## *ADVANCED METHODS OF SURVEY SAMPLING*

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| **COURSE LEADER** | Dr. Philippe Eichenberger, Statistical Methods Unit, Swiss Federal Statistical Office (SFSO), Neuchâtel |
| **OBJECTIVE(S)** | The course will give an overview of some advanced methods in survey sampling |
| **TRAINING METHODS** | The course will be based on lectures (approximately 2/3 of the time) and practical exercises (1/3). Most of the exercises will use computers and the R software. The course will be held in a room equipped with 20 PCs (one for each participant). |
| **TARGET GROUP** | The course is meant for junior staff of methodology divisions and more experienced staff using sample survey techniques in the production of statistics. |
| **ENTRY QUALIFICATIONS** | University degree, good basic knowledge of sampling techniques and survey methodology, sound knowledge of English |
| **EXPECTED OUTPUT** | The course will give an overview of some advanced methods in survey sampling |
| **CONTENTS** | The course will give an overview of some advanced methods in survey sampling according to the following programme:<br>1.    A short introduction to the R software (2.5h) Dr. D. Kuonen<br>2.    New sampling algorithms (3h) Prof. Y. Tillé<br>3.    Calibration (3h) Dr. P.-A. Salamin<br>4.    Variance estimation (3h) Dr. J.-P. Renfer<br>5.    Handling of outliers in complex surveys (3h) Prof. B. Hulliger<br>6.    Practical exercises with the R software (3h)<br>7.    Analysis of complex survey data (3h) Dr. A. Renaud<br>8.    Analysis of compositional data from a complex survey (3h) Dr. M. Graf<br>9.    Practical exercises with the R software (3h)<br>10.   Afternoon reserved for the questions, examples and problems of the participants (3h) |
| **REQUIRED READING** | For example: Särndall C. E., Swensson B. and Wretman J. (1992). Model Assisted Survey Sampling. Springer. PART I: Principles of Estimation for Finite Populations and Important Sampling Designs (Chapters 1 to 5) |
| **REQUIRED PREPARATION** | ▪ Some familiarity with the R software is of advantage.<br><br>▪ Participants, who want to discuss an example or a special problem in the last afternoon, are asked to prepare in advance a small presentation (max. 15 minutes) and to send it one month before the start of the course to the course leader. It is possible that only some of the problems of the participants may be treated, depending on the time available. |

### PRACTICAL INFORMATION:

| TIMING | DURATION: | TRAINING SITE | LANGUAGE | REGISTRATION |
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| 27.10 (9:30 AM) – 31.10.08 (5 PM) | 5 days | FSO building, Neuchâtel, room 512 | English | Deadline June 27, 2008 |

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| **TRAINING FEE** | No training fees. |
| **TRAVEL / ACCOMODATION** | EFTA will finance the expenses relating to this training course (plane, train and hotel) as well as the per diem for 2 people of each ??????? country. Further details concerning reimbursement are available from the EFTA secretary, Mrs. Erica Barley, mailto:Erica.Barley@ext.ec.europa.eu (????)<br><br>No funding is provided for participants from other European countries |