Program outcomes, program specific outcomes and course outcomes of Zoology Department

Subject specific outcomes	• Students gain knowledge and skill in the fundamentals of animal sciences, understands the complex interactions among various living organisms • Apply the knowledge of internal structure of cell, its functions in control of various metabolic functions of organisms. • Analyze complex interactions among the various animals of different phyla, their distribution and their relationship with the environment • Understands the complex evolutionary processes and behaviour of animals • understand the physiological processes of animals and relationship of organ systems • Gain knowledge of Agro based Small Scale industries like sericulture, fish farming, and vermin-compost preparation. • Understands about various concepts of genetics, molecular biology and its importance in human health • Understand the physiological aspects of human and other vertebrates
Program specific outcomes	• Understand the nature and basic concepts of cell biology, genetics, molecular biology, taxonomy, physiology, ecology, diseases, disease spreading agents and applied Zoology • Understand the relationships among animals, plants and microbes • Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, molecular Biology, Immunology, Applied Zoology, Clinical science, tools and techniques of Zoology, Toxicology, Entomology, Nematology Sericulture, Biochemistry, Fish biology, Animal biotechnology and research methodology • Understand the applications of biological sciences in Apiculture, Aquaculture, Agriculture and Medicine • Gains knowledge about research methodologies, effective communication and skills of problem solving methods

GONDWANA UNIVERSITY, GADCHIROLI
CBCS COURSES IN B. SC. ZOOLOGY

SEMESTER - I

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	CREDIT
USCZOT01	I	NONCHORDATE - PROTOZOA TO ANNELIDA	02
USCZOT02	II	CELL BIOLOGY	02
USCZOP01	PRACTICAL	CORE COURSE I & II	02

SEMESTER - II

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	CREDIT
USCZOT03	III	NONCHORDATE - ARTHOPODA TO HEMICHORDATA	02
USCZOT04	IV	GENETICS & EVOLUTION	02
USCZOP02	PRACTICAL	CORE COURSE III & IV	02

SEMESTER- III

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	CREDIT	SEC
USCZOT05	V	ANIMAL DIVERSITY (CHORDATES) and COMPARATIVE ANATOMY	02	ENVIRONMENTAL STUDIES
USCZOT06	VI	PHYSIOLOGY & BIOCHEMISTRY - I	02	
USCZOP03	PRACTICAL	CORE COURSE V & VI	02	

SEMESTER- IV

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	CREDIT	SEC
USCZOT07	VII	DEVELOPMENTAL BIOLOGY	02	ENVIRONMENTAL STUDIES
USCZOT08	VIII	PHYSIOLOGY & BIOCHEMISTRY - II	02	
USCZOP04	PRACTICAL	CORE COURSE VII & VIII	02	

SEMESTER -V

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	CREDIT
USCZOT09	IX	Any one of APICULTURE SERICULTURE VERMICULTURE & LAC CULTURE AQUARIUM FISH CULTURE	02
USCZOT10	X	Any one of PARASITOLOGY APPLIED ZOOLOGY INSECT VECTOR & DISEASE AQUATIC BIOLOGY	02
USCZOP05	PRACTICAL	CORE COURSE IX & X	02

SEMESTER -VI

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	CREDIT
USCZOT11	XI	Any one of MEDICAL DIGNOSTICS PUBLIC HEALTH AND HYGIENE RESEARCH METHODOLOGY INSTRUMENTATION	02
USCZOT12	XII	Any one of IMMUNOLOGY ANIMAL BIOTECHNOLOGY MICROTECHNIQUE, BIOINFORMATICS & BIOSTATISTICS REPRODUCTIVE BIOLOGY	02
USCZOP06	PRACTICAL	CORE COURSE XI & XII	02

Scheme of Marks of Theory and Practical

Semester	Paper	Title	Marks		Total
			Theory	Internal Assessment	
I	I	Nonchordate - Protozoa to Annelida	50	10	150
	II	Cell biology	50	10	
	Practical	Core course I and II practical based on paper I and paper II	30	-	
II	I	Nonchordate - Arthopoda to Hemichordata	50	10	150
	II	Genetics & Evolution	50	10	
	Practical	Core course iii & iv Practicals based on paper V and paper VI	30	-	
III	I	Animal Diversity(Chordate) and Comparative Anatomy	50	10	150
	II	Physiology and Biochemistry - I	50	10	
	Practical	Animal Diversity, Comparative Anatomy, Physiology and Biochemistry-I	30	-	
IV	I	Developmental Biology	50	10	150
	II	Physiology and Biochemistry - II	50	10	
	Practical	Developmental Biology, Physiology and Biochemistry - II	30	-	

COURSE SPECIFIC OUT COMES

B.SC. I

SEMESTER – I

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	COURSE SPECIFIC OUTCOMES
USCZOT01	I	NONCHORDATE - PROTOZOA TO ANNELIDA	• Describe general taxonomic rules on animal classification • Classify Protista up to phylum using examples from parasitic adaptation • Classify Phylum Porifera to Echinodermata with taxonomic keys • Describe Phylum Nematoda and give examples of pathogenic Nematodes
USCZOT02	II	CELL BIOLOGY	• Structural and functional aspects of basic unit of life i.e. cell concepts
USCZOP01	PRACTICAL	CORE COURSE I & II PRACTICALS BASED ON PAPER I AND PAPER II	• Practical on identification of animals, cell biology

SEMESTER –II

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	COURSE SPECIFIC OUTCOMES AT THE END OF COURSE STUDENTS WILL ABLE TO UNDERSTAND
USCZOT03	III	NONCHORDATE - ARTHOPODA TO HEMICHORDATA	• Describe general taxonomic rules on animal classification • Classify Arthropoda up to phylum using examples and adaptation • Classify Phylum Arthropoda to Hemichordata with taxonomic keys
USCZOT04	IV	GENETICS & EVOLUTION	• Mendelian and non mendielian inheritance • Concept behind genetic disorder, gene mutations- various causes associated with inborn errors of metabolism Concepts of Evolution and evolutionary process • Theories of Evolution • Knowledge of eras and evolution of species
USCZOP02	PRACTICAL	CORE COURSE III & IV PRACTICALS BASED ON PAPER III AND PAPER IV	• Practical on animal identification and Mendelian and non mendielian inheritance

B. Sc. II

Semester III

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	COURSE SPECIFIC OUTCOMES AT THE END OF COURSE STUDENTS WILL ABLE TO UNDERSTAND
USCZOT05	V	ANIMAL DIVERSITY (CHORDATES) and COMPARATIVE ANATOMY	• Imparts conceptual knowledge of vertebrates, their adaptations and associations in relation to their environment • Classify phylum Protochordates to Mammalia • Complex Vertebrate interactions
USCZOT06	VI	PHYSIOLOGY & BIOCHEMISTRY - I	• Seeks to understand the mechanisms that work to keep the human body alive and functioning • Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physical, and biochemical functions of humans, their organs, and the cells of which they are composed • Interactions and interdependence of physiological and biochemical processes
USCZOP03	PRACTICAL	CORE COURSE V & VI	• Practical on identification on vertebrates

Semester IV

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	COURSE SPECIFIC OUTCOMES AT THE END OF COURSE STUDENTS WILL ABLE TO UNDERSTAND
USCZOT07	VII	DEVELOPMENTAL BIOLOGY	• Gains knowledge about gametogenesis, cleavage mechanisms, gastrulation and role of hormones in metamorphosis and regeneration • Development of Chick, Frog
USCZOT08	VIII	PHYSIOLOGY & BIOCHEMISTRY - II	• Seeks to understand the mechanisms that work to keep the human body alive and functioning • Physiological and biochemical understanding through scientific enquiry into the nature of mechanical, physical, and biochemical functions of humans, their organs, and the cells of which they are composed • Interactions and interdependence of physiological and biochemical processes
USCZOP04	PRACTICAL	CORE COURSE VII & VIII	• Practical on physiology and Developmental Biology

B. Sc. III

Semester V

PAPER CODE	CORE PAPER	TITLE OF THE PAPER	COURSE SPECIFIC OUTCOMES AT THE END OF COURSE STUDENTS WILL ABLE TO UNDERSTAND
USCZOT09	**SEC (ANY ONE)**	APICULTURE	• Gives knowledge of honey bee rearing • Pests and diseases associated with honey bee • Various process involved in honey and associated products production
		SERICULTURE	• Gives knowledge of silk worm rearing • Mulberry cultivation • Pests and diseases associated with silk worm and mulberry • Various process involved in silk production
		VERMICULTURE & LAC CULTURE	• Gives knowledge of earthworm and lac insect rearing • Pests and diseases associated with vermiculture and Lac culture • Various process involved in vermiculture and Lac culture
		AQUARIUM FISH CULTURE	• Provides knowledge of ornamental fish breeding which is highly professional and attractive avenue for youth
USCZOT10	**DSE (ANY ONE)**	PARASITOLOGY	• Parasitology is an integral part of applied ecology involving the study of diverse ecto and endoparasites • Understanding of fundamental complement of numerous diseases which have significant impact on human health
		APPLIED ZOOLOGY	• Students will applications of Zoology in Agriculture and other industries. • Identify various methodology and perspectives of applied branches of zoology • for the possibilities of self-employment. • Learn the basic principles involved in the culture and breeding of common • edible and ornamental fishes of Kerala and the art of aquarium keeping. • Get a basic understanding of human genomics and reproductive biology • Aware about stem cell research and prenatal diagnostic techniques.
		INSECT VECTOR & DISEASE	• Understanding ofInsect vector host interactions of many important diseaseslike Malaria, Filaria, Dengue etc. • Understanding of denudation of forests its results in increased human vector contact

			which have become almost irreversible. • Course gives insight into physiology, biochemistry and reproduction of insect vectors and their control measures. • Students gain knowledge about the concepts of overview of Entomology • Source reduction and environmental methods for vector control, biological control and other Insect bites • Knowledge of hormones and Insects
		AQUATIC BIOLOGY	• Course provides them comprehensive understanding about aquatic ecosystem and various economical important fishes. • Students gain knowledge in the areas of responses characterization and classification of Ostracoderms, placoderms, acanthodians, holocephali, elasmobranchs. • Students will get information about zooplanktons, rotifers and other microscopic organisms

B.Sc. III Semester VI

PAPER CODE	**CORE PAPER**	**TITLE OF THE PAPER**	**COURSE SPECIFIC OUTCOMES AT THE END OF COURSE STUDENTS WILL ABLE TO UNDERSTAND**
USCZOT09	**SEC (ANY ONE)**	MEDICAL DIGNOSTICS	• Gives knowledge related to the techniques involved in detection of various diseases CO2 Pathology associated with various diseases • Practical skills of conducting basic clinical lab experiments • Application of knowledge of clinical science and pathology to one's own life
		PUBLIC HEALTH AND HYGIENE	• Realize the factors affecting Health • Apply the knowledge to lead a healthy lifestyle
		RESEARCH METHODOLOGY	• The course provides wide knowledge about research, experimental & sampling design, • Data collection, analysis & interpretation of data and allows student to present the research data in scientific method • Gains skill to solve problems using inferential statistical tools • Learns to collect literature collection, literature citation, and components of research report – Text, tables, figures, bibliography. • Writing of dissertations, project proposals, project reports, research papers.

			• Intellectual Property Rights – Biopiracy, copyrights, patent and traditional knowledge and plagiarism. • Understanding of Laboratory safety measures, laboratory good practices, animal model systems, animal ethics- animal welfare guidelines for care and use of animals.
		INSTRUMENTATION	• Students gain knowledge about various tools & techniques used in biological systems and gives them insight about their use in research.
USCZOT10	**DSE (ANY ONE)**	IMMUNOLOGY	• Provides basics knowledge about immune system and allows the student to create insight as how to improve their immune system and good health. • Types of immunity, antigens-antibodies and their properties • Complement system, MHC's and immune responses • Understanding of types of hypersensitivity reactions and auto immune diseases • Ability to understand concepts of tumor immunology and transplantation immunology
		ANIMAL BIOTECHNOLOGY	• It gives insight into various cell/tissues culture techniques • Understanding of in vitro culturing of organisms and production of transgenic animals. • Understanding of cloning of mammals, large scale culture and production from recombinant microorganisms • Gains skills in medical, environmental biotechnology, biopesticides, Biotechnology of aquaculture and use of animals as bioreactors • This insight allows students to take into consideration about ethical issues involved in production transgenic animals and BT products.
		MICROTECHNIQUE, BIOINFORMATICS & BIOSTATISTICS	• Students gain knowledge about various tools and techniques used in biological systems and gives them insight about their use in research. • Biostatistics teaches them to use the best data analysis methods in their research projects • Students gains knowledge about statistical methods like measures of central tendencies, Probability

			• Learns about hypothesis testing and inferential statistics • Learns the problem-solving methods
		REPRODUCTIVE BIOLOGY	• In this course, students will learn the biological processes of reproduction, including the endocrinology and physiology of male and female reproduction. • They will gain an understanding of the determinants of fertility and infertility, and how reproductive biotechnology is used to overcome poor fertility. • Social and ethical implications of reproductive technologies and research will be discussed within appropriate topics.

GONDWANA UNIVERSITY, GADCHIROLI
CBCS COURSES IN M. SC. ZOOLOGY

SEMESTER - I

PAPER CODE	TITLE OF THE PAPER	CREDIT
Core 1	STRUCTURE AND FUNCTION OF INVERTEBRATES	4
Core 2	GENERAL PHYSIOLOGY	4
Core 3	CELL BIOLOGY AND GENETICS	4
Core 4	ADVANCED REPRODUCTIVE BIOLOGY	4
Practical core 1 and core 2	BASED ON THEORY PAPER 1 AND 2	4
Practical core 3 and core 4	BASED ON THEORY PAPER 3 AND 4	4
Seminar 1	SEMINAR 1	1

SEMESTER - II

PAPER CODE	TITLE OF THE PAPER	CREDIT
Core 5	STRUCTURE AND FUNCTION OF VERTEBRATES	4
Core 6	COMPARATIVE ENDOCRINOLOGY	4
Core 7	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	4
Core 8	ADVANCED DEVELOPMENT AL BIOLOGY	4
Practical core 5 and core 6	BASED ON THEORY PAPER 5 AND 6	4
Practical core 7 and core 8	BASED ON THEORY PAPER 7 AND 8	4
Seminar 2	SEMINAR 2	1

SEMESTER - III

PAPER CODE	TITLE OF THE PAPER	CREDIT
Core 9	PARASITOLOGY AND IMMUNOLOGY	4
Special Group 1	ANIMAL PHYISOLOGY 1	4
Special Group 2	ANIMAL PHYSIOLOGY 2	4
Foundation 1	FRESH WATER FISHERIES	4
Practical core 9	BASED ON THEORY PAPER 9	4
Practical special group 1 and 2	BASED ON THEORY PAPER SPECIAL GROUP 1 AND 2	4
Seminar 3	SEMINAR 3	1

SEMESTER - IV

PAPER CODE	TITLE OF THE PAPER	CREDIT
Core 10	BIOTECHNIQUE, BIOSTATISTICS, ETHOLOGY, TOXICOLOGY AND BIOINFORMATICS	4
Special Group 3	ANIMAL PHYISOLOGY 3	4
Special Group 4	ANIMAL PHYSIOLOGY 4	4
Foundation 2	APPLIED FRESH WATER FISHERIES	4
Practical special Group 3 and 4	BASED ON THEORY PAPER SPECIAL GROUP 3 AND 4	4
Practical Project	PROJECT	4
Seminar 4	SEMINAR 4	1

Scheme of Marks of Theory and Practical

Semester	Paper	Title	Marks		Total
			University Exam	Internal Assessment	
I	Core 1	STRUCTURE AND FUNCTION OF INVERTEBRATES	80	20	100
	Core 2	GENERAL PHYSIOLOGY	80	20	100
	Core 3	CELL BIOLOGY AND GENETICS	80	20	100
	Core 4	ADVANCED REPRODUCTIVE BIOLOGY	80	20	100
	Practical core 1 and 2	BASED ON THEORY PAPER 1 AND 2	80	20	100
	Practical core 3 and 4	BASED ON THEORY PAPER 3 AND 4	80	20	100
	Seminar 1	SEMINAR 1	25	-	25
II	Core 5	STRUCTURE AND FUNCTION OF VERTEBRATES	80	20	100
	Core 6	COMPARATIVE ENDOCRINOLOGY	80	20	100
	Core 7	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	80	20	100
	Core 8	ADVANCED DEVELOPMENTAL BIOLOGY	80	20	100
	Practical core 5 and 6	BASED ON THEORY PAPER 5 AND 6	80	20	100
	Practical core 7 and 8	BASED ON THEORY PAPER 7 AND 8	80	20	100
	Seminar 2	SEMINAR 2	25	-	25
III	Core 9	PARASITOLOGY AND IMMUNOLOGY	80	20	100
	Special Group 1	ANIMAL PHYISOLOGY 1	80	20	100
	Special Group 2	ANIMAL PHYSIOLOGY 2	80	20	100
	Foundation 1	FRESH WATER FISHERIES	80	20	100
	Practical core 9	BASED ON THEORY PAPER 9	80	20	100
	Practical special group 1 and 2	BASED ON THEORY PAPER SPECIAL GROUP 1 AND 2	80	20	100
	Seminar 3	SEMINAR 3	25	-	25
IV	Core 10	BIOTECHNIQUE, BIOSTATISTICS, ETHOLOGY, TOXICOLOGY AND BIOINFORMATICS	80	20	100
	Special Group 3	ANIMAL PHYISOLOGY 3	80	20	100
	Special Group 4	ANIMAL PHYSIOLOGY 4	80	20	100
	Foundation 2	APPLIED FRESH WATER FISHERIES	80	20	100
	Practical special Group 3 and 4	BASED ON THEORY PAPER SPECIAL GROUP 3 AND 4	80	20	100
	Practical Project	PROJECT	80	20	100
	Seminar 4	SEMINAR 4	25	-	25

Course specific outcomes M.Sc. Zoology

Semester	Title	Course specific outcomes
I	STRUCTURE AND FUNCTION OF INVERTEBRATES	• Course will provide knowledge regarding the various Invertebrates species • Students gain knowledge in the areas of Systematic position, general organization and affinities of invertebrates • The students will be well equipped to become very competent in research or teaching fields after completion of this course
	GENERAL PHYSIOLOGY	• Compare the functioning of organ systems across the animal world. • Learn more about animal physiology and anatomy.
	CELL BIOLOGY AND GENETICS	• Understanding on the details of the basic unit of life at the molecular level. • Explain the fine structure and functions of cell organelles. • Introduce the new developments in genetics and its implications in human welfare. • Expose the learners to the basics of genetics, genetic diseases.
	ADVANCED REPRODUCTIVE BIOLOGY	• In this course, students will learn the biological processes of reproduction, including the endocrinology and physiology of male and female reproduction. • They will gain an understanding of the determinants of fertility and infertility, and how reproductive biotechnology is used to overcome poor fertility. • This course will also include a focus on the biology of normal and disordered pregnancy. • Students will explore how reproductive biology impacts other aspects of health, exploring implications of early life exposures for later health and of the biology of reproductive cancers. • Social and ethical implications of reproductive technologies and research will be discussed within appropriate topics.
	BASED ON THEORY PAPER 1 AND 2	• Practical based on paper 1 and 2
	BASED ON THEORY PAPER 3 AND 4	• Practical based on paper 3 and 4
	SEMINAR 1	• Improve the presentation skill

II	STRUCTURE AND FUNCTION OF VERTEBRATES	• Course will provide knowledge regarding the various vertebrates species • Students gain knowledge in the areas of Systematic position, general organization and affinities of vertebrates • The students will be well equipped to become very competent in research or teaching fields after completion of this course
	• COMPARATIVE ENDOCRINOLOGY	• Students understand how the endocrine system is functioning. • They will understand the structures and molecular modes of action of a large variety of vertebrate and invertebrate hormones • Students will understand how hormones can regulate animal behavior. • They will acquire understanding of the physiological importance of hormones, as well as on their possible use and abuse in animals and humans
	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	• It gives insight into various cell/tissues culture techniques • Understanding of in vitro culturing of organisms and production of transgenic animals. • Understanding of cloning of mammals, large scale culture and production from recombinant microorganisms • Gains skills in medical, environmental biotechnology, biopesticides, Biotechnology of aquaculture and use of animals as bioreactors • This insight allows students to take into consideration about ethical issues involved in production transgenic animals and BT products.
	ADVANCED DEVELOPMENTAL BIOLOGY	• Students will learn development of animal from egg to adult and also learn the processes of blastula, gastrulation • Will learn fundamental molecular and cellular mechanisms contribute during development process. • Will learn how these different mechanisms integrate at the level of whole tissues,

		organs and organisms, and how they are functionally adapted in distinct developmental contexts.
	BASED ON THEORY PAPER 5 AND 6	• Practical based on paper 5 and 6
	BASED ON THEORY PAPER 7 AND 8	• Practical based on paper 7 and 8
	SEMINAR 2	• Improve the presentation skill
III	PARASITOLOGY AND IMMUNOLOGY	• Provides basics knowledge about immune system and parasites • Types of immunity, antigens-antibodies and their properties • Complement system, MHC's and immune responses • Understanding of types of hypersensitivity reactions and auto immune diseases • Ability to understand concepts of tumor immunology and transplantation immunology • Study of diverse ecto and endoparasites • Understanding of fundamental complement of numerous diseases which have significant impact on human health • Understanding of Insect vector host interactions of many important diseases like Malaria, Filaria, Dengue etc.
	ANIMAL PHYISOLOGY 1 PHYSIOLOGY OF DIGESTION AND EXCRETION	• Students will learn the detailed concepts of digestion, absorption, excretion • in depth knowledge of various physiological processes associated with digestion and excretion in the animal kingdom
	ANIMAL PHYSIOLOGY 2 PHYSIOLOGY OF CIRCULATION	• Understanding of the functions of effectors in the circulatory physiology and adaptations by animals to environment • Imparts knowledge about various metabolic and physiological mechanisms involved in circulation Gain knowledge about hormones and electrophysiology of circulatory system
	FRESH WATER FISHERIES	• Course provides them comprehensive understanding about aquatic ecosystem and various economical important fishes. • Students gain knowledge of integumentary system - basic structure of skin, dermal and epidermal pigments, fins, and scales. • Understanding of embryogenesis - Early

		development and post embryonic development • Understanding of fishes habits and habitats and their functional anatomy
	BASED ON THEORY PAPER 9	• Practical based on paper 9
	BASED ON THEORY PAPER SPECIAL GROUP 1 AND 2	• Practical based on paper 10 and 11
	SEMINAR 3	• Improve the presentation skill
IV	BIOTECHNIQUE, BIOSTATISTICS, ETHOLOGY, TOXICOLOGY AND BIOINFORMATICS	• Students gain knowledge about various tools & techniques used in biological systems and gives them insight about their use in research. • Biostatistics teaches them to use the best data analysis methods in their research projects • Students gains knowledge about statistical methods like measures of central tendencies, Probability • Learns about hypothesis testing and inferential statistics • Learns the problem-solving methods • Learns various aspects of bioinformatics
	ANIMAL PHYISOLOGY 3 PHYSIOLOGY OF BRAIN, NERVE AND MUSCLE	• Course provides students comprehensive understanding about neurobiology, neurophysiology, molecular neurobiology • It gives comprehensive understanding regarding brain, nerves and muscles and their structure and function.
	ANIMAL PHYSIOLOGY 4 PHYSIOLOGY OF RESPIRATION AND REPRODUCTION \	• Understanding of the functions of effectors in respiratory physiology and reproduction and adaptations by animals to environment • The students will be well equipped to become very competent in research.
	APPLIED FRESH WATER FISHERIES	• Students will applied value of fisheries • Learn about culturing and maintenance of fish culture, pearl culture, prawn culture
	PRACTICAL BASED ON THEORY PAPER SPECIAL GROUP 3 AND 4	• Practical based on paper 14 and 15
	PROJECT	• Make research proposal • Construct tool of data collection • Learn fieldwork modalities • Understand the process of data analysis • Writing research report.
	SEMINAR 4	• Improve the presentation skill