

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE (AUTONOMOUS)-POLLACHI

676	BSW	Methods of Social Work	22USW203	2022
677	BSW	Human Growth and Development	22USW204	2022
678	BSW	Women and Development	22USW2A2	2022
679	M.A Tamil	IKKALA ILAKKIYAM	22PTM101	2022
680	M.A Tamil	KONGU NAATIAL	22PTM1E1	2022
681	M.A Tamil	BAKTHI ILAKKIYAMUM SITRILAKKIYAMUM	22PTM205	2022
682	M.A Tamil	ILAKKIY MANUDAVIYAL	22PTM208	2022
683	M.A Tamil	Tamilar panpadu	22PTM2N1	2022
684	M.A Tamil	KAAPPIYANGAL	22PTM310	2022
685	M.A Tamil	TAMILAGA THOLLIYAL	22PTM312	2022
686	M.A Tamil	PENNIYAM	22PTM313	2022
687	M.A Tamil	THONAMI ILAKKIYAM	22PTM414	2022
688	M.Sc. Botany	Ethno Botany	22PBY1E2	2022
689	M.Sc. Botany	Plants in Tamil Culture	22PBY2N2	2022
690	M.Sc Computer Science	Data Mining using R	22PCS102	2022
691	M.Sc Computer Science	Full Stack Web Development	22PCS312	2022
692	M.Sc Computer Science	Elective III:Natural Language Processing and Text Analytics	22PCS3E2	2022
693	M.Com IB	Innovation and Entrepreneurship	22PIB104	2022
694	M.Com IB	International Logistics Management	22PIB205	2022
695	M.Com IB	Foreign Trade Procedure and Documentation	22PIB206	2022
696	M.Com IB	Map Reading and Route Tracing	22PIB208	2022
697	MA English	Shakespere	22PEL103	2022
698	MA English	World Drama	22PEL414	2022
699	MA English	World Fiction	22PEL415	2022

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New Course Introduced

Dr. R. MUTHUKUMARAN,
M.A., M.Phil., B.Ed., Ph.D.,
PRINCIPAL
N.C.M. College, Pollachi - 642 001
Coimbatore District

PG and Research Department of Botany
NALLAMUTHU GOUNDER MAHALINGAM COLLEGE
POLLACHI - 642001

8th Board of Studies Meeting in the PG and Research Department of Botany

Date & Time: 04 June 2022 & 10 .00 am

Agenda

BoS / MB8.1	:	Welcome address and Opening Remarks by Chairman, Board of studies in the PG and Research Department of Botany
BoS / MB8.2	:	Confirmation of the Minutes of the 7 th meeting of Board of studies in the PG and Research Department of Botany, 22-05-2021 and Action taken report of 7 th meeting of Board of studies
BoS / MB8.3	:	8.3.1 Syllabus of I M.Sc., Botany under Regulation 2022 - 2024
	:	8.3.2 Syllabus of II M.Sc., Botany under Regulation 2022 - 2024
	:	Any other Discussions if any
BoS / MB8.4	:	Suggestion given by BOS Members
BoS / MB8.5	:	Any other items

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE, POLLACHI

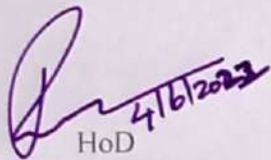
**PG and Research Department of Botany
MINUTES OF BOS MEETING**

The 8th Meeting of the Board of studies of the PG and Research Department of Botany was held on 04th June 2022 at 10.00 a.m. at PG Botany Class Room

1. The following members were present:

1	Dr. R. Rakkimuthu Assistant Professor and Head, PG and Research Department of Botany NGM College, Pollachi	Chairman
2	Dr. P. Sathish Kumar Assistant Professor PG and Research Department of Botany NGM College, Pollachi.	Internal Members
3	Dr. A.M. Ananda Kumar Assistant Professor PG and Research Department of Botany NGM College, Pollachi.	
4	Mrs. D.Sowmiya Assistant Professor PG and Research Department of Botany NGM College, Pollachi.	
5	Dr. T. Parimelazhagan Professor of Botany School of Life Sciences Bharathiar University, Coimbatore – 641 046	University Nominee
6	Dr. M. Mayilsamy Assistant Professor Department of Botany, APA College, Palani	Subject expert
7	Dr. S. Karppusamy Assistant Professor Department of Botany, Madura College, Madurai	Academic auditor

8	Mr. M. Muthukumar QC chemist Quantum Confectionary Pollachi, Tamilnadu	Industrial Expert
9	Mrs. R. Nithyakamachi Quality Control Uutru mineral Water company, Pollachi	Alumnus nominated by Principal / HoD
10	B. Kamali (20MB16) PG and Research Department of Botany Nallamuthu Gounder Mahalingam College, Pollachi	Student Member


HoD


CDC Co-ordinator


COE


PRINCIPAL

Dr. R. Rakkimuthu, M.Sc., Ph.D.,
Assistant Professor and Head,
PG & Research Dept. of Botany,
N.G.M. College (Autonomous),
Pollachi - 642 001.

 K. SRINIVASAN, M.C.A.,
Co-ordinator
Curriculum Development Cell (CDC)
NGM College (Autonomous)
Pollachi - 642 001.

Dr. R. MANICKA CHEZIAN, M.Sc., M.S., Ph.D.,
Controller of Examinations
NGM College (Autonomous)
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Dr. R. MUTHUKUMARAN,
M.A., M.Phil., B.Ed., Ph.D.
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N.G.M. College, Pollachi - 642 00
Coimbatore District

**BoS/MB8.1 WELCOME ADDRESS AND OPENING REMARKS BY CHAIRMAN,
BOARD OF STUDIES IN THE PG AND RESEARCH DEPARTMENT OF BOTANY**

The Chairman, BoS of the PG and Research Department of Botany welcomed and introduced the members of 8th Board of Studies and thanked each one of them for sparing their valuable time to attend the meeting.

**BoS/CS 8.2 TO CONFIRM THE MINUTES OF 7th BOS MEETING HELD ON
22.05.2021.** The minutes of the 7th Board of Studies meeting held on 22.05.2021 were communicated to the members. The comments received have been incorporated and placed for confirmation. The same was approved by the 7th Academic council.

~ Action Taken Report (Enclosed in Annexure 1)

BoS/MB8.3

BoS/MB8.3.1

I M.Sc., Botany I & II SEMESTER

- 22PBY1E1 -Ecology and Phytogeography
- 22PBY206- Plant physiology
- 22PBY2E4 - Elective 2-Horticulture and Landscaping

The presented syllabus was accepted by the experts and a few suggestions were given as follows:

1. Ecology and Phytogeography
 - The topic population ecology was added in Unit I
 - Carbon sequestration topic was added in Unit III
2. Plant physiology
 - The topic plasmolysis was added in Unit I
 - The topic carbohydrate and amino acid metabolism were removed from Unit IV
3. Horticulture and Landscaping

- Cultivation of apple was replaced by mango

The following papers from M.Sc., Botany were accepted by the experts fully without further suggestions

- 22PBY101- Core -1 Plant Diversity I
- 22PBY102 - Core – 2 Plant Diversity II
- 22PBY103 Core – 3 Applied Microbiology and Plant Pathology
- 22PBY 1E3- Elective 1- Seed technology
- 22PBY205- Plant Anatomy and Reproductive Biology
- 22PBY207 Core – 7 Cytology, Genetics and Plant Breeding
- 22PBY2E5 - Elective 2- IPR and Bioethics
- 22PBY2E6- Elective 2-Organic forming

New Course Added:

The following papers from M.Sc., Botany were accepted by the experts fully without further suggestions

- **22PBY1E2- Elective 1-Ethnobotany**
- **22PBY2N1 Non- Major Elective 1- Plants in Tamil culture**

BoS/CS 8.3.2

II M.Sc., Botany III & IV SEMESTER

- 22PBY309 Core - 9 Taxonomy of Angiosperms
- 22PBY312 Core – 12 Laboratory course – III
- 22PBY4P1 Core - 16 Project Work and Viva –Voce.

The presented syllabus was accepted by the experts and a few suggestions were given as follows:

1. Taxonomy of Angiosperms

- One family Ulmaceae was added in Unit IV

2. Laboratory course – III

- Taxonomy of Angiosperms individual practical was merged with Plant biochemistry & plant Biotechnology practicals.

3. Project Work and Viva –Voce

- Project evaluation mark was changed as 200.

The following papers from M.Sc., Botany were accepted by the experts fully without further suggestions:

- 22PBY310 **Core -10** Plant Biochemistry and Biophysics
- 22PBY311 **Core -11** Plant Biotechnology
- 22PBY3E7 -Forestry and Wood science
- 22PBY3E8 **Elective 3** Herbal Technology
- 22PBY3E9 **Elective 3** Pharmacognosy
- 22PBY413 **Core - 13** Research Methodology
- 22PBY414 **Core - 14** Bioinformatics
- 22PBY415 **Core – 15** Laboratory course –IV
- 22PBYFVI- Field / Industry / Institute visit

The following courses were revised with minor modifications.

These changes have been made effect for the students admitted in 2022 with 1 Semesters accordingly.

BoS/CS8.4 SUGGESTIONS GIVEN BY THE BoS MEMBERS

8.4.1: Add the Carbon sequestration topic in the paper Ecology and Phytogeography.

8.4.2: Add plasmolysis in plant physiology paper.

8.4.3: Remove carbohydrate and amino acid metabolism from Plant Physiology paper.

8.4.4: Added family Ulmaceae in Taxonomy of Angiosperms.

8.4.5: Change the title from Plant Biotechnology and Nanobiology to Plant Biotechnology

8.4.6: Change the title from Bioinformatics and cyber security to Bioinformatics.

The members had a brainstorming discussion and interaction among themselves. After discussion, fruitful suggestions were incorporated appropriately in the Curriculum and Syllabi.

Based on the suggestions given by the members, BOS resolved to recommend the following to the Academic Council for further approval.

- a) The syllabus of First Year M.Sc., Botany under Regulation 2022.
- b) The syllabus of Second Year M.Sc., Botany under Regulation 2022
- c) Any other discussion

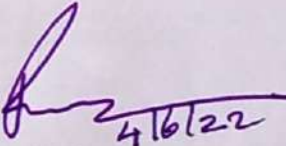
Members Present:

Chairman	
Dr. R. Rakkimuthu Assistant Professor and Head, PG and Research Department of Botany NGM College, Pollachi	R. Rakkimuthu 4/6/22
Internal Members	
Dr. P. Sathish Kumar Assistant Professor PG and Research Department of Botany NGM College, Pollachi.	P. Sathish Kumar 4/6/22
Dr. A.M. Ananda Kumar Assistant Professor PG and Research Department of Botany NGM College, Pollachi.	A.M. Ananda Kumar 4/6/22
Mrs. D. Sowmiya Assistant Professor PG and Research Department of Botany NGM College, Pollachi.	D. Sowmiya 4/6/22
University Nominee	
Dr. T. Parimelazhagan Professor & Head Department of Botany School of Life Sciences Bharathiar University, Coimbatore - 641 046	T. Parimelazhagan 4/6/22
Subject expert	
Dr. M. Mayilsamy Assistant Professor Department of Botany APA College of Arts and Culture Palani - 624601	M. Mayilsamy 4/6/22
Academic Auditor	
Dr. S. Karppusamy Assistant Professor Department of Botany Madura College, Madurai	
Industrial expert	
Mr. M. Muthukumar QC chemist Quantum Confectionary Pollachi	M. Muthukumar
Alumni	
Mrs. R. Nithiyakamatchi Quality Control, Uutru mineral Water company, Pollachi	R. Nithiyakamatchi
Student Member	
B. Kamali, II nd M.Sc., Botany, PG and Research Department of Botany. NGM College, Pollachi	B. Kamali

ANNEXURE I

Minutes of the 7th Meeting – Action Taken Report

S.No	Suggestion given by expert members	Action taken
1.	Rewrite the vision and mission	Reviewed and Implemented
2.	Make some corrections over Program educational objective	Implemented
3.	Use better sentence to start writing with POs and PSOs	Implemented
4.	Make some necessary changes in project guidelines	Implemented
5.	Add more points on course objective for all course	Implemented
6.	Include the period of internship and it may be permitted for the period of 7 – 15 days accordingly. The marks for internship were allotted as 50.	Implemented
7.	MOOC course was made compulsory	Implemented
8.	Specify the name of the phytochemical tests in Biochemistry practical	Implemented
9.	Give the no. of text books and reference books uniformly to all the subjects	Reviewed and Implemented
10.	Give the recent editions of textbooks and reference books as possible and available	Reviewed and Implemented


4/6/22
HoD

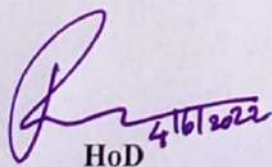
Dr. R. Rakkimuthu, M.Sc., Ph.D.,
Assistant Professor and Head,
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**List of Courses having focus on local, national, regional and global developmental needs
offered by the PG and Research Department of Botany**

PG and Research Department of Botany						
Programme: M.Sc., Botany					Year: 2022 -2024	
Course Code	Course Title	Need				Rationale
		Local	National	Regional	Global	
22PBY101	Plant Diversity I	✓	✓	-	-	Utilizing the algae and fungi as food, medicine, fertilizer and algae as indicators of pollution.
22PBY102	Plant Diversity II	✓	✓	-	-	Identifying the ecology and evolutionary significances of Bryophytes, Pteridophytes and Gymnosperms in environmental sustainability.
22PBY103	Core 3 Applied Microbiology and Plant Pathology	✓	✓	✓	-	Knowledge about microbes. Knowledge about plant infectious microbes and their diagnostic methods
22PBY1E1	Ecology and Phytogeography	-	-	-	✓	To understand the mechanism of environmental and biodiversity management
22PBY1E2	Ethno Botany	✓	-	-	✓	To study the local herbs and their medicinal properties to treat diseases
	Seed technology	✓	✓	-	-	Awareness on storage reserves in seeds, seed longevity and seed viability to quality yield

						of crops.
22PBY207	Cytology, Genetics and Plant Breeding	-	-	-	✓	To study genes and their mode of expression Awareness on the conventional methods of plant breeding to producing new variety.
22PBY2E4	Elective2 Horticulture and Landscaping	✓	-	-	-	To understand the principle and techniques of improving horticultural plants
22PBY2E5	IPR and Bioethics	-	✓	-	-	Fundamentals of patenting, copyright and trademark
22PBY2E6	Organic farming	✓	-	-	-	The preparation and application of organic manures locally
22PBY2N1	Non- Major Elective 1 Plants in Tamil Culture	✓	-	-	-	To know about the – plants used in earlier literature
22PBY309	Taxonomy of Angiosperms	✓	✓	-	-	To learn the method of identifying plants to arrive at local and national flora
22PBY310	Plant Biochemistry and Biophysics	-	-	-	✓	Knowledge in the synthesis of biomolecules and their role in metabolic pathways along with their regulation.
22PBY311	Plant Biotechnology and Nanobiology	-	-	-	✓	Demonstrates the role of transgenic plants and bionano particles in the fields of medicine, agriculture and environment.

						To inculcate the techniques of plant tissue culture, so that students can get placed in plant tissue culture industries
22PBY312	Laboratory course - III	✓	✓	✓		Knowledge on the preparation of solutions, to carry out the experiments on biochemistry and plant tissue culture.
22PBY3E8	Herbal Technology	-	-	✓	-	To learn the medicinal value of plants and the students will study the medicinally used traditional herbs
22PBY3E9	Pharmacognosy	-	✓	-	-	To study the medicinal plants and their utilization in the preparation of herbal pharmaceuticals
22PBY413	Research Methodology	-	-	-	✓	Scientific understanding of analytical techniques and detail interpretation of results.
22PBY414	Bioinformatics and Cyber Security	-	-	-	✓	Modern competences in the handling of bioinformatics tools.


HoD 4/6/2022


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**List of Courses having focus on employability/ entrepreneurship/ skill development offered
by the PG and Research Department of Botany**

PG and Research Department of Botany						
Programme: M.Sc., Botany					Year: 2021-2023	
Course Code	Course Title	Employability (EM) / Entrepreneurship (EN) / Skill Development (SD)			Focus	Year of Introduction
		EM	EN	SD		
22PBY101	Core – 1 Plant Diversity I (Phycology, Mycology, Lichenology and Bryology)			✓	Understanding characters of lower diversity for cultivation sustainable growth of species	2015
22PBY102	Core – 2 Plant Diversity II (Pteridophytes, Gymnosperms and Palaeobotany)			✓	To be clear with evolutionary trends for better understanding of biodiversity	2015
22PBY103	Core 3 Applied Microbiology and Plant Pathology	✓	✓	✓	etiology of the plant diseases and control measures	2019
22PBY104	Core 4 Laboratory course 1	✓	✓	✓	Cultivation practice of phytoplanktons, macroalgae, Microbes and morphological anatomical	2015

					features	
22PBY1E1	Ecology and Phytogeography	✓	✓	✓	The paper deals with distribution, energy transfer, assessing the environment using plant communities, importance of plants towards ecological balance.	2017
22PBY1E2	Ethno Botany	✓	✓	✓	Importance of various crops, mode of cultivation practice of various important crop species	2022
22PBY1E3 Elective	Seed technology	✓	✓	✓	Seed characters and features, processing, storage and seed certification	2021
22PBY1N1	Non- Major Elective 1 Plants in Tamil Culture	-	-	✓	Deals with plants used in earlier literature	2022
22PBY205	Core - 5 Plant Anatomy and Reproductive Biology			✓	Anatomical features of angiosperms	2017

					their architecture, evolution and process of reproduction	
22PBY206	Core - 6 Plant physiology			✓	Behaviour and response of plant on various stimuli internal and external plant level physiology	2015
22PBY207	Core – 7 Cytology, Genetics and Plant Breeding	✓	✓	✓	Mainly the course deals with cell features, crop improvement, process of production of new varieties with good qualities	2017
22PBY208	Core - 8 Laboratory course-II	✓	✓	✓	The paper deals with anatomical features cytological details and genetical influence towards crop improvement	2015
22PBY2E4	Elective-2	✓	✓	✓	Deals with	2020

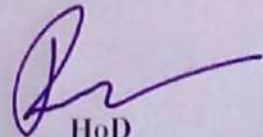
	Horticulture and Landscaping /				economically important crops and land scaping methods	
22PBY2E5/	IPR and Bioethics/	✓	✓	✓	The course deals with importance of IPR and its various features, traditional knowledge, legal issues regarding materials and products	2020
22PBY2E6	Organic farming	✓	✓	✓	The course focus on organic farming practices and methods to grow crops organically, their beneficial effects on health	2021
22PBY3INT	Industrial Training / Internship	✓	-	✓	It involves industrial exposure methods, knowledge on prerequisite qualities for fetching jobs	2020

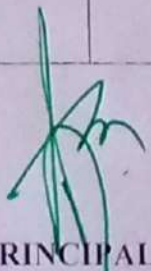
22PBY309	Core - 9 Taxonomy of Angiosperms			✓	The main focus is to identify the plants perfectly using classical and recent methods. The main focus for the pharma industry where the identification of the plants is most important thing	2015
22PBY310	Core -10 Plant Biochemistry and Biophysics			✓	The paper focuses on biochemical cycles and its kinetics, details on biochemical products and its importance	2015
22PBY311	Core -11 Plant Biotechnology and Nanobiology	✓	✓	✓	The paper focus on applied aspects of biological science which gives wide knowledge on various tools used in the biological	2015

					sciences and its applications in industry.	
22PBY312	Core – 12 Laboratory course - III (for core paper 9,10 and 11)	✓	✓	✓	The paper deals with identification of plants plants specimens, plant components and estimation of various important plant components	2015
22PBY3E7/	Elective-3 Forestry and Wood science	✓	✓	✓	The course which deals with importance, types, silviculture, timber values , methods to conserve the forest, importance of value added products, laws and commercial forest products w	2020
22PBY3E8/	Herbal Technology	✓	✓	✓	The course focuses the importance of	2020

					herbs and isolation of various drugs without disturbing the natural population. The course gives aspects on cultivation and propagation of drugs.	
22PBY3E9	Pharmacognosy	✓	✓	✓	The course deals with production of plant based quality drugs, adulteration for the welfare of human	2021
22PBY3N3	Non- Major Elective 3 Economic Botany	✓	✓	✓	Courses focuses on economically important species and its values both commercially and in day to day life	2019
22PBY413	Core - 13 Research Methodology	✓		✓	The course focus on statistical aspects,	2015

					interpreting the data and analyzing the data while preparing thesis	
22PBY414	Core - 14 Bioinformatics and Cyber Security	✓		✓	Students are being taught with basic computational biology tools and their applications. Hence, the students will enrich their ICT skill to suit themselves in the job market.	2015
22PBY415	Core - 15 Laboratory course -IV	✓	✓	✓	The course deals with applied aspects on bioinformatics protein modeling using drug online softwares	2015
22PBYFVI	Field / Industry / Institute visit	✓	✓	✓		2021
22PBY4P1	Core - 16 Project Work and Viva – Voce	✓	✓	✓		2015


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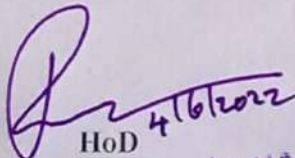
Percentage of Revision of M.Sc., Botany Syllabus under Regulation 2022

Total Percentage of Revision=8.21%

PG and Research Department of Botany

S.No	Course Code	Course Title	Change Details	% of Changes	Content Deleted	Content Updated	Reason for Change
1.	22PBY101	Plant Diversity I (Phycology, Mycology, Lichenology and Bryology)	No	0	-	-	-
2.	22PBY102	Core – 2Plant Diversity II (Pteridophytes, Gymnosperms and Palaeobotany)	No	0	-	-	-
3.	22PBY103	Core 3 Applied Microbiology and Plant Pathology	No	0	-	-	-
4.	22PBY104	Core 4 Laboratory course I	No	0	-	-	-
5.	22PBY1E1	Ecology and Phytogeography	Yes	15	-	Population Ecology Carbon sequestration	Student suggestion, subject expert
6.	22PBY1E2	Ethno Botany	New Course	100	-	-	Course Teacher
7.	22PBY1E3	Seed technology	No	0	-	-	-
8.	22PBY205	Plant Anatomy and Reproductive Biology	No	0	-	-	-
9.	22PBY206	Plant physiology	No	0	-	-	-
10.	22PBY207	Cytology, Genetics and Plant Breeding	No	0	-	-	-
11.	22PBY208	Laboratory course-II	No	0	-	-	-
12.	22PBY2E4/	Elective-2 Horticulture and Landscaping	Yes	5	Cultivation of apple	Cultivation of mango	Subject expert

13.	22PBY2E5/	IPR and Bioethics	No	0	-	-	-
14.	22PBY2E6	Organic farming	No	0	-	-	-
15.	22PBY2N2	Non- Major Elective 1 Plant in Tamil culture	New course	100	-	-	Course Teacher
16.	22PBY3INT	Industrial Training / Internship	No	0	-	-	-
17.	22PBY309	Core - 9 Taxonomy of Angiosperms	Yes	5	-	Ulmaceae family	Student suggestion
18.	22PBY310	Core -10 Plant Biochemistry and Biophysics	No	0	-	-	-
19.	22PBY311	Plant Biotechnology	No	0	-	-	-
20.	22PBY312	Laboratory course - III	Yes	5	-	Ulmaceae family	Course Teacher
21.	22PBY3E7/	Elective3Forestry and Wood science	No	0	-	-	-
22.	22PBY3E8/	Herbal Technology	No	0	-	-	-
23.	22PBY3E9	Pharmacognosy	No	0	-	-	Course Teacher
24.	22PBY413	Core - 13 Research Methodology	No	0	-	-	-
25.	22PBY414	Core - 14 Bioinformatics	No	0	-	-	-
26.	22PBY415	Laboratory course -IV	No	0	-	-	-
27.	22PBYFVI	Field / Industry / Institute visit	No	0	-	-	-
28.	22PBY4PI	Project Work and Viva -Voce	No	0	-	-	-
TOTAL				230/2800 =8.21%			


HoD 4/6/2022

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SCHEME OF EXAMINATION

Semester	Course Code	Course Title	Class hours /Week		Exam Hrs	Maximum marks			Credits
			T	P		CIA	ESE	Total	
I	22PBY101	Core – 1 Plant Diversity I (Phycology, Mycology, Lichenology and Bryology)	6	3	3	50	50	100	4
	22PBY102	Core – 2 Plant Diversity II (Pteridophytes, Gymnosperms and Palaeobotany)	6	2	3	50	50	100	4
	22PBY103	Core - 3 Applied Microbiology and Plant Pathology	6	1	3	50	50	100	4
	22PBY104	Core - 4 Laboratory course-I (for core courses 1, 2, 3)	-	6	4	50	50	100	4
	22PBY1E1/ 22PBY1E2/ 22PBY1E3	Elective -1 Ecology and Phytogeography/ Ethano Botany/ Seed technology	6	-	3	50	50	100	4
Total			24	6		250	250	500	20
II	22PBY205	Core - 5 Plant Anatomy and Reproductive Biology	6	3	3	50	50	100	4
	22PBY206	Core - 6 Plant physiology	6	2	3	50	50	100	4
	22PBY207	Core – 7 Cytology, Genetics and Plant Breeding	5	1	3	50	50	100	4
	22PBY208	Core - 8 Laboratory course II (for core courses 5,6,7)	-	6	4	50	50	100	4
	22PBY2E4/ 22PBY2E5/ 22PBY2E6	Elective -2 Horticulture and Landscaping /IPR and Bioethics/ Organic forming	5	-	3	50	50	100	4
	22PBY2N2	Non- Major Elective Plants in Tamil culture	2	-	2	50	50	100	2
Total			24	6		300	300	600	22
III	22PBY309	Core - 9 Taxonomy of Angiosperms	6	3	3	50	50	100	4
	22PBY310	Core -10 Plant Biochemistry and Biophysics	6	2	3	50	50	100	4
	22PBY311	Core -11 Plant Biotechnology	6	1	3	50	50	100	4
	22PBY312	Core – 12 Laboratory course – III (for core course 9,10 and 11)	-	3	4	50	50	100	4
	22PBY3E7/ 22PBY3E8/ 22PBY3E9	Elective-3 Forestry and Wood science / Herbal technology/ Pharmacognosy	6	-	3	50	50	100	4
	22PBY3IN	Industrial Training / Internship	-	-	-	25	25	50	2
Total			24	6		275	275	550	22
IV	22PBY413	Core - 13 Research Methodology	6	3	3	50	50	100	4
	22PBY414	Core - 14 Bioinformatics and Cyber Security	6	3	3	50	50	100	4
	22PBY415	Core - 15 Laboratory course –IV (for core courses 13 and 14)	-	6	4	50	50	100	4
	22PBYFV1	Field / Industry / Institute visit	-	-	-	25	25	50	2
	22PBY4P1	Core - 16 Project Work and Viva – Voce	6	-	-	100	100	200	12
Total			18	6	-	275	275	550	26
Grand Total			90	24	-	1100	1100	2200	90

Programme code	M.Sc.	Programme Title : Master of Science in Botany		
Course Code:	22PBY1E2	Title : Elective -1 Ethno Botany	Batch	2022-2024
			Semester	I
Hrs/Week:	5		Credits	4

Course Objective

The main objectives of this course are:

- To conserve the indigenous knowledge of the region and create awareness in the young generation.
- To develop new products for food, herbal, and pharmaceutical companies and assist in managing biological resources

Course Outcomes (CO)

On the successful completion of the course, student will be able to:		
CO1	Understand the ethnic knowledge of tribes	K2
CO2	Be familiar with the methodology and procedure for collecting information from ethnic communities	K2
CO3	Apply and use of different plants for human welfare	K3
CO4	Evaluate the medicinal and economic importance of plants used by indigenous communities	K5
CO5	Understand and analyze about the ethnic plants for modern drug manufacture	K2, K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate		

Unit	Content	Hrs
Unit I	Ethno botany: Introduction -concept, scope and objectives - its significance in state level, national and global level- Landmarks in history of ethnobiology- relation between geology, phyto geography and ethnobotany.	14
Unit II	Methodology of Ethno botany : Field work - Herbarium - Ancient Literature - Temples and sacred places- Plants used by the tribal: Food plants - intoxicants and beverages - Resins and oils and miscellaneous uses- Indigenous societies and interactions with plants- a global view-Relationship between man and plants- for benefit of developmental strategies-mutually destructive approaches.	14
Unit III	Ethno botany Practices : Linkage of ethnobotany with other sciences and disciplines in biology- food and nutrition, medicine, sociological and cultural practices, religions and social costumes and economic relations, archaeology, history and politics- Plants and Tribal medicine: Significance of the following plants in ethno botanical practices (along with their habitat and morphology) <i>Azadirachta indica</i> - <i>Ocimum sanctum</i> - <i>Vitex negundo</i> , <i>Gloriosa superba</i> - <i>Tribulus terrestris</i> - <i>Pongamia pinnata</i> - <i>Cassia auriculata</i> - <i>Indigofera tinctoria</i> .	15
Unit IV	Ethno botany in Modern Medicine: Role of ethnobotany in modern medicine with special example <i>Morinda citrifolia</i> - <i>Trichopus zeylanicus</i> . Major tribes of south India and their ethnobotanical and ethno- biological heritage- Naikas, Shola Naikas, Thodas, Kothas, Kurumbas, Irulas, Malayali and KattuNaikas	15

Unit V	Applications and Conservation of Ethnobotany: Ethnobotany and conservation of plants with special reference to India- Mythology and conservation of ecosystems - conservation of selected medicinal plant species: scared groves, forestry and unique ecosystems, and their ethnobiological values - plants and animals in art, tradition and ethnography: methodologies in ethno-botanical research - Ethnobotany as a source of drug.	14
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**Self study topics*

Power point Presentations, Group discussions, Seminar, Quiz, Assignment, Case study

Text Books

1. Das, A.P. and Pandey, A.K. (2007). Advances in Ethnobotany. Bishen Singh and Mahendra Pal Singh, Dehradun.
2. Sahu, T.R. (2007). Indigenous Knowledge: An application. Scientific Publishers. Jodhpur.
3. Gary J Martin, 2008. Ethnobotany A Methods manual, Earth scan, London.

Reference Books

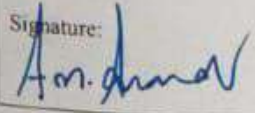
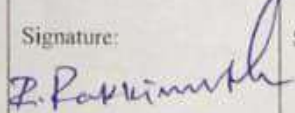
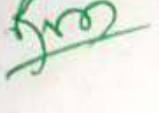
1. Jain, S.K. (1995). Manual of Ethnobotany, Scientific Publishers, Jodhpur.
2. 3. Cotton, C.M. (1997). Ethnobotany – Principles and Applications. John Wiley and Sons – Chichester.
4. Jain, S.K. (ed.) (1989). Methods and Approaches in Ethnobotany. Society of Ethnobotanists, Lucknow, India.

Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]

1. <https://www.biologydiscussion.com/botany/ethno-botany-definitions-development-and-importance/7158>
2. <https://www.studocu.com/en-us/document/university-of-central-florida/culinary-botany-across-the-cultures/ethnobotany-chapter-1-lecture-notes-1/11828890>

PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2
CO												
CO1	H	H	H	L	M	M	M	L	M	H	M	M
CO2	H	M	H	L	M	L	M	L	M	H	L	M
CO3	H	H	H	L	M	L	M	L	M	H	M	H
CO4	H	H	H	L	M	L	M	L	M	H	M	H
CO5	H	H	M	L	M	L	M	L	L	H	M	H

H-High M-Medium L-Low

Course Designed by Name and Signature	Verified by HOD Name and Signature	Checked by CDC	Approved by COE
Name: Dr. A.M. Ananda kumar Signature: 	Name: Dr. R. Rakkimuthu Signature: 	Name: Mr. K. Srinivasan Signature: 	Name: Dr. R. Manicka Chezian Signature: 

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Assistant Professor and
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Controller of Examinations
NGM College (Autonomous)
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Programme code	M.Sc.	Programme Title : Master of Science in Botany		
Course Code: 22PBY2N1		Title : Non Major Elective – I Plants in Tamil Culture	Batch	2022-2024
			Semester	II
Hrs/Week:	2		Credits	2

Course Objective

The main objectives of this course are to:

- Elaborates antiquity of Tamil land
- Emphasizes relationship between Tamil people and plants
- Usage of plants are supported by Tamil literature

Course Outcomes (CO)

On the successful completion of the course, student will be able to:		
CO1	understand and manage plants based on earlier literature	K2
CO2	Apply knowledge to conserve plants as sacred and would utilize plants as sustainable manner	K3
CO3	Apply and analyze knowledge on plants used in Sangam Literature	K3,K4
CO4	Analyze plant used in Tamil culture	K4
CO5	Understand about the importance of Plants Relevant to Astrological and influence of plants present-day	K2,K5
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate		

Unit	Content	Hrs
Unit I	Land, People and Literature: Antiquity of Tamil land – occurrence of Paleolithic, Mesolithic, Neolithic and megalithic sites of human settlement- Landscape and vegetation and rainfall patterns.	6
Unit II	A Brief Introduction to Sangam Literature : Plants in "Kurinjpattu". Tinai as landscape and ecosystem concept- Importance of plants in five landscapes: Mullai, Marutham, Kurinji, Neythal and Palai.	6
Unit III	Plants in Tholkkapiyam: Plants used in early Tamil culture as food and economy. Plants in love and war	6
Unit IV	Sacred Plants : Sacred plants associated with gods, temple, religion and rituals. Plants and poetic convention. Recent plant introductions and their adoption in Tamil culture.	6
Unit V	Plants Relevant to Astrological Importance: Constellation (Rasi) and star plants- the continuing influence of plants present-day Tamil culture	6

Text Books :

1. Hart, G.L. III. 1975. The Poems of Ancient Tamil. Their Milieu and Their Sanskritic Counterparts. University of California Press, Berkeley.
2. Ramanujam, A.K. 1975. The Interior Landscape: Love Poems from a Classical Tamil Anthology. Fitzhenry and Whiteside Limited, Ontario.

Reference::

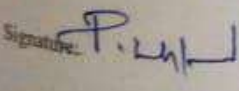
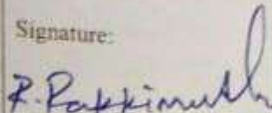
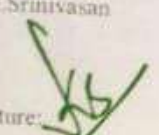
1. Samy, P.L. 1967. Sangallakkiathil Sedikodi Vilakkam. Saiva Siddhanta Publishing Society. Thirunelveli.
2. Samy, P.L. 1972. Plants in Kurinji Pattu. Journal of Tamil Studies.
3. Sasivalli, V.C. 1989. Pandai Tamilar Tolilkal. International Institute of Tamil Studies. Madras.
4. Sobidhraj, K.K.S. 1993. Thala Marangal. Sobitham. Tambaram East. Madras.
5. Srinivasan, C. Sanga IlakiaThavarangal, Tamil University Publication. Thanjavur.
6. Thaninayagam, X.S. 1966. Landscape and Poetry: A study of Nature in Classical Tamil Poetry. Asia Publishing House, Madras.
7. Varadarajan, M. 1957. The treatment of Nature in Sangam literature. S.I.S.S.W Publishing Society, Madras.

Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]

1. WWW. Thavarathagavalmayam.com
2. WWW.plantinfocentre.com

PO/PSO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2
CO1	H	M	H	H	H	M	H	H	M	H	H	H
CO2	M	H	M	H	L	H	L	M	H	H	L	L
CO3	M	M	M	M	M	L	H	H	L	M	M	M
CO4	H	H	H	M	M	H	M	H	M	H	M	H
CO5	M	H	H	M	H	M	H	L	M	H	M	H

H- High M- Medium L -Low

Course Designed by Name and Signature	Verified by HOD Name and Signature	Checked by CDC	Approved by COE
Name: Dr. P. Sathishkumar Signature: 	Name: Dr. R. Rakkimuthu Signature: 	Name: Mr. K. Srinivasan Signature: 	Name: Dr. R. Manicka Chezian Signature: 

K. SRINIVASAN, M.C.A.
Co-ordinator

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