

ST JOSEPH'S COLLEGE FOR WOMEN (AUTONOMOUS)

VISAKHAPATNAM

DEPARTMENT OF ZOOLOGY

The Department of Zoology, St. Joseph's College for Women (A), offers Zoology as a core subject for undergraduate students in combination with chemistry and Botany as CBZ programme.

Programme Specific Outcomes of B.Sc Programme with Zoology.

PSOs: Students after graduating with Zoology as one of the core subjects will:

PSO1: Be able to demonstrate fundamental knowledge in core areas of zoology (Non-Chordates, Chordates, Cytology, Physiology, Genetics, Ecology, Evolution, Animal Biotechnology, Animal Husbandry, and Wildlife: Conservation, Diversity & Management and Aquaculture).

PSO2: Gain practical knowledge about classification through specimen observation, conduct laboratory experiments like analysis of Blood groups, Rh factor, Estimation of Hemoglobin, Blood Pressure, Dissolved oxygen etc, using safety and ethical standards.

PSO3: Be able to integrate knowledge gained in Zoology to General education courses.

PSO4: Engage in industry internship or gain skills through Hands on Experience in post-harvest technology in fishes to demonstrate relevancy of foundational and theoretical knowledge of their cluster subject and to gain career related experiences and to practice standard safety measures in sea food preservation.

PSO5: Able to develop critical thinking ,develop scientific attitude through model making and study projects where the learner is able to demonstrate the theoretical knowledge and conceptualize them and also learn to work collaboratively.

ASSESSMENT METHODOLOGY

PSO1: Be able to demonstrate fundamental knowledge in core areas of zoology (Non-Chordates, Chordates, Cytology, Physiology, Genetics, Ecology, Evolution, Animal Biotechnology, Animal Husbandry, and Wildlife: Conservation, Diversity & Management and Aquaculture).

Direct method of computing PSO1 attainment is based on the student performance in all assessment instruments namely online and offline –subjective and objective tests for all courses offered (Z). These exams test students learning at knowledge, understanding and application levels in the respective courses. Indirect method of computing PSOs is done through student's course exit survey wherein a structured questionnaire is administered to the students and their response is solicited on a 5 point scale. Responses are consolidated and students' satisfaction level with reference to course transaction is computed. Average percentage of level of attainments of all the courses in zoology is given below. –**87.75%**

PSO2: Gain practical knowledge about classification through specimen observation, conduct laboratory experiments like analysis of Blood groups, Rh factor, Estimation of Hemoglobin, Blood Pressure, Dissolved oxygen etc using safety and ethical standards.

PSO2 attainment level is ascertained through the Midsemester and End semester exams in every semester. This direct assessment involves testing students' knowledge on identifying specimens through observation study, procedures of experiments and their skill in executing them in all semesters.(89.2%).The practical skills learnt gives them an opportunity to pursue jobs in medical labs .

PSO3: Be able to integrate knowledge gained in Zoology to General education courses.

Assessment of this learning outcome is largely done through the undergraduate general education course namely environmental science .This course provides an opportunity for the students to apply zoology knowledge to understand the issues of environment ,natural resources ,biodiversity and pollution . Direct method of computing PSO3 attainment is based on the student performance in all assessment instruments namely formative and summative tests in courses on environment. -88.5%

PSO4 : Direct assessment is done through the twelve day internship which the students complete during their sixth semester, as it has clear learning outcomes like providing hands on experience on making value added products which improves their skill in Aquaculture field. After completion of the training students will submit internship report which is assessed for 10 marks based on viva voce individually and testing students' knowledge through an objective test conducted .

End semester examination

60% (which is descriptive)

Assessment of Internship: Direct assessment is done through the 12day internship which the students complete during their sixth semester as it has clear learning outcomes like providing hands on experience on making value added products which improves their skill in Aquaculture field. After completion of the training students will submit internship report which is assessed for 10 marks based on viva voce individually and testing students' knowledge through an objective test conducted.

LEARNING OUTCOMES:

CODE	TITLE OF THE PAPER	COURSE OUTCOMES
Z1501(3)	ANIMAL DIVERSITY- I	CO1:Gain knowledge about the fundamental principles of systematics in which the animals are placed & how to classify according to their characters. CO2: Know and remember the general characters and classification up to orders . CO3: Be able to understand the basics of life processes in the non-chordates. CO4: Understand the pathogenicity, life history and significance of invertebrate groups. CO5: Gain knowledge on the general biology of few selected non-chordates. CO6: Gain knowledge about some of the important and common protozoans, helminthes, and arthropods of parasitic nature

		<p>causing diseases.</p> <p>CO7: Identify the various invertebrate larval forms.</p> <p>CO8: Understand the morphology of Earth worm, importance of vermicomposting.</p> <p>CO9: Learn about the regeneration capacity in Echinoderms with star fish as an example.</p> <p>CO10: Understand about coral reef formation and its ecological role.</p> <p>CO11: Gets sound foundation for better learning in Zoology, entrepreneurship skills in pearl culture .</p>
Level of attainment of CO1-CO12 :- 83.7%		
Z1551(2)	<p>Animal Diversity</p> <p>I</p> <p>(practical)</p>	
Z2501(3) (Theory)	<p>Animal Diversity</p> <p>II.</p>	<p>CO1: To identify vertebrates to the correct taxonomic class and important orders and families within these classes.</p> <p>CO2: Understand the structural and functional</p>

		<p>aspects of vertebrate systems.</p> <p>CO3: Understand the ecological role of different groups of chordates.</p> <p>CO4: Understand the diversity of chordates.</p> <p>CO5: Be able to describe unique characters of protochordates and vertebrates (fishes, amphibians, reptiles, birds & mammals).</p> <p>CO6: Be able to identify major anatomical structures in vertebrates.</p> <p>CO7: Gain knowledge in understanding the structure and function of heart and the increasing complexity from Pisces to mammals.</p> <p>CO8: Demonstrate understanding in adaptive radiation or divergent evolution in vertebrate groups like reptiles and mammals.</p> <p>CO9: Demonstrate skill in designing and constructing models through the theoretical knowledge.</p> <p>CO10: Develop critical thinking, raise questions, and communicate ideas through projects and</p>
Z2551(2) (Practical)	Animal Diversity II	<p>CO1: Be able to identify & classify the vertebrates.</p> <p>CO2: Develops skill in dissecting fish to observe the viscera.</p> <p>CO3: Gain knowledge practically by specimen observation and illustrate through drawing.</p>

		CO4: Compare & differentiate girdles and bones of frog, calotes, pigeon and rabbit.
Z3501(3)	Cytology and physiology	<p>CO1: Acquire knowledge about the elements of cytology.</p> <p>CO2: Gaininsight on the basic components of Prokaryotic and Eukaryotic cells.</p> <p>CO3:Apply their knowledge in cell biology to changes in cell function..</p> <p>CO4: Be able to explain the stages of information processing in the nervous system.</p> <p>CO5: Be knowledgeable RMP, AP, and synapse and describe how the gated ion channels produce signals.</p> <p>CO6: Know the structure of neuron and be able to describe how electric signals are generated and propagated.</p> <p>CO7: Acquire knowledge on the countercurrent mechanism and urine formation.</p> <p>CO8: Gain insight into the functioning of endocrine glands.</p> <p>CO9: Understand the anatomical components of circulatory system.</p> <p>CO10: Acquire understanding on the working of the respiratory system.</p>
Z3551(2)	Cytology & Physiology (pr)	<p>CO1: Acquire skills for analysis of blood groups, Rh factor, Estimation of Hb, Blood pressure etc.</p> <p>CO2: Carry out laboratory experiments in physiology using standard procedures.</p>

		<p>CO3: Able to prepare temporary slides of mitosis.</p> <p>CO4: Work collaboratively to perform experiments.</p> <p>CO5: Practice safety & ethical measures in labs.</p>
Bench mark set for the paper 80%		
Z 4501(3)	Genetics, Ecology ,Evolution & Zoogeography	<p>CO1: Demonstrates knowledge of the terms phenotype, genotype, locus, allele, homozygous, and heterozygous.</p> <p>CO2: Applies knowledge of Mendel's principle of segregation and independent assortment to solve genetic problems involving monohybrid, dihybrid, and test crosses.</p> <p>CO3: Demonstrate critical thinking to solve problems related to X-linked inheritance.</p> <p>CO4: Apply the knowledge of genetics in a variety of problem solving situations.</p> <p>CO5: Understand the extensions of mendelian genetics, including different forms of allelic relationships.</p> <p>CO6: Present an overview of diversity of life forms in an ecosystem..</p> <p>CO7: Able to explain the role of organisms in energy transfers and relate to food chain or food web.</p> <p>CO8: Apply and be able to interpret why external factors bring changes in populations.</p> <p>CO9: Predict the potential consequences of human activities including pollution & climatic changes on species abundance and distribution.</p> <p>CO10: Gain knowledge on fundamental processes</p>

Benchmark is set for 75%		<p>that cause or prevent adaptive evolution, Speciation and extinction .</p> <p>CO10: Understand Darwin’s thought and explain how life might have originated on this planet.</p> <p>CO11: Gain knowledge on how gene frequencies changes from one generation to next due to mutation, migration, genetic drift, non-random mating and selection.</p> <p>CO12:Understand the process of allopatric speciation.</p> <p>CO13:Analyse the importance of maintaining biodiversity and its role in conservation of species and ecological balance.</p>
	Genetics, Ecology ,Evolution & Zoogeography (practical)	<p>CO1: Be able to estimate the dissolved oxygen of the given sample.</p> <p>CO2: Able to solve genetic problems on inheritance .</p> <p>CO3:Able to identify the fauna and adaptations of sandy shore, muddy shore & Rocky shore.</p> <p>CO4:Relate the fauna according to the zoogeographical realms.</p> <p>CO5: Infer the effects of global warming to animal distribution.</p>
Benchmark is set for 80%		
Z5501(3)	Biotechnology	<p>CO1:Gain knowledge about how recombinant genes are formed</p> <p>CO2: Able to understand the applicability of</p>

		<p>cloning vectors and restriction enzymes.</p> <p>CO3: Acquire knowledge & explain the principles that form the basis for recombinant DNA technology.</p> <p>CO4: Comprehend the fundamental concepts of animal cell culture and its importance.</p> <p>CO5: Understand the importance of production of monoclonal antibodies and hybridoma technology.</p> <p>CO6: Demonstrates knowledge of reproductive technologies in animals.</p> <p>CO7: Gain insight into cloning, transgenesis and importance of transgenic animals.</p> <p>CO8: Gain knowledge about industrial applications of Biotechnology like fermentation technology.</p> <p>CO9: Be knowledgeable about the scope of biotechnology in Agriculture, medicine and environment.</p> <p>CO10: Evaluate & understand the importance of ethical concerns over the use of animal biotechnology.</p>
Level of Attainment of CO1 to CO10:85.8%		
Z5551(2)	Biotechnology (Practical)	<p>CO1: Acquire skills for handling equipment for biotechnology Practical's.</p> <p>CO2: Learn about the use of autoclave and importance of sterilization.</p> <p>CO3: Able to conduct practicals using standardized procedures.</p> <p>CO4: Use problem solving skills and team work to use knowledge in making biotechnology</p>

		models and presentations.
Level of attainment of CO1 to CO3: 85%		
Z 5502(3)	Animal Husbandry	<p>CO1: Gain knowledge in all aspects of poultry maintenance, production, nutrition, health, welfare etc.</p> <p>CO2: Understand avian anatomy, formulating poultry feed, assessing nutrient digestibility, quality of eggs etc.</p> <p>CO3: Design a poultry unit guided by the principles of poultry housing.</p> <p>CO4: Design a dairy farm based on the theoretical knowledge of housing of dairy animals.</p> <p>CO5: Explain the importance of dairy production locally and worldwide.</p> <p>CO6: Gain insight into the selection of dairy cattle to encourage herd improvement.</p> <p>CO7: Understand how a dairy farm works and management practices for better results.</p> <p>CO8: Learn about breeding, artificial insemination in cattle etc.</p> <p>CO9: Able to evaluate the economic importance of the economically important poultry products from quail, turkey, Emu etc.</p>
Level of Attainment of CO1 to CO8 : 87 %		
Code Z 5552(2)	Animal Husbandry(Practical)	<p>CO1: Identify different breeds of poultry breeds.</p> <p>CO2: Distinguish a layer from a non- layer bird.</p> <p>CO3: Demonstrate understanding of poultry diseases and their prevention.</p> <p>CO4: Identify various cattle breeds .</p> <p>CO5: Summarise the visit to a dairy farm in the form of report writing.</p>

Level of attainment of CO1 to CO5 : 87.7 %		
Z E16501(3)	Wildlife: Diversity, Conservation &Management	CO1: Gain knowledge on the principles of wildlife conservation and management. CO2: Relate the concepts of national parks, wildlife sanctuaries & biosphere reserves. CO3: Be competent in basic forest management, principles and evaluation of forests for health, wildlife habitat etc. CO4: Discuss the causes of deforestation, narrate the effects of deforestation. CO5: Define the terms conservation and gain knowledge on conservation schemes& strategies. CO6: Develop an understanding of how animals interact with each other and their natural environment. CO7: Demonstrate critical thinking to link theory to solve practical problems in wild life conservation. CO8: Discuss about Tracking devices & methods. CO9: Gain knowledge about illegal wild life trade &legislation. CO10:Acquire knowledge in designing a zoo with the required facilities. CO11:Acquire knowledge about the important national parks and birdsanctuaries of AP.
Level of attainment of co1-co10: Benchmark is set at 80%		
ZE1 6551(3)	Wildlife: Diversity, Conservation	CO1: Develop tactile skills involved in effective collection & observation of live animals. CO2: Able to work collaboratively on team based

	&Management (Practical)	<p>projects.</p> <p>CO3: Able to identify horns, pugmarks, etc.</p> <p>CO4: Gain knowledge about endangered species.</p> <p>CO5: Suggest habitat improvement strategies.</p>
Level of attainment of CO1- CO4:-Bench mark is set at 85%		
ZA16501(3)	Principles of Aquaculture	<p>O1: Gain an overview of the fishery & aquaculture industry in the world.</p> <p>CO2: Gain knowledge about the techniques & principles underlying the culture of various organisms.</p> <p>CO3: Design a pond, its layout, design, construction & preparation using theoretical knowledge.</p> <p>CO4: Understand the culture practices & systems like traditional, intensive etc.</p> <p>CO5: Develop an insight into procurement of seed, management of Carp culture ponds.</p> <p>CO6: Understand the culture of aquatic organisms in fresh water and marine water.</p> <p>CO7: Apply & explain the rules of construction & management of ponds and artificial tanks, recirculating systems, raceways etc.</p> <p>CO8: Acquire knowledge about culture of ornamental fishes & rearing them.</p> <p>CO9: Demonstrate critical thinking in providing the nutritional requirements according to the age of the fish.</p> <p>CO10: Develop awareness about the technique of Aquaculture and job potential of fisheries.</p>
Level of attainment of CO1 to CO7: 89.7%		

ZA16551(2)	Principles of Aquaculture(pr)	<p>CO1: Identify important edible fishes, crustaceans, & aquarium fishes.</p> <p>CO2: Learn about the descriptive, morphometric & meristic characters.</p> <p>CO3: Gain knowledge about the fish and shrimp diseases.</p> <p>CO4: Gain practical insight about rigor mortis.</p>
Level of attainment of co1 to co4:- 92%		
ZA26502(3)	Aquaculture Management	<p>CO1: Gain knowledge about breeding and hatchery management.</p> <p>CO2: Understand the importance of water quality management.</p> <p>CO3: Study about feed management, live foods, and their shrimp larval nutrition.</p> <p>CO4: Gain insight about disease management, health management and prophylaxis.</p> <p>CO5: Be able to apply the knowledge of economics and marketing methods for better demand and price.</p> <p>CO6: Be able to manage fish habitats by their understanding of natural systems.</p> <p>CO7: Design an aeration system for intensive fish farming.</p> <p>CO8: Acquire knowledge about hypophysation technique.</p> <p>CO9: Gain knowledge about the various kinds of fish hatcheries.</p> <p>CO10: understand genetic improvement of fish stocks .</p>

Level of attainment of co1- co5: 90.9 %		
ZA26552(2)	Aquaculture Management (pr)	<p>CO1: Observe culture techniques of phyto and zooplankton.</p> <p>CO2: Able to formulate fish feed from diverse ingredients.</p> <p>CO3: Demonstrate the knowledge of economic impact of fish farms on the value of aquaculture products.</p> <p>CO4:carry out water quality monitoring techniques.</p>
Level of attainment of CO1-CO4: 93%		
ZA3 6503(3)	Postharvest Technology	<p>CO1:Gain knowledge about handling and principles of fish preservation.</p> <p>CO2: Understand the fish preservation methods and able to apply safety and ethical measures of hygiene.</p> <p>CO3: Be able identify hazards.</p> <p>CO4: Gain insight into Hazard analysis and critical control points.</p> <p>CO5: Understand the uses of seaweeds in disease treatment and therapeutic drugs.</p> <p>CO6: Acquire knowledge and be able to practically be vigilant about good manufacturing practices.</p> <p>CO7: Gain knowledge about preparation of value added sea products.</p> <p>CO8:Demonstrate critical thinking in using fish preservation methods through the knowledge gained in theory.</p> <p>CO9:learn fluently the seven principles of HACCP.</p>

		CO10: Plan and prepare flow chart for fish processing.
Level of attainment of CO1 TO CO7: 89.5 %		
ZA36553(2)	Postharvest Technology	CO1:Acquire skills for preparation of fish by - products. CO2: Gain hands on experience on salting, drying ,slicing etc. CO3:Acquire skills on handling fish and prepare value added products. CO4:Be able to plan and prepare flow charts for procedures in processing of fish. CO5:Follow safety and hygienic procedures in processing plants.
Level of attainment of COI-CO 4 : 93%		

Z1501 (3) Animal Diversity I (Theory) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO5
CO 1	3	1			
CO 2	3	2			
CO 3	3				
CO 4	3				
CO 5	3	2			
CO 6	2	1			
CO 7	3	2			
CO 8	3				
CO 9	2				
CO 10	3				
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z1551 (2) Animal Diversity I (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4
CO 1		3		
CO 2		3		
CO 3		2		
CO 4		3		
CO 5		2		
Average				

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z2501 (3) Animal Diversity II & Developmental Biology (Theory) - Input Mapping

Course Outcome	PSO I	PSO2	PSO 3	PSO 4	PSO 5
CO 1	3				
CO 2	3				
CO 3	3		2	2	
CO 4	3	2			
CO 5	3	2			
CO 6	2				
CO 7	3				
CO 8	3				
CO 9	3				3
CO 10					2
Average					

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Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z2551 (2) Animal Diversity II & Developmental Biology (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO5
CO 1		3			
CO 2		3			
CO 3	3	3			3
CO 4		2			
CO 5					
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z3501 (3) Cytology & Physiology (Theory) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO5
CO 1	3	2			
CO 2	3	2			2
CO 3	3				
CO 4	3				2
CO 5	3				
CO 6	3				2
CO 7	2				
CO 8	3	1			
CO 9	2				2
CO 10	3				1
Average					

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Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z3551 (2) Cytology & Physiology (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3			
CO 2		3			
CO 3	1	3			1
CO 4		3			
CO 5		3			
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z4501 (3) Genetics, Ecology, Evolution & Zoogeography (Theory) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2			
CO 2	3	2			
CO 3	3	3			
CO 4	3				
CO 5	3				
CO 6	3		2		
CO 7	3		2		2
CO 8	3		2		
CO 9	3		2		
CO 10	3				

CO11	2				
CO12	2				
CO13	3		3		3
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z4551(2) Genetics, Ecology, Evolution & Zoogeography (Practical) - Input Mapping

Course Outcome	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1		3			
CO 2	3	3			
CO 3	2	3			2
CO 4	2	3			2
CO 5	2	3	3		
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z5501 (3) Animal Biotechnology (Theory) - Input Mapping

Course Outcome	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3			2	2
CO 2	3			2	2
CO 3	3				
CO 4	2	1			1
CO 5	2				
CO 6	3	1			

CO 7	2				1
CO 8	3	2			1
CO 9	3				1
CO 10	2				
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z5551 (2) Animal Biotechnology (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO5
CO 1		2			
CO 2	1	2			
CO 3		2			
CO 4		2			2
CO 5					
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z5502 (3) Animal Husbandry (Theory) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	2			2
CO 2	3	2			
CO 3	3	2			3
CO 4	3	2			3
CO 5	3	2			

CO 6	3	2			
CO 7	3				2
CO 8	3	1			
CO 9	3	1			
CO 10					
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z5552 (2) Animal Husbandry (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4
CO 1	3	3		
CO 2	2	3		
CO 3	2	2		
CO 4	3	3		
CO 5				3
Average				

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z- E1-6501 (3) Wildlife: Diversity, Conservation and Management (Theory) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3		2		2
CO 2	2		2		2
CO 3	3	2	2		

CO 4	3		2		1
CO 5	3		2		2
CO 6	3		2		
CO 7	3		2		
CO 8	3				
CO 9	3		2		2
CO 10	3	2			
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

Z-E1-6551(2) Wildlife: Diversity, Conservation and Management (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1		3			
CO 2		3			2
CO 3		3			
CO 4	2	3			
CO 5		3			
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

ZA16501 (3) Principles of Aquaculture (Theory) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3				

CO 2	3	2			
CO 3	2	2		1	1
CO 4	3				
CO 5	3	1			
CO 6	3				
CO 7	3	2			2
CO 8	3	2		1	2
CO 9	3	2			
CO 10	3	2			
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

ZA16551 (2) Principles of Aquaculture (Practical) - Input Mapping

Course Outcome	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5
CO 1		3			
CO 2	2	3			
CO 3	2	3		2	1
CO 4	2	3		2	1
CO 5					
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

ZA26502 (3) Aquaculture Management (Theory) - Input Mapping

Course Outcome	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5

CO 1	3	2			
CO 2	3	2		1	1
CO 3	3	2		2	
CO 4	3	1			
CO 5	2	2			
CO 6	2	2			
CO 7	2	2			2
CO 8	3	2		1	2
CO 9	3	3		1	2
CO 10	3				
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

ZA26552 (2) Aquaculture Management (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1		2		2	
CO 2		3		2	
CO 3	2	2			
CO 4		2			
CO 5					
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

ZA36503 (3) Postharvest Technology (Theory) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	3	3		3	
CO 2	3	3		3	
CO 3	3	2		3	
CO 4	3	2		1	
CO 5	3	2		2	
CO 6	3	3		2	
CO 7	3	2		3	
CO 8	3	3		1	
CO 9	3	2		1	
CO 10	3	2		2	
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

ZA36553 (2) Postharvest Technology (Practical) - Input Mapping

Course Outcome	PSO I	PSO 2	PSO 3	PSO 4	PSO 5
CO 1	2	3		3	
CO 2	2	3		3	
CO 3	2	3		3	
CO 4	2	3		3	
CO 5	2	3		3	
Average					

Low level of alignment (mapping) 1

Medium level of alignment (mapping) 2

High level of alignment (mapping) 3

