



**UNIVERSITY OF L'AQUILA** Department of Health, Life  
and Environmental Sciences

## **2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE**

**Laurea Magistrale in  
SCIENZE DELLE PROFESSIONI SANITARIE  
TECNICO-ASSISTENZIALI**

### **Course Catalogue**

**Academic year starts the last week of September and ends the first week of June.**

**1<sup>st</sup> Semester** - *Starting date:* last week of September, *end date:* 3<sup>rd</sup> week of January

**2<sup>nd</sup> Semester** - *Starting date:* last week of February, *end date:* 1<sup>st</sup> week of June

**Exams Sessions:** I) from last week of January to 3<sup>rd</sup> week of February, II) from 2<sup>nd</sup> week of June to end of July, III) from 1<sup>st</sup> to 3<sup>rd</sup> week of September

<b>Comprehensive Scheme of the 2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE</b>				
<b>YE AR</b>	<b>CO DE</b>	<b>COURSE</b>	<b>Credits (ECTS)</b>	<b>Semeste r</b>
<b>I</b>	D222 4	Biomedical insights applied to Technical Sciences of class I	6	1
	D396 6	Psychosocial Sciences applied to Educational Processes	12	1
	D224 6	Biomedical insights applied to Technical Sciences of class II	10	2
	D225 4	Biomedical insights applied to Technical Sciences of class III	15	2
	D363 8	<b>Work Placement I</b>	14	2

<b>II</b>	D413 8	Healthcare Management I	12	1
	D413 7	Insights of Technical Assistance Methods	3	2
	D413 9	Healthcare Management II	12	2
	D364 0	<b>Work Placement II</b>	16	2
<b>I or II</b>	D295 0	Other activities/courses: ✓ Further Language courses (3 ECTS) ✓ Further training (5 ECTS)	8	2
	D407 9	Optional free choice courses	6	2
<b>II</b>	D205 4	<b>Thesis</b>	6	2

<b>Programme of</b> <b>“APPROFONDIMENTI BIOMEDICI APPLICATI ALLE SCIENZE TECNICHE DELLA CLASSE I”</b> <b>“BIOMEDICAL INSIGHTS APPLIED TO TECHNICAL SCIENCES OF CLASS I”</b> This course is composed of two Modules: 1) Clinical Biochemistry, 2) General and Applied Hygiene. <b>D2224, Compulsory</b> <b>2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE, 1<sup>st</sup> year, 1<sup>st</sup> semester</b> <b>Number of ECTS credits: 6 (workload is 150 hours; 1 credit = 25hours)</b> <b>1) CLINICAL BIOCHEMISTRY (3 ECTS)</b>		
Teacher: <b>Mariagrazia PERILLI</b>		
<b>1</b>	<b>Course objectives</b>	The objective of course is to introduce students to the basic concepts of clinical biochemistry and laboratory medicine, providing a survey of the mechanisms of diseases and the correlation of laboratory data with those diseases.
<b>2</b>	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<b>Topics of the module include:</b> <ul style="list-style-type: none"> <li>- Serum Proteins: Classification and clinical application. Electrophoresis of blood proteins. Pre-albumin, Albumin, C-reactive protein (CRP), Transferritin, Ferritin.</li> <li>- Enzymology: Clinical significant of blood enzymes.</li> <li>- Metabolism of Lipoproteins: Classification, Clinical Applications. Dislipidemies.</li> <li>- Metabolism of carbohydrates, clinical applications, biochemical tests for diagnosis of diabetes.</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 <b>Understand</b> the role of laboratory testing in health care;</li> <li>0 Demonstrate the theoretical and <b>practical knowledge</b> of laboratory methodologies, with particular emphasis on innovative methodologies;</li> <li>0 <b>Discuss</b> the function, structure, laboratory investigation and diseases of the different body systems.</li> <li>0 <b>Describe</b> how chemical and biochemical analysis are applied to the study of disease.</li> <li>0 <b>Outline</b> a step-by-step approach to the use of the laboratory in diagnosis.</li> <li>0 <b>Correlate</b> laboratory findings in clinical samples to pathological processes.</li> </ul>

		<ul style="list-style-type: none"> <li>0 <b>Perform</b> complex data handling exercises associated with biochemical analysis.</li> <li>0 <b>Demonstrate</b> an awareness of the processes needed to validate and quality assure clinical chemistry analyses</li> <li>0 <b>Critically evaluate</b> methods used in clinical chemistry</li> <li>0 <b>Demonstrate</b> an understanding of a range of clinical chemistry tests and their application to the diagnosis and/or monitoring of disease</li> <li>0 <b>Understand</b> the principles and application of therapeutic drug monitoring</li> <li>0 demonstrate the <b>ability to express</b> concepts using appropriate technical language and the <b>capacity to continue learning</b>.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know Biology, Chemistry and Biochemistry.
4	<b>Teaching methods and language</b>	<p>Lectures; exercises.</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b></p> <ul style="list-style-type: none"> <li>- Zatti, Goglio, Grigis, Lechi Santonastaso, Lippi, Manzato, Marchiaro, Spandrio, <b>"Medicina di Laboratorio"</b>, Idelson-Gnocchi, 2006.</li> <li>- Luigi Spandrio, <b>Biochimica Clinica</b>, Casa Editrice Sorbona, 2008.</li> </ul>
5	<b>Assessment methods and criteria</b>	Written exam.

## 2) GENERAL AND APPLIED HYGIENE (3 ECTS)

Teacher: <b>Stefano NECOZIONE</b>		
1	<b>Course objectives</b>	This Module allows the students to know and understand the tools of methodological epidemiology functional to the Organisation and Management of Health Care and Health Care Programmes from a Public Health Perspective.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- Epidemiology, Evidence-Based-Medicine, Clinical Governance</li> <li>- Measuring disease occurrence and casual effects</li> <li>- Types of Epidemiologic Study</li> <li>- Biases in study design</li> <li>- Systematic review and meta-analysis</li> <li>- Methods for the economic evaluation of health care programmes: Cost-effectiveness analysis, Cost-utility analysis, Cost-benefit analysis</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 demonstrate a general <b>knowledge</b> of Hygiene rules and e methods to perform an epidemiological investigation.</li> <li>0 be able to <b>describe and discuss</b> pathogens that are associated with human infection and disease and the routes for disease transmission.</li> <li>0 be able to <b>explain</b> the essential principles of infection control.</li> <li>0 demonstrate capacity to <b>design</b> outbreak strategies to control the spread of infectious disease.</li> <li>0 <b>understand</b> the use of serological and molecular diagnostic techniques.</li> <li>0 be able to <b>define</b> the major types of antimicrobial drugs and <b>analyse</b> the results.</li> <li>0 <b>know and understand</b> the minimal standards for environmental hygiene within communities.</li> </ul>

		0 be able <b>to track</b> contamination sources and identify public health problems. 0 be able <b>to plan and evaluate</b> public Health interventions.
<b>3</b>	<b>Prerequisites and learning activities</b>	The student must know Human Biology and the Basics of Medical Physics
<b>4</b>	<b>Teaching methods and language</b>	Lectures; exercises, tutorials; home work <b>Language:</b> Italian/English <b>Ref. Text books</b> -J.A. Muir Gray, <i>L'Assistenza Sanitaria Basata sulle Prove. Come organizzare le politiche sanitarie</i> , Centro Scientifico Torinese, 1999. -L. Manzoli, P. Villari, A. Boccia, <i>Epidemiologia e Management in Sanità</i> , Edi- Ermes, 2008.
<b>5</b>	<b>Assessment methods and criteria</b>	Written exam.

<p align="center"><b>Programme of</b>  <b>“SCIENZE PSICOSOCIALI APPLICATE AI PROCESSI EDUCATIVI”</b>  <b>“PSYCHOSOCIAL SCIENCES APPLIED TO EDUCATIONAL PROCESSES”</b></p> <p>This course is composed of three Modules: 1) General Sociology, 2) Developmental and Educational Psychology, 3) Sociology of Cultural and Communication processes.</p> <p><b>D3966, Compulsory</b>  <b>2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE, 1<sup>st</sup> year, 1<sup>st</sup> semester</b></p> <p align="center"><b>Number of ECTS credits: 12 (workload is 300 hours; 1 credit = 25hours)</b></p> <p align="center"><b>1) GENERAL SOCIOLOGY (3 ECTS)</b></p> <p>Teacher: <b>Mariagrazia PERILLI</b></p>		
<b>1</b>	<b>Course objectives</b>	The Module aims to enable the students to reach a knowledge and comprehension of the basic and essential elements of sociology, in order to develop competence and skills in performing sociological analysis of ambience and context, applying communication strategies for prevention and solution of critical situations and indentifying socio-cultural uneasiness.
<b>2</b>	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- Communication and society, rules and violence.</li> <li>- From <i>certitudo salutis</i> to health industry.</li> <li>- The social system.</li> <li>- Talcott Parsons and the concept of the sick role in 1951.</li> <li>- The sociologic theory of health.</li> <li>- Risk and safety in clinical medicine</li> <li>- Studies on <i>litigation communication</i> and <i>communication public relations</i>.</li> <li>- From Galileo Galilei to earthquake in L'Aquila: Science and Trials.</li> <li>- Communicating risks.</li> </ul> <p>Students, at the end of the Module, should</p> <ul style="list-style-type: none"> <li>0 <b>Know and understand</b> the basic elements of sociology;</li> <li>0 Acquire the theoretical and practical <b>knowledge</b> of the meaning of social groups institution;</li> <li>0 <b>Understand and explain</b> the main sociological methodologies;</li> </ul>

		<ul style="list-style-type: none"> <li>0 <b>Know</b> the fundamental characteristics of communication;</li> <li>0 Be able to <b>apply</b> communication strategies to prevent situations of conflict between micro or macro groups;</li> <li>0 Demonstrate an <b>awareness</b> of the fundamental role of communication in social context;</li> <li>0 <b>Be able to critically</b> analyze human behaviour;</li> <li>0 demonstrate the <b>ability to</b> analyze context of life from a sociological point of view and do simple sociological research.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The module is connected with previous learning and foresees work placement in medical departments.
4	<b>Teaching methods and language</b>	<p>Lectures, team work, exercises, home work, report.</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b></p> <p>-AA.VV., <i>La devianza come sociologia. Alcuni concetti fondamentali</i>, a cura di Costantino Cipolla, Franco Angeli, Milano 2012.</p> <p>-F. Sidoti, M. Gammone, (a cura di), <i>La comunicazione giudiziaria. Come vincere le cause perse</i>, numero monografico della rivista "Sicurezza e scienze sociali", FrancoAngeli, 2, 2013</p>
5	<b>Assessment methods and criteria</b>	Written exam, short reports, exercises
<b>2) DEVELOPMENTAL AND EDUCATIONAL PSYCHOLOGY (3 ECTS)</b>		
Teacher: <b>Dina DI GIACOMO</b>		
1	<b>Course objectives</b>	Objective is to provide the students with a general orientation to psychology. An introduction to various theoretical approaches in psychology, and the development of psychology as a science is discussed with focus on major personality theories.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- The qualitative and quantitative methods</li> <li>- Experiments</li> <li>- The central nervous system</li> <li>- Learning</li> <li>- Memory</li> <li>- Emotion</li> <li>- Personality</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 <b>Discuss</b> the extent to which biological, cognitive, and social factors influence human development.</li> <li>0 <b>Know and understand</b> psychological research relevant to the study of developmental psychology.</li> <li>0 <b>Know and understand</b> theories of cognitive development.</li> <li>0 <b>Discuss</b> how social and environmental variables may affect cognitive development.</li> <li>0 <b>Examine</b> attachment in childhood and its role in the subsequent formation of relationships.</li> <li>0 <b>Discuss</b> potential effects of deprivation of trauma or childhood on later development</li> <li>0 <b>Discuss</b> the formation and development of gender roles and <b>explain</b> cultural variations in gender roles.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know Human Biology and the Basics of Medical Physics
4	<b>Teaching methods and language</b>	<p>Lectures; exercises, home work</p> <p><b>Language:</b>Italian/English</p> <p><b>Ref. Text books</b></p>

		- Anolli L., Legrenzi P., <b>Psicologia generale</b> , Il Mulino Editore, 2009.
5	<b>Assessment methods and criteria</b>	Written and oral exam.
<b>3) SOCIOLOGY OF CULTURAL AND COMMUNICATION PROCESSES (6 ECTS)</b>		
Teacher: <b>Piera Angiola FARELLO</b>		
1	<b>Course objectives</b>	Main objective of the Course is the development of a study path that will enhance the student's critical attitude and ability to correlate, structure and compare purely cultural phenomena with their educational aspects through the tools of interpretive sociology.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- The building blocks of society,</li> <li>- The concept of culture in the social sciences and its basic elements (symbols, values, norms, rituals and myths),</li> <li>- Culture transmission and its changes (socialization, ethnocentrism, relativism),</li> <li>- The different sociological interpretations of the concept of culture with particular reference to the classics of sociology: Durkheim, Weber, Simmel, Marx, Parsons, Goffman, Luhmann,</li> <li>- Processes of communication as a mode of transmission of beliefs, values, behavior patterns.</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 <b>Know</b> the main sociological theories corresponding to cultural, educational and training systems, and analyze their theoretical and conceptual frames,</li> <li>0 <b>Understand and explain</b> the relationship between culture, society and education in different epistemological perspectives,</li> <li>0 Be able to <b>interpret</b> the transformations in cultural and educational system in the wider frame of general social changing,</li> <li>0 Acquire <b>descriptive and analytical competences</b> on the core role of educational processes in Western society, on the base of the main theories and empirical research on the relationship between culture and education,</li> <li>0 Be able to <b>read in a sociological key</b> the themes of differences, of equality and inequality, efficiency and quality of cultural and educational systems,</li> <li>0 Improve the ability to <b>conceptualize</b> the circular relationship between communication processes and cultural processes,</li> <li>0 be able to <b>understand the scientific texts</b> that deal with issues of sociology of communication and social change, with particular reference to the processes that generate collective resentment,</li> <li>0 be able to <b>support and discuss</b> clearly, through arguments appropriate, possible proposals to address problems in the social dynamics of varying complexity, with particular reference to the construction of stereotypes.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know General Sociology.
4	<b>Teaching methods and language</b>	Lectures; exercises, tutorials; home work <b>Language:</b> Italian/English <b>Ref. Text books</b>

		-Crespi F., <b>Handbook of the sociology of culture</b> , Laterza, Rome-Bari 1996 -Sciolla L., <b>Sociology of Cultural Processes</b> , Bologna, Il Mulino, 2002 -Other texts will be provided at the beginning of the course.
5	<b>Assessment methods and criteria</b>	Written exam.

<p style="text-align: center;"><b>Programme of</b>  <b>“APPROFONDIMENTI BIOMEDICI APPLICATI ALLE SCIENZE TECNICHE DELLA CLASSE II”</b>  <b>“BIOMEDICAL INSIGHTS APPLIED TO TECHNICAL SCIENCES OF CLASS II”</b></p> <p>This course is composed of five Modules: 1) Maxillo-Facial Surgery, 2) Dental Diseases I, 3) Dental Diseases II, 4) Medical Sciences applied to Dental Hygiene I, 5) Medical Sciences applied to Dental Hygiene II.</p>		
<b>D3966, Compulsory</b> <b>2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE, 1<sup>st</sup> year, 2<sup>nd</sup> semester</b>		
<b>Number of ECTS credits: 10 (workload is 250 hours; 1 credit = 25hours)</b>		
<b>1) MAXILLO-FACIAL SURGERY (3 ECTS)</b>		
<b>Teacher: Tommaso CUTILLI</b>		
1	<b>Course objectives</b>	The goal of this Course is to provide the students with scientific knowledge enabling them to understand the main fields of oro-maxillo-facial surgery. The Course supplies clinical elements for diagnosis and treatment of benign and malignant tumors, facial and cranio-facial trauma, facial dysmorphism and congenital deformities, the wide osseous pathology, temporo-mandibular joint disorders.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- Surgical anatomy of maxillofacial region</li> <li>- Tumors of oral cavity, middle third, mandible, salivary glands, facial skin.</li> <li>- Cervical nodes and disease</li> <li>- Facial Trauma: fractures of mandible, maxillary, middle third, orbita, nasal-ethmoidal complex. Craniofacial fractures.</li> <li>- Facial dysmorphism: mandibular and/or maxillary defects and excesses, open bite, asymmetry.</li> <li>- Congenital deformities: cleft lip and palate, First arch Syndrome, Franceschetti Syndrome, facial cleft, hemifacial microsomia.</li> <li>- Mandibular and Maxillary osteolytic lesions.</li> <li>- Osteoradionecrosis and BRONJ.</li> <li>- Temporomandibular disorders.</li> </ul> <p>Students, at the end of the Module, should</p> <ul style="list-style-type: none"> <li>0 acquire <b>knowledge</b> of biomedical and clinical sciences as they relate to the maxilla district,</li> <li>0 <b>apply</b> this knowledge to achieve clinical understanding of the normal and pathological conditions of maxilla and adjacent structures,</li> </ul>



		<ul style="list-style-type: none"> <li>0 have profound <b>knowledge and understanding</b> of early clinical signs of oral tumors,</li> <li>0 have <b>knowledge and understanding</b> of maxillofacial dysmorphism,</li> <li>0 <b>understand and explain</b> the osteolytic maxillary lesions</li> <li>0 <b>use</b> this knowledge to <b>understand</b> disease and pain of the orofacial complex, head and neck and treatment of Temporomandibular Joint Pathology,</li> <li>0 <b>understand and explain</b> the osteolytic maxillary lesions,</li> <li>0 gain ability to <b>understand and interpret</b> the diagnostic imaging,</li> <li>0 develop skills for the <b>critical evaluation</b> of scientific literature, research and new products for the continuous up-dating of their knowledge and competencies.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know the basic notions of anatomy and pathology of oral and maxillofacial region. Work placement is characterized by the frequency of the clinical Operative Unit of Maxillofacial Surgery and its operating room.
4	<b>Teaching methods and language</b>	<p>Lectures, team work, exercises, home work, report.</p> <p><b>Language:</b> Italian, scientific English</p> <p><b>Ref. Text books:</b></p> <ul style="list-style-type: none"> <li>-Italian Society of Maxillofacial Surgery, "<b>Maxillofacial Surgical Pathology</b>", Minerva Ed Turin - Italy, 2007</li> <li>-Brusati R., Sesenna E., <b>Chirurgia delle deformità mascellari</b>, Masson Ed, Milano 2008.</li> </ul>
5	<b>Assessment methods and criteria</b>	Written exam, short reports, exercises

## 2) DENTAL DISEASES I (2 ECTS)

Teacher: <b>Roberto GATTO</b>		
1	<b>Course objectives</b>	The Module is designed to provide the student with the theoretical knowledge and practical examples needed to prevent, detect and treat abnormalities. It is strongly focused on patients putting their interests and needs first; it meets current and future oral health needs and covers the full range of skills, knowledge and behaviors needed to work in a dental practice team (i.e., professionalism, communication, and management and leadership).
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>-Preventive dentistry,</li> <li>-Clinical elements for diagnosis and professional care,</li> <li>- In depth study of cases.</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 have profound <b>knowledge</b> of diagnosis and clinical practice,</li> <li>0 have <b>knowledge and understanding</b> of preventive dentistry,</li> <li>0 have <b>knowledge and understanding</b> of those aspects of the biomedical sciences and of oral physiology and craniofacial, oral and dental anatomy that are significant in the management of the patients,</li> <li>0 <b>understand and explain</b> oral pathology and preventive dentistry protocols,</li> <li>0 <b>know and apply</b> universal infection control guidelines for all clinical procedures,</li> <li>0 <b>Prevent, diagnose, and manage</b> pain and anxiety in the dental patient.</li> </ul>



<b>3</b>	<b>Prerequisites and learning activities</b>	The student must know oral pathology and cranium-mandibular dysfunctions.
<b>4</b>	<b>Teaching methods and language</b>	Lectures, team work and clinical practice <b>Language:</b> Italian/English <b>Ref. Text books</b> - Teacher's Notes
<b>5</b>	<b>Assessment methods and criteria</b>	Written and oral exam.

### **3) DENTAL DISEASES II (2 ECTS)**

Teacher: <b>Giuseppe MARZO</b>		
<b>1</b>	<b>Course objectives</b>	The course is designed to provide the student with the theoretical knowledge and practical examples needed to prevent, detect and treat abnormalities. To give the student a valid knowledge of dental diseases prevention and connected protocols.
<b>2</b>	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- Prevention</li> <li>- Anatomy of periodontium</li> <li>- Periodontal Charting</li> <li>- Dental Dam</li> <li>- Fissure Sealing</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 <b>know and explain</b> developmental or acquired occlusal abnormalities.</li> <li>0 <b>know and explain</b> the replacement of teeth for the partially or completely edentulous patient.</li> <li>0 <b>know how</b> to assist diagnosis and management of surgical treatment needs of pulpal and periradicular diseases.</li> <li>0 be able to <b>prevent, recognize, and manage</b> medical and dental emergencies.</li> <li>0 be able to <b>evaluate</b> outcomes of comprehensive dental care.</li> <li>0 <b>provide</b> prevention, intervention, and educational strategies.</li> <li>0 be able to <b>participate</b> with dental team members and other health care professionals in the management and health promotion for all patients.</li> <li>0 <b>recognize and appreciate</b> the need to contribute to the improvement of oral health beyond those served in traditional practice settings.</li> </ul>
<b>3</b>	<b>Prerequisites and learning activities</b>	The student must know Histology and Anatomy.
<b>4</b>	<b>Teaching methods and language</b>	Lectures <b>Language:</b> Italian/English <b>Ref. Text books:</b> -Teacher's Notes
<b>5</b>	<b>Assessment methods and criteria</b>	Written exam.

### **4) MEDICAL SCIENCES APPLIED TO DENTAL HYGIENE I (2 ECTS)**

Teacher: <b>Mario GIANNONI</b>		
<b>1</b>	<b>Course objectives</b>	Aim of the course is to give to the students a valid knowledge of the main techniques that the professional Dentist should use for preventing or manage oral diseases.
<b>2</b>	<b>Course content</b>	<b>Topics of the module include</b>

	and Learning outcomes (Dublin descriptors)	<ul style="list-style-type: none"> <li>- Prevention Programs of <ul style="list-style-type: none"> <li>▪ Periodontitis,</li> <li>▪ Dental Caries,</li> <li>▪ Cross Infection Dental,</li> <li>▪ Malocclusions,</li> <li>▪ Oral cancer,</li> <li>▪ Halitosis,</li> <li>▪ Dental erosion,</li> <li>▪ Oral Diseases in pregnancy,</li> </ul> </li> <li>- General principles of radioprotection in dentistry.</li> </ul> <p>On completion of this module the student should:</p> <ul style="list-style-type: none"> <li>0 Have <b>knowledge</b> of the techniques and methods for the oral hygiene;</li> <li>0 be able to <b>discuss</b> the prevention methodologies and identify those that best fit with the specific patient;</li> <li>0 <b>understand and explain</b> the different methodologies to be applied in different contexts and needs;</li> <li>0 be able to <b>apply</b> the guidelines;</li> <li>0 demonstrate capacity to <b>interpret and adapt</b> the theoretical knowledge to practical cases;</li> <li>0 demonstrate capacity for <b>reading and understanding</b> other texts on related topics.</li> </ul>
3	Prerequisites and learning activities	The student must know anatomy and histology of oral cavities.
4	Teaching methods and language	<p>Lectures, Seminars.</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text Books:</b></p> <p>-Wilkins E., “<i>La pratica clinica dell’igienista dentale</i>”, Piccin, 2010.</p>
5	Assessment methods and criteria	<b>Oral Exam</b>
<b>5) MEDICAL SCIENCES APPLIED TO DENTAL HYGIENE II (2 ECTS)</b>		
Teacher: <b>Mario CAPOGRECO</b>		
1	Course objectives	The main aim of this Module is to enable the students to prepare and develop proposals to enhance patient safety and rad the operators.
2	Course content and Learning outcomes (Dublin descriptors)	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- Preventative dentistry</li> <li>- Dental radiology</li> <li>- Dental pharmacology</li> <li>- Periodontology</li> <li>- Anatomy and physiology</li> <li>- Microbiology</li> <li>- Oral health</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>o <b>Apply</b> the dental hygiene process of care using evidence-based practices for the child, adolescent, geriatric, medically-complex and periodontally-involved patient,</li> <li>o <b>Complete</b> radiographic images according to diagnostic and technical standards,</li> <li>o <b>Prepare</b> for assessment and treatment of medical emergencies,</li> </ul>

		<ul style="list-style-type: none"> <li>o <b>Apply</b> a professional code of ethics in the provision and/or support of oral health care services,</li> <li>o <b>Prepare</b> oral health strategies for diverse groups,</li> <li>o <b>Apply</b> legal and regulatory concepts to the provision of oral health care services,</li> <li>o <b>Apply</b> self-assessment skills to prepare for life-long learning</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know oral pathology and cranium-mandibular dysfunctions.
4	<b>Teaching methods and language</b>	Lectures, team work and clinical practice <b>Language:</b> Italian/English <b>Ref. Text books</b> -Teacher's Notes
5	<b>Assessment methods and criteria</b>	Oral exam.

<p align="center"> <b>Programme of</b>  <b>“APPROFONDIMENTI BIOMEDICI APPLICATI ALLE SCIENZE TECNICHE DELLA CLASSE III”</b>  <b>“BIOMEDICAL INSIGHTS APPLIED TO TECHNICAL SCIENCES OF CLASS III”</b> </p> <p> <b>This course is composed of four Modules: 1) Physical Medicine and Rehabilitation, 2) Anesthesiology, 3) Applied and Rehabilitative Diet Technical Sciences, 4) Orthopedic Sciences</b> </p>		
<b>D2254, Compulsory</b> <b>2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE, 1<sup>st</sup> year, 2<sup>nd</sup> semester</b>		
<b>Number of ECTS credits: 15 (workload is 375 hours; 1 credit = 25hours)</b>		
<b>1) PHYSICAL MEDICINE AND REHABILITATION (3 ECTS)</b>		
Teacher: <b>Angelo CACCHIO</b>		
1	<b>Course objectives</b>	The goal of this course is to provide the students with knowledge of rehabilitation methods that allow functional recovery in musculoskeletal disorders, neurological, sports injuries, degenerative diseases and their outcomes. Rehabilitation for various diseases and the main treatment in the light of EBM will be highlighted.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- Rehabilitation of the upper limb (shoulder, elbow, wrist);</li> <li>- Rehabilitation of the lower limb (hip, knee, ankle);</li> <li>- Rehabilitation of the vertebral column (cervical, thoracic, lumbar, sacral, coccygeal)</li> <li>- Rehabilitation of spine dimorphisms</li> <li>- Anatomical and functional mechanisms of post-lesion restructuring of nervous system (Rehabilitation of peripheral nervous system lesions, of spinal cord lesions, of traumatic brain injuries).</li> </ul> <p>On successful completion of this module the student should</p> <ul style="list-style-type: none"> <li>o have <b>profound knowledge</b> of the main spine lesions and dimorphisms;</li> <li>o have <b>knowledge and understanding</b> of the goals of rehabilitation for various diseases and of the main treatment methodologies and techniques for functional recovery;</li> <li>o be able to <b>explain</b> the relevant techniques and tools for the</li> </ul>

		<p>assessment of a patient using appropriate scientific language;</p> <ul style="list-style-type: none"> <li>0 demonstrate ability to <b>identify</b> the targeted treatment and to assess the results;</li> <li>0 be able to <b>apply</b> the acquired knowledge to concrete cases as occurring in the professional life;</li> <li>0 demonstrate <b>concern</b> to health, well-being and safety;</li> <li>0 be able to <b>communicate effectively</b> with the patients and their caregivers;</li> <li>0 demonstrate capacity for <b>reading and understanding</b> other texts on related topics and to be critical and self-critical.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know anatomy, physiology and pathology about musculoskeletal system.
4	<b>Teaching methods and language</b>	<p>Lectures; team work; tutorials.</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b></p> <ul style="list-style-type: none"> <li>- Randall L. Braddom, <i>"Physical Medicine and Rehabilitation"</i>, Ed A. Delfino, 2011.</li> <li>- N. Basaglia, <i>"Trattato di Medicina Riabilitativa"</i>, Ed. Idelson Gnocchi, 2009.</li> <li>- W. E. Prentice, <i>"Rehabilitation Techniques in Sports Medicine"</i>, UTET, 1999.</li> </ul>
5	<b>Assessment methods and criteria</b>	Oral exam.

## 2) ANAESTHESIOLOGY (3 ECTS)

Teacher: **Franco MARINANGELI**

1	<b>Course objectives</b>	The Module provides the theoretical-practical bases of first aid. Students will acquire the bases of the anesthesiologic practice and analgesic therapy.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- <u>Cardiopulmonary Arrest: causes and physiopathology</u> <ul style="list-style-type: none"> <li>✓ algorithm of bls</li> <li>✓ basic trauma care</li> <li>✓ techniques of rcp</li> <li>✓ bases and using of dea</li> </ul> </li> <li>- <u>Anesthesia:</u> <ul style="list-style-type: none"> <li>✓ historical elements of anesthesia</li> <li>✓ preoperative evaluation</li> <li>✓ general anesthesia</li> <li>✓ induction and tracheal intubation <ul style="list-style-type: none"> <li>✓ maintenance and the awakening anesthesia</li> <li>✓ loco regional anesthesia: definition and physiopathology</li> <li>✓ spinal anesthesia</li> <li>✓ epidural anesthesia</li> </ul> </li> </ul> </li> <li>- <u>Pain Therapy</u> <ul style="list-style-type: none"> <li>✓ physiopathology of pain</li> <li>✓ acute and chronic pain</li> <li>✓ nsaid</li> <li>✓ opioids</li> <li>✓ adjuvant</li> </ul> </li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 have <b>profound knowledge</b> of BLS-D,</li> </ul>

		<ul style="list-style-type: none"> <li>0 have <b>knowledge and understanding</b> on techniques of loco-regional and general anesthesia,</li> <li>0 have profound <b>knowledge</b> of drugs and chemistry,</li> <li>0 <b>know and understand</b> therapeutic elements,</li> <li>0 <b>understand and explain</b> techniques of regional anesthesia, the appropriate drugs, and the recognition and management of complications,</li> <li>0 demonstrate skills and capacities in the <b>approach of patients</b> and ability to start treating patients for medical emergencies,</li> <li>0 be able to <b>suggest or prescribe</b> adequate postoperative analgesia,</li> <li>0 demonstrate capacity for <b>reading and understanding</b> other texts on related topics.</li> </ul>
3	<b>Prerequisites and learning activities</b>	Basic knowledge of general physiological and biological elements.
4	<b>Teaching methods and language</b>	<p>Lectures, team work and clinical practice</p> <p>Language: Italian</p> <p>Ref. Text books:</p> <p>-Miller R.D. <i>Anesthesia</i>, Elsevier, 2010.</p> <p>-Marino P.L., <i>Terapia Intensiva</i>, Elsevier Masson, 2007.</p>
5	<b>Assessment methods and criteria</b>	Oral exam

### 3) APPLIED AND REHABILITATIVE DIET TECHNICAL SCIENCES (3 ECTS)

Teacher: **Antonio D'ALESSANDRO**

1	<b>Course objectives</b>	The module forms students in dietetic techniques contributing to the goals of improving capability of paramedics.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <p><u>Basic Principles of Nutrition</u> Brief survey of nutrients: food sources; physiological functions and requirements as related to human health.</p> <p><u>Assessment of Nutritional Status</u> Methods of human nutritional assessment including dietary, anthropometric, biochemical and clinical assessments. Nutritional status assessment tools and techniques through practical experimentation laboratory sessions.</p> <p><u>Community Nutrition</u> Detection and analysis of nutrition problems in communities. Nutrition programs and policy, principles of nutrition education.</p> <p><u>Food and Nutrition Awareness</u> Dietetic devices, nutrients, artificial nutrition.</p> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 have <b>profound knowledge</b> of dietetics techniques and awareness of the impact of health care policy and different health care delivery systems on food and nutrition services and on dietetics practice.</li> <li>0 have <b>knowledge and understanding</b> of the nutrition care process to make decisions, to identify nutrition-related problems and determine and evaluate nutrition interventions.</li> <li>0 <b>understand and explain</b> diet community problems.</li> <li>0 successfully <b>solve multidisciplinary problems</b> as part of a team and individually.</li> <li>0 <b>Critically evaluate</b> information on food science and nutrition issues appearing in the popular press.</li> <li>0 <b>prepare and deliver</b> effective presentations (orally and in writing) of technical information to food science and nutrition</li> </ul>

		<p>professionals as well as to the general public</p> <ul style="list-style-type: none"> <li>0 demonstrate <b>counseling techniques</b> to facilitate behavior change.</li> <li>0 <b>apply</b> professional guidelines to a practice scenario and develop interventions to affect change and enhance wellness in diverse individuals and groups.</li> <li>0 demonstrate how to <b>locate, interpret, evaluate and use</b> professional literature to make ethical evidence-based practice decisions.</li> <li>0 <b>apply</b> management theories to the development of programs or services.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know general dietetics and human nutrition principles.
4	<b>Teaching methods and language</b>	<p>Lectures, team work, exercises, home work, report</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b></p> <p>-Sudhart B., <i>Nursing medico-chirurgico</i>, Ambrosiana Ed., Milano, 2009</p>
5	<b>Assessment methods and criteria</b>	The module forms students in dietetic techniques contributing to the goals of improving capability of paramedics.

#### 4) ORTHOPEDIC TECHNIQUES (6 ECTS)

Teacher: <b>Vittorio CALVISI</b>		
1	<b>Course objectives</b>	<p>This Module is designed to assist students in developing expertise and in depth understanding in the field of orthopedic nursing. They will acquire knowledge of the branch of <a href="#">surgery</a> involving the <a href="#">musculoskeletal system</a> using both surgical and nonsurgical means to treat <a href="#">musculoskeletal trauma</a>, <a href="#">sports injuries</a>, <a href="#">degenerative diseases</a>, <a href="#">infections</a>, <a href="#">tumors</a>, and <a href="#">congenital disorders</a>. Students will develop advanced skills for nursing interventions in various orthopedic conditions providing quality care.</p>
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- Introduction to <a href="#">musculoskeletal system</a> structure,</li> <li>- Anatomy,</li> <li>- Biomechanics</li> <li>- Structural deformities, body alignment,</li> <li>- Diseases and disorders,</li> <li>- Implications chronic illness,</li> <li>- Sports injuries &amp; related surgery,</li> <li>- Systemic diseases affecting musculoskeletal system,</li> <li>- Relationship of Pathology to Gait and Biomechanics.</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 <b>Know</b> the principal surgical techniques,</li> <li>0 <b>Know and understand</b> the possible complication of an surgical orthopedic treatment in the short and long term,</li> <li>0 <b>Know how</b> to minimize the risks in the post-operative status,</li> <li>0 Be able to carefully <b>assess and evaluate</b> the patient's pain and determine the appropriate nursing interventions required,</li> <li>0 <b>Perform</b> physical and psychological assessment of patients with orthopedic diseases and disabilities,</li> <li>0 <b>Understand and explain</b> various disease conditions and their management,</li> <li>0 <b>Discuss</b> various diagnostic tests required in orthopedic care,</li> <li>0 <b>Apply</b> nursing process in providing care to patients requiring</li> </ul>

		<p>surgical treatment and rehabilitation,</p> <ul style="list-style-type: none"> <li>0 <b>Describe</b> recent technologies and treatment modalities in the management of patients,</li> <li>0 <b>Counsel</b> the patients and their families with orthopedic conditions,</li> <li>0 <b>Recognize the role</b> of orthopedic nurse practitioner as a member of a orthopedic and rehabilitation team,</li> <li>0 Be able to <b>prepare a design and layout</b> of orthopedic and rehabilitative unit.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know the principles of medical prescription, disease-caring persons at risk, also for health education purposes.
4	<b>Teaching methods and language</b>	<p>Lectures, and home work</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text Books:</b></p> <p>-Mancini A., Morlacchi C., <i><b>Clinica ortopedica. Manuale-atlante</b></i>, Piccin ed., 2011.</p>
5	<b>Assessment methods and criteria</b>	Written Exam

<p align="center"><b>Programme of</b></p> <p align="center"><b>“SCIENZE DEL MANAGEMENT E DELLA PROGRAMMAZIONE SANITARIA I”</b></p> <p align="center"><b>“HEALTHCARE MANAGEMENT I”</b></p> <p><b>This course is composed of two Modules: 1) Company Economics, 2) Company Organisation</b></p> <p><b>D4138, Compulsory</b></p> <p><b>2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE, 2<sup>nd</sup> year, 1<sup>st</sup> semester</b></p> <p align="center"><b>Number of ECTS credits: 12 (workload is 300 hours; 1 credit = 25hours)</b></p> <p align="center"><b>1) COMPANY ECONOMICS (6 ECTS)</b></p> <p>Teacher: <b>Marco RECCHIONI</b></p>		
1	<b>Course objectives</b>	<p>Aims of this Module is to provide the students with knowledge and skills enabling them to apply economic models to healthcare demand and supply, and to their interaction in the healthcare economy. They will acquire innovative thinking related to the business, management and policy of health care services, health care technology, and health care financing.</p>
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>-Services management: how to apply economics to an analysis of the health care industry, with special emphasis on the characteristics of the Italian healthcare markets, from pre-hospital to post-acute care,</li> <li>-Managing or investing in Health Care Services Businesses: defined as companies that manage, distribute or provide health care services, the Health Care Services sector touches almost every other portion of the health care system,</li> <li>-Key (current) management issues related to a number of different health care services businesses with a focus on common challenges concerning reimbursement, regulatory, margin, growth, and competitive issues,</li> <li>-Economic features of health care delivery, including: the role of nonprofit providers, the effects of regulation and antitrust activity on hospitals, the nature of competition in home health care, public versus private provision of emergency medical services, the effect of specialty hospitals and ambulatory surgery centers, defining and improving medical performance in hospitals, specialization and</li> </ul>



		<p>investment in physical and human capital, shifting of services between inpatient and outpatient settings and its effect on health care costs and quality.</p> <p>On successful completion of this module the student should</p> <ul style="list-style-type: none"> <li>0 have profound <b>knowledge</b> of the Italian Healthcare system;</li> <li>0 have <b>knowledge and understanding</b> of the concepts, institutions, and issues specifically involved in the organization, financing and delivery of health services and products;</li> <li>0 be able to <b>explain</b> the structure of health care systems in Europe, focusing on financing, reimbursement, delivery systems and adoption of new technologies;</li> <li>0 demonstrate ability to <b>critically examine</b> the relative roles of private sector and public sector insurance and providers, and the effect of system design on cost, quality, efficiency and equity of medical services,</li> <li>0 be able to <b>apply</b> economics to an analysis of the health care industry,</li> <li>0 develop generalized skills in competitive <b>analysis</b> and the ability to <b>apply</b> those skills in the specialized analysis of opportunities in producer (e.g. biopharmaceutical, medical product, information technology) and provider (e.g. hospitals, nursing homes, physician) organizations and industry sectors,</li> <li>0 acquire skills for <b>critical and analytical thought</b> about the national health care system and its organization,</li> <li>0 be able to <b>explore</b> the effects of the changing health care environment on the physician, patient and health care manager.</li> </ul>
3	<b>Prerequisites and learning activities</b>	No specific prerequisites are needed.
4	<b>Teaching methods and language</b>	<p>Lectures, group and individual activities: assigned tasks, reports, projects and oral presentations</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b></p> <ul style="list-style-type: none"> <li>- Normann, R., <i>La Gestione strategica dei servizi</i>, Milan: Etas. (1992)</li> <li>-Teacher's Notes and further teaching material will be distributed by the teachers.</li> </ul>
5	<b>Assessment methods and criteria</b>	Oral exam.
<b>2) COMPANY ORGANISATION (6 ECTS)</b>		
Teacher: <b>Piero CARDUCCI</b>		
1	<b>Course objectives</b>	This course focuses on health care organizations' financial decisions in the changing health care landscape. Upon completion of the course, students will be able to utilize a range of financial tools and techniques for making value-added financial decisions in a variety of important contexts in the health care sector.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>-Company Organization Systems: theories and practices of services management and organization, focused on the health care sector,</li> <li>-Organization theories: policy and politics perspectives of health care's three persistent issues: access, cost and quality;</li> <li>-Organization models: analysis of healthcare professionalism model, focused on managerial competence (an overview of the business of health and how a variety of health care organizations have gained, sustained, and lost competitive advantage amidst intense competition, widespread regulation, high interdependence,</li> </ul>

	<p>and massive technological, economic, social and political changes),</p> <ul style="list-style-type: none"> <li>-Evaluation of the challenges that health care organizations are facing, through competitive analysis (identification of their past responses and exploration of the current strategies they are using to manage these, and emerging ones challenges, more effectively),</li> <li>-Quality management: improving access to care and health insurance exchanges, enhancing quality and constraining costs through health care delivery system reforms,</li> <li>-Financial planning and control: realigning capacity through changes in the health care workforce and in medical education, the potential impact on biomedical and other innovations, and the impact on economic outcomes such as employment, wage growth, and national budget deficits,</li> <li>-Healthcare professionalism models in the private sector: the nature of competition of public versus private provision of emergency medical services, the effect of specialty hospitals and ambulatory surgery centers, the economics of direct-to-consumer advertising and its effect on drug safety, and shifting of services between inpatient and outpatient settings and its effect on health care costs and quality,</li> <li>-The role of "entrepreneur" in the healthcare and wellness business: (1) sources of health care innovation; (2) the many "customers" in health care: patients, doctors, hospitals, insurers, and regulators; (3) the powerful established firms with developed clinical and sales expertise; (4) the investing community.</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 have profound <b>knowledge</b> of healthcare services delivering systems;</li> <li>0 have <b>knowledge and understanding</b> on basic health care delivering, how it advances worldwide and represents some of the major societal challenges of our time,</li> <li>0 have profound <b>knowledge</b> of entrepreneurship principles,</li> <li>0 develop a good <b>understanding</b> of core financial accounting and control principles e.g. double entry accounting, accruals, prepayments, liabilities, assets, duty segregation and the need for solid controls,</li> <li>0 gain competence <b>in reading and understanding</b> financial statements and develop a robust understanding of the work of management accounting, incorporating budget preparation, budget appraisal, costing, and financial appraisal techniques,</li> <li>0 take a <b>practical approach</b> to funding negotiation and negotiation in general,</li> <li>0 gain an <b>understanding of the critical steps</b> in any successful planning process,</li> <li>0 become familiar with a number of <b>planning tools and processes</b>,</li> <li>0 gain competence in the <b>critical analysis</b> of strategic plans.</li> <li>0 <b>understand how</b> the concept of quality has evolved over time and how it can be measured and evaluated in the context of healthcare,</li> <li>0 <b>understand</b> the legislative and socioeconomic frameworks within which quality accreditation operates in the Italian healthcare sector,</li> <li>0 <b>apply</b> the insights of quality management to the organisation and delivery of their own services,</li> <li>0 <b>understand</b> core medical ethical principles and appreciate how they inform the key ethical questions relevant to</li> </ul>
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		healthcare.
3	<b>Prerequisites and learning activities</b>	No specific prerequisites are needed.
4	<b>Teaching methods and language</b>	Lectures, group and individual activities: assigned tasks, reports, projects and oral presentations <b>Language:</b> Italian <b>Ref. Text books:</b> - Normann, R., <i>La Gestione strategica dei servizi</i> , Milan: Etas. (1992) -Teacher's Notes and further teaching material will be distributed by the teachers.
5	<b>Assessment methods and criteria</b>	Oral exam

<b>Programme of</b> <b>"APPROFONDIMENTI IN METODOLOGIE TECNICO-ASSISTENZIALI"</b> <b>"INSIGHTS OF TECHNICAL ASSISTENTIAL TECHNIQUES METHODS "</b> <b>"Cardiovascular Physiopathology and Techniques of Extracorporeal Perfusion"</b>		
<b>D4137, Compulsory</b> <b>2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE, 2<sup>nd</sup> year, 2<sup>nd</sup> semester</b>		
<b>Number of ECTS credits: 3 (workload is 300 hours; 1 credit = 25hours)</b>		
Teacher: <b>Mauro DI EUSANIO</b>		
1	<b>Course objectives</b>	The aim of the Module is to provide future professionals with a wide range of information in the cardiovascular area: knowledge of cardiovascular physiology and pathology and understanding techniques of extracorporeal circulation and cardiovascular mechanical assistance. Students will be trained in the use of instruments related to extracorporeal circulation support and to homodynamic techniques.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<b>Topics of the module include:</b> -Cardiovascular physiology: Heart, Regulation of blood pressure, Hemodynamics, Regional circulation, Electrical conduction system of the heart, Electrocardiogram, Cardiac marker Cardiac action potential, -Cardiovascular pathology: Atherosclerosis, Stroke, Coronary thrombosis, -Methods of extracorporeal circulation and cardiac mechanical assistance: devises, tools and methods.  On successful completion of this module, the student should 0 have <b>knowledge</b> in cardiovascular physiology and pathology, 0 have <b>knowledge and understanding</b> of methods of extracorporeal circulation (techniques, devices, indications to, complications of etc.), 0 <b>understand</b> how to provide professional services in collaboration with medical staff, 0 be able <b>to plan, manage and assess</b> all necessary aspects to ensure the proper functioning of the equipment for which they are responsible, 0 be able to <b>test and verify</b> that the equipment employed is functioning correctly, taking responsibility for its standard maintenance and the elimination of any minor problems.
3	<b>Prerequisites and</b>	The students need to have a general knowledge on cell biology and

	<b>learning activities</b>	physiology. The course is mainly a work placement in the departmental surgical structures.
<b>4</b>	<b>Teaching methods and language</b>	Lectures, team work and clinical practice <b>Language:</b> Italian and scientific English <b>Ref. Text Books:</b> -Teacher's Notes
<b>5</b>	<b>Assessment methods and criteria</b>	Oral exam

<p align="center"><b>Programme of</b>  <b>“SCIENZE DEL MANAGEMENT E DELLA PROGRAMMAZIONE SANITARIA II”</b>  <b>“HEALTHCARE MANAGEMENT II”</b></p> <p>This course is composed of five Modules: 1) Systems of Information Processing, 2) Medical Statistics, 3) Audioprosthesis Sciences, 4) Applied Medical Sciences I, 5) Applied Medical Sciences II.</p>		
<b>D4139, Compulsory</b> <b>2<sup>nd</sup> Cycle Degree in SCIENCES OF HEALTH PROFESSIONS FOR TECHNICAL ASSISTANCE, 2<sup>nd</sup> year, 2<sup>nd</sup> semester</b>		
<b>Number of ECTS credits: 12 (workload is 300 hours; 1 credit = 25hours)</b>		
<b>1) SYSTEM OF INFORMATION PROCESSES (3 ECTS)</b>		
Teacher: <b>Giuseppe PLACIDI</b>		
<b>1</b>	<b>Course objectives</b>	This Module aims to enable the students 1) To learn what is medical informatics and why computers are necessary in healthcare; 2) To know what are the principal applications of informatics in healthcare 3) To know how informatics applies in medicine and healthcare
<b>2</b>	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<b>Topics of the module include:</b> -Medical informatics: introduction -The algorithms: definition and properties -Flow chart of an algorithm -Information coding -Medical images: reconstruction, coding, representation and processing -The architecture of a Personal Computer -Hardware and software -Models and systems -The operating system -Computer networks and Internet -Database: definition and usage -ICT based healthcare applications -Electronic Health Record -Telemedicine applications -Real-time systems in medicine -Haptic interfaces -Artificial intelligence in medicine -Principles of information and network security  On successful completion of this module, the student should 0 have profound <b>knowledge</b> of what is medical informatics and why computers are necessary in healthcare;

		<ul style="list-style-type: none"> <li>0 <b>understand and explain</b> what are the principal concept and applications of informatics in healthcare;</li> <li>0 <b>understand</b> how informatics applies in medicine and healthcare;</li> <li>0 <b>critically evaluate</b> the range of application and the related limits.</li> </ul>
3	<b>Prerequisites and learning activities</b>	No prior knowledge of medical informatics is required as a prerequisite.
4	<b>Teaching methods and language</b>	<p>Lectures, presentations of study cases</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text Books:</b></p> <p>The course material consists, mainly, on lecture notes and slides prepared by the teacher. Some specific journal papers are also given to explore some topics in more details. No textbook is required.</p>
5	<b>Assessment methods and criteria</b>	The exam is written: the student has to give brief answers, in 45 minutes, to four open questions.

## **2) MEDICAL STATISTICS (3 ECTS)**

Teacher: <b>Cinzia LEUTER</b>		
1	<b>Course objectives</b>	This Module provides an introduction to Statistical methods. Students will be able to use descriptive statistics to analyze categorical and continuous data in problem solving and decision making process for healthcare services organization and delivery.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Course content:</b></p> <ul style="list-style-type: none"> <li>- Observational and experimental studies.</li> <li>- Descriptive statistics. Probability. Probability distribution.</li> <li>- Means and their properties. How to measure the variability. Normal distribution.</li> <li>- Testing of hypothesis. Confidence intervals. Overview of statistical tests.</li> <li>- Linear regression and correlation.</li> <li>- Properties of the diagnostic tests.</li> </ul> <p>The successful student will</p> <ul style="list-style-type: none"> <li>0 <b>Appreciate</b> problems involved in data collection and management;</li> <li>0 <b>Develop</b> strategies to use specific statistical tests;</li> <li>0 <b>Critically evaluate and interpret</b> the research data and <b>provide</b> correct information on the study results;</li> <li>0 <b>Participate</b> in drawing conclusion from data and in the presentation and writing of reports and papers;</li> <li>0 Demonstrate ability in <b>critically reading</b> the published results of a clinical study.</li> </ul>
3	<b>Prerequisites and learning activities</b>	The student must know basic statistical concepts and techniques
4	<b>Teaching methods and language</b>	<p>Lectures, team work, exercises</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b></p> <p>-Teacher's Notes and further teaching material will be distributed by the teachers.</p>
5	<b>Assessment methods and criteria</b>	Oral exam

## **3) AUDIO-PROSTHETIC SCIENCES (3 ECTS)**

Teacher: <b>Franco MARINANGELI</b>		
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1	<b>Course objectives</b>	<p>This Module focuses on detection and rehabilitation methodologies of hearing impairment. The students will acquire the scientific knowledge on which the rehabilitation techniques and tools for the treatment of auditory and vestibular system pathologies are based. Upon completion of the Module, students will be able to cooperate with other professionals in hearing loss prevention and rehabilitation programmes using instrumental and prosthetic techniques and methods.</p>
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b></p> <ul style="list-style-type: none"> <li>- The physiological basis of the auditory and vestibular system;</li> <li>- Scientific basis behind alterations in the auditory and vestibular function;</li> <li>- Hearing assessment techniques (Otoscopy, PTA, Tympanometry, Acoustic Reflexes,</li> <li>- Auditory Evoked Potentials);</li> <li>- Assessment techniques within Neurophysiology (Electroencephalography, Nerve conduction studies, Visual Evoked Potentials, Somatosensory Evoked Potentials, Auditory Evoked Potentials, Imaging);</li> <li>- Hearing pathologies (Outer, Middle, Inner Ear and Retrocochlear);</li> <li>- Diseases of the central and peripheral nervous system (Autoimmune, Inflammation,</li> <li>- Ischemic, Tumours, Motor Neuron, Multiple Sclerosis, Epilepsy, Alzheimer's/Dementia);</li> <li>- Rehabilitation methodologies and prosthetic technologies for deafness rehabilitation;</li> <li>- Hearing loss prevention protocols.</li> </ul> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 have profound <b>knowledge</b> of anatomy and physiology of the auditory and vestibular system;</li> <li>0 <b>Understand</b> key aspects of the perception of sound and how these relate both to speech perception and to the underlying anatomy and physiology;</li> <li>0 have <b>knowledge and understanding</b> of changes in auditory and vestibular functions;</li> <li>0 <b>Discuss</b> the essential structures and functions of auditory pathways;</li> <li>0 <b>Know and understand</b> all non-invasive, psycho-acoustic and electrophysiological procedures for the evaluation and measurement of the auditory and vestibular system;</li> <li>0 <b>Understand and explain</b> basic mathematics and physics relevant to introductory acoustics and the use of appropriate units;</li> <li>0 <b>Critically evaluate</b> the fundamental principles of the psychophysical assessment of auditory pathologies;</li> <li>0 <b>Describe</b> the range and basic function of routine audiological equipment and critically <b>evaluate</b> their use in the everyday assessment of hearing, tinnitus and balance in patients;</li> <li>0 <b>Explore</b> the framework underpinning aural rehabilitation of adults with acquired hearing impairment;</li> <li>0 <b>Evaluate</b> investigations and treatment of routine otological and audiological disorders;</li> <li>0 Discuss the prevalence and incidence of hearing loss and tinnitus;</li> </ul>

		<p>0 <b>Present</b> information clearly in the form of verbal and written reports;</p> <p>0 <b>Work</b> effectively as an individual or part of a team.</p>
3	<b>Prerequisites and learning activities</b>	Knowledge of basic Mathematics, Physics, Biology and Physiology is needed.
4	<b>Teaching methods and language</b>	<p>Lectures, group and individual practical activities.</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b></p> <p>-Teacher's Notes and further teaching material will be distributed by the teacher.</p>
5	<b>Assessment methods and criteria</b>	Oral exam

#### 4) APPLIED MEDICAL SCIENCES I (2 ECTS)

Teacher: <b>Mario GIANNONI</b>		
1	<b>Course objectives</b>	Aim of the course is to give to the students a valid knowledge of the latest diagnostic methods in the prevention of oral diseases, with special reference to the knowledge of the investigation of biomedical laboratory and equipment useful for the evaluation of clinical parameters related to the oro-maxillo-facial disorders. The students will acquire competence and skills for preventing and managing oral diseases.
2	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include</b></p> <ul style="list-style-type: none"> <li>- Classification of dento-maxillo-facial disharmonies</li> <li>- Orthodontic semiotics,</li> <li>- Role of the neuro-muscular system in defining occlusion,</li> <li>- Instrumental examinations for orthodontics,</li> <li>- Specific dental and orthodontic disease: agenesises, supernumerary teeth, traumas,</li> <li>- teeth included,</li> <li>- Overview of orthodontic therapy,</li> <li>- Safety Principles,</li> <li>- Professionalism,</li> <li>- Infection Control Practices,</li> <li>- Trends in Healthcare.</li> </ul> <p>On completion of this module the student should:</p> <ul style="list-style-type: none"> <li>0 have good <b>knowledge</b> of oral diseases,</li> <li>0 have <b>knowledge</b> of Biomedical laboratory analysis,</li> <li>0 <b>understand</b> the oral pathology ,</li> <li>0 demonstrate skill and ability to <b>patients management</b>,</li> <li>0 <b>develop</b> leadership skills,</li> <li>0 <b>have acquired</b> Therapeutic Communication capacities,</li> <li>0 be able <b>to work</b> in a multidisciplinary healthcare team.</li> </ul>
3	<b>Prerequisites and learning activities</b>	Knowledge of the main aspects of the anatomy and physiology of the oral cavities
4	<b>Teaching methods and language</b>	<p>Lectures, presentation, exercitation</p> <p><b>Language:</b> Italian, Scientific English</p> <p><b>Ref. Text books:</b></p> <p>Ref. Text Books:</p> <p>-Wilkins E., "<i>La pratica clinica dell'igienista dentale</i>", Piccin, 2010.</p> <p>- Teacher's Notes</p>
5	<b>Assessment methods and</b>	Oral exam



	<b>criteria</b>	
<b>5) APPLIED MEDICAL SCIENCES II (1 ECTS)</b>		
Teacher: <b>Mario GIANNONI</b>		
<b>1</b>	<b>Course objectives</b>	Aim of this course is to provide direct experience of the problems rising in a dentist laboratory. The student will gain capacity and competence for applying guidelines and protocols as required by healthcare practice.
<b>2</b>	<b>Course content and Learning outcomes (Dublin descriptors)</b>	<p><b>Topics of the module include:</b> The complete knowledge of the questions related to the management of dental hygienist into a working group aimed to assess the oral health of a community according to the criteria of community dentistry.</p> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> <li>0 Have <b>knowledge</b> of the techniques and methods for the oral hygiene;</li> <li>0 be able to <b>discuss</b> the prevention methodologies and identify those that best fit with the specific patient;</li> <li>0 <b>understand and explain</b> the different methodologies to be applied in different contexts and needs;</li> <li>0 be able to <b>apply</b> the guidelines;</li> <li>0 demonstrate capacity to <b>interpret and adapt</b> the theoretical knowledge to practical cases;</li> <li>0 demonstrate capacity for <b>reading and understanding</b> other texts on related topics.</li> </ul>
<b>3</b>	<b>Prerequisites and learning activities</b>	Knowledge of the main safety and health prevention protocols.
<b>4</b>	<b>Teaching methods and language</b>	<p>Lectures, exercitations.</p> <p><b>Language:</b> Italian</p> <p><b>Ref. Text books:</b> -Wilkins E., “<i>La pratica clinica dell’igienista dentale</i>”, Piccin, 2010. - Teacher’s Notes</p>
<b>5</b>	<b>Assessment methods and criteria</b>	Oral exam