Programme: M.Sc. Marine Biotechnology
Course code: MBO 284
Title of the course: MARINE FOOD TECHNOLOGY
Number of credits: 2
Effective from: 2019-2020

Course Objectives	The objectives of this course are to teach the principles of food preservation, processing and packaging and quality management practices for food of marine origin.	
Learning Outcomes	On completion of this course, students should be able to acquire practical knowledge of food technology for marine foods.	
Content	**MODULE-I** Preservation and processing – chilling methods, phenomena of rigor mortis, spoilage changes- causative factors; Drying – conventional methods; Salt curing, pickling and smoking; Freezing and cold storage, Canning procedures; Role of preservatives in processing. Packing – handling fresh fish, frozen packs, individually quick frozen (IQF), layered and shatter packs; Fishery by-products, cannery waste, feeds, silage, fish gelatin, fish glue, chitin and chitosan, pearl essence, fertilizer. **MODULE-II** Seafood, microbiology, factors, influencing, microbial, growth and activity; Seafood, Borne pathogens, bacteria fungi, viruses; Spoilage, factors in seafood; Toxins influencing food spoilage; Microbes as food single cell protein (SCP), microbial neutraceuticals. Quality management – concepts, planning, system, quality control, quality assurance, quality improvement; Certification standards – ISO and HACCP; Principles of quality related to food sanitation, contamination, pest control, human resource and occupational hazards; Novel product development, marketing and sea food export – Marine Products Export Development Authority (MPEDA), marketing, government policies, export finance, economic importance; Novel products – nutrition promotion, consumer studies qualitative and quantitative research methods.	12 hours 12 hours
References/ Reading	1. Drugs from sea. (2000). Fusetani, N. 2. Microbiology of deep sea hydrothermal vents. (1995). Karl, D.M. 3. The search from bioactive compounds from microorganisms. (1992). Omum, S. 4. Biotechnology and Biodegradation (1990). Kamely, D. Chakraborty, A. & Omenn, G.S. 5. Recent Advances in Marine Biotechnology. Vol.2 (1998) Fingerman, M., Nagabushanam, R., Thompson, M. 6. Biotechnology in the marine sciences: Proceedings of the first	