



UNIVERSITY OF L'AQUILA



Department of Health, Life and
Environmental Sciences

Profile of
Single Second Cycle Degree in
MEDICINE AND SURGERY

Laurea Magistrale a Ciclo Unico in
MEDICINA E CHIRURGIA

DEGREE PROFILE OF
Laurea Magistrale in MEDICINA E CHIRURGIA
Single Second Cycle Degree in MEDICINE AND SURGERY

TYPE OF DEGREE & LENGTH	Single Degree (360 ECTS-credits), 6 years
INSTITUTION(S)	Università degli Studi dell'Aquila - <i>University of L'Aquila</i> , ITALY
ACCREDITATION ORGANISATION(S)	Italian Ministry of Education and Research Albo dei Medici-Chirurghi e Odontoiatri/ <i>Register of Medical Doctors - Surgeons and Dentists</i> (http://www.fnomceo.it),
PERIOD OF REFERENCE	Programme validated for 3 years for cohorts starting in October 2012
CYCLE /LEVEL	QF for EHEA: Second Cycle; EQF level: 7; NQF for Italy: Laurea Magistrale

A	PURPOSE
	<p>The degree programme in <i>Medicine and Surgery</i> is a single 2nd cycle that provides the scientific basis and the necessary theoretical and practical training for the practice of the medical profession as well as the necessary methodology and culture for a continuous learning, for decision-making and operational autonomy and for ethical issues required by health system regulations. The specific learning outcomes of the programme are coherent with the specific provisions of <i>Ministerial Decree n.509/1999 (and following amendments/integrations)</i>, EC Directive 2005/36/EC, as well as the European Specifications in Medical Education drawn up by the Thematic Network on Medical Education in Europe (MEDINE), within the European Qualifications Framework. The study plan includes 360 ECTS over 6 years, and 60 ECTS per year. At the end of the six year programme, graduates will have acquired the knowledge and technical skills to become competent doctors in all fundamental fields of medical science and are able to continue specialist studies in all medical and surgical fields, exercising any of the roles foreseen by the health system regulations. The basic and translational biomedical knowledge provide the students with a wide perspective on human diseases for a clinical practice looking at the patients as a whole. This includes the ability to interpret the sign and symptoms of healthiness and disease following a pathophysiological approach based on specific knowledge of the various organs and functions, keeping in mind the social and cultural environment which interfere with human life. Students will develop ability to independently carry out activities relating to prevention, diagnosis, prognosis, therapy and rehabilitation of various diseases, to communicate clearly and with humanity with the patient and family members to apply specific ethical principles when approaching a patient and its relatives using compassion and comprehension.</p> <p>They Degree holders obtain the credentials for National Certification as "Medical Doctors" and, after a state exam, can be registered in the Italian "<i>Albo dei Medici-Chirurghi e Odontoiatri</i>".</p>

B	CHARACTERISTICS		
1	<table border="1"> <tr> <td style="width: 20%;">DISCIPLINE(S) / SUBJECT AREA(S)</td> <td>Strong theoretical basis on basic Sciences (Physics, Chemistry, general Biology), Physiology, Medicine, Medical Practice (10:10:40:40)</td> </tr> </table>	DISCIPLINE(S) / SUBJECT AREA(S)	Strong theoretical basis on basic Sciences (Physics, Chemistry, general Biology), Physiology, Medicine, Medical Practice (10:10:40:40)
DISCIPLINE(S) / SUBJECT AREA(S)	Strong theoretical basis on basic Sciences (Physics, Chemistry, general Biology), Physiology, Medicine, Medical Practice (10:10:40:40)		
2	<table border="1"> <tr> <td style="width: 20%;">GENERAL / SPECIALIST FOCUS</td> <td>General Medical Doctor</td> </tr> </table>	GENERAL / SPECIALIST FOCUS	General Medical Doctor
GENERAL / SPECIALIST FOCUS	General Medical Doctor		
3	<table border="1"> <tr> <td style="width: 20%;">ORIENTATION</td> <td>It is an academic research based degree with a professional orientation applied to the theory and practice of Medical Doctor professional profile, according to International and National Directives on Health Professions.</td> </tr> </table>	ORIENTATION	It is an academic research based degree with a professional orientation applied to the theory and practice of Medical Doctor professional profile, according to International and National Directives on Health Professions.
ORIENTATION	It is an academic research based degree with a professional orientation applied to the theory and practice of Medical Doctor professional profile, according to International and National Directives on Health Professions.		

4	DISTINCTIVE FEATURES	This degree has a strong component of interdisciplinary learning with other Health Care professionals and is developed in a stimulating research environment. Students have a 9-months compulsory placement in health departments in Italy and/or abroad for on-field working experiences and research activities.
---	----------------------	--

C EMPLOYABILITY & FURTHER EDUCATION		
1	EMPLOYABILITY	Upon successful completion of the Programme, graduates, having passed the state examination, are eligible to work as Medical Doctor, and be enrolled in the professional Register of Medical Doctors-Surgeons and Dentists (http://www.fnomceo.it), who have fulfilled the requirements of European Directive ("Professional Qualifications Directive" 2005/36/EC) on the Recognition of Professional Qualifications. Graduates carry out their professional activities in health care facilities, public or private, either as employees or freelance workers.
2	FURTHER STUDIES	The Master Degree in <i>Medicine and Surgery</i> normally gives direct access to a wide range of clinical and surgical Specialisations as well as PhD programmes. Furthermore they can carry out research and teaching activities at university.

D EDUCATION STYLE		
1	LEARNING & TEACHING APPROACHES	Lectures, tutorials/seminars/workshops; group-work and problem-oriented learning, individual study and autonomous learning, inter-professional learning, self-directed study, practical and laboratory classes; work placement, reflective practice and integration of learning, observation and treatment of patients.
2	ASSESSMENT METHODS	Assessment is normally made by means of an oral or written examination. The final exam consists in the discussion of a written text aimed at demonstrate that the candidate has acquired the essential professional skills and competences related to the professional profile. Degree holders obtain the credentials for accessing the state exam for the enrollment on the Register of Italian Doctors and Dentists http://www.fnomceo.it

E PROGRAMME COMPETENCES		
1	GENERIC	<p>The degree programme meets the competences and quality assurance procedures required by Italian Register of Medical Doctors-Surgeons and Dentists and by the National Higher Education Quality Assurance Agency (AVA) requirements for degree courses at second level. This includes the Generic Competences expected for the second cycle graduated, as follows:</p> <ul style="list-style-type: none"> — Analysis and synthesis: Knowledge and understanding of the profession and ability to be critical and self-critical and to make autonomous judgments; — Flexible mind: Ability to make autonomous reasoned decisions and to interact with others in a constructive manner, even when dealing with difficult issues; Ability to act on the basis of ethical reasoning; — Leadership, Management and Team-working: Ability to work in a team and to interact constructively with others regardless of background and culture and respecting diversity; — Communication skills: Ability to communicate both orally and through the written word in first language and in another European language; — Field culture: Ability to apply knowledge in practical situations and to act on the basis of ethical reasoning — Learning ability: Capacity to learn and stay up-to-date with learning in generic and specialized fields; — Problem solving: Ability to identify, pose and resolve problems in new or unfamiliar environments within broader and multidisciplinary contexts in providing, organizing and optimizing health diagnostic and therapeutic services; — Other skills: Ability to plan and manage time and to evaluate and maintain the quality of work produced.
2	SUBJECT SPECIFIC	<p>The Programme meets all the Specific Competences as established and agreed in collaboration with the field stakeholders, clustered within the key overarching competences summarized below:</p> <p>Deep knowledge and understanding of :</p> <ul style="list-style-type: none"> - the basics of anatomy, histology and physiology, human pathology, integrating the physiopathological and pathological studies with clinical methodology and diagnostic procedures which allow the evaluation of the main disease scenarios;

	<ul style="list-style-type: none"> - main correlational conditions and therapeutic, medical and surgical procedures which are complementary to the medical profession, as well as basic knowledge of patient care and assistance following the pedagogical principles of psychology, sociology and health ethics. - the normal morphological characteristics of individuals and the alterations caused by tissue and cell pathologies, physiological mechanisms and fundamental pathologies which, at molecular, tissue, organ and system level, determine the condition of wellbeing or development of acute and chronic diseases at any age or state of human development; organism defense systems and the pathological consequences; -the fundamental bases and mechanisms of diagnostics and pharmaceutical action. <p>Application:</p> <ul style="list-style-type: none"> - ability to practice the full range of general therapeutic activities in the context of global patient care without producing additional risks for the patient or the environment; -ability to establish the diagnostic and treatment procedures to manage the state of illness or promote the state of health, and to recognise all conditions of imminent danger to the patient's life; - ability to correctly interpret legislation concerning the profession in the country of the European Union they work in, in compliance with the medico-legal regulations and ethics in the country they exercise the profession in and to apply European regulations relative to the experimentation of medicines, in particular medicines for advanced treatments and tissue engineering products. <p>Synthesis:</p> <ul style="list-style-type: none"> -ability to autonomously manage the treatment of patients; to recognise the interaction of their practice with the general health of patient; to recognise their own limits in assisting patients and recognise the need to address patients to other medical spheres for treatment; -ability to formulate detailed autonomous judgements and opinions in order to solve specific problems linked to their professional activities; - ability to recognise and assess the main ethical problems involved in experimentation protocols; - Capacity to provide reasons for, analyse, interpret and document the chosen actions and solutions on the basis of reasoning, decision-making, documentation and evaluation processes; <p>Creativity:</p> <ul style="list-style-type: none"> - Ability to plan and adapt instruction, guidance and advice as regards problems with time and equipment management; - ability to organise and guide health care teams using the full range of auxiliary staff available and plan and enhance the actions aiming to increase human, technological, information and financial resources of the structures where they work; <p>Evaluation and learning skills:</p> <ul style="list-style-type: none"> -ability to evaluate the efficacy of the treatment plan, interventions carried out and results achieved; -ability to critically use the information produced by fundamental and clinical biomedical research, including the principles of evidence-based medicine; - ability to organise and plan laboratory activities and to study experimental techniques in detail; - ability to consult databases in order to obtain scientific documentation and analyse scientific literature applying the results of research to treatment in a reliable manner in a continuously evolving field; - development of a study method and ability to work by objectives, both in groups and autonomously; - Ability to perform continuous quality assessment and evaluation of outcomes and results of their work; <p>Problem managing:</p> <ul style="list-style-type: none"> - ability to identify and prevent the problems arising in the practice and develop suitable solutions; - ability to coordinate, administer and manage specific services and general healthcare services offered to patients with a focus on health promotion, prevention and resilience; <p>Communication:</p> <ul style="list-style-type: none"> - ability to communicate effectively with patients and relatives providing appropriate information, based on knowledge accepted by the scientific community, to obtain the informed consent to treatment; -ability to communicate both verbally and in writing scientific knowledge also in English; - ability to develop an interdisciplinary approach to clinical cases, also and above all in collaboration with other medical and health professionals, developing knowledge of the rules and dynamics of group work in the healthcare field.
--	---

F	COMPLETE LIST OF PROGRAMME LEARNING OUTCOMES
	<p>Upon a successful completion of the MA program of <i>Medicine and Surgery</i> students will gain advanced knowledge of:</p> <ul style="list-style-type: none"> -biomedical sciences which form the basis for understanding human growth, development and health; -anatomy, biology and physiology, to include detailed knowledge of the form and function of organs and associated structures, in health and disease; - modern developments in biomolecular sciences that may impact upon their professional practice; - human diseases and pathogenic processes, including genetic disorders, and the manifestation of those diseases which are particularly relevant to their specialization field of practice; - diseases and disorders of the body structures, their causes and sequelae together with the principles of their prevention,

diagnosis and management;

- sources of infection and the means available for infection control;
- medical emergencies and their prevention and management, including basic life support and resuscitation;
- patients' responses to applied treatment and an understanding of how these may be affected psychologically, social and cultural influences;
- the medico-legal and ethical principles upon which the practice is based;

Ability to:

- exercise initiative and personal responsibility;
- communicate effectively at all levels in both the scientific and professional contexts using verbal, non-verbal and written means;
- work effectively as members of a team;
- use information technology as a means of communication, for data collection and analysis, and for self-directed learning;
- analyse and resolve problems, and deal with uncertainty;
- manage time, set priorities and work to prescribed time limits;
- make decisions based on sound ethical, moral and scientific principles;
- manage their learning in the context of establishing a philosophy of continuing professional development;
- acquire, analyse, process and communicate information in a scientific manner to solve problems and to guide clinical decision-making;
- evaluate the evidence published in refereed scientific journals and other publications for sound experimental design and statistical analysis;

Capacity to:

- understand the role and function of the Register of Medical Doctors and Dentists in regulating the medical profession, and be familiar with its issued guidelines;
- understand the role, function and obligations of the National Health Service;
- apply jurisprudence to the practice of medical doctor and manage the arising ethical issues;
- understand the ethical and legal basis of confidentiality, including the need to maintain accurate and complete patient records in a confidential manner;
- issue therapeutic prescriptions and ensure that they are well understood and as far as possible to check that they are properly executed.
- provide empathetic care for all patients, including members of diverse and vulnerable populations, and respect the principle of patient autonomy;
- base their care of patients on a sound knowledge and experience of the psychological aspects of human behaviour particularly in the management and treatment of the child patient;
- agree treatment plans with patients of all ages and, where necessary, through the intermediate consent of a parent, guardian or care-giver;
- continue to take care of the patients also those considered incurable only to soothe physical and mental suffering, to help and comfort them;
- recognise the responsibility and demonstrate the ability to share information and professional knowledge verbally and in writing;
- identify and use sources of continuing professional development and apply critical thought to a continually expanding knowledge base such that professional competence is maintained;
- assess personal progress, including the identification of strengths and weaknesses and use the principles of peer review and quality assurance in medical practice;
- evaluate social and economic trends and their impact on public health care;
- recognise their role in and responsibility for improving the general health of the community through treatment strategy, education and service.

**Comprehensive Scheme of the Single Second Cycle Degree
in MEDICINE AND SURGERY**

YEAR	CODE	COURSE	Credits (ECTS)	Semester
I	D0254	Medical Physic	6	1
	D0258	Basic Biochemistry	6	1
	D0266	Human Anatomy	11	1 and 2
	D0259	Biology, genetics and of bases of human behavior	13	1
	D1386	Biochemistry	8	1
	D0286	Histology and Embriology	7	2
	D3366	Epistemology and History of Medicine	3	2
II	D4027	Human Anatomy II	6	1
	D4075	Human Physiology I	8	1
	D4804	Human Physiology II	9	2
	D3372	General Pathology, Immunology, Immunopathology and general microbiology	13	2
	D4801	Medical Informatics, Biomedical Statistics, and scientific English	12	2
III	D0396	Laboratory Medicine and Integrated Diagnostics	12	1
	D4800	General Psysiopathology and Molecular Pathology	7	1
	D0392	Semeiotics and Clinical Methodology	13	1
	D4327	Pathological Anatomy	5	2
	D4069	Internal Medicine, Endocrinology, Clinical Immunology and Infectious Diseases	13	2
IV	D4330	Pathological Anatomy II	6	1
	D1646	General and Special Pharmacology	8	1 and 2
	D4068	Systematic Pathology	10	1
	D1650	Medical and Surgical Oncology	16	2
V	D2086	Diagnostic Imaging and Radiotherapy	9	1
	D2180	Specialized Medical and Surgical Disciplines	15	1
	D1606	General and applied hygiene and techniques of hygiene and prevention	10	1
	D1674	Sport Medicine	8	1
	D1696	Nervous System Diseases	12	2
	D1692	Pediatrics	8	2
	D1834	Psychiatry and Child Neuropsychiatry	10	2
VI	D2180	Specialized Medical and Surgical Disciplines	15	1
	D1844	General surgery, endoscopy and transplantation	16	1
	D4040	Gynaecology and obstetrics, reproductive and sexuality medicine	11	1
	D4067	Dermatology and Rheumatology	6	2
	D1884	Medical and surgical emergencies	12	2
	D2152	Internal Medicine and Geriatrics	11	2
		<i>Optional Activities/Courses</i>	8	1 or 2
		<i>Thesis</i>	15	2