

# Mat-1.C STATISTICAL INFERENCE: A Core Course for Data Analytics (5cr) 19.11.-14.12.2012

The course will intend to provide broad overviews of:

- Major topics in classical statistical theory including descriptive techniques,
- Some useful notions of probability theory,
- The foundations of statistical inference,
- Selected domains of statistics involving special mathematical tools and foundations.

Additionally, the course will aim at offering:

- An appreciation of the historical development of the theory of statistics.

The current course will be the first step towards learning:

- Advanced data analytic techniques,
- Advanced statistical inference, specially testing of statistical hypothesis, along with the monitoring problems
- Statistical problems related to process control.

The course will have certain special features:

- Recent developments, specially adaptive procedures in the light of classical inference problems will be discussed in brief.
- In all appropriate cases, data analytic techniques using R software will be discussed.
- Assignments will be thought provoking and will help in learning practical applications of Statistics.

Teaching language is English.

The course consists of lectures and home exercises. The extent of the course is 5 cr.

## Lectures:

|     |             |      |                   |
|-----|-------------|------|-------------------|
| Mon | 12:15-14:00 | U511 | 19.11.-10.12.2012 |
| Mon | 14:15-16:00 | U413 | 19.11.-10.12.2012 |
| Tue | 16:15-18:00 | U511 | 20.11.-27.11.2012 |
| Wed | 16:15-18:00 | U511 | 21.11.-12.12.2012 |
| Fri | 14:15-16:00 | U511 | 23.11.-14.12.2012 |

## Registration in WebOodi

<https://oodi.aalto.fi/a/opintjakstied.jsp?Kieli=6&Tunniste=Mat-1.C&html=1>

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