FACULTY OF VETERINARY MEDICINE

accredited by EAEVE

9th Basic Summer Course on Veterinary Epidemiology

Faculty of Veterinary Medicine

Academic year 2018–2019

GHENT UNIVERSITY

WELCOME

9th Basic Summer Course on Veterinary Epidemiology.

INTRODUCTION

Epidemiology in veterinary medicine is becoming increasingly important for many people active in veterinary practice, research, consultancy and organization and regulation of animal production.

The aim of this summer course is to make all participants familiar with the key aspects of veterinary epidemiology in a practical and applied manner. Upon completion of this course all participants should be familiar with all basic concepts of veterinary epidemiology, be capable of critically reading and understanding scientific literature and performing basic statistical and epidemiological analyses. Moreover the participants should be ready to design surveillance, analytical or clinical studies and to critically analyze the results. Furthermore the participants will be introduced to several aspects of more advanced epidemiological tools.

The course will be organized as a two week summer course (9 September – 20 September 2019) consisting of 10 course days. Every day will be filled with a mixture of theoretical training and practical applications. At the end of the course there will be the possibility to participate in a "take-home" exam. An online course (5- 10 hours, depending on your prior knowledge on working with R) will be offered as a pre-workshop for the statistical part within the course. In total, this summer course will count for 3 ECTS points.

The course will be thought by different experienced lecturers with ample theoretical and practical knowledge

PARTICIPANTS

The course is intended for everybody who is confronted with epidemiological questions in their professional activities (such as practice, disease control, scientific research and legislation) and is open to veterinarians as well as any other master degree in the field of biomedical sciences or bioengineering. No specific prior epidemiological or statistical knowledge is required. Although the

majority of examples are from the field of veterinary medicine the course touches on all general principles of epidemiology and is therefore equally interesting to participants facing epidemiological questions in non-veterinary domains (e.g. human medicine, plant diseases, food safety, ...).
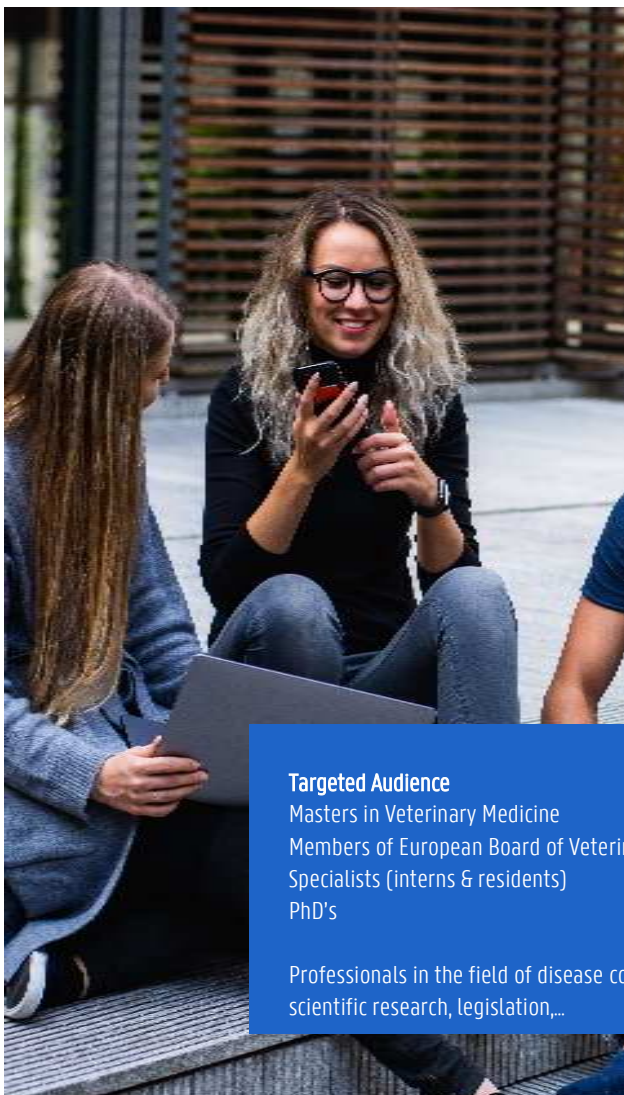
Targeted Audience
Masters in Veterinary Medicine
Members of European Board of Veterinary Specialists (interns & residents)
PhD's

Professionals in the field of disease control, scientific research, legislation,...

PROGRAM (3 ECTS POINTS)

OVERVIEW

SUBJECT	day	date
General introduction (J. Dewulf)	1	9/9
Data management and frequency measures (S. De Vliegher)	1	9/9
Statistics in Epidemiology a practical approach* (E.Fransen & E. Roelant)	2	10/9
Diagnostics, accuracy and precision (J. Dewulf)	3	11/9
Sample size calculations (J. Dewulf)	4	12/9
Monitoring and surveillance part 1 (G. Van Schaik)	4	12/9
Monitoring and surveillance part 2 (G. Van Schaik)	5	13/9
Observational studies, design and data analysis (J. Dewulf)	6	14/9
Systematic review and meta-analysis (J. Dewulf)	6	14/9
Association and causality (J. Dewulf)	7	17/9
Questionnaire design (B. Damiaans)	7	17/9
Big data in Veterinary Epidemiology (M. Hostens)	7	17/9
Introduction to qualitative and quantitative risk assessment (M. Fillippitzi)	8	18/9
Outbreak investigation and disease control (J. Dewulf)	8	18/9
Clinical trials (D. Maes)	9	19/9
Modeling of infectious diseases (G. Fournié)	10	20/9

*The practical exercises are taught in the open source software package R. For students not familiar with this software, we offer an online introduction to R using instruction videos and short exercises. This online material will be made available through the online learning platform VICE
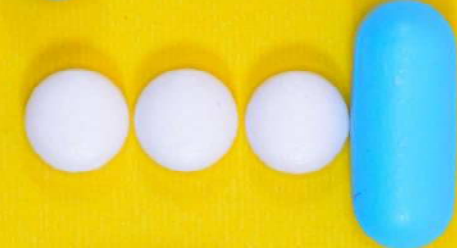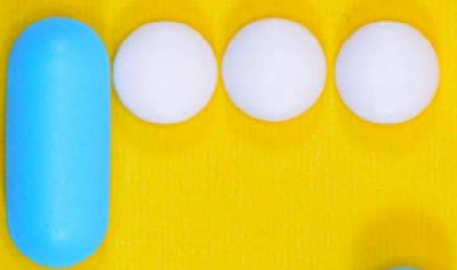
LECTURERS

J. Dewulf(Prof, DVM, MSc, PhD, Dipl ECVPH, Dipl ECPHM)
Professor in Veterinary Epidemiology, Department of Reproduction, obstetrics and herd health. Faculty of Veterinary Medicine, Ghent University.

S. De Vliegher (DVM, MSc, PhD, Dipl ECVPH)
Associate Professor in Veterinary Legislation and practice management, Department of Reproduction, Obstetrics and Herd Health. Faculty of Veterinary Medicine, Ghent University

N.S. Pauwels (PhD, MSc)
Information Specialist, Knowledge Centre for Health Ghent, Ghent University and Ghent University Hospital

M. Filippitzi (DVM, MSc, PhD, Dipl ECVPH)
Senior Epidemiologic researcher, Veterinary Epidemiology Unit, Epidemiology and Public Health Department at Sciensano (The Belgian Institute for Health), Brussels , Belgium

D. Maes (DVM, MSc, PhD, Dipl ECVPH, Dipl ECPHM)
Professor in Porcine Herd Health Management, Department of Reproduction, Obstetrics and Herd Health. Faculty of Veterinary Medicine, Ghent University

M. Hostens (DVM, PhD)
Senior researcher in Herd Health Management, Department of Reproduction, Obstetrics and Herd Health. Faculty of Veterinary Medicine, Ghent University

B. Damiaans (DVM)
Research assistant in Veterinary Epidemiology, Department of Reproduction, Obstetrics and Herd Health. Faculty of Veterinary Medicine, Ghent University

G. Fournié (DVM, MSc, PhD)
Senior research fellow, Veterinary Epidemiology, Economics and Public Health group, Department of Pathobiology and Population Sciences, Royal Veterinary College, UK

G. Van Schaik (Prof, MSc, PhD)
Professor in Monitoring and Surveillance of Farm Animal Health, Department of Farm Animal Health, Faculty of Veterinary Medicine, Utrecht University, the Netherlands.

Head of the Epidemiology group of GD Animal Health, Deventer, the Netherlands

E Roelant (PhD)
StatUa Center for Statistics, University of Antwerp.

E. Fransen (Prof, PhD, MSc)
Statua Center for statistics, University of Antwerp

REGISTRATION AND FUNDING

The course fee is €1500. For PhD students, members of the Flemish society of Veterinary Epidemiology and Economics (VEE) as well as residents or interns of a European College (member of EBVS) the fee is reduced to €1200. (extra information on funding at the bottom of this page)

The registration fee includes:

- All theoretical and practical courses
- The book "Veterinary Epidemiologic Research" (Dohoo, Martin, Stryhn)
- All course notes
- Coffee and lunches during all course days

HOW TO REGISTER

Registration is done by sending all relevant information (registration document) to the research assistant of the course organizer, Philip Joosten, **before 15 July 2019**. The subscription is only final after having paid the registration fee (you will receive an invoice after registering). Be careful since the registrations will be treated on a first come, first serve basis and the maximum number of participants is limited to 25. After registration you will receive a password that allows you to download all course material from the website.

FUNDING

Members of the Doctoral School of life sciences and medicine (DS LSM) of Ghent University can include the course as **one of the three specialist courses** in the minimum set of activities. All PhD students that are member of the DS LSM can receive a **€500 co-funding** by the doctoral school. (final fee = €700). For funding through the DS LSM please follow the procedure as described in: https://www.ugent.be/doctoralschools/en/doctoraltraining/courses/fundingopportunities/overview.htm

The course is recognised **by the European College of Veterinary Public Health**. **The first 10 residents of the ECVPH** can apply for **€100 funding**. For more information, please read the Bylaws on the refund of Residents.

COURSE MATERIAL

For the exercises every student is requested to bring his / her own **laptop**. If you do not have access to a laptop please contact us on beforehand so that we can try to find a solution.

During the course the book **"Veterinary Epidemiologic Research"** (Dohoo, Martin, Stryhn) will be used. Besides that several free-ware software packets will be demonstrated and used.

As the **statistical analysis course** is concerned, this course will give an overview of the basics of statistical concepts and hypothesis testing. The course starts with a short introduction about the different types of variables, sampling theory and the methodology of hypothesis testing. In the exercises, we focus on statistical analysis in practice using hands-on exercises on real-world datasets. The first step consists of visualization of the data, quality checking and descriptive statistics. Subsequently, we focus on statistical hypothesis testing with a strong emphasis on how to choose the right type of statistical analysis, depending on the research question, the type of the data at hand and the assumptions on the statistical tests. Students will get ample exercises to carry out this hypothesis testing, and interpret the results.The practical exercises are taught in the open source software package R. **For students not familiar with this software, we offer an online introduction to R using instruction videos and short exercises. This online material will be made available through the online learning platform VICE.**

As the **quantitative risk assessment** is concerned we will provide you (shortly before the start of the course) a link to @Risk free trial version to be installed at your computer before the start of the course.

All courses will be given in **English.**

LOCATION
Veterinary Epidemiology Unit
Department of Reproduction, Obstetrics and Herd Health
Faculty of Veterinary Medicine
Ghent University
Salisburylaan 133
B-9820 MERELBEKE

HOUSING
We have made some suggestions for those of you that need housing during the summer course.

Bed and Breakfast in the neighbourhood
B&B in Merelbeke (relatively close to the Faculty of Veterinary Medicine) are:
- La Clé du Sud

Hotels in Ghent
There are plenty of hotels in Ghent. A list can be viewed here. They are located in or just outside the city centre. Holiday Inn Express Gent and Campanile Gent are located relatively close to the Faculty of Veterinary Medicine.
Please note that you are asked to contact the B&B or hotels yourself and make the reservations yourself.
If you have difficulties with transport from your location towards the faculty you may contact us and we can try to find department collaborators that can provide a lift in the morning and evening.

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CONTACT

Official website

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