



**UNIVERSIDADE FEDERAL DE SANTA CATARINA
CENTRO DE CIÊNCIAS FÍSICAS E MATEMÁTICAS
PÓS-GRADUAÇÃO EM MATEMÁTICA PURA E APLICADA**

MTM510008 Algebraic Topology

Pre-requisite: MTM410026 Topology, MTM410018 Advanced Calculus

Weekly lesson hours: 06h

Discipline syllabus: Elements of homology and complex algebra, map morphism, Homotopia, Homology, Cohomology, CW complexes, Excision, Coating spaces, Poincaré duality, Applications.

BIBLIOGRAPHIC REFERENCES

1. HATCHER, A. – Algebraic Topology – Cambridge University Press, Cambridge, 2002.
2. BREDON, GLEN E. – Topology and Geometry - GTM 139, 1st ed., Springer-Verlag, 1993.
3. FULTON, W. – Algebraic Topology: A first course – GTM 153, Springer, 1995.
4. NOVIKOV, P. – Algebraic Topology I, Encyclopaedia of Mathematical Sciences, Vol. 12. Springer 1996.
5. BRUZZO, U. – Introduction to Algebraic Topology and Algebraic Geometry. – <http://people.sissa.it/~bruzzo/notes/IATG/notes.pdf>. [6] MAY, J. P. – A concise Course in Algebraic Topology – <http://www.math.uchicago.edu/~may/CONCISE/ConciseRevised.pdf>
6. HILTON, P., STAMMBACH, U. – A course in Homological Algebra – GTM 4, Second Edition, Springer-Verlag, New York- Berlin, (1977).