

**Scuola di Dottorato del Politecnico di Bari**

**Ph.D. School**

**Elements of Probability for Engineering Sciences**

**CFU: 3 (24 ore)**

**SSD: ING-INF/03**

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| **Goal** | The course provides the basic elements of probability theory and stochastic process as well as examples of their usage in relevant engineering scenarios. |
| **Program** | * Review of probability: key definitions ( 2 hours) * Continuous and Discrete Aleatory Variables and Arrays (6 hours) * Stochastic processes: basic definitions (2 hours) * Stationarity and Ergodicity of stochastic processes (4 hours) * Spectral analysis of stochastic processes (4 hours) * Stochastic processes in Linear Time Invariant systems (4 hours) * Selected Applications (2 hours) |
| **References** | Robert G. Gallager – Stochastic Processes Theory for Applications, Cambridge University Press. |