

DEPARTMENT OF ZOOLOGY (S.F.)
DEVA MATHA COLLEGE, KURAVILANGAD

Affiliated to Mahatma Gandhi University, Kottayam



Syllabus

ADD-ON COURSE

in

DMCK/SFZOO/AD37/2021: Biological preservation techniques

Academic Year: 2021-22



DEVA MATHA COLLEGE KURAVILANGAD

DEPARTMENT OF ZOOLOGY SELF FINANCE

Add on Courses offered for Students:2021-2022

***IIPG-Data Analytics Using R-20 - for PG Students**

DMCK/STATS/AD 38/2021

***IPG-Biological Preservation Techniques**

DMCK/ SFZ00/AD 37/2021

Department Coordinator: Ms. Ambily K Chandran

Title: **BIOLOGICAL PRESERVATION TECHNIQUES**

Instructional Hours:30

Duration: 3 months

Mode of Instruction:Both online and off line

Intake Capacity:12

Eligibility: B Sc Zoology

P G Department of Zoology offers add on course on 'Biological preservation techniques (DMCK/SFZOO/AD37/2021) for our I PG students. The details of the course and syllabus are attached. This course mainly introduce tools and techniques available for studying biochemical and biophysical nature of life. This course help learners to use the tools and techniques for project work /research in biology. Eight students participated in the program. Ms. Aparna S., Ms. Ambily K Chandran and Ms. Athira Raveendran has taken the class.

Course Objectives

1. To introduce tools and techniques available for studying biochemical and biophysical nature of life
2. To equip the learner to use the tools and techniques for project work /research in biology

Title of the course : Biological Preservation Technique

Instructional Hours : 30 hours

Time schedule - From 05/12/2022 to 31/12/2022

Syllabus

Module 1 (Time schedule - 05/12/2022 to 13/12/2022)

Specimen preparation for light microscopy – wet mount preparation, smears, squashes and sections. Cytochemical and histological methods – microtome techniques, fixation, staining, cytochemistry of nucleic acids, detection of carbohydrates, proteins and lipids.

PRACTICAL (From 14/12/2022 to 21/12/2022)

- Preparation of temporary and permanent slides. (Demonstration only)
- Preparation of Microtome section & spreading. (Demonstration only)
- Squash preparation of onion root tip. (Demonstration only)
- Collection and preservation of invertebrates. (Demonstration only)

Module 2 (From 22/12/2022 to 31/12/2022)

Taxidermy, Fixation, preparation of temporary and permanent slides, whole mounts. Collection and preservation of vertebrates. Preparation of specimens: Preparation of museum specimens, articulated skeletons, Alizarin preparation and resin-embedded specimens, Preparation o

Course outcome

- Familiarize with the equipment's used for histological studies
- Implementing temporary and permanent mounting
- Differentiating various stains and chemicals used for each histological procedures

Assessment Procedure

Multiple Choice Questions

Grading

Grade	Grade point	Range
A+	5	4.5-5.00
A	4	4.00-4.49
B	3	3.00-3.99
C	2	2.00-2.99
D	1	0.01-1.99
E	0	0

References

Roy, R.N. 1996. A Textbook of Biophysics. New Central Book Agency (P) Ltd. Calcutta

Karp, G. 2013. Cell and Molecular Biology (7th edn). John Wiley and Sons, Inc. NJ, USA.

Keith Wilson and John Walker. 2010. Principles and techniques of Biochemistry and Molecular Biology. 7th Edition.



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