



UNIVERSITY OF L'AQUILA



Department of Health, Life and
Environmental Sciences

1st Cycle Degree in DENTAL HYGIENE

Laurea in IGIENE DENTALE

Course Catalogue

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

1st Semester - Starting date: last week of September, end date: 3rd week of January

2nd Semester - Starting date: last week of February, end date: 1st week of June

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

Comprehensive Scheme of the First Cycle Degree in DENTAL HYGIENE				
YEAR	CODE	COURSE	Credits (ECTS)	Semester
I	D4282	Scientific Methodology and Informatics	8	1
	D1812	Biomedical Sciences	12	1
	D4279	Professional Organization	9	1
	D1620	General Pathology and Microbiology	6	2
	D4306	Clinical Dentistry	6	2
	D3638	<i>Work Placement I</i>	16	2
	D4079	<i>Free choice optional courses</i>	6	1 and/or 2
	D4108	<i>Other Courses / Activities:</i> <ul style="list-style-type: none"> ○ <i>Other activities (6 ECTS)</i> ○ <i>English (3 ECTS)</i> ○ <i>Specific professional Labs (3 ECTS)</i> 	12	1 and/or 2
II	D4285	Anesthesiology, Pharmacology and Pathological Anatomy	9	1
	D2078	Preventive Dentistry and Cranio-Mandibular Dysfunctions	9	1
	D2198	General and Applied Hygiene	3	2
	D2520	Prostheses and Implantology	6	2
	D3640	<i>Work Placement II</i>	24	2
III	D4513	Oral and Maxillo-Facial Surgery	4	1
	D4297	Periodontology	3	1
	D2552	Principles of Health Organization and Forensic Medicine implications	12	1
	D2564	Professional Practice I	3	2
	D2574	Professional Practice II	3	2
	D3642	<i>Work Placement III</i>	20	2
	D2054	<i>Thesis</i>	6	2

**Programme of “METODOLOGIA SCIENTIFICA E INFORMATICA”
“SCIENTIFIC METHODOLOGY AND INFORMATICS”**

This course is composed of two Modules: 1) Informatics, 2) Medical Statistics

D4282, compulsory

1st Cycle Degree in DENTAL HIGIENE, 1st year, 1st semester

Number of ECTS credits: 8 (total workload is 200 hours; 1 credit = 25 hours)

1) INFORMATICS (4 ECTS)

Teacher: Pierpaolo VITTORINI

1	Course objectives	Aim of the course is to provide the foundations for the introduction to computer science applied to the medical context with particular reference to the role of the dental hygienist.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Coding systems in computer science and in medicine - Introduction to algorithms and medical examples - Von Neumann architecture and operating system - Introduction to imaging - Networking, Internet, tele-medicine and PubMed <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o Understand the use of database for the collection of medical records . o Be able to perform easy analyses of data . o Demonstrate skill in the use of Word Excel. o Understand and use the most important medical search engines such as Pubmed or Scopus. o Understand the use of an informatics software.
3	Prerequisites and learning activities	Not previous specific knowledge are required
4	Teaching methods and language	Lectures, team work, exercises, home work Language: Italian Ref. Text books: -Vittorini P., <i>L'informatica per la medicina e la sanità pubblica</i> . Edizioni L'Una. 2009.
5	Assessment methods and criteria	Written exam

2) MEDICAL STATISTICS (4 ECTS)

Teacher: Antonella MATTEI

1	Course objectives	The aim of the course is to teach to the Hygienist the Statistical methods as syntax of the methodology of clinical research.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Observational and experimental studies. - Statistical distributions. - Means and their properties. How to measure the variability. Normal distribution. - Rates and proportions, stressing the difference between prevalence ratio and incidence rate. - How to measure the strength of the association between two variables, especially referring to the relationship between exposition to a risk factor and presence of a disease. - Introduction to probability and its applications in Medicine. - Random sampling. - Basic concepts of the Statistical Inference: Parameter, estimator, standard error, confidence intervals, statistical tests. - Statistical methods in clinical studies with respect to the phase. <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o Understand data from phenomena showing variability in individual observations: tables and graphics. o be able to perform easy analyses of data, and interpreting the obtained results. o demonstrate ability in critically reading the published results of a clinical study. o demonstrate skills in the use of Word Excel

		o demonstrate capacity for applying and understanding the T Student Test
3	Prerequisites and learning activities	Basic mathematical skills
4	Teaching methods and language	Lectures, team work, exercises, home work Language: Italian Ref. Text books: -E. Ballatori, <i>Foundations of the Scientific Medicine</i> . Margiacchi-Galeno ed.; Perugia, 2006.
5	Assessment methods and criteria	Written and oral exam.

Programme of "SCIENZE BIOMEDICHE" "BIOMEDICAL SCIENCES"		
This course is composed of four modules: 1) Histology, 2) Biochemistry, 3) General and Oral Physiology, 4) Human Anatomy		
D1812, COMPULSORY		
First Cycle Degree in DENTAL HYGIENE 1st Year, 1st Semester		
Number of ECTS credits: 12 (total workload is 300 hours; 1 credit = 25 hours)		
1) HISTOLOGY (3 ECTS)		
Teacher: Paola DE CESARIS		
1	Course objectives	The goal of the course is to provide the student with a basic background in histology concerning the properties of cells and cellular interactions with one another as components of tissues and organs.
2	Course content and Learning outcomes (Dublin descriptors)	This course gives the student a thorough and detailed overview of the various human tissues. Topics include: - a brief description of cell organization and of the function of its constituent organelles, - description of the more utilized histological techniques for the observation of tissues with the light and electron microscope, - study of the basic tissue types i.e. epithelial, glands, connective tissue (e.g. cartilage, bone, teeth and blood), muscle and nervous tissues Emphasis is placed on structural-functional correlates at both the light and electron microscopic level. - overview of the structure of mammalian cells and of their organization into tissues. - Basic cell biology and histochemistry; - Histology of the different human tissues; Students are expected to: o acquire knowledge of cell structure and tissues organizations; o to acquire the ability to recognize the different tissues; o be able to understand and describe the normal structure and function of various cell types and tissues; o demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	The student must know the basic notion of chemistry, biochemistry and cell biology as acquired in the high schools.
4	Teaching methods and language	Lectures Language: Italian Ref. Text books: -Adamo et al. " <i>ISTOLOGIA</i> " (PICCIN 2008)
5	Assessment methods and criteria	Written exam: multiple choice test regarding cell biology and histology topics
2) BIOCHEMISTRY (3 ECTS)		
Teacher: Fabrizia BRISDELLI		
1	Course objectives	The objective of this module is to introduce students to the basic concepts of biochemistry, providing a survey of the structure, function and reaction of major biological molecules. The course is designed to give the foundation for further study of nutrition, physiology and pathology.
2	Course content and Learning outcomes (Dublin descriptors)	Topics of the module include: - <u>Overview On Biochemistry</u> : Chemical composition of living organisms. Chemical bonds.

	descriptors)	<p>Principal functional groups of organic molecules.</p> <ul style="list-style-type: none"> - <u>Water</u>: Chemical-physical properties. Hydrogen bonds. Solvent properties of water. Ionization of water Acids and bases. Buffer solutions. Macromolecules and their subunits. - <u>Amino Acids And Proteins</u>: Chemical and biological properties and structure of aminoacids. Peptide bond. Primary, secondary, tertiary and quaternary of proteins. Major secondary structures: α-helix and β-plated sheet. Collagen, keratin, elastin, myosin and actin. - <u>Myoglobin And Emoglobin</u>: structure and properties. Mutated and pathological emoglobins. - <u>Enzymes</u>: Structures and functions. Enzyme kinetic and inhibition. Enzyme activity control. - <u>Carbohydrates</u>: monosaccharides, disaccharides, storage and structural polysaccharides. Glycoconjugates. - <u>Lipids</u>: fatty acids, triacylglycerols, phosphoacylglycerols, sphingolipids, steroids. Biological membranes. Membrane proteins and transport. - <u>Nucleotides</u>: Structures of nucleosides and nucleotides. Purine and pyrimidine bases. Phosphodiester bond. Nucleic acids. Cyclic nucleotides. ATP. NAD and NADP. FAD. - <u>Biologically important oxidation-reduction reactions</u>. - <u>Carbohydrate Metabolism</u>: Carbohydrate digestion. Glycolysis. Lactic and alcoholic fermentation. Glycogen synthesis and breakdown. Pentose phosphate pathway. - <u>The tricarboxylic acid cycle</u>. - <u>Electron transport chain and oxidative phosphorylation</u>. - <u>Lipid metabolism</u>: Lipid digestion and transport. B-oxidation of fatty acids. Acetyl-CoA fate. Ketone bodies. - <u>Protein metabolism</u>: Amino acid catabolism. Transamination reactions. Ammonia production. Urea cycle. Fate of the carbon skeleton of amino acids. - <u>Liposoluble vitamins</u>: Vitamin A, D, E, K. - <u>Hydrosoluble Vitamins</u> <p>On successful completion of this module, the student is expected to</p> <ul style="list-style-type: none"> o become familiar with the structure and function of carbohydrates, lipids, proteins and nucleic acids, and with cell metabolism and its regulation. o have basic knowledge of biochemical processes and their alteration in diseases o have knowledge and understanding of the role of pathogenic markers in differential diagnosis o demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	Students must know the fundamentals of general biology and chemistry
4	Teaching methods and language	<p>Lectures. Language: Italian Ref. Text books: -M.V. Catani, I. Savini, P. Guerrieri, L. Avigliano. "<i>Appunti di Biochimica</i>" (per le Lauree Triennali). Piccin (2008) -David L. Nelson, Michael M. Cox. "<i>Introduzione alla Biochimica di Lehninger</i>". Quarta edizione (2011), Zanichelli. -John W. Pelley. "<i>Biochimica</i>", (2008), Elsevier Masson.</p>
5	Assessment methods and criteria	Written and oral exam
3) GENERAL AND ORAL PHYSIOLOGY (3 ECTS)		
Teacher: Eugenio SCARNATI		
1	Course objectives	The general objective of this course is to provide the students with the knowledge of physiological processes that occur in the mouth as well as their regulation, coordination and control mechanisms.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the Module include: <u>Unit 1 - Blood</u> Functions of red blood cells, white blood cells and platelets. Haemostasis</p> <ul style="list-style-type: none"> o <i>Specific conceptual skills</i>: -Understanding composition and functions of blood -Evaluating the risk of bleeding in intraoral manipulations.

		<p><u>Unit 2 - Excitability, muscle contraction and impulse conduction.</u> Muscle-nervous system interaction. Receptors. Reflex arch.</p> <ul style="list-style-type: none"> o <i>Specific conceptual skills:</i> <p>-Capacity to explain the outcome of stimulating specific classes of receptors.</p> <p><u>Unit 3 - Overview of cardiovascular and respiratory systems</u> Regulation and control of cardiac function and circulation. The respiratory system.</p> <ul style="list-style-type: none"> o <i>Specific conceptual skill:</i> <p>-Understanding the function of heart, arteries and veins, - Understanding how the blood pressure is regulated - Understanding the need of O₂ absorption and CO₂ elimination</p> <p><u>Unit 4 - Nervous system</u> Motor and sensory functions of the nervous system. Oral-facial sensory and motor functions. The trigeminal system. Tooth pulp. Taste and smell.</p> <ul style="list-style-type: none"> o <i>Specific conceptual skills</i> <p>- ability to explain the functioning of different motor and sensory components of the nervous system - ability to explain how peripheral information are integrated in the central nervous system - understanding voluntary and involuntary movements - understanding the functions of intraoral sensory receptors</p> <p><u>Unit 5 - Mastication and its control</u></p> <ul style="list-style-type: none"> o <i>Specific conceptual skills:</i> <p>-Knowledge of how the mandible moves during masticatory and non masticatory mouth activity - ability to explain how masticatory forces are modulated - ability to understand how masticatory muscles are controlled.</p> <p><u>Unit 6 - The intraoral fluids and dental deposits</u></p> <ul style="list-style-type: none"> o <i>Specific conceptual skills:</i> <p>-Understanding of salivary glands functions and knowledge of saliva composition; -Knowledge of the role of the crevicular fluid; - Knowledge the origin of dental deposits; -Understanding of the functions of the intraoral mucosa;</p> <p>At the end of the course students should be able to:</p> <ul style="list-style-type: none"> o Understand the physiology of human body as an integrated whole system, with diverse structures and systems coordinating with each-other. o Know and understand the general concepts and functions of teeth and intraoral fluids, o Comprehend how mouth movements occur. o Understand specific aspects of teeth and mouth physiology in the context of human health o Apply their knowledge to the professional practice.
3	Prerequisites and learning activities	This course will introduce mouth physiology based upon previous knowledge acquired in the courses of Cell and Tissue Biology, Physics Biochemistry and Anatomy.
4	Teaching methods and language	<p>Theoretical lectures (in Italian) will consist of scientifically sound and structurally clear presentations on a particular topic in order to address the proper understanding of the concerning information. Explanations will be accompanied by graphical examples, transparencies and interactive slides. In the course of the explanations, some time will be devoted to the discussion of specific points concerning in particular oral physiology.</p> <p>Theoretical lectures will address the study of suggested textbooks and/or recommended specific literature to the student.</p> <p>Language: Italian</p> <p>Suggested textbook: -Stanfield <i>"Fisiologia"</i>, 4°ed. Edises Napoli 2013. -Manzoni-Scarnati <i>"Fisiologia orale e dell'apparato stomatognatico"</i>. EdiErmes Milano 2011.</p>
5	Assessment methods and criteria	Final examination at the end of the semester in form of multiple-choice questionnaire
4) HUMAN ANATOMY (3 ECTS)		
Teacher: Antonella VETUSCHI		
1	Course objectives	The Module aims to provide the students with the knowledge of general and structural organization of the normal human body from the microscopic to the macroscopic level and with the capacity to understand the main morpho-functional relationships of the human

		organism.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Overview of the human body and anatomic nomenclature. - Musculoskeletal system - Head: external skull, intracranial regions; -Vertebral column; - Chest; - Pelvic girdle; -Upper and lower limb. - Cardiovascular system: mediastinum, heart and great vessels. - Overview of lymphatic system - Respiratory system: Upper airways, trachea and bronchi. Pleura and Lungs. - Digestive system. Upper digestive tract: vestibule and oral cavity proper, teeth, tongue, hard palate. Salivary glands. Gastrointestinal tract. Abdominal viscera: liver, biliary tree and pancreas. - Urogenital system: Kidney and urinary tree. General aspects of male and female reproductive systems. - Endocrine system - Nervous system: spinal cord and spinal nerves. Brain stem. Cerebellum. Diencephalon. Cerebral emispheres. Cranial nerves. - Special senses: external, middle and inner ear. The eye. The orbit and accessory visus apparatus. <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o have profound knowledge of gross anatomy of the oral cavity, o have knowledge and understanding of different human body systems, o demonstrate capacity to organize a discussion on morphological aspects in a comprehensive manner, o be able to apply the theoretic knowledge to the practice.
3	Prerequisites and learning activities	The student must know the basic structure and function of cells and integrating cells into tissues..
4	Teaching methods and language	Lectures, seminars, lab Language: Italian Ref. Text books: -Artico M., Castano P., <i>Anatomia Umana. Principi</i> . AA.VV, Edi-Ermes, 2005. -Ambrosi G., <i>Anatomia dell'Uomo</i> . AA.VV, Edi-Ermes, 2006.
5	Assessment methods and criteria	Written and oral exam.

Programme of “ORGANIZZAZIONE DELLA PROFESSIONALE” “PROFESSIONAL ORGANIZATION”		
This course is composed of three modules: 1) Radiation Protection Techniques, 2) Diagnostic Chemical / Physical Tools and Devices, 3) Organization and Ergonomics of the Profession		
D4279 , COMPULSORY		
First Cycle Degree in DENTAL HYGIENE, 1st Year, 1st Semester		
Number of ECTS credits: 9 (total workload is 225 hours; 1 credit = 25 hours)		
1) RADIATION PROTECTION TECHNIQUES (3 ECTS)		
Teacher: Ernesto DI CESARE		
1	Course objectives	This course aims to give information about radiation risks and protection methods/techniques by means focused lessons on physical principles of radiations, Italian legislation, different methods and tools for protection. The students will be able to use and apply the learnt principles in their profession.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Radiation Physics -Radiobiology -Measurements in Radioprotection -Sanitary Effects -Population Ionizing Radiation Exposition -Radiation Source in the Radiological Department -Radioprotection principles and low -General principles of radioprotection in the radiological activities

		<p>On successful completion of this module, the student should :</p> <ul style="list-style-type: none"> ○ Understand the nature and properties of ionising radiation ○ Be familiar with terminology used in radiation protection ○ Be aware of and understand the potential hazards associated with ionising radiations and have an understanding of the concept of ALARP (As Low As Reasonably Practicable), one of the fundamental principles of risk management ○ Understand the basic principles of practical protection ○ Have a general awareness of the range of applications of ionising radiation in medicine ○ Have an awareness of the categories of possible radiation incidents – industrial, nuclear, malicious (CBRN) etc. and their likely consequences ○ Understand how radiation measurements can be made in the field and know how to use, and interpret results obtained from, instrumentation available to the ambulance trusts. ○ Know and be familiar with agreed national strategy/protocols for dealing with radiation incidents and understand the importance of adhering to specified procedures.
3	Prerequisites and learning activities	Not previous specific knowledge is required
4	Teaching methods and language	<p>Lectures. Language: Italian Textbook recommended: -E. Di Cesare, P. Gallicchi, M. Midiri “<i>La Radioprotezione Negli Studi Radiologici</i>”, ed. Gnocchi, 2010</p>
5	Assessment methods and criteria	Oral exam.

2) DIAGNOSTIC CHEMICAL / PHYSICAL TOOLS AND DEVICES (3 ECTS)

Teacher: Mario GIANNONI		
1	Course objectives	Aim of the course is to give to the students a valid knowledge of all tools used by the Dental Hygienist.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Knowledge of the Dental Equipe (training, role, activity) and the dental environment (tools, equipment, infection control). - Outlines of Forensic Medicine in the profession of Dental Hygienist - Principles of Oral Radiology - Use of the dental plaque detectors - Diagnostic tools for detection of oral diseases - Salivary tests - The Periodontal risk <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> ○ have profound knowledge of existing tools and devices for diagnosis in Dental care Profession; ○ have knowledge and understanding of the physical and chemical principles on which they are based; ○ understand and explain how the main tools and devices must be used; ○ understand the ethical principles connected with diagnosis and care; ○ demonstrate skill in equipment maintenance and ability to identify the needed tools in the different cases occurring in the professional life; ○ demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	The student must know anatomy and physiology of the oral cavities.
4	Teaching methods and language	<p>Lectures, Seminars. Language: Italian Ref. Text books: - Cortesi Ardizzone V., Abbinante A. “<i>Igienista Orale Teoria e pratica professionale</i>”, LSWR EDITORE, Milano, 2013.</p>
5	Assessment methods and criteria	Oral exam

3) ORGANIZATION AND ERGONOMICS OF THE PROFESSION (3 ECTS)

Teacher: Angela Pia CAZZOLLA

1	Course objectives	The course provides the students with the basic knowledge of methods and devices useful for preventing occupational diseases connected with the profession. On successful completion of this course, the student should have competence for applying ergonomics concepts to the dentist office, and for organizing the clinical area by designing and using prevention concepts.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -General principles of ergonomics and ergonomics in stomatology; introduction to ergonomics concepts; economic principles of movements; elementary movements. -Reception and accommodation of patient: preparation of patient; treatment area: the office, the operating room and operating field; types of dentist armchairs, lighting, positioning and regulation; the operating procedure: preparation, execution and re-ordering; -Organization of hygiene department: environmental independence, independence of organization; full mouth disinfection; planning of appointments and types of patients; patients with particular needs; -Structure and organization of clinical area: from the first visit to the planning of the treatment; case history, emergencies in the dental office, end of the treatment, balance. -Methods of disinfection and sterilization: means of mechanical protection; crossed infections; disinfection; re-ordering; storage; elimination of refuse; notions concerning radiology. -Poor posture and professional problems concerning backache; eye disorders, hearing disorders, muscular-skeletal disorders, pathology of rachides and exposure to biomechanical risks; pathology due to radiations; disorders due to chemical agents; biological effects due to drugs, <i>anesthetic</i> gas; occupational diseases of the skin. -Italian law concerning the prevention of <i>occupational disease</i>. <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o have knowledge and understanding of general principles of ergonomics and ergonomics in stomatology, organization of hygiene department, structure and organization of clinical area, methods of disinfection and sterilization, professional diseases, o have knowledge of Italian laws concerning the prevention of <i>occupational disease</i>. o demonstrate skill in the management of a dentist treatment office, in the reception and the accommodation of patient, in the organization of the hygiene department and of the clinical area, in the evaluating working conditions in the office fulfilling the Italian law. o have knowledge of foundation of forensic medicine o demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	No prerequisites are required.
4	Teaching methods and language	Lectures; powerpoint presentations; Language: Italian Ref. Text Books: - Leghissa G.C., Moretti S., Palermo C., Buzzi G. <i>“La Gestione Pratica Del Paziente Odontoiatrico”</i> . Ed. Masson, 2007. -Guastamacchia C. <i>“Elementi di Ergonomia e Pratica Professionale Odontoiatrica”</i> . Ed. Masson. 1988.
5	Assessment methods and criteria	Written exam.

**Programme of “PATOLOGIA GENERALE E MICROBIOLOGIA”
“GENERAL PATHOLOGY AND MICROBIOLOGY”**

This course is composed of two modules: 1) General Pathology, 2) Microbiology

D1620, compulsory

First cycle Degree in DENTAL HYGIENE, 1st year, 2nd semester

Number of ECTS credits: 8 (workload is 270 hours; 1 credit = 30 hours)

1) GENERAL PATHOLOGY (3 ECTS)

Teacher: **Assunta Leda BIORDI**

1	Course objectives	Aim of the course is to give to the student the foundations of the most important pathogenic conditions of particular significance for the oral health.
---	-------------------	---

2	Course content and Learning outcomes (Dublin descriptors)	<p>Pathology is the study of disease and disease processes, their development, causes, structural changes in cells and tissues as well as the effect of disease processes on bodily functions.</p> <p>Topics of the module include:</p> <ul style="list-style-type: none"> - Etiology Pathological manifestations. - Basic concepts of pathology and general physiopathology. - Definitions of health and disease; etiology and pathogenesis. - Chemical, physical and biologic agents as causes of disease. Biological - - of exciting and ionizing radiations. - Inflammation: Acute and chronic inflammation. Vascular phenomena, cell involved in inflammatory process, chemicals mediators, phagocytosis, exudate formation, type of exudates, granulomas, reparative process. - Fever: thermoregulation. Endogenous and exogenous pyrogens. Type of fever. - Immunology : Immune system cells, immune response and mechanisms of immunoregulation. Anti-infective immunity. - Cytopathology: Regressive process of cell and extracellular matrix; cellular death. - Oncology: Control and alteration of the proliferation and cellular differentiation; hyperplasia, hypertrophy, metaplasia, anaplasia. - Molecular basis of the neoplastic transformation: oncogenes and oncosuppressor genes. Neoplastic cell morphology. Invasion and metastasis. Promotion and tumor progression. Apoptosis and angiogenesis in the tumors. Criteria of the tumor classification. <p>On successful completion of this module, the student should:</p> <ul style="list-style-type: none"> o know and understand the concept of "cause" in pathology. o be able to describe basic disease processes and tissue reactions . o understand and explain the most common systemic diseases and diseases of the organs that occur in humans. o understand and explain the causes and the consequences of diseases o be able to identify and apply suitable prevention measures. o demonstrate awareness of dental hygienist role as a member of the health team and competence for promotion of oral health as part of general health.
3	Prerequisites and learning activities	The student must have the knowledge of the fundamentals of histology.
4	Teaching methods and language	<p>Lectures, team work, reports</p> <p>Language: Italian.</p> <p>Ref. Text books:</p> <p>-G.M. Pontieri "<i>Elementi di Patologia Generale</i>" (per i Corsi di Laurea Professioni Sanitarie). Piccin ed. 2011.</p>
5	Assessment methods and criteria	Oral exam.
2) MICROBIOLOGY (3 ECTS)		
Teacher: Patrizia FRASCARIA		
1	Course objectives	The course is intended to give the foundations of general microbiology, with particular reference to the oral cavity casualties. Safety concerning the biological risk is particularly outlined. Although memorization is an important part of any medical discipline, understanding the basic principles plays an important role in mastering microbiology.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Fundamentals of procariotic cell structure and function -Cell wall structure -Laboratory equipment in bacteriology -Optical microscope -Microbial metabolism -Bacterial genetic -Sterilization methods in bacteriology -Safety cabins -Biological hazard and safety methods -Microscopy of bacteria: staining techniques -Culture of bacteria, mould and yeast -Culture media -Natural and acquired immunity

		<p>-Bacterial species with particular reference to Staphylococci, Streptococci, Pseudomonas, Candida albicans, Helicobacter pilory, Enterobacteria, Mycobacteria.</p> <p>-Biofilm: dental plaque microbiology</p> <p>-Antibiotics</p> <p>-Fundamentals of virology, Viral species with particular reference to HBV, HCV, HIV.</p> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o have profound knowledge of the relevance of bacteria and viruses o have knowledge and understanding of the arguments displayed in the module o understand and explain the arguments of the module o understand the relevance of microbiology in dental care o demonstrate skill in focusing and ability to recognize the microbiological casualties o demonstrate capacity for reading and understand other texts on related topics
3	Prerequisites and learning activities	The student must know Biochemistry and Immunology
4	Teaching methods and language	<p>Lectures.</p> <p>Language: Italian.</p> <p>Ref. Text books:</p> <p>-P.R. Murray, K.S. Rosenthal, M.A. Pfaller <i>"Medical Microbiology"</i>, EMSI 2008</p>
5	Assessment methods and criteria	Written exam.

<p>Programme of "CLINICA DEL CAVO ORALE" "CLINICAL DENTISTRY"</p>		
<p>This course is composed of two modules: 1) Protocols for Prevention of Oral Diseases, 2) Odontostomatology and Diagnostic Techniques</p>		
<p>D1306, compulsory 1st Cycle degree in DENTAL HYGIENE, 1st Year, 2nd Semester</p>		
<p>Number of ECTS credits: 6 (total workload is 150 hours; 1 credit = 25hours)</p>		
<p>1) PROTOCOLS FOR PREVENTION OF ORAL DISEASES</p>		
<p>Teacher: To be hired</p>		
1	Course objectives	<p>This Module provides future oral health professionals with information about preventive agents and measures that can promote oral health and reduce oral diseases in children and communities.</p>
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the Module include:</p> <ul style="list-style-type: none"> -The prevention of major dental diseases: dental caries, periodontal disease, oral cancer and precancerous lesions. -The diseases of the mucous membranes of the mouth: viral, fungal, autoimmune oral diseases and cancer. -Preventive agents and measures including: <ul style="list-style-type: none"> ✓ Fluorides: Fluoride Supplements, Fluoridated Toothpaste, Fluoride Rinses, Professionally Applied Fluoride Gel or Foam, Professionally Applied Fluoride Varnish, ✓ Antimicrobials such as chlorhexidine, xylitol, and systemic antibiotics; ✓ Dental sealants; -Scaling and Prophylaxis, discussed in terms of indications and contraindications for use. -Adaptations for children as well for patients with certain special health care needs; -Organization of dental practice according preventive and therapeutic dental hygienists' activities. <p>At the end of the course the student should:</p> <ul style="list-style-type: none"> o Define the main dental diseases o have knowledge and understanding of preventive dentistry, o Know and understand the preventive protocols, o Explain semiotics and pathophysiology of the oral cavity, o understand and explain oral pathology and preventive dentistry, o demonstrate skill in prevention of dental diseases, o be able to apply the protocols in the organization of the profession,

		o demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	The student should know the basic principles of Biology, Physiopathology, Microbiology
4	Teaching methods and language	Lectures, Discussions Language: Italian Ref. Text Books: -Farronato G.- <i>Odontostomatologia per l'Igienista dentale</i> , Piccin, Padova 2009 -Cortesi Ardizzone V., Abbinante A.- <i>Igienista Orale</i> , Era editore, Milano 2013
5	Assessment methods and criteria	Oral exam

2) ODONTOSTOMATOLOGY AND DIAGNOSTIC TECHNIQUES

Teacher: Mario CAPOGRECO

1	Course objectives	The goal of this Module is to provide the students with scientific knowledge enabling them to identify the main oral diseases and understand the peculiar hygiene requirements.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Anatomy of oral cavities - Congenital deformities, dental malformations, - Dental caries and its treatment, - Oral cancer, abscesses, cysts, - Periodontal diseases, - Endodontic, orthodontic, removable or fixed prosthesis, - Implantology, - Radiography in dentistry, - Anesthesia and analgesia, - Oral surgery and dental extractions. <p>On successful completion of this module, the student should:</p> <ul style="list-style-type: none"> o Have the conceptual and practical knowledge to carry out a clinical visit of the oral cavity, o Be able to observe the hard and soft tissues of the oral cavity including the lips and perioral areas and recognize the anatomy, health and pathological conditions, o Be able to recognize and use the instruments needed during a dental visit oriented to Dental Hygienist competences, o Be able to recognize and know how to properly use the instruments necessary for the detection of the main parameters related to dento-gingival health and disease and the intraoral diagnosis, o Know and be able to detect the main clinical indexes and be able to give the correct meaning to data from diagnostic and functional monitoring of the patient. o Be able to fill in the medical record and indicate the times and the procedures for monitoring the individual patient, o Have the capacity to interact with the dentist in order to optimize the diagnostic and therapeutic approach.
3	Prerequisites and learning activities	Knowledge of the main aspects of the anatomy, embryology and physiology of the oral cavity.
4	Teaching methods and language	Lectures, team work and clinical practice Language: Italian and Scientific English Ref. Text Books: -Farronato G.- <i>Odontostomatologia per l'Igienista dentale</i> , Piccin, Padova 2009 -Cortesi Ardizzone V., Abbinante A.- <i>Igienista Orale</i> , Era editore, Milano 2013
5	Assessment methods and criteria	Oral exam.

Programme of "ANESTESIOLOGIA, FARMACOLOGIA E ANATOMIA PATOLOGICA" "ANESTHESIOLOGY, PHARMACOLOGY AND PATHOLOGICAL ANATOMY"

This course is composed of three Modules: 1) Anesthesiology, 2) Pharmacology, 3) Pathological Anatomy

D4285, compulsory

1st Cycle Degree in "DENTAL HYGIENE", 2nd year, 1st semester

Number of ECTS credits: 9 (total workload is 225 hours; 1 credit = 25hours)

1) ANESTESIOLOGY (3 ECTS)

Teacher: Alba PIROLI

1	Course objectives	Goals of this course are to provide the definitions and principal techniques of general and local anesthesia and to ensure that students acquire and retain skill and knowledge that enable them to act correctly in cardiac and respiratory emergencies.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the course are:</p> <ul style="list-style-type: none"> -Local Anesthetics: mode of action, clinical use, toxicity -Local Anesthesia -General Anesthetics: mode of action, clinical use, side effects -General Anesthesia -Sedative drugs -Neuromuscular blocking agents -Opioids -Vital parameters monitoring -Basic Life Support (BLS) <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o have knowledge of cardiac, respiratory physiopathology; o have knowledge of pharmacology principles; o have knowledge of general and local anesthesia techniques; o understand finally the entity, severity, priority of the emergency; o demonstrate skill in noninvasive airway management and ability to perform chest compression, and to use AED; o be able to up-date the knowledge by reading and understanding scientific journals on the topic.
3	Prerequisites and learning activities	The students must know some principles of Anatomy, Cardiovascular and Respiratory Physiology and Pharmacology
4	Teaching methods and language	Lectures and practical practice in BLS Language: Italian Ref. Text books: -Teacher's notes
5	Assessment methods and criteria	Written exam. Optional further oral questions, on the most important issues, to improve evaluation

2) PATHOLOGICAL ANATOMY (3 ECTS)

Teacher: Pietro LEOCATA

1	Course objectives	The goal of this Course is to provide the students with scientific knowledge enabling them to distinguish the main oral diseases
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Tumors of oral cavity, middle third, mandible, salivary glands, facial skin. -Cervical nodes and disease -Odontogenic cysts and tumors -Mandible and Maxillary osteolytic lesions -Salivary tumors -early identification of neoplasia in the head and neck -puzzling lesions of the oral cavity: pre-neoplasia, early cancer. -general diagnostic criteria -infectious mononucleosis -tb & aids: changes in the oral cavity <p>On successful completion of this module, the student should:</p> <ul style="list-style-type: none"> o Have general knowledge of histopathology, immunohistochemistry and molecular pathology techniques. o Demonstrate knowledge of elementary concepts of histopathological diagnosis. o Be aware of dangerous infectious disease and early neoplasia (skin, lymph-nodes, oral cavity). o have basic knowledge of salivary diseases o have basic knowledge of early clinical signs of oral tumors o have basic knowledge of biopsy and know how to submit a specimen to the pathology laboratory.

		○ Demonstrate capacity to read the histopathological diagnosis
3	Prerequisites and learning activities	The student must know anatomy, histology and oral pathology.
4	Teaching methods and language	Lectures, team work and clinical practice Language: Italian Ref. Text books: -Robbins e Cotran " <i>Le Basi patologiche delle malattie</i> " , Ed. Elsevier, 2010. -Soames " <i>Patologia Orale</i> " Ed. Elsevier, 2004.
5	Assessment methods and criteria	Oral exam
3) PHARMACOLOGY (3 ECTS)		
Teacher: Donatella FANINI		
1	Course objectives	The Module is designed to prepare the student for the clinical study of therapeutics by providing a knowledge of the manner in which drugs modify biological function. The course includes a systematic study of the effects of drugs on different organ systems and disease processes, the mechanisms by which drugs produce their therapeutic and toxic effects, and the factors influencing their absorption, distribution and biological actions.
2	Course content and Learning outcomes (Dublin descriptors)	Topics of the module include: - Principles of Pharmacology, Dose-Response Relationships, Pharmacokinetics, Drug Interactions, Drug Metabolism, Receptors, ADR. Pharmacogenetics. - Fluoride in Human Body. - Structure and Function of the Nervous System, Autonomic Pharmacology: introduction, Cholinergic Pharmacology, Adrenergic Pharmacology, Dopamine and 5HT Pharmacology, Autacoids, Glutamate, GABA, Neuropeptides and Other Neurotransmitters, Pain Pathways and NSAIDS, Opiates, Glucocorticoids, Local Anesthetic Drugs, General Anesthetic Drugs . On successful completion of this module, the student should - have profound knowledge of 'drugs' use in the profession; - have knowledge and understanding of Drug Metabolism; - understand and explain drugs used in dentistry; - understand the principles of Pharmacokinetics; - be able to read and understand books/publications on topics related to their field.
3	Prerequisites and learning activities	The student must know Physiology and Anatomy
4	Teaching methods and language	Language: Italian Ref. Text books -R.D. Howland, M.J. Mycek: <i>Le basi della Farmacologia</i> , Ed. Zanichelli, 2007. -M.Furlanut: <i>Farmacologia Generale e Clinica per le Lauree Triennali</i> , Ed. Piccin,2003.
5	Assessment methods and criteria	Written exam

Programme of "ODONTOIATRIA PREVENTIVA E DISFUNZIONI CRANIO-MANDIBOLARI" "PREVENTIVE DENTISTRY AND CRANIUM-MANDIBULAR DYSFUNCTIONS"		
This course is composed by 3 Modules: 1) Pediatric Dentistry, 2) Orthodontics, 3) Periodontal instrumentation and devices		
D2078, Compulsory 1st Cycle Degree in DENTAL HYGIENE, 2nd Year, 1st Semester		
Number of ECTS credits: 9 (total workload is 225 hours; 1 credit = 25/30 hours)		
1) PEDIATRIC DENTISTRY (3 ECTS)		
Teacher: Roberto GATTO		
1	Course objectives	Aim of the course is to give the student valid diagnosis skills and possibilities to clinical therapy.
2	Course content and Learning outcomes (Dublin descriptors)	Topics of the module include: Preventive dentistry and cranium-mandibular dysfunctions. The hygienist should be able to promote the oral health of the children as well as serve as educational resources for parents. Early detection is essential to maintain oral health, modify wrong habits, and treat as needed

		and as simply as possible. Additionally, parents are given a program of preventative home care (brushing/flossing/fluorides), a caries risk assessment, information on finger, thumb, and pacifier habits, advice on preventing injuries to the mouth and teeth of children, diet counseling, and information on growth and development. On successful completion of this module, the student should <ul style="list-style-type: none"> ○ have profound knowledge of diagnosis and clinical practice, ○ have knowledge and understanding of preventive dentistry, ○ understand and explain oral pathology and preventive dentistry in pediatric dentistry, ○ demonstrate skill in pediatric dentistry and ability to professional prevention, ○ demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	The student must know oral pathology and cranium-mandibular dysfunctions.
4	Teaching methods and language	Lectures, team work and clinical practice. Language: Italian Ref. Text Books: -Cameron A.C., Widmer R.P., <i>"Manuale di pedodontia"</i> , Editore: Elsevier – Masson,2004.
5	Assessment methods and criteria	Oral Exam

2) ORTHODONTICS (3 ECTS)

Teacher: Professor Claudio CHIMENTI		
1	Course objectives	Aim of the course is to provide the students with an adequate basic knowledge of the main concepts of orthodontics and gnathology in order to allow them to better understand the pathological processes caused by fixed and removable orthodontic appliances, both in childhood and in adulthood and to apply the knowledge in their profession.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Elements of Cephalometric Analysis and Diagnosis - Hygiene of orthodontic patients before, during and after treatment - Fixed, removable and mixed orthodontic appliances - Orthodontic Bonding - Orthodontic Debonding - Orthodontic materials - Orthodontic instruments <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> ○ have knowledge of elements of Cephalometric Analysis, hygiene of orthodontic patients during treatment, types of orthodontic appliances, procedures, materials and instruments ○ have knowledge and understanding of oral hygiene procedures in patients with fixed and removable appliances ○ understand and explain to the patient the orthodontic oral hygiene procedures ○ understand the materials and orthodontic instruments ○ demonstrate ability to recognize the stages of orthodontic bonding and skills in orthodontic debonding procedures ○ demonstrate capacity for reading and understand other texts on related topics ○ be able to analyse and recognize a patient with orthodontic problems.
3	Prerequisites and learning activities	The student must know basic knowledge of anatomy, pathological anatomy, pathology, pharmacology, microbiology, general dentistry, radiology, histology, physiology and biochemistry. The module does not provide a practical training in the department.
4	Teaching methods and language	Lectures with ppt presentations. Language: Italian and English Ref. Text books: -Farronato Giampietro <i>"Dentistry for dental hygienist (anatomical and clinical basis and operating protocols)"</i> , Piccin-Nuova Libreria, 2007; -Paola Cozza - G. Laganà - G. Scommegna <i>"The assistant in orthodontics"</i> , Martina Ed., 1999.
5	Assessment methods and criteria	Written exam with quiz or short answer questions.

3) PERIODONTAL INSTRUMENTATION AND DEVICES

Teacher: Loretta LUCCI		
1	Course objectives	To give the student a valid knowledge of the morphological alterations and symptoms of periodontitis.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include: The correct use of the mechanical and manual instruments for removing soft and hard deposits above and below the gum. The student must know all the techniques used by the Hygienist.</p> <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> ○ have knowledge of anatomy and physiology of oral cavities ○ have knowledge of anatomy of periodontium ○ have knowledge and understanding of diagnosis and therapy of periodontitis ○ understand and explain etiological treatment. ○ demonstrate skill in periodontology and the use of drugs in this disease.
3	Prerequisites and learning activities	The student must know oral histology and anatomy.
4	Teaching methods and language	<p>Lectures Language: Italian Ref. Text Books: -Cortesi Ardizzone V., Abbinante A. <i>"Igienista Orale:Teoria e pratica professionale"</i>, LSWR EDITORE, Milano, 2013</p>
5	Assessment methods and criteria	Oral Exam

Programme of "IGIENE GENERALE E APPLICATA" "GENERAL AND APPLIED HYGIENE"		
D2198, Compulsory 1st Cicle in DENTAL HYGIENE, 2nd year, 2nd semester		
Number of ECTS credits: 3 (total workload is 75 hours; 1 credit = 25 hours)		
Teacher: Stefano NECOZIONE		
1	Course objectives	Aim of this course is to provide the students with knowledge and capacity to understand the basic methodology and tools for the prevention of infectious and non infectious diseases in hospital and non-hospital setting. Among the competences acquired, students will be able to develop self-analysis of certain health risk factors and prevention strategies both at individual and collective level, and to plan interventions for health and safety promotion of health care workers and users.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Concepts of Health and Illness and Aetiology of Illness -Principles and Practice of Health Promotion -Epidemiology: general aspects. epidemiology measures, types of Epidemiologic Study -Aims and methods of prevention: primary prevention, secondary prevention (screening), tertiary prevention and rehabilitation -General prophylaxis for infectious diseases; hospital hygiene; Hospital infections. -General prevention of non infectious diseases <p>By the end of the course the student</p> <ul style="list-style-type: none"> ○ has acquired knowledge of the determinant factors of health and disease; ○ knows the fundamental means to prevent the main infectious and non-infectious diseases; ○ is able to design a prevention strategy; ○ is able to apply and use the acquired knowledge; ○ understand scientific publication and is able to up-date his methods.
3	Prerequisites and learning activities	No prerequisites are needed
4	Teaching methods and language	<p>Lectures, team work, exercises, home work, reports. Language: Italian Ref. Text books: -Barbuti S, Bellelli E, Fara G.M., Giammanco G. <i>"Igiene"</i>, Monduzzi Ed., 2011.</p>

5	Assessment methods and criteria	Written and oral exam
---	---------------------------------	-----------------------

<p align="center">Programme of “PROTESI E IMPLANTOLOGIA” “PROSTHESES AND IMPLANTOLOGY”</p>		
<p>This course is composed of two Modules: 1) Protocols for oral health maintenance of patients with special needs, 2) Prostheses and Implantology</p>		
<p>D2520, compulsory 1st Cycle Degree in DENTAL HYGIENE, 2nd year, 2nd semester</p>		
<p>Number of ECTS credits: 6 (total workload is 150 hours, 1 credit = 25 hours)</p>		
<p align="center">1) PROTOCOLS FOR ORAL HEALTH MAINTENANCE OF PATIENTS WITH SPECIAL NEEDS (3 ECTS)</p>		
<p>Teacher: Mario GIANNONI</p>		
1	Course objectives	Aim of the course is to give to the students a valid knowledge of the most important diseases that Dental Hygienists can encounter during their profession and of specific Protocols that they must follow.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -the description of problems and obstructions to oral hygiene caused by the main disabling diseases; - identification and adoption of tailored methodologies and tools for the maintenance of oral health in patients with heart disease, diabetes, cancer, blood diseases, maxillofacial diseases, pedodontic diseases, diseases in patients wearers prosthetic or orthodontic appliances, periodontology, diseases in transplanted patient , diseases in pregnant, diseases in smoking and disabled patients. <p>On completion of this Module the student will:</p> <ul style="list-style-type: none"> o know and understand the need to use different and specific oral hygiene methodologies and tool on patients with special needs; o understand and explain the reasons why different Protocols must be followed; o be able assess the special needs of patients with disabling diseases and the possible harmful interactions of their activities with the drugs taken by the patients; o be able to identify and apply the correct methodology; o demonstrate capacity to adopt the Protocol that best suits with the specific disease; o be able to read and understand scientific publications on this field.
3	Prerequisites and learning activities	The student must know anatomy and physiology of the oral cavity. The student should also know the most important drugs used by these patients.
4	Teaching methods and language	Lectures, seminars. Language: Italian Ref. Text Books: -Cortesi Ardizzone V., Abbinante A. <i>“Igienista Orale: Teoria e pratica professionale”</i> , LSWR EDITORE, Milano, 2013
5	Assessment methods and criteria	Oral exam
<p align="center">2) PROSTHESES AND IMPLANTOLOGY</p>		
<p>Teacher: Annalisa MONACO</p>		
1	Course objectives	To give the student a valid knowledge of prostheses and implants and connected oral hygiene techniques.
2	Course content and Learning outcomes (Dublin descriptors)	<p>The programme consists of a programmed series of units including lectures, seminars, tutorials, group discussion and an extensive review of the literature in the field of Prosthetic and Implantology.</p> <p>Topics of the module include:</p> <ul style="list-style-type: none"> -Oral Anatomy -Recording of Mandibular/Cranial relationship -Treatment plan in teeth loss -Fixed, implant, adhesive prosthodontics and removable denture -Aesthetic prosthesis <p>On successful completion of this module, the student should</p>

		<ul style="list-style-type: none"> ○ have profound knowledge of oral anatomy; ○ have knowledge and understanding of therapy of partial and total teeth loss; ○ understand and explain the role of treatment plane in joint manipulations; ○ demonstrate skill in prosthetic and implantology and ability to help the dentist in the diagnosis and treatment plane for health of oral tissue. ○ demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	<p>The student must know oral anatomy and gnathology and professional oral hygiene technique.</p> <p>Inherent to the program is the clinical training where the student will acquire proficiency in management and preservation aspects of prosthetic and oral implants</p>
4	Teaching methods and language	<p>Lectures, presentation, exercises</p> <p>Language: Italian and scientific English</p> <p>Ref. Text Book:</p> <ul style="list-style-type: none"> -E.Gherlone "<i>Odontoiatria protesica</i>", Edi Ermes, 2010 - R. Cattaneo, A. Monaco "<i>Il sistema trigeminale</i>", San Benedetto del Tronto – FUTURA PUBLISHING, 2006
5	Assessment methods and criteria	Written and oral exam.

<p>PROGRAMME of "CHIRURGIA ORALE E MAXILLO-FACCIALE"</p> <p>" ORAL AND MAXILLO-FACIAL SURGERY "</p>		
<p>The course consists of two Modules: 1) Maxillo-Facial Surgery, 2) Oral Surgery</p>		
<p>D4513, COMPULSORY</p>		
<p>1st Cycle Degree in DENTAL HIGIENE, 3rd year, 1st semester</p>		
<p>Number of ECTS credits: 4 (total workload is 100 hours; 1 credit = 25 hours)</p>		
<p>1) MAXILLO-FACIAL SURGERY (1 ECTS)</p>		
<p>Teacher: Tommaso CUTILLI</p>		
1	Course objectives	<p>The goal of this Module is to provide the students with scientific knowledge enabling them to understand the main fields of oro-maxillofacial surgery, as well as the basic principles of diagnosis and treatment of benign and malignant tumors, of facial and cranio-facial trauma and dysmorphoses.</p>
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Surgical anatomy of maxillofacial region, - Tumors of oral cavity, middle third, mandible, salivary glands, facial skin, - Cervical nodes and disease, - Facial Trauma: fractures of mandible, maxillary, middle third, orbita, nasal-ethmoidal complex. Craniofacial fractures, - Facial dysmorphoses: mandibular and/or maxillary defects and excesses, open bite, asymmetry, - Congenital deformities: cleft lip and palate, First arch Syndrome, Franceschetti Syndrome, facial cleft, hemyfacial microsomia, - Mandibular and Maxillary osteolytic lesions, - Osteoradionecrosis and BRONJ, - Temporomandibular disorders. <p>On successful completion of this module, the student should:</p> <ul style="list-style-type: none"> ○ have basic knowledge of early clinical signs of oral tumors ○ have basic knowledge of maxillofacial dysmorphism ○ have basic knowledge of maxillofacial trauma ○ have basic knowledge of osteolytic maxillary lesions ○ have basic knowledge of Temporomandibular Joint Pathology ○ understand the pathologies related to Maxillo-Facial Surgery ○ be able to recognize maxillo-facial disorders and give support to patients.
3	Prerequisites and learning activities	<p>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</p>
4	Teaching methods and language	<p>Lectures, team work, exercises, home work, report.</p> <p>Language: Italian and scientific English</p>

		Ref. Text books : - Italian Society of Maxillofacial Surgery " <i>Maxillofacial Surgical Pathology</i> " 2007, Minerva Ed Turin - Italy - Brusati R, Sesenna E: <i>Chirurgia delle deformità mascellari</i> . 2008, Masson Ed, Milano
5	Assessment methods and criteria	Oral exam
2) ORAL SURGERY		
Teacher: Claudia MAGGIORE		
1	Course objectives	The aim of the course is to show to the hygienist the main surgical treatments of oral cavity including endodontics.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include</p> <ul style="list-style-type: none"> - Diagnosis, surgical treatment, and peri-operative management of adults and children with acquired and congenital diseases, - Outline of the physiology of the tooth and hydrodynamic theory of the sensitivity, - Common surgical treatments for wisdom teeth removal, mouth preparation for dentures, jaw problems repair and root canals therapy. - Endodontics: rx in endodontics (long cone x-ray, RVG, centering, intraoral rx, intraoral full, development techniques, x-ray storage, principles of radioprotection), operatory field isolation (aims, partial or total isolation, techniques of isolation, tools, other techniques of isolation), types of cements, uses of guttaperca, endodontic urgent treatments, stages of the endodontic treatments. <p>On successful completion of this module, the student should:</p> <ul style="list-style-type: none"> o Demonstrate a broad based knowledge of dental, medical and surgical literature, research and products as it relates to oral and maxillofacial surgery, o Recognise and differentiate disease and pain of the orofacial complex, head and neck and diseases impacting on the practice of surgery and anesthesia, o Discuss the contribution of oral hygiene to holistic patient care, o Recognise the characteristics of a healthy and unhealthy oral cavity, o Demonstrate an understanding of the key features of oral assessment, o Discuss factors which may compromise oral health o Identify appropriate interventions that can be used to promote oral health
3	Prerequisites and learning activities	Knowledge of dental anatomy and of the most important inflammatory processes.
4	Teaching methods and language	Oral lessons, seminars, internships Language: Italian Ref. Text Books: -F. Somma, " <i>ENDODONZIA</i> " Masson Edizioni, 2006. -Teacher's Notes
5	Assessment methods and criteria	Written and oral exam

Programme of "PARODONTOLOGIA" "PERIODONTOLOGY"		
The course is composed by: 1) Periodontology I, 2) Periodontology II		
D4297, Compulsory		
1st Cycle Degree in DENTAL HIGIENE, 3rd year, 1st semester		
Number of ECTS credits: 3 (workload is 40 hours; 1 credit = 10 hours)		
1) PERIODONTOLOGY I (2 ECTS)		
Teacher: Giuseppe Marzo		
1	Course objectives	Aim of this Module is to give to the student the foundations of periodontology and related surgical techniques connected the Dental Hygiene.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Prevention -Anatomy of periodontium -Classification of periodontitis -Clinical, histological and microbiological elements of periodontology -Implantology

		<p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> ○ have profound knowledge of anatomy of periodontium; ○ have knowledge and understanding of diagnosis and therapy of periodontitis; ○ understand and explain etiological treatment; ○ demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	The student must know oral histology and anatomy.
4	Teaching methods and language	<p>Lectures, presentation, exercitation Language: Italian and scientific English Ref. Text Books: J. LINDHE. , <i>Parodontologia e implantologia dentale</i>, Ed. Ermes., 2010. V. CAMPANELLA, M.R. GIUCA, G. MARZO, <i>Le Patologie Cistiche in età Pediatrica</i>, Ed. Delfino, 2002.</p>
5	Assessment methods and criteria	Oral Exam
1) PERIODONTOLOGY II (1 ECTS)		
Teacher: Giuseppe Marzo		
1	Course objectives	Aim of this Module is to introduce the student to the main topics of Periodontology, that is the study of diseases of the supporting tissues surrounding the teeth together with their clinical management.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Biological and pathological basis of periodontal disease -Plaque-induced chronic inflammatory periodontal disease -Proper assessment and diagnosis, -The non-surgical management of periodontal disease <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> ○ Be able to describe the anatomy, biology and pathology of the periodontium as well as the principles of bone biology, wound healing and tissue integration. ○ demonstrate knowledge of the principles of dental implant material science and implant biomechanics. ○ Be able to collect, organise, analyse, interpret and present clinical data related to examination of periodontal tissues. ○ demonstrate knowledge and understanding of non-surgical and surgical management of periodontal defects, regenerative techniques, mucogingival procedures in the expression of periodontal disease. ○ Demonstrate knowledge of pathogenesis of periodontal diseases. ○ Be able to describe to patients the nature of their periodontal health status and treatment needs.
3	Prerequisites and learning activities	The student must know oral histology and anatomy.
4	Teaching methods and language	<p>Lectures, presentation, exercitation Language: Italian and scientific English Ref. Text Books: J. LINDHE. , <i>Parodontologia e implantologia dentale</i>, Ed. Ermes., 2010. V. CAMPANELLA, M.R. GIUCA, G. MARZO, <i>Le Patologie Cistiche in età Pediatrica</i>, Ed. Delfino, 2002.</p>
5	Assessment methods and criteria	Oral Exam

**Programme of “PRINCIPI E ORGANIZZAZIONE SANITARIA E DISCIPLINE MEDICO-LEGALI”
“PRINCIPLES OF HEALTH ORGANIZATION AND FORENSIC MEDICINE IMPLICATIONS”**

The course consists of four Modules: 1) Systems and information processing, 2) Business Organisation, 3) Forensic Medicine, 4) Psychology of Organizations

D2552, compulsory

1st Cycle Degree in DETAL HYGIENE, 3rd year, 1st semester

Number of ECTS credits: 12 (total workload is 300 hours; 1 credit = 25 hours)

1) SYSTEMS AND INFORMATION PROCESSING (3 ECTS)

Teacher: Antonello INGLESE		
1	Course objectives	Aim of the course is to give to the student the foundations of information processing systems and their use in different application contexts.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Management and electronic coding of the information, -Archives Information Security and data protection information, -Work on the evolution of the Internet, Architectures of information systems on the web, -The exchange of information on the net Privacy of health data Health information systems, management and control. <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o Understand the use of database for the collection of medical records . o Be able to perform easy analyses of data . o Demonstrate skill in the use of the informatics programs. o Understand the use of an informatics software o Be able to create a database for the collection of data
3	Prerequisites and learning activities	The students must know the basic principles of informatics.
4	Teaching methods and language	<p>Lectures, Exercises</p> <p>Language: Italian, English</p> <p>Ref. Text Books:</p> <p>Material provided by the teacher (access by registration on website and password)</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/19-lezione-1-sistema-informativo</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/20-lezione-2-informazione-in-formato-digitale</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/25-lezione-3-hardware</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/26-lezione-4-reti-e-telecomunicazioni</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/30-opuscolo-sanita</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/33-lezione-6-basi-di-dati</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/77-lezione-7-base-di-dati</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/78-lezione-7-bis-base-di-dati-libre-office</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/91-html</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/32-lezione-5-html</p> <p>http://www.antonelloinglese.altervista.org/joomla/sistemi-informativi/60-lezione-7</p>
5	Assessment methods and criteria	Entrance test: multiple choice test; intermediate test: multiple choice; test exams; multiple choice test and / or oral exams

2) BUSINESS ORGANIZATION (3 ECTS)

Teacher: Leondino MAMMARELLA		
1	Course objectives	The course aims to give students a basic understanding of the organization of health services with focus on economic evaluation techniques. The student will be able to acquire skills for the use of innovation and strategic planning and to develop entrepreneurial creativity.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - Health Systems (NHS , other international models) - Health economics - basic concepts - The financing of health care - The demand for health - The provision of health services - Equity , Quality, Effectiveness and Efficiency <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> o be able to describe the main features of the functioning of the "market" health with particular reference to the Italian model; o have acquired capacities to use the basic principles of the cost / benefits ratio, of usefulness and effectiveness; o be able to analyze and develop strategies for the rationalization of health expenditure; o be able to assess and evaluate the health services organization,

		<ul style="list-style-type: none"> ○ have capacity to up-date their knowledge by reading and understanding related scientific publications.
3	Prerequisites and learning activities	Not previous specific knowledge is required
4	Teaching methods and language	<p>Lectures and team work Language: Italian Ref. Text books</p> <p>-Levaggi R., Capri S. (2008), <i>Economia sanitaria</i> (Health Economics) Franco Angeli, Milano, -Dirindin N. e Vineis P. (2003), <i>Elementi di Economia Sanitaria</i> (Elements of Health Economics), Il Mulino, Bologna -Claudio De Vincenti, Renato Finocchi Ghersi e Andrea Tardiola, <i>La sanità in Italia Organizzazione, governo, regolazione, mercato</i> (Healthcare Organization in Italy , government regulation , market), Il Mulino, Bologna -Arbarello P., Arcangeli M., e altri <i>Medicina legale per le professioni sanitarie</i> (Forensic Medicine for health professions, -Chiara Saraceno, <i>Il Welfare</i>, Il Mulino, 2013</p>
5	Assessment methods and criteria	Oral examination to assess the learning of the various aspects of the program and evaluate the critical capacity of students

3) FORENSIC MEDICINE (3 ECTS)

Teacher: Mauro ARCANGELI		
1	Course objectives	Aims of this Module is to provide the students with the main legal and ethical principles that they will face in their professional life.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of this Module are:</p> <ul style="list-style-type: none"> -The forensic medicine as a meeting point between medicine and law. Causation. Nods of thanatology and pathology. The death's ascertainment. Basics of bioethics and professional ethic. Informed consent. The professional secret and the privacy. The report. Failure to assistance. -The professional liability within the sanitary activities; The sanitary documentation, legal nature, connected crimes; Risk management. -Nods of criminal law: imputability and liability. The crimes: concept, classification of the crimes and the constitutive elements. The bodily harm. -Nods of civil law: civil capacity and evaluation of the damage. <p>On successful completion of this module, the student should</p> <ul style="list-style-type: none"> ○ have profound knowledge and understanding of the civil and criminal liability of their profession; ○ understand and explain the main principles of forensic medicine; ○ demonstrate skills in problem solving and ability to find the right and more appropriate solution in the everyday professional life; ○ demonstrate awareness of the limits of their profession in dental care implementation; ○ demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	No specific prerequisites are needed
4	Teaching methods and language	<p>Lectures in classroom Language: Italian Ref. Text books:</p> <p>-T. Feola – M. Arcangeli – E. Nardecchia <i>“Appunti di Medicina Legale”</i>, Minerva Medica 2014. -P. Arbarello – T. Feola – M. Arcangeli – M. Vaccaro <i>“Medicina legale per le professioni sanitarie. Diritto. Deontologia. Legislazione sociale”</i>, Minerva Medica 2010</p>
5	Assessment methods and criteria	Oral exam

4) PSYCHOLOGY OF ORGANIZATIONS

Teacher: Noemi D'Addezio		
1	Course objectives	Aims of this Module is to provide the students with the knowledge of the main principles that regulate the human communication and social interaction and how these are bound up with individuals' social identities and their definition to be members of a group.
2	Course content and Learning outcomes (Dublin	<p>Topics of the module include :</p> <ul style="list-style-type: none"> - Behavior of people at work: Leadership, Motivation and Commitment, Communication and

	descriptors)	<p>Information Management, Burn-out syndrome: individual and organizational factors and management strategy;</p> <p>-Group Decision Making: Intergroup Negotiation and Conflict Management, Group Productivity and Performance, Leadership, Team structure in Health Care organizations;</p> <p>-Social identity and group productivity: Acute and Chronic Stress, Collective Actions, The motivational processes.</p> <p>On completion of the Module the students</p> <ul style="list-style-type: none"> ○ have acquired knowledge of the basic principles of social interaction; ○ are able to discuss and explain the main rules for the management of teams; ○ demonstrate capacity to identify and manage conflicts; ○ have acquired skills to recognize the psychophysiological reactions to the stressors with particular reference to work-related ones; ○ have ability in developing appropriate behavior; ○ have capacity to read and understand scientific literature in this field.
3	Prerequisites and learning activities	The student must know the Psychology of a group working in collaboration.
4	Teaching methods and language	<p>Lectures, seminars.</p> <p>Language: Italian</p> <p>Ref. Text Books:</p> <p>-Argentero P., Cortese C.G., Piccardo C. <i>"Psicologia delle organizzazioni"</i>, R. Cortina Editore, 2014.</p>
5	Assessment methods and criteria	Oral exam

<p>Programme of "PRATICA PROFESSIONALE I"</p> <p>"PROFESSIONAL PRACTICE I"</p> <p>"Application of substances to reduce tooth decay and receptivity"</p>		
<p>D2564, COMPULSORY</p> <p>First cycle Degree in DENTAL HYGIENE, 3rd year, 2nd semester</p>		
<p>Number of ECTS credits: 3 (workload: 75 hours, 1 credit = 25 hours)</p>		
<p>Teacher: Mario GIANNONI</p>		
1	Course objectives	Aim of the course is to give to the students a valid knowledge of all tools and materials used by the Dental Hygienist for caries reduction.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> -Sealants, mouthwashes, toothpastes, dental paints and foams -Professional care -Interdental space management -Fluorine -Salivary tests - Ministerial guidelines for the prevention of caries in children <p>On completion of the module the students should</p> <ul style="list-style-type: none"> ○ know and describe the role of sealants and other materials in caries prevention; ○ explain appropriate dental and mouth hygiene methods; ○ be able to manage interdental space and early fissures and apply fluoride or other appropriate materials; ○ be able to analyze and identify as early as possible those patients (especially children) where there is doubt or evidence about capacity to comply with dental health preventive methodologies; ○ demonstrate ability to apply the full range of preventive measures to the highest standard possible; ○ have acquired skills for the assessment of the patient and capacities for developing prevention plans tailored on his/her specific characteristics; ○ have deep knowledge of the Guidelines for prevention of caries in children
3	Prerequisites and learning activities	The student must know anatomy and physiology of the oral cavities.
4	Teaching methods	Lectures, seminars.

	and language	Language: Italian Ref. Text Books: -Cortesi Ardizzzone V., Abbinante A. <i>"Igienista Orale. Teoria e pratica professionale"</i> , LSWR EDITORE, Milano, 2013
5	Assessment methods and criteria	Oral exam

<p align="center">Programme of "PRATICA PROFESSIONALE II" "PROFESSIONAL PRACTICE II" "Techniques of oral hygiene in hospitalized patients"</p>		
<p>D2574 , compulsory 1st Cycle Degree in DENTAL HYGIENE, 3rd year, 2nd semester</p>		
<p align="center">Number of ECTS credits: 3 (workload: 75 hours, 1 credit = 25 hours)</p>		
<p>Teacher: Bruno GRILLI</p>		
1	Course objectives	Aim of the course is to give to the students a valid knowledge of the main techniques that the Dental Hygienist should use for preventing or manage oral diseases in hospitalized and/or disabled patients.
2	Course content and Learning outcomes (Dublin descriptors)	<p>Topics of the module include:</p> <ul style="list-style-type: none"> - main chronic diseases and effects on oral and dental health; - effects of drugs and chemotherapy treatments on oral and dental health; - Techniques for preventing oral lesions and disease in chronic psychiatric or social disadvantaged people; - Protocols and Guidelines for Oral care interventions for unconscious / uncooperative patients and for conscious / cooperative patients with severe pathologies. <p>On completion of this module the student should:</p> <ul style="list-style-type: none"> o have knowledge of the techniques and methods for the oral hygiene of hospitalized patients and in patients hosted in protected communities; o be able to discuss the methodologies and identify those that best fit with the specific patient; o understand and explain the different methodologies to be applied in different contexts and needs; o be able to apply the guidelines; o demonstrate capacity to interpret and adapt the theoretical knowledge to practical cases; o demonstrate capacity for reading and understand other texts on related topics.
3	Prerequisites and learning activities	The student must know anatomy and physiology of the oral cavities.
4	Teaching methods and language	Oral Lessons, seminars. Language: Italian Ref. Text Books: -Wilkins E <i>"La pratica clinica dell'igienista dentale"</i> , Piccin, 2010.
5	Assessment methods and criteria	Oral exam