



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

MTM510053 Introduction to the Mathematical Theory of Navier-Stokes Equation

Pre-requisite: MTM410029 Functional Analysis, MTM510012 Distribution Theory and Sobolev spaces

Weekly lesson hours: 06h

Discipline syllabus: Stationary Stokes equations. Stationary Navier-Stokes equations. The evolution problem. Decay of Solutions. Existence and Uniqueness of Periodic Solutions in Time. Stability of solutions.

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COMPLEMENTARY BIBLIOGRAPHY

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7. J. G. Heywood, The Navier-Stokes equations: On the existence, regularity and decay of solutions. *Indiana University Math J.* 29 (1980), 641--681.
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