useful for our curriculum.

At the same time, we consider that another strong point of this curricula is related to the existence of disciplines like Medical law or Collaboration in healthcare teams which might add essential value to the development of specialist and advanced practice nurses and we consider it would be valuable for our curricula as well.

Weaknesses is the lack of a curricula for SNs or APNs, courses only in Polish.

Nevertheless, the number of theoretical hours foreseen in this curriculum is too high, there is a only small number of hours in specialized disciplines in nurses (36.12%), and not too many hours for practical activities.

The number of course hours should be less since our curricula will be meant to focus more on the practical side and therefore by comparison to the current curricula we consider that it would be essential for our curricula to increase the number of practical hours and to develop the skills next to the patient's bed, but at the same time to develop the nurses' logical, intuitive and creative thinking in order to augment their ability to solve problems or unexpected situations that might occur in their daily practice.

Teaching methodology (online/onsite/simulation) in Poland are Lectures, Exercises, Independent Study, Laboratory and Practical Study, Practical activities at the patients' bed

No ECTS - 180 ECTS/ 6 semesters

Strong points – existing of innovative methods of teaching as lectures; Exercises, Independent Study, Laboratory and Practical Study, and also the higher percents of practical activities versus theoretical hours.

The curriculum includes important practical teaching methods such as laboratory and practical studies along with practical activities at the patients' bed.

In the same time in this country, it exists **Master** degree studies with 4 semester and 137 ECTS credits. During the Master the admitted candidates performed more specific disciplines, deepen specialized in nursing like: Care and therapeutic education in chronic diseases, including: respiratory failure, Care and therapeutic education in chronic diseases, including: continuous oxygen therapy and mechanical ventilation, Care and therapeutic education in chronic diseases, including: chronic wounds and fistulas, Care and therapeutic education in chronic diseases, including: nutritional treatment, etc.

It is a Master degree diploma which it is more appropriate to Advanced Practice Nurses curricula. Strong points for Master are: Healthcare law, Care and therapeutic education in chronic diseases, Modern techniques of medical procedures.

Strong points for Master are: Healthcare law, Care and therapeutic education in chronic diseases, Modern techniques of medical procedures.

Country 2 Austria

The curriculum for nurses in Austria (*Salzburg University of Applied Sciences*) usually is for *Bachelor's* Degree and has 6 semesters (3 years), 180 ECTS credits, 60 credits for each year and the language of this program is only in German. After the graduation of these studies, they are general nurses.

Admission for bachelor program consist of a motivation letter that must reflect the candidate's academic and social potential. For this program can apply Austrian people and also international applicants. Applicants with an international previous education (baccalaureate diploma), however, also have to submit documents in the original or as legalized copies. It is necessary a very good command of the German language. Minimum: B2 level, Common European Framework of Reference for Languages.

A strength of the admission system consists of the fact that international candidates are also encouraged to apply for this program, but a weak point is represented by the fact that for the admission is required only a motivational letter.

Main learning outcomes: the disciplines and courses included in the curriculum are preclinical, general disciplines like anatomy, physiology, microbiology, parasitology, pharmacology, etc., clinical disciplines like Internal Medicine, Surgery, Obstetrics and Gynaecology, Anaesthesiology, Paediatrics, geriatrics and also very particular discipline in nursing (i.e. Nursing care, Nursing Models and Theories, Psychology in Nursing Diagnostics, Nursing in Diverse Settings).

The students must acquire the *learning outcomes* in terms of competencies, knowledge and skills achieved by the end of the curriculum or course as following:

Knowledge:

- Reflection on existing nursing practices
- Acquire knowledge relevant for their chosen career in the areas of psychology, education and sociology
- Knowledge of scientific theories in nursing and can describe the difference between general and scientific knowledge
- Recognize diverse ethic concepts
- Relevant medical, pharmaceutical and dietary knowledge
- Relevant care concepts
- Qualified to pursue a higher service career in nursing

Skills:

- Involved in bedside care for patients

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- Try out established roles and model new roles in the field of nursing, e.g. bedside nursing, case management, community care or quality management
- Case management, community care, quality management
- Counselling and health promotion and prevention
- Special care procedures (dependent on practicum)
- Coordinate health care processes
- Human interactions
- Cooperate with the therapeutic team
- They can recognize symptoms relevant for nursing care and as necessary incorporate them into the nursing plan for optimal patient-oriented care
- Communication with team members, patients, clients, residents, family members, representatives of other professions

Competences:

- Compiling the elements of nursing care and nursing science for a given patient history based on precise questions and offer possible solutions for nursing care
- Can discern and identify the respective causes of disease
- Develop and evaluate of new possibilities for action
- They diagnose nursing problems and determine the measures that need to be taken independently
- Select research results as the basis for nursing-related decisions
- Independent diagnosis of care problems
- Identifying resources and implementing defined measures
- Use of research findings in nursing decisions
- Carrying out prevention and health education activities
- Counselling, health promotion, prevention in nursing
- Develop and evaluate new action possibilities
- Health promotion, prevention of illness and care of ill, disabled and dying people

The curriculum has a wide spectrum of competencies which are highly relevant for the scope of this project especially since we aim to train specialist nurses who will have to gain essential competencies for managing all special cases they will meet in clinical practice.

Several particular disciplines included in this curriculum might be considered as strong points such as Nursing care, Nursing Models and Theories, Psychology in Nursing, Nursing Diagnostics or Nursing in Diverse Settings. Moreover, among the most important knowledge, skills and competences which further strengthen this curriculum we recall the recognition of diverse ethic concepts, case management, community care, quality management, communication and cooperation with the therapeutic team, with patients, clients, residents, family members or representatives of other professions, but also the compiling of the elements of nursing care and nursing science for a given patient history, the development and evaluation of new possibilities for action, the selection of research results as the basis for nursing-related decisions, the use of research findings in nursing decision, the implementation of defined measures, or establishing independent diagnosis of care problems.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.



Family Members, Function and Dysfunction III, Fundamentals of Health Education, Health Promotion and Disease Prevention, Interferential Statistics, Nursing Diagnostics, Nursing in Diverse Settings, Palliative Care, Qualitative and Quantitative Research Methods in the Field of Nursing, Role Concepts in Diverse Settings, Salutogenic Models in Health Education, The Ethics of Nursing, Critical Evaluation of Scientific Articles, Health Economics, Nursing Patients with Specific Limitations, Organisational Theory and Development, Casework, Bachelor Dissertation and Accompanying Seminar, Interdisciplinary Casework, Case-, Care- and Disease Management, Interdisciplinary Casework, Open window, Project: Nursing in Practice, Self Management in Nursing, Pediatric and Adolescent Care, Psychiatric Health and Nursing Care, Surgical Nursing Care

The Contents of the curriculum

Semester I

Education and Sociology in Nursing (21 hours), Fundamentals in Nursing Care (140 hours), Healthcare Systems and Law (42 hours), Microbiology and Hygiene (28 hours), Nursing Models and Theories (28 hours), Practical Training 1 (daily routine in their area of practice), Psychology in Nursing (28 hours), The History and Philosophy of Nursing (14 hours)

Semester II

Communication, Dialogue and Presentation Techniques (56 hours), Concepts in Nursing Practice (84 hours), Descriptive Statistics (21 hours), Function and Dysfunction II (91 hours), Gerontology and Psychiatric Gerontology (21 hours), Introduction to Nursing Research (49 hours), Kinesthetics (28 hours)

Nursing process (14 hours), Practical Training 2 (daily routine in their area of practice), Reflections on Client/Student Interaction (14 hours)

Semester III

Counseling of Clients and Family Members (21 hours), Function and Dysfunction III (56 hours), Fundamentals of Health Education, Health Promotion and Disease Prevention (21 hours), Interferential Statistics (21 hours), Nursing Diagnostics (21 hours), Nursing in Diverse Settings (21 hours), Palliative Care (28 hours), Practical Training 2 (daily routine in their area of practice), Qualitative and Quantitative Research Methods in the Field of Nursing (28 hours), Role Concepts in Diverse Settings (21 hours), Salutogenic Models in Health Education (21 hours), The Ethics of Nursing (21 hours)

Semester IV

Critical Evaluation of Scientific Articles (28 hours), Health Economics (14 hours), Nursing Patients with Specific Limitations (70 hours), Organizational Theory and Development (21 hours), Practical Training 4 (daily routine in their area of practice), Quality and Process Management (28 hours), Selected Nursing Techniques (42 hours)

Semester V

Casework (56 hours) - Examination of specific case study examples of nursing care: patient history, social history and biographical history; Nursing diagnostics, preparation of healthcare plans; evaluation; comparison with scientific findings in nursing interventions; study of the question of interdisciplinary cooperation; Practical training 4 - Students improve the skills and proficiencies gained in Practical Training 1- 4 and can accept increasingly complex tasks. They can carry out health care procedures independently. With supervision and guidance students assume responsibility for a patient, client, resident or group of persons in need of care. They become acquainted with a head nurse's scope of duties

Semester VI

Bachelor Dissertation and Accompanying Seminar (14 hours), Bachelor examination, Case-, Care- und Disease Management (21 hours), Interdisciplinary Casework (21 hours), Interdisciplinary Casework (14 hours), Open hours (21 hours), Practical Training 6 (daily routine in their area of practice), Project: Nursing in Practice (28 hours), Self Management in Nursing (7 hours), Pediatric and Adolescent Care (35 hours), Psychiatric Health and Nursing Care (35 hours), Surgical Nursing Care (35 hours)

Courses from the curricula – Preclinical disciplines 11.5 hours (10.40 %), Specialized disciplines in nurses 16.5 +10.5 +10 +14.5+4 +16.5 hours (65.15 %), Clinical specialties 16.5 + 10.5 hours = 27 hours (24.43 %); Number of practical activities (n %) – high number of ECTS for practical activities, without providing the exact number of hours, Number of theoretical hours (n %)

Several courses included in this curriculum give the value of this program and make it special such as Dialogue and Presentation Techniques, Nursing Diagnostics, Ethics in Nursing, Role Concepts in Diverse Settings, Critical Evaluation of Scientific Articles, Nursing Patients with Specific Limitations, or Casework, but also Nursing in Practice, Self-Management in Nursing, Paediatric and Adolescent Care, Psychiatric Health and Nursing Care, Surgical Nursing Care, Nursing Models and Theories, Psychology in Nursing, Nursing in Diverse Settings.

An important weak point refers to the fact that the curriculum does not state an exact number of practical hours.

Teaching methodology (online/onsite/simulation) – Lectures, Exercises, Independent Study, Laboratory and Practical Study, E-learning, Database research, literature studies, learning from practice

No ECTS - 180 ECTS/ 6 semesters

Although this curriculum foresees several practical approaches, more important practical teaching methods should be implemented in order to enhance the applicants practical skills.

Country 3 Romania

The curriculum for nurses in Romania (*Târgu Mureş and Cluj*) usually is for *Bachelor's* Degree and has 8 semesters (4 years), 240 ECTS credits, 60 credits for each year and the language of this program is only in Romanian and Hungarian. After the graduation of these studies, they are general nurses.

Admission for bachelor program consist of a motivation letter that must reflect the candidate's academic and social potential. For this program can apply Romanian people. The admission test will consist of a multiple choice comprising 50 questions from biology (of which 40 will be chosen from an existing data base and 10 questions will be elaborated at the time of admission).

The classification of candidates will be done according to the average between the grade obtained at the multiple choice test (70%) and the grade obtained at the final high-school graduation exam (30%).

The main strength of the admission system in Romania is represented by the inclusion of a multiple choice test in the application along with the grade obtained at the final high-school graduation exam. Nevertheless, the weak point consists of the fact that this program is designed only for Romanian applicants.

Main learning outcomes: the disciplines and courses included in the curriculum are preclinical, general disciplines like anatomy, physiology, microbiology, parasitology, pharmacology, etc., clinical disciplines like Internal Medicine, Surgery, Obstetrics and Gynaecology, Anaesthesiology, Paediatrics, geriatrics and also very particular discipline in nursing (i.e General nursing and general principles of care. Clinical nursing).

The students must acquire the learning outcomes in terms of competencies, knowledge and skills achieved by the end of the curriculum or course as following:

Knowledge:

- Reflection on existing nursing practices
- Acquire knowledge relevant in the medical, surgical, pediatric, obstetrics
- Knowledge of scientific theories in nursing and can describe the difference between general and scientific knowledge
- Relevant medical, pharmaceutical and dietary knowledge

Skills:

- Case management, community care, quality management
- Special care procedures (dependent on practicum)
- Cooperate with the therapeutic team
- They can recognize symptoms relevant for nursing care and as necessary incorporate them into the nursing plan for optimal patient-oriented care
- Communication with team members, patients, clients, residents, family members, representatives of other professions
- Administration of treatments according to doctor's prescriptions

Specific competences

- Identifying the needs of general health care in conditions of efficiency and effectiveness
- Provision of general health care
- Carrying out prevention and health education activities
- Organization and provision of professional training services
- Carrying out research activities in the field of general health care

Unfortunately, the curriculum from Romania includes only a few specific disciplines and courses such as General nursing, General principles of care and Clinical nursing, fact that definitely requires major improvements. Moreover, the knowledges, skills and competences foreseen in this curriculum should also benefit from major improvements.

Particularities of the curricula in that country

The courses included in the curriculum: Biochemistry, Medical informatics. Biostatistics, Anatomy, Physiology, Histology, Cell and molecular biology, Pathophysiology, Pharmacology, Hygiene, Pathology, Medical emergencies and medical first aid, Biophysics, Genetics, Modern languages, Modern languages, Clinical Laboratory, Microbiology (bacteriology, virology, parasitology), Epidemiology, Medical ethics. Bioethics, Public health. Sanitary management, Medical sociology. Behavioral Sciences and Medical Psychology, Scientific research methodology, Radiology and medical imaging, Internal medicine and medical specialties, General nursing and general principles of care. Clinical nursing, General surgery and surgical specialties, Qualified care in urology, Qualified care in orthopedics, Skilled care in surgery, Skilled care in cardiovascular surgery, Clinical Laboratory, Skilled care in endocrinology, diabetes and nutritional diseases, Elderly care and geriatrics, Skilled care in pneumophofthisiology, Qualified care in rheumatology, balneology, Qualified care in internal medicine, Nutrition and dietetics, Anesthesia-Intensive therapy, Childcare and skilled childcare, Mother and newborn care, Pediatrics and skilled care in pediatrics, Skilled care in pediatric surgery and orthopedics, Qualified care of the critically ill (ATI and medical emergencies), Health promotion and health education, Skilled care in neurology, Skilled care in neurosurgery

The Contents of the curriculum

Year 1 (2 semesters, 4 modules): Biochemistry (28 hours), Medical informatics. Biostatistics (28 hours), Anatomy (112 hours), Physiology, (112 hours) Histology (56 hours), Cell and molecular biology (28 hours), Pathophysiology (56 hours), Pharmacology (56 hours), Hygiene (28 hours), Pathology (56 hours), Medical emergencies and medical first aid (56 hours), Biophysics (28 hours), Genetics (28 hours), Modern languages (56 hours), Speciality practices

Year 2 (2 semesters, 4 modules): Microbiology (bacteriology, virology, parasitology) (56 hours), Epidemiology (28 hours), Medical ethics. Bioethics (14 hours), Public health (14 hours). Sanitary management (14 hours), Medical sociology. Behavioral Sciences and Medical Psychology (14 hours), Scientific research methodology (28 hours), Radiology and medical imaging (28 hours), Internal medicine and medical specialties 1 (112 hours), General nursing and general principles of care. Clinical nursing (140 hours), General surgery and surgical specialties 1 (112 hours), Qualified care in urology (28 hours), Qualified care in orthopedics (28 hours), General surgery and surgical specialties 2 (56 hours), Skilled care in surgery (56 hours), Skilled care in cardiovascular surgery (28 hours), Clinical Laboratory (28 hours), Specialty practices

Year 3 (2 semesters, 4 modules): Internal medicine and medical specialties 2 (112 hours), Skilled care in endocrinology, diabetes and nutritional diseases (28 hours), Elderly care and geriatrics (28 hours), Skilled care in pneumophthisiology (28 hours), Qualified care in rheumatology (40 hours), balneology, Qualified care in internal medicine (112 hours), Nutrition and dietetics (42 hours) Anesthesia-Intensive therapy (56 hours), Childcare and skilled childcare (42 hours), Mother and newborn care (28 hours), Pediatrics and skilled care in pediatrics (56 hours), Skilled care in pediatric surgery and orthopedics (28 hours), Qualified care of the critically ill (ATI and medical emergencies) (84 hours), Health promotion and health education (28 hours), Skilled care in neurology (28 hours), Skilled care in neurosurgery (28 hours); Specialty practices

Year 4 (2 semesters, 4 modules): Qualified care in infectious diseases (56 hours), Skilled care in internal medicine (112 hours), Skilled care in family medicine (14 hours), Legal aspects of the profession. Social and health legislation (14 hours), Obstetrics – gynecology (56 hours), Skilled care in obstetrics and gynecology (28 hours), Psychiatry and the care of the patient with mental health and psychiatric disorders (28 hours), Skilled care in surgery (56 hours); Optional Discipline (28 hours)

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Practical activities: Care in medical pathology, Care in pediatric pathology, Care in surgical pathology, Care in chronic pathology, Care in palliative pathology, Care in the pathology of the acute and critically ill

Courses from the curricula – Preclinical disciplines 1224 hours (35.41 %), Specialized disciplines in nurses 224+252+406+804+210 = 1896 hours (54.86 %), Clinical specialties 210+126 = 336 hours (9.72 %); Number of practical activities 160+384+378+804+994 = 2720 hours (64.60 %) – high number of ECTS for practical activities, Number of theoretical hours 364+420+496+210 = 1490 hours (35.39 %)

The strong points of the content imply mostly the courses designed for each clinical specialty, but also other courses such as Medical sociology, Behavioural sciences or Medical ethics. On the other hand the practical activities should comprise a wider spectrum of specialties in order to enhance the candidates practical view on each patient.

Teaching methodology (online/onsite/simulation) – Lectures, Seminars and Tutorials, Exercises, Independent Study, Case-based learning, Team based learning, Laboratory and Practical Study, E-learning

No of ECTS - 240 ECTS/ 8 semesters (4 years)

Although the teaching methods include several methods designed for improving the future nurses clinical and practical skills such as case-based or team-based learning, it would definitely help to implement more innovative teaching methods for enhancing their practical skills.

This curriculum should include much more practical hours and we intend to develop this in our project.

Country 4 Portugal

The graduate course has 8 semesters (4 years), 20 Full-time study weeks per semester (40 per year), 3985 annual contact hours, 240 ECTS credits (30 per semester); of the 240 credits required for the training of the General Care Nurse, 50% are clinical teaching/internship, i.e. 120 credits, 1 credit at 27 hours. The organization of the bachelor's degree in Nursing shall comply with the general regulations referred to in Decree-Law No. 353/99 dated 3 September, 1999. Article 6 establishes the duration of the course in four curricular years.

Directive nº 77/453/EEC, transposed into internal law by Decree-Law nº 320/87, of 27th August and which served as the basis for Portaria 799-D/99 of 18th September as regards the curricular structure, states in point 3, of article 3 that "the duration of clinical teaching in nursing should be of at least half of the total workload of the course" (p. 6510).

It needs to have Absence of psychic, sensorial or motor deficiency that seriously interferes with the functional capacity and interpersonal communication to the point of impeding one's own or another's learning.

The course is only in Portuguese.

Admission consists of entrance examinations, one of the following sets: Biology and Geology; or Biology and Geology & Physics and Chemistry; or Biology and Geology & Mathematics.



The access to Bachelor programs is possible whether by the International Student Status, the National Admission Procedure or by International Course Transfer, depending on the candidates academic status.

The prerequisites for the selection and seriation of candidates are expressed as:

a) Apt, with a numerical classification on the scale of 100 to 200 points, to be considered in the calculation of the candidacy score under the terms of article 26 of Decree-Law 296 -A/98; or

b) Not Apt.

European students and other non-Portuguese students with permanent address in Portugal for the last two years can access to the Bachelor Programmes via the National Admission Procedure, organized by the Directorate General of Higher Education (DGES, www.dges.mctes.pt).

International Students may apply in a special way admission procedure, the International Student Status, organized by the IPB. This admission procedure aims at non-Portuguese and non-European students.

Portuguese and European students, who are not allowed to apply via the International Student Status, may apply via the National Admissions Procedure.

Admission - The strong points of the admission system - international candidates are also encouraged to apply for this program and every candidate must pass entrance examinations.

Main learning outcomes: The courses included in the curriculum, the profile of the programme comprises in the development of the technical-scientific knowledge and professional skills in the study areas of Nursing; Biology and Biochemistry; Philosophy and Ethics; Health.

The bachelor degree is awarded to those students that demonstrate, at a scientific, technical and relational level, the ability to act in integrity and freedom with civic capacity and responsibility to provide a conscientious and competent response. The student must acquire the following skills and competences:

Knowledge:

- Acquire knowledge to support the internalization of content relating to knowledge of human development, as a process of construction in the dialectic between the individual and their contexts

Skills:

- To plan, to prescribe, to execute and to evaluate general nursing cares, safe, fulfilling the professional, technical and ethical-deontological rules, to the individual, family, groups and community, along the vital cycle, to the three levels of prevention in health (primary, secondary and tertiary)

Competences:

- Develop professional and personal awareness at an inter and transdisciplinary level at multiple dimensions related to nursing: research, training/education, therapeutic activities and health management; Develop research and implement appropriate intervention strategies

Strong points of skills – to plan, to prescribe, to execute and to evaluate general nursing cares.

Strong points of competences – developing research and implement appropriate intervention strategies.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in an specific SN or APN.

Particularities of the curricula in that country

The courses included in the curriculum: Anatomohistofisiology I, Bioethics and Deontology, Biochemistry and Biophysics, Dietetics and Nutrition, Nursing Fundamentals I, Microbiology, Developmental Psychology, Administration and Management in Health, Anatomohistofisiology II, Gerontological and Geriatric Nursing, Epidemiology and Public Health, Nursing fundamentals II, Pedagogy, Socioanthropology, Nursing in Emergencies and, Catastrophes, Nursing in Rehabilitation, Medical-Surgical Nursing I, Medical-Surgical Nursing II, Oncology Nursing and Palliative Care, Pharmacology and Farmacoterapy, The dependent person and family carers, Management of illness and therapeutic regimes, Body responses to disease I, Body responses to disease II, Interventions resulting from prescriptions, Introduction to management in nursing, Bioethics and ethics in nursing, Introduction to clinical practice II, Introduction to clinical practice III, Pathology I, Pathology II, Nursing in Situations of Dependence in Self-Care, Systemic Pathology, Nursing in the Elderly and Geriatrics, Psychology of Health, Clinical teaching in situations of self-care deficit, Community Health Nursing and Family, -Nursing in Child Health and Pediatrics, Mental Health and Psychiatric Nursing, Sexual and Reproductive Health Nursing, Health Education, Research Methodology, Community and Family Health Nursing, Child Health and Paediatric Nursing, Mental Health and Psychiatric Nursing, Nursing Sexual and Reproductive Health, Health Education, Research Methodology, Pedagogia, Clinical Training: Mental Health and Psychiatric Nursing, Clinical Training: Paediatrics, Clinical Training continuing care option, Clinical teaching option palliative care, Clinical Training in Primary Health Care (Family and Community Health, Maternal Health, Child Health and Mental Health), Clinical Training in Hospital Care (Medicine and Medical Specialities, Surgery and Surgical Specialities, Paediatrics, Obstetrics and Psychiatry), Clinical Training Family Health, Clinical Training: Community Health Nursing, Clinical teaching: Surgery, Clinical teaching: Medicine, Clinical teaching: Parenting and pregnancy, Clinical Training III - Community and Family Health Nursing, Clinical Training IV - Nursing in Urgency, Internship in Professional Life Integration, Clinical Training IV - Emergency Nursing, Clinical Training III - Family and Community Health Nursing, Internship of Integration to Professional Life, Nursing and Professionalism, Ethics and Deontology II, Management and Economics of Health, Nursing in Palliative Care, nnovation and Entrepreneurship in Health, Models of Chronic Disease Management, Nursing in Situations of Emergency and Catastrophe, Theoretical Thinking and Practice Design.

In Common courses there are teorical disciplines in the first year.

The Contents of the curriculum

- *Analysis of the common courses from the curricula (e.g. preclinical disciplines)*

Year	Sem	The Contents of the curriculum Curricular Unit	ECTS IPB	Nursing School Coimbra	Nursing School Porto

1	1	Anatomohistofisiology I	5	6	9 (I, II)
1	1	Bioethics and Deontology	5	2	8
1	1	Biochemistry and Biophysics *	4	4	3 (2 ^o Year)
1	1	Dietetics and Nutrition	3	2	–
1	1	Nursing Fundamentals I	5	6 (I)	
1	1	Microbiology*	4	4	3*
1	1	Developmental Psychology	4	3	6
1	2	Administration and Management in Health	5	2	-
1	2	Anatomohistofisiology II	5	4	-
1	2	Gerontological and Geriatric Nursing	3	–	-
1	2	Epidemiology and Public Health	5	5	-
1	2	Nursing fundamentals II	6	–	-
1	2	Pedagogy	2	-	-
1	2	Socioanthropology	4	3	6

Table 1- Comparing Curriculars Units between IPB, Coimbra and Porto in the first year

Porto 1 st year +	ECTS	Coimbra 1st year +	ECTS
Health information	3	Clinical Practice in Social Determinants of Health	10.00
Option - European cultures and policies	3	General Pathology	2.00
Option - Personal and social development	3	Healthcare-Associated Infection Prevention	2.00
Option - Entrepreneurship	3	Interpersonal Communication	2.00
Option - Intervention in disaster situations	3		
Option - Complementary therapies	3		
Option - Portuguese sign language	3		
Option - European Languages - English	3		
Option - European Languages - Spanish	3		
Option - European Languages - German	3		

Year	The Contents of the curriculum Curricular Unit	ECTS IPB	Nursing School Coimbra	Nursing School Porto
2	Nursing in Emergencies and Catastrophes	4		
2	Nursing in Rehabilitation	4	2	
2	Medical-Surgical Nursing I	6	4	
2	Medical-Surgical Nursing II	6		
2	Oncology Nursing and Palliative Care	5		
2	Pharmacology and Farmacoterapy	5	3	3
2	The dependent person and family carers			6

2	Management of illness and therapeutic regimes			6
2	Body responses to disease I			6
2	Body responses to disease II			6
2	Interventions resulting from prescriptions			6
2	Introduction to management in nursing			3
2	Bioethics and ethics in nursing			3
2	Introduction to clinical practice II			6
2	Introduction to clinical practice III			6
2	Pathology I			6
2	Pathology II			3
2	Nursing in Situations of Dependence in Self-Care		3	
2	Systemic Pathology		3	
2	Nursing in the Elderly and Geriatrics		3	
2	Psychology of Health		3	
2	Clinical teaching in situations of self-care deficit		15	
2	Community Health Nursing and Family		6	
2	-Nursing in Child Health and Pediatrics		4	
2	Mental Health and Psychiatric Nursing		4	
2	Sexual and Reproductive Health Nursing		4	
2	Health Education		2	
2	Research Methodology		4	

Table2- Comparing Curriculars Units between Bragança (IPB), Coimbra and Porto in the second year

Year	The Contents of the curriculum Curricular Unit	ECTS IPB	Nursing School Coimbra	Nursing School Porto
3	<i>Community and Family Health Nursing</i>		-	7,5
3	<i>Child Health and Paediatric Nursing</i>	6	-	
3	<i>Mental Health and Psychiatric Nursing</i>	6	-	
3	<i>Nursing Sexual and Reproductive Health</i>	6	-	
3	<i>Health Education</i>		-	
3	<i>Research Methodology</i>	8		
3	<i>Pedagogia</i>	2		
3	<i>Clinical Training: Mental Health and Psychiatric Nursing</i>	6		
3	<i>Clinical Training: Paediatrics</i>	6		
3	<i>Clinical Training continuing care option</i>	6		
3	<i>Clinical teaching option palliative care</i>	6		
3	Clinical Training in Primary Health Care (Family and Community Health, Maternal Health, Child Health and Mental Health)		30	

3	Clinical Training in Hospital Care (Medicine and Medical Specialities, Surgery and Surgical Specialities, Paediatrics, Obstetrics and Psychiatry)		30	
3	Clinical Training Family Health	-		15
3	Clinical Training: Community Health Nursing	7,5		7,5
3	Clinical teaching: Surgery	-		15
3	Clinical teaching: Medicine	-		15
3	Clinical teaching: Parenting and pregnancy			7,5

Table3- Comparing Curriculars Units between Bragança (IPB), Coimbra and Porto in the 3rd year

Year	The Contents of the curriculum Curricular Unit	ECTS IPB Bragança	ECTS Nursing School Coimbra	ECTS Nursing School Porto
4	Clinical Training III - Community and Family Health Nursing			15
4	Clinical Training IV - Nursing in Urgency			15
4	Internship in Professional Life Integration			30
4	Clinical Training IV - Emergency Nursing	15		
4	Clinical Training III - Family and Community Health Nursing	15		
4	Internship of Integration to Professional Life	30		
4	Nursing and Professionalism		5	
4	Ethics and Deontology II		3	
4	Management and Economics of Health		3	
4	Nursing in Palliative Care		2	
4	Innovation and Entrepreneurship in Health		2	
4	Models of Chronic Disease Management		2	
4	Nursing in Situations of Emergency and Catastrophe		2	
4	Theoretical Thinking and Practice Design		2	
4	8 options		26	

Table4- Comparing Curriculars Units between Bragança (IPB), Coimbra and Porto in the 4th year

The curriculum includes several important and specific courses that deserve to be taken into consideration such as Developmental Psychology, Nursing in Emergencies and Catastrophes, The dependent person and family carers, Nursing in Situations of Dependence in Self-Care, Clinical Training: Community Health Nursing.

Weaknesses - without ECTS theoretical practices options, Only option internship II (IPB - Bragança). IPB, don't have Complementary therapies, European languages – English, Spanish, German like Porto.

Teaching methodology - 80% of the contact lessons are compulsory. Lectures, Exercises, Independent Study, Laboratory and Practical Study, Clinical Training and Internship

The skills assessment of each theoretical-practical course unit may include the following elements: development themes; case studies; individual written, oral or experimental works; projects; laboratory works; mini-tests, tests and/or others. The assessment can be made through the elements of assessment during the academic period (continuous assessment) and/or the realization of an exam (final and recourse exam). The final exam, which, as a general rule, consists in a written test, weights with elements of the continuous assessment and has as a requirement the compulsory attendance to 80% of the total contact hours.

The recourse exam should include the entire evaluation of the curricular unit and is aimed at those who failed the continuous or final evaluation, or do not have 80% of attendance, or if they wish to improve the continuous/final grade.

Evaluation of curricular units of clinical practice, clinical teaching/internship is done through continuous observation registered in a specific grid, approved by the pedagogical council of the school. It can have more elements of evaluation, such as case studies, critical reflection, projects and/or research work.

No ECTS - 240 ECTS (4 Years)

It has 90-120 ECTS theoretical practices before the internship.

Strong points – Evaluation of curricular units of clinical practice, clinical teaching/internship is done through continuous observation registered in a specific grid.

The evaluation of internships is carried out by nurses. The internship duration in nursing should be of at least half of the total workload of the course.

Of the 240 credits required for the training of the General Care Nurse, 50% are clinical teaching/internship.

Country 5 Italy

The course has 180 ECTS (3 Years). To be admitted to the degree course, students must have a five-year upper secondary education diploma or another qualification obtained abroad and recognized as suitable.

Admission

Admission to the Nursing Course is based almost entirely on the entrance exam. The Entrance exam is entirely in English and a written test composed of 60 multiple choice questions with 5 answer options. (12 General Knowledge, 10 Logical Reasoning, 18 Biology, 12 Chemistry, and 8 Physics and Math questions). The student is given 100 minutes and scores 1.5 points for each correct answer, 0 for no response, and -0.4 for incorrect answers.



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For admission the candidates need a high School Diploma (at least 12 years of study) translated into Italian or English with necessary Apostille accompanied by Statement of Verification and Statement of Comparability issued by CIMEA OR a Declaration of Value issued by the competent Italian consulate in your home country

Candidates who are citizens of the European Union must meet the requirements listed: must be in possession of one of the qualifications or linguistic certificates listed in the University page

Candidates who are not-citizens of the European Union must follow:

- be already enrolled in the individual training activities and have earned the relevant credits by the expiry date of the announcement;
- must meet the requirements for equivalence to the deadline for registration for the admission test

Regulations for the Degrees of Health Professions require the candidate to demonstrate notions of general culture and logical reasoning, biology, chemistry, physics and mathematics.

The strong points consist of the fact that admission is based almost entirely on the entrance exam, the entrance exam is entirely in English and a written test and international candidates are also encouraged to apply for this program.

Main learning outcomes:

The knowledge and skills required for access to degree courses are positively verified by obtaining a minimum score of 20 points in the admission test for students who fall within the contingent of Italian, EU and similar citizens, of 5 points for students who fall within the contingent of non-EU citizens residing abroad. The first-level degree is conferred, at the end of the educational program, to the students who can prove to have skills in:

- knowledge and understanding
- applying knowledge and understanding
- making judgements
- communication skills
- learning skills

At the end of the three-year period, the Nursing graduate must have acquired the knowledge and technical, relational and educational skills to practice the profession.

Through the specific objectives it is intended to develop:

- complex cognitive activities (critical thinking, problem solving, decision making, clinical reasoning, etc.)
- skills in the field of intra and inter-professional team work with a particular orientation towards comparison and multidisciplinary synergies
- the ability to activate the helping relationship towards the person and the family in the various care settings
- the ability to develop educational paths
- the ability to self-assess one's own skills
- a cultural attitude based on the long life learning approach starting from a solid basic training



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- an ethical sensitivity and an approach based on the values expressed by the Code of Conduct for Nurses
- organizational skills that allow them to actively participate and integrate into the various organizational models present in healthcare contexts
- an approach to evidence-based practice and the use of search results

At the end of the training course, students are also able to communicate, in full compliance with the contexts and interlocutors, in written and oral form through the English language (level B1)

The strong points of learning outcomes - skills in the field of intra and inter-professional team work with a particular orientation towards comparison and multidisciplinary synergies, a cultural attitude based on the long life learning approach starting from a solid basic training, an approach to evidence-based practice and the use of search results.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.

Particularities of the curricula in that country

The courses included in the curriculum: Basic cellular morphology and function, Fundament of organs morfology and function, Fundament of Nursing Science, Morphological and functional fundamentals of the human body, Basic Pathophysiological Mechanisms, Social and Psychological Process of Human Being, Nursing and Clinical Methods, Nursing Diagnostic Terapeutic and Rehabilitative Processes, Nursing process and therapeutic care in the medical area, Nursing process and therapeutic care in the physical and psychological disabilities, Nursing process and therapeutic care in maternal and pediatric area, Nursing process and therapeutic care in surgical area, Nursing in the assistance of the critic area, Nursing Methodology Based On Evidence Of Effectiveness, Legal principles applied to the organization and management of nursing, English Language Suitability, Life Sciences, Biochemistry, Biology And Genetics, Medical Genetics, Physiological Sciences, Applied Physics, Physiology, Morphological Sciences, Anatomy, Histology, Preventive And Community Sciences, General Hygiene, Preventive And Community Nursing, General Microbiology, Radiation Protection, Pathological Sciences, Clinical Biochemistry, General Pharmacology, Clinical Pathology, General Pathology And Immunology, Human Sciences, Health Pedagogy, General Psychology, Fundamental Care, Safety Of Care, General And Applied Nursing, Nursing Assessment And Objective Examination, Philogenesis And Structure Of The Nursing Discipline, Applied Nursing Methodology, Research Methodology Applied To Nursing, Statistics, Evidence Applied To Care Practice, Introduction To Research, Clinical Sciences Of The Surgical-Specialist Area, Anesthesia And Analgesia, General Surgery, Thoracic Surgery, Vascular Surgery, Diseases Of The Locomotive System, Clinical Sciences Of The Mother And Child Area, Pediatric Nursing, Obstetrics And Gynecology, Pediatrics And Neonatology, Clinical Sciences Of The Medical-Specialist Area, Pharmacology, Diseases Of The Cardiovascular System, Diseases Of The Respiratory System, Internal Medicine And Geriatrics, Oncology And Palliative Care, Nursing Of The Medical Area, Bioethics, Psychiatry, Dermatology, Infectious Diseases, Occupational Medicine, Nephrology, Neurology, Medical Surgical And Chronicity Nursing Sciences, Surgical Area Nursing, Nursing In Chronicity, Basic Nursing Care, Health Organization And Assistance Processes, Professional Conduct Ethics, Institutions Of Public Law And Healthcare Organization, Forensic Medicine, Organizational And Management Models Of Assistance In The Hospital And Local Area, Critical Area Sciences, Intensive Care And Emergency Aid, Risk Management, Critical Area Nursing, Mental Health Sciences, Mental Health Nursing, Psychiatry, Clinical Psychology.



The Contents of the curriculum

	SEMESTER	ECTS	LANGUAGE
1st year			
Basic cellular morphology and function	1	5	Italian
Fundament of organs morfology and function	1	7	Italian
Fundament of Nursing Science	1	6	Italian
Morphological and functional fundamentals of the human body	1	6	Italian
Basic Pathophysiological Mechanisms	2	6	Italian
Social and Psychological Process of Human Being	2	6	Italian
Nursing and Clinical Methods	2	6	Italian
Nursing Internship I	2	13	English
2nd year			
Nursing Diagnostic Therapeutic and Rehabilitative Processes	1	7	Italian
Nursing process and therapeutic care in the medical area	1	9	Italian
Nursing process and therapeutic care in the physical and psychological disabilities	2	8	Italian
Nursing process and therapeutic care in maternal and pediatric area	2	7	Italian
Nursing process and therapeutic care in surgical area	2	6	Italian
Nursing Internship II	2	23	Italian
3rd year			
Nursing in the assistance of the critic area	1	6	Italian
Nursing Methodology Based On Evidence Of Effectiveness	1	6	English
Legal principles applied to the organization and management of nursing	2	5	English
Nursing Internship III	2	24	English
Seminar activities	2	6	English
Professional lab	2	3	English
To the knowledge of at least one foreign language	2	2	English
For the Final Test	2	7	English
ADE (to prepare the student to the demands of the working world)	2	6	English

Table5- The courses included in the curriculum - Sapienza Università di Roma

English Language Suitability A - 2	1	3
Life Sciences (Ci)	1	
Biochemistry	1	3
Biology And Genetics	1	3

Medical Genetics	1	1
Physiological Sciences (Ci)	1	
Applied Physics	1	2
Physiology	1	3
Morphological Sciences (Ci)	1	
Anatomy	1	4
Histology	1	2
Preventive And Community Sciences	2	
General Hygiene	2	2
Preventive And Community Nursing		2
General Microbiology	2	2
Radiation Protection -	2	1
Pathological Sciences (Ci)	2	
Clinical Biochemistry	2	1
General Pharmacology	2	1
Clinical Pathology	2	1
General Pathology And Immunology	2	3
Human Sciences	2	
Health Pedagogy -	2	2
General Psychology -	2	3
Nursing Internship 1	2	14
Basic Nursing Laboratory (Ci)	4	
Laboratory Of Fundamental Care I		1
Seminar Safety Of Care		1
General And Applied Nursing (Ci)	4	
Nursing Assessment And Objective Examination		1
Philogenesis And Structure Of The Nursing Discipline		2
Applied Nursing Methodology		4
Laboratory Of Fundamental Nursing II (Ci) - Not Active For The Year 2022/2023	1	
Fundamental Care Lab Ii	1	1
In-Depth Seminars A	1	3
Research Methodology Applied To Nursing (Ci) - Not Active For The Year 2022/2023	1	
Statistics	1	1
Evidence Applied To Care Practice	1	2
Introduction To Research	1	2
Clinical Sciences Of The Surgical-Specialist Area (Ci) - Not Active For The Year 2022/2023	1	
	1	
Anesthesia And Analgesia	1	1

General Surgery	1	2
Thoracic Surgery	1	1
Vascular Surgery	1	1
Diseases Of The Locomotive System	1	1
Clinical Sciences Of The Mother And Child Area (Ci) - Not Active For The Year 2022/2023	1	
Pediatric Nursing	1	2
Obstetrics And Gynecology	1	1
Pediatrics And Neonatology	1	2
Clinical Sciences Of The Medical-Specialist Area I (Ci) - Not Active For The Year 2022/2023	1	
Pharmacology -	1	2
Diseases Of The Cardiovascular System	1	1
Diseases Of The Respiratory System	1	1
Internal Medicine And Geriatrics	1	2
Oncology And Palliative Care	1	1
Clinical Sciences Of The Medical-Specialist Area II (CI) - Not Active For The Year 2022/2023	1	
Dermatology	1	1
Infectious Diseases	1	1
Occupational Medicine	1	1
Nephrology	1	1
Neurology	1	1
Medical Surgical And Chronicity Nursing Sciences (CI) - Not Active For The Year 2022/2023	1	
Surgical Area Nursing	1	3
Nursing Of The Medical Area-	1	2
Nursing In Chronicity	1	2
Nursing Internship 2 - Not Active For The Year 2022/2023	1	17
English Language Suitability B - 1	1	3
Basic Nursing Care Laboratory III - Not Active For The Year 2022/2023	1	
Fundamental Care Lab Iii	1	1
In-Depth Seminars B	1	2
Health Organization And Assistance Processes (CI) - Not Active For The Year	1	
Bioethics -	1	1
Professional Conduct Ethics	1	1
Institutions Of Public Law And Healthcare Organization -	1	2
Forensic Medicine -	1	1

Organizational And Management Models Of Assistance In The Hospital And Local Area	2	2
Final Test - Not Active For The Year 2022/2023	1	3
Critical Area Sciences (Ci) -	1	
Intensive Care And Emergency Aid	1	2
Risk Management	1	1
Critical Area Nursing	1	2
Mental Health Sciences -	1	
Mental Health Nursing	1	2
Psychiatry -	1	2
Clinical Psychology -	1	2
Nursing Internship 3 - Not Active For The Year 2022/2023	1	29

Table6- The courses included in the curriculum - Bologna

The curriculum includes several important and specific courses that deserve to be taken into consideration such as Social and Psychological Process of Human Being, Nursing Methodology Based on Evidence of Effectiveness, Radiation Protection, Professional Conduct Ethics, Organizational and Management Models of Assistance in The Hospital and Local Area.

Other strong points are to have in the program an English language UC and the fact that after the second year - the use of English.

Teaching methodology – The didactic forms aimed at the development of skills in applying knowledge include lectures, conferences, seminars, work groups and discussion groups.

The modern didactic tools will be used. The skills in applying knowledge are developed by means of internships in the various healthcare situations, in medical and surgical areas, both general and specialized, with interdisciplinary approaches.

Attendance is compulsory and preparatory courses are foreseen which favor curricular learning.

Group and individual tutoring is provided to students.

During the 3 academic years, students are supervised by the same didactic coordinator/year tutor, who:

- Facilitates the learning of intellectual, relational and gestural skills;
- Manages and guarantees the learning setting;
- Collaborates in the coordination of student internships;
- Contributes to the assessment and provides feedback to the student and the teacher.

Individual interviews are held with the students in order to better understand the individual learning paths and evaluate together with the student any critical issues and possible resolution strategies.

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During the internship, the student is accompanied by the same guide for the entire internship period and will carry out the same hours of service.

Both Bologna and Roma have 40 ECTS before the internship.

The strong points of teaching methodology - individual interviews are held with the students in order to better understand the individual learning paths and evaluate together with the student any critical issues and possible resolution strategies. During the 3 academic years, students are supervised by the same didactic coordinator/year tutor.

Weaknesses - the number of credits at the end (180) and the fact that both (Bologna and Sapienza Università di Roma) are only 60 ECTS of internship.

Country 6 Spain

The Bachelor's Degree in Nursing has 240 ECTS (4 years)

The number of the students who can enroll in each Degree Course is established by the competent authorities in relation to the available facilities and teachers. The number of students for the first year is 95.

Students already holding a degree (achieved either in Spain or abroad) and students coming from other degree programs or holding other degrees must follow the same procedures and undergo the admission test to enroll in the first year.

The course is taught only in Spanish.

Admission: admission with exam

The strong points consist of the fact that candidates undergo the admission test to enroll in the first year.

Main learning outcomes:

The educational program is continually organized, monitored, validated, and improved, with the purpose to help students acquire competences, knowledge, and abilities included into the curricular profile regulated by the laws in force and the Course's specific goals. The professional nurse should have an adequate knowledge on the basic, clinical, and nursing sciences in order to better understand the most important elements at the base of the physiological and pathological processes

Knowledge and Skills: Those described in this legislation:
<http://www.boe.es/boe/dias/2008/07/19/pdfs/A31680-31683.pdf>

Basics:

- CB1 - Students have demonstrated knowledge and understanding in an area of study that builds on the foundation of general secondary education, and is usually at a level that, while relying on advanced textbooks, also includes some aspects that involve knowledge from the cutting edge of their field of study.



- CB2 - Students are able to apply their knowledge to their work or vocation in a professional manner and possess the competences usually demonstrated through the development and defense of arguments and problem solving within their field of study.
- CB3 - Students have the ability to gather and interpret relevant data (usually within their field of study) in order to make judgements which include reflection on relevant social, scientific or ethical issues
- CB4 - Students are able to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.
- CB5 - That students have developed those learning skills necessary to undertake further study with a high degree of autonomy.

General:

- CIN1 - Be able, in the field of nursing, to provide technical and professional health care appropriate to the health needs of the people they care for, in accordance with the state of development of scientific knowledge at any given time and with the levels of quality and safety established in the applicable legal and deontological regulations.
- CIN2 - Plan and provide nursing care aimed at individuals, families or groups, oriented towards health outcomes, assessing their impact, through clinical or care practice guidelines, which describe the processes by which a health problem is diagnosed, treated or cared for.
- CIN3 - Know and apply the theoretical and methodological foundations and principles of nursing.
- CIN4 - Understand the interactive behavior of the individual as a function of gender, group or community, within their social and multicultural context.
- CIN5 - Design care systems aimed at individuals, families or groups, evaluating their impact and establishing appropriate modifications.
- CIN6 - Base nursing interventions on scientific evidence and available means.
- CIN7 - Understand people without prejudice, considering their physical, psychological and social aspects, as autonomous and independent individuals, ensuring respect for their opinions, beliefs and values, guaranteeing the right to privacy, through confidentiality and professional secrecy.
- CIN8 - Promote and respect the right to participation, information, autonomy and informed consent in the decision-making process of the people cared for, in accordance with the way in which they experience their health-illness process.
- CIN9 - Promote healthy lifestyles and self-care, supporting the maintenance of preventive and therapeutic behaviors.
- CIN10 - Protect the health and well-being of individuals, families or groups cared for, guaranteeing their safety.
- CIN11 - Establish effective communication with patients, family, social groups and colleagues and promote health education.
- CIN12 - Know the ethical and deontological code of Spanish nursing, understanding the ethical implications of health in a changing global context.
- CIN13 - Know the principles of health and socio-health financing and make appropriate use of the available resources.
- CIN14 - Establish evaluation mechanisms, considering scientific-technical and quality aspects.
- CIN15 - Work with the team of professionals as a basic unit in which the professionals and other staff of care organizations are structured in a uni or multidisciplinary and interdisciplinary way.
- CIN16 - Know health information systems.
- CIN17 - Perform nursing care based on integrated health care, which involves multiprofessional cooperation, integration of processes and continuity of care.

- CIN18 - Know the strategies for adopting comfort and symptom care measures, aimed at the patient and family, in the application of palliative care that contribute to alleviating the situation of advanced or terminally ill patients.

Transversal Competences:

- TC1 - Capacity for analysis and synthesis.
- CT2 - Ability to apply knowledge in practice.
- TC3 - Planning and time management.
- CT4 - Basic general knowledge of the area of study.
- CT5 - Basic knowledge of the profession.
- TC6 - Oral and written communication in the mother tongue.
- CT7 - Knowledge of a second language.
- CT8 - Basic computer skills.
- CT9 - Research skills.
- CT10 - Ability to learn.
- CT11 - Information management skills (searching and analyzing).
- CT12 - Capacity for criticism and self-criticism.
- CT13 - Ability to adapt to new situations.
- CT14 - Ability to generate new ideas (creativity).
- CT15 - Problem solving.
- CT16 - Decision-making.
- CT17 - Teamwork.
- CT18 - Interpersonal skills.
- CT19 - Leadership.
- CT20 - Ability to work in an interdisciplinary team.
- TC21 - Ability to communicate with non-experts.
- TC22 - Appreciation of diversity and multiculturalism.
- CT23 - Ability to work in an international context.
- TC24 - Knowledge of other cultures and their customs.
- CT25 - Ability to work independently.
- CT26 - Project design and management.
- CT27 - Initiative and entrepreneurial spirit.
- CT28 - Ethical commitment.
- TC29 - Concern for quality.
- TC30 - Motivation.

The modern didactic tools will be used. The skills in applying knowledge are developed by means of internships in the various healthcare situations, in medical and surgical areas, both general and specialized, with interdisciplinary approaches.

Specific Competences:

- CMB1 - Know and identify the structure and function of the human body. Understand the molecular and physiological bases of cells and tissues.
- CMB2 - Know the use and indication of medical devices related to nursing care.
- CMB3 - Know the different groups of drugs, the principles of their authorization, use and indication, and their mechanisms of action. Use of medicines, assessing the expected benefits and associated risks and/or effects derived from their administration and consumption.
- CMB4 - Know and assess the nutritional needs of healthy people and those with health problems throughout the life cycle, to promote and reinforce healthy eating patterns.

Identify nutrients and the foods in which they are found. Identify the most prevalent nutritional problems and select appropriate dietary recommendations.

- CMB5 - Apply health care information and communication technologies and systems.
- CMB6 - Know the pathophysiological processes and their manifestations and the risk factors that determine the states of health and disease in the different stages of the life cycle.
- CMB7 - Identify the psychosocial responses of people in different health situations (in particular, illness and suffering), selecting the appropriate actions to provide help in these situations. Establish an empathic and respectful relationship with the patient and family, in accordance with the person's situation, health problem and stage of development. Use strategies and skills that enable effective communication with patients, families and social groups, as well as the expression of their concerns and interests.
- CMB8 - Recognize life-threatening situations and know how to perform basic and advanced life support maneuvers.
- CMB9 - Know and identify the psychological and physical problems derived from gender violence in order to train the student in the prevention, early detection, assistance, and rehabilitation of the victims of this form of violence.
- CME1 - Identify, integrate and relate the concept of health and care, from a historical perspective, to understand the evolution of nursing care.
- CME2 - Understand, from an ontological and epistemological perspective, the evolution of the central concepts that make up the nursing discipline, as well as the most relevant theoretical models, applying scientific methodology in the care process and developing the corresponding care plans.
- CME3 - Apply the nursing process to provide and guarantee the well-being, quality and safety of the people cared for.
- CME4 - Know and apply the principles underpinning comprehensive nursing care.
- CME5 - Direct, evaluate and provide comprehensive nursing care to the individual, the family and the community.
- CME6 - Ability to describe the fundamentals of the primary health care level and the activities to be developed to provide comprehensive nursing care to the individual, family and community. Understand the role and activities and cooperative attitude that the professional has to develop in a primary health care team. Promote the participation of individuals, families and groups in their health-illness process. Identify factors related to health and environmental problems, in order to attend to people in situations of health and illness as members of a community. Identify and analyses the influence of internal and external factors on the level of health of individuals and groups. Apply the necessary methods and procedures in their field to identify the most relevant health problems in a community. Analyze statistical data referring to population studies, identifying the possible causes of health problems. Educate, facilitate and support the health and well-being of community members whose lives are affected by health problems, risk, suffering, illness, disability or death.
- CME7 - Know the health alterations in adults, identifying the manifestations that appear in their different phases. Identify the care needs derived from health problems. Analyze the data collected in the assessment, prioritize the problems of the adult patient, establish and implement the care plan and carry out its evaluation. Perform nursing care techniques and procedures, establishing a therapeutic relationship with patients and relatives. Select interventions aimed at treating or preventing problems derived from health deviations. Have a cooperative attitude with the different members of the team.
- CME8 - Identify the characteristics of women in the different stages of the reproductive cycle and in the climacteric and in the alterations that may occur, providing the necessary care at each stage. Apply general care during the maternity process to facilitate the adaptation of women and newborns to new demands and prevent complications.

- CME9 - Know the specific aspects of newborn care. Identify the characteristics of the different stages of childhood and adolescence and the factors that condition the normal pattern of growth and development. Know the most frequent health problems in childhood and identify their manifestations. Analyze the assessment data of the child, identifying the nursing problems and complications that may arise. Apply the techniques that make up nursing care, establishing a therapeutic relationship with children and their carers. Select interventions aimed at the healthy and sick child, as well as those derived from diagnostic and treatment methods. Be able to provide health education to parents or primary carers.
- CME10 - Understand the changes associated with the ageing process and their impact on health. Identify the structural, functional, psychological and lifestyle changes associated with the ageing process.
- CME11 - Know the most frequent health problems in the elderly. Select caregiving interventions aimed at treating or preventing health problems and their adaptation to daily life by means of proximity and support resources for the elderly person.
- CME12 - Know the Spanish Health System. Identify the characteristics of the management function of nursing services and care management. Know and be able to apply group management techniques.
- CME13 - Know the applicable legislation and the code of ethics and deontology of Spanish nursing, inspired by the European code of nursing ethics and deontology. Provide care, guaranteeing the right to dignity, privacy, intimacy, confidentiality and decision-making capacity of the patient and family. Individualize care considering age, gender, cultural differences, ethnicity, beliefs and values.
- CME14 - Know the most relevant mental health problems in the different stages of the life cycle, providing comprehensive and effective care in the field of nursing.
- CME15 - Know palliative care and pain control to provide care that alleviates the situation of the advanced and terminally ill.
- CMF1 - Pre-professional practice, in the form of an independent clinical rotation and with a final assessment of competences, in Health Centers, Hospitals and other care centers that allow the incorporation of professional values, care communication skills, clinical reasoning, clinical management and critical judgement, integrating the knowledge, skills and attitudes of Nursing into professional practice, based on principles and values, associated with the competences described in the general objectives and in the subjects that make up the Degree.
- CMF2 - Carry out, present and defend an original work, consisting of an end-of-degree project in the field of Nursing, in which the competences acquired in the degree are synthesized and integrated. (Cross-disciplinary subject whose work will be carried out in association with different subjects).

Strong points of learning outcomes – students have developed those learning skills necessary to undertake further study with a high degree of autonomy, understand the interactive behaviour of the individual as a function of gender, group or community, within their social and multicultural context, establish effective communication with patients, family, social groups and colleagues and promote health education, work with the team of professionals as a basic unit in which the professionals and other staff of care organisations are structured in a uni or multidisciplinary and interdisciplinary way.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in an specific SN or APN.

The courses included in the curriculum: History and philosophy of nursing science, Specific english, Human anatomy, Biochemistry-biophysics, Basic human physiology, Alterations of physiological mechanisms, Psychosocial sciences applied to nursing, General pharmacology, Research methodology applied to nursing, Community nursing, Women's nursing, Nursing of newborns, childhood and adolescence, Pharmacotherapy, prescription, nutrition and dietetics in nursing, Fundamentals of nursing, Mental health nursing, Adult nursing, Ethics, legislation and management in nursing, Palliative care, Health education, Nursing in urgencies, emergencies and catastrophes, Statistical methods applied in nursing, Occupational risks in nursing, Research Methodology, Physiopathological processes, Anatomy, Historical, ethical and legal bases of care, Physiology, Fundamentals of Nursing, Biochemistry, Food, Nutrition and Dietetics, Psychosocial Sciences applied to Nursing care, Microbiology, biophysics and health promotion, clinical pharmacology, Procedures and Clinical Safety, Childhood and Adolescent Nursing, Nursing in Sexual and Reproductive Health, Aging Nursing, Palliative Care Nursing, Mental Health Nursing, Emergency Nursing, Administration and Management of Resources in Nursing, Physical Activity in Health, Evidence-Based Complementary Care, Nursing in Cooperation and Development, Critical Care Nursing, School and occupational nursing, Molecular and Hereditary Pathology, Diagnostic Techniques in Health.

– **The Contents of the curriculum**

	Semester	ECTS	Character
1st year			
History and philosophy of nursing science	1	6	Compulsory
Specific english	1	6	Compulsory
Human anatomy	1	6	Basic training
Biochemistry-biophysics	1	6	Basic training
Basic human physiology	1	6	Basic training
Alterations of physiological mechanisms	2	6	Basic training
Psychosocial sciences applied to nursing	2	6	Basic training
General pharmacology	2	6	Basic training
Fundamentals of nursing i	2	6	Basic training
Research methodology applied to nursing	2	6	Basic training
2nd year			
Community nursing I	1	6	Compulsory
Women's nursing	1	6	Compulsory
Nursing of newborns, childhood and adolescence	1	6	Compulsory
Pharmacotherapy, prescription, nutrition and dietetics in nursing	1	6	Compulsory
Fundamentals of nursing II	1	6	Compulsory
Community nursing II	2	6	Compulsory
Mental health nursing	2	6	Compulsory
Adult nursing I	2	6	Compulsory
Aging nursing	2	6	Compulsory
Ethics, legislation and management in nursing	2	6	Compulsory
3rd year			
Practicum I	1	30	External internships

Palliative care	2	6	Compulsory
Health education	2	6	Compulsory
Adult nursing II	2	6	Compulsory
Nursing in urgencies, emergencies and catastrophes	2	6	Optional
Statistical methods applied in nursing	2	6	Optional
Statistical methods applied in nursing	2	6	Optional
Occupational risks in nursing	2	6	Optional
4th year			
Practicum II	1	30	External internships
Practicum III	2	24	External internships
Final degree project	2	6	Final degree project

Table7- The courses included in the curriculum - Facultad de Enfermería y Terapia Ocupacional de Cáceres

<i>1st Course . Annual</i>			
<i>Code</i>	Subject	ECTS	Character
15201106	Research Methodology	9	basic
15201104	Physiopathological processes	9	basic
<i>1st Course . 1st Semester</i>			
<i>Code</i>	Subject	ECTS	Character
15201101	Anatomy	6	basic
15201201	Historical, ethical and legal bases of care	6	compulsory
15201102	Physiology	6	basic
15201202	Fundamentals of Nursing	6	compulsory
<i>1st Course . 2nd Semester</i>			
<i>Code</i>	Subject	ECTS	Character
15201105	Biochemistry, Food, Nutrition and Dietetics	6	basic
15201103	Psychosocial Sciences applied to Nursing care	6	basic
15201107	Microbiology, biophysics and health promotion	6	basic
<i>2nd Course . 1st Semester</i>			
<i>Code</i>	Subject	ECTS	Character
15202203	Adult Nursing I	6	compulsory
15202109	clinical pharmacology	6	basic
15202401	Practicum I	12	External Practices
15202108	Procedures and Clinical Safety	6	basic
<i>2nd Course . 2nd Semester</i>			
<i>Code</i>	Subject	ECTS	Character
15202204	Community Nursing I	6	compulsory

15202205	Childhood and Adolescent Nursing	6	compulsory
15202206	Nursing in Sexual and Reproductive Health	6	compulsory
15202402	Practicum II	12	External Practices
<i>3rd Course . 1st Semester</i>			
<i>Code</i>	<i>Subject</i>	<i>ECTS</i>	<i>Character</i>
15203211	Adult Nursing II	6	compulsory
15203212	Aging Nursing	6	compulsory
15203209	Palliative Care Nursing	6	compulsory
15203210	Mental Health Nursing	6	compulsory
15203207	Emergency Nursing	6	compulsory
<i>3rd Course . 2nd Semester</i>			
<i>Code</i>	<i>Subject</i>	<i>ECTS</i>	<i>Character</i>
15203208	Administration and Management of Resources in Nursing	6	compulsory
15203403	Practicum III	12	External Practices
15203404	Practicum IV	12	External Practices
<i>4th Course . 1st Semester</i>			
<i>Code</i>	<i>Subject</i>	<i>ECTS</i>	<i>Character</i>
15204305	Physical Activity in Health	3	Optional
15204302	Evidence-Based Complementary Care	3	Optional
15204214	Community Nursing II	6	compulsory
15204301	Nursing in Cooperation and Development	3	Optional
15204213	Critical Care Nursing	6	compulsory
15204303	School and occupational nursing	3	Optional
15204306	Molecular and Hereditary Pathology	3	Optional
15204405	Practicum V	12	External Practices
15204304	Diagnostic Techniques in Health	3	Optional
<i>4th Course . 2nd Semester</i>			
<i>Code</i>	<i>Subject</i>	<i>ECTS</i>	<i>Character</i>
15204406	Practicum VI	12	External Practices
15204407	Practicum VII	12	External Practices
15204501	Final Degree Project	6	Final Degree Project

Table8- The courses included in the curriculum - Universidad Almeria

The curriculum includes several important and specific courses that deserve to be taken into consideration such as Psychosocial sciences applied to nursing, Community nursing, Aging nursing, Ethics, legislation and management in nursing, Nursing in urgencies, emergencies and catastrophes, Occupational risks in nursing, Diagnostic Techniques in Health.

Another strong point is to have in the program a English language UC.



Teaching methodology – The theoretical-practical course units are assessed by examination and continuous assessment.

The evaluation of internships is done through a set of performance activities in its own grid, weighed up with other elements (case studies, reports, etc.).

The results obtained by the student in each of the subjects of the study plan will be graded based on the following numerical scale from 0 to 10, with expression of a decimal, to which the corresponding qualitative grade may be added:

Suspense: from 0 to 4.9

Approved: from 5 to 6.9

Notable: from 7 to 8.9

No ECTS - Basic Sciences (60 ECTS), Nursing Sciences (84 ECTS), Optional (to choose 6 ECTS), Internship 84 ECTS, Supervised Internships and End of Course Work (90 ECTS).

1st Semester- *preclinical disciplines* (theoretical) (60ECTS)

The Internship and Final Degree Project module is composed of 7 internships of 12 ECTS each (84 ECTS), according to the European Directive 2005/36/EC, and 6 ECTS respectively.

The strong points - The theoretical-practical course units are assessed by examination and continuous assessment. The number of ECTS for Nursing Sciences is higher than that for Basic Sciences. It has a simulation center. UC option UC theoretical practices.

Country 7 Greece

Average of nursing courses at Bachelor/Master level: 60 courses

Admission: No citizenship is required, age: above 18 years, a minimum grade from the national exams

The strong points consist of the fact that no citizenship is required, while the main weak point is that the admission is based on a minimum grade from the national exams.

Main learning outcomes:

General learning outcomes according to competencies, knowledge and skills:

- Basic knowledge in nursing and complementary areas
- Modern medical knowledge based on up-to-date courses
- Integrative holistic approach of nursing in all medical related field
- Plan and implement nursing care
- Administration of treatments according to doctor's prescriptions
- To cooperate with the therapeutic team



- Social - to communicate with the patient efficiently and with empathy
- Health promotion, prevention of illness and care of ill, disabled and dying people
- Health promotion in relation to a healthy and ill person
- Prepare for participation in the implementation of health policy
- Sensitize to providing nursing care in accordance with the principles of professional ethics
- Use up-to-date knowledge to ensure safety and high level of care, provide benefits regarding health promotion and preservation as well as disease prevention, independently exercise the profession in accordance with the principles of general professional ethics and holistic approach to the patient considering respect of his rights, organize his own work

The strong points of learning outcomes - Integrative holistic approach of nursing in all medical related field, cooperation with the therapeutic team, health promotion in relation to a healthy and ill person, preparing for participation in the implementation of health policy.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.

It does not promote the nursing research and the cooperation between different medical specialties during the therapeutic process.

Particularities of the curricula in that country

The courses included in the curriculum

Compulsory: Anatomy – Histology – Embryology I, Biochemistry, Cell Biology, Biostatistics, Introduction to Nursing, Anatomy – Histology – Embryology II, Epidemiology, Health Economics focused on Nursing Care, Physiology I, Health Informatics, Pharmacology, Microbiology, Community Nursing I, First Aid, Fundamentals of Nursing I, Physiology II, Prevention Fundamentals of Nursing II, Nursing Care Delivery Systems, Surgery – Physical Examination (Semeiography), Health Psychology, Internal Medicine I, Internal Medicine II, Surgery, Medical Nursing I, Perioperative Nursing I, Management Health Services and Quality Assurance, Ethical Issues in Health Care, Psychiatry, Mental Health Nursing, Medical Nursing II, Perioperative Nursing II, Infection Control Nursing, Research Methodology, Pediatric Nursing, Emergency Medicine & Intensive care, Emergency Nursing & Intensive care, Pediatrics, Anaesthesiology Nursing, Nursing Management, Clinical Nursing Practice, Palliative Care, Legislation and Nursing Responsibility.

Electives: Bioethics, Introduction to Psychology, Introduction to Informatics and Data Analysis, Biophysics, Human Genetics, Clinical Nutrition, Biology of Behaviour, Health Sociology, Clinical Anatomy, Biomedical Informatics & Technology, Nursing Theories, Radiation Protection, Transcultural Nursing, Hospital Information Systems, Occupational Health Nursing Assessment,, Dermatology Nursing, Communication Skills, Pathophysiology of Diseases, Rehabilitation of Patients with Chronic Diseases, Oncology Nursing, Gerontology Nursing, Neurological/Neurosurgical Nursing, Psychoactive Substances, Community Nursing II, Nephrology Nursing, Endoscopy Nursing, Cardiovascular Nursing, Oxygen Therapy, *Acquisition of clinical experience, Mental Health Nursing Liaison, Complementary Therapies, Pulmonology-Nursing of Pulmonary Diseases, Mechanical Ventilation, Evidence Based in Nursing Practice, Nursing Problems of Children with Chronic Diseases, Emergency Medicine, Psychosocial Rehabilitation, Paediatric Trauma and Intoxications, Orthopaedic Nursing, Maternal and Gynaecological Nursing, *Acquisition of clinical experience.

Courses from the curricula – Number of theoretical hours: 140, Number of practical activities: 110,
The percentage of practical/theoretical hours: 78%

Strong points - clear structure and the existence of several areas dedicated to deepen and specified preparation of nurses like: Nursing ethics, Basics of nursing, Rehabilitation and nursing of the disabled, Pathology, Information system in health care, Organization of nursing profession, and also medical and surgical specialties: Paediatrics, Nosocomial infections, Surgery and surgical nursing.

Weakness - does not offer enough training on practical skills

Teaching methodology – Lectures, Exercises, Independent Study, Laboratory and Practical Study,
Other – Practical activities at the patients' bed

General ECTS released by the courses at national level: Around 250 ECTS credits

Weaknesses - does not offer training on practical skills (acquisition of clinical experience is an elective course) and does not promote a continuous long-life self-training, training with the use of digital means (virtual clinical cases).

Country 8 Croatia

Average of nursing courses at Bachelor/Master level: Around 60 courses

Admission:

Educational qualifications (type of completed education)

Achievements from previous education (grades obtained), as well as State Matura exams for undergraduate study

Results of additional entrance classification exams, Conservation-restoration program

The strong points consist of the fact that additional entrance classification exams are required for Admission.

Main learning outcomes:

The general goals of this program are:

- To prepare students to provide nursing care based on ethical principles in a capable and responsible manner, and to raise their awareness about the necessity of lifelong learning
- To prepare students for work with individuals, their families and the community, respecting thereby their differences in culture and ethnicity
- Students will master team work and collaboration with all experts who are involved in all types of the promotion of health, treatment and medical care

Project number: 2022-1-RO01-KA220-HED-000087854

- Students must receive the highest level of education as well as an integrated knowledge in theory and practice so that they are able to keep professionally developing through various forms of lifelong learning

The specific goals of this program are:

- To develop specific knowledge, skills and attitudes about the nursing care of sick or healthy individuals, their families and the community as a whole
- To develop knowledge, skills and attitudes so that they are able to make a good evaluation about the needs for nursing care, about the selection of the best developmental strategy and management
- Coordination and evaluation of nursing care in various situations and workplaces
- To gain knowledge, capabilities and attitudes needed to work on changes within the community to promote health and prevent disease
- To develop the skills of critical analysis, synthesis and evaluation of nursing care
- To develop decision-making skills with respect to ongoing or intended nursing care procedures in unforeseen circumstances
- Acquire the ability to recognize and determine complex problems and find possible solutions for them

The strong points of learning outcomes - raising awareness about the necessity of lifelong learning, preparing students for work with individuals, their families and the community, respecting thereby their differences in culture and ethnicity and team work and collaboration with all experts who are involved in all types of the promotion of health, treatment and medical care.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.

Particularities of the curricula in that country

The courses included in the curriculum

Compulsory courses: Anatomy, Fundamentals of Medical Chemistry and Biochemistry, Fundamentals of Physics, Radiology and Radiation Protection, Microbiology with Parasitology, Philosophy and Ethics in Nursing, Fundamentals of Nursing Care I/1, Nursing Care Process I/1, English Language I/1, Physiology, Social and Healthcare Legislation, Pharmacology, Computer Science in Nursing Care, Clinical Practice I, Communication Skills, Fundamentals of Nursing Care I/2, Nursing Care Process I/2, English Language I/2, Dietetics, Pathophysiology, Pathology, Gynaecology and Obstetrics, Mother and Newborn Nursing Care, Internal Medicine, Infectology, Adult Nursing Care I/1, Sociology of Health, Hygiene and Epidemiology, Health Psychology, English Language II/1, Paediatrics, Child Nursing Care, Neurology, Dermatology, Adult Nursing Care I/2, Public Healthcare, Organisation, Management and Administration in Healthcare, Clinical Practice II, English Language II/2, Anaesthesiology, Reanimatology and Intensive Care, Ophthalmology, Otorhinolaryngology, Adult Nursing Care II/1, Psychiatry and Mental Health, Nursing Care of Psychiatric Patients I/1, Home Nursing Care, Nursing Care of Older Persons, Nursing Care of Disabled Persons, Fundamentals of Research Work in Nursing, Surgery, Traumatology and Orthopaedics, Adult Nursing Care II/2, Nursing Care of Psychiatric Patients I/2, Palliative Nursing Care, Community Nursing Care, Healthcare Education with Learning and Teaching Methods, Clinical Practice III, Undergraduate The



Elective courses: Selected Chapters from History of Medicine and Nursing, Psychology of Pain, Fundamentals of Genetics in Medicine, Evidence-Based Nursing Care, Biologic Fundamentals of Behavior, Nursing Care of Children with Chronical Illness, Nursing Care of Addicts, Group Work in Nursing, Child and Adolescent Mental Health Protection, Nursing Care of Children in Intensive Care Units, Nursing and Media, Clinical Pharmacology in Nursing Practice, Psychological Approach to Oncologic Patients, Pain Therapy, Basic Urgent Medical Procedures, Introduction to Neuropsychological Rehabilitation, Chronic Wound Treatment Procedure, Nursing Care of Oncologic Patients

The Contents of the curriculum

Year 1

Compulsory courses

Anatomy, Fundamentals of Medical Chemistry and Biochemistry, Fundamentals of Physics, Radiology and Radiation Protection, Microbiology with Parasitology, Philosophy and Ethics in Nursing, Fundamentals of Nursing Care I/1, Nursing Care Process I/1, English Language I/1, Physiology, Social and Healthcare Legislation, Pharmacology, Computer Science in Nursing Care, Clinical Practice I, Communication Skills, Fundamentals of Nursing Care I/2, Nursing Care Process I/2, English Language I/2, Dietetics

Elective courses

Selected Chapters from History of Medicine and Nursing, Psychology of Pain, Fundamentals of Genetics in Medicine, Evidence-Based Nursing Care, Biologic Fundamentals of Behavior

Year 2

Compulsory courses

Pathophysiology, Pathology, Gynaecology and Obstetrics, Mother and Newborn Nursing Care, Internal Medicine, Infectology, Adult Nursing Care I/1, Sociology of Health, Hygiene and Epidemiology, Health Psychology, English Language II/1, Paediatrics, Child Nursing Care, Neurology, Dermatology, Adult Nursing Care I/2, Public Healthcare, Organisation, Management and Administration in Healthcare, Clinical Practice II, English Language II/2

Elective courses

Nursing Care of Children with Chronical Illness, Nursing Care of Addicts, Group Work in Nursing, Child and Adolescent Mental Health Protection, Nursing Care of Children in Intensive Care Units, Nursing and Media

Year 3

Compulsory courses

Anaesthesiology, Reanimathology and Intensive Care, Ophthalmology, Otorhinolaryngology, Adult Nursing Care II/1, Psychiatry and Mental Health, Nursing Care of Psychiatric Patients I/1, Home Nursing Care, Nursing Care of Older Persons, Nursing Care of Disabled Persons, Fundamentals of Research Work in Nursing, Surgery, Traumatology and Orthopaedics, Adult Nursing Care II/2, Nursing Care of Psychiatric Patients I/2, Palliative Nursing Care, Community Nursing Care, Healthcare Education with Learning and Teaching Methods, Clinical Practice III, Undergraduate The

Elective courses

Clinical Pharmacology in Nursing Practice, Psychological Approach to Oncologic Patients, Pain Therapy, Basic Urgent Medical Procedures, Introduction to Neuropsychological Rehabilitation, Chronic Wound Treatment Procedure, Nursing Care of Oncologic Patients

Courses from the curricula – Number of theoretical hours: 1355, Number of practical activities: 1250, The percentage of practical/theoretical hours: 92%

Strong points - clear structure and the existence of several areas dedicated to deepen and specified preparation of nurses like: Nursing ethics, Fundamentals of nursing, Nursing of the disabled, Pathology, Computer Science in nursing, Community nursing, Communication skills and also medical and surgical specialties: Pediatrics, Nosocomial infections, Surgery and surgical nursing.

Enhances the nursing research and the cooperation between different medical specialties during the therapeutic process.

Weaknesses - does not offer enough training on practical skills

Teaching methodology – Lectures, Exercises, Independent Study, Laboratory and Practical Study, Other – Practical activities at the patients' bed

General ECTS released by the courses at national level: 180 ECTS credits

Weaknesses - does not promote a continuous long-life self-training and training with the use of digital means (virtual clinical cases)

Country 9 The Netherlands

Average of nursing courses at Bachelor/Master level: Around 60

Most nursing courses at Bachelor level are taught in Dutch so there are some language requirements. There are more courses at Master level that are taught in English.

Admission

A prospective student with a foreign diploma (secondary and/or higher education) must add the following documents to his online registration for a Dutch-taught graduate, bachelor or advanced bachelor's degree: Copy of diploma(s): after checking the online registration, we will request confirmation of your diplomas (secondary and/or higher education (higher education diploma only compulsory for advanced bachelor's degree program)

The strong points of the admission system consist of the fact that international candidates are also encouraged to apply for this program and Master level courses are taught in English.

The weak point consist of the fact that most nursing courses at Bachelor level are taught in Dutch.

Main learning outcomes:

- Gain in-depth scientific knowledge through lectures, group work, self-study, simulation and/or skills training.
- Receive a strong scientific basis of anatomy, physiology, pathology and pharmacology.
- Learn how to work with high-tech equipment, but also learn how to use innovations in healthcare. A good portion of medical calculation will of course not be missing.

The strong point consist of the fact that students learn how to use innovations in healthcare.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.

Particularities of the curricula in that country

The courses included in the curriculum:

Anatomy and Physiology 1, Clinical education 1, The nurse as a global citizen: introductory, Nursing reasoning and acting: introductory 1, Basic and Social Sciences (Nutrition, Psychosocial care, Developmental Psychology), Basic Nursing, Creativity, entrepreneurship and innovation, Sustainable thinking and acting, Humanities (RZL and ethics, Introduction to psychology), Experience internship, Introduction to evidence based nursing reasoning and action, Clinical Education 1, The creative, enterprising and innovative nurse: introductory, The sustainable nurse: introductory - Religion, meaning and philosophy 2, The detective, investigative nurse: introductory without scientific research, Scientific research, The nurse as citizen of the world: introductory, Religion, meaning and philosophy 1, Psychological frameworks 1, Transcultural care and global citizenship, General medical care, The digital nurse, The nurse as coach and leader, Clinical education 2, Clinical education 3, Clinical education 4, Clinical education 5, Clinical education 6, Clinical education 7, Clinical education 8, Nursing reasoning and acting: in-depth, Surgical care, Chronic care, Mental health care, Acute and critical care, Digitization in healthcare, Primary care, Interprofessional module (Language & Culture Course, Public Health), International module on pediatric rehabilitation - University hospital Ghent, Belgium, Research methodology and statistics, Caring" of the elderly in need of care, 3D printing in healthcare, Beyond the BADGElor, The nurse as a skilled companion, FuturePROEF: the nurse as practice developer, Clinical education 9, Clinical education 10, Clinical education 11, Clinical education 12, Clinical education 13, Clinical education 14, Clinical education 15, Clinical leadership, Complex wound care, The nurse as an independent professional, Français medical, Dealing non-violently with aggression, Healthcare as a global profession, Cross-border recovery support work, The sick child: broadening, Interdisciplinary Program on Palliative and End-of-Life Care (IPPE), International Conferences, Interprofessional collaboration, Medical English, Methodology: qualitative and quantitative research for healthcare (link), Dealing with loss and emotional pain in children and parents, Caring: experiential learning in mental health care, Personal and professional development, Professionalization in the field, Skilled Companion, Social work in health care, Topics in acute and critical care, Topics in cancer care, Addiction Care

Courses from the curricula – Number of practical activities: 2300

The curriculum includes several important and specific elective courses that deserve to be taken into consideration such as The nurse as a global citizen, Creativity, entrepreneurship and innovation, Sustainable thinking and acting, 3D printing in healthcare, Dealing non-violently with aggression.

Weakness - the curriculum offered in the Netherlands does not offer a concrete learning program of medical specialties.

Teaching methodology – The classes are approached differently than other Nursing degree programs, with a focus on experiential and integrative learning. For example: in the anatomy lesson about the circulatory system, students immediately learn to measure the heart rate and blood pressure. By creating a very realistic and safe learning environment using high-tech equipment, combined with a debriefing according to predetermined didactic principles, students will be trained in clinical reasoning and acting. The students go through a predetermined trajectory that prepares you step by step for graduation.

For each module, students will receive a package of lessons, practice and internship, each for a period of two to nine weeks. The students do an internship from the first year, so that students immediately gain care experience. Gradually the hours of internship will increase.

SIM@rt is an expertise center for simulation education at Artevelde University College within the Health and Care domain. By creating a very realistic and safe learning environment using high-tech equipment, combined with a debriefing according to predetermined didactic principles, we give the participants the opportunity to train themselves in clinical reasoning and acting. The nursing students go through a predetermined trajectory to prepare themselves step by step for graduation. The other healthcare programs on the campus are also involved in interdisciplinary simulation training.

General ECTS released by the courses at national level: 240 ECTS

The strong points consist of the fact that students do an internship from the first year, so that students immediately gain care experience and gradually the hours of internship will increase. Nursing students go through a predetermined trajectory to prepare themselves step by step for graduation. The other healthcare programs are also involved in interdisciplinary simulation training.

Other strong points are learning in a safe high-tech environment, high public health influence and deepen in clinical reasoning and acting.

Country 10 France

The curriculum for nurses in France usually is for bachelor level where students receive the state diploma of nurse.

There is also a master degree for specialization. In France the anesthetist nurse (IADE) diploma is a two years master degree, which requires the prior obtaining of the state diploma of nurse (bachelor level). The training is based on Order of 23 July 2012 on training leading to the State diploma of nurse anaesthetist (“Arrêté du 23 juillet 2012 relatif à la formation conduisant au diplôme d'Etat d'infirmier anesthésiste”). The state diploma of the anesthetist nurse is a Master degree.

Admission

To become a nurse, students should join one of the 350 Nursing Training Institutes (IFSI) in France, which recruits holders of a baccalaureate by competitive examination for training over 3 years and which issues a recognized State diploma Bac +3.



It is just as possible to continue the studies and validate a master's degree in clinical nursing sciences, which can be obtained from the School of Advanced Studies in Public Health in Rennes.

For childcare auxiliaries and nursing assistants who wish to convert to the nursing profession, a specific admission exam has been put in place.

National education and higher education nurses can, if they wish, take an entrance examination to become state public servants.

The admission for master degree is subject to a selective examination; The candidates must have a diploma, certificate or other title mentioned in Article L.4311-3 or Article L.4311-12 of the Public Health Code, allowing to practice the profession of Nurse, or a diploma or authorization to practice issued by the Regional Director of Youth, Sports and Social Cohesion in charge of health pursuant to Article L.4311-4 of the Public Health Code. The candidates must justify a minimum of 2 years of practice, in full-time equivalent, of the nursing profession, on January 1 of the year of the competition. They must have successfully passed the admission tests for training preparing for the state diploma of nurse anesthiologist, organized by each authorized school under the control of the director general of the regional health agency and the university president (written and oral admission test).

The strong points consist of the fact that there is a very selective entry from recruits holders of a baccalaureate.

The admission for master degree is subject to a selective examination.

Main learning outcomes:

For the Bachelor degree for nurse, the main learning outcomes are:

- Evaluate a clinical situation and establish a diagnosis in the nursing field
- Designing and leading a nursing project
- Accompany a person in carrying out their daily care
- Implement diagnostic and therapeutic actions
- Initiate and implement educational and preventive care → The health service will be included in these teaching units in the course of individual and collective care in places of living.
- Communicate and lead a relationship in a care setting
- Analyze the quality of care and improve professional practice
- Research and process professional and scientific data
- Organize and coordinate medical interventions
- Inform and train professionals and trainees

For the master degree for the anesthetist nurse, the main learning outcomes are:

- At the end of the training the student will be able to become an autonomous, responsible and reflective practitioner, a professional capable of analyzing any health situation, making decisions within the limits of his role, and conducting interventions alone and in collaboration with the anesthiologist in the field of anesthesia, resuscitation, emergency care.



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- Develop resources in theoretical and methodological knowledge, gestural skills and relational abilities. The student completes his knowledge, develops his skills and enriches his professional project.
- Develop their critical and questioning ability, lead a reflection in the field of ethics, safety, quality and professional responsibility and gradually acquire the autonomy necessary to take up the position as an anesthetist nurse.
- The anesthetist nurse works in multidisciplinary teams, in collaboration and under the responsibility of anesthesiologist
- They carries out specific care and technical gestures in the fields of anesthesia-resuscitation, emergency medicine and pain management.
- The anesthetist nurse analyzes, evaluates situations, and intervenes to ensure the quality of care and the safety of patients in the peri-operative period.
- Their activities contribute to diagnosis, treatment, research. He participates in training in these specific fields.
- The Article R 4311-12 of the Health Code specifies the conditions for the exercise of the anesthetic nurse. Provided that an anesthesiologist can intervene at any time and that he has examined the patient and established the protocol, an IADE is authorized:
 - To apply the techniques of general anesthesia, regional anesthesia and reinjections in the event that a device has been set up by a anesthesiologist;
 - To practice per-operative resuscitation.
- The training objectives are structured around seven competencies to be acquired:
 - 1 Anticipate and set up an organization of the anesthesia site according to the patient, the type of intervention and the type of anesthesia
 - 2 Analyze the situation, anticipate the associated risks according to the type of anesthesia, the characteristics of the patient and the intervention and adjust the anesthetic management
 - 3 Implement and adapt the anesthesia procedure according to the patient and the course of the procedure
 - 4 Ensure and analyze quality and safety in anesthesia and resuscitation
 - 5 Analyze the patient's behavior and provide support and information adapted to the anesthesia situation
 - 6 Coordinate its actions with stakeholders and train professionals in the context of anesthesia, resuscitation, intra- and extra-hospital emergency and pain management
 - 7 Research, process and produce professional and scientific data in the fields of anesthesia, resuscitation, emergency and analgesia

The strong points consist of the fact that at the end of the training the student will be able to become an autonomous, responsible and reflective practitioner, a professional capable of analyzing any health situation, making decisions within the limits of his role.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.

Particularities of the curricula in that country are:

The Contents of the curriculum

For the Bachelor degree for nurse, the program is divided in two parts:



Theoretical teaching:

- UE 1.1: Psychology, sociology, anthropology
- UE 1.2: Public health and health economics
- UE 1.3: Legislation, ethics, deontology
- UE 2.1: Basic biology
- UE 2.2: Life cycles and major functions
- UE 2.3: Health, illness, disability, life accidents
- UE 2.4: Traumatic processes
- UE 2.5: Inflammatory and infectious processes
- UE 2.6: Psychopathological processes
- UE 2.7: Organic failures and degenerative processes
- UE 2.8: Obstructive processes
- UE 2.9: Tumor processes
- UE 2.10: Infectiology / Hygiene
- UE 2.11: Pharmacology and therapeutics
- UE 3.1: Nursing reasoning and clinical approach
- UE 3.2: Nursing project
- UE 3.3: Nursing roles, organization of work and interprofessionalism
- UE 3.4: Initiation to the research process
- UE 3.5: Supervision of healthcare professionals
- UE 4.1: Comfort and well-being care
- UE 4.2: Relational care
- UE 4.3: Emergency care
- UE 4.4: Therapeutics and contribution to medical diagnosis
- UE 4.5: Nursing care and risk management
- UE 4.6: Educational and preventive care
- UE 4.7: Palliative and end-of-life care
- UE 4.8: Quality of care and evaluation of practices
- UE 6.1: Working methods and ICT
- UE 6.2: English

Clinical teaching in internships:

- First year: 15 weeks (Semester 1: 5 weeks, Semester 2: 10 weeks)
- Second year: 20 weeks (Semester 3: 10 weeks, Semester 4: 10 weeks)
- Third year: 25 weeks (Semester 5: 10 weeks, Semester 6: 15 weeks)

For the master degree for the anesthetist nurse, the program is divided in two parts:

Theoretical teaching (60 ECTS) with 30 teaching units (UE) divided into 7 areas:

- UE 1 Humanities, Social Sciences and Law (6 ECTS)
- UE 1.1 Psycho-sociology and anthropology
- UE 1.2 Pedagogy and professional construction.
- UE 1.3 Management: organization, interdisciplinarity and teamwork in emergency, anesthesia and resuscitation situations
- UE 1.4 Public health: health economics and epidemiology
- UE 1.5 Law, Ethics and Professional Conduct
- UE 2 Physical, biological and medical sciences (8 ECTS)
- UE 2.1. Physics, biophysics, chemistry, biochemistry and cell biology
- UE 2.2. Integrated physiology and pathophysiology

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- UE 2.3. General pharmacology
- UE 2.4. Pharmacology specific to anesthesia resuscitation and emergency
- UE 3 Fundamentals of anesthesia, resuscitation and emergency (14 ECTS)
- UE 3.1. Anesthesia, resuscitation and emergency techniques, principles and implementations (Part 1)
- UE 3.2 Anaesthesia, resuscitation and emergency techniques, principles and implementations (Part 2)
- UE 3.3 The specific modalities of anaesthesia, resuscitation and emergency related to different types of intervention and different associated pathologies
- UE 4 Practice of the profession of IADE in specific fields (10 ECTS)
- UE 4.1 Pathology and major syndromes
- UE 4.2 Techniques and organisation of care
- UE 4.3. Pain Management
- UE 4.4 vigilance
- UE 4.5 Quality and Risk Management
- UE 5 Studies and research in health (6 ECTS)
- UE 5.1. Statistics
- UE 5.2 Research methodology. Clinical trials
- UE 5.3. Annotated analysis of scientific articles
- UE 5.4 Foreign language
- UE 5.5 Computer science education
- UE 6 Integration of IADE knowledge (10 ECTS)
- UE 7 Professional dissertation (6 ECTS)

Clinical teaching in internships: (4 semesters and 60 ECTS):

- S1: 14 weeks of internship (14 ECTS)
- S2: 14 weeks internship (16 ECTS)
- S3: 14 weeks internship (14 ECTS)
- S4: 16 weeks of internship (16 ECTS)

Internships are chosen by the student on the proposal of the director. Each internship is subject to a validation of skills.

There are 2200-2400 hours of internship and 800-900 hours of theoretical teaching.

The strong points consist of the fact that training is covering almost all disciplines and specialties and there is quality training both theoretically and practically. Students have individual professional project with possible support from the employer.

For the master degree for the anesthetist nurse there are 2200-2400 hours of internship and 800-900 hours of theoretical teaching. Integration into training is possible only after 2 years of professional experience. The diploma provides recognition everywhere in France and in some neighboring countries (Switzerland, Luxembourg, Belgium).

Weaknesses consist of: French specificity of the training curriculum, the courses are only in French, the theoretical teaching is too specialized in certain areas, there are no or few opportunities to integrate the training for a foreigner or a French coming from a foreign course, there are not enough schools in France, the method of training is difficult to transpose to another country, there are no possible bridges with other foreign formations, in or outside the EU, there is not enough development on quality and risk management approaches for an eminently risky practice.

For the master degree for the anesthetist nurse there is too much focus on anesthesia activities in the operating room: Not enough training development to expand IADE's activities to intensive care units.



Teaching methodology (online/onsite/simulation) – Lectures, Practical tutorials, Guided personal work, Simulation learning. There is individualized pedagogical follow-up throughout the training course allowing the pedagogical support and personal development of each student

No ECTS - 180 ECTS for license level (3 years) distributed as follows: 120 credits for theoretical lessons and 60 credits for clinical teaching (one week of internship is equivalent to one credit)

120 ETCS for the master degree for the anesthetist nurse

The strong points consist of the fact that there is individualized pedagogical follow-up throughout the training course allowing the pedagogical support and personal development of each student. It provides quality of teaching and teachers. There is a diversity of internship places. Financing is possible by the employer in whole or in part.

Weaknesses consist of: the scarcity of trained professionals leads to a wage outbid, there is no access to training via validation of acquired experience, strong lobbying by professional unions and professional associations to prevent the emergence of other training courses (corporatism), the training is too focused on the public hospital model, largely neglecting other models (such as the private model).

Country 11 Belgium

The curriculum for nurses in Belgium usually is for Bachelor level. There are also Bachelor degree for special professional titles such as in anesthesia for nurses involved in that particular field; the courses last one year and provide a specialization, not another level compared to the general nurses which are already at the bachelor level.

Admission

To access the Bachelor level, candidates must have obtained the CESS in Belgium or an equivalent recognized qualification (Baccalaureate).

If candidates do not have a secondary school leaving certificate, it is possible to take an entrance exam called “Paramedical Jury A1” organized by the French Community of Belgium. It can be done remotely with EAD* (distance education) or by following a year of preparatory course in a High School.

Admission is not compulsory: each School offers a limited number of places.

The common admission requirements for special professional titles Bachelor degree are:

- The candidate must have a Bachelor degree in nursing
- Foreign equivalent degree
- Professional 5 years experience with recognition of some university years (60 credits per year, max 2 years)

A strength of the admission system consists of the fact that international candidates are also encouraged to apply for this program, but a weak point is represented by the fact that there is no exam for the admission to Bachelor degree for special professional titles.

Main learning outcomes:

The main learning outcomes for nurses program are:

- Make a nursing diagnosis independently, based on the current clinical and theoretical knowledge required. Plan, organize, apply and perform nursing care.
- Ensure professional communication
- Collaborate
- Ensure professional liability
- Empower individuals, families and groups so that they adopt a healthy lifestyle and take care of themselves
- Manage the health project
- Analyze, ensure and evaluate the quality of care in order to improve own professional practice

For special professional titles such as anesthesia for nurses, the general learning outcomes are:

- The nurse specialized in anesthesia (ASN) provides assistance in the anesthetic management of patients in the various specialties of the operating room, other technical platforms, pre-anesthesia consultation and pain management.
In collaboration with the anesthesiologist, the ASN is able to participate, in different places of exercise, in the application of specific anesthesia techniques and pain control.
- The anesthesia specialized nurse takes care of the patient before, during and after anesthesia :
 - Before anesthesia, the ASN job consists of collecting the preoperative data essential for the patient's anesthetic care with the approval of the doctor. In collaboration with the anesthesiologist, the nurse develops an anesthesia plan adapted to the patient's condition. Their role is also to organize the anesthesia site according to the type of intervention performed and to anticipate all the doctor's needs.
 - During the intervention, the ASN assists the anesthesiologist in carrying out general and loco-regional anesthesia techniques. They ensure the patient's safety during anesthesia by monitoring different parameters (hygiene, temperature, heart rate, breathing, musclerelaxation, etc.). The ASN constantly analyzes the situation in order to adjust the anesthetic care if necessary, according to the doctor's instructions.
 - Once the intervention is completed, the nurse ensures the patient's awakening with the anesthesiologist in the post-anesthesia room (surveillance and resuscitation). The ASN helps to assess and control post-operative pain.
- At each of these stages, the anesthesia nurse informs and accompanies the patient, adult or child and his relatives.
In general, the ASN is also responsible for the maintenance of equipment and the logistical management of the anesthesia service.

Weaknesses consist of lack of specific knowledge for curriculum, lack of acquiring specific skills of SN or APN and not providing appropriate competences in a specific SN or APN.

Particularities of the curricula in that country are:
The Contents of the curriculum

Analysis of the common courses from the curricula:

	1st	2nd	3rd
Theoretical training			
Nursing			
Orientation and ethics of the profession	0,75	0,5	0,5
General Principles of Health and Nursing	2,75	1,75	0,75
General care	6,25	0,75	0,25
General medicine and medical specialties	1,75	3,5	3,75
General surgery and surgical specialties	0	2,75	2,5
Childcare and pediatrics	0,5	0,5	0
Hygiene and care for mother and newborn	0,25	0,75	0
Mental health and psychiatry	0	0,75	0,5
Care of the elderly and geriatrics	1	0,5	0,5
Home Care	0	0	0,75
Total Nursing	13,25	11,75	9,5
Basic sciences			
Anatomy – physiology	27,5	0	0
General medicine and specialties	0	1,75	1,5
General surgery and specialties	0	1,25	1,5
Pediatrics	0	0,5	0
Obstetrics	0	0,5	0
Psychiatry	0	0,5	0,25
Bacteriology	0,5	0,25	0
Dietetic	0,5	0,5	0,25
Environmental study	0,25	0	0,25
Occupational and hospital hygiene	0,75	0,25	0
Prevention and prophylaxis	0,25	0	0
Pharmacology	0,75	0	0
Total basic sciences	5,75	5,5	3,5
Social Sciences			
Sociology (including religious sciences)	0,5	0,5	0,5
Psychology	0,75	0,75	0,5
Principles of administration	0,25	0	0,5
Principles of teaching and health education	0	0,5	0,5
Social and health legislation	0,25	0,25	0,5
Legal aspects of the profession	0,25	0,25	0,5
Total social sciences	2	2,25	3,5
Methodology, personal work and research	1,5	1,5	1,5

Total theoretical training	22,5	21	17,5
Practical training			
Clinical nursing education	16	17,5	21
Total practical training	16	17	21
GRAND TOTAL	38,5	38,5	38,5

Table9- The courses included in the curriculum - ECNAS Sainte-Elisabeth

The number of hours for internships: 520 hours in the first year, 580 hours in the second year, 700 hours in the third year, 666 hours in the fourth year (half of year). In the third year, the student is required to work internship weekends and must work four to eight nights throughout the school year. In the fourth year, each student completes three internships of 5 to 7 weeks. The school imposes one internship and the student proposes the other two internships. They provide professional hours.

The internships allow the integration of theoretical notions and the learning of technical acts in different fields:

- Medical-surgical services
- Nursery or kindergarten
- Nursing and care homes
- Medicine – Surgery
- Pediatrics – Maternity
- Mental health – Psychiatry
- Geriatrics
- Medicine: 4 weeks
- Surgery: 4 weeks
- Home care: 2 weeks
- Psychiatry: 2 weeks
- Geriatrics: 4 weeks

The common courses from the curricula for special professional titles such as anesthesia for nurses:

Theoretical program:

- General / Breathing / Intubation (34 hours)
- Technical knowledge and equipment (20 hours)
- Pharmacology (32 hours)
- Technical specifications and principles of care in pre, per and post anesthesia (169 hours) including nursing care and medical pathologies: Cardiovascular, visceral, gynecology, urology, obstetrics, transplantation and pediatrics
- Anesthesia and hygiene (27 hours)
- Pain management (18 hours)
- Emergency and critical care (7 hours)
- Nursing care in post-operative period (22 hours)
- Legislation, ethics and stress management (27 hours)

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600 hours of internship spread throughout the year: The internships allow the integration of theoretical notions and the learning of technical acts in different fields:

- Anesthesia consultation
- Operating room and delivery room
- Medical-technical services (endoscopy, radiology...)
- Outpatient surgery
- Post-anesthesia room

The strong points consist of the fact that there are 2040 hours of theoretical program and 2466 hours of internship. Also, for the anesthesia for nurses program there are 356 hours of theoretical program and 600 hours of internship spread throughout the year.

Weaknesses of the program are: it is only in French, there is only a short clinical internship and no European equivalence.

Teaching methodology (online/onsite/simulation) – lectures, seminars, practical studies, case-based learning

No ECTS – 180 ECTS are released by the training for Bachelor degree nurses and 60 ECTS are released by the training for anesthesia for nurses program.

The strong points consist of the fact that teaching methods such as case-based learning are used. Also, special professional titles are a short program (one year).

Country 12 Germany

Nursing in Germany is a three-year program offered by several universities and schools. In your final years, you can choose from a variety of specialisations, including oncology nurse, psychiatric nurse, nurse anaesthetist, and ICU nurse.

Following the apprenticeship, you must pass a state test, an Anerkennung recognizes qualifications, which vary by state. The most important prerequisite for the profession of nurse is to first master the German language so that they have no difficulty interacting with the country's indigenous Professionals must have passed the German B1 language exam.

Germany's government has introduced the Nursing Studies Strengthening Act. The nursing course is offered as a dual study program, with students receiving an appropriate training allowance for their studies.

A key aspect of the regulations is the recognition of the significant contributions of nursing professionals from other countries. The Nursing Studies Strengthening Act aims to simplify the recognition of international degrees.

In Germany, anesthesiology nurses have more possibilities of training.

The paramedical staff involved in anesthesiology have three possibility of training: The first one is a training program for anesthesia assistants, in a program that last 3 years (880 hours if theoretical training and 2500 hours of practice in the anesthesia). The anesthetic assistants are not nurses, but specialized paramedical staff in anesthesiology, with limited autonomy. The second program lasts



two years and combine anesthesiology and critical care training and is intended to the nurses that wish to specialize in the field of anesthesiology and critical care. The third one is a bachelor degree, a part time program designated to on-the-job nurses, which last 6 or 7 semesters (depending of the university). This program deliver a bachelor in science in anesthesiology and critical care.

The most frequent program in Germany is the second one, a two years program designated to the nurses who want to specialize in anesthesiology and critical care.

The program is an equivalent of bachelor degree.

Admission

To pursue a nursing course in Germany, students must meet the following qualifying requirements:

- Certificate of completion of high school (10+2) in any subject.
- Proof of having completed a German B1 level language course as a topic of study in Class 10 or 12.
- Students must hold an 'Abitur' qualification, which is Germany's university entry exam.

The admission requirements are a completed training in nursing with a professional licence according to the Nursing Professions Act and one year of professional experience in healthcare or nursing.

The strong points consist of the fact that nurses must have one year of professional experience in healthcare or nursing.

Main learning outcomes:

According to § 3 of the Nursing Act, the training objective includes the following aspects:

- Acquisition of professional, personal, social and methodical skills for responsible participation, especially in the healing, detection and prevention of diseases
- The care is to include preventive, rehabilitative and palliative measures in order to regain, improve, maintain and promote the health of the people to be cared for
- The different care and life situations as well as life phases, the independence and self-determination of the people are to be considered

The training for nursing should in particular enable:

1. Carry out the following tasks independently:
 - Survey and determination of care needs, planning, organization, implementation and documentation of care
 - Evaluation of care, assurance and development of the quality of care
 - Advice, guidance and support for people to be cared for and their caregivers in dealing with health and illness
 - Initiation of life-sustaining emergency measures until the doctor arrives
2. Perform the following tasks as part of the collaboration:
 - Independent implementation of ordered medical measures
 - Measures of medical diagnostics, therapy or rehabilitation
 - Measures in crisis and disaster situations

3. To work in an interdisciplinary manner with other professional groups, developing multidisciplinary and interprofessional solutions to health problems

The strong points consist of the fact that they work in an interdisciplinary manner with other professional groups, developing multidisciplinary and interprofessional solutions to health problems.

Particularities of the curricula in that country are:

The Contents of the curriculum

Overview of lectures and courses, SWS (Semesterwochenstunden = weekly hours/semester) and ECTS (European Credit Transfer and Accumulation System) in the Bachelor's degree Nursing:

1. Semester	SWS	ECTS
Science and Research	5	8
Health Diagnostics and Organisation	4	5
Health Promotion, Activity and Rest, Nutrition, Excretion	12	10
Practical Exercises I	2,5	7
2. Semester	SWS	ECTS
Systemic Healthcare Communication	7	5
Basics of Evidence-based Action	8	7
Perception, Cognition, Self-concept, Growth, Development & Well-being	7	5
Basics of Education	6	5
Practical Exercises II	1,7	8
3. Semester	SWS	ECTS
Professional Identity and Policy	5	5
Quality Management, Care and Case Management and Long-term Care According to SGB	4	5
Coping & Stress Tolerance, Role Identity, Security and Protection, Disease Theory I	8	5
Educations Concepts and Methods	4	5
Practical Exercises III	2,5	10
4. Semester	SWS	ECTS
Ethical Decisions	5	5
Cooperation	6	5
Sexuality, Spirituality & Congruence, Disease Theory II	8	5
Healthcare Communication and Information	6	5
Practical Exercises IV	1,7	10
5. Semester	SWS	ECTS

Compulsory Elective Classes	4	8
Special Pathology and Crises	6	10
Practical Exercises V	1,7	12
6. Semester	SWS	ECTS
Practical Exercise Development	6	10
Innovation in Nursing Care	5	7
Psychological and Social Aspects of Health	5	5
Practical Exercises VI	0,9	8
7. Semester	SWS	ECTS
Utilities Research und new Technologies	6	7
Complex Intervention	5	8
Health and Social Justice	4	8
Practical Exercises VII	1,7	7
8. Semester	SWS	ECTS
Development of Compulsory Elective Classes	2	5
Bachelor Thesis	2	10
Practical Exercises VIII	0,4	15

Table10- The courses included in the curriculum - Degendorf Institute of Technology

The program for anesthesia assistants is divided in two parts:

Theoretical teaching program (720-800 hours depending of the university):

- Performing basic tasks in intensive care and anesthesia (104 hours)
 - design structural and organizational processes in intensive care unit
 - monitor patients, evaluate results, recognize emergencies and act appropriately
 - apply hygiene instructions in practice
 - consider legal requirements in practice
 - assume tasks related do diagnosis and therapeutics
- Patient care in intensive care and traumatology (124 hours)
 - Evaluate the situation of the patient with respiratory failure, cardiovascular disease and act according to the situation
 - Evaluate the situation of the trauma patient and act according the situation
- Management of patients with diseases or infections requiring intensive care (116 hours)
 - Evaluate the situation of the patient with metaboli or excretoty disorders and act accordingly
 - Evaluate the situation of the patient with haematologic diseases and act accordingly
 - Evaluate the situation of the patient with neurologic disorders and act accordingly
 - Evaluate the situation of the infected patient and act accordingly
- Perceiving life situations and making and supporting decisions (62 hours)
 - Support patient in specific life situations
 - Support patient and their loved ones in the last phase of life
 - Acting in situations of ethical conflict
- Nursing interventions in anesthesia (114 hours)

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- Apply the basics of anesthesia
- Make decisions in complex anesthesiologic situations
- Accomplish different tasks in several types of anesthesiology procedures
- Tasks in different surgical situations and different patient conditions

Practical training of minimum 1800 hours:

- 500 hours in intensive care unit
- 500 hours in surgical intensive care
- 500 hours in anesthesia
- 300 additional hours in the previous fields

The strong points consist of the fact that there are 720-800 hours of theoretical teaching program and minimum 1800 hours of practical training. There is a very important part of practical training with a big amount of 1800 hours. Also the program provides a good overview of the care in anesthesiology and critical care.

Weaknesses consist of the fact that the program is only in German and the part dedicated to the anesthesia is too small.

Teaching methodology (online/onsite/simulation) – The common teaching methodologies utilised in the courses are lectures, seminars, practical studies and internship

No ECTS – 240 ECTS for Nurse Degree - Bachelor of Science (B.Sc.).

Equivalent to 120 ECTS for the nurses that wish to specialize in the field of anesthesiology and critical care.

The strong points consist of the fact that there is a possibility of employer funding.

3. Conclusion

The nursing curricula of both Poland and Austria share a lot in common. Both have 3 years with 180 ECTS and add more value on theoretical training, but the curricula from Austria has a lot of number of hours in specialized disciplines in nurses (65%) in comparison to the curricula of the Poland (36%), reflected on the acquisition of clinical training and skills. The curricula from Poland has a lot of practical hours (55,93%) similar to the curricula from Romania. In other way, the curricula from Romania has 4 years with 8 semester and 240 ECTS. The curricula of Poland and Austria have a very clear structure and several areas dedicated to deepen and prepare nurses in many medical disciplines but the main approach is theoretical for the one from Poland, while the one from Austria is focused on practical skills proven by the daily practice foreseen in its implementation. The curricula from Austria promotes the development of sympathy towards the patient and his relatives and the nurse's role as a global citizen and a vital part of public-social healthcare and also the communication with the patients. On the other hand the curriculum of the Austria focuses on nursing innovation, research, leadership, cooperation with colleagues, medical reasoning and thinking. The curricula



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from Poland has the discipline Medical law, Ethics and communication, discipline very important in the daily practice of nurses, and the one from Austria prepare nurses with essential competencies for managing all special cases they will met in clinical practice, while the one from Romania has many hours of theoretical activities and not so many for practical activities. The strong point of the curricula from Romania is the exam which is compulsory to be passed at the admission based on a test and not only on an interview and we consider that this is worth including in our curriculum development.



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