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# BIO102-Foundations of Biology-I

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INDRAPRASTHA INSTITUTE of  
INFORMATION TECHNOLOGY **DELHI**

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*January 06, 2025*

# Course objectives

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- The aim of this basic core course is to provide you all a decent background in cell biology, biochemistry, genetics, evolution and ecology.
- During the course you will also learn biological thermodynamics, enzyme kinetics and metabolism.
- You will solve qualitative and quantitative problems related to the same.

# Course structure

Weeks	Topics	Lecture + Tutorials
Week 1 and 2	Introduction to Biology Cell Structure and Function Biomolecules: Structure and Function	
Week 3	Cell Membrane Transport	
Week 4	Enzymes and Metabolism	
Week 5	Cell Division: Mitosis and Meiosis	
Week 6	Mendelian Genetics	
Week 7, 8 and 9	DNA Structure and Replication Gene Expression: Transcription and Translation Regulation of Gene Expression	3 hours of lecture + 1 hour of tutorial every week
Week 10, 11	Introduction to Evolution Principles of Natural Selection Microevolution & Macroevolution	
Week 12	Introduction to Ecology	
Week 13	Introduction to Physiology: Animal and Plant Systems	

# Reference books

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- *Essential Cell Biology* by Bruce Alberts, Dennis Bray, Karen Hopkin Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, Peter Walter
- *Biology* by Neil A. Campbell and Jane B. Reece
- *Lehninger Principles of Biochemistry* by David L. Nelson and Michael M. Cox

Google classroom: po3uarh

# Evaluation scheme

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Type of Evaluation	% Contribution in Grade
Assignments	20
Quiz	20
Mid-semester Exam	30
End-semester Exam	30

**3 quizzes and 3 assignments in all with (n-1) policy**