Program

Students must choose one course from each block, for a total of two courses per week, and also choose between attending either one week, two or three weeks. Notice that no lab/group sessions are given on Saturday afternoon. In most courses, Stata® is the statistical software used. The maximum number of students per class is 30. The Sunday Stata® courses are extra courses and they are independent of courses from other blocks.

3 June	**Stata Course 1** 9:00 -17:00	
Introduction to Stata	Meta-analysis using Stata	Tables for Epidemilogist using Stata
4-9 June	**Course Block 1** 08:30-10:30 Lecture 14:00-15:30 Lab/group session	
Biostatistics I	Applied Linear Regression	Applied Quantile Regression
4-9 June	**Course Block 2** 11:00-13:00 Lecture 16:00-17:30 Lab/group session	
Principles of Epidemiology	Applied Logistic Regression	Missing Data in Observational and Randomized Studies
10 June	**Stata Course 2** 9:00-17:00	
Introduction to Stata	Flexible Dose-Response Analysis with Stata	Multiple Imputation of Missing data with Stata
11-16 June	**Course Block 3** 8:30-10:30 Lecture 14:00-15:30 Lab/group session	
Modern Epidemiology	Applied Longitudinal Analysis	Monitoring and Evaluation of Health Programs
11-16 June	**Course Block 4** 11:00-13:00 Lecture 16:00-17:30 Lab/group session	
Biostatistics II	Survival Analysis	Evidence Based Public Health
17 June	**Stata Course 3** 9:00-17:00	
Introduction to Stata for Survival Analysis		
18-23 June	**Course Blocks 5,6** (choose left or right column)	
Causal Inference 8:30-10:30 Lecture 14:00-15:30 Lab session Clinical Trials 8:30-10:30 Lecture 14:00-15:30 Lab session	Statistical Methods for Population-Based Cancer Survival Analysis 9:00-18:00	

Accommodation

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, 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.

Registration Fee

The registration fee includes only the course tuition. The final deadline for registration is **31 May 2012**. Fees depend on whether the applicant is currently a student at an accredited university, or not, number of weeks, and the timing of enrollment.

	Registration before 31 March 2012		Registration after 31 March 2012	
	Student	General	Student	General
1 week	€1,150	€1,250	€1,350	€1,450
2 weeks	€2,100	€2,300	€2,400	€2,600
3 weeks	€3,000	€2,300	€3,500	€3,800

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 are available. Scholarships cover the cost of tuition, for at most one week. Only registered students may apply. The request to be considered for a scholarship should be communicated no later than March 1, 2012. More information can be found in in the General Info section of the website.

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Summer School on Modern Methods in Biostatistics and Epidemiology

3 - 23 JUNE 2012

Cison di Valmarino-Treviso, Italy

Castello Brandolini Colomban

Location

The School is held at the Brandolini Colomban Castle in Cison di Valmarino, 40 km north of Treviso, in Veneto, in the northeast of Italy.

The castle is now a hotel with meeting, sporting, recreational and well-being facilities. For more information, visit the homepage www.castelbrando.it

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.

Course Descriptions

Please refer to www.biostatepi.org for additional information on the 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, model 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.

Applied Quantile Regression - M. Bottai

The course offers an introduction to quantile regression and its extensions through a series of real-life examples from clinical and epidemiological studies. The focus is on interpretation and practical relevance.

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.

Causal Inference - A. Rotnitzky

Students will learn to critically evaluate the pitfalls of observational studies and of imperfect experimental studies, in particular all possible biases that can arise.

Evidence Based Public Health - E. Savoia

Introduces the core concepts of evidence based public health and present studies conducted in Europe, the United States and in the developing world assessing the effectiveness of public health interventions and their relationship with the organizational structures, financing systems, workforce characteristics and delivery mechanisms of various practice settings.

Flexible Dose-Response Analysis with Stata® - N. Orsini

Introduces students to flexible modeling of a quantitative covariate using different approaches. By the end of this one-day course, the students will be able to perform and present a dose-response analysis.

Introduction to Stata® - S. Venturini, D. Rizzuto

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.

Introduction to Stata® for Survival Analysis - S. Eloranta, T. Andersson

Introduces students to basic survival analysis using Stata, and how to analyse time-to-event data, the Kaplan-Meier estimator of survival, log-rank tests, hazard functions as well as the Cox regression model.

Meta-analysis using 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.

Missing Data in Observational and Randomized Studies - N.J. Horton

Students will learn ways to minimize missingness, the nomenclature for missing data methods, ways to describe patterns of missing data, and how to account for incomplete observations using multiple imputation and sensitivity analysis.

Modern Epidemiology - J. Kasperzyk

To explore in greater depth the epidemiologic concepts introduced in Principles of Epidemiology. Topics include: disease surveillance, nutritional epidemiology, genetic and molecular epidemiology.

Monitoring and Evaluation of Health Programs - M. Pagano

This course covers the basic statistical tools necessary for monitoring and evaluation of health programs.

Multiple Imputation of Missing Data with Stata® - R. Bellocco

The course introduces the basics of multiple imputation, in particular imputation by chained equations. Students should have a background in linear regression methods prior to taking this course.

Principles of Epidemiology - J. Buring

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

Randomized Clinical Trials - D. Harrington

Provide an introduction to the methods used in the design, interim monitoring, and analysis of clinical trials, including the impact of patient exclusions and other causes of incomplete data.

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, estimation in the presence of competing risks, and methods for analysing data with missing covariates.

Survival Analysis - P. Dickman

The course aim is to introduce statistical methods for describing how epidemiological cohort studies can be analysed in the framework of survival analysis.

Tables for Epidemiologists using Stata® - N. Orsini

This course is designed to introduce students to basic commands to estimate the incidence of a binary response and create a table of univariate predictors.