

Report on Add-on Certificate Course on “Biological Technique-Microtomy” in collaboration with Z.S.I. Dehradun from 19th June to 24th June 2023

Department of Zoology, Dolphin (PG) Institute of Biomedical & Natural Sciences, Dehradun held Add-on Certificate Course on “Biological Technique-Microtomy” in collaboration with Z.S.I. Dehradun from 19th June 2023. The resource persons for the course were Dr. Gaurav Sharma, Scientist E, ZSI, Dehradun, Dr. Aftab Ahmad, Scientist D, ZSI, Dehradun, Dr. Beena Joshi Bhatt Associate Professor & Head, Department of Zoology, Dolphin (PG) Institute of Biomedical & Natural Sciences, Dehradun and Dr. D. K. Bhardwaj, Associate Professor, Department of Zoology, Dolphin (PG) Institute of Biomedical & Natural Sciences, Dehradun. The BOS of the course was held on 13th June 2023.

Microtome has been derived from the Greek words, mikros meaning "small", and temnein, meaning "to cut". Microtome is an instrument with the help of which sections of tissues are cut and the process of cutting thin sections is known as Microtomy. Many undergraduate science students are unable to learn this technique due to unavailability of microtome and chemicals in their labs. The aim of this study was to reach to the students and train them in microtomy. After completion of this course participants will be technically and critically trained with microtomy and histology.

On day1, 19th June 2023 students learnt the basic, history and importance of microtomy. After that they studied about the equipments and chemicals required for microtomy. Then they prepared the Bouin's fluid and fixed the animal tissues on it.

On second day, 20th June 2023 participants washed the fixed sample in Bouin's fluid in ascending series of alcohol i.e. 10%, 30%, 50%, 70%, 90% and 100%. After the whole procedure they prepared the wax block.

On third day, i.e. 21st June 2023 participants trimmed their blocks. After trimming they started the process of section cutting using the microtome.

On fourth day, i.e. 22nd June 2023 participants learnt the principle, stain and procedure of double staining. They stained their slides using coppling jars and prepared the permanent slides.

On fifth day, i.e. 23rd June 2023 participants visited ZSI. The students viewed their slides under highly magnified microscopes including electron microscope.

On sixth day i.e. 24th June 2023 analysis of slides and assessment of participants were done. This was followed by certificate distribution to the participants.



FIG. 1: BOS OF ADD-ON COURSE HELD ON 13th JUNE 2023



Fig.2: Day 1; Preparation of Bouin's fluid & fixation of tissues



Fig.3: Day 1; Manual Kit Distribution



Fig.3: Day 2; Block Preparation



Fig.4: Day 3; Cutting of Blocks under Microtome



Fig. 5: Day 4; Double Staining of Slides



Fig. 6: Day 5; Visit to ZSI and Visualisation of Slides

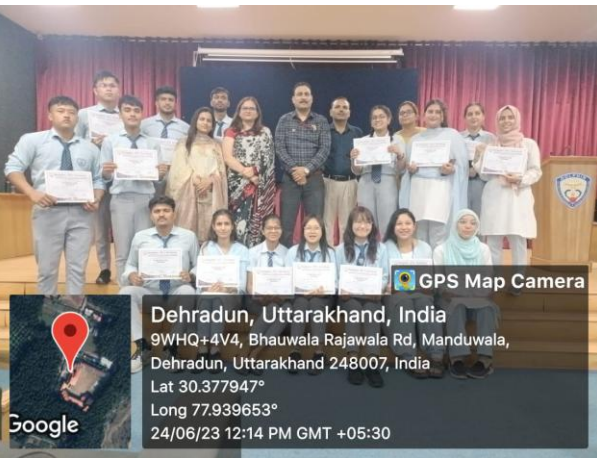
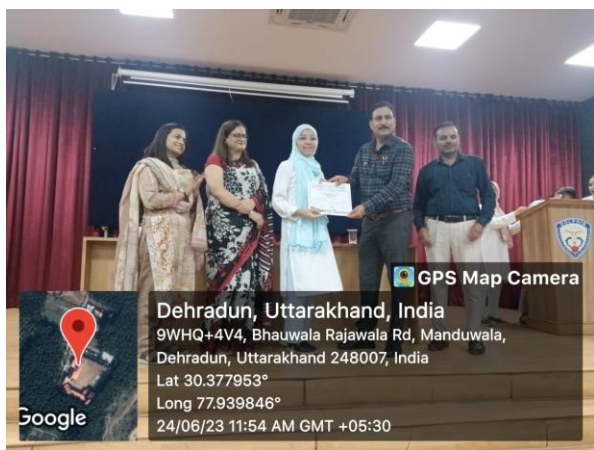


Fig. 7: Evaluation of Participants and Valedictory Session

Dolphin (PG) Institute of Biomedical & Natural Sciences, Manduwalla, Dehradun

ATTENDANCE SHEET
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S.No.	Name	Department	Sig.
1	Lokesh Singh Bhaurani	Pat. Pathology 3rd year	Arshi
2	Himan Rijaz	Pathology (2nd year)	Arshi
3	Aashi	M.Sc. Zoology 2nd sem	Arshi
4	Sakshi	"	Arshi
5	Ashwika Sharma	"	Arshi
6	Kangyan Wilson Singh	"	Arshi
7	Manamita Thakran	"	Arshi
8	K. Nelson Singh	"	Arshi
9	Harshita Bhat	"	Arshi
10	Adity Raj	Pathology (2nd year)	Arshi
11	Arshi Kumar Sanyam	Pathology 3rd yr	Arshi
12	Jay Vamshy M. M	M.Sc. Zoology 2nd sem	Arshi
13	Pooja	M.Sc. Microbiology	Arshi
14	V. Manoharanga Bachan	M.Sc. Zoology 2nd sem	Arshi
15	Ashmita Maan	"	Arshi
16	N. Suresha Chakri	"	Arshi
17	Jyoti Chakri	"	Arshi
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Fig.8: Attendance Sheets

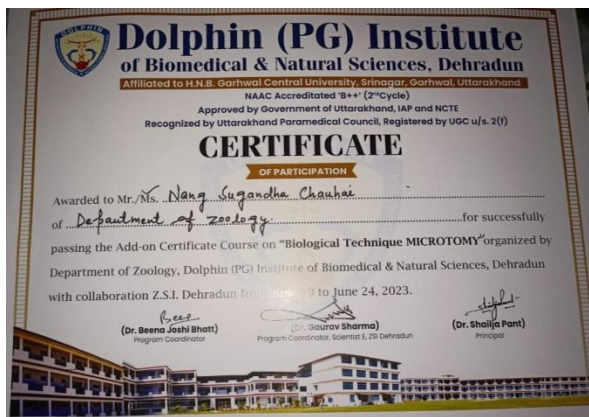
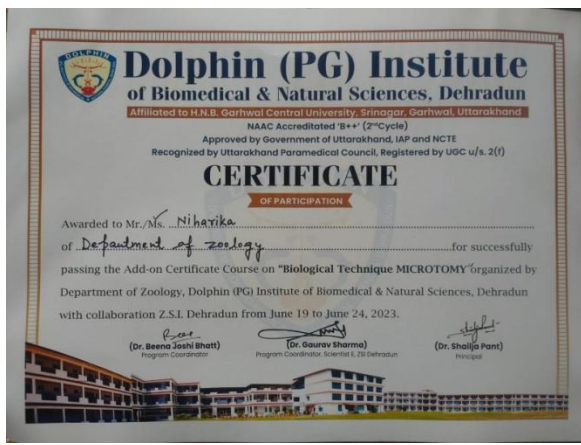
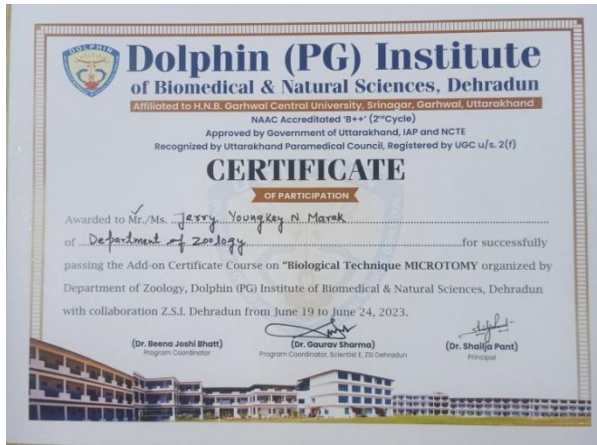


Fig. 9: Certificates

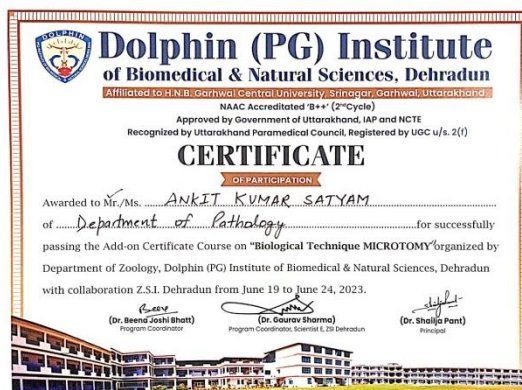
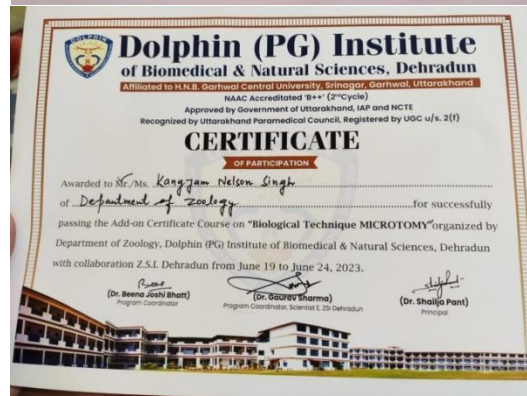
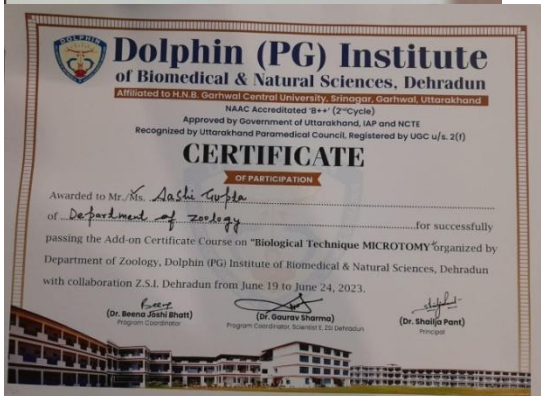


Fig. 10: Certificates

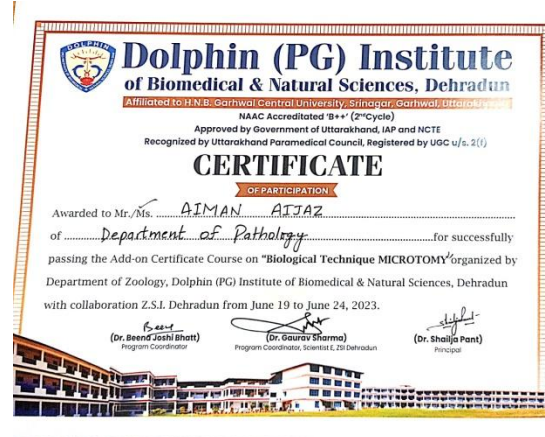
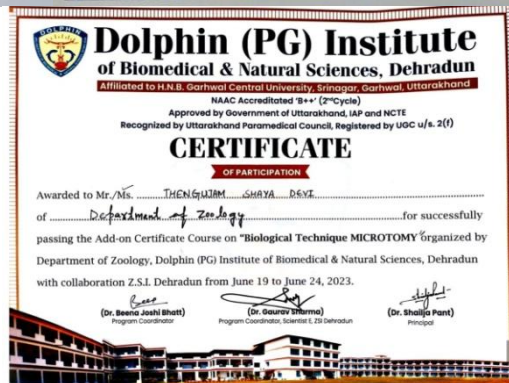




Fig. 11: Certificates