| Program | Level | Third cycle |
| --- | --- | --- |
| | Name of the program | SEE Doctoral Studies in Mathematical Science |

| COURSE | | | | |
| --- | --- | --- | --- | --- |
| Course title | **Algebraic topology II** | | | |
| Course code | Semester | Course status | ECTS | Contact hours |
| PMAT 690 | I | Elective course | 10 | 30 |
| Lecturer | **Prof. dr. Ismar Volić** | | | |
| Course Goals | This case is continued by Algebraic Topology and which developed the basic invariants topological space as the fundamental group and homology. The main focus in this continue is the cohomotopy which has additional interesting properties and applications in various mathematical areas. The homotopic group, which generalize fundamental group, and a stable theory of homotopy will also be one of the main topics. | | | |

## COURSE CONTENT

- Cohomology
- Meyer-Vietoris array
- Cup product
- Künneth Theorem
- Poincaré duality
- Mnogostrukosti i deRham cohomology
- Groups of homotopy
- Freudenthal suspense and stable homotopy
- Cubic diagrams i Blakers-Massey Theorem

## LITERATURE

[1]  Allen Hatcher, Algebraic Topology, Cambridge University Press, 2002
[2]  Tammo Tom Dieck, Algebraic Topology, European Mathematical Society, 2008
[3]  James Davis and Paul Kirk, Lecture Notes in Algebraic Topology, American Mathematical Society, 2001
[4]  J. Peter May, A Concise Course in Algebraic Topology, University of Chicago Press, 1999

| GRADING | | | REMARKS |
| --- | --- | --- | --- |
| Criterion | Maximum points | Minimum points | |
| Homework | 70 | 40 | |
| Final exam | 30 | 15 | |
| T o t a l | 100 | 55 | |