First year courses

**Bachelor Medicine Year 1**

Fac. Health, Medicine and Life Sciences

**Growth and Development I**

**Full course description**

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN1101
Period 1
4 Sep 2017
27 Oct 2017
[Print course description](#)
ECTS credits:
7.0
Instruction language:
Dutch
Coordinator:

- P.E.J. van der Meijden

Fac. Health, Medicine and Life Sciences

**Circulation and Breathing I**

**Full course description**

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN1102
Period 2
30 Oct 2017
22 Dec 2017
[Print course description](#)
ECTS credits:
7.0
Instruction language:
Dutch
Coordinator:


Regulation and Integration

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN1103
Period 3
8 Jan 2018
2 Feb 2018
Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:
• F.A. van Nieuwenhoven

Thinking and Doing I

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN1104
Period 4
5 Feb 2018
6 Apr 2018
Print course description
ECTS credits:
7.0
Instruction language:
Dutch
Coordinator:
• A.F.G. Leentjens

Fac. Health, Medicine and Life Sciences
Digestion and Defense I

Full course description

This study program is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

GEN1105
Period 5
9 Apr 2018
8 Jun 2018
Print course description
ECTS credits:
7.0
Instruction language:
Dutch
Coordinator:
- L.J. Schurgers

Fac. Health, Medicine and Life Sciences

Diabetes, Obesity and Lifestyle

Full course description

This study program is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

GEN1106
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:
- B. Havekes

Fac. Health, Medicine and Life Sciences

Progress Test Examination Year 1

GEN1007
Year
Skills Assessment Year 1

GEN1008
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
6.0
Instruction language:
Dutch
Coordinator:

• M.J.B.L. Franssen

Fac. Health, Medicine and Life Sciences

Personal Formularium Year 1

GEN1012
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
1.0
Instruction language:
Dutch
Coordinator:

• B.J.A. Janssen

Fac. Health, Medicine and Life Sciences

CORE Year 1

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in
Bachelor Medicine
Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN1013
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
2.0
Instruction language:
Dutch
Coordinator:

- A.D.J. Smeenk

Fac. Health, Medicine and Life Sciences

**Imaging Techniques**

GEN1011
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
1.0
Instruction language:
Dutch
Coordinator:

- S.G.F. Robben

Fac. Health, Medicine and Life Sciences

**Portfolio Examination Year 1**

GEN1009
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
6.0
Instruction language:
Dutch
Coordinator:

- M.M. Verheggen
Bachelor International Track in Medicine (ITM) Year 1

Fac. Health, Medicine and Life Sciences

Growth and Development I

Full course description

This theme covers normal and abnormal growth, the development and breakdown of cells, tissues and individuals. It also involves issues such as pregnancy, the growth and development of children, puberty and ageing. There is a transfer of this theme to several subthemes of the clusters in year 3, including: - Circulation/lungs: e.g. pulmonary nodules as expression of disturbed cell growth, cardiomyopathy - Psychomedical: Alzheimer's disease, the cognitive development in children, puberty issues, Down syndrome - Abdomen: gynaecological issues - Locomotor system: bone and joint disorders (osteoporosis) Subjects: - Structure of the cell (prokaryote, cell organelles, membrane) - DNA/RNA/protein synthesis/gene regulation - Cell division, cell cycle, regulation, cell death - Cell metabolism and communication - Cell growth and differentiation - Hereditary principles - Structure of selected tissues and organs (different cell types, histology) - Embryonic and foetal development

Course objectives

Knowledge and insight By the end of the block, the student should have a broad understanding of: the background to problem-based learning. By the end of the block, the student should have conceptual knowledge of: the structure of a cell, ligand/receptor interactions, the mechanism and purpose of signal transduction, the structure of the gene, gene regulation, transcription, translation, post-translational modification, regulation of cellular growth and differentiation, the role of growth, differentiation and cell death in the construction of organ systems and the response to injury, embryonic growth and development, as far as the creation of the three germ layers, growth and growth regulation of the individual, cognitive, psychosocial and emotional development, homeostasis and disease as a disruption of homeostasis, By the end of the block, the student should have a broad understanding of: the determinants and epidemiology of disease and health, the organisation of health care in the Netherlands, the competencies of medical doctors (CANMEDs), the objectives of the Consultations and Reflection (CORE) programme. Skills By the end of the block, the student should have the basic skills for the following themes: watching and feeling, hearing and listening, microscopy. Scientific aspects By the end of the block, the student should have conceptual knowledge of: the meaning of measurement levels, measures of central values and dispersions, and of distributions and plots, the meaning of health: levels and the associated measurement methods, scientific measurements in a social context and what biological and social/cultural diversity mean in this context..

ITM1101
Period 1
4 Sep 2017
27 Oct 2017
Print course description
ECTS credits:
7.0
Instruction language:
Circulation and Breathing I

Full course description

The normal working and disturbances of the heart, lungs and circulation are illustrated by means of normal situations and several disorders. In addition, the concept of homeostasis is introduced in year 1 and used to discuss the clinical examination of the heart, lungs and blood pressure as well as resuscitation skills. There is a transfer of this theme to the Circulation & Lungs cluster in year 3.

Subjects: • Heart, lungs and circulation: anatomy and physiology • Overview of the blood circulation (greater/lesser circulation, coronary arteries) • Regulation of blood pressure • Basic renal physiology • Regulation of respiration • Blood: composition, production and breakdown of blood cells, regulation • Blood: oxygen transport • Blood: acid-base balance • Blood: haemostasis and fibrinolysis • Exercise physiology

Course objectives

Knowledge and insight • Physiology and physical diagnostic examination of the thorax (cardiovascular and upper respiratory tract). • Macroscopic and microscopic anatomical structure and function structure of the thorax: airways, lungs and pleurae, heart and blood vessels. • Foetal heart and lung development. • Principles of the mechanisms underlying the circulation and respiration: breathing exercise, alveolar ventilation, pulmonary circulation, gas exchange, gas transport, cellular respiration and the associated regulatory mechanisms, circulation, physiology of the heart, physiology of large vessels, compliance, pulse pressure, regulation of cardiac output, Frank Starling mechanism. • Regulation of various aspects of breathing and circulation and the influence of rest and effort on this regulation. Skills and practicals • Providing adequate care for patients in cardiac arrest (Basic Life Support + AED). • Physical diagnostic examination of the thorax, heart and lungs. • Research of peripheral circulation and determination of blood pressure. • Introduction of additional diagnostic tests. • Practical hemodynamic using an experimental design. • Computer lab cardio lab (influence of drugs on cardiac function). • Practical coagulation. • Virtual microscopy of the thorax (lungs, heart and blood vessels). • Practical Spirometry: Writing a report on causes of variation and interpretation, including: 1) graphic variation in spirometric measurements, 2) and particularly the influence of race and gender in this (international).
Regulation and Integration

Full course description

This theme elaborates the concept of homeostasis and the functioning of regulatory mechanisms, based on the knowledge the students acquired in the first two blocks. Also, the concepts of sickness and health are introduced. The following subjects can be used as examples: • Dehydration and hypovolaemic shock (integration of blood pressure regulation and kidney function) • Hormonal regulation and feedback system (e.g. in cases of hypothyroidism and hyperthyroidism) • “Stress” (including stress response, HPA axis, feedback) • “Out of balance”: effect of disease on psychosocial functioning and vice versa (e.g. in cases of fatigue in hypothyroidism). This can also include the concepts of “sickness” versus “illness”, and other concepts of social medicine.

Course objectives

Knowledge and insight The focus in this block is on a number of important pathophysiological basic mechanisms. The following themes are dealt with (divided over seven topics): • Basic principles of physiology: homeostasis • Basic principles of control systems: the sensor-integrator-effector principle • Causes and mechanisms of variation in control systems (feedback or feed-forward systems) • Day and night rhythm and other important time-related variations • Hypothalamus/pituitary (adenohypophysis and neurohypophysis) • Adrenal cortex functions and adrenal medulla functions • Preservation of cellular volume, osmolality • Antidiuretic hormone and the renin-angiotensin system • Kidney function: emphasising the glomerulus • Kidney function: emphasising the tubule • Measuring kidney function: knowledge of the concept of clearance • Transcapillary fluid management (Starling’s law) • The body’s responses to dehydration and hypovolaemia • Mechanisms of oedema • Multiple organ failure and the downward spiral to death
Thinking and Doing I

Full course description

As the name implies is this block a constitution of two major components: Thinking (‘Brain’) and Doing (‘Movement’). The Thinking part includes the neuroanatomy and vascularisation of the brain and its sensory pathways. Sensory perception (hearing and vision) will be used to explain the afferent pathway systems. The neurophysiology of neuron- neuron and neuron-muscle signalling will also be discussed. Focus on the motion of the lower extremities (hip, knee and ankle). Anatomy and basic functioning of these extremities and their control by the central and peripheral nervous systems will be discussed. The entire process of the movement will be discussed, from the initiation of the movement, via the motor pathways through to reflexes and motor problems.. Imbedded in the block is the integration of both themes. It is the failure of proper function of Brain and/or Movement that affects the human characteristics most. This is exemplified by the cases which study pain sensation, propriocepsis loss and the ‘patient with neurological damage’. In short, the block will be aimed mainly at three primary areas, which will be covered either separately or together; we nevertheless hope that the students will be able to integrate the different areas themselves as we go along (knowledge in one of these subject areas simplifies knowledge in one of the other areas).

Course objectives

Knowledge and insight • Neuroanatomy and vascularisation of the central nervous system at the macroscopic and microscopic levels • Neurotransmission: stimulus generation, propagation and transfer; neurotransmitters and neurotransmitter systems • Neuroanatomy and the function of sensory pathway systems (gnostic and vital, including propriocepsis) • Anatomy and physiology of the ear and the auditory system • Anatomy of the eye and the visual system • Language acquisition • Neurophysiology and neuropsychology in relation to consciousness, unconsciousness and coma, normal sleeping and waking rhythm Practice • Planning and initiation of motion • Neuroanatomy and function of motor pathway systems • Structure and function of the lower extremities, bones, muscles and joints (hip, knee and ankle) • Basic components of the motor system • Reflexes, coordination, proprioception Integration knowledge and practice via: • Neurophysiology of pain, perception of pain, pain behaviour • Balance, posture regulation and reflexes • Pathophysiology: relationship between the functioning of parts of the brain, linked to behaviour or failure of functions, particularly learning and memory and motor functions Skills • Function study of the cranial nerves, sensibility, sight and hearing • Study into the movements of the hip, knee and ankle • Integration training sessions using vignettes • Examination of a CVA patient CORE education will be given too.

ITM1104
Period 4
5 Feb 2018
31 Aug 2018
Print course description
ECTS credits:
7.0
Instruction language:
English
Digestion and Defence I

Full course description

In this block, the topics are: 'digestive system', 'microbiology' and 'immunology'. Central stands the digestion process and the involved organs, i.e. the mouth, esophagus, stomach, small and large bowel, as well as the liver, gall bladder and pancreas. The main processes involved include regulation of food intake, digestion and absorption of nutrients, which require cooperation between all these organs. Problems with the functioning of the digestive tract can result in symptoms such as reflux, abdominal pain and diarrhea. Our digestive tract is continuously exposed to a myriad of microbes, either from our own microbiota or potential pathogens. Therefore, the second topic of this block concerns microbiology to get acquainted with mechanisms of bacteria, viruses and parasites. An adequate immune system is required for the defence against infectious pathogens. How the immune system is constituted and how it functions is the third block topic. The focus of this block will be mainly on normal physiology and as such it is the basis for year 2 where the focus will be on the pathophysiology. In addition attention will be paid to internationalization in the context of health care world-wide and on scientific aspects such as statistics, epidemiology, medical history and the diversity of professional medical literature.

Course objectives

- Anatomy and histology of the oral cavity, teeth, tongue, salivary glands, pharynx, esophagus, stomach, small and large intestine, liver, gall bladder and pancreas. - Hormonal and neural regulation of food intake and digestion, including the cephalic, gastric and intestinal phase. - Composition of food, digestion of proteins, carbohydrates and fat and the absorption of the digested nutrients, minerals, vitamins, electrolytes and water. - Motility of the digestive tract, such as gastric emptying, peristalsis of the small and large intestine, and mechanisms of diarrhea and constipation. - At the organ level, the following physiological functions will be discussed: swallowing, secretion and composition of saliva, secretion of gastric juice and protection against gastric acid, endocrine and exocrine function of the pancreas, function of bile and the liver functions such as bile production, biotransformation and the metabolism of carbohydrates, proteins and fats. - Knowledge of structure, classification and replication of bacteria and viruses, mechanisms of and resistance against some antibiotics, composition and function of the commensal microbiota, and examples of gastrointestinal pathogens causing diarrhea. - Classes and functions of leukocytes, the inflammatory process, induction of fever. - The innate and adaptive immune system and the cellular and humoral immune response in the context of infection and vaccination. - Performing and interpreting diagnostic skills.
Bachelor Medicine

of the mouth, throat, neck, of the abdomen and lab skills on faces, blood and injection; knowledge of imaging techniques. - Scientific skills, e.g. application of relevant statistical tests, using diverse professional medical information and knowledge of the history of infectious diseases and its treatment. - Orientation on health care from a international, world-wide view.

**Recommended reading**

- Digestive system (authors: Smith & Morton) - Medical microbiology (authors: Murrau, Rhosental. Pfaller - Basic mmunology (authors: Abbas, Lichtman, Pillai)

ITM1105
Period 5
9 Apr 2018
8 Jun 2018

**Print course description**

ECTS credits:
7.0

Instruction language:
English

Coordinator:
- P.F.G. Wolfs

Teaching methods:
Lecture(s), Skills, Training(s), PBL

Assessment methods:
Computertest, Written exam

Keywords:
- Gastro-intestinal system - Microbiology - Immunology

Fac. Health, Medicine and Life Sciences

**Diabetes, Obesity and Lifestyle**

**Full course description**

The incidence of diabetes and obesity (diabetes) shows a rapid, worldwide increase. This block aims the students to acquire knowledge of all aspects of diabetes and obesity in a “cell to society approach”. Pathophysiological mechanisms, the effect of diabetes on tissues and organs as well as the interaction between nutrition, genes and inflammation will be discussed. In addition, the block pays detailed attention to the risk factors of developing diabetes and the options to influence the lifestyle of people suffering from diabetes. Finally, the optimal treatment of people with diabetes will be covered.

**Course objectives**

- Incidence and expected increase of the incidence of type 2 DM and obesity worldwide. - Differences between type I and type II diabetes and the various genetic subtypes. - Risk factors for developing diabetes and obesity (lifestyle, socioeconomic background, gender and body image, stress). - What is healthy nutrition: composition and function of nutritional components, balance between the nutritional components. Glucose level regulation, including the action of insulin, neurohumoral
regulation of food intake, lipids and disturbed fat metabolism in diabetes patients, what is healthy nutrition. Energy balance, psychological control: intention versus behaviour; self-regulation and ego-depletion; impulse management. -Relation between energy intake and metabolism. Interaction between genes and the environment in diabetes and obesity (nutrition and genes, genetics of complex diseases, interaction between genes and the environment). -Nutrition and inflammation. Consequences of diabetes/obesity (cardiovascular diseases, microvascular and macrovascular diseases and the integration of the various organ systems (general), diabetes/obesity/hypertension as a disease or risk factor, socioeconomic effects of diabetes (on work, family life and lifestyle)). Medicinal treatment, care chain: multidisciplinary approach to diabetes patients; autonomy and participation; shared decision-making (disease management models). Lifestyle interventions: principles of intervention development; of each domain (nutrition, exercise, specific example intervention for diabetes patients). -What is lifestyle/more than isolated behaviour

ITM1106
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:
- S.S.M. Rensen

Teaching methods:
Lecture(s), PBL, Skills, Training(s)
Assessment methods:
Computertest, Written exam
Keywords:
Key disciplines: Internal Medicine, Pathology, Molecular Genetics, psychology, Medical Sociology, Health Education
Fac. Health, Medicine and Life Sciences

Progress Test Examination Year 1

ITM1007
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
8.0
Instruction language:
English
Coordinator:
- B. Schutte

Fac. Health, Medicine and Life Sciences
Skills Assessment Year 1

ITM1008
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
6.0
Instruction language:
English
Coordinator:
• B. Schutte

Fac. Health, Medicine and Life Sciences

Imaging Techniques

ITM1011
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
1.0
Instruction language:
English
Coordinator:
• S.G.F. Robben

Fac. Health, Medicine and Life Sciences

Personal Formularium Year 1

ITM1012
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
1.0
Instruction language:
English
Coordinator:
• B.J.A. Janssen

Fac. Health, Medicine and Life Sciences
CORE Year 1

Full course description

Students learn to conduct encounters with patients who present with cases relevant for the cases in their theoretical first-year curriculum. Additionally they reflect on aspects of diversity between individual patients they witness in these cases. Simulated patients present the cases while students integrate their knowledge, preferred approach and attitude in a consultations that runs as smoothly as possible. The simulated patients provide tailor-made feedback after the consultation. Additionally the consultations are recorded on video. The students watch the recordings and two weeks later a feedback session takes place with a teacher. In this session they address the medical content, their ‘approach’ and possible ethical issues relevant for the case.

Course objectives

Intended learning objectives of the first-year CORE-programme:

- Being able to conduct a simple consultation, with emphasis on clarification of the patient’s reason for the encounter
- Structuring the consultation into different phases

Recommended reading


ITM1013
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
2.0
Instruction language:
English
Coordinator:
  A.D.J. Smeenk
Teaching methods:
Work in subgroups, Training(s)
Assessment methods:
Attendance, Observation, Participation, Portfolio
Keywords:
communication skills, diagnostic skills
Fac. Health, Medicine and Life Sciences
Bachelor Medicine

**Portfolio Examination Year 1**

ITM1009
Year
1 Sep 2017
31 Aug 2018

[Print course description](#)

ECTS credits:
6.0

Instruction language:
English

Coordinator:

- **M.I. Kruithof**

Second year courses

**Bachelor Medicine Year 2**

Fac. Health, Medicine and Life Sciences

**Circulation and Breathing II**

**Full course description**

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

GEN2101
Period 1
4 Sep 2017
27 Oct 2017

[Print course description](#)

ECTS credits:
7.0

Instruction language:
Dutch

Coordinator:

- **J.P.M. Cleutjens**

Fac. Health, Medicine and Life Sciences

**Growth and Development II**

**Full course description**

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of
Digestion and Defence II

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

Thinking and Doing II

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.
Bachelor Medicine
8 Jun 2018
Print course description
ECTS credits: 7.0
Instruction language: Dutch
Coordinator: S.P.G. Bours
Fac. Health, Medicine and Life Sciences

Progress Test Examination Year 2
GEN2006
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits: 8.0
Instruction language: Dutch
Coordinator: A.M. Duijvestijn
Fac. Health, Medicine and Life Sciences

Portfolio Examination Year 2
GEN2108
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits: 16.0
Instruction language: Dutch
Coordinator: M.M. Verheggen

Bachelor Medicine Year 2, Electives
Fac. Health, Medicine and Life Sciences

Autoimmune Diseases and Autoimmunity I
Bachelor Medicine

**Full course description**

Dit aandachtsthema wordt in blok 2.3 en blok 2.6 als een spoor aangeboden. De student maakt kennis met theorie en praktijk van autoimmuunziekten in het algemeen en met een aantal in het bijzonder. Wat precies autoimmuniteit is, welke mechanismen er achter zitten, de typen autoimmuunziekten, de incidentie en prevalentie, de mortaliteit en morbiditeit, en de pathogenese ervan zullen worden belicht. Daarnaast komt de pathofysiologie, de laboratorium diagnostiek, en de therapie van de verschillende autoimmuunziekten aan de orde. In blok 2.3 zal met name ingegaan worden op immunologische mechanismen die een rol spelen in de pathologie van autoimmuunziekten, de mechanismen die dienen ter voorkoming van autoimmuniteit, de mogelijke oorzaken die ten grondslag liggen aan het ontstaan van autoimmuniteit. Aantal beschikbare plaatsen: 30

**Course objectives**

Het programma heeft de volgende eindtermen ten doel staan voor wat betreft kennisvergaring en persoonlijke ontwikkeling door de student: I) Immunologische kennis - Verdieping in immunologische regel en effector mechanismen - Verdieping in mechanismen van autoimmuniteit II) Medische aspecten - Algemene kennis van autoimmuunziekten - pathogenese - de meest voorkomende autoimmuunziekten - pathofysiologie - epidemiologie - Verdieping in 1 specifieke autoimmuunziekte - symptomen en diagnosniet - pathogenese en pathofysiologie - therapie III) Wetenschappelijke aspecten - Kennismaking met onderzoek in autoimmuunziekten - Wetenschappelijke voordracht (duo's of drietallen; powerpoint)

**Recommended reading**

Cellular and Molecular Immunology (authors: Abbas, Lichtman and Pillai)

GEN2301
Period 3
8 Jan 2018
2 Feb 2018

Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:
• K.H.J. Gaens

Keywords:
- Immunologie - Autoimmuniteit - Autoimmuunziekten
Fac. Health, Medicine and Life Sciences

**Genetic Conditions and Congenital Anomalies**

**Full course description**

Als leidraad in het blok worden in de 4 weken de verschillende stappen in het diagnostisch en
Bachelor Medicine

behandelingstraject gevolgd (klinisch redeneren, differentiaal diagnostisch denken, vervolgonderzoeken en uitslagen, begeleiding en follow-up). De activiteiten van de week sluiten aan bij de thematiek van de week. Het programma is bestaat uit een theoretisch deel en een praktijk deel. In het theoretische deel wordt op verschillende manieren gebouwd aan inhoudelijke kennis. In onderwijsgroepen worden, onder leiding van een inhoudsdeskundige tutor (de contactpersonen), via de PGO methodiek 7 casus bestudeerd over verschillende syndromen en aangeboren aandoeningen. Daarnaast worden wekelijks minimaal 1 lezing aangeboden ter verdieping van deellementen van de stof. Tevens zijn er over het blok verspreid een aantal verschillende practica zoals een workshop dysmorfologie beschrijven. Ook worden verschillende zelfstudie-opdrachten aangeboden met bijvoorbeeld aanvullende patiënten casuïstiek om het diagnostisch proces te oefenen of een opdracht om zelf stambomen te leren maken. Het streven is om niet alleen theoretisch inhoudelijke kennis op te doen maar ook met de kliniek kennis te maken. In het praktische deel zal in casuïstiek groepen geoefend worden met het diagnostisch proces. Dit deel loopt als een rode draad door dit keuzeblok. Studenten hebben in de tweede week een patiëntencontact met een kind met een erfelijke en/of aangeboren aandoening. Elke student werkt voor zijn of haar patiëntje het diagnostisch proces in de loop van het blok uit. In de casuïstiek groepen leert men ook de patientjes met andere aandoeningen van hun groepsgenoten kennen. De aanwezigheidsverplichting is 100%. Aantal beschikbare plaatsen: 30 Meer info: zie Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014

GEN2303
Period 3
8 Jan 2018
2 Feb 2018

Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:

- M. Vreeburg

Fac. Health, Medicine and Life Sciences

European and International Health Law

Course objectives

The object of the course is to give students an understanding of the values underpinning health care in the international context, and to give specific understanding of the differences between health Laws in different countries and created by the international community, and to ask about the origins and motivations of those rights. It seeks to place the study of medicine into a broader context both in terms of the relationship between the practice of medicine and Law, and of the different constructions of rights and expectations between jurisdictions. To give a specific understanding of the European context of international co-operation in relation to health. Number of available places: 30 Meer info: zie Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014

GEN2304
Period 3
8 Jan 2018
2 Feb 2018
Fundamentals of Neuroscience

Full course description

There is a link to the programme 2.6 Translational Neuroscience. Registration for both is recommended. Fundamentals of neuroscience intends to extend your insights gained through fundamental research on brain structure and function to identify novel approaches for treating diseases of the central nervous system (CNS) and peripheral nervous system (PNS). This course will focus on the basic neuroscientific knowledge that the physician generally needs in order to deal intelligently and flexibly with the clinical problems she or he will face. Number of available places: 30

More info: see Eleum > Organizations > FHML Students > BA GEN > Onderwijs in Nederland > Keuzeonderwijs 2.3 en 2.6 > Programmabeschrijvingen 2013-2014

GEN2305
Period 3
8 Jan 2018
2 Feb 2018

Health & Development Challenges in Developing Countries: a Focus on HIV/AIDS

Full course description

This course critically focuses on structural issues of development on a global scale. Globalization refers to the increasing interdependence of markets, states and civil societies and the resulting effects on people and their environment. By also focusing on inequality, the structural differentiation among actors in terms of access to means, opportunities and resources, issues of (re-)distribution are taken into account as well. The course investigates inequalities and interdependencies on a global, international, national and local level, while considering the role of public, private and civil society actors. Thus, it aims to understand the underlying development processes and unlock the
Bachelor Medicine

ongoing debates. The course focuses on the following themes: Millennium Development Goals (MDGs) and issues of poverty, colonial history; actors of development; democratization and human rights; women and health; migration and remittances; environment and global crises. Number of available places: 30 (only available for ITM-students!) More info: see Eleum > Organizations > FHML Students > BA GEN > Onderderwijs in Nederland > Keuzeonderwijs 2.3 en 2.6 > Programmabeschrijvingen 2013-2014

GEN2306
Period 3
8 Jan 2018
2 Feb 2018

Print course description

ECTS credits:
4.0

Instruction language:
English

Coordinator:

• W.W. Nauta

Fac. Health, Medicine and Life Sciences

**Exercise Physiology**

**Full course description**

Various forms of exercise challenge the functions of our body. The fact that we usually cope well with those circumstances, sometimes under extreme conditions, shows that the body is capable of extensive adaptations. Studying of how our body handles exercise is an excellent way to understand the physiology as a whole. Moreover, the systems that allow us to perform well during exercise are the same that help us to survive diseases. Also, it is becoming increasingly clear that physical exercise is of primary importance for keeping a good health, such as preventing obesitas, diabetes, cardiovascular disease. Paradoxically, many physicians understand little about problems originating from exercise and dissuade often physical exercise in patients. This teaching block aims to study physiology of the human body until the most extreme situations and combine this with better appreciation of physical exercise by future physicians. Number of available places: More info: see Eleum - Organizations - FHML Students - BA GEN - Onderderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014

**Course objectives**

Learning goals - anatomy, physiology, histology of the neuromuscular system - methods for studying force and velocity - aerobic vs. anaerobic metabolism - measurement of body composition - principles of various forms of exercise training - principles of testing force and velocity - effects of different forms of exercise training in health and disease - anatomy, physiology of respiration, ventilation and gas exchange and their regulation - abnormalities in ventilation and respiration in lung disease - consequences of staying at high altitude, in great depth; both acutely and chronically - effects of training on respiration, ventilation and gas exchange - constraints of exercise capacity by respiratory diseases - cardiovascular changes during exercise - cardiovascular changes due to exercise training - risks of exercise in cardiovascular diseases - exercise as treatment for cardiovascular diseases - fluid and salt management during exercise and heat - temperature regulation during exercise and ambient temperatures - effect ambient temperatures on exercise
Clinical Neurology

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

Drugs in the Clinic

Full course description

There is a link to the programme 2.3 Mechanisms of drug action: basic and advanced principles. Registration for both is recommended. Drug therapy is of vital importance in modern clinical practice. Nevertheless, using drugs in an optimal manner unfortunately is still not obvious. Inappropriate drug choice due to lack of knowledge of the prescribing physician, differences
Bachelor Medicine

between populations or individuals, side effects of drugs, poor patient compliance and drug interactions may all contribute to suboptimal or even hazardous drug use. In this block the students will learn how factors such as here mentioned can determine the outcome of drug treatment and how they should be taken into account/dealt with. In addition, the students will learn about novel trends and developments in modern pharmacotherapy. Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2610
Period 3
8 Jan 2018
2 Feb 2018

Print course description

ECTS credits:

4.0

Instruction language:

English

Coordinator:

* H.H.H.W. Schmidt

Fac. Health, Medicine and Life Sciences

Klinische Stage Complexe Zorg uit Patiëntperspectief

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

Course objectives

GEN2311
Period 3
8 Jan 2018
2 Feb 2018

Print course description

ECTS credits:

4.0

Instruction language:

Dutch

Coordinator:

* K.R.J. Schruers

Fac. Health, Medicine and Life Sciences
Multidisciplinary Multimorbidity in Nursing Home Practice

Full course description

This study program is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN2313
Period 3
8 Jan 2018
2 Feb 2018
Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:

- M.A.L.M. Prevoo

Fac. Health, Medicine and Life Sciences

Pathology: Science behind Diagnostics

Full course description

Pathologie is een medisch specialisme dat een brugfunctie vervult tussen de basale wetenschappelijke vakken en de klinische praktijk in de geneeskunde. De patholoog stelt dagelijks bij vele patiënten een diagnose op basis van afwijkingen in het weefsel, waarbij de klachten van de patiënt worden gecombineerd met het beeld onder de microscoop. Wetenschappelijk onderzoek zorgt ervoor dat er steeds betere prognostische factoren voor ziekten in de weefsels ontdekt en gevalideerd worden. Tevens helpt dit onderzoek om het onderliggend pathofysiologisch mechanisme van ziekten te ontrafelen. Aantal beschikbare plaatsen: 30 Meer info: zie Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014

GEN2314
Period 3
8 Jan 2018
2 Feb 2018
Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:

- J.P.M. Cleutjens

Teaching methods:
Radiation Oncology: combining clinic, biology, technology, imaging and computer sciences to treat cancer patients

Full course description

Radiotherapy is the medical use of ionizing radiation and is one of the most effective forms of cancer treatment. It contributes to the cure or palliation of many cancer patients. Ionizing radiation induces DNA lesions within the tumor cells. These lesions, if unrepaired, are unable to divide and to grow which ultimately results in cell death. Radiotherapy aims to cause maximum damage of cancer cells and minimum damage of normal tissue cells.

Number of available places: 25

Course objectives

- The workflow of a patient (RO), more specifically to understand - To understand Radiation Oncology of RO: five sub-disciplines - To have a clear view of the contribution of the

  1. clinic (including psychosocial care and Shared Decision Making in radiation therapy)
  2. biology
  3. imaging
  4. physics
  5. computer sciences

- To understand how radiation oncology works

Recommended reading


GEN2315
Period 3
8 Jan 2018
2 Feb 2018
Print course description
ECTS credits:
4.0
Instruction language:
Gender and Diversity in Medicine

Full course description

This course will introduce students to the field of Gender Medicine and provide an overview of methods related to sex and gender analysis and the most recent insights of sex and gender implications in a number of medical disciplines (cardiology, pharmacology, and mental health). Students will learn to understand how sex and gender factors are important to consider in disease susceptibility, recognition of symptoms, presentation of symptoms, compliance with therapy and coping with disease. Gender Medicine is a specialty at the forefront of research and is internationally recognized by important research organizations and funders. Despite the existence of handbooks in English and German, specialized centers in Europe and an international society, the scope and impact of this field are not widely known nor are issues of sex and gender systematically taught in regular medical curricula.

Course objectives

Aim of the module is to integrate gender medicine into medical education and research as a new discipline. Students will learn to grasp the fundamental principles and scientific standards of gender medicine in selected medical disciplines (specializations). Students will learn to understand the importance of taking sex and gender aspects into consideration in medical treatment and research. They will acquire an overview of fields of evidence-based medicine, where sex and gender aspects are already implemented. They will familiarize themselves with instruments of gender and sex differences in diagnosis and therapy with a view to implementing these in their own medical research and their future work as physicians. Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014

Recommended reading


GEN2316
Period 3
8 Jan 2018
Gezondheidszorg voor Mensen met een Verstandelijke Beperking

**Course objectives**

De student heeft kennis van de frequent voorkomende gezondheidsproblemen bij mensen met verstandelijke beperkingen. De student kent een aantal van de voornaamste (genetische) oorzaken van verstandelijke beperkingen en kan voorbeelden noemen van comorbiditeit bij deze syndromen.
De student heeft zicht op enkele vaak voorkomende psychiatrische en gedragsstoornissen bij mensen met een verstandelijke beperking. De student is op de hoogte van het zorgaanbod en de organisatie van de mediche zorg voor mensen met een verstandelijke beperking. De student heeft kennis gemaakt met de inhoud en de impact van het begrip vraaggestuurde zorg. De student kan een eenvoudig lichamelijk onderzoek verrichten toegepast op het niveau van de cliënt. De student kan het gedrag, de houding, de manier van bewegen en de mimiek observeren en beschrijven. De student kan in een gesprek met een persoon met verstandelijke beperkingen en een ouder of verzorger nagaan hoe de persoon zijn gezondheid ervaart, wat diens problemen zijn en welke de problemen van de ouder of verzorger zijn. De student heeft een indruk van de verschillende communicatiebeperkingen van mensen met verstandelijke beperkingen. De student heeft kennis gemaakt met de begrippen autonomie en rechts-positie (waaronder wilsbekwaamheid) van de persoon met verstandelijke beperkingen.

**Recommended reading**

De aanbevolen literatuur bestaat uit een combinatie van boeken, relevante websites en artikelen die via de e-reader ingezien kunnen worden. Hieronder staat een selectie van de aanbevolen boeken:  

**GEN2317**
Period 3
8 Jan 2018
2 Feb 2018

**Print course description**

ECTS credits:
4.0

Instruction language:
Dutch

Teaching methods:
Assignment(s), Work in subgroups, Lecture(s), Patientcontact, Paper(s), PBL, Working visit(s)

Assessment methods:
Attendance, Final paper, Presentation, Written exam

Keywords:
krijgt inzicht in de oorzaken van een VB en heeft weet van het zorgaanbod. Tevens krijgt de student inzicht in de ethische en juridische aspecten van de zorg voor mensen met VB.

Fac. Health, Medicine and Life Sciences
Autoimmune Diseases and Autoimmunity II

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

Course objectives

Het programma heeft de volgende eindtermen ten doel staan voor wat betreft kennisvergaring en persoonlijke ontwikkeling door de student: I) Immunologische kennis - Toepassen immunologische kennis in autoimmuunziekten II) Medische aspecten - Algemene kennis van bepaalde typen autoimmuunziekten - Verdieping in 1 specifieke autoimmuunziekte - herkenning en klinische routing van huisarts tot specialist - patientcontact - het chronisch ziektebeeld - diagnostiek - therapie III) Wetenschappelijke aspecten - Kennis making met onderzoek in autoimmuunziekten - Wetenschappelijke voordracht (duo's of drietallen; powerpoint) IV) Persoonlijke aspecten - Inleving in het (chronisch) ziektebeeld van autoimmuniteit - Inleving in en contact met de patient V) Maatschappelijke en gezondheidszorgaspecten van autoimmuunziekten

Recommended reading

- Cellular and Molecular Immunology (authors: Abbas, Lichtman and Pillai)

GEN2601
Period 6
11 Jun 2018
6 Jul 2018

Print course description

ECTS credits:
4.0

Instruction language:
Dutch

Keywords:
- Immunologie - Autoimmuunziekten
- Metabolism from Child to Adult

Fac. Health, Medicine and Life Sciences

Metabolism form Child to Adult

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

GEN2603
Period 6
11 Jun 2018
Dutch Health Law

Full course description

Dutch Health Law and Health Ethics play an important part in setting the norms within which medicine is practiced. A study of the Dutch Law allows medical students the opportunity to explore the limits and opportunities that the Law places on their professional lives within the context of Dutch society. Health Law has been a part of the Faculty of Medicine since the creation of the Faculty. The Health Law group is now based in the Health, Ethics and Society department (Metamedica) in FHML and CAPHRI. It researches and teaches in the areas of traditional Medical Law (examining, for example, questions of patients rights, of medical professionals’ duties, of the regulation of the profession, and of the rules concerning access to health care), and more interdisciplinary questions of Health Law (considering, for example, the regulation of the development and implementation of new technologies in health care, of Law’s response to the health in society, the ethical construction of the Law, broader questions of the Law and nutrition and public health programmes and the rights of individuals to make life choices). Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

Introduction in Forensic Medicine

Full course description

In het programma Forensische Geneeskunde komt de student in aanraking met vele aspecten van geneeskunde: post mortale veranderingen en pitfalls, hoe te handelen in situaties waarin sprake kan
zijn van niet- natuurlijk overlijden. Wet op de lijkbezorging, weten welke instanties te raadplegen bij onzekerheid over natuurlijk of niet natuurlijk overlijden, wiegedood, herkenning van intoxicaties en het nemen van de nodige maatregelen worden eveneens onderwezen alsmede problematiek in de gezinssituatie, kennis over juridische aspecten en rechten en plichten van de arts op dit gebied. Ook kindermishandeling komt aan het bod. Herkennen van crimineel risicogedrag en verslavingsproblematiek, alsmede forensische psychiatrie wordt tevens uitgebreid aandacht aan besteed. Ook het euthanasie vraagstuk komt aan bod met daarbij inzicht in en kennis van de werkzaamheden van de technische recherche, samenwerking tussen forensische arts, forensisch patholoog en justitie, ondersteund door de forensisch anthropoloog en de forensisch tandarts. Aantal beschikbare plaatsen: 30 Meer info: zie Eleum - Organizations - FHML Students - BA GEN - Onderderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2605
Period 6
11 Jun 2018
6 Jul 2018

Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:

- P.A.M. Hofman

Fac. Health, Medicine and Life Sciences

**Hormones**

**Full course description**

De mens is een complex organisme waarin een groot aantal regelmechanismen operationeel zijn, die tot doel hebben belangrijke lichaamsprocessen goed te laten verlopen. Deze regelmechanismen onttrekken zich vrijwel geheel aan ons bewustzijn en wilscentrum, en worden daarom gerekend tot het vegetatief stelsel. Bij deze regelmechanismen spelen hormonen een belangrijke rol. Er zijn vele tientallen hormonen bekend en er worden nog altijd nieuwe hormonen ontdekt. Voor al deze hormonen geldt dat er specifieke cellen in het lichaam zijn waar zij gesynthetiseerd worden, dat zij door deze cellen uitgescheiden worden, door het bloed getransporteerd worden en hun werking uitoefenen op andere (doel-)cellen in het lichaam. De synthese, uitscheiding en het transport van deze hormonen worden nauwkeurig gereguleerd. Omdat afwijkingen in de hormoonhuishouding kunnen leiden tot ziekte en omdat bij veel ziekten hormonen een belangrijke rol spelen, is een goed inzicht in het hormonale stelsel van mens van groot belang bij het volgen van de klinische stages in jaar 4 en 5. Een aantal hormonen is gedurende de eerste 2 jaren van de studie oppervlakkig behandeld, maar dit blok zal de kennis van de werking van deze hormonen verdiepen en de samenhang tussen de verschillende hormoonsystemen inzichtelijk maken. Aantal beschikbare plaatsen: Meer info: zie Eleum - Organizations - FHML Students - BA GEN - Onderderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2607
Period 6
11 Jun 2018
6 Jul 2018
Bachelor Medicine

Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:

- G. Antoons

Fac. Health, Medicine and Life Sciences

**Infectious Diseases**

**Full course description**

Throughout the history of mankind, infectious diseases have always been an important cause of illness and death. Although antibiotics are widely available, infectious diseases are quite common even now. According to the World Health Organisation (WHO) annually 13 million people die of infectious diseases. This means that even in the 21st century approximately a quarter of all deaths can be attributed to fatal infections. On a global level and particularly in the developing countries, major ‘killers’ are AIDS, tuberculosis, malaria, diarrhoea, pneumonia and measles. However, in the Western world infections are prevalent as well. Respiratory tract infections, to which many people are exposed each winter, are a good example of this. Because infections occur in all age groups and can affect all organs and tissues of the body, the study of these diseases is highly complex. The host’s condition as well as factors pertaining to the microorganism, determine the course of the disease. In order to obtain an insight into infectious diseases in general, we chose to study a few representative infection types in this block. This is based on the idea that a study of these ‘models’ will provide students with a good basic knowledge of infections/infectious diseases, which will give them better and faster insight when they are confronted with other examples of infectious diseases. During this block period we will become familiar with a few infectious diseases that are important for humans. In order to obtain an appropriate insight into these diseases it is essential to acquire knowledge (or to refresh existing knowledge) about the microorganisms themselves. We will specifically address those characteristics of the pathogens that are important for the understanding of pathogenesis, diagnostics, prevention and therapy. To complete the subject, attention will be paid to immunology and pathology (particularly to inflammation). Number of available places: 30

More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2608
Period 6
11 Jun 2018
6 Jul 2018

Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:

- S.H. Lowe

Fac. Health, Medicine and Life Sciences
**Bachelor Medicine**

**Rehabilitation Medicine**

**Full course description**

In dit keuzeblok maakt de student kennis met de inhoud van de medische specialisatie revalidatiegeneeskunde. Zowel de patiënt (de revalidant, geconfronteerd met gevolgen van ziekte/ongeval) als het werk van de revalidatiearts staan in deze kennismaking centraal. De student maakt zowel in theorie als praktijk kennis met de multidisciplinaire werkwijze binnen de revalidatiegeneeskunde. Naast de rol van de revalidatiearts, vormen de werkzaamheden van andere disciplines (zoals fysiotherapie, ergotherapie, logopedie, psychologie en maatschappelijk werk) een wezenlijk onderdeel in de kennismaking. Integraal in dit blok wordt tevens de impact van ongeval/ziekte op maatschappelijke participatie en kwaliteit van leven van patiënten belicht. In het blok wordt gewerkt met onderwijsgroepen, colleges, practica en patiëntcontacten. Aantal beschikbare plaatsen: 30 Meer info: zie Eleum - Organizations - FHML Students - BA GEN - Onderderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

**GEN2612**
Period 6
11 Jun 2018
6 Jul 2018

*Print course description*

ECTS credits:
4.0

Instruction language:
Dutch

Coordinator:
- G.M.M. Winnubst

Fac. Health, Medicine and Life Sciences

**Translational Neuroscience**

**Full course description**

There is a link to the programme 2.3 Fundamentals of Neuroscience. Registration for both is recommended. Translational neuroscience applies insights gained through fundamental research on brain structure and function to identify novel approaches for treating diseases of the central nervous system (CNS) and peripheral nervous system (PNS). Therefore, requires continuous interaction between fundamental and clinical neuroscientists. This course will focus on translational neuroscience knowledge that the physician generally needs in order to deal intelligently and flexibly with the clinical problems she or he will face and enables them to go back and forth between the clinic and the laboratory. Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

**GEN2614**
Period 6
11 Jun 2018
6 Jul 2018

*Print course description*

ECTS credits:
4.0
Bachelor Medicine
Instruction language:
English
Coordinator:

- **M.P. Martinez Martinez**

Fac. Health, Medicine and Life Sciences

**Personalized Medicine in Cancer Treatment and Care**

**Full course description**

Cancer arises through sequential steps including activation of oncogenes and inactivation of tumor suppressor genes by genetic and epigenetic mechanisms (hallmarks of cancer). During solid cancer growth, tumor cells interact continuously with their normal non-malignant neighbors (microenvironment) and co-opt cells of the immune system, fibroblasts, endothelial cells etc. These interactions’s both positively and negatively affect tumor growth and have a crucial role in tumor initiation and progression and influence therapy outcome. Genomic analyses of human tumors have shown these are genetically and phenotypically heterogeneous and that this heterogeneity underlies differential outcome and response between patients. The identification of this tumor heterogeneity has led to the development of individualized approaches directed against a subset of cancer cells with patient-specific characteristics (personalized medicine).

Using expert lectures, practical assignments, a journal club and through discussion of real world cases within tutor groups both basic and clinical aspect of personalized medicine will be discussed together with biologists and clinicians, thereby taking into account the latest developments within the field with a focus on treatments involving radiation therapy.

Other aspects of personalized medicine, which will be discussed, include the involvement of patients in decision making and new interactive methods to facilitate this shared decision making between physician and patient. Finally methodologies, which are used to determine how cost-effective a treatment is, will be discussed. These economical facts are increasingly important in our expensive healthcare system and provide challenging ethical considerations for our society.

Number of available places: 25

**Course objectives**

1. Understand the concept of personalized medicine, how is it investigated and how it can be applied in cancer patients
2. Understand the genetic basis for cancer development and treatment response and the role of the tumor microenvironment therein.
3. Understand the concept and implications of shared decision making and economical analysis of healthcare decisions in (personalized) medicine

GEN2615
Period 6
11 Jun 2018
6 Jul 2018

**Print course description**

ECTS credits:
Bachelor Medicine

4.0
Instruction language:
English
Coordinator:

- K.M.A. Rouschop

Teaching methods:
Work in subgroups, Lecture(s), PBL, Presentation(s), Skills, Working visit(s), Assignment(s)
Assessment methods:
Participation, Written exam, Assignment, Computer test
Keywords:
cancer; personalised treatment; microenvironment
Fac. Health, Medicine and Life Sciences

Clinical and Therapeutic Aspects of Thrombosis

GEN2617
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:

- H.M.H. Spronk

Fac. Health, Medicine and Life Sciences

Maakt het Beleven van Kunst je een Betere Dokter?

GEN2618
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:

- P.E.M.R. Fleskens

Fac. Health, Medicine and Life Sciences

Male and Female Infertility - Ferrara/Italy
Course objectives

- Factors affecting infertility - Evaluation of the infertile couple - Diagnosis and Management of tubal factor infertility - Diagnosis and Management of uterine infertility - Diagnosis and Management of infertility due to endometriosis - Diagnosis and Management of infertility due to anovulation - Diagnosis and Management of infertility due to diminished ovarian reserve - Diagnosis and Management of male infertility - Diagnosis and Management of unexplained infertility - Endocrine disorders and infertility - Physiologic basis of ovulation induction - Intrauterine insemination - In vitro reproductive technologies - Complication of infertility treatment - Preimplantation genetic diagnosis - Fertility preservation - Infertility treatment: varying approaches across continents

Number of available places: 10 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014 

GEN2312  

Print course description

ECTS credits:  
4.0

Instruction language:  
English

Coordinator:  
- A.M. Duijvestijn

Fac. Health, Medicine and Life Sciences

The Basic Principles of Pharmacology

Full course description

The module's subjects will be provided in an integrative setting of PBL cases, lectures and practical trainings. The PBL cases will be amended by lectures which also hook up with topics of this module and prior modules. The presentation of a real patient case illustrates how pharmacology is implemented in clinical practice. An important part of this module consists of a practical in which students perform a clinical trial on the effects of nutrients on the kinetics of a drug. This practical will be completed by an assignment. The results of all other practicals will be presented and discussed in the tutorial group meetings enabling their seamless embedding in the other block's subjects. This module provides an introduction into the basic principles of pharmacology and toxicology. Pharmacology and toxicology deal with the effects of biologically active compounds on (patho)physiological processes. The disciplines are subdivided into two general subjects: (1) pharmacodynamics, which assesses the effects of a compound in the human physiology, and (2) pharmacokinetics, which assesses the fate of a compound in the human body. Both subjects determine the therapeutic effectivity and toxicity of a drug in humans and are influenced by genetic factors like polymorphisms in genes of drug metabolizing enzymes and by the concomitant intake of nutrients. Also subjects like drug development (preclinical and clinical phases) and the set-up of a clinical trial protocol for medical-ethical approval are covered.

Course objectives

The student is able to:
Bachelor Medicine

1. describe the basic principles of pharmacodynamics, pharmacokinetics and drug development.
2. explain the effects of nutrients and genetic polymorphisms on the action of drugs.
3. calculate basic pharmacodynamic and pharmacokinetic parameters and to use them for the prediction of drug action.
4. discuss the design and execution of clinical trials to investigate the efficacy of drugs.
5. evaluate clinical trial data and present them to qualified persons so that they can follow and understand the outcomes and conclusions.

Recommended reading

1. Module manual "The Basic Principles of Pharmacology"
4. J.M.A. Sitsen en K.L. Franson: Farmacologie. 4e editie, Elsevier, 2009. Several copies are available at the library's "study landscape".
5. Relevant medical books on human anatomy, physiology and pathophysiology available in the library's "study landscape" or online via accessmedicine.mhmedical.com
6. Search engines such as PubMed to find up-to-date scientific (review) articles.

BGZ2026
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Coordinator:
• A.R. Weseler

Teaching methods:
Assignment(s), Work in subgroups, Lecture(s), PBL, Research, Skills
Assessment methods:
Assignment, Attendance, Participation, Written exam
Keywords:
Pharmacokinetics, ADME, Pharmacodynamics, Receptor, toxicity, polymorphism, Clinical study, drugs
Fac. Health, Medicine and Life Sciences

Practical Skills The Basic Principles of Pharmacology

Full course description

The module offers the following practical trainings:

1. Training 1: Clinical study: drug-nutrient interaction (paracetamol study). This training is a small clinical study into the effect of nutrients on the pharmacokinetics of a drug (paracetamol). The students analyse the samples they collected and processed themselves by means of HPLC analysis. They shall evaluate the data (on individual and group level) and write
Bachelor Medicine

1. a report about this which is to hand in electronically. At the end of the module, the results of the study will be discussed during an interactive session.
2. Training 2: Genetic toxicity, polymorphism CYP P450. In this training students determine genetic differences between people with respect to drug-metabolising liver enzymes.
3. Training 3: Pharmacokinetics. During this lab training the interrelation of pharmacokinetic key parameters such as volume of distribution, dose, and clearance are practically appraised.

Computer training

1. Computer training 1: Pharmacodynamics. This computer simulation elucidates basic principles of drug-receptor interactions and clarifies terms like (partial) agonists, antagonists, affinity (KD), EC50 (pD2) and intrinsic activity (alpha)
2. Computer training 2: Pharmacokinetics. A computer simulation that illustrates plasma concentration curves upon different modes of administration and allows assessing and modulating all relevant pharmacokinetic parameters in a one-compartment model.

Course objectives

The student is able to:

1. describe the basic principles of pharmacodynamics, pharmacokinetics and drug development.
2. explain the effects of nutrients and genetic polymorphisms on the action of drugs.
3. calculate basic pharmacodynamic and pharmacokinetic parameters and to use them for the prediction of drug action.
4. discuss the design and execution of clinical trials to investigate the efficacy of drugs.
5. evaluate clinical trial data and present them to qualified persons so that they can follow and understand the outcomes and conclusions.

Recommended reading

1. Module manual "The Basic Principles of Pharmacology"
4. J.M.A. Sitsen en K.L. Franson: Farmacologie. 4e editie, Elsevier, 2009. Several copies are available at the library's "study landscape".
5. Relevant medical books on human anatomy, physiology and pathophysiology available in the library's "study landscape" or online via accessmedicine.mhmedical.com
6. Search engines such as PubMed to find up-to-date scientific (review) articles.
Public Health in International Context

Full course description

A look at questions of public health and health care from an international perspective reveals two basic realities: globalization and tradition. As the world globalizes, health threats and opportunities are also becoming more global. However, this trend coexists with a more traditional reality. Namely, as we look internationally, we see an enormous diversity in health status—and even in definitions of health and understandings of how it is best pursued—among the many cultures of the world. This module is designed to give students insight into both basic realities, and hence the module’s name: Public Health in International Context. In this module, we will explore how travel, migration, and climate change are giving rise to a new context in which infectious disease and other health threats are viewed. Further, we will consider the opportunities and barriers created by international cultural diversity for health care and public health activity. The module covers four weeks and each week focuses on one particular theme. There are three set themes and one open theme that will be organized around the expertise of a guest speaker who will be invited to the module. The set themes include: 1) Global health epidemiology and data sources, 2) transnational health governance and development and 3) global trade and health.

Recommended reading

Bachelor Medicine
Coordinator:
  
  - M.J. Commers

Teaching methods:
Work in subgroups, Lecture(s), PBL
Assessment methods:
Attendance, Final paper, Written exam
Fac. Health, Medicine and Life Sciences

Practical Skills Public Health in International Context

Full course description

The practical skills training includes three elements:

1. Analysis of a public health problem at the international level. In a group of approximately 6 students you will conduct research mainly based on existing literature into one major public health problem at the international level (such as HIV/AIDS, malaria or tuberculosis). You will report the results of this analysis in a group paper.

2. Training on the role of culture on health care and public health practice internationally. Culture and differences between (and within) cultures is an aspect interrelated with considering public health in an international perspective. In this training you will look at the important role of culture in defining how people define health and ill-health, as well as how they understand what determines health, what health related customs are and how health can therefore best be pursued. During this training you will work on an assignment around culture and cultural sensitivity of interventions and research in a group of six students. Findings will be presented in an oral presentation.

3. Training international collaboration. During this training you will learn about the facilitators and barriers of working with different nationalities. This training will consist of a theoretical and a practical part. The theoretical part will inform you on challenges of working with team members from different nationalities and cultural backgrounds. In addition, you will learn more about the impact nationality and culture can have on collaboration in teams.

In addition, there will be a field visit to a refugee center.

PGZ2226
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
1.0
Instruction language:
English
Coordinator:
  
  - M.J. Commers

Teaching methods:
Assignment(s), Work in subgroups, Lecture(s), Working visit(s)
Assessment methods:
Bachelor Medicine
Attendance, Final paper, Presentation

Bachelor International Track in Medicine (ITM) Year 2
Fac. Health, Medicine and Life Sciences

Circulation and Breathing II

Full course description

In year 1, the physiology of the cardiopulmonary system has been studied. In year 3, chronic cardiopulmonary pathology will be discussed from a clinical perspective. Course 2.1 forms the bridge between year 1 and 3 by focusing on basic pathophysiology of cardiopulmonary diseases. The course is built around the major organ system involved: the heart, vasculature, kidneys and lungs. Each of these four parts starts with an introductory lecture on physiology, to refresh the knowledge about each organ system, and ends with a clinical lecture detailing how pathophysiological mechanisms affect patients and how this knowledge can guide treatment. The following diseases are discussed in tutorial groups: • The vasculature: atherosclerosis and myocardial infarction • The heart: arrhythmias, valvular disease and heart failure • The kidneys: renal artery stenosis and acid-base disorders • The lungs: asthma and pneumonia The course includes practica on hemodynamics, anatomy and histology, as well as 'skills lab' training on physical examination of cardiac function, pulmonary function and resuscitation. Each tutorial group will give a short presentation at a poster session about a variety of topics in pulmonary (patho)-physiology. In addition, a workshop on the design of randomized clinical trials will be organized. At the end of the course, we will focus on hypovolemic and septic shock, integrating the (dys)-regulation by the organ systems and the interactions within the cardiopulmonary system.

Course objectives

Knowledge and insight The following diseases are discussed in tutorial groups: • the vasculature: atherosclerosis and myocardial infarction, • the heart: arrhythmias, valvular disease and heart failure, • the kidneys: renal artery stenosis and acid-base disorders, • the lungs: asthma and pneumonia. At the end of the course, we will focus on hypovolemic and septic shock, integrating the (dys)-regulation by the organ systems and the interactions within the cardiopulmonary system. Skills The course includes practica on hemodynamics, anatomy and histology, as well as skills lab training on physical examination of cardiac function, pulmonary function and resuscitation. Each tutorial group will give a short presentation at a poster session about a variety of topics in pulmonary (patho)-physiology. In addition, a workshop on the design of randomized clinical trials will be organised.

ITM2101
Period 1
4 Sep 2017
27 Oct 2017
Print course description
ECTS credits:
7.0
Instruction language:
English
Growth and Development II

Full course description

This block links up to block Growth and Development in year 1 (block 1.1). Once more the stages of life form a connecting thread throughout the block. In the first year the normal procedure of growth and development has already received much attention. In this block we build upon this knowledge and we would also like to get you acquainted with abnormal growth and development. This is done problem based by using cases, in which basic (patho-) physiological processes, diagnostics and treatment are covered. Lectures provide additional knowledge partly by means of patient demonstrations. The first four weeks concern pregnancy, delivery and birth. In the fifth week child development is covered together with some puberty related themes. In week 6 and 7 the central theme is formed by abnormal growth of tissues and treatment for oncological disorders. We close of in the last week of the block with functional changes that occur in ageing. Within the scope of science a “congress day” is organised that includes a forum discussion, posters and presentations of scientific data made for and by you.

Course objectives

Knowledge and insight • Normal procedure of growth and development • Abnormal growth and development • Basic (patho-) physiological processes, diagnostics and treatment • Pregnancy, delivery and birth • Child development • Abnormal growth of tissues and treatment for oncological disorders • Functional changes that occur in ageing • Skills training Gynaecology and Obstetrics • Assessment of the development of the infant and child • Examination of the breasts Scientific aspects • A ‘congress day’ is organised that includes a forum discussion, posters and presentations of scientific data made for and by the student

ITM2102
Period 2
30 Oct 2017
22 Dec 2017
Print course description
ECTS credits:
7.0
Instruction language:
English
 Coordinator:

• A.H.N. Hopman

Teaching methods:
Bachelor Medicine
Lecture(s), Patientcontact, Skills, PBL
Keywords:
Key disciplines: Obstetrics/Gynaecology, Oncology, Anatomy, Biochemistry, Genetics, Molecular Cell Biology, Pathology, Physiology, Paediatrics, Pharmacology, Skills training, Epidemiology,
Fac. Health, Medicine and Life Sciences

Digestion and Defence II

Full course description

There are three main themes in this block: Gastroenterology, Infectiology, Immunology, and Health Law. It forms the bridge between ‘Digest and defense year 1’ (block 1.5) and the cluster abdomen year 3. Year one extensively dealt with normal anatomy and physiology of the digestive tract and the basic principles of microbiology and immunology. Year 3 will mainly deal with clinical reasoning, differential diagnosis, probability diagnosis and therapy. In order to be well prepared for this, year 2 will focus on pathophysiology. Selected clinical presentations will be used to discuss the most important principles and concepts of gastroenterology, infectiology and immunology, starting from the basic knowledge of physiology and anatomy obtained in year 1. The use of illness scripts (pattern recognition of disease) will be introduced as a basis for clinical reasoning. Where applicable, pathophysiological concepts will be reduced to different mechanisms of disease. Discussing pathophysiological concepts in the context of mechanisms of disease in the tutorial group will be an excellent preparation for clinical reasoning leading to differential diagnosis. Knowledge of the basis sciences is indispensable. Therefore, it is mandatory to refresh the knowledge from the block ‘Digest and defense year 1’ before the pre-discussion of each new case or task. There will be ample attention to psychosocial themes such as chronicity, ethics (organ transplant) and public health (outbreak management of infectious disease). The major procedure in the tutorial group will be PBL, incidentally in a multimedia approach. Activities in the tutorials will be supported by lectures, practicals and skills training, taking care of the best possible mutual consistency.

Course objectives

- Explaining clinical symptoms of the most important diseases of the gastrointestinal system using (patho)physiological concepts
- Psychosocial and ethical aspects of selected diseases (addiction, chronicity)
- Cause and consequence of auto-immunity (general, with a projection on the gastrointestinal system)
- Microbiological en immunological aspects of major bacterial, viral, parasitological and opportunistic infections related to clinical presentation
- Antibiotics en resistance
- Global aspects of serious infections; import diseases
- Hypersensitivity/allergy

Recommended reading

www.un.org International Health Law (David Townend)
Thinking and Doing II

Full course description

Thinking & Doing II, the final regular 8-week block of year 2, covers aspects of thinking (cognitive, motivational and emotional disorders as well as disorders of sensory systems such as the visual system, sense of touch and position) and aspects of movement (disorders related to the motor system, bones, muscles and joints). The block offers more in-depth knowledge as well as new subjects as a sequel to the issues discussed in the block on Thinking & Doing in year 1. The brain is the source of movement, posture, touch, vision, cognition, emotion and motivation. Disturbances of these systems may occur in isolation, but also in combination. Therefore, this block will show how subjects are integrated. The subjects will often be approached by means of clinical reasoning, which will be given a lot of attention so as to facilitate the transition to year 3. This implies that educational methods will be applied that are closer to real practice than those used before in the curriculum. The patient’s symptoms and complaints are used as a starting point, which means that a variety of block-related disciplines will be studied based on integrated patient cases. The block thus aims to train the students to consider differential diagnoses based on the patient’s symptoms. Aspects of ophthalmology covered in this block include the anatomy, physiology and pathophysiology of some common eye disorders and causes of visual impairment, including vision and several eye measurements. Thinking & Doing in year 1 focussed on the lower extremities. This block studies anatomy on the basis of spinal column and shoulder problems, the pathophysiology of osteoporosis and osteoarthritis, radicular problems (e.g. herniated disc) and nonspecific back pain, including the social consequences such as incapacity for work. The biospsychosocial model will be introduced. Back problems are also used to study neuroanatomy (dermatomes, myotomes, peripheral nerves). Furthermore, the anatomy of the brain will again be addressed, now with special focus on stroke patients. Included are aspects of diagnostics (localisation principles), consequences for the patient, acute and long-term treatment. The block also covers a number of psychiatric disorders, again taking the patient’s symptoms and behaviour as a starting point. The clinical pictures of depression and dementia will be discussed, including the associated biological, psychological and environmental aspects. The students will also learn to conduct a mental state examination, which they will practice as part of their CORE training.
**Course objectives**

Eye: Anatomy: Functional anatomy of the eye, blood supply, adnexa, papilla and macula Physiology: Physiological optics Emmetropia and accommodation Ametropia, myopia, hypermetropia, astigmatism, presbyopia Functioning of the retinal receptors, organisation and conduction of stimuli Skills: Vision examination, far and close by Diagnostic refraction testing, Amsler, External inspection of the eye and adnexa with penlight/ophthalmoscope and loupe Locomotor/neurology: Anatomy: Spinal column, shoulder, spinal cord and nerve roots, trunk muscles Pathophysiology: Ageing of the spinal column and pathophysiology of osteoarthritis Osteoporosis: bone physiology, pathophysiology, symptoms, diagnostics and risk factors Pathophysiology of fractures and fracture healing Radicular syndrome Nonspecific low back problems Shoulder problems: dislocation, impingement Skills: Methodical examination of the cervical, thoracic, lumbar spinal column and shoulder based on case studies Brain/ neurology: Stroke: diagnostics, acute and long-term treatment Long-term consequences Skills: History taking and physical examination of stroke patients and examination of patients with radicular irritation in the leg (integration examination of the back and neurological examination) Brain/psychiatry: Regulation and dysregulation of emotion, motivation and cognition Biological, psychological, ecological aspects of depression and dementia and aspects of communication Skills: Mental state examination / Clinical reasoning based on symptoms Other aspects Work and health, organisation of healthcare Neurobiology of pain Biopsychosocial model Ethics concerning early diagnostics Gene environmental interaction, genetic vulnerability

ITM2105  
Period 5  
9 Apr 2018  
8 Jun 2018  
[Print course description](#)  
ECTS credits:  
7.0  
Instruction language:  
English  
Coordinator:  
• **L. Goossens**

Teaching methods:  
Lecture(s), PBL, Skills, Training(s)

Keywords:  
Key disciplines: Ophthalmology, Anatomy, Physiology, Pathophysiology, Social Medicine, Neuroanatomy, Diagnostics, Psychiatry  
Fac. Health, Medicine and Life Sciences

**Progress Test Examination Year 2**

ITM2006  
Year  
1 Sep 2017  
31 Aug 2018  
[Print course description](#)  
ECTS credits:  
8.0  
Instruction language:  
English
Bachelor Medicine
Coordinator:
  - B. Schutte
Fac. Health, Medicine and Life Sciences

Portfolio Examination Year 2

ITM2106
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
16.0
Instruction language:
English
Coordinator:
  - M.I. Kruithof

Bachelor International Track in Medicine (ITM) Year 2
Electives

Fac. Health, Medicine and Life Sciences

European and International Health Law

Course objectives

The object of the course is to give students an understanding of the values underpinning health care in the international context, and to give specific understanding of the differences between health Laws in different countries and created by the international community, and to ask about the origins and motivations of those rights. It seeks to place the study of medicine into a broader context both in terms of the relationship between the practice of medicine and Law, and of the different constructions of rights and expectations between jurisdictions. To give a specific understanding of the European context of international co-operation in relation to health. Number of available places:
30 Meer info: zie Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014
GEN2304
Period 3
8 Jan 2018
2 Feb 2018
Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:
Fundamentals of Neuroscience

Full course description

There is a link to the programme 2.6 Translational Neuroscience. Registration for both is recommended. Fundamentals of neuroscience intends to extend your insights gained through fundamental research on brain structure and function to identify novel approaches for treating diseases of the central nervous system (CNS) and peripheral nervous system (PNS). This course will focus on the basic neuroscientific knowledge that the physician generally needs in order to deal intelligently and flexibly with the clinical problems she or he will face. Number of available places: 30

More info: see Eleum > Organizations > FHML Students > BA GEN > Onderwijs in Nederland > Keuzeonderwijs 2.3 en 2.6 > Programmbeschrijvingen 2013-2014

GEN2305
Period 3
8 Jan 2018
2 Feb 2018

Print course description

ECTS credits:
4.0
Instruction language:
English
Coordinator:

• M.P. Martinez Martinez

Health & Development Challenges in Developing Countries: a Focus on HIV/AIDS

Full course description

This course critically focuses on structural issues of development on a global scale. Globalization refers to the increasing interdependence of markets, states and civil societies and the resulting effects on people and their environment. By also focusing on inequality, the structural differentiation among actors in terms of access to means, opportunities and resources, issues of (re-)distribution are taken into account as well. The course investigates inequalities and interdependencies on a global, international, national and local level, while considering the role of public, private and civil society actors. Thus, it aims to understand the underlying development processes and unlock the ongoing debates. The course focuses on the following themes: Millennium Development Goals (MDGs) and issues of poverty, colonial history; actors of development; democratization and human rights; women and health; migration and remittances; environment and global crises. Number of available places: 30 (only available for ITM-students!)

More info: see Eleum > Organizations > FHML Students > BA GEN > Onderwijs in Nederland > Keuzeonderwijs 2.3 en 2.6 > Programmbeschrijvingen 2013-2014

GEN2306
Exercise Physiology

Full course description

Various forms of exercise challenge the functions of our body. The fact that we usually cope well with those circumstances, sometimes under extreme conditions, shows that the body is capable of extensive adaptations. Studying of how our body handles exercise is an excellent way to understand the physiology as a whole. Moreover, the systems that allow us to perform well during exercise are the same that help us to survive diseases. Also, it is becoming increasingly clear that physical exercise is of primary importance for keeping a good health, such as preventing obesity, diabetes, cardiovascular disease. Paradoxically, many physicians understand little about problems originating from exercise and dissuade often physical exercise in patients. This teaching block aims to study physiology of the human body until the most extreme situations and combine this with better appreciation of physical exercise by future physicians. Number of available places: More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014

Course objectives

Learning goals - anatomy, physiology, histology of the neuromuscular system - methods for studying force and velocity - aerobic vs. anaerobic metabolism - measurement of body composition - principles of various forms of exercise training - principles of testing force and velocity - effects of different forms of exercise training in health and disease - anatomy, physiology of respiration, ventilation and gas exchange and their regulation - abnormalities in ventilation and respiration in lung disease - consequences of staying at high altitude, in great depth; both acutely and chronically - effects of training on respiration, ventilation and gas exchange - constraints of exercise capacity by respiratory diseases - cardiovascular changes during exercise - cardiovascular changes due to exercise training - risks of exercise in cardiovascular diseases - exercise as treatment for cardiovascular diseases - fluid and salt management during exercise and heat - temperature regulation during exercise and ambient temperatures - effect ambient temperatures on exercise
Radiation Oncology: combining clinic, biology, technology, imaging and computer sciences to treat cancer patients

Full course description

Radiotherapy is the medical use of ionizing radiation and is one of the most effective forms of cancer treatment. It contributes to the cure or palliation of many cancer patients. Ionizing radiation induces DNA lesions within the tumor cells. These lesions, if unrepaired, are unable to divide and to grow which ultimately results in cell death. Radiotherapy aims to cause maximum damage of cancer cells and minimum damage of normal tissue cells.

Number of available places: 25

Course objectives

-the workflow of a patient (RO), more specifically to understand - To understand Radiation Oncology
of RO: five sub-disciplines- To have a clear view of the contribution of the
1. clinic (including psychosocial care and Shared Decision Making in radiation therapy)
2. biology
3. imaging
4. physics
5. computer sciences

- To understand how radiation oncology works

Recommended reading


GEN2315
Period 3
Bachelor Medicine

8 Jan 2018
2 Feb 2018
Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:
- L.J. Dubois

Teaching methods:
Assignment(s), Lecture(s), Work in subgroups, Presentation(s), Onderwijspoli('s), Skills
Assessment methods:
Assignment, Attendance, Written exam, Presentation
Keywords:
Cancer and Radiotherapy Radiotherapy and oxygen Radiotherapy and immunotherapy agents
Physics Advanced Imaging Brachytherapy Lung Cancer Linear accelerator, radiation, detection
Dosimetry External Beam therapy Knowledge engineering oncology Palliative irradiation Patient
safety Shared Decision Making
Fac. Health, Medicine and Life Sciences

**Gender and Diversity in Medicine**

**Full course description**

This course will introduce students to the field of Gender Medicine and provide an overview of methods related to sex and gender analysis and the most recent insights of sex and gender implications in a number of medical disciplines (cardiology, pharmacology, and mental health). Students will learn to understand how sex and gender factors are important to consider in disease susceptibility, recognition of symptoms, presentation of symptoms, compliance with therapy and coping with disease. Gender Medicine is a specialty at the forefront of research and is internationally recognized by important research organizations and funders. Despite the existence of handbooks in English and German, specialized centers in Europe and an international society, the scope and impact of this field are not widely known nor are issues of sex and gender systematically taught in regular medical curricula.

**Course objectives**

Aim of the module is to integrate gender medicine into medical education and research as a new discipline. Students will learn to grasp the fundamental principles and scientific standards of gender medicine in selected medical disciplines (specializations). Students will learn to understand the importance of taking sex and gender aspects into consideration in medical treatment and research. They will acquire an overview of fields of evidence-based medicine, where sex and gender aspects are already implemented. They will familiarize themselves with instruments of gender and sex differences in diagnosis and therapy with a view to implementing these in their own medical research and their future work as physicians. Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014
**Recommended reading**


**GEN2316**
Period 3
8 Jan 2018
2 Feb 2018
[Print course description](#)

ECTS credits: 4.0
Instruction language: English
Coordinator: [M.T. Brancaccio](#)

Teaching methods:
- Assignment(s), Work in subgroups, Lecture(s), Paper(s), Presentation(s), Research, Training(s)

Assessment methods:
- Assignment, Attendance, Final paper, Participation, Presentation

Keywords:
- sex, gender, basic research, Biomedicine, clinical practice, health research, innovative methodologies

Fac. Health, Medicine and Life Sciences

**Drugs in the Clinic**

**Full course description**

There is a link to the programme 2.3 Mechanisms of drug action: basic and advanced principles. Registration for both is recommended. Drug therapy is of vital importance in modern clinical practice. Nevertheless, using drugs in an optimal manner unfortunately is still not obvious. Inappropriate drug choice due to lack of knowledge of the prescribing physician, differences between populations or individuals, side effects of drugs, poor patient compliance and drug interactions may all contribute to suboptimal or even hazardous drug use. In this block the students will learn how factors such as here mentioned can determine the outcome of drug treatment and how they should be taken into account/dealt with. In addition, the students will learn about novel trends and developments in modern pharmacotherapy. Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2610
Period 3
8 Jan 2018
2 Feb 2018
[Print course description](#)

ECTS credits: 4.0
Instruction language: English
Bachelor Medicine
Coordinator:

- H.H.H.W. Schmidt

Fac. Health, Medicine and Life Sciences

**Dutch Health Law**

**Full course description**

Dutch Health Law and Health Ethics play an important part in setting the norms within which medicine is practiced. A study of the Dutch Law allows medical students the opportunity to explore the limits and opportunities that the Law places on their professional lives within the context of Dutch society. Health Law has been a part of the Faculty of Medicine since the creation of the Faculty. The Health Law group is now based in the Health, Ethics and Society department (Metamedica) in FHML and CAPHRI. It researches and teaches in the areas of traditional Medical Law (examining, for example, questions of patients rights, of medical professionals’ duties, of the regulation of the profession, and of the rules concerning access to health care), and more interdisciplinary questions of Health Law (considering, for example, the regulation of the development and implementation of new technologies in health care, of Law’s response to the health in society, the ethical construction of the Law, broader questions of the Law and nutrition and public health programmes and the rights of individuals to make life choices). Number of available places: 30

More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2604

Period 6

11 Jun 2018
6 Jul 2018

Print course description

ECTS credits: 4.0

Instruction language: English

Coordinator:

- D.M.R. Townend

Fac. Health, Medicine and Life Sciences

**Infectious Diseases**

**Full course description**

Throughout the history of mankind, infectious diseases have always been an important cause of illness and death. Although antibiotics are widely available, infectious diseases are quite common even now. According to the World Health Organisation (WHO) annually 13 million people die of infectious diseases. This means that even in the 21st century approximately a quarter of all deaths can be attributed to fatal infections. On a global level and particularly in the developing countries, major ‘killers’ are AIDS, tuberculosis, malaria, diarrhoea, pneumonia and measles. However, in the Western world infections are prevalent as well. Respiratory tract infections, to which many people are exposed each winter, are a good example of this. Because infections occur in all age groups and
Bachelor Medicine

can affect all organs and tissues of the body, the study of these diseases is highly complex. The host’s condition as well as factors pertaining to the microorganism, determine the course of the disease. In order to obtain an insight into infectious diseases in general, we chose to study a few representative infection types in this block. This is based on the idea that a study of these ‘models’ will provide students with a good basic knowledge of infections/infectious diseases, which will give them better and faster insight when they are confronted with other examples of infectious diseases. During this block period we will become familiar with a few infectious diseases that are important for humans. In order to obtain an appropriate insight into these diseases it is essential to acquire knowledge (or to refresh existing knowledge) about the microorganisms themselves. We will specifically address those characteristics of the pathogens that are important for the understanding of pathogenesis, diagnostics, prevention and therapy. To complete the subject, attention will be paid to immunology and pathology (particularly to inflammation). Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2608
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:

• S.H. Lowe

Fac. Health, Medicine and Life Sciences

Translational Neuroscience

Full course description

There is a link to the programme 2.3 Fundamentals of Neuroscience. Registration for both is recommended. Translational neuroscience applies insights gained through fundamental research on brain structure and function to identify novel approaches for treating diseases of the central nervous system (CNS) and peripheral nervous system (PNS). Therefore, requires continuous interaction between fundamental and clinical neuroscientists. This course will focus on translational neuroscience knowledge that the physician generally needs in order to deal intelligently and flexibly with the clinical problems she or he will face and enables them to go back and forth between the clinic and the laboratory. Number of available places: 30 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6

GEN2614
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
English
Cancer arises through sequential steps including activation of oncogenes and inactivation of tumor suppressor genes by genetic and epigenetic mechanisms (hallmarks of cancer). During solid cancer growth, tumor cells interact continuously with their normal non-malignant neighbors (microenvironment) and co-opt cells of the immune system, fibroblasts, endothelial cells etc. These interactions’s both positively and negatively affect tumor growth and have a crucial role in tumor initiation and progression and influence therapy outcome. Genomic analyses of human tumors have shown these are genetically and phenotypically heterogeneous and that this heterogeneity underlies differential outcome and response between patients. The identification of this tumor heterogeneity has led to the development of individualized approaches directed against a subset of cancer cells with patient-specific characteristics (personalized medicine).

Using expert lectures, practical assignments, a journal club and through discussion of real world cases within tutor groups both basic and clinical aspect of personalized medicine will be discussed together with biologists and clinicians, thereby taking into account the latest developments within the field with a focus on treatments involving radiation therapy.

Other aspects of personalized medicine, which will be discussed, include the involvement of patients in decision making and new interactive methods to facilitate this shared decision making between physician and patient. Finally methodologies, which are used to determine how cost-effective a treatment is, will be discussed. These economical facts are increasingly important in our expensive healthcare system and provide challenging ethical considerations for our society.

Number of available places: 25

Course objectives

1. Understand the concept of personalized medicine, how is it investigated and how it can be applied in cancer patients
2. Understand the genetic basis for cancer development and treatment response and the role of the tumor microenvironment therein.
3. Understand the concept and implications of shared decision making and economical analysis of healthcare decisions in (personalized) medicine
Bachelor Medicine
English
Coordinator:
  - K.M.A. Rouschop

Teaching methods:
Work in subgroups, Lecture(s), PBL, Presentation(s), Skills, Working visit(s), Assignment(s)
Assessment methods:
Participation, Written exam, Assignment, Computer test
Keywords:
cancer; personalised treatment; microenvironment
Fac. Health, Medicine and Life Sciences

Clinical and Therapeutic Aspects of Thrombosis

GEN2617
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:
  - H.M.H. Spronk

Fac. Health, Medicine and Life Sciences

Male and Female Infertility - Ferrara/Italy

Course objectives
- Factors affecting infertility - Evaluation of the infertile couple - Diagnosis and Management of tubal factor infertility - Diagnosis and Management of uterine infertility - Diagnosis and Management of infertility due to endometriosis - Diagnosis and Management of infertility due to anovulation - Diagnosis and Management of infertility due to diminished ovarian reserve - Diagnosis and Management of male infertility - Diagnosis and Management of unexplained infertility - Endocrine disorders and infertility - Physiologic basis of ovulation induction - Intrauterine insemination - In vitro reproductive technologies - Complication of infertility treatment - Preimplantation genetic diagnosis - Fertility preservation - Infertility treatment: varying approaches across continents
Number of available places: 10 More info: see Eleum - Organizations - FHML Students - BA GEN - Onderwijs in Nederland - Keuzeonderwijs 2.3 en 2.6 - Programmabeschrijvingen 2013-2014
GEN2312
Print course description
ECTS credits:
4.0
Instruction language:
English
Coordinator:
The Basic Principles of Pharmacology

Full course description

The module’s subjects will be provided in an integrative setting of PBL cases, lectures and practical trainings. The PBL cases will be amended by lectures which also hook up with topics of this module and prior modules. The presentation of a real patient case illustrates how pharmacology is implemented in clinical practice. An important part of this module consists of a practical in which students perform a clinical trial on the effects of nutrients on the kinetics of a drug. This practical will be completed by an assignment. The results of all other practicals will be presented and discussed in the tutorial group meetings enabling their seamless embedding in the other block's subjects. This module provides an introduction into the basic principles of pharmacology and toxicology. Pharmacology and toxicology deal with the effects of biologically active compounds on (patho)physiological processes.

The disciplines are subdivided into two general subjects: (1) pharmacodynamics, which assesses the effects of a compound in the human physiology, and (2) pharmacokinetics, which assesses the fate of a compound in the human body. Both subjects determine the therapeutic effectivity and toxicity of a drug in humans and are influenced by genetic factors like polymorphisms in genes of drug metabolizing enzymes and by the concomitant intake of nutrients. Also subjects like drug development (preclinical and clinical phases) and the set-up of a clinical trial protocol for medical-ethical approval are covered.

Course objectives

The student is able to:

1. describe the basic principles of pharmacodynamics, pharmacokinetics and drug development.
2. explain the effects of nutrients and genetic polymorphisms on the action of drugs.
3. calculate basic pharmacodynamic and pharmacokinetic parameters and to use them for the prediction of drug action.
4. discuss the design and execution of clinical trials to investigate the efficacy of drugs.
5. evaluate clinical trial data and present them to qualified persons so that they can follow and understand the outcomes and conclusions.

Recommended reading

1. Module manual "The Basic Principles of Pharmacology"
4. J.M.A. Sitsen en K.L. Franson: Farmacologie. 4e editie, Elsevier, 2009. Several copies are available at the library's "study landscape".
5. Relevant medical books on human anatomy, physiology and pathophysiology available in the library's "study landscape" or online via accessmedicine.mhmedical.com
6. Search engines such as PubMed to find up-to-date scientific (review) articles.
Practical Skills The Basic Principles of Pharmacology

Full course description

The module offers the following practical trainings:

1. Training 1: Clinical study: drug-nutrient interaction (paracetamol study). This training is a small clinical study into the effect of nutrients on the pharmacokinetics of a drug (paracetamol). The students analyse the samples they collected and processed themselves by means of HPLC analysis. They shall evaluate the data (on individual and group level) and write a report about this which is to hand in electronically. At the end of the module, the results of the study will be discussed during an interactive session.

2. Training 2: Genetic toxicity, polymorphism CYP P450. In this training students determine genetic differences between people with respect to drug-metabolising liver enzymes.

3. Training 3: Pharmacokinetics. During this lab training the interrelation of pharmacokinetic key parameters such as volume of distribution, dose, and clearance are practically appraised.

Computer training

1. Computer training 1: Pharmacodynamics. This computer simulation elucidates basic principles of drug-receptor interactions and clarifies terms like (partial) agonists, antagonists, affinity (KD), EC50 (pD2) and intrinsic activity (alpha)

2. Computer training 2: Pharmacokinetics. A computer simulation that illustrates plasma concentration curves upon different modes of administration and allows assessing and modulating all relevant pharmacokinetic parameters in a one-compartment model.

Course objectives

The student is able to:

1. describe the basic principles of pharmacodynamics, pharmacokinetics and drug development.
Bachelor Medicine

2. explain the effects of nutrients and genetic polymorphisms on the action of drugs.
3. calculate basic pharmacodynamic and pharmacokinetic parameters and to use them for the prediction of drug action.
4. discuss the design and execution of clinical trials to investigate the efficacy of drugs.
5. evaluate clinical trial data and present them to qualified persons so that they can follow and understand the outcomes and conclusions.

Recommended reading

1. Module manual "The Basic Principles of Pharmacology"
4. J.M.A. Sitsen en K.L. Franson: Farmacologie. 4e editie, Elsevier, 2009. Several copies are available at the library's "study landscape".
5. Relevant medical books on human anatomy, physiology and pathophysiology available in the library's "study landscape" or online via accessmedicine.mhmedical.com
6. Search engines such as PubMed to find up-to-date scientific (review) articles.

BGZ2226
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
1.0
Instruction language:
English
Coordinator:
• A.R. Weseler

Teaching methods:
Assignment(s), Work in subgroups, PBL, Research, Skills
Assessment methods:
Assignment, Written exam
Keywords:
Pharmacokinetics, ADME, Pharmacodynamics, Receptor, toxicity, polymorphism, Clinical study, drugs
Fac. Health, Medicine and Life Sciences

Practical Skills Public Health in International Context

Full course description

The practical skills training includes three elements:

1. Analysis of a public health problem at the international level. In a group of approximately 6 students you will conduct research mainly based on existing literature into one major public
Bachelor Medicine

health problem at the international level (such as HIV/AIDS, malaria or tuberculosis). You will report the results of this analysis in a group paper.

2. Training on the role of culture on health care and public health practice internationally. Culture and differences between (and within) cultures is an aspect interrelated with considering public health in an international perspective. In this training you will look at the important role of culture in defining how people define health and ill-health, as well as how they understand what determines health, what health related customs are and how health can therefore best be pursued. During this training you will work on an assignment around culture and cultural sensitivity of interventions and research in a group of six students. Findings will be presented in an oral presentation.

3. Training international collaboration. During this training you will learn about the facilitators and barriers of working with different nationalities. This training will consist of a theoretical and a practical part. The theoretical part will inform you on challenges of working with team members from different nationalities and cultural backgrounds. In addition, you will learn more about the impact nationality and culture can have on collaboration in teams.

In addition, there will be a field visit to a refugee center.

PGZ2226
Period 6
11 Jun 2018
6 Jul 2018
Print course description
ECTS credits:
1.0
Instruction language:
English
Coordinator:
• M.J. Commers

Teaching methods:
Assignment(s), Work in subgroups, Lecture(s), Working visit(s)
Assessment methods:
Attendance, Final paper, Presentation
Fac. Health, Medicine and Life Sciences

Public Health in International Context

Full course description

A look at questions of public health and health care from an international perspective reveals two basic realities: globalization and tradition. As the world globalizes, health threats and opportunities are also becoming more global. However, this trend coexists with a more traditional reality. Namely, as we look internationally, we see an enormous diversity in health status—and even in definitions of health and understandings of how it is best pursued—among the many cultures of the world. This module is designed to give students insight into both basic realities, and hence the module’s name: Public Health in International Context. In this module, we will explore how travel, migration, and climate change are giving rise to a new context in which infectious disease and other health threats are viewed. Further, we will consider the opportunities and barriers created by international cultural diversity for health care and public health activity.
The module covers four weeks and each week focuses on one particular theme. There are three set themes and one open theme that will be organized around the expertise of a guest speaker who will be invited to the module. The set themes include: 1) Global health epidemiology and data sources, 2) transnational health governance and development and 3) global trade and health.

**Recommended reading**


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**PGZ2026**
Period 6
11 Jun 2018
6 Jul 2018

**Print course description**

ECTS credits:
5.0

Instruction language:
English

Coordinator:

- [M.J. Commers](#)

Teaching methods:
Work in subgroups, Lecture(s), PBL

Assessment methods:
Attendance, Final paper, Written exam

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**Bachelor Medicine Year 3**

Fac. Health, Medicine and Life Sciences

**Abdomen**

**Full course description**

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

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**GEN3001**
Period 1
4 Sep 2017
10 Nov 2017
Period 2
Bachelor Medicine

13 Nov 2017
2 Feb 2018
Period 4
5 Feb 2018
20 Apr 2018
Period 5
23 Apr 2018
6 Jul 2018

Print course description
ECTS credits:
10.0
Instruction language:
Dutch
Coordinator:

• S.O. Breukink

Fac. Health, Medicine and Life Sciences

**Locomotor Apparatus**

**Full course description**

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN3002
Period 1
4 Sep 2017
10 Nov 2017
Period 2
13 Nov 2017
2 Feb 2018
Period 4
5 Feb 2018
20 Apr 2018
Period 5
23 Apr 2018
6 Jul 2018

Print course description
ECTS credits:
10.0
Instruction language:
Dutch
Coordinator:

• H.M. Staal

Fac. Health, Medicine and Life Sciences
Bachelor Medicine

Circulation and Lungs

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

GEN3003
Period 1
4 Sep 2017
10 Nov 2017
Period 2
13 Nov 2017
2 Feb 2018
Period 4
5 Feb 2018
20 Apr 2018
Period 5
23 Apr 2018
6 Jul 2018

Print course description
ECTS credits:
10.0
Instruction language:
Dutch
Coordinators:

- W.R.M. Dassen
- P.J.C. Barenbrug

Fac. Health, Medicine and Life Sciences

Psychomedical Problems and Mental Health Care

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website.

GEN3004
Period 1
4 Sep 2017
10 Nov 2017
Period 2
13 Nov 2017
2 Feb 2018
Period 4
5 Feb 2018
Bachelor Medicine

20 Apr 2018
Period 5
23 Apr 2018
6 Jul 2018

Print course description
ECTS credits:
10.0
Instruction language:
Dutch
Coordinators:
  • P.A.E. Domen
  • K.R.J. Schruers

Fac. Health, Medicine and Life Sciences

Progress Test Examination Year 3

GEN3005
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
8.0
Instruction language:
Dutch
Coordinator:
  • B. Schutte

Fac. Health, Medicine and Life Sciences

Professional Behaviour Examination Year 3

GEN3006
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
4.0
Instruction language:
Dutch
Coordinator:
  • W.N.K.A. van Mook

Fac. Health, Medicine and Life Sciences
Examination Clinical Skills

GEN3008
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
2.0
Instruction language:
Dutch
Fac. Health, Medicine and Life Sciences

CORE Year 3

Full course description

This study programma is taught in Dutch. Hence, the programme information is only available in Dutch. If you would like to read the Dutch programme information, please choose ‘NL’ at the top of the website

GEN3009
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
2.0
Instruction language:
Dutch
Coordinator:
  • A.D.J. Smeenk

Fac. Health, Medicine and Life Sciences

Critical Appraisal of a Topic Year 3

GEN3013
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
2.0
Coordinator:
  • M.A.H. Mommers

Fac. Health, Medicine and Life Sciences
Health Law and Health Ethics

GEN3014
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
1.0
Coordinator:
- R.H. Houtepen

Fac. Health, Medicine and Life Sciences

Farmacologie Opdracht

GEN3015
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
1.0
Instruction language:
Dutch
Coordinator:
- B.J.A. Janssen

Bachelor International Track in Medicine (ITM) Year 3

Fac. Health, Medicine and Life Sciences

Abdomen

Full course description

The Abdomen cluster aims to deepen, broaden and integrate what the students have learned about abdominal complaints in previous years (e.g. Digestion and Defense). A large team has been working on this cluster over the past few years to achieve this aim. The team members are all still involved in the cluster. You can find their roles in this the cluster on eleUM: Course Information -> Staff Information.

The guiding principle for the design of the curriculum for the Abdomen cluster, in which the patient and their clinical presentation is the starting point of learning, comprises of the seven competences/roles of a doctor as described in the 2009 Framework for Undergraduate Medical Education in the Netherlands. These competences/roles as well as the corresponding subsidiary competences with respect to the Abdomen cluster are discussed in Course Book -> introduction -> Chapter 1: Objectives.
Bachelor Medicine

This cluster covers abdominal complaints with a more or less chronic nature. The complaints are often related to the gastrointestinal system, the urological system and the reproductive systems. The students are confronted with a variety of clinical presentations, all related to the abdomen. These clinical presentations are the basis to study the physiological and pathophysiological processes that lead to chronic abdominal complaints in an integrated way. Moreover, patient contacts are used as a basis to study the generic aspects of the consequences of chronic disease, ethics and law and clinical epidemiology.

The heart of learning lies in the educational patient contacts, where the students, often in pairs, will see patient consultations at different (outpatient) departments. It is very stimulating for the students to see these patients in the specialist’s consultation room. Specialists of the MUMC departments of gynaecology/obstetrics, urology, gastroenterology, paediatrics, surgery, radiotherapy and dermatology open the doors to their consultation rooms to the 3rd-year students. Obviously, the student’s professional behaviour is essential in learning through educational patient contacts. Many activities have been organised to optimize the learning effect of these educational patient contacts, including training sessions in which the students can acquire more knowledge about (chronic) abdominal complaints and practise skills.

The cluster contains cluster-related as well as non-cluster-related activities.

**Course objectives**

Within 10 weeks, the students are trained to make a differential diagnosis of the most common abdominal complaints.

For these complaints the Sheffield list is used. The student practices both with patients and with fictitious case to take a medical history and perform a physical examination. As a framework for history taking, the VITMINE C + D system is applied. In addition, the anatomic relationships are taught between the location of the complaint and the organs in the abdomen. Subsequently, it is taught to make a differential diagnosis with the acquired information. Finally, the students learn the basics of additional research and therapy.

**Recommended reading**

see referencelist course Abdomen ITM3001 - Eleum

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[Print course description](#)

ECTS credits:

10.0

Instruction language:
Bachelor Medicine
English
Coordinator:

- N.D. Bouvy

Teaching methods:
Assignment(s), Work in subgroups, Lecture(s), Patient contact, Onderwijspoli('s), Presentation(s), Skills, Training(s)

Assessment methods:
Assignment, Attendance, Observation, Oral exam, Participation, Presentation, Written exam, Portfolio

Keywords:
problem recognition/definition, history taking, physical examination, additional investigation, therapy

Fac. Health, Medicine and Life Sciences

Circulation and Lungs

ITM3003
Period 1
4 Sep 2017
10 Nov 2017
Period 4
5 Feb 2018
20 Apr 2018
Print course description

ECTS credits:
10.0

Instruction language:
English
Coordinator:

- B.J.A. Janssen

Fac. Health, Medicine and Life Sciences

Locomotor Apparatus

Full course description

The cluster Locomotor Apparatus has been developed based on the seven competences of a doctor, as described in the (Dutch) Blueprint 2009: Medical Expert, Communicator, Collaborator, Leader, Health advocate, Scholar, Professional. The cluster Locomotor Apparatus aims to deepen, broaden and integrate knowledge and skills gained in the previous years.

The main goal of the cluster is to gain knowledge and skills to determine the most probable (differential) diagnosis in a patient presenting with a problem of the locomotor system. The problems may affect the musculoskeletal and/or nervous system, and may involve traumatic, degenerative, autoimmune, congenital, psychological, environmental and medico-ethical processes and factors. Other goals include knowledge and skills concerning therapeutic options (including eg medication and rehabilitation) and impact of a disorder on patients daily life (family, work, health care).
Bachelor Medicine

This goal is achieved by a variety of educational activities. Clinical presentation, relevant anatomy, pathophysiology, epidemiology, diagnostic aspects and treatment options of the relevant clinical disorders are studied by self-study (including repeating previous knowledge), base group presentations, lectures, trainings and practical skills trainings. Transition of theoretical knowledge to application in real patients is promoted by educational patient contacts. In these educational patient contacts, the patient complaint is the point of departure, and clinical reasoning is practiced to arrive to a well-considered (differential) diagnosis. Patient cases are reported and discussed in the base group meetings so that all students benefit.

The nature of the cluster implies a great amount and variety of specialisations involved at the creation of the educational program and the educational patient contacts at the outpatient clinics.

**Course objectives**

Within 10 weeks students are trained in taking medical history and doing the physical examination in order to make a differential diagnosis, eventually with the help of additional examination such as X-ray. The student practices mainly with patients at the outpatient clinics. It is essential that students realize that patients with an assumed medical problem are sometimes initially referred to one medical specialty, and that the eventual diagnosis should be assessed and treated by another medical specialist. Therefore, they have to learn to think ‘outside the box’ and consider also other disorders or treatment options of other specialties. The most common disorders are described in the lists of objectives and problems.

**Recommended reading**

See reference list cluster Locomotor Apparatus, ITM3002 via My Studentportal

- ITM3002
- Period 2
  - 13 Nov 2017
  - 2 Feb 2018
- Period 5
  - 23 Apr 2018
  - 6 Jul 2018

[Print course description](#)

ECTS credits: 10.0

Instruction language: English

Coordinator: M.C.G. Vlooswijk

- Teaching methods: Assignment(s), Work in subgroups, Lecture(s), Patient contact, PBL, Presentations, Onderwijspoli(‘s), Research, Training(s)
- Assessment methods: Assignment, Attendance, Observation, Participation, Presentation, Written exam

Fac. Health, Medicine and Life Sciences
Psychomedical Problems

ITM3004
Period 2
13 Nov 2017
2 Feb 2018
Period 5
23 Apr 2018
6 Jul 2018
[Print course description]
ECTS credits: 10.0
Instruction language: English
Coordinator:
  - K.R.J. Schruers
Fac. Health, Medicine and Life Sciences

Progress Test Examination Year 3

ITM3005
Year
1 Sep 2017
31 Aug 2018
[Print course description]
ECTS credits: 4.0
Instruction language: English
Coordinator:
  - B. Schutte
Fac. Health, Medicine and Life Sciences

Chronicity

ITM3007
Year
1 Sep 2017
31 Aug 2018
[Print course description]
ECTS credits: 1.0
Instruction language: English
Coordinator:
  - E.G.M. Geelen
**Professional Behaviour Examination Year 3**

ITM3006  
Year  
4 Sep 2017  
6 Jul 2018  
**Print course description**  
ECTS credits:  
3.0  
Instruction language:  
English  
Coordinator:  
• W.N.K.A. van Mook

Fac. Health, Medicine and Life Sciences

**CORE Year 3**

**Full course description**

In the third year students learn to conduct difficult encounters with patients (breaking bad news and communicating with a couple who disagree, and irritated of anxious patients). The simulated patients present with slightly unpredictable cases. Simulated patients present the cases while students integrate their knowledge, preferred approach and attitude in consultations that run as smoothly as possible. The simulated patients provide tailor-made feedback after the consultation. Additionally the consultations are recorded on video. The students watch the recordings and two weeks later a feedback session takes place with a teacher. In this session they address the medical content, their ‘approach’ and possible ethical issues relevant for the case.

**Course objectives**

Intended learning objectives of the second-year CORE-programme:

- Being able to conduct a full doctor-patient encounter, as far as their knowledge allows
- Being able to break bad news in such a way that the patient understands an the news and feel this was done in an acceptable way
- Being able to deal with difficult communication contexts (breaking bad news and adequately addressing the reaction, dealing with irritated or anxious patient.

Being aware of the limitations in their knowledge, and being able to handle these limitations with regard to themselves and the (simulated) patient

**Recommended reading**

Bachelor Medicine

ITM3008
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
2.0
Coordinator:
  • A.D.J. Smeenk
Teaching methods:
Work in subgroups
Assessment methods:
Attendance, Observation, Participation, Portfolio
Keywords:
communication skills, diagnostic skills
Fac. Health, Medicine and Life Sciences

Examination Clinical Skills

ITM3009
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
2.0
Instruction language:
English
Coordinator:
  • F.J. Jongen - Hermus
Fac. Health, Medicine and Life Sciences

Academic Skills

ITM3011
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
2.0
Coordinator:
  • M.A.H. Mommers
Fac. Health, Medicine and Life Sciences
Bachelor Medicine

**Health Law and Health Ethics**

ITM3014
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
1.0
Coordinator:

- R.H. Houtepen

Fac. Health, Medicine and Life Sciences

**Pharmacology Assignment**

ITM3015
Year
1 Sep 2017
31 Aug 2018
Print course description
ECTS credits:
1.0
Instruction language:
English
Coordinator:

- B.J.A. Janssen

Fac. Health, Medicine and Life Sciences

**Portfolio Examination Year 3**

ITM3010
Year
4 Sep 2017
6 Jul 2018
Print course description
ECTS credits:
4.0
Coordinator:

- M.I. Kruithof