

Program: Chemistry (15025012071P6)

Course: MATHEMATICAL METHODS FOR PHYSICAL CHEMISTRY

Code: PPGQU0048

Workload: 60 hours

Credits: 04

Syllabus:

Vectors and Coordinate Systems; Derivation; Integration; Matrices, determinants, and systems of linear equations; Infinite series; Series and integral functions. Gradient, divergence, and rotational. Functions of Different Equations.

Bibliography:

HASSANI, S. Mathematical Methods for Students of Physics and Related Fields, 2nd edition, Springer, 2009.

KREYSZIG, E. Advanced Engineering Mathematics, 9th edition, John Wiley & Sons, 2006.

HOUSTON, P. L. Chemical Kinetics and Reaction Dynamics, Dover, 2006.

ATKINS, P. W., FRIEDMAN, R. S. Molecular Quantum Mechanics, 3rd edition, Oxford, 1997.

BILLING, G. D., MIKKELSEN, K. V. Introduction to Molecular Dynamics and Chemical Kinetics, John Wiley & Sons, 1996.

FARLOW, S. J. Partial Differential Equations for Scientists and Engineers, Dover, 1993.

MCQUARRIE, D. A. Statistical Mechanics, Harper & Row, 1976.