# COURSE OUTLINE

## (1) GENERAL

**MD-601 Clinical Practice: Emergency Medicine and Intensive Care**

| | | | |
|---|---|---|---|
| **SCHOOL** | Medical | | |
| **ACADEMIC UNIT** | Basic and Clinical Sciences | | |
| **LEVEL OF STUDIES** | 1st Cycle | | |
| **COURSE CODE** | MD-601 | **SEMESTER** | Year 6 / Semester 11/12 (rotation) |
| **COURSE TITLE** | Clinical Practice: Emergency Medicine and Intensive Care | | |
| **INDEPENDENT TEACHING ACTIVITIES** *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits* | | **WEEKLY TEACHING HOURS** | **CREDITS** |
| | | 40 | 48* |
| * Clinical Practice is delivered through the year with rotations in Internal Medicine; General Surgery; General Practice & Geriatric Medicine; and Emergency Medicine & Intensive Care. Its grade and ECTS are awarded at the end of the year. | | | |
| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).* | | | |
| **COURSE TYPE** *general background, special background, specialised general knowledge, skills development* | Core | | |
| **PREREQUISITE COURSES:** | None | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | English | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | | | |
| **COURSE WEBSITE (URL)** | | | |

## (2) LEARNING OUTCOMES

**Learning outcomes**

*The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.*

*Consult Appendix A*

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

By the end of the course the students should be able to:

- Assess the urgency of care required for an emergency patient (triage).
- Take a focused history from a patient, or relative of a patient, who presents as an emergency, in a sensitive and caring manner.
- Carry out an appropriate physical examination of patients so presenting.

- Discuss a differential diagnosis for the emergency.
- Apply their knowledge of basic and clinical science to identify and explain appropriate investigations, including blood, sputum and urine tests and imaging, to assist in the diagnosis of the presenting complaint and to interpret the results from such tests.
- Prepare and explain a treatment management plan for the patient to present to the responsible clinician to include medical, pharmacological, surgical options as appropriate.
- Demonstrate effective history taking with relation to prescribed drugs, over the counter medication, complementary and alternative therapies, illicit drug use and allergies.
- Prescribe drugs safely
    - Demonstrate how to write a prescription for a patient, including effective prescription of controlled drugs.
    - Demonstrate the correct use of an in-patient prescription chart.
    - Inject drugs, at the correct dose, intramuscularly, subcutaneously and intravenously.
    - Correctly prescribe oxygen, “As Required” medication, fluids and
    - blood products, under supervision.
    - Administer nebulized drugs.
- Calculate the strength of an infusion based on the required rate of drug administration.
- Mix and inject drugs into an intravenous infusion bag and prepare and give drugs by infusion pump.
- Describe the emergency assessment and resuscitation of a patient following a drug overdose.
- Describe the symptoms and signs following overdose with aspirin, paracetamol, opiates, tricyclic antidepressants, benzodiazepine.
- Describe the specific management including antidotes of each drug listed.
- Observe, and where appropriate carry out or assist with, the following procedures: measurement of arterial blood gases, interpretation of liver
- function tests and coagulation studies, measurement of ECG, cardiac stress test, angiogram, echocardiogram, IV cannulation insertion, maintenance of a Guedel airway ventilation with bag and mask, endotracheal intubation, CT, MRI and PET scans, X-rays, ultrasound, Doppler scans, emergency surgical procedures e.g. appendectomy, planned and opportunistic.
- Identify the patient who requires immediate medical attention and intervention.
- Describe the initial emergency management of shock, seizures, severe respiratory distress, head trauma, and cervical spine trauma in children and describe findings suggestive of non-accidental trauma.
- Describe the treatment for wounds and burns, the stabilization of orthopaedic trauma, the recognition and initial management of shock and coma, head and cervical spine trauma in adults.
- Outline the specific initial management issues for abrasions, bites, burns, contusions, fractures, lacerations, near drowning, and sprains, including tetanus prevention.
- Outline the diagnosis and management of acute organ failure, with particular emphasis on the cardiorespiratory system.
- Describe sedation and analgesia in the critical care unit and outline parenteral and enteral nutrition in the critically ill patient.

**General Competences**

*Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?*

*Search for, analysis and synthesis of data and information, with the use of the necessary technology*
*Adapting to new situations*
*Decision-making*
*Working independently*
*Team work*
*Working in an international environment*
*Working in an interdisciplinary environment*
*Production of new research ideas*
*Project planning and management*
*Respect for difference and multiculturalism*
*Respect for the natural environment*
*Showing social, professional and ethical responsibility and sensitivity to gender issues*
*Criticism and self-criticism*
*Production of free, creative and inductive thinking*
*……*
*Others…*
*…….*

**Knowledge and Understanding**

- Explain the scientific principles underlying common and important disease processes including inflammation, infection, neoplasia and trauma
- Describe basic pharmacological principles together with the pharmacology of commonly used medications, including their modes of action, pharmacokinetics, medication interaction and side effects

**Skills**

- Communicate compassionately and effectively with patients and when relevant, with significant others including taking a relevant focused history
- Communicate effectively with colleagues in all professional settings, including group situations
- Communicate effectively by written and by electronic means as well as orally
- Keep accurate clinical records and demonstrate skills in the recording, organisation and management of information including the use of appropriate information technology
- Assess, investigate and manage patients in a safe, competent and caring manner applying sound clinical reasoning at all stages of the process
- Prescribe drugs safely under supervision including dosage calculation, prescription writing and administration
- Recognise and manage life-threatening conditions and provide the immediate core of medical emergencies including First Aid and resuscitation

**Competences**

- Discuss the nature of medical professionalism and its importance in patient care recognising that the care and safety of patients is central to their everyday practice
- Work with members of the multidisciplinary team and understand their own personal roles and responsibilities within the team as well as those of other healthcare professionals
- Discuss the basic principles that underpin good ethical practice including the need to respect patients regardless of their lifestyle, culture, beliefs, religion, race, colour, gender, sexuality, disability, age, and social or economic status
- Be aware of and be able to discuss the major ethical issues in healthcare as may be encountered in everyday clinical practice including concern for confidentiality and respect for individual autonomy
- Explain the importance of maintaining patient confidentiality and of respecting the autonomy, dignity and privacy of patients
- Explain one's professional and legal responsibilities when accessing information in relation to patient care, research and education

- Demonstrate an understanding of the importance of always acting with honesty and integrity, including the duty of open disclosure when things go wrong
- Demonstrate an understanding of when patient consent is required and how it is best obtained. This includes an understanding of when and how consent needs to be obtained from a third party
- Recognise the potential impact on patient care of one's personal beliefs and biases and describe the strategies that mitigate this
- Describe the principles of safeguarding of children and vulnerable adults
- Display a life long commitment to scholarship and service towards the individual patient and the community
- Practice medicine holistically taking into account ethical, legal, psychological and social considerations
- Contribute toward the establishment of Cyprus and Greece as regional centres of excellence in medical education

## (3) SYLLABUS

- The diagnosis and management of common emergencies including cardiac arrest, shock, respiratory emergencies, seizures, renal failure, acute pain management
- Recognising the sick patient on the ward or in A&E
- The indications for the use of emergency drugs and routes of administration
- Oxygen therapy
- Choking and hyperventilation
- The indications for intubation
- Prescribing skills
- Local and general anaesthetics
- Adverse drug reactions and anaphylaxis
- Overdose with aspirin, paracetamol, opiates, carbon monoxide, tricyclic antidepressants, benzodiazepine
- The emergency assessment and resuscitation of a patient following overdose
- The specific management including antidotes of drugs commonly taken as overdose
- Desensitisation therapy in the management of allergy to insect stings (bee, wasp) and pollen (grass, trees

## (4) TEACHING and LEARNING METHODS - EVALUATION

| | |
|---|---|
| **DELIVERY**<br>*Face-to-face, Distance learning, etc.* | Face-to-face |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY**<br>*Use of ICT in teaching, laboratory education, communication with students* | *Use of ICT in teaching / Χρήση ΤΠΕ*<br>*Communication with students / Επικοινωνία με Φοιτητές* |
| **TEACHING METHODS**<br>*The manner and methods of teaching are described in detail.*<br>*Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.* | |

| *Activity* | *Semester workload* |
|---|---|
| Lectures/large group | 21 |
| Small group teaching | 7 |
| Clinical Practice | 252 |
| Self-directed learning | 60 |
| | |

| | | |
|---|---|---|
| *The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS* | | |
| | | |
| | | |
| | | |
| | Per 7-week rotation | ***340*** |
| **STUDENT PERFORMANCE EVALUATION**<br>*Description of the evaluation procedure*<br><br>*Language of evaluation, methods of evaluation, summative or conclusive, multiple-choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other*<br><br>*Specifically-defined evaluation criteria are given, and if and where they are accessible to students.* | Final year exam and final year OSCE. The written assessment will be Single Best Answer MCQs and Short Answer Questions. Workplace-based assessments will take place during the attachment. | |

## (5) ATTACHED BIBLIOGRAPHY

**Required textbooks/reading**

| Authors | Title | Edition | Publisher | Year | ISBN |
|---|---|---|---|---|---|
| Mahadevan, Swaminatha V | An introduction to clinical emergency medicine | | Cambridge University Press | 2012 | 9780521747769 |
| Joint Formulary Committee | https://bestpractice.bmj.com/drugs | Last one | BMJ Group and Pharmaceutical Press | Current year | |
| National Institute for Health and Clinical Excellence | https://www.nice.org.uk/guidance | Last one | | Current year | |

**Recommended textbooks/reading**

| Authors | Title | Edition | Publisher | Year | ISBN |
|---|---|---|---|---|---|
| Knoop, Kevin J | Atlas of emergency medicine | | McGraw Hill | 2013 | 9780071496186 |

# COURSE OUTLINE

## (1) GENERAL

### MD-601 Clinical Practice: General Practice and Geriatric Medicine

| | | | |
|---|---|---|---|
| **SCHOOL** | Medical | | |
| **ACADEMIC UNIT** | Basic and Clinical Sciences | | |
| **LEVEL OF STUDIES** | 1st Cycle | | |
| **COURSE CODE** | MD-601 | **SEMESTER** | Year 6 / Semester 11/12 (rotation) |
| **COURSE TITLE** | Clinical Practice: General Practice and Geriatric Medicine | | |
| **INDEPENDENT TEACHING ACTIVITIES** *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits* | | **WEEKLY TEACHING HOURS** | **CREDITS** |
| | | 40 | 48* |
| *Clinical Practice is delivered through the year with rotations in Internal Medicine; General Surgery; General Practice & Geriatric Medicine; and Emergency Medicine & Intensive Care. Its grade and ECTS are awarded at the end of the year. | | | |
| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).* | | | |
| **COURSE TYPE** *general background, special background, specialised general knowledge, skills development* | Core | | |
| **PREREQUISITE COURSES:** | None | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | English | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | | | |
| **COURSE WEBSITE (URL)** | | | |

## (2) LEARNING OUTCOMES

**Learning outcomes**

*The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.*

*Consult Appendix A*

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

By the end of the course the students should be able to:

- Outline the nature of the physician-patient relationship and its impact upon the management of the patient's illness.
- Demonstrate effective shared decision-making skills.
- Formulate differential diagnoses and treatment plans based on the limited information gathered in a typical GP office visit and evaluate a given treatment plan on the basis of outcome for the patient, likelihood of being implemented

successfully, and the cost effectiveness of the treatment.

- Manage the most common problems seen in ambulatory practice.
- Maintain good patient records.
- Perform procedures commonly carried out by GPs, including: urinalysis, venepuncture, throat culture, intramuscular and subcutaneous injections, ECGs, skin testing, spirometry, tympanometry, suturing, incision and drainage, casting and splinting, stool for occult blood.
- Demonstrate effective history taking in relation to prescribed drugs, over the counter medication, complementary and alternative therapies, illicit drug use and allergies.
- Demonstrate how to write a prescription for a patient, including effective prescription of controlled drugs.
- Give subcutaneous, intramuscular and intravenous injections and prepare and give nebulised drugs.
- In general, for each condition studied, list the main drugs (if any) that relieve symptoms, produce a cure or improve prognosis or reduce risk of recurrence.
- Develop a caring and empathic attitude towards all patients, regardless of their background, age, skin colour, gender, sexual preference, culture, religion or social status.
- Describe the concept of prevention and generalise the concept of prevention/ lifetime health monitoring and developing long-term treatment plans and goals.
- Take a history from an older person, including information of functional ability and social support.
- Demonstrate the ability to perform a full physical examination of elderly people including systems often affected by illness in old age (locomotor, nervous and cardio-respiratory systems).
- Explain the need to respect older patients' rights regardless of their age, background, culture, lifestyle, beliefs, race, gender, sexuality, disability, social or economic status.
- Communicate clearly and effectively with older patients, their relatives and colleagues from a variety of health and social care professions.
- Discuss the balance between prolongation and quality of life.
- Describe the assessment, investigation and management of an elderly patient with falls, delirium, dementia, reduced mobility or incontinence.
- Describe the process and principles of rehabilitation in hospital and community settings, the importance of functional assessment and what may realistically be achieved, the importance of goal setting, and the influence of socio-economic factors.
- Describe indications for referral of an elderly person to a residential or nursing home and explain how such a placement is organised.
- Outline the many roles played by a wide range of health professionals in caring for elderly patients.
- Discuss the ethical and legal issues relating to older people including: consent to treatment, capacity to make decisions, safe-guarding finances, withdrawing and withholding treatment, elder abuse and cardio-pulmonary resuscitation decisions.

**General Competences**

*Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?*

| | |
|---|---|
| *Search for, analysis and synthesis of data and information, with the use of the necessary technology* | *Project planning and management* |
| | *Respect for difference and multiculturalism* |

| | |
|---|---|
| *Adapting to new situations*<br>*Decision-making*<br>*Working independently*<br>*Teamwork*<br>*Working in an international environment*<br>*Working in an interdisciplinary environment*<br>*Production of new research ideas* | *Respect for the natural environment*<br>*Showing social, professional, and ethical responsibility and sensitivity to gender issues*<br>*Criticism and self-criticism*<br>*Production of free, creative, and inductive thinking*<br>*……*<br>*Others…*<br>*……* |

**Knowledge and Understanding**

- Explain normal human structure and function at the molecular, cellular, tissue, organ, and whole-body level from conception to old age
- Explain the scientific principles underlying common and important disease processes including inflammation, infection, neoplasia, and trauma
- Describe basic pharmacological principles together with the pharmacology of commonly used medications, including their modes of action, pharmacokinetics, medication interaction and side effects
- Explain how psychological and sociological factors might impact on the risk of disease and the outcome of treatment
- Describe how individuals adapt to major life changes, including the onset of illness
- Explain the concept of 'wellness is and describe the importance of promoting lifestyle factors in achieving the best possible health
- Describe the role of epidemiology in evaluating the health of a population
- Discuss the role of environmental, ecological, social, behavioural, occupational, and cultural factors in determining health at individual, community, and societal levels
- Describe the principles of primary, secondary, and tertiary disease prevention, together with the role of immunisation and screening
- Describe the basic principles of communicable disease control in both hospital and community settings
- Discuss the role of nutrition in health and illness

**Skills**

- Communicate compassionately and effectively with patients and when relevant, with significant others including taking a relevant focused history
- Communicate effectively with colleagues in all professional settings, including group situations
- Communicate effectively by written and by electronic means as well as orally
- Keep accurate clinical records and demonstrate skills in the recording, organization management of information including the use of appropriate information technology
- Assess, investigate, and manage patients in a safe, competent, and caring manner applying sound clinical reasoning at all stages of the process
- Prescribe drugs safely under supervision including dosage calculation, prescription writing and administration
- Recognise and manage life-threatening conditions and provide the immediate core of medical emergencies including First Aid and resuscitation

**Competences**

- Discuss the nature of medical professionalism and its importance in patient care recognising that the care and safety of patients is central to their everyday practice

- Work with members of the multidisciplinary team and understand their own personal roles and responsibilities within the team as well as those of other healthcare professionals
- Discuss the basic principles that underpin good ethical practice including the need to respect patients regardless of their lifestyle, culture, beliefs, religion, race, colour, gender, sexuality, disability, age, and social or economic status
- Be aware of and be able to discuss the major ethical issues in healthcare as may be encountered in everyday clinical practice including concern for confidentiality and respect for individual autonomy
- Explain the importance of maintaining patient confidentiality and of respecting the autonomy, dignity, and privacy of patients
- Explain one's professional and legal responsibilities when accessing information in relation to patient care, research, and education
- Demonstrate an understanding of the importance of always acting with honesty and integrity, including the duty of open disclosure when things go wrong
- Demonstrate an understanding of when patient consent is required and how it is best obtained. This includes an understanding of when and how consent needs to be obtained from a third party
- Recognise the potential impact on patient care of one's personal beliefs and biases and describe the strategies that mitigate this
- Describe the principles of safeguarding of children and vulnerable adults
- Display a lifelong commitment to scholarship and service towards the individual patient and the community
- Practice medicine holistically taking into account ethical, legal, psychological, and social considerations
- Promote health and wellness through disease prevention and research
- Contribute toward the establishment of Cyprus and Greece as regional centres of excellence in medical education

(3) **SYLLABUS**

- The diagnosis and management of common General Practice presentations affecting all the systems of the body including minor illnesses, obstetric and gynaecological conditions, childhood illnesses, infectious diseases and immunisations, mental health issues
- Problem formulation and differential diagnosis recognising the biopsychosocial dimensions of illness
- Development of management plans
- Discriminatory use of investigations including phlebotomy, measuring blood pressure measuring blood glucose, urinalysis
- Prescribing skills
- Adoption of preventative approach to healthcare including patient education
- Dealing with elderly patients presenting with falls, incontinence, delirium, dementia, confusion and reduced mobility
- Rehabilitation and residential care
- Breaking bad news
- Dealing with ethical issues
- Writing referral letters and hospital discharge letters
- Sickness certification

(4) **TEACHING and LEARNING METHODS - EVALUATION**

| | |
|---|---|
| **DELIVERY**<br>*Face-to-face, Distance learning, etc.* | Face-to-face |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY**<br>*Use of ICT in teaching, laboratory education, communication with students* | *Use of ICT in teaching / Χρήση ΤΠΕ*<br>*Communication with students / Επικοινωνία με Φοιτητές* |
| **TEACHING METHODS**<br>*The manner and methods of teaching are described in detail.*<br>*Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.*<br><br>*The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS* | |
| **STUDENT PERFORMANCE EVALUATION**<br>*Description of the evaluation procedure*<br><br>*Language of evaluation, methods of evaluation, summative or conclusive, multiple-choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other*<br><br>*Specifically-defined evaluation criteria are given, and if and where they are accessible to students.* | Final year exam and final year OSCE. The written assessment will be Single Best Answer MCQs and Short Answer Questions. Workplace-based assessments will take place during the attachment. |

| ***Activity*** | ***Semester workload*** |
|---|---|
| Lectures/large group | 21 |
| Small group teaching | 7 |
| Clinical Practice | 252 |
| Self-directed learning | 60 |
| | |
| | |
| | |
| | |
| | |
| Per 7-week rotation | ***340*** |

## (5) ATTACHED BIBLIOGRAPHY

**Required textbooks/reading**

| Authors | Title | Edition | Publisher | Year | ISBN |
|---|---|---|---|---|---|
| Stephenson, Anne. (ed.) | A textbook of general practice | | Hodder Arnold | 2011 | 9781444120646 |
| Woodford, Henry. | Essential geriatrics | | Radcliffe | 2010 | 9781846194269 |
| Timiras, Paola S. | Physiological basis of aging and Geriatrics | | Informa Healthcare | 2007 | 9780849373053 |
| Joint Formulary Committee | https://bestpractice.bmj.com/drugs | Last one | BMJ Group and Pharmaceutical Press. | Current year | |
| National Institute for Health and Clinical | https://www.nice.org.uk/guidance | Last one | | Current year | |

| | | | | | |
|---|---|---|---|---|---|
| Excellence | | | | | |

**Recommended textbooks/reading**

| Authors | Title | Edition | Publisher | Year | ISBN |
|---|---|---|---|---|---|
| Fillit, Howard | Brocklehurst's textbook of geriatric medicine and gerontology | 7th | Saunders/ Elsevier | 2010 | 9781416062318 |

# COURSE OUTLINE

## (1) GENERAL

### MD-601 Clinical Practice: General Surgery

| | | | |
|---|---|---|---|
| **SCHOOL** | Medical | | |
| **ACADEMIC UNIT** | Basic and Clinical Sciences | | |
| **LEVEL OF STUDIES** | 1st Cycle | | |
| **COURSE CODE** | MD-601 | **SEMESTER** | Year 6 / Semester 11/12 (rotation) |
| **COURSE TITLE** | Clinical Practice: General Surgery | | |
| **INDEPENDENT TEACHING ACTIVITIES** *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits* | | **WEEKLY TEACHING HOURS** | **CREDITS** |
| | | 40 | 48* |
| *Clinical Practice is delivered through the year with rotations in Internal Medicine; General Surgery; General Practice & Geriatric Medicine; and Emergency Medicine & Intensive Care. Its grade and ECTS are awarded at the end of the year. | | | |
| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).* | | | |
| **COURSE TYPE** *general background, special background, specialised general knowledge, skills development* | Core | | |
| **PREREQUISITE COURSES:** | None | | |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | English | | |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | | | |
| **COURSE WEBSITE (URL)** | | | |

## (2) LEARNING OUTCOMES

**Learning outcomes**

*The course learning outcomes, specific knowledge, skills, and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.*

*Consult Appendix A*

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

By the end of the course, students will be able to:

- Take a competent history from a patient, or relative of a patient, presenting with a condition requiring surgical intervention, in a sensitive and caring manner.
- Carry out a physical examination of patients.
- Discuss a differential diagnosis for the presenting complaint.
- Apply their knowledge of basic and clinical science to identify and explain

appropriate investigations, including blood, urine and faecal tests and imaging, cytology and biopsy to assist in the diagnosis of the presenting complaint and to interpret the results from such tests.

- Prepare and explain a surgical treatment management plan for the patient to present to the responsible surgeon.
- Apply clinical reasoning and problem-solving skills at the bedside, in outpatients and in theatre, using hypothesis generation, data gathering, integration of basic science, clinical medicine and evaluation of opinions.
- Demonstrate knowledge of common surgical problems and surgical emergencies.
- Perform procedures common to general surgery – aseptic technique, scrubbing, gowning & gloving, suturing, use of local anaesthetic for suturing, removal of sutures and staples, freezing and cautery, endoscopic procedures (observed only), wound management, wound dressing and bandaging, management of leg ulcers and burns, control of haemorrhage, airway maintenance, bag and mask, resuscitation, venepuncture, insertion of intravenous cannulae, arterial puncture, urinary catheter, setting up an intravenous fluid infusion, administration of an intravenous injection, intramuscular injection, subcutaneous injection, administration of oxygen, diagnosis of death, male and female urinary catheterization.
- Prescribe drugs safely
    - Demonstrate how to write a prescription for a patient, including effective prescription of controlled drugs.
    - Demonstrate the correct use of an in-patient prescription chart.
    - Inject drugs, at the correct dose, intramuscularly, subcutaneously and intravenously.
    - Correctly prescribe oxygen, "As Required" medication, fluids and blood products, under supervision.
- Mix and inject drugs into an intravenous infusion bag and prepare and give drugs by infusion pump.
- Demonstrate high professional standards and attitudes regarding relationships in the workplace, team work, confidentiality, initiative, self- directed learning and ethical issues.

**General Competences**

*Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?*

| | |
|---|---|
| *Search for, analysis and synthesis of data and information, with the use of the necessary technology* | *Project planning and management* |
| *Adapting to new situations* | *Respect for difference and multiculturalism* |
| *Decision-making* | *Respect for the natural environment* |
| *Working independently* | *Showing social, professional, and ethical responsibility and sensitivity to gender issues* |
| *Teamwork* | *Criticism and self-criticism* |
| *Working in an international environment* | *Production of free, creative, and inductive thinking* |
| *Working in an interdisciplinary environment* | *……* |
| *Production of new research ideas* | *Others…* |
| | *…….* |

**Knowledge and Understanding**

- Explain normal human structure and function at the molecular, cellular, tissue, organ, and whole-body level from conception to old age
- Explain the scientific principles underlying common and important disease processes including inflammation, infection, neoplasia, and trauma
- Describe basic pharmacological principles together with the pharmacology of

commonly used medications, including their modes of action, pharmacokinetics, medication interaction and side effects
- Describe how individuals adapt to major life changes, including the onset of illness
- Discuss the role of nutrition in health and illness

**Skills**

- Communicate compassionately and effectively with patients and when relevant, with significant others including taking a relevant focused history
- Communicate effectively with colleagues in all professional settings, including group situations
- Communicate effectively by written and by electronic means as well as orally
- Keep accurate clinical records and demonstrate skills in the recording, organization management of information including the use of appropriate information technology
- Assess, investigate, and manage patients in a safe, competent, and caring manner applying sound clinical reasoning at all stages of the process
- Prescribe drugs safely under supervision including dosage calculation, prescription writing and administration
- Recognise and manage life-threatening conditions and provide the immediate core of medical emergencies including First Aid and resuscitation

**Competences**

- Discuss the nature of medical professionalism and its importance in patient care recognising that the care and safety of patients is central to their everyday practice
- Work with members of the multidisciplinary team and understand their own personal roles and responsibilities within the team as well as those of other healthcare professionals
- Discuss the basic principles that underpin good ethical practice including the need to respect patients regardless of their lifestyle, culture, beliefs, religion, race, colour, gender, sexuality, disability, age, and social or economic status
- Be aware of and be able to discuss the major ethical issues in healthcare as may be encountered in everyday clinical practice including concern for confidentiality and respect for individual autonomy
- Explain the importance of maintaining patient confidentiality and of respecting the autonomy, dignity, and privacy of patients
- Explain one's professional and legal responsibilities when accessing information in relation to patient care, research, and education
- Demonstrate an understanding of the importance of always acting with honesty and integrity, including the duty of open disclosure when things go wrong
- Demonstrate an understanding of when patient consent is required and how it is best obtained. This includes an understanding of when and how consent needs to be obtained from a third party
- Recognise the potential impact on patient care of one's personal beliefs and biases and describe the strategies that mitigate this
- Describe the principles of safeguarding of children and vulnerable adults
- Display a lifelong commitment to scholarship and service towards the individual patient and the community
- Practice medicine holistically taking into account ethical, legal, psychological, and

social considerations
- Contribute toward the establishment of Cyprus and Greece as regional centres of excellence in medical education

## (3) SYLLABUS

- The diagnosis and management of common acute and elective surgical conditions
- The diagnosis and management of surgical complications
- Clean and sterile technique
  - Scrubbing, gowning and gloving
  - Wound dressing and bandaging
  - Suturing and removal of sutures and staples
- Infection control
- Freezing and cautery
- Insertion of tubes, drains, needles
- Interpretation of investigations – X-rays, CT scans, MRI scans, ultrasound, Doppler and duplex scans, blood tests, pathology
- Emergency medicine skills – airway maintenance etc.
- Prescribing Skills
  - Management of fluids and electrolytes
  - Postoperative pain control
- Gaining informed consent
  - Explaining procedure to patient

## (4) TEACHING and LEARNING METHODS - EVALUATION

| | |
|---|---|
| **DELIVERY**<br>*Face-to-face, Distance learning, etc.* | Face-to-face |
| **USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY**<br>*Use of ICT in teaching, laboratory education, communication with students* | *Use of ICT in teaching / Χρήση ΤΠΕ*<br>*Communication with students / Επικοινωνία με Φοιτητές* |
| **TEACHING METHODS**<br>*The manner and methods of teaching are described in detail.*<br>*Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.*<br><br>*The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS* | |

| ***Activity*** | ***Semester workload*** |
|---|---|
| Lectures/large group | 21 |
| Small group teaching | 7 |
| Clinical Practice | 252 |
| Self-directed learning | 60 |
| | |
| | |
| | |
| | |
| | |
| Per 7-week rotation | ***340*** |

| | |
|---|---|
| **STUDENT PERFORMANCE EVALUATION**<br>*Description of the evaluation procedure*<br><br>*Language of evaluation, methods of evaluation, summative or conclusive, multiple-choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical* | Final year exam and final year OSCE. The written assessment will be Single Best Answer MCQs and Short Answer Questions. Workplace-based assessments will take place during the attachment. |

| | |
|---|---|
| *examination of patient, art interpretation, other*<br><br>*Specifically-defined evaluation criteria are given, and if and where they are accessible to students.* | |

## (5) ATTACHED BIBLIOGRAPHY

| **Required textbooks/reading** | | | | | |
|---|---|---|---|---|---|
| **Authors** | **Title** | **Edition** | **Publisher** | **Year** | **ISBN** |
| Brunicardi, F. Charles | Schwartz's principles of surgery | 9th | McGraw-Hill | 2010 | 9780071547703 |
| Raftery, Andrew T. | Applied basic science for basic surgical training | | Churchill Livingstone Elsevier | 2008 | 9780080451404 |
| Joint Formulary Committee | https://bestpractice.bmj.com/drugs | Last one | BMJ Group and Pharmaceutical Press. | Current year | |
| National Institute for Health and Clinical Excellence | https://www.nice.org.uk/guidance | Last one | | Current year | |
| **Recommended textbooks/reading** | | | | | |
| **Authors** | **Title** | **Edition** | **Publisher** | **Year** | **ISBN** |
| Goldberg, Andrew. | Surgical talk: lecture notes in undergraduate surgery | | Imperial College Press | 2012 | 9781848166141 |

# COURSE OUTLINE

## (1) GENERAL

### MD-601 Clinical Practice: Internal Medicine

| | | | |
|---|---|---|---|
| **SCHOOL** | Medical | | |
| **ACADEMIC UNIT** | Basic and Clinical Sciences | | |
| **LEVEL OF STUDIES** | 1st Cycle | | |
| **COURSE CODE** | MD-601 | **SEMESTER** | Year 6 / Semester 11/12 (rotation) |
| **COURSE TITLE** | Clinical Practice: Internal Medicine | | |

| **INDEPENDENT TEACHING ACTIVITIES** *if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits* | **WEEKLY TEACHING HOURS** | **CREDITS** |
|---|---|---|
| | 40 | 48* |

*Clinical Practice is delivered through the year with rotations in Internal Medicine; General Surgery; General Practice & Geriatric Medicine; and Emergency Medicine & Intensive Care. Its grade and ECTS are awarded at the end of the year.

| *Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).* | | |
|---|---|---|

| | |
|---|---|
| **COURSE TYPE** *general background, special background, specialised general knowledge, skills development* | Core |
| **PREREQUISITE COURSES:** | None |
| **LANGUAGE OF INSTRUCTION and EXAMINATIONS:** | English |
| **IS THE COURSE OFFERED TO ERASMUS STUDENTS** | |
| **COURSE WEBSITE (URL)** | |

## (2) LEARNING OUTCOMES

**Learning outcomes**

*The course learning outcomes, specific knowledge, skills, and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.*

*Consult Appendix A*

- *Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area*
- *Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B*
- *Guidelines for writing Learning Outcomes*

By the end of the course, students will be able to:

- Take a competent history from a patient, or relative of a patient, presenting with a medical condition, in a sensitive and caring manner.
- Carry out a physical examination of patients.
- Discuss a differential diagnosis for the presenting complaint.

- Apply their knowledge of the basic and clinical sciences to identify and explain appropriate investigations, including blood and urine tests and imaging, to assist in the diagnosis of the presenting complaint and to interpret the results from such tests.
- Prepare and explain a treatment management plan for the patient to present to the responsible clinician.
- Apply clinical reasoning and problem-solving skills at the bedside, using hypothesis generation, data gathering, integration of basic science, clinical medicine and evaluation of opinions.
- Demonstrate knowledge of common medical problems and medical emergencies.
- Perform procedures common to internal medicine e.g. venepuncture, insertion of intravenous cannulae, arterial puncture, urinary catheter and nasogastric tubes, measurement of peak flow, arterial blood gases, transcutaneous pulse oximetry, setting up an intravenous fluid infusion, administration of an intravenous medicine, intramuscular injection, subcutaneous injection, insulin injection, administration of oxygen, diagnosis of death.
- Demonstrate effective history taking in relation to prescribed drugs, over the counter medication, complementary and alternative therapies, illicit drug use and allergies.
- Demonstrate the correct use of an in-patient prescription chart.
- Demonstrate how to write a prescription for a patient, including effective prescription of controlled drugs.
- Demonstrate how to prescribe at hospital admission, on-call in hospital and at hospital discharge.
- Inject drugs, at the correct dose, intramuscularly, subcutaneously and intravenously and prepare and give nebulised drugs.
- In general, for each condition studied, list the main drugs (if any) that relieve symptoms, produce a cure or improve prognosis or reduce risk of recurrence.
- Demonstrate high professional standards and attitudes regarding relationships in the workplace, team work, confidentiality, initiative, self- directed learning and ethical issues.

**General Competences**

*Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?*

*Search for, analysis and synthesis of data and information, with the use of the necessary technology*
*Adapting to new situations*
*Decision-making*
*Working independently*
*Teamwork*
*Working in an international environment*
*Working in an interdisciplinary environment*
*Production of new research ideas*
*Project planning and management*
*Respect for difference and multiculturalism*
*Respect for the natural environment*
*Showing social, professional, and ethical responsibility and sensitivity to gender issues*
*Criticism and self-criticism*
*Production of free, creative, and inductive thinking*
*……*
*Others…*
*…….*

**Knowledge and Understanding**

- Explain normal human structure and function at the molecular, cellular, tissue, organ, and whole-body level from conception to old age
- Explain the scientific principles underlying common and important disease processes including inflammation, infection, neoplasia, and trauma
- Describe basic pharmacological principles together with the pharmacology of commonly used medications, including their modes of action, pharmacokinetics,

medication interaction and side effects
- Describe how individuals adapt to major life changes, including the onset of illness
- Explain the concept of 'wellness is and describe the importance of promoting lifestyle factors in achieving the best possible health
- Discuss the role of environmental, ecological, social, behavioural, occupational, and cultural factors in determining health at individual, community, and societal levels
- Describe the principles of primary, secondary, and tertiary disease prevention, together with the role of immunisation and screening
- Describe the basic principles of communicable disease control in both hospital and community settings
- Discuss the role of nutrition in health and illness

**Skills**

- Communicate compassionately and effectively with patients and when relevant, with significant others including taking a relevant focused history
- Communicate effectively with colleagues in all professional settings, including group situations
- Communicate effectively by written and by electronic means as well as orally
- Keep accurate clinical records and demonstrate skills in the recording, organization management of information including the use of appropriate information technology
- Assess, investigate, and manage patients in a safe, competent, and caring manner applying sound clinical reasoning at all stages of the process
- Prescribe drugs safely under supervision including dosage calculation, prescription writing and administration
- Recognise and manage life-threatening conditions and provide the immediate core of medical emergencies including First Aid and resuscitation

**Competences**

- Discuss the nature of medical professionalism and its importance in patient care recognising that the care and safety of patients is central to their everyday practice
- Work with members of the multidisciplinary team and understand their own personal roles and responsibilities within the team as well as those of other healthcare professionals
- Discuss the basic principles that underpin good ethical practice including the need to respect patients regardless of their lifestyle, culture, beliefs, religion, race, colour, gender, sexuality, disability, age, and social or economic status
- Be aware of and be able to discuss the major ethical issues in healthcare as may be encountered in everyday clinical practice including concern for confidentiality and respect for individual autonomy
- Explain the importance of maintaining patient confidentiality and of respecting the autonomy, dignity, and privacy of patients
- Explain one's professional and legal responsibilities when accessing information in relation to patient care, research, and education
- Demonstrate an understanding of the importance of always acting with honesty and integrity, including the duty of open disclosure when things go wrong
- Demonstrate an understanding of when patient consent is required and how it is best obtained. This includes an understanding of when and how consent needs to

be obtained from a third party
- Recognise the potential impact on patient care of one's personal beliefs and biases and describe the strategies that mitigate this
- Describe the principles of safeguarding of children and vulnerable adults
- Display a lifelong commitment to scholarship and service towards the individual patient and the community
- Practice medicine holistically taking into account ethical, legal, psychological, and social considerations
- Promote health and wellness through disease prevention and research
- Contribute toward the establishment of Cyprus and Greece as regional centres of excellence in medical education

(3) **SYLLABUS**

- The diagnosis and management of common acute and elective medical conditions
- The preventative approach to healthcare
- Insertion of tubes, drains, needles
- Interpretation of investigations, including X-rays, CT scans, MRI scans, ultrasound, Doppler and duplex scans, blood tests, pathology
- Emergency medicine skills – airway maintenance etc.
- Prescribing skills
  - Management of fluids and electrolytes
- Patient education – peak flow, spirometry, inhalers, nebulisers, glucose measurement.

(4) **TEACHING and LEARNING METHODS - EVALUATION**

<table>
<tr><td>DELIVERY<br>Face-to-face, Distance learning, etc.</td><td>Face-to-face</td></tr>
<tr><td>USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY<br>Use of ICT in teaching, laboratory education, communication with students</td><td>Use of ICT in teaching / Χρήση ΤΠΕ<br>Communication with students / Επικοινωνία με Φοιτητές</td></tr>
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<tr><td>Small group teaching</td><td>7</td></tr>
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<tr><td>Per 7-week rotation</td><td>340</td></tr>
</table>
</td></tr>
<tr><td>STUDENT PERFORMANCE EVALUATION<br>Description of the evaluation procedure<br><br>Language of evaluation, methods of evaluation, summative or conclusive, multiple-choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</td><td>Final year exam and final year OSCE. The written assessment will be Single Best Answer MCQs and Short Answer Questions. Workplace-based assessments will take place during the attachment.</td></tr>
</table>

| | |
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| *Specifically-defined evaluation criteria are given, and if and where they are accessible to students.* | |

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|---|---|---|---|---|---|
| **Authors** | **Title** | **Edition** | **Publisher** | **Year** | **ISBN** |
| Loscalzo J<br>Kasper D<br>Wiener C<br>Fauci A<br>Hauser S<br>Longo J<br>Jameson L | Harrison's Principles of Internal Medicine | 20th | McGraw Hill, New York | 2021 | 9781260463040 |
| Joint Formulary Committee | https://bestpractice.bmj.com/drugs | Last one | BMJ Group and Pharmaceutical Press. | Current year | |
| National Institute for Health and Clinical Excellence | https://www.nice.org.uk/guidance | Last one | | Current year | |