

Department of BOTANY

Academic Calender and Academic Plan

1st Semester Honours Course (July 2018 - Dec 2018) CCH 01

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 01	PHYCOLOGY	General Account	SR	Jul-18		YES
CCH 01		Classification		Jul-18		
CCH 01		Cyanobacteria		Aug-18		
CCH 01		Bacillariophyta		Aug-18		
CCH 01		Life History		Sep-18		
CCH 01	MICROBIOLOGY	Virus	AC	Aug-18		YES
CCH 01		Bacteria		Sep-18		

Course Outcome	<p>Study about algae and its role in plant groups.</p> <p>Types of algal habits are found and their morphological, anatomical, reproductive characters are depicted.</p> <p>Blue-green algae and its role in nitrogen fixation is described here, significance of heterocyst is also mentioned here.</p> <p>Diatoms and their role as diatomaceous earth and its economical uses in daily life are described.</p> <p>Life history of different algal genera showing gametophytic variation and nature alternation of generation is analyzed.</p> <p>A cellular organism, its role as intermediate, its life cycle in the host cell and its beneficial and harmful effects.</p> <p>Prokaryotic organism, its types, growth curve, beneficial and harmful role are depicted.</p>
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1st Semester Honours Course (July 2018 - Dec 2018) CCH 02

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 02	MYCOLOGY	General Account, Classification, Life History	PS	Aug-18		YES
CCH 02		Mycorrhiza		Sep-18		
CCH 02		Lichen		Sep-18		
CCH 02	PHYTO-PATHOLOGY	Terms and Definition	AC	Sep-18		YES
CCH 02		Host-parasite Interaction	AC	Sep-18		
CCH 02		Plant Disease Management	AS	Aug-18		

CCH 02	Symptoms, Causal Organisms, Disease Cycle, Control Measures	AS	Aug-18	
Course Outcome	<p>Study about fungus, concept of mycelium, hypha, dikaryotization etc. are described. Different types of fungi with their peculiarities are described according to different mycologists.</p> <p>Life history of all the fungal species, homo and heterothallism, parasexuality and its mode of alternation of generation is mentioned.</p> <p>Association of fungi with root and the symbiotic relationship is established. Types and its role in agriculture and forestry are described. Algal and fungal associative relationship, types and ecological role are mentioned. It deals with different types of plant diseases and related terminologies and disease triangle. Interrelationship and interactive role of plant and its pathogen causing disease. How to deal with the plant disease, is discussed. The overall peculiarities of different types of plant diseases, responsible organism, cycle of disease development and remedy for the plants are discussed.</p>			

2nd Semester Honours Course (Jan 2019 - June 2019) CCH 03

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 03	ANATOMY	Cell Wall	PS	Jan-19		Yes
CCH 03		Stomata	PS	Jan-19		
CCH 03		Stele	PS	Jan-19		
CCH 03		Primary Structure of Stem and Root	SR	Feb-19		
CCH 03		Secondary Growth	PS	Feb-19		

		Developmental Anatomy	SR	Mar-19	
		Ecological Anatomy	SR	Apr-19	
		Scope of Plant Anatomy	SR	Apr-19	
Course Outcome	<p>Structural components of cell wall, stomatal apparatus and its types and primary xylem, primary phloem and its arrangement are discussed. Secondary cell wall materials like hemicellulose, lignin, pectin, suberin etc. are responsible for secondary growth and it also elaborates developmental pattern by periclinal and anticlinal division to form new structures in gametophytes and sporeophytes.</p> <p>To cope with its concerned environment, plants possess typical adaptive characters making a balance with its ecology.</p> <p>To cope with its concerned environment, plants possess typical adaptive characters making a balance with its ecology.</p> <p>After knowing the internal structural details, it can be correlated to any physiological or biochemical properties of the plants.</p>				

2nd Semester Honours Course (Jan 2019 - June 2019) CCH 04

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
	BRYOPHYTES	General Account	PS	Jan-19		YES
		Life History		Feb-19		
		Phylogeny		Feb-19		

		Importance		Mar-19		
CCH 04	PTERIDOPHYTES	General Account	AS	Jan-19		YES
CCH 04		Life History		Mar-19		
CCH 04	GYMNOSPERMS	Classification, Progymnosperms	AC	Feb-19		YES
CCH 04		Life History		Apr-19		
Course Outcome	<p>Different bryophyte members which are amphibian in nature have crucial role in terms of ecological and economical significance. These are the first land vascular plants and it enunciates heterospory forwarding to seed habit. Starting with progymnosperms having affinities on both side i.e. pteridophytes and gymnosperms, this chapter says about seed plants where seed is uncovered and presence of cone is significant.</p>					

3rd Semester Honours Course (July 2019 - Dec 2019) CCH 05

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 05	Palaeobotany and palynology	Geological time scale	SR	Aug-19	1	YES
CCH 05		Plant Fossils	SR	Aug-19	2	
CCH 05		Fossil Pteridophytes	AC	Aug-19	2	

CCH 05		Fossil Gymnosperms	AC	Sep-19	2	
CCH 05		Indian Gondwana System	AC	Sep-19	1	
CCH 05		Palynology	SR	Sep-19		
CCH 05		Applied Palynology	SR	Sep-19		
CCH 05		Importance	SR	Sep-19		
Course Outcome	<p>The students would get a brief idea about the different types of fossils, their mode of preservations, naming, conditions for fossilization and their importance.</p> <p>The study would impart an elaborative idea of the different important fossil pteridophytes.</p> <p>The study would help the students to know about the different important fossilized reconstructed genus of gymnosperms.</p> <p>The study would impart knowledge of the different major mega fossils present in the Indian Gondwana System.</p>					
3rd Semester Honours Course (July 2019 - Dec 2019) CCH 06						
Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 06	REPRODUCTIVE BIOLOGY OF ANGIOSPERMS	Morphology of Angiosperms	PS	Sep-19		YES
CCH 06		Pre-fertilization changes	AC	Aug-19		

		Fertilization	AC	Aug-19	
		Post-fertilization changes	AC	Sep-19	
		Apomixis and Polyembryony	AC	Sep-19	
Course Outcome	<p>This topic helps the learner to get a brief idea about the different types of inflorescence and flowering present in angiosperms and the genetic mode of flower development.</p> <p>The students would get a brief idea about the pre- fertilization changes that are observed.</p> <p>The study would impart an elaborative idea of the different fertilization stages.</p> <p>The study would help the students to know about the different post- fertilization stages.</p> <p>This study would help the students to understand a mode of reproduction which does not involve formation of zygote through gametic fusion and a process in which the fertilization of single egg leads to the formation of two or more embryos.</p>				

3rd Semester Honours Course (July 2019 - Dec 2019) CCH 07

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
	TAXONOMY OF ANGIOSPERMS	Introduction	SS	Aug-19		YES
		Nomenclature		Aug-19		
		Systems of Classification		Aug-19	1	

CCH 07	Phenetics and Cladistics	Aug-19	1
CCH 07	Data Sources in Taxonomy	Sep-19	
CCH 07	Diagnostic feature, systematic position and economic importance of Monocotyledons and Dicotyledons	Sep-19	
Course Outcome	Introduction of plant habits, specially angiospermic plants. Naming process of plants. Criteria of classification and its description according to different taxonomists. Evolutionary outline and interrelationship by forming phylogenetic tree. How the taxonomic data are collected, maintained and preserved for future references. Characters of different plants on the basis of branching pattern, phylotaxy, floral morphology. Economic importance in terms of industrial, medicinal or daily use.		

3rd Semester Honours Course (July 2019 - Dec 2019) SEC

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
SEC	APPLIED PHYCOLOGY, MYCOLOGY AND MICROBIOLOGY	Applied Phycology	SS	Sep-19		YES
SEC		Applied Mycology	PS	Sep-19		
SEC		Applied Microbiology	AC	Sep-19		
Course Outcome	Economical as well as industrial processes, its utilization and marketing i.e. commercialization of different algal members.					

4th Semester Honours Course (Jan 2020 - Jun 2020) CCH 08

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 08	PLANT GEOGRAPHY	Phytogeographical regions	SR	Mar-20		NO
		Endemism		Mar-20		
CCH 08	ECOLOGY	Preliminary Idea	SR	Mar-20		
CCH 08		Community Ecology		Mar-20		
CCH 08		Conservation of Biodiversity		Apr-20		
CCH 08		Evolution	PS	Apr-20		
CCH 08		Plant Geography	SR	Apr-20		
CCH 08		Ecology	SR	Apr-20		

Course Outcome	Geographical isolation according to vegetation cover throughout the globe. Restricted species in restricted area and its ecological significance. Interrelationship and interaction between biotic and abiotic organisms and their impact on the environment. How the living organisms form population terminating into a community is described here. Diversity of living organisms irrespective of flora and fauna and its in-situ and ex-situ conservation policies. Origin and deviation of living organisms in different branches through the evolution are narrated. Different zones in terms of vegetation and floral and faunal implications on these zones are analyzed.
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4th Semester Honours Course (Jan 2020 - Jun 2020) CCH 09

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 09	ECONOMIC BOTANY	Origin of cultivated crops, cereals, legumes	SS, PS	Apr-20		NO
CCH 09		Sugar and starches, spices, beverages, oils, fats	SS, SR	Apr-20		
CCH 09		Drug yielding plants, timbers, fibres	AC, SR	Apr-20		
Course Outcome	Economical uses of different angiospermic plants including shrubs, herbs and trees.					

4th Semester Honours Course (Jan 2020 - Jun 2020) CCH 10

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
CCH 10	GENETICS	Introduction	AC	Feb-20		NO

CCH 10		Linkage, Crossing over and Gene Mapping	Mar-20	
CCH 10		Epistasis and Polygenic Inheritance in plants	Apr-20	
CCH 10		Aneuploidy and Polyploidy	Mar-20	
CCH 10		Chromosomal Aberration	Mar-20	
CCH 10		Mutation	Mar-20	
CCH 10		Structural Organisation of Gene	Apr-20	
CCH 10		Effects	Apr-20	
Course Outcome		Concept of gene as an unit of heredity. Crossing over between sister Chromatids, linked gene concept, genetic distance and its mapping in terms of linkage. Influencing or dominating gene over the recessive one and its being carry forwarded through the generations of plants. Chromosomal number, character variation and its implication in the structural behavior. Also the effects of external factors in terms of physical mutagen and chemical mutagen is aptly described.		

4th Semester Honours Course (Jan 2020 - Jun 2020) SEC

Name of the paper	Module	Topic	Name of the teacher	To be Completed during	No of PPT classes	Continuous Internal Assesment Schedule (write yes or no)
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	SEC	PLANT BREEDING	Plant Breeding	SS	Mar-20		NO
	SEC		Methods of Crop Improvement		Mar-20		
	SEC		Germplasm		Mar-20		
	SEC		Mass and Pureline selection		Apr-20		
	SEC		Heterosis, Hybrid seed, Male sterility, Inbreeding		Apr-20		
	SEC		Molecular breeding		Apr-20		
	SEC		Role of mutation		Apr-20		
	SEC		Role of biotechnology in crop improvements		Apr-20		
Course Outcome		Crossing in between plants for the improvement of crop productivity and agricultural benefits.					