

PROGRAM

Students can choose between attending one week or two. For the first week one course can be chosen from blocks 1 and 2, OR from block 3. For the second week one course can be chosen from blocks 4 and 5, OR from block 6. No afternoon sessions will be given on Saturdays. The maximum number of students per class is 30. Stata® is the statistical software used. The Sunday Stata® courses are extra courses and they are independent of courses from other blocks.

JUNE 7

Stata Courses 1 (9:00-17:00)

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| Meta-Analysis with Stata® | Basics of Stata® | Survival Analysis with Stata® |
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JUNE 8-13

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| Block 1 (8:30-10:30 Lecture, 14:00-15:00 Lab) | | | Block 3 (8:30-17:30) |
| Biostatistics I | Applied Linear Regression | Quantile Methods | Statistical Methods for Population Based Cancer Survival Analysis |
| Block 2 (11:30-13:00 Lecture, 16:00-17:30 Lab) | | | |
| Epidemiology I | Applied Logistic Regression | Intro to Social and Biological Networks | |

JUNE 14

Stata Courses 2 (9:00-17:00)

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| Tables for Epidemiologists Using Stata® | Basics of Stata® | Analysis of Prospective Studies with Stata® |
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JUNE 15-20

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| Block 4 (8:30-10:30 Lecture, 14:00-15:00 Lab) | | Block 6 (8:30-17:30) |
| Epidemiology II | Applied Longitudinal Analysis | Monitoring and Evaluation of Public Health Programs |
| Block 5 (11:30-13:00 Lecture, 16:00-17:30 Lab) | | |
| Biostatistics II | Survival Analysis | |

REGISTRATION FEE

The registration fee includes only the course tuition. The final deadline for registration is 31st of May 2015. Fees depend on whether the applicant is currently a student at an accredited university, or not, number of weeks, and the timing of enrolment.

| | Registration before 31st of March 2015 | | Registration after 31st of March 2015 | |
|---------|--|---------|---------------------------------------|---------|
| | Student | General | Student | General |
| 1 week | 1200 € | 1350 € | 1400 € | 1550 € |
| 2 weeks | 2200 € | 2500 € | 2500 € | 2800 € |

The fee for attending each Stata® course is 400€. Students attending summer school courses during the week receive a discounted fee of 250€ per course.

SCHOLARSHIPS

A limited number of scholarships to support either partially or fully students attendance are available. The request to be considered for a scholarship should be communicated no later than 1st of March 2015.

ACCOMODATION

Standard lodging expenses per person are 115€ per day, including accommodation in the castle and all meals. Accommodation is in double rooms; however, a small number of single rooms are available at an extra charge, on a first-come first-served basis. The castle offers accommodation both inside the castle grounds and within walking distance. Choices can be made only on a first come first-served basis. If different arrangements are required, for example if a student requires only meals, they should be made with the hotel administrator in advance. More information can be found in the course application form and in the hotel accommodation form in the application section of the website.

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SUMMER SCHOOL ON MODERN METHODS IN BIOSTATISTICS AND EPIDEMIOLOGY



7-20 JUNE 2015

THE SCHOOL IS HELD AT THE BRANDOLINI COLOMBAN
 CASTLE IN THE NORTHEAST OF ITALY.

The School offers introductory and advanced courses in medical statistics and epidemiology, and their application to etiology research and public health. It is meant to provide researchers, physicians, and health professionals with insight into available analytical tools for planning research, handling data, and interpreting results. These allow the use of scientific data, including controlled experiments and well-structured observational data, as the source for decision making.

BIOSTATEPI.ORG



GOALS AND RATIONALE

The School offers introductory and advanced courses in medical statistics and epidemiology, and their application in etiology research and public health.

Modern medical research is becoming increasingly formalized. Today researchers, physicians and health professionals are encouraged to use scientific data, including controlled experiments and well-structured observational data as the source for decision making. Evidence based medicine is entering into many subspecialties, including public health science.

This School provides participants insight into available analytical tools for planning research, handling data and interpreting results. Better understanding of scientific medical papers is also a goal and it requires not only knowledge of the topic being investigated but also an understanding of the research methods being used.

Examples include proper understanding of the meaning of a hazard ratio or a confidence interval and an understanding of the difference between a randomized controlled trial and a case control study.

WEEK-LONG, FULL-DAY COURSES

MONITORING AND EVALUATION OF PUBLIC HEALTH PROGRAMS: DURING ROUTINE PUBLIC HEALTH ACTIVITIES AND EMERGENCIES - M. PAGANO, E. SAVOIA

Evaluation planning, survey development and validation techniques, testing methods, methods for evaluating sub-groups performance, comprehensive monitoring and evaluation are some of the topics covered.

STATISTICAL METHODS FOR POPULATION-BASED CANCER SURVIVAL ANALYSIS - P. DICKMAN, P. LAMBERT

The course covers central concepts, such as how to estimate and model relative survival, cure models, flexible parametric models, loss in expectation of life, and estimation in the presence of competing risks.

WEEK-LONG, HALF-DAY COURSES

APPLIED LINEAR REGRESSION - R. BELLOCCO

This introductory course teaches students how to apply and use linear regression models with continuous and categorical predictors

APPLIED LOGISTIC REGRESSION - D. WYPIJ

Introduces to the practice and application of logistic regression modeling. Topics: assessment of confounding and effect modification, use of indicator variables, models building methods, goodness-of-fit assessment.

APPLIED LONGITUDINAL ANALYSIS - G. FITZMAURICE

This course focuses on methods for analyzing longitudinal and repeated measures data. This type of study design encompasses epidemiological follow-up studies as well as clinical trials.

BIostatISTICS I - M. PAGANO

Introduces the fundamental principles of statistics applied to biomedicine. The topics to be covered include: descriptive statistics, measures of central tendency, probability, diagnostic testing, population and sample, comparison of proportions.

BIostatISTICS II - M. BONETTI

Students are introduced to more advanced methods for the comparison of outcome among groups, correlation and linear regression, contingency tables, and survival data.

EPIDEMIOLOGY I - M. MITTLEMAN

This course provides an introduction to the skills needed by public health professionals and clinicians to critically interpret the epidemiological literature.

EPIDEMIOLOGY II - M. MITTLEMAN

Principles introduced in Epidemiology I (Week 1) will be explored in greater depth. Topics will mainly focus on chronic disease epidemiology, with special emphasis on causal inference and practical study design.

INTRODUCTION TO SOCIAL AND BIOLOGICAL NETWORKS - JP. ONNELA

Network analysis can be used to study how pathogens spread in contact networks, or how behaviors to counter illnesses diffuse in social networks. This course introduces some essential network concepts and covers the basics of the Python programming language to analyze networks and to simulate epidemiological processes.

WEEK-LONG, HALF-DAY COURSES

QUANTILE METHODS - M. BOTTAI

The course gives an introduction to quantile regression and other related methods through a series of real-life examples with non-normal outcomes, outlying values, survival and longitudinal data from clinical and epidemiological research. The focus is on interpretation and practical relevance.

SURVIVAL ANALYSIS - N. ORSINI

The course introduces the concepts and methods for the analysis of survival or time-to-event data. Topics include life-table, Kaplan-Meier, and popular regression models for survival analysis.

Stata® ONE DAY COURSES

ANALYSIS OF PROSPECTIVE STUDIES WITH Stata® - R. BELLOCCO

This course introduces student to the analysis of cohort studies, managing person-times, estimating counts and incidence rate ratios and fitting count regression models.

BASICS OF Stata® - S. VENTURINI (June 7th), N. ORSINI (June 14th)

This course is designed to introduce students to the basics in Stata®. By the end of this one-day course, the student should be capable of using Stata® autonomously

META-ANALYSIS WITH Stata® - R. D'AMICO

Covers Stata® commands for a variety of tasks: data preparation and input, fixed and random-effect models, forest plots, heterogeneity across studies, publications bias, sensitivity analysis, and meta-regression models.

SURVIVAL ANALYSIS WITH Stata® - C. WEIBULL, S. ELORANTA

The course teaches how basic survival analysis can be done using Stata® and how to analyse time-to-event data.

TABLES FOR EPIDEMIOLOGISTS USING Stata® - A. DISCACCIATI

This course teaches basic commands to estimate the incidence of a binary response and create a table of univariate predictors.