

**A.S.D GOVT. DEGREE COLLEGE FOR WOMEN (A),**  
(Re- Accredited by NAAC with B Grade)  
**Jagannaickpur, Kakinada-533002, East Godavari, AP**

**DEPARTMENT OF ZOOLOGY &**  
**AQUACULTURE TECHNOLOGY**

**2020-2025**



**Best Practice**

**"Hands - on Training & Field Work"**

## **Title:** Hands-on Training & Field Work

### **Objectives of the Practice:**

The primary objective of this practice is to provide students with practical, real-world experience in the field of aquaculture and aquatic sciences. By engaging students in hands-on training at Aqua Labs, the practice aims to enhance their theoretical knowledge with practical skills, preparing them for careers in sustainable aquaculture, water resource management, and environmental conservation. The underlying principles include experiential learning, skill development, and bridging the gap between academic learning and industry needs in the field of aquatic sciences.

### **The Context:**

In Indian higher education, particularly in the field of aquaculture and aquatic sciences, there is often a gap between classroom learning and real-world application. Theoretical knowledge is crucial, but it is insufficient to fully prepare students for the challenges faced in the industry. Inadequate exposure to practical work and field conditions makes it difficult for students to transition into careers. Moreover, the lack of resources, trained faculty, and infrastructure to provide quality hands-on training at universities poses a challenge. To address these issues, implementing hands-on training and fieldwork in Aqua Labs was essential to ensure students gain critical technical skills, exposure to modern techniques, and knowledge of industry practices in aquaculture and water management.

### **The Practice:**

The practice of hands-on training and fieldwork at Aqua Labs involves students participating in practical exercises that simulate real-world scenarios in the aquaculture industry. This includes learning how to manage aquatic ecosystems, analyse water quality, monitor the growth and health of aquatic organisms, and understand the environmental factors affecting aquaculture. Students gain experience in setting up and maintaining aquaculture systems, such as ponds and tanks, and learn about sustainable aquaculture practices, disease management, and water treatment processes. Students also participate in field surveys, visiting local farms, and engaging in case studies of successful aquaculture projects in India.

The limitations faced during the implementation of this practice include the requirement for well-equipped laboratories and field stations, which not all institutions can afford. The lack of trained faculty to guide hands-on training, especially in remote or under-resourced institutions, also posed a challenge. The practice required regular updates and investments in equipment and infrastructure to ensure its sustainability. However, our institution, with the support of State Institute of Fisheries Technology (SIFT), Kakinada, effectively addressing these challenges. Furthermore, organizing fieldwork and ensuring students' safety in the field added logistical complexities. Being located in a coastal area, our college offers students an excellent opportunity to experience and explore aquaculture through immersive visits.

With the support of SIFT, The Department of Zoology & Aquaculture, ASD Govt Degree College (W)(A) has been providing regular incentives to students through trainings, field visits, internships, etc., regarding aquaculture practices

**Evidence of Success:**

The success of this practice can be seen in the high levels of student engagement and their improved skill sets, which are reflected in their academic performance and success in industry placements. Students who participated in Aqua Labs training programs exhibited enhanced problem-solving skills, critical thinking, and the ability to adapt to various field conditions, which made them more employable. The institution noted an increase in students securing internships and jobs in aquaculture firms and environmental agencies. Feedback from students and industry partners highlighted that this hands-on approach led to a stronger understanding of aquaculture practices and better preparedness for the challenges in the field. Additionally, post-training assessments showed a marked improvement in practical skills and water management techniques.

**Resources Required:**

Resources required to implement this practice included well-equipped Aqua Labs with modern aquaculture systems, trained faculty or industry experts to lead the training, transportation for field visits, and financial investment to update laboratory equipment and facilities. The practice proved to be highly beneficial in providing students with the necessary skills and experience for their future careers.

# Gallery



Students taking inputs from the feed analysis lab



Students receiving instructions from SIFT Staff at the inauguration of Hands-on-training



Hands-on-Training at the Hydrology lab



Hands-on-Training at the Microbiology lab on Laminar Airflow



Demonstration at Hydrology Lab



Students receiving data from a feed analyst



Hands-on-Training at the Microbiology lab for cultures



Demonstration at PCR Lab

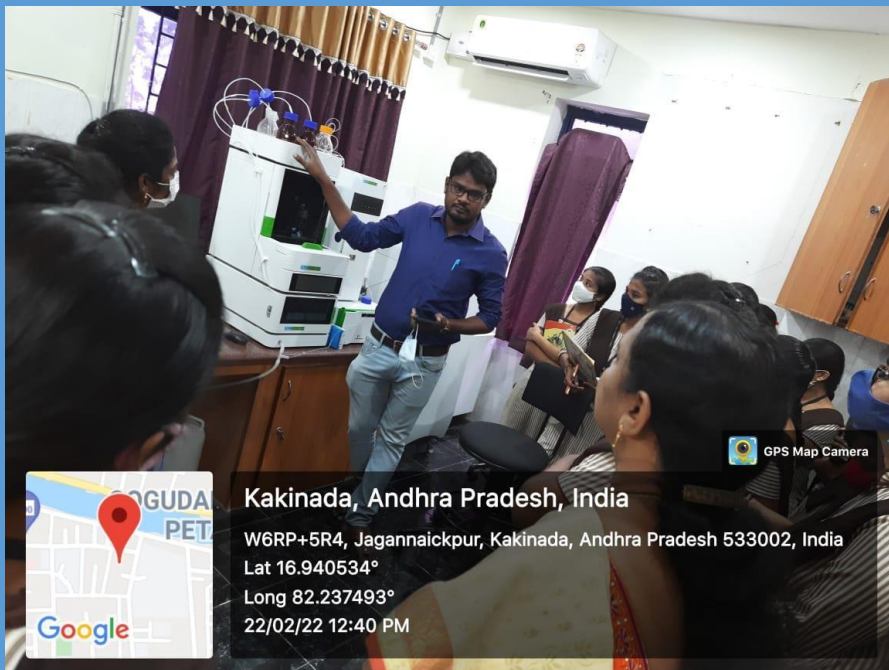


Demonstration at Soil Analysis Lab



Demonstration at Water Analysis Lab

Feed Preparation Lab



Kakinada, Andhra Pradesh, India

W6RP+5R4, Jagannaickpur, Kakinada, Andhra Pradesh 533002, India

Lat 16.940534°

Long 82.237493°

22/02/22 12:40 PM

GPS Map Camera

Students Learning about the mechanism of HPLC