

Information

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General and human genetics

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Presentation

Human genetics is a relatively young medical discipline which originated in the sixties with the demonstration of chromosomal anomalies in constitutional and acquired disorders. The discipline experienced a rapid growth with the development of DNA analytical methods which enabled the identification of several genetic, mainly onogenic, disorders. At present, human genetics experiences another growth spurt due to the development of genome-wide analysis tools, high capacity mutation detection methods leading towards complete human genome sequencing. This evolution leads to an ever increasing relevance within all medical disciplines. The current technologies not only enable to identify inherited Mendelian disorders, but also increase our understanding of complex diseases. Human genetics not only enables diagnosis, but is leading more and more to improved guidance and treatment.

From this ever increasing importance and complexity, the Belgian Society of Human Genetics identified the need for a course which provides a theoretical basis for human genetics at a postdoctoral level. The members of the society represent the eight Belgian human genetics centers as well as scientists and professionals involved in human genetics.

The postgraduate course in human genetics intends to fulfill the need of a growing number of professions in which a full theoretical basis of all aspects of human genetics is useful or required. In the industry, health care, diagnostics as well as in certain areas of research, such knowledge is wanted. Within the Belgian genetics centers, the course will provide a uniform and adequate theoretical basis for all those taking up responsibilities in human genetics-related activities.

This permanent education in human aims to

- * Cover all aspects of human genetics (Clinical genetics, Molecular genetics, Cytogenetics, Biochemical genetics)
- * Bring an up-to-date program embedded within the current practices
- * Deliver a certificate acknowledging a robust knowledge basis in human genetics.

Special conditions of access / students concerned

The course aimed at

- * Everyone taking up a responsible function in a genetic center
- * Professionals in industry involved in or with human genetics
- * Pharmaceutical industry involved in human genetics
- * Postdocs/PhD students with interest in human genetics
- * MDs involved in human genetics

Participants hold

- * A masters/licentiaats/license degree, or MD degree
- * Some knowledge of molecular biology

Duration of the training

The course entails 60 contact hours + exercises in human genetics. The total course sums up to **20 ECTS**.

Courses programme

The course outline is based on the book *Genetics in Medicine* (Thompson & Thompson, Seventh edition). The course chapters will be taught by representatives of the 8 human genetic centers in Belgium, localized at or associated with 8 different universities. The courses will take place on the first or second Saturday of each month.

Compulsory courses

MCER0155-1	<i>The human genome and the chromosomal basis of heredity - N...</i>	1,5	-	-	0,5
MCER0156-1	<i>Human genome : gene structure dans fonction - N...</i>	2	-	-	0,5
MCER0157-1	<i>Tools of human molecular genetics - N...</i>	3	-	-	1
MCER0158-1	<i>Patterns of single gene inheritance - N...</i>	1,5	-	-	0,5
MCER0159-1	<i>Genetic variation in individuals and populations : mutation and polymorphism - N...</i>	1	-	-	0,5
MCER0160-1	<i>Epigenetics</i>				1
	- Chromatin structure - N...	1	-	-	
	- Epigenetics : mechanistic insights - N...	1	-	-	
	- Epigenetics and human diseases - N...	1	-	-	
MCER0161-1	<i>Human gene mapping and disease gene identification - N...</i>	3	-	-	1
MCER0162-1	<i>The molecular, biochemical and cellular basis of genetic disease - N...</i>	3	-	-	1
MCER0163-1	<i>Clinical cytogenetics : disorders of the autosomes and the sex chromosomes - N...</i>	3	-	-	1
MCER0164-1	<i>The treatment of genetic disease - N...</i>	3	-	-	1

MCER0165-1	<i>Cancer genetics and genomies - N...</i>	3	-	-	1
MCER0166-1	<i>Developmental genetic - N...</i>	3	-	-	1
MCER0167-1	<i>Ethical issues in medical genetics - N...</i>	2	-	-	0,5
MCER0168-1	<i>Genetics of common disorders with complex inheritance - N...</i>	3	-	-	1
MCER0169-1	<i>Animal models - N...</i>	2	-	-	0,5
MCER0170-1	<i>Bioinformatics - N...</i>	2	-	-	0,5
MCER0171-1	<i>Pharmacogenetics and pharmacogenomies - N...</i>	3	-	-	1
MCER0172-1	<i>Birth defects - N...</i>	3	-	-	1
MCER0173-1	<i>The immune system - N...</i>	2	-	-	0,5
MCER0174-1	<i>Prenatal diagnosis - N...</i>	3	-	-	1
MCER0175-1	<i>Genetic counseling and risk assesment - N...</i>	3	-	-	1
MCER0176-1	<i>Additional work : critical reading with written report and oral presentations and/or exercises - N...</i>	3	-	-	3

Assessment

To obtain the certificate in human genetics the candidate will take an examination at the end of the course program. This written test will cover the different topics presented during the course. The POC is made up of eight members, representing each Belgian University. The POC consists of a working group of the Belgian Society of Human genetics. The certificate will be approved by the BeSHG and will be delivered by the University at which the student registered.

Registration

Registration is finalized following: entering registration details at the BeSHG website.

Paying the registration cost of the course is **200 Euro**. Registrations are open in each university / human genetics center.

200 Euros can be deposited at :

"BeSHG - Course", account No: **001-5643252-62** (Fortis Bank).

Communication: **bLast name, First name, University or Center** (e.g.: DELVAUX André ULB)

!! those details in the payment's "communication" are mandatory for the registration to be efficient !!

The registrants will subsequently be registered at the University they entered when paying.