



Department of Botany
Holy Cross College (Autonomous), Nagercoil



**Minutes of the Board of Studies Meeting of the Department of Botany held on 20.1.2020 at
10.00 AM**

Ref. No: BOT/BOS/ 2019-2020/13

Members

Dr.C.Jespin Ida	- HoD and Chair person
Dr. S. Beschi Antony Rayan	- University Nominee, St.Xavier's College,Palayamkottai.
Dr. N. Vasudevan	- Subject Expert, Saraswathi Narayana College, Madurai – 22.
Dr. V. Anand Gideon	- Subject Expert, Bisop Heber College (Autonomous), Tiruchirappalli.
Dr. K.P. Srinivasakumar	- Industrialist, Chief Scientific Officer, Inbiotics, Nagercoil.
Ms. M.M. Shyra	- Alumna, Scott Christian College, Nagercoil
Dr. Sr. Leema Rose	- Member
Dr. A. Anami Augustus Arul	- Member
Ms.B. Santhiya	- Member
Ms.M.Nathira Jimmu	- Member
Mrs. J. Albino Wins	- Member
Dr. N. Benit	- Member
Dr. J. Celin Pappa Rani	- Member
Dr. G. Jerlin Deletta	- Member

Agenda

1. Prayer
2. Welcome by the Chairperson
3. Reading of the minutes of the previous meeting
4. Panel of Examiners for UG and PG
5. Restructuring / Revision of curriculum for UG with PEOs, POs, PSOs and COs.
6. Revision of syllabus for UG Semester I and II
7. Restructuring / Revision of curriculum for PG with PEOs, POs, PSOs and COs.
8. Revision of syllabus for PG Semester I and II
9. Classification of New Courses
10. Classification of courses as Employability / Entrepreneurship / Skill Development
11. Classification of courses as Local / National / Regional / Global
12. Classification of courses as Crosscutting Issues Gender Equity / Environment and Sustainability / Human Values / Professional Ethics
13. Question Paper pattern for internal and external examinations
14. Recommendation of books and journals for UG and PG
15. Conduct of UG and PG practical exam during the odd and even semester
16. Conduct of seminars / workshops in collaborations with Government Agents / Universities / NGOs.
17. Suggestion for innovative teaching and evaluation techniques for UG and PG
18. Discussion on coordination of teaching, research, extension and other activities of the department
19. Feedback and action taken
20. Next meeting of BoS
21. Any other.

The meeting commenced with the prayer after which the Dr.C.Jespin Ida, Head of the Department, introduced the Board members with warm words of welcome.

The following items in the Agenda were discussed by the members of the Board.

Item 01/BoS 20.01/03: Approval of the minutes of the previous meeting held on 04.02.2019.

Dr.Sr. Leema Rose read the minutes and was approved by the members incorporating the modifications/ suggestions given by the Academic council.

Item 02/BoS 20.01/04: Approval of the panel of examiners for UG and PG

The list of panel of examiners for both theory and practical were approved by the BoS members.

DEPARTMENT OF BOTANY
UG Theory / Practical Examiners List

1. Dr. Usha Kumari,

Associate Professor
Department of Botany,
Devikumari College,
Kuzhithurai.
Ph: 9489292752

2. Mrs. Vasantha,

Associate Professor,
Sri Ayyappa College,
Chungankadi.
Ph.No: 9486864762

3. Dr. Usha Rani

Associate Professor,
Department of Botany,
Aringer Anna College,
Thovalai.
Ph: 9487311117

4. Dr. Beena Lawrence,

Assistant Professor,
Department of Botany,
Womens' Christian College,
Nagercoil.
Ph: 7598872727

5. **Dr.J. Irene Wilsy,**
Associate Professor,
Department of Botany,
Scott Christian College,
Nagercoil.
Ph: 8903539741

PG Theory / Practical Examiners List

1. **Dr. S. Jeeva,**
Assistant Professor,
Department of Botany,
Scott Christian College,
Nagercoil – 629 001.
Ph.No: 9487482379
2. **Dr. Sahaya Antony Xavier**
Associate Professor,
Department of Botany,
St. Xavier's College (Autonomous),
Palayamkottai.
Ph.No: 9442063390
3. **Dr. Beena Lawrence,**
Assistant Professor,
Department of Botany,
Womens' Christian College,
Nagercoil.
Ph: 7598872727
4. **Dr. M. Reginald,**
Associate Professor,
Department of Botany,
Scott Christian College,
Nagercoil.
Ph: 9443281255

5. **Dr .J. Irene Wilsy,**
 Associate Professor,
 Department of Botany,
 Scott Christian College,
 Nagercoil.
 Ph: 8903539741

Item 03/ BoS 20.01/05: Approval for Restructuring / Revision of curriculum for UG with PEOs, POs, PSOs and COs

The overall structure of the curriculum framed in 2020 was accepted by the board with the following modifications.

- i. The overall structure of the curriculum is revamped
- ii. The core papers were slightly modified.
- iii. Allied papers for I Chemistry are changed.
- iv. Skilled Base Course, Non Major Elective Course and Value added Courses were changed.

Programme Educational Objectives (PEOs)

PEO-1	The graduates will apply appropriate theory and scientific knowledge to participate in activities that support humanity and economic development nationally and globally, developing as leaders in their fields of expertise.
PEO-2	The graduates pursue lifelong learning and continuous improvement of the knowledge and skills with the highest professional and ethical standards.
PEO-3	The graduates acquire basic and specialized science skills that instill qualities of self-confidence and self-reliance that make them contribute valuably in the biological issues of national and international interest.

Programme Outcomes(POs)

PO	Upon completion of B.Sc Programme, the graduates will be able to:
PO – 1	utilize scientific knowledge to pursue higher studies in the relevant field.
PO – 2	create innovative ideas to enhance entrepreneurial skills for economic independence.
PO – 3	face challenging competitive examinations that offer rewarding careers.
PO – 4	reflect upon green initiatives and take responsible steps to build a sustainable environment.
PO – 5	handle ethical issues with social responsibility.
PO – 6	communicate effectively and collaborate successfully with peers to become competent professionals.

Programme Specific Outcomes (PSOs)

PSOs No.	Upon completion of B.Sc. Degree Programme, the graduates of Botany will be able to :	PO Addressed
PSO - 1	develop a strong and competent knowledge in Botany.	1
PSO - 2	communicate appropriately and effectively in science and also interact productively with people from diverse background.	6
PSO - 3	understand the basic professional skills through various laboratory technical training, to analyze the relevant biological situations.	2
PSO - 4	create green environment to protect nature for future sustenance.	4
PSO - 5	seek entrepreneurship through skill based, value added and related courses.	2
PSO - 6	understand the professional, ethical, legal and social issues related to gender.	5
PSO - 7	integrate the related topics from other branches of science to carry out projects to have a successful career.	3

Course Structure
Distribution of Hours and Credits

Course	Sem. I	Sem. II	Sem. III	Sem. IV	Sem. V	Sem. VI	Total	
							Hours	Credits
Part I -Language	6 (4)	6 (4)	6 (4)	6 (4)	-	-	24	16
Part II-English	6 (4)	6 (4)	6 (4)	6 (4)	-	-	24	16
Part-III								
Major Core – Theory	4(4)	4(4)	4(4)	4(4)	6(6)+ 6(6)+ 6(5)	6(6)+ 6(6)+ 6(5)	52	50
Major - Practical	2(-)	2(2)	2(-)	2(2)	2(-)+ 2(-)+ 2 (-)	2(2)+ 2(2)+ 2(2)	20	10
Elective/ Project	-	-	4(3)	4(3)	4 (3)	4(3)	16	12
Allied –Theory	4(3)	4(3)	4(3)	4(3)	-	-	16	12
Allied Practical	2(-)	2(2)	2(-)	2(2)	-	-	8	4
Part IV								
Add on Course(Professional	2(2)	2(2)	2 (2)	2 (2)	-	-	8	8

English)								
Non Major Elective (NME)	2 (2)	2 (2)					4	4
SEC(Skill Enhancement Course)	2 (2)	2 (2)	-	-		2 (2)	6	6
Ability Enhancement Course (AEC)					2(2)		2	2
Total	30(21)	30(25)	30(20)	30(24)	30(22)	30(28)	180	140
Non -academic Courses								
Part V								
FC –I (Values for Life)	-	(1)					-	1
FC– II(Personality Development)			-	(1)			-	1
FC–III (Human Rights Education)					(1)		-	1
FC –IV (Gender Equity Studies)						(1)	-	1
SLP-Community Engagement Course		-	(2)				-	2
SLP-Extension Activity (RUN)			-	(2)				2
STP - Clubs & Committees / NSS	-	-	-	(2)			-	2

Total number of Hours = 180

Total number of Compulsory Credits = 140+10

- Non - academic Courses are mandatory and conducted outside the regular hours
- Skill Development Programme (Mandatory Certificate Course – 60 hours.)is offered in the first year for all the students

Item 04/ BoS 20.01/06: Revision of syllabus for UG Semester I and II

Courses offered for the students of B.Sc. Botany are given in the following structure:

Sem ester	Course	Course code	Subject	Hours/ week	Credit
I	Part I	TL2011/FL2011	Language: Tamil / French	6	3
	Part II	GE2011	General English	6	3
	Part III	BC2011	Major Core I – Algae, Fungi and Lichens	4	4
		BC20P1	Major Practical I - Algae, Fungi and Lichens	2	2
		BA2011	Allied I –Chemistry of Life	4	4
		BA20P1	Allied Practical I - Chemistry of Life	2	-
	Part IV	AEC201	Ability Enhancement Compulsory Course (AECC): English Communication	2	2
		BNM201	Non Major Elective Course (NMEC) – Gardening and Floriculture	4	2
		VEC202	Foundation Course I – Values for Life	-	-
	Part V	SDP202	Skill Development Programme (SDP) – Certificate Course	-	-
		STP204	Student Training Programme (STP) - Clubs & Committees/NSS	-	-
II	Part I	TL2021/FL2021	Language: Tamil / French	6	3
	Part II	GEB202	General English	6	3
	Part III	BC2021	Major Core II – Plant Anatomy and Developmental Botany	4	4
		BC20P2	Major Practical II - Plant Anatomy and Developmental Botany	2	2
		BA2021	Allied I –Taxonomy of Angiosperms and Herbal Technology	4	4
		BA20P1	Allied Practical I - Chemistry of Life & Taxonomy of Angiosperms and Herbal Technology	2	2

	Part IV	AEC202	Ability Enhancement Compulsory Course (AECC): Environmental Studies	2	2
		BNM202	Non Major Elective Course (NMEC)– Biofertilizers, Biofuels and Biopesticides	4	2
		VEC202	Foundation Course – II –Personality Development	-	1
	Part V	SDP202	Skill Development Programme (SDP) – Certificate Course	-	1
		STP204	Student Training Programme (STP) - Clubs & Committees/NSS	-	-
III	Part I	TL2031/FL2031	Language: Tamil / French	6	3
	Part II	GEB203	General English	6	3
	Part III	BC2031	Major Core III – Archegoniate	4	4
			Major – Elective I	4	4
		BC2032	(a) Herbal Botany		
		BC2033	(b) Natural Resource Management		
		BC2034	(c) Agricultural Botany		
		BC20P3	Major Practical III - Archegoniate	2	2
		BA2031	Allied II – Theory: Plant Diversity -I (Algae, Fungi, Bryophyta and Pteridophyta)	4	4
		BA20P2	Allied Practical II - Plant Diversity -I	2	-
	Part IV	SEC203/ SEC204	Skill Enhancement Course (SEC) – Yoga / Computer Literacy	2	2
		VEC204	Foundation Course II – Personality Development	-	-
Part V	STP204	Student Training Programme (STP): Clubs & Committees/NSS	-	-	
	SLP203	Service Learning Programme (SLP): Extension Activity (RUN)	-	1	
IV	Part I	TL2041/FL2041	Language : Tamil / French	6	3
	Part II	GE2041	General English	6	3
	Part III	BC2041	Major Core IV – Plant Ecology and	4	4

			Phytogeography		
		BC2042	Major – Elective II (a) Biological Resources		
		BC2043	(b) Food Science	4	4
		BC2044	(c) Biodiversity and Human Welfare		
		BC20P4	Major Practical IV - Plant Ecology and Phytogeography	2	2
		BA2041	Allied II – Theory: Plant Diversity – II (Gymnosperms and Angiosperms) and Plant Physiology	4	4
		BA20P2	Allied II – Practical: Plant Diversity – I & II and Plant Physiology	2	2
	Part IV	SEC203/ SEC204	Skill Enhancement Course (SEC) – Yoga / Computer Education	2	2
		VEC204	Foundation Course II – Personality Development	-	1
	Part V	STP204	Student Training Programme (STP) - Clubs & Committees/NSS	-	1
V	Part III	BC2051	Major Core V –Taxonomy of Angiosperms and Economic Botany	6	5
		BC2052	Major Core VI - Biochemistry and Biophysics	6	5
		BC2053	Major Core VII - Microbiology and Plant Pathology	5	4
		BC2054	Major – Elective III (a) Horticulture and Plant Breeding		
		BC2055	(b) Forestry	5	5
		BC2056	(c) Biological Techniques		
		BC20P5	Major Practical V - Taxonomy and Economic Botany & Biochemistry and Biophysics	4	2
		BC20P6	Major Practical VI - Microbiology and Plant Pathology	2	-
	Part IV	SEB205	Skill Enhancement Course (*SEC) –	2	2

			Global Environmental Issues		
		HRE205	Foundation Course III - Human Rights Education (HRE)	-	1
VI	Part III	BC2061	Major Core VIII - Genetics, Biostatistics and Bioinformatics	6	5
		BC2062	Major Core IX - Biotechnology and Molecular Biology	6	5
		BC2063	Major Core X - Plant Physiology and Metabolism	5	5
		BC2064	Major – Elective IV		
		BC2065	(a) Marine Botany		
		BC2066	(b) Organic Farming	5	4
			(c) Ecotourism		
	BC20P6	Major Practical VI - Genetics, Biostatistics and Bioinformatics & Biotechnology and Molecular Biology	4	2	
	BC20P7	Major Practical VII - Microbiology and Plant Pathology & Plant Physiology and Metabolism	2	2	
	Part IV	SEB206	Skill Enhancement Course/(*SEC) – Project	2	2
WSC206		Foundation Course IV - Women's Studies (WS)	-	1	
			TOTAL	180	140+3

***SBC for the V & VI semesters is offered by the departments for their students**

Self Learning – Extra Credit Course

Semester	Subject code	Title of the paper	Hours/week	Credit
III/ V	BC20S1	Plant Resource Utilization	-	2
IV/VI	BC20S2	Algal Biotechnology	-	2
	BC20S3	Online Course (MOOC)	-	2

Value Added Courses

Semester	Subject code	Name of the Course	Total hours	Credit
I/II	VAB201	Mushroom Culture Technology	30	1
III/ IV	VAB202	Food Preservation Technology	30	1
I/II	VAB203	In Vitro Propagation	30	1
III/ IV	VAB204	Organic Farming	30	1
V/VI	VAB205	Microbial Technology	30	1
V/VI	VAB206	Flower, Foliage and Dry Stick Arrangement	30	1

Revision of curriculum for B.Sc. Botany

i. The following courses during the I and II semesters are revised/ modified based on the feedback from the students & Alumnae.

Sl.No.	Semester	Paper Code	Paper Title	Changes	
				Removed (if any)	Addition (if any)
1	I	BC2011	Algae, Fungi and Lichens	Nil	Unit- III - <i>Rhizopus</i> Unit-IV Glomeromycota
2	I	BA2011	Chemistry of Life	New Course	-
3	I	BNM201	Gardening and Floriculture	New Course	-
4	II	BC2021	Plant Anatomy and Developmental Botany	Unit – I Primary structure of dicot and monocot stem, root and leaf Unit– II Anomalous secondary thickening in dicot stem (<i>Boerhaavia</i>) and monocot stem (<i>Dracaena</i>).	Unit – I Types of vascular bundles. Unit – II Primary structure of dicot and monocot stem, root and leaf Unit – III Anomalous secondary thickening in dicot stem (<i>Boerhaavia</i>) and monocot stem (<i>Dracaena</i>).

					Unit – V Pollination mechanisms and adaptations. Apomixis and polyembryony
5	II	BC20P1	Algae, Fungi, Lichens and Plant Anatomy and Developmental Botany	Modified based on the syllabus	-
6	II	BA2021	Taxonomy of Angiosperms and Herbal Technology	Unit – I Classification- artificial and phylogenetic Unit – II Annonaceae Unit – III, IV & V	Unit – II Liliaceae Unit – III, IV & V - Herbal Technology
7	II	BA20P1	Chemistry of Life and Taxonomy of Angiosperms and Herbal Technology	New Course	-
8	II	BNM202	Biofertilizers, Biofuels and Biopesticides	New Course	-

Item 05/BoS 20.01/07: Approval for Restructuring / Revision of curriculum for PG with PEOs, POs, PSOs and COs

Programme Educational Objectives (PEOs)

PEO No.	Upon completion of M.Sc. Degree Programme, the graduates will be able to:
PEO 1	The graduates will apply appropriate theory and scientific knowledge to participate in activities that support humanity and economic development nationally and globally, develop in gas leaders in their fields of expertise.
PEO 2	The graduates pursue lifelong learning and continuous improvement of the knowledge and skill switch the highest professional and ethical standards.
PEO 3	The graduates will develop strong and competent knowledge with diversified professional skills in accordance with dynamic real –time challenges and career opportunities.

Programme Outcomes (POs)

PO No.	Upon completion of M.Sc. Degree Programme, the graduates will be able to:
PO-1	Carry out internship programmes and research projects to develop scientific skills and innovative ideas
PO-2	Analyse complex problems, think independently, formulate and perform quality research
PO-3	Become successful professionals and entrepreneurs
PO-4	Develop a multidisciplinary perspective and contribute to the knowledge capital of the globe
PO-5	Emerge as expressive, ethical and responsive citizens with proven expertise
PO-6	Utilize the obtained scientific knowledge to create eco-friendly environment

Programme Specific Outcomes (PSOs)

PSO No.	Upon completion of M.Sc. Degree Programme, the graduates of Botany will be able to:	PO Addressed
PSO-1	Apply fundamental mathematical tools and physical principles in analyzing biological situations	PO-2
PSO-2	Evaluate ecological inter connectedness of life on earth	PO-4,6
PSO-3	Experience in seeking external funds for their research from a diversity of resources	PO-1,2
PSO-4	Apply the acquired conceptual knowledge by connecting disciplinary and interdisciplinary aspects of Botany	PO-4
PSO-5	Integrate the knowledge of botany for global sustainable development	PO-3,4
PSO-6	Understand the professional, ethical, legal and social issues related to gender	PO-3,5

Course Structure

Distribution of Hours and Credits

Course	Sem.I	Sem.II	Sem.III	Sem.IV	Total	
					Hours	Credits
Major Core-Theory	6(5)+ 6(5)+ 6(5)	6(5)+ 6(5)+ 6(5)	6(5)+ 6(5)	6(5)+ 6(5)+ 6(5)	66	55
Major Core-	2+2+2(-)	2+2+2(3+3)	3+3(-)	2+2+2 (3+3)	24	12
Major Elective	6(4)	6(5)	6(4)	6(5)	24	18
Major Project	-	-	6(5)	-	6	5
Total	30 (19)	30 (26)	30 (19)	30 (26)	120	90
Non – Academic Courses						
Life Skill Training-I	-	(1)				1
Life Skill Training-II	-	-	-	(1)	-	1

Service Learning Programme (SLP) – PCommunity Engagement Course	-	(1)	(1)	-	-	2
Summer Training Programme	-	(1)		-	-	1

- Non-Academic Courses are mandatory and conducted outside the regular working hours
- **SLP (Service-Learning Programme) - Community Engagement Course**

Courses / Programmes conducted outside the regular working hours on Saturdays and holidays (UBA)

for all the students. No. of hours allotted for each of this programme is 30 and is supervised by the faculty in charge

- **STP (Summer Training Programme)** (Mandatory Course - 30 hours) will be offered in the second year for all the students

Item 06/ BoS 20.01/08: Revision of Syllabus for PG Semester I and II

Courses offered for the students of M.Sc. Botany are given in the following structure

Courses offered

Semester	Course code	Title of the paper	Hours/week	Credit
I	PB2011	Core I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes	6	4
	PB2012	Core II – Microbiology	6	4
	PB2013	Core III – Plant Anatomy & Embryology	6	4
	PB2014	Elective I – (a) Marine Biology / (b) Organic Farming	6	5
	PB20P1	Practical I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes, Microbiology and Plant Anatomy &	6	5

II	PB2021	Core IV –Plant Diversity II - Pteridophyta, Gymnosperms and Palaeobotany	6	4
	PB2022	Core V – Research Methodology	6	4
	PB2023	Core VI – Cell Biology and Biomolecules	6	4
	PB2024	Elective II – (a) Herbalism / (b) Evolutionary Biology	6	5
	PB20P2	Practical II- Plant Diversity II- Pteridophyta, Gymnosperms and Palaeobotany, Research Methodology and Cell Biology and Biomolecules	6	5
	LST202	Life Skill Training (LST) – I	-	1
III	PB2031	Core VII - Taxonomy of Angiosperms	6	4
	PB2032	Core VIII – Genetics and Molecular Biology	6	4
	PB2033	Elective III – (a) Horticulture / (b) Forestry	6	5
	PB20P3	Practical III- Taxonomy of Angiosperms & Genetics and Molecular Biology..	4	4
	PB20PR	Project	8	4
IV	PB2041	Core IX - Plant Physiology	6	4
	PB2042	Core X – Plant Ecology and Phytogeography	6	4
	PB2043	Core XI – Biotechnology & Bioinformatics	6	4
	PB2044	Elective IV – (a) Phytochemistry and Pharmacognosy (b) Entrepreneurial Botany	6	5
	PB20P4	Practical IV- Plant Physiology, Plant Ecology and Phytogeography and Biotechnology & Bioinformatics	6	5

	LST204	Life Skill Training (LST) – II	-	1
	STP201	Summer Training Programme	-	1
		TOTAL	120	90

Self Learning – Extra Credit Course

Semester	Subject code	Title of the paper	Hours/ week	Credit
III	PB20S1	Biology for Competitive Exam – I	-	2
IV	PB20S2	Biology for Competitive Exam – II	-	2
	PB20S3	Online Course MOOC		2

Value Added Courses

Semester	Subject code	Name of the Course	Total hours	Credit
I/ II	VAB207	Medicinal Plants and Traditional Medicinal Formulations	30	1
III/IV	VAB208	Horticultural Techniques	30	1

Revision of curriculum for M.Sc. Botany

i. The following courses during the I and II semesters are revised/ modified based on the feedback from the students & Alumnae.

Sl.No.	Semester	Paper Code	Paper Title	Changes	
				Removed (if any)	Addition (if any)
1	1	PB2012	Core II- Microbiology	Core II- Microbiology, Immunology & Plant pathology (Title only removed)	Core II- Microbiology (New Title added)
2	1	PB2013	Core III- Plant	Core III-	Core III- Plant

			Anatomy & Embryology	Developmental Botany (This paper was removed)	Anatomy & Embryology (New paper with all new units were added)
3	1	PB2014	Elective I- (b.) Organic Farming	Elective I- (b.) Cell Biology paper was removed	Elective I- (b.) Organic Farming paper is added
4	1	PB20P1	Practical I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes, Microbiology and Plant Anatomy & Embryology	Developmental Botany practical content was removed	Plant Anatomy & Embryology practical content was included
5	2	PB2023	Core VI – Cell Biology and Biomolecules	Core VI- Biochemistry & Biophysics (Paper was removed)	Core VI – Cell Biology and Biomolecules (Newly added)
6	2	PB2024	Elective II-(a) Herbalism	Elective II- (a) Medicinal Botany & Pharmacognosy (Paper was removed)	Elective II-(a) Herbalism (Newly added)
7	2	PB2024	Elective II-(b) Evolutionary Biology	Elective II- (b) Medicinal plants & Ethnobotany (Paper was removed)	Elective II-(b) Evolutionary Biology (Newly added)
8	2	PB20P2	Practical II -Plant Diversity II- Pteridophyta, Gymnosperms and	Practical II- Biochemistry & Biophysics was removed	Cell Biology and Biomolecules - practical content was newly added

			Palaeobotany, Research Methodology and Cell Biology and Biomolecules		
--	--	--	--	--	--

- i. The Title of the core paper II ‘ Microbiology, Immunology & Plant pathology’ is changed into ‘Microbiology’.
- ii. The Core paper Core III- ‘Developmental Botany ’is changed into Core III- ‘Plant Anatomy & Embryology’.
- iii. The Elective paper I (a) - ‘Cell Biology ’is changed into Elective I(a) - ‘Organic Farming’.
- iv. The Practical I ‘Plant Diversity I and Microbiology, Immunology & Plant pathology and Developmental Botany’ is changed into Practical I – ‘Plant Diversity I – Algae, Fungi, Lichens and Bryophytes, Microbiology and Plant Anatomy & Embryology’.
- v. The Core paper Core VI- ‘Biochemistry & Biophysics’is changed into Core VI- ‘Cell Biology and Biomolecules’.
- vi. The Elective paper II (a)- ‘Medicinal Botany & Pharmacognosy’is changed into Elective II(a)- ‘Herbalism’.
- vii. The Elective paper II (b)- ‘Medicinal plants & Ethnobotany changed into Elective II(b)- ‘Evolutionary Biology.
- viii. The Practical II- ‘Plant Diversity II and Biochemistry & Biophysics and Developmental Botany and Research Methodology’ is changed into Practical II - Plant Diversity II- Pteridophyta, Gymnosperms and Palaeobotany, Research Methodology and Cell Biology and Biomolecules

Item 07/ BoS 20.01/09: Classification of New courses

UG Courses

Year of implementation 2020						
Sem	Course Code	Course Title	Old/ New	Course Code	Course Title	Old/ New
I	BA1711	Cell Biology and Plant Anatomy	Old	BA2011	Chemistry of Life	New
I	BNM171	Food and Nutrition	Old	BNM201	Gardening and Floriculture	New
II	BA1721	Taxonomy of Angiosperms and Plant Physiology	Old	BA2021	Taxonomy of Angiosperms and Herbal Technology	New
II	BA17P1	Cell Biology and Plant Anatomy & Taxonomy of Angiosperms and Plant Physiology	Old	BA20P1	Chemistry of Life & Taxonomy of Angiosperms and Herbal Technology	New
II	BNM172	Eco friendly Technology	Old	BNM202	Biofertilizers, Biofuels and Biopesticides	New

PG Courses

Year of implementation 2020						
Sem	Course Code	Course Title	Old/ New	Course Code	Course Title	Old/ New
I	PB1714	(b) Cell Biology	Old	PB2015	(b). Organic Farming	New
II	PB1723	Core VI – Biochemistry and Biophysics	Old	PB2023	Core VI – Cell Biology and Biomolecules	New
II	PB1724	Elective II – (a) Medicinal Botany and Pharmacognosy	Old	PB2024	Elective II – (a) Herbalism	New
		(b) Medicinal Plants and Ethnobotany	Old		(b) Evolutionary Biology	New

Item 08/BoS 20.01/10: Classification of the courses as Employability / Entrepreneurship Skill development

UG Courses

Sl.No.	Paper Code	Paper Title	Employability	Entrepreneurship	Skill development
1	BC2011	Algae, Fungi and Lichens	✓	✓	✓
2	BA2011	Chemistry of Life	✓	✓	✓
3	BNM201	Gardening and Floriculture		✓	✓
4	BC2021	Plant Anatomy and Developmental Botany	✓	✓	✓
5	BC20P1	Algae, Fungi ,Lichens and Plant Anatomy and Developmental Botany	✓	✓	✓
6	BA2021	Taxonomy of Angiosperms and Herbal Technology	✓	✓	✓
7	BA20P1	Chemistry of Life and Taxonomy of Angiosperms and Herbal Technology	✓		✓
8	BNM202	Biofertilizers, Biofuels and Biopesticides	✓	✓	✓

PG Courses

Sl.No.	Paper Code	Paper Title	Employability	Entrepreneurship	Skill development
1	PB2011	Core I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes	✓	✓	✓
2	PB2012	Core II – Microbiology	✓	✓	✓
3	PB2013	Core III – Plant Anatomy & Embryology	✓	✓	✓
4	PB2014	Elective I –Marine Biology	✓	✓	✓
5	PB2015	(b) Organic Farming	✓		✓
6	PB2021	Core IV –Plant Diversity II -Pteridophyta, Gymnosperms and Palaeobotany	✓	✓	✓
7	PB2022	Core V – Research Methodology	✓	✓	✓
8	PB2023	Core VI – Cell Biology and Biomolecules	✓	✓	✓
9	PB2024	Elective II – (a) Herbalism	✓		✓
10	PB2025	(b) Evolutionary Biology	✓		✓
11	PB20P1	Practical I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes, Microbiology and Plant Anatomy & Embryology	✓	✓	✓

12	PB20P2	Practical II- Plant Diversity II- Pteridophyta, Gymnosperms and Palaeobotany, Research Methodology and Cell Biology and Biomolecules	✓	✓	✓
----	--------	---	---	---	---

Item 09/ BoS 20.01/11: Classification of the courses as local/regional/ national/ global relevance

UG Courses

Sl.No.	Paper Code	Paper Title	Local	National	Regional	Global
1	BC2011	Algae, Fungi and Lichens	✓	✓	✓	✓
2	BA2011	Chemistry of Life	✓	✓	✓	✓
3	BNM201	Gardening and Floriculture		✓	✓	✓
4	BC2021	Plant Anatomy and Developmental Botany	✓	✓	✓	✓
5	BC20P1	Algae, Fungi , Lichens and Plant Anatomy and Developmental	✓	✓	✓	✓

		Botany				
6	BA2021	Taxonomy of Angiosperms and Herbal Technology	✓	✓	✓	✓
7	BA20P1	Chemistry of Life and Taxonomy of Angiosperms and Herbal Technology		✓	✓	
8	BNM202	Biofertilizers, Biofuels and Biopesticides	✓	✓	✓	✓

PG Courses

Sl.No.	Paper Code	Paper Title	Local	National	Regional	Global
1	PB2011	Core I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes	✓	✓	✓	✓
2	PB2012	Core II – Microbiology	✓	✓	✓	✓
3	PB2013	Core III – Plant Anatomy & Embryology	✓	✓	✓	✓
4	PB2014	Elective I –Marine Biology		✓	✓	✓
5	PB2015	(b) Organic Farming	✓	✓	✓	✓
6	PB2021	Core IV –Plant Diversity II - Pteridophyta, Gymnosperms and Palaeobotany	✓	✓	✓	✓

7	PB2022	Core V – Research Methodology	✓	✓	✓	✓
8	PB2023	Core VI – Cell Biology and Biomolecules			✓	✓
9	PB2024	Elective II – (a) Herbalism	✓	✓	✓	✓
10	PB2025	(b) Evolutionary Biology	✓		✓	✓
11	PB20P1	Practical I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes, Microbiology and Plant Anatomy & Embryology	✓	✓	✓	✓
12	PB20P2	Practical II- Plant Diversity II- Pteridophyta, Gymnosperms and Palaeobotany, Research Methodology and Cell Biology and Biomolecules	✓	✓	✓	✓

Item 10/BoS 20.01/12: Classification of Courses as Cross Cutting Issues – (1) Gender Equity, (2) Environment & Sustainability, (3) Human Values, and (4) Professional Ethics

UG Courses

Professional Ethics - Nil

Sl.No.	Paper Code	Paper Title	Gender equity	Environment and sustainability	Human Values
1	BC2011	Algae, Fungi and Lichens	✓	✓	✓
2	BA2011	Chemistry of Life		✓	✓
3	BNM201	Gardening and Floriculture		✓	✓
4	BC2021	Plant Anatomy and		✓	

		Developmental Botany			
5	BC20P1	Algae, Fungi, Lichens and Plant Anatomy and Developmental Botany		✓	
6	BA2021	Taxonomy of Angiosperms and Herbal Technology		✓	
7	BA20P1	Chemistry of Life and Taxonomy of Angiosperms and Herbal Technology		✓	
8	BNM202	Biofertilizers, Biofuels and Biopesticides		✓	

PG Courses

Gender equity - Nil

Human Values - Nil

Sl.No.	Paper Code	Paper Title	Environment and sustainability	Professional Ethics
1	PB2011	Core I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes	✓	
2	PB2012	Core II – Microbiology	✓	
3	PB2013	Core III – Plant Anatomy & Embryology	✓	
4	PB2014	Elective I –Marine Biology	✓	
5	PB2015	(b) Organic Farming	✓	
6	PB2021	Core IV –Plant Diversity II - Pteridophyta, Gymnosperms and Palaeobotany	✓	
7	PB2022	Core V – Research Methodology		

8	PB2023	Core VI – Cell Biology and Biomolecules	✓	
9	PB2024	Elective II – (a) Herbalism	✓	
10	PB2025	(b) Evolutionary Biology	✓	✓
11	PB20P1	Practical I - Plant Diversity I – Algae, Fungi, Lichens and Bryophytes, Microbiology and Plant Anatomy & Embryology	✓	
12	PB20P2	Practical II- Plant Diversity II- Pteridophyta, Gymnosperms and Palaeobotany, Research Methodology and Cell Biology and Biomolecules	✓	

Item 11/BoS 20.01/13: Approval of question Paper pattern for internal and external examinations

For B.Sc. Botany Major (Core) and Elective :

Internal: External 30: 70

Marks allotted for Continuous Internal Assessment for UG:

Periodic Test: 15 marks: Quiz (2) - 3 marks; Assignment (2): - 4 Marks; Field Report - 4 marks;

Class test(2) – 4 marks.

External Question paper pattern:

Part A- 10x1=10 marks (Objective type)

Part B- 5x 4=20 marks (Internal Choice)

Part C- 5x8=40 (Internal Choice)

For M.Sc. Botany major (Core) and Elective:

Internal: External 40: 60

Internal:

Internal evaluations based on class room assessments such as Assignments, Quiz, Chart preparation, Herbarium preparation etc.

Marks allotted for Continuous Internal Assessment for PG:

Periodic Test: 20 marks, Seminar – 4 marks, Class test (2) – 4 marks, Quiz (2) - 4 marks, Open book test/ Problem solving/ Book review/ Article review/ Group Discussion – 4 marks, Online home assignment – 4 marks.

External Question Paper Pattern:

Part A – 10 x 1 = 10 marks

Part B- 5 x 3 = 15 marks (Internal Choice)

Part B- 5 x 7 = 35 (Internal Choice)

Total: 60 marks

Item 12 /BoS 20.01/14 Recommendation of books and journals for UG and PG

The members suggested to subscribe the following books / journals for the department from the general library:

BOOKS:

1. Bonner, J. T. 1988. The Evolution of Complexity. Princeton: Princeton Univ. Press
2. Williams, G. C. 1992. Natural Selection: Domains, Levels and Challenges. New York: Oxford Univ. Press.
3. Roff, D. A. 1992. The Evolution of Life Histories. New York: Chapman and Hall
4. Hilary B. Moore, 1958. *Marine Ecology* Published by John Wiley and Sons, Inc., New York (London: Chapman and Hall, Ltd.),
5. Marine environmental biology and conservation Daniel W Beckman. 2013. Publisher Burlington, MA : Jones & Bartlett Learning
6. Arthur M. Lesk. Introduction to Bioinformatics. 2002.Edition: 1st edition, Publisher: Oxford University Press.
7. Essentials of Genomics and Bioinformatics. 2002. Christoph W. Sensen. Publisher: Wiley, John & Sons,

8. Esau's Plant Anatomy: Meristems, Cells, and Tissues of the Plant Body: Their Structure, Function, and Development, Third Edition- Ray F. Evert. 2006. John Wiley & Sons.

JOURNALS:

1. Journal of Biology - ISSN: 1475-4924
2. Indian Forester - ISSN: 0019 - 4816
3. The Journal of Experimental Biology – ISSN : 0022 - 0949

Item 13/ BoS 20.01/15: Conduct of UG and PG practical exam during the odd and even semester

From the feedback of the stakeholders, it is suggested by the Board of Studies members to continue the pattern followed in 2017 revision. (Practical Exams are conducted during the odd and even semesters).

Item 14/ BoS 20.01/16: Conduct of seminars/ workshops in collaboration with Government agents/ Universities/ NGOs.

The subject experts recommended to have internship programme in collaboration with Government agencies/ Universities/ NGOs. It has to be evaluated along with the project work in the III year.

Item 15/BoS 20.01/17: Suggestions for innovative teaching and evaluation techniques for UG and PG

The BoS members suggested the following methodologies to enhance teaching, learning and evaluation.

- i. Use of the participative-learning techniques such as Flip Class, Group Discussion, Case Study, etc.,
- ii. Internal evaluations based on class room assessments such as Assignment, Quiz, Slip test, Open Book Test etc.,
- iii. Field oriented hands on training for main papers which can be included under internal evaluation.
- iv. The board of studies members have suggested the following to be implemented for the institute.
 - (a). Computer Literacy can be shifted to first year.

- (b). SEC can be more of practical oriented rather than theory. The exams can be outcome based.
- (c). Catechism can be included in the FC.
- (d). Steps can be taken to initiate NCC Unit

Item 16/BoS 20.01/18: Discussion on coordination of teaching, research, extension and other activities of the department

The members suggested to have the following initiatives for the academic year 2020-2021

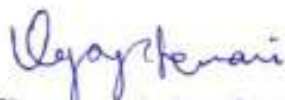
- i. Organize innovative student projects
- ii. Organize phyto quiz programme for school children
- iii. Awareness to local community through exhibition / workshops:
 - a. Herbal oil
 - b. Roof top garden

Item 17/BOS 2023.05/19: Feedback Action Taken

Department	Stakeholders	Feedback received	Action Taken
Botany	Students	Allied syllabus may be interdisciplinary Field and Industry visit can be enhanced	Chemistry of life was introduced as allied. More visits has been included
Botany	Parents	Skill based courses can be included Information about Job opportunities and higher education should be given	Skill based courses were offered Orientation was given by experts
Botany	Teacher	Curriculum is good Evolutionary related papers should be opted	- Evolutionary biology paper was included
Botany	Alumni	More field visits needed Courses related to skill enhancement can be given	Importance were given for visits Skill enhancement programmes were initiated

- Locally available plants (Families) can be included in taxonomy
- More field/lab visits needed
- Skill oriented courses can be included
- Encourage paper presentation and attending conferences outside the campus
- Internship programme in collaboration with Government institutions.
- Journal subscription in department is essential

Name of the Students: Vijayakumari (UG)



Sr. I. Antony Rincy (PG)



Item 18/BoS 20.01/20: Next Meeting of the BoS

The members of the board suggested to have the next meeting of BoS in second week of August.

Item 19/BoS 20.01/21: Any Other – Nil

The meeting ended with vote of thanks by the HoD, the Chairperson of the BoS at 3.45pm.

Sl.No	Name of the Members	Designation	Signature
1.	Dr.C.Jespin Ida	Associate Professor and Head, Holy Cross College, Nagercoil.	<i>C. Jespin Ida</i> 20/01/2020
2.	Dr..S. Beschi Antony Rayan	Associate Professor and Head, St.Xavier's College, Palayamkottai.	<i>Antony Rayan</i> 20/01/2020
3.	Dr. N. Vasudevan	Associate Professor & Head, Saraswathi Narayanan College, Madurai - 22.	<i>N. Vasudevan</i> 20/01/2020
4.	Dr. V. Anand Gideon	Associate Professor & Head, Bisop Heber College (Autonomous), Tiruchirappalli.	<i>Anand Gideon</i> 20/01/2020
5.	Dr. K.P. Srinivasakumar	Chief Scientific Officer, Inbiotics, Nagercoil.	-
6.	Ms. M.M. Shyra	M.Phil. Student, Scott Christian College, Nagercoil.	<i>Ms. M.M. Shyra</i> 20/01/2020
7.	Dr. Sr. Leema Rose	Assistant Professor, Holy Cross College, Nagercoil.	<i>Sr. Leema Rose</i>
8.	Dr. A. Anami Augustus Arul	Assistant Professor, Holy Cross College, Nagercoil.	<i>Anami Augustus Arul</i> 20/01/2020
9.	Ms.B. Santhiya	Assistant Professor, Holy Cross College, Nagercoil.	<i>Ms. B. Santhiya</i> 20/01/2020
10.	Ms.M.Nathira Jimmu	Assistant Professor, Holy Cross College, Nagercoil.	<i>Ms. M. Nathira Jimmu</i>

Sl.No	Name of the Members	Designation	Signature
1.	Dr. C. Jespin Ida	Associate Professor & Head , Holy Cross College (Autonomous), Nagercoil-4	<i>C. Jespin Ida</i> 20/01/2020
2.	Dr. S. Beschi Antony Rayan	Associate Professor & Head , Department of Botany, St.Xaviers College (Autonomous), Playamkottai.	<i>S. Beschi Antony Rayan</i> 20/01/2020
3.	Dr. N. Vasudevan	Head & Associate Professor, Saraswathi Narayanan College, Madurai - 22	<i>N. Vasudevan</i> 20/01/20
4.	Dr. V. Anand Gideon	Associate Professor & Head, Bisop Heber College (Autonomous), Tiruchirappalli - 620 017	<i>V. Anand Gideon</i> 20/01/20
5.	Dr. K.P. Srinivasakumar	Chief Scientific Officer, Inbiotics, Nagercoil.	-
6.	Ms. M.M. Shyra	M.Phil. Student, Scott Christian College, Nagercoil - 629 003	<i>Ms. M.M. Shyra</i> 20/01/20
7.	Mrs. J. Albino Wins	Assistant Professor, Department of Botany, Holy Cross College (Autonomous), Nagercoil-4	<i>J. Albino Wins</i> 20/01/2020
8.	Dr. N. Benit	Assistant Professor, Department of Botany, Holy Cross College (Autonomous), Nagercoil-4	<i>N. Benit Maddy</i> 20.1.2020
9.	Dr. J. Celin Pappa Rani	Assistant Professor, Department of Botany, Holy Cross College (Autonomous), Nagercoil-4	<i>J. Celin Pappa Rani</i> 20/01/2020
10.	Dr. G. Jerlin Deletta	Assistant Professor, Department of Botany, Holy Cross College (Autonomous), Nagercoil-4	<i>G. Jerlin Deletta</i> 20/01/2020