



Goa University

Discipline of Marine Microbiology

School of Earth, Ocean and Atmospheric Sciences

Report on Field trips and Industrial visits for Marine Microbiology Part I students

1. Title of the Event/Activity/program	Field trips and Industrial visits for Marine Microbiology Part 1 students as part of the MMI-533: Field Trip/Study Tour – Practical (1 credit) course.
2. Date and Time	Day 1: 17 th February 2025; 9.30 am - 6.30 pm. Day 2: 19 th February 2025; 9.30 am - 6.30 pm. Day 3: 20 th February 2025; 2.30 pm - 5.30 pm. Day 4: 22 nd February 2025; 9.30 am - 2.30 pm. Day 5: 25 th February 2025; 9.30 am - 2.30 pm. Day 6: 27 th February 2025; 9.30 am - 2.30 pm.
3. Mode of conduct (Physical/Online)	Physical
4. School/ Directorate/ Section	School of Earth, Ocean and Atmospheric Sciences
5. Collaborating Agency/School/Directorate	NA
6. Detail of the Resource Person (Brief biodata)	NA
7. Number of Faculty attended/participated	Day 1: 01 Day 2: 01 Day 3: 02 Day 4: 01 Day 5: 02 Day 6: 02

8. Number of Student attended / participated	Day 1: 11 Day 2: 11 Day 3: 11 Day 4: 11 Day 5: 11 Day 6: 10
9. No. of external students/faculty/other participants	Day 1: 03 Day 2: 05 Day 3: Nil Day 4: 02 Day 5: 01 Day 6: 02
10. The objectives of the Program/activity/event	To (1) gain an understanding of the ongoing research activities at various national research institutes; (2) witness first-hand the functioning of microbiology- and aquaculture-related facilities; (3) gain hands-on experience in the collection of water and sediment samples, processing and analysis of research data; and (4) obtain information about the employment opportunities available to them in the different sectors mentioned above.
11. Description of the Program/activity/event	Day-wise description provided in Annexure 1
12. Benefit/Key outcomes of the Program/activity/event	The field trip visits provided students with practical exposure to various industries, aquaculture facilities and research institutes. They also gained knowledge about the diverse employment opportunities available to them for their future careers.
13. Enclosures with report	Geo-tagged photos, Attendance of students/faculty/external participants.

Signature:

MD 10/04/25

Name of Coordinator with designation:

DR. PRIMA D' COSTA
ASST- PROFESSOR,
SEOAS

Signature

Dean

Seal of the School



Annexure I

Day-wise description of the field trip activities

The M.Sc. Marine Microbiology Part I students visited different research institutes, industries and aquaculture facilities on 6 days from 17th February 2025 to 27th February 2025, as part of the MMI-533: Field Trip/Study Tour – Practical (1 credit) course.

Day 1 (17th February 2025): The students visited BITS-Pilani (Goa campus) in the morning session and the National Centre for Polar and Ocean Research (NCPOR) in the afternoon. One Marine Microbiology faculty (Dr. Priya M. D’Costa) accompanied them. In BITS-Pilani, the students were taken to the different biological science laboratories where the resource persons explained the different types of research undertaken there. In NCPOR, Dr. Anand Jain interacted with the students. He presented the different avenues of research work that NCPOR is involved in and also discussed about Dissertation and Ph.D. opportunities with them. The students were shown various instruments used in biological oceanography, particularly the FlowCAM used for plankton studies and instruments used for molecular biology and sequencing analyses.

Day 2 (19th February 2025): The students went for a field trip along the Mandovi estuary. They boarded a passenger ship at Brittona Jetty, and collected water and sediment samples from 4 selected stations. Dr. Priya D’Costa accompanied them. This field trip was preceded by detailed planning and preparation of reagents and consumables required for sampling and analysis. After collection, the samples were transported to the laboratory and processed further.

Day 3 (20th February 2025): The students visited CSIR-National Institute of Oceanography in Dona Paula, Goa, during the afternoon half. Dr. Priya D’Costa accompanied them. They were shown videos about the mandate and research work of NIO. They appreciated the various archaeological exhibits at the museum section of NIO, that were excavated by the archaeology section of NIO. They also visited various laboratories, and understood the workings of different research instruments, mainly Q-ToF, that is used for proteomics. They also viewed culturing and maintenance of marine organisms, particularly sea slugs.

Day 4 (22nd February 2025): The morning half was dedicated to studying the biological diversity of the intertidal rocky ecosystem of Anjuna. The students, along with Dr. Priya D’Costa, visited the Anjuna rocky intertidal region during low tide hours and carefully viewed and documented the diverse algae, gastropods, sea urchins, crabs and sea anemones observed there. They used the iNaturalist app and Google lens to identify these flora and fauna.

Day 5 (25th February 2025): The students visited two aquaculture facilities in the morning half of the day, and were accompanied by Drs. Chanda Berde and Nikita Lotlikar. They first visited the aquaculture ponds in Dhauji, Ella Farms, Old Goa where they were informed about the aquaculture practices employed in Goa, and the commercial and logistical aspects of aquaculture farming. They subsequently toured the Goan Bounty fish processing facility in Dhulapi, Corlim, where they observed the techniques used to process fish. They were also shown the storage facilities and the packed fish ready for export.

Day 6 (27th February 2025): This was the last day of the field trip series. The students visited Molbio Diagnostics Pvt. Ltd. in Verna along with Drs. Chanda Berde and Sangeeta Naik. The resource persons there showed the students their diagnostics facility and informed them about the majority of their products used for various diagnostic services.

Geotagged photos

Day 1 (17th February 2025): BITS-Pilani, Goa Campus



Fig. 1. Resource person explaining about the instruments in the laboratory.



Fig. 2. Resource person explaining about the wastewater processing facility at BITS-Pilani.

Day 1 (17th February 2025): NCPOR, Vasco



Fig. 3. Group picture with the resource persons.



Fig. 4. Dr. Anand Jain explaining about the different fields of research in NCPOR.

Day 2 (19th February 2025): Mandovi estuarine system

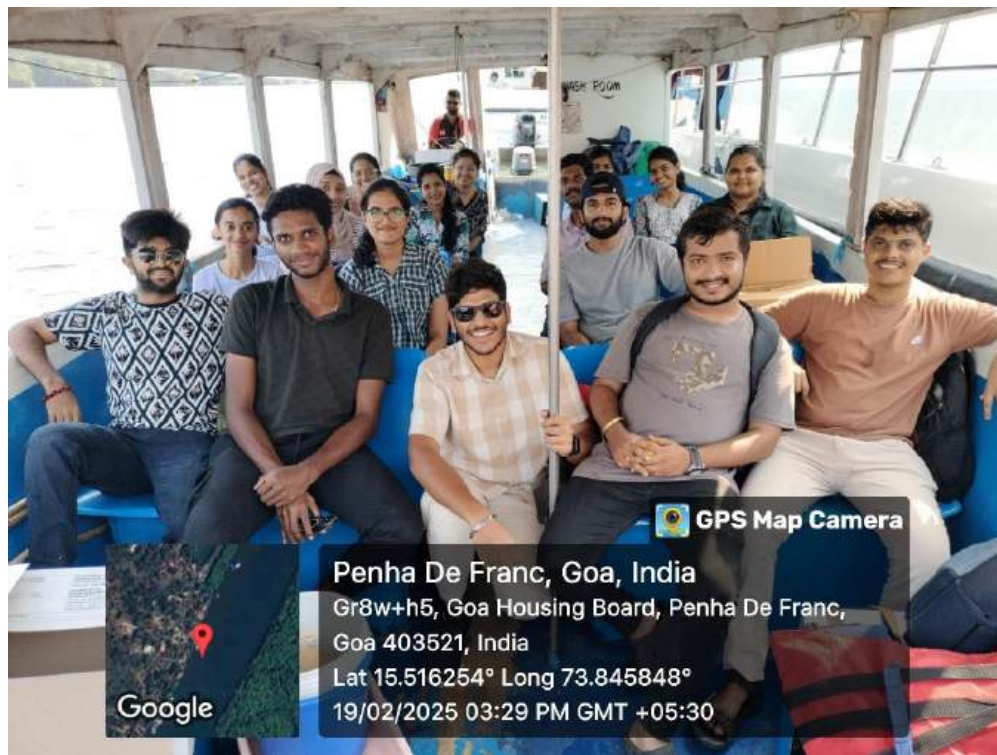


Fig. 5. Participants onboard the passenger boat.



Fig. 6. Preparation for collection of water samples.



Fig. 7. Analysis of salinity using a hand-held refractometer.



Fig. 8. Collection of water samples for microbiological analysis.

Day 3 (20th February 2025): CSIR-NIO, Dona Paula



Fig. 9. Dr. Samir Damare explaining the working of Q-ToF to the students.



Fig. 10. The students viewing the archaeological exhibits in the NIO museum.

Day 4 (22nd February 2025): Anjuna intertidal ecosystem



Fig. 11. Students exploring the biodiversity of the rocky, intertidal pools at Anjuna.

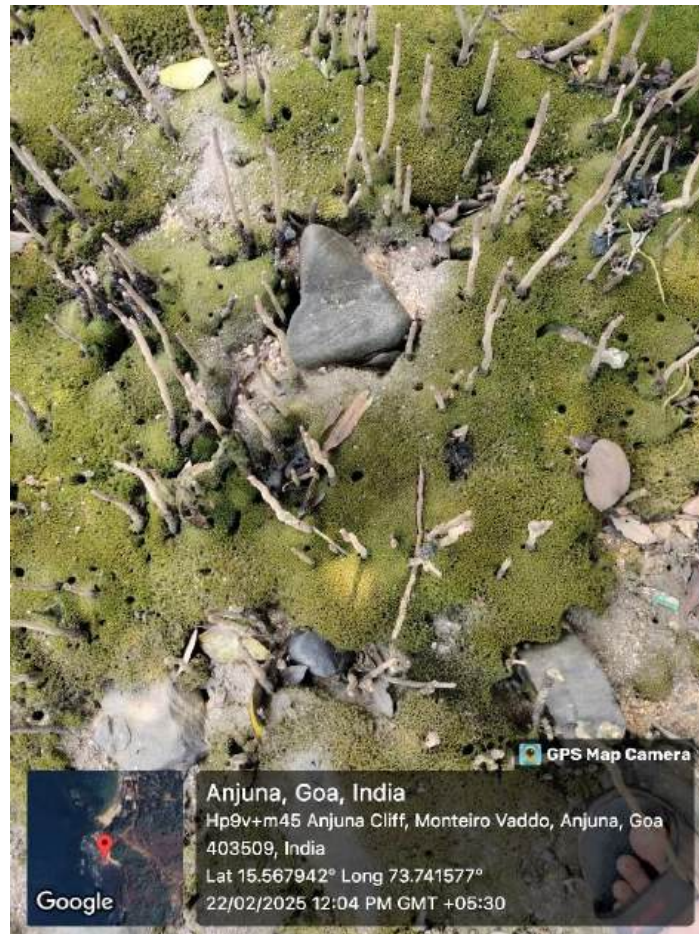


Fig. 12. The rich biodiversity of the rocky, intertidal pools at Anjuna.

Day 5 (25th February 2025): Aquaculture and fish processing units, Old Goa



Fig. 13. The aquaculture ponds at Dhauji, Old Goa.



Fig. 14. The resource person explaining how fish are monitored for growth.



Fig. 15. The Marine Microbiology group visiting Goan Bounty, a fish processing unit at Dhulapi.



Fig. 16. The resource person explaining about the fish products that are processed for export.

Day 6 (27th February 2025): Molbio Diagnostics Pvt. Ltd., Verna



Fig. 17. The Marine Microbiology students and faculty at Molbio Diagnostics, Verna.



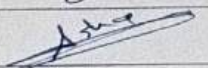
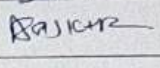
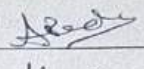
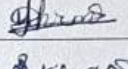
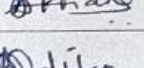
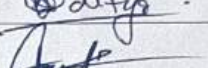
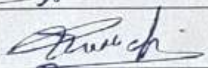
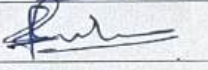
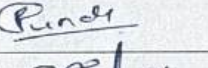
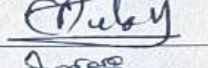
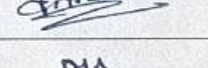
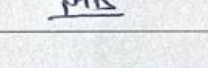
Fig. 18. The resource person explaining about the Molbio products available commercially.

Field Trip : Visit to BITS PILANI & NCPOR

DAY 1: 17th February 2025

Attendance

Time : 9:30 am - 6:30 pm.

Sr. No.	Name of the Faculty/ Research Scholar/ Students	Programme	Signature
1	Dweta Kanekar	Msc Marine micro Part 2	
2	Lesha R. Lotlikar	"	
3	Anushka Kaskar	Ph.D. Marine Micro	
4	Ambika S. Pednekar	Ph.D Marine micro	
5	Riksha I. Sharma	MSc Marine Micro Part I	
6	Sana K. Khan	MSc. Marine Micro Part - I	
7	Aditya Raj Shrivastav	" " "	
8	Vasant Gouka	"	
9	Shivani Kadam	"	
10	John Fernandes	"	
11	Hansh Gawandakar	"	
12	Pratham Kunde	"	
13	Chetan D. Tulaskar	"	
14	Imrana Shaikh	Ph.D Marine Microbiology	
15	DR. PRIYA M. D'COSTA	FACULTY, MARINE MICROBIOLOGY	

MD
17/02/25 (COORDINATOR)
DR. PRIYA M. D'COSTA
ASST. PROFESSOR (MAR. MICRO),
SEDAS




SR. PROF. S.C. GHADI
DEAN, SEDAS



Goa University
School of Earth, Ocean and Atmospheric Sciences
Field Trip to Mandovi Estuarine System Students Part-1
DAY 2: Date: 19th February 2025

Attendance

TIME : 9:30 am - 6:30 pm.

Sr. No.	Name of the Faculty/ Research Scholar/ Students	Programme	Signature
1	Diksha I. Sharma	Marine Microbiology	
2	Lesha R. Lotlikar	" "	
3	Sana K. Khan	" "	
4	Disha Kanekar	" "	
5	Chetan D. Palskar	" "	
6	Vasat Gowkar	" "	
7	Shivam Kadam	" "	
8	Pratham G.S. Kunde	" "	
9	Aditya Raj Shrivastav	" "	
10	John. S. Fernandes	" "	
11	Han'h Gawandalleer	" "	
12	Imrana Shaikh	Ph.D. Marine Microbiology	
13	Savica B. Botelho	Ph.D. Marine Microbiology	
14	Anushka Karkan	" "	

MD
19/02/25
Co-ordinator
Dr. Priya D'Costa
Asst. Prof. Marine Microbiology



Senior Prof. S.C. Ghadi
Dean, SEOAS



Goa University

School of Earth, Ocean and Atmospheric Sciences

Field Trip to CSIR- National Institute of Oceanography for Part-1 Students

DAY 3: Date: 20th February 2025

Attendance

TIME : 2:30 pm - 5:30 pm

Sr. No.	Name of the Faculty/ Research Scholar/ Students	Programme	Signature
1	Niksha - I. Sharma	Marine Microbiology	
2	Dueta R. Kanekar	Marine Micro	
3	Sara - K. Khan	Marine Microbiology	
4	Lesha R. Lotlikar	" "	
5	chetan .D. Pulekar	" "	
6	Vasant Gonetkar	" "	
7	Shivam Kadam	" "	
8	Pratham A.S. Kundi	" "	
9	Aditya Raj Shrivastav	" "	
10	John. S. Fernandes	" "	
11	Hank. Gausandalkar	" "	
12	Diviya Vaidgankar	Faculty Marine Microbiology	
13	DR. PRIYA M. D'COSTA	FACULTY, MARINE MICROBIOLOGY	
-	-	-	-

20/02/25

Co-ordinator

Dr. Priya D'Costa

Asst. Prof. Marine Microbiology



Senior Prof. S.C. Ghadi
Dean, SEOAS



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Goa University

School of Earth, Ocean and Atmospheric Sciences

Field Trip to Anjuna for Marine Microbiology Students Part-1

DAY 4: Date: 22nd February 2025

Attendance

TIME : 9:30 am - 2:30 pm

Sr. No.	Name of the Faculty/ Research Scholar/ Students	Programme	Signature
1	Diksha .I. Sharma	Marine Microbiology	
2	Lesha R. Lotlikar	" "	
3	Sana .K. Khan	" "	
4	Dweta Kanekar	" "	
5	Chetan .D. Tulaykar	" "	
6	Vasant Gorekar	" "	
7	Shriam Fadnis	" "	
8	Pratham A.S. Kundi	" "	
9	Aditya Raj Ghosvartan	" "	
10	John .S. Fernandes	" "	
11	Harkh Gavandekar	" "	
12	Inwara Shaikh	Ph.D Marine Microbiology	
13	Savica .B. Botelho	Ph.D Marine Microbiology	
14	Dr. Priya M. D'Costa	FACULTY MAR. MICROBIOLOGY	

MD 22/02/25

Co-ordinator
Dr. Priya D'Costa
Asst. Prof. Marine Microbiology



Senior Prof. S.C. Ghadi
Dean, SEOAS



Goa University

School of Earth, Ocean and Atmospheric Sciences
Field Trip for Marine Microbiology Students Part-1

DAY 5: Date: 25th February 2025, TIME: 9:30 am - 2:30 pm

Attendance

VENUE: AQUACULTURE FARM, AND FISH PROCESSING UNIT

Sr. No.	Name of the Faculty/ Research Scholar/ Students	Programme	Signature
1.	John. S. Fernandes	Marine Microbiology	
2.	Aditya Raj Shrivastav	Marine Microbiology	
3.	Shivam Kacham	Marine Microbiology	
4.	Pratham Kunder	Marine Microbiology	
5.	Vasant Govekar	"	
6.	Hank Gaudandalbar	"	
7.	Chetan D. Gulaskar	"	
8.	Dweta R. Kanekar	"	
9.	Lesha R. Lotlikar	Marine Microbiology	
10.	Sana K. Khan	Marine Microbiology	
11.	Riksha I. Sharma	"	
12.	Savita B. Botelho	Ph.D. Marine Microbiology	
13.	DR. CHANDA BERDE	FACULTY (MAR. MICROBIOLOGY)	
14.	DR. NIKITA LOTLIKAR	FACULTY (MAR. MICROBIOLOGY)	

MD 25/02/25

Co-ordinator
Dr. Priya D'Costa
Asst. Prof. Marine Microbiology



Senior Prof. S.C. Ghadi
Dean, SEOAS





Goa University
School of Earth, Ocean and Atmospheric Sciences
Field Trip for Marine Microbiology Part-1 Students

DAY 6: Date: 27th February 2025; TIME: 9:30 am - 2:30 pm

Attendance

VENUE: MOL BIO DIAGNOSTICS, VERA

Sr. No.	Name of the Faculty/ Research Scholar/ Students	Programme	Signature
1.	Sana - K. Khan	Marine Microbiology	
2.	Dweta R. Kanekar	" "	
3.	Diksha I. Sharma	" "	
4.	Prathan G.S Kunder	" "	
5.	Shivam Kadam	" "	
6.	Varant Govekar.	" "	
7.	Chetan D. Tukarkar.	" "	
8.	Aaditya R. Shrivartan.	" "	
9.	Lesha Lollikan	" "	
10.	John Fernandes	" "	
11.	Dr. Chanda Berde	Faculty (Marine Microbiology)	
12.	Dr. Sangeeta Naik	" "	
13.	Anushka Kaskar	Ph.D. Marine Micro	
14.	Ambika S. Pednekar	" "	

MD
 27/02/25
 Co-ordinator
 Dr. Priya D'Costa
 Asst. Prof. Marine Microbiology



Senior Prof. S.C. Ghadi
 Dean, SEOAS