

## Sample Course Description

**Faculty:** Faculty of Natural Science

**Study program:** Bio-Cemestry

**Course Title:** Matematics

**Course Credits:**3

**Language of Instruction:** English

**Course Description:** First, this subject recognizes students with concepts of verses and actions with them, series and actions with them, as well as with their indefinite or certain integrals and implementations.

You learn on the concepts of matrixes and actions with them.

You also learn about probability concepts and random variables and their uses.

**Course Goals:** The students will be able to use and interpret all the mathematical elements and methods that will he need in the other courses of these study program.

- **Course Requirements:** Lectures are optional
  - Seminars should be attended to 75%
  - **Grading:**
  - Participation / Activation + Task: 40 points  
Final Exam: 60 points
1. **Course Schedule:** Sequences, definition actions with them and their properties.
  2. The convergence of Sequences.
  3. Numerical series, definition, actions with them and their properties.
  4. Series convergence and convergence criteria.
  5. Matrixes, actions with them and their properties. The determinant of the matrices and its properties.
  6. Algebraic equation system.
  7. Indefinite integral. Definition and its properties. Integration methods.
  8. Definite integral. Definition and its properties. Integration methods. Their implementations.
  9. Events, definition actions with them and their properties.
  10. The probability of the event and their properties.
  11. Conditional probability and independence of events.
  12. Discrete and continuous random variables.
  13. The characteristics and properties of random variable.
  14. Some discrete and continuous distribution.
  15. Binomic and normal distribution.