SCHOOL OF ELECTRICAL ENGINEERING
**Signal Theory**: EQ1220 / EQ1210

Reading Assignment: Stochastic Processes (1/5) 2013–09–03,

**Notice:** To be collected before Lecture 2.
The essay consists of five questions. If you successfully answer all questions, you obtain 1 bonus point for part A of the final exam. An essay with partially correct answers will give you 1/2 point.
For the answers you should not copy text from a textbook. Group work is also not allowed, but feel free to discuss with your fellows. The reports will be checked against plagiarism.
Be brief, i.e., at most 1 page.

Explain (in your own words) . . .

1. . . . what *random variables* and *stochastic processes* are, and the difference between the 2 concepts.

2. . . . what the *probability distribution function*, the *probability density function*, the *mean* and the *variance* represent for a random variable.

3. . . . how the relationship between multiple random variables is modeled and what the measures of dependency are for jointly distributed random variables.

4. . . . how you interpret the concept of *stationarity* for random variables.

5. . . . how the concept of stationarity translates in mathematical terms. Develop in particular the role and the properties of the *autocorrelation function*.