PARTIAL DIFFERENTIAL EQUATIONS IN APPLIED SCIENCES

MAT/05 - 6 CFU - 1° semestre

Docente titolare dell'insegnamento

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Orario ricevimento: martedì 14-16 e giovedì 11-13

OBIETTIVI FORMATIVI

Knowing how to construct and understand mathematical models that describe qualitatively and quantitatively some phenomena related to the environment. Knowing how to use the main concepts of differential equation theory for application in the biological, geological and environmental fields. Knowing how to predict and justify the evolution of simple phenomena, described by ordinary differential equations, related to the biological, geological and environmental sciences.

MODALITÀ DI SVOLGIMENTO DELL’INSEGNAMENTO

Frontal class.

Should teaching be carried out in mixed mode or remotely, it may be necessary to introduce changes with respect to previous statements, in line with the programme planned and outlined in the syllabus.

Learning assessment may also be carried out on line, should the conditions require it.

PREREQUISITI RICHIESTI

Differential and Integral Calculus. Basic Analytic Geometry.

FREQUENZA LEZIONI

Recommended.
CONTENUTI DEL CORSO


TESTI DI RIFERIMENTO

1. S. Motta, M.A. Ragusa, A. Scapellato – Methods and mathematical models - ed. CULC (2020)
4. Lecture notes.

ALTRO MATERIALE DIDATTICO

Si faccia riferimento all’apposita sezione su Studium.

PROGRAMMAZIONE DEL CORSO
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### VERIFICA DELL’APPRENDIMENTO

#### MODALITÀ DI VERIFICA DELL’APPRENDIMENTO

Oral examination. Criteria for assigning the final grade: verification of the achievement of the educational objectives expressed through the European Descriptors of the qualification. Verification of learning can also be carried out electronically, should the conditions require it.

#### ESEMPI DI DOMANDE E/O ESERCIZI FREQUENTI

Ordinary differential equations and systems of ordinary differential equations; partial differential equations and their applications; physical models; models for pollution.