

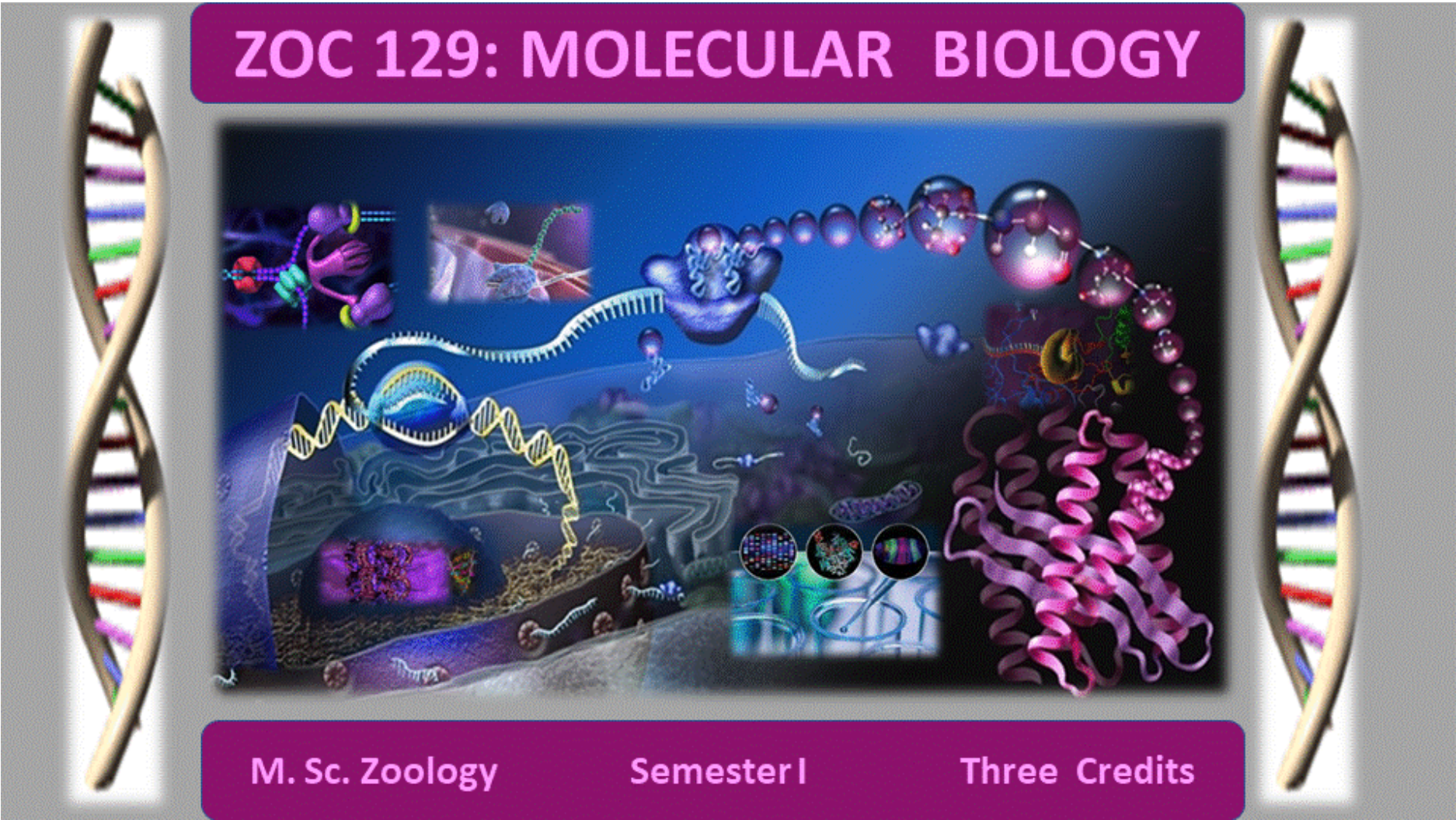
ZOC 129: MOLECULAR BIOLOGY



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[Course Details](#)



[Course Schedule](#)



[Molecular Cell Biology, 4th edition Harvey Lodish, Arnold Berk, S Lawrence Zipursky, Paul Matsudaira, David Baltimore, and James Darnell.](#)



[Molecular Biology of the Cell, 4th edition Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, and Peter Walter.](#)



[An Introduction to Genetic Analysis, 7th edition Anthony JF Griffiths, Jeffrey H Miller, David T Suzuki, Richard C Lewontin, and William M Gelbart.](#)

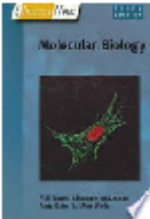


[Biochemistry, 5th edition Jeremy M Berg, John L Tymoczko, and Lubert Stryer.](#)



[Modern Genetic Analysis Anthony JF Griffiths, William M Gelbart, Jeffrey H Miller, and Richard C Lewontin.](#)



	Genomes, 2nd edition Terence A Brown.	☒
		
	Molecular Biology of the Cell By Bruce Alberts	☒
		
	Molecular Biology By Philip C. Turner, Alexander G. McLennan	☒
		

MODULE I

	Lecture 1 Handout	☒
	Lecture 1 Video	☒
	Lecture 2 handout	☒
	Lecture 2 video Part 1	☒
	Lecture 2 video Part 2	☒
	Lecture 2 video last part and lecture 4 first part	☒
	Science History institute	☒
	Discovery of DNA Structure and Function: Watson and Crick	☒
	The Discovery of DNA	☒
	The discovery of the molecular structure of DNA - the double helix	☒
	How I discovered DNA - James Watson	☒
	Lies, Thieves and DNA	☒
	The Discovery of the Structure of DNA: Double Helix, Biochemistry (2000).	☒
	Lecture 9 - DNA Structure	☒
	Three-dimensional double helical DNA structure directly revealed from its X-ray fiber diffraction pattern by iterative phase retrieval	☒
	Activity 1	☒

Activity 1

Describe and build your own timeline for discovery of DNA double helix for a duration from 1866 to 1961.

10 mks

1000 words

	Lecture 4 Handout	☒
	Lecture 2 video last part and lecture 4 first part	☒
	Lecture 4 video last part and Lecture 5 beaining	☒

Activity 2 A

- Describe various forces of attraction (weak & strong) that make up the DNA helix stable. 05 mks
(Diagram + 400 word)
- What are Inosine & Hypoxanthine and what is their significance in molecular biology? 05 mks
(Diagram + 400 word)

Activity 2 B

- Prepare a differentiating chart on types of DNA due to nucleotide conformations. 05 mks
(Diagrams + Chart + description 300 words)
- Describe types of DNA based on unusual DNA sequence structures. 05 mks
(Diagrams + 500 words)

Activity 3

- Describe various Repetitive DNA Sequences and their functions.
05 mks mks
(Diagrams + 1000 word)
- Draw a chart explaining structure and function of Telomeres and Centromeres.
05 mks mks
(Diagrams with labelling)

Activity 4

1. Distinguish between Polytene Chromosome and Lampbrush Chromosome
05 mks (Diagrams + 1000 word)
2. Prepare a detailed chart depicting Various Chromosomal Abrasions and related diseases.
05 mks (Detailed Chart)

 [Lecture 5 Extra video](#)



Hidden from students

 [Lecture 5 Extra Revised handout](#)



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 [Lecture 6 Handout](#)



 [Lecture 6 Video](#)



 [Lecture 6 Activity video](#)



 [Lecture 6 Activity video 2](#)



 [Lecture 6 reference](#)



 [Lecture 6 reference 1](#)



 [Lecture 6 reference 2](#)



 [Lecture 7 Handout](#)



 [Activity_5](#)



Activity 5

1. Give summaries of discoveries made in Genetics and Molecular Biology using *D. melanogaster* and *C. elegans* as animal models.
10 mks 1000 words

 [Lecture 7 Video](#)



 [Lecture 7 Drosophila Part I Video](#)



 [Lecture 7 Drosophila Part II Video](#)



 [Lecture 7 C. elegans Video](#)



 [Introduction: Drosophila—A Model System for Developmental Biology.](#)



 [Advantages of using Drosophila Melanogaster as a Model Organism](#)



 [Care Sheet: Flightless Fruit Fly \(Drosophila melanogaster\).](#)



 [Lecture 8 Handout](#)



 [Activity_6](#)



Activity 6

1. Give a summary of Genome Evolution.
10 mks 1000 words Max

 [Lecture 9 Handout Part I](#)



 [Lecture 9 Handout Part II](#)



 Lecture 8 Video	☒
 Lecture 9 Part I Video	☒
 Lecture 9 Part I complete & II initiated Video	☒
 Activity 7	☒
Activity 7 1. What do you understand by Functional Chromosome ? 10 mks 500 words Max	
 Lecture 10 video Revision & Discussion	☒

Molecular Biology YouTube Resources

 dmflyboy	☒
David J. Marcey, Ph.D. Professor and Fletcher Jones Professor of Developmental Biology, California Lutheran University	
 Bob Trenwith	☒
Rosie redfield Professor , University of British Columbia	
 Genetics	☒
 Nucleic acids I	☒
Lecture Series on BioChemistry I by Prof.S.Dasgupta, Dept of Chemistry, IIT Kharagpur NPTEL	
 Nucleic acids II	☒
Lecture Series on BioChemistry I by Prof.S.Dasgupta, Dept of Chemistry, IIT Kharagpur NPTEL	
 Nucleic acids III	☒
Lecture Series on BioChemistry I by Prof.S.Dasgupta, Dept of Chemistry, IIT Kharagpur NPTEL	
 Lecture 9 part II handout	☒

MODULE 2

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 Lecture 14 Handout	☒
 Lecture 15-16 Handout	☒
 Lecture 17 Complete Handout	☒
 Lecture 14 Part I video	☒
 Lecture 14 Part II video	☒
 Lecture 15 video	☒
 Lecture 16 video	☒
 Ames test (Technique to determine mutagenic potential).	☒
 Lecture 17 Part I video	☒
 Lecture 17 Part II video	☒
 DNA Repair Mechanism I Video BY EASY PEASY SEHER	☒

 DNA Repair Mechanism II Video BY EASY PEASY SEHER	☒
 Lecture 18 Handout	☒
 Lecture 18 video	☒
 Lecture 19-20 Handout	☒
 Lecture 19-20 video	☒
 Lecture video on Module I ISA feedback	☒
 P53_genes	☒
 Lecture 26 Primer Handout	☒
 Lecture 26 Primer video	☒
 Lecture 26 Part I	☒
 Lecture 26 Part I Handout	☒
 Lecture 26 last part video	☒
 Lecture 26 last part Handout	☒
 Transcription in prokaryotes 1	☒
 Transcription in prokaryotes 2	☒
 Transcription in prokaryotes 3	☒
 Submission link for Module II activities	☒

Submission link for Module II Activities

 Submission link for Module III activities	☒
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Submission link for Module III Activities

 Lecture 26 lecture last part video	☒
 Lecture 26 lecture last part 2 handout	☒
 Lecture 27 lecture I transcription in Eukaryotes	☒
 Lecture 27 lecture Transcription in eukaryotes video	☒
 Lecture 3 part+ 27 part and lecture 28 part	☒
 Lecture3+ 27+28 lecture video 1	☒
 Lecture3+ 27+28 lecture video 2	☒
 Lecture 3+ 27+ 28 lecture video 3	☒
 Lecture 27 Splicing	☒
 Lecture 27 Splicing	☒
 Lecture 28 Part 1	☒
 Lecture 28 Part 1	☒
 Lecture 28 part II	☒
 Lecture 28 Part II	☒
 Lecture 28 Part III	☒
 Lecture 28 Part III	☒
 Lecture 29	☒
 Lecture 29 -2	☒
Lecture 29 2	☒

 Lecture 29-3	☒
 Lecture 30 part	☒
 Lecture 30 part video	☒
 Lecture 30-31-32 handout	☒
 Lecture 30-31-32 video	☒
 Lecture 33 handout	☒
 Lecture 33 video	☒

[My Field work Students Group](#)

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 Monthly Report	☒
 Monthly Report II	☒
 Monthly Report III	☒
 FAO Species identification sheets for fishery_purposespdf	☒
 Bird Identification Guide	☒
 Bird Identification	☒
 Bird watching	☒
 Bird ringing	☒
 Bird identification	☒
 Bird identification	☒
 Bird identification	☒
 butterfly_identification	☒
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