



**Integrated Bachelor and Master Programmes in Biomedical Science**  
**IBMP (Biomedical Science) Semester (II)**

Paper Code	IS02CBMC53	Periods per week	01
Title of the paper	Practical based on IS02CBMC51 & IS02CBMC52	Exam Duration	2 hrs
Total Credit of the Paper	01	Total Marks	50

Course Objectives:	This course enables students to, <ol style="list-style-type: none"><li>To gain practical knowledge by applying the experimental methods to correlate with the theory, learn the usage of different systems for various measurements and apply graphical analysis to the experimental data.</li><li>Provide knowledge about Practical based on Development Biology and get familiar with basic instrumental techniques.</li></ol>
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Unit	Description
1.	<ul style="list-style-type: none"><li>Resolving power of a telescope</li><li>Measuring wavelengths with a diffraction grating</li><li>Determination of Cauchy's constants</li><li>Determine the numerical aperture of an optical fibre</li><li>Michelson's interferometer</li></ul>
2.	<ul style="list-style-type: none"><li>To study the parts of a dicot flower.</li><li>To study the parts of the monocot flower.</li><li>To study the structure of <i>Cycas</i> male cone and microsporophyll</li><li>demonstration of chick embryo to study the structure</li><li>To study the development of frogs.</li></ul>

\* Units will have the same weightage in the evaluation as suggested in the course outline

Teaching-Learning Methodology	Practical demonstration of each experiment will be conducted in group or individual with the help of availability of suitable lab equipment's and infrastructure.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage



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1.	Internal Written / Practical Examination	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, student will be able to

1.	Practical are conducted based on theory papers in order to strengthen the understanding behind concepts.
2.	Students are exposed to analytical instruments.

Suggested References: Include reference material from where a student is expected to study the said content in APA style. Reference websites can also be included.

Sr. No.	Reference
1.	B.Sc. Practical Physics, C L Arora, S. Chand & Co. Ltd., New Delhi (2018)
2.	Practical Physics (With Viva-Voce), Dr. S L Gupta and V Kumar, Pragati Prakashan, Meerut (2014)
3.	An Advanced Course in Practical Physics, D. Chatopdhyay, P.C. Rakshit, New Central Book Agency Pvt. Ltd (1990)
4.	Developmental Biology, A Guide for Experimental Study, by Mary S. Tyler
5.	Developmental Biology – Scott F. Gilbert – 8 th Edition, Sinauer Associates Inc., 2006
6.	Principles of Development – L. Wolpert – 4 th Edition, Oxford University Press, 2011.

On-line resources available that can be used as reference material (As per Guidelines –V)

Sr. No.	On-line Resources
1.	<a href="https://nptel.ac.in/courses/115/105/115105120/">https://nptel.ac.in/courses/115/105/115105120/</a>
2.	<a href="http://cbii-au.vlabs.ac.in/">http://cbii-au.vlabs.ac.in/</a>
3.	<a href="https://www.researchgate.net/publication/241594386_Key_Experiments_in_Practical_D">https://www.researchgate.net/publication/241594386_Key_Experiments_in_Practical_D</a>



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<a href="#">Developmental Biology</a>
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