Course Specifications
Valid as from the academic year 2015-2016

Problems of Clinical Genetics, Obstetrics, Paediatrics and Adolescence (D012006)

Course size
(nominal values; actual values may depend on programme)

<table>
<thead>
<tr>
<th>Credits</th>
<th>Study time</th>
<th>Contact hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.0</td>
<td>300 h</td>
<td>160.0 h</td>
</tr>
</tbody>
</table>

Course offerings and teaching methods in academic year 2016-2017

| A (semester 2)  | work placement | 32.5 h   |
|                | clinical lectures | 50.0 h   |
|                | lecture          | 80.0 h   |

Lecturers in academic year 2016-2017

Poppe, Bruce  GE02 lecturer-in-charge
Roelens, Kristien  GE04 co-lecturer

Offered in the following programmes in 2016-2017

<table>
<thead>
<tr>
<th>Programme</th>
<th>crdts</th>
<th>offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Medicine in Medicine (main subject Family Medicine)</td>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>Master of Medicine in Medicine (main subject Hospital Medicine)</td>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>Master of Medicine in Medicine (main subject Public Health)</td>
<td>10</td>
<td>A</td>
</tr>
<tr>
<td>Joint Section Master of Medicine</td>
<td>10</td>
<td>A</td>
</tr>
</tbody>
</table>

Teaching languages
Dutch

Keywords
Clinical Genetics, Obstetrics and Paediatrics oriented towards the Doctor of Medicine

Position of the course
Clinical genetics and obstetrics are attuned to the basic knowledge acquired in the bachelor programme. ... Paediatrics occur here for the first time in the curriculum: the emphasis is on the knowledge of the normal child and the recognition of warning signs in ill children

Contents

- Miscarriage and perinatal death
- Preterm birth
- Abnormal fetal growth
- Bleeding in pregnancy
- Alloimmunization
- Hypertensive disease in pregnancy
- Prenatal ultrasound and prenatal diagnostics
- Medical disorders during pregnancy
- Working and pregnancy
- Diabetes, thyroid and pregnancy
- Infectious diseases in pregnancy
- Multiple pregnancy
- Preconception care
- Problems during childbirth
- Postpartum disorders
- Care and clinical examination of the neonate
- Pathology of the neonate: neonatal hypoxemia; birth trauma; infections, most common congenital abnormalities; concepts of pathology related to prematurity, neonatal icterus;

(Approved)
• Normal feeding of neonates and infants; breast feeding; nutritional deficiencies;
• Most important gastro-intestinal diseases in children: reflux, pylorus, hypertrophy; the
crying baby, acute abdominal pain, acute appendicitis, invasion, chronic
abdominal pain, acute gastro-enteritis, malabsorption, diarrhoea of the toddler,
inflammatory bowel disease, constipation;
• Most important infectious diseases in children: viral infections including measles,
rubella, mumps, herpes, Epstein-Barr, parvo-enterovirus; major bacterial infections
including staphylococcus, streptococcus, pneumococcus, hemophilus influenzae,
meningococcus, pertussis, Kawasaki disease, tuberculosis, Lyme disease, HIV-
fection;
• Vaccination programme in children;
• Disease of the airways in children: rhinitis, pharyngitis, tonsillitis, otitis media,
sinusitis, laryngitis, tracheitis, bronchitis, bronchiolitis, pneumonia, asthma,
mucoviscidosis;
• Heart diseases in children: etiology, cyanosis and hear failure, non cyanotic heart
diseases, arrhythmia, bacterial endocarditis;
• Diseases of the kidneys and urinary tract in children: congenital abnormalities,
urinary tract infections, proteinuria, hematuria, acute renal insufficiency, arterial
hypertension, abnormalities of mictiion;
• Liver diseases in children: persistent neonatal icterus, viral hepatitis, acute hepatic
failure, liver transplantation;
• Malignant diseases in children: acute lymphoblast leukemia, brain tumors,
neuroblastoma, Wilms tumor, Rhabdomyosarcoma, bone tumors, retinoblastoma
• Hematologic diseases in children: anemia, abnormalities of haemostasis;
• Endocrine and metabolic diseases in children: diabetes mellitus, hypoglycemia,
hypothyroidism, congenital metabolic abnormalities (when to think about it ?), short
stature, delayed-advanced puberty, obesity
• Eating disorders in children and adolescents
• Neurologic disease in children: meningitis, encephalitis, headache, convulsion
(hyperthermic; epilepsy), cerebral palsy, ataxia, haemorrhages in the central nervous
system, neural tube defects, neuromuscular diseases, neurocutaneous syndromes,
neurogenerative diseases, mental retardation
• Autism
• Spastic child and revalidation
• Potentially life threatening diseases in children: cot death, apparent life threatening
events, accidents, aspiration of foreign body, child abuse
• Physical activity in children and adolescents and the implications for health in later
life
• Clinical, genetic and molecular aspects of monogenic diseases with relevant
medical examples: hemoglobinepathies, phenylketonuria, cystic fibrosis, connective
tissue diseases.
• Mutations in the human genome and their consequences at the protein level.
Indications for and principles of molecular diagnostic testing.
• Clinical / medical consequences of numerical and structural chromosomal
abnormalities, indications for chromosome studies, microdeletion syndromes, the role
of chromosomal analysis on malignencies.
• Multifactorial heredity with relevant medical examples: frequent congenital
abnormalities (e.g. cleft lip-palate, neural tube defects, ...) and diseases in adults (e.
ge. diabetes).
• Principles of population genetics and genetic risk calculation.
• Unusual inheritance patterns with relevant medical examples: expansion mutations
(triplet repeats), mozaicism, genetic imprinting, isodisomie, mitochondrial inheritance.
• Cancer and heredity: major familial cancer syndromes;
• Principles of dysmorphology: when to consider a ‘syndrome-diagnosis’;
• Genetic counseling in practice; predictive genetic testing (presymptomatic, prenatal/
pre-implantation diagnosis), carrier testing;
• Ethical and psychosocial aspects of genetic testing;
• Ethical and legal implications of child abuse;

Initial competences
Knowledge of the normal delivery, principles of molecular biology, cytogenetics and
Mendelian inheritance Knowledge of human physiology and physio-pathology

Final competences
1 • The physician is familiar with development and nutrition of the normal
child.

2 • The physician knows the basic principles of clinical paediatrics with special focus
on the alarm signs that are essential for the practitioner.

3 • The physician is capable of clinical examination of children and infants.

(Approved)
4 • The physician is aware of the most relevant problems of pregnancy and delivery.

5 • The physician is familiar with the basic principles of human genetics, the most important indications for genetic counseling and testing and is aware of the clinical symptoms and genetic tests for the most important hereditary diseases.

**Conditions for credit contract**
Access to this course unit via a credit contract is determined after successful competences assessment

**Conditions for exam contract**
This course unit cannot be taken via an exam contract

**Teaching methods**
Lecture, work placement, clinical lectures

**Learning materials and price**
- Pediatrics
  - Syllabus

- Obstetrics
  - Syllabus Prof. Roelens Dr. Roets Prof. Temmerman. Verloskunde deel II: pathologie: Problemen van klinische genetica, verloskunde, pediatrie en adolescentie. Academia Press
  - Obstetrie en gynaecologie: voortplanting van de mens. Onder redactie van Heineman et al, uitgeverij Elsevier/Bunge (? 91,72)

- Medical Genetics
  - Syllabus

**References**
- B-boeken.

**Course content-related study coaching**
prof Guy T'Sjoen
guy.tsjoen@ugent.be

**Evaluation methods**
end-of-term evaluation

**Examination methods in case of periodic evaluation during the first examination period**
Written examination with multiple choice questions

**Examination methods in case of periodic evaluation during the second examination period**
Oral examination

**Examination methods in case of permanent evaluation**

**Possibilities of retake in case of permanent evaluation**
not applicable

**Calculation of the examination mark**

(Approved)