

Board of Studies meeting of the Department of Botany was conducted on 02-07-2016 at 11 AM in the Department of Botany. Following members were present in the meeting.

1. Dr. Mini Chacko (Chairperson)
2. Dr. Joseph Job, Associate Professor, SB College, Changanassery
3. Dr. Hari N.
4. Mr. Rojimon P. Thomas
5. Dr. Elizabeth Cherian
6. Dr. Basil George

Agenda of the meeting:

- Proposal of curriculum for various academic programs
- Recommended books for the reference for teachers and students
- Suggest methodologies for teaching and evaluation
- Suggest panel of names of Examiners to be presented to the Academic Council
- Other matters arising

The decisions taken in the meeting were:

1. The existing syllabus (of MG University) will be continued for the current academic year and new syllabus is to be proposed for the next academic year. Preparations for formulating the new syllabus need to begin simultaneously.
2. The books to be referred will be same as prescribed in the syllabus of M G University and changes can be made when syllabus is revised. It was also decided that teachers can prepare study material for their part of the syllabus.
3. Internal evaluation will be based on attendance, assignments, seminar and viva.
4. A panel of 3 members should be constituted for setting question papers and conduct of the practical examinations. The names of examiners should be forwarded to the office of the Controller of Examinations
5. External Evaluation to be done by 2 examiners. If the difference in the marks of the 2 evaluations is above 10, a third examiner should evaluate the paper. There

will be no provision for reevaluation. However, a student can apply for scrutiny, if need be

Suggestions that evolved from the meeting were:

- An outline of the syllabus of the next academic year can be prepared by the members of the department and that can be discussed in the next Board of Studies meeting. The draft of syllabus prepared thus, can be sent to all the members of the Board of Studies prior to the meeting.
- It should be taken care that the content of the syllabus should be in concurrence with the syllabus of MG University for reasons of equivalency.
- The question paper setter need not need to prepare the key. An internal staff member can be assigned the task with remuneration.

(Member Secretary)

(Read and confirmed)

Dr. Mini Chacko
(Chairperson)

Kottayam
02.07.2016

Board of Studies meeting of the Department of Botany was conducted on 11-01-2017 at 10 AM in the Department of Botany. The following members were present in the meeting.

1. Dr. Mini Chacko (Chairperson)
2. Dr. (Fr.) Jose John, Vice Principal, SH College, Thevara
3. Dr. Joseph Job, Associate Professor, SB College, Changanassery
4. Mr. Rojimon P. Thomas
5. Dr. Elizabeth Cherian
6. Dr. Basil George

Agenda of the meeting:

- Discussion on the revised syllabus proposed

The decisions taken in the meeting were:

1. The syllabus was proposed to be revised in each semester
2. Modifications were made only in the 1st and 2nd Semesters. With regard to the suggestions that evolved in the meeting, it was decided that the current syllabus be continued in the next academic year also.
3. A complete revision of the syllabus need to be made before August, 2017 and should be submitted for approval for the academic year 2018-19.

Suggestions that evolved from the meeting were:

- Equal number of modules of equal weightage should be a criterion for each course.
- Environmental Science mentioned by UGC, should be included in the UG syllabus
- Additional credits to be given for extra courses.

(Read and confirmed)

(Member Secretary)

Dr. Mini Chacko
(Chairperson)

Kottayam
11.01.2017

Board of Studies meeting of the Department of Botany was conducted on 20 -03 -2018 at 11 AM in the Department of Botany. Following members were present in the meeting.

Dr. Mini Chacko (Chairperson)

Dr. (Fr.) Jose John, Vice Principal, SH College, Thevara

Dr. Joseph Job, Associate Professor, SB College, Changanassery

Dr. Rojimon P. Thomas

Dr. N. Hari

Dr. Basil George

Apology of Absence – Sri. Rajesh S. Moni, Manager, Quality Assurance – Research and Development, Dr. Elizabeth Cherian, Assistant Professor, CMS College, Kottayam.

Dr. Mini Chacko, Chairperson of the Board of Studies welcomed the members. She appreciated the members for their active participation in the curriculum revision process. The following resolutions were taken after the discussions.

B.Sc. Botany Programme Curriculum

The syllabus of B.Sc. Botany 2017 of the Mahatma Gandhi University and the proposed UGC Curriculum forms the basis of the present syllabus recommended for the Department of Botany, C. M. S. College, Kottayam for the academic year 2018 – 19. Twelve core courses for B.Sc. Botany, Four complementary courses for B. Sc. Zoology and Family and Community science, one open course and one elective course for the UG programme were reviewed.

The core course content of the B. Sc. Botany programme of the M. G. University is well conceived with the aim of preparing students for competitive examinations and pursuing higher studies. Therefore, the syllabus of the M.G. University is adopted with minor changes. Feedback from students was the motivation for these minor changes, since they observed that it gave them a better understanding and insight into their subject of interest. The changes mainly involve,

1. Rearrangements in the syllabus, like shifting the topics from one course to another, where it is perceived to fit in better.
2. Addition of subtopics (brief) and topics to be made brief is specified wherever necessary, in order to convey and make the study of the topic easier.
3. Specifying examples and types for studying some topics

However, no change has been made in the basic structure and content of the UG Botany curriculum. The course specific changes that have been brought about are listed below.

Core Course 1

Methodology of Science and an Introduction to Botany

Module 1 Methodology of Science

1. The contents of **unit 1 and unit 2 of Module I** is combined to be completed in six teaching hours.
2. The 5 steps involved in scientific method is specified. They are
 - a) Observation and Thoughts
 - b) Formation of Hypothesis
 - c) Experimentation
 - d) Testing of hypothesis
 - e) Formulation of theory and lawKosch's Experiment to be cited here as an example, to transact these steps.
3. In **unit 3 of module 1** - causes of evolution are added before evidences of evolution, in order to convey the importance of "Origin and Evolution of life"
4. It is also suggested to shift the major postulates namely isolation, mutation, genetic drift and speciation **from unit 3 of Module 1 in Sem I to unit 7 of Module 1 in Sem VI** i.e. the Core course – Genetics, Plant Breeding and Horticulture

Module 2 Introduction to Botany

It is recommended to have **2 units in module 2** in order to better structure the course.

Unit 1 - of 2 hours

- Diversity of life
- An introduction to classification
- Need for classifying organisms

Unit 2 - of 12 hours

- Types of classification
(Study of Life cycle not required)

Module 3 Basic Botanical Skills

1. Microscopy – Evolution of Microscope – simple, compound, dissection, stereomicroscopes
2. Parts of a compound Microscope, Adjustments in Microscopy, Handling and Care of Microscopes
3. Temporary mounts: Hand sections, smears and squashes
4. Killing and Fixing, Permanent mounts and Herbarium - **deleted** from here since these topics are dealt under Micro technique (course V) and Taxonomy (course 11)

PRACTICALS

1. Mendel's Experiment
2. Field report with photographs to be submitted during practical examination
(a field visit to nearby Biodiversity rich area is compulsory – one day trip) TLS and RLS deleted, LS added

Core Course 2

Microbiology, Mycology and Plant pathology

1. In Module 1, Unit 1, **Microbiology : A brief historical prelude with milestones** is added instead of Introduction to microbiology
2. Addition of Bacterial identification – based on motility, staining, colony characters and biochemical tests (IMVic only) – A short description after Ultrastructure of bacteria in Unit 2 of Module 1
3. The example of pour plate method is specified in, “Demonstrate the culture of bacteria”, under the practical of Microbiology
4. No other changes are incorporated in the MGU syllabus.

Core Course 3

Phycology and Bryology

No changes are made in the MGU Syllabus

Core Course 4

Pteridology, Gymnosperms and Paleobotany

No changes are made in the MGU Syllabus

Core Course 5

Anatomy, Reproductive Botany and Microtechnique

A small portion of course 1, module 3 is included in module 3 of this course, since it fits better here.

Inclusions

1. Killing and fixing agents – Formalin, FAA, Carnoy’s fluid, Farmer’s fluid
2. Hand sections – T.S., L.S., T.L.S., R.L.S.
3. The term mounting media is changed to mountants

Under the Practicals of Reproductive Botany - Identification of embryo (chordate stage is specified)

Core Course 6

Research Methodology, Biophysics and Biostatistics

Compound microscope deleted from unit 2 of module 2 since it is well covered in core course 1. Instead, STEM is added to electron microscopy.

Core Course 7

Plant Physiology and Biochemistry

Lowry's method specified for "Quantitative estimation of protein using colorimeter"
(Practical No. 5)

Core Course 8

Environmental Science and Human Rights.

The UGC Syllabus is adopted (50 hours).

Local knowledge (4 hours) is incorporated as Unit 2

Open Course

Agribased Microenterprises

No changes are made in the syllabus

Core Course 9

Genetics, Plant Breeding and Horticulture

Module 1, Unit 7 – sub topics added under Hardy Weinberg Principle –

Factors affecting genetic equilibrium – mutation, selection, migration and genetic drift (brief account only)

Core Course 10

Cell and Molecular Biology

No changes are made in the MGU syllabus

Core Course 11

Angiosperm Morphology, Taxonomy and Economic Botany

No changes are made in the MGU syllabus

Core Course 12

Biotechnology and Bioinformatics

No changes are made in the MGU syllabus

Programme Elective Course

Biotechnology and Bioinformatics

No changes are made in the MGU syllabus

Complementary Courses for Model I B.Sc. Zoology

Complementary Course 1

Cryptogams, Gymnosperms and Plant Pathology

No changes are made in the MGU Syllabus

Complementary Course 2

Plant Physiology

No changes are made in the MGU Syllabus

Complementary Course 3

Angiosperm Taxonomy and Economic Botany

No changes are made in the MGU syllabus

Complementary Course 4

Anatomy and Applied Botany

Module 2, Unit 1 - Sub topics added under **Procedure of hybridization** – selection of parents, emasculation and pollination.

Module 3 – Plant Tissue culture:

1. MS medium specified under culture media
2. Surface sterilization specified for ex plants
3. Inoculation and incubation processes added

Dr. Mini Chacko (Chairperson)
In the absence of Member Secretary

(Read and confirmed)

Dr. Mini Chacko
(Chairperson)

Kottayam
20.03.2018

Board of Studies meeting of the Department of Botany was conducted on 26.04.2018 at 10 AM in the Department of Botany. The following members were present in the meeting.

Dr. Mini Chacko (Chairperson)

Dr. (Fr.) Jose John, Vice Principal, SH College, Thevara

Dr. Joseph Job, Associate Professor, SB College, Changanassery

Dr. Rojimon P. Thomas

Dr. N. Hari

Dr. Basil George

Apology of Absence – Sri. Rajesh S. Moni, Manager, Quality Assurance – Research and Development, Dr. Elizabeth Cherian, Assistant Professor, CMS College, Kottayam.

Dr. Mini Chacko, the Chairperson welcomed the members and in her introductory remarks she appreciated the members for their active participation in the curriculum revision process.

After discussion the following resolutions were taken.

Agenda Items

Agenda Item No.1. Syllabus Revision

It was decided to revise the curriculum of B.Sc. Botany, and the Complementary and Open courses offered by the Department of Botany, to be implemented in CMS College Kottayam w.e.f. 2018 admissions.

The feedback gathered from various stakeholders like students, teachers, parents, industrialists, employers, etc. were discussed. The restructuring of the syllabus was made in tune with the UGC model curriculum and the existing curriculum of the MG University. The curriculum was restructured by mapping the courses incorporating graduate program outcomes (GPO), program specific outcomes (PSO), course outcomes (CO).

The Courses in Botany were devised in such a manner:

1. To address the advances in research and technological infrastructure and to train the student about the scientific advances and discoveries.
2. Due significance was given to incorporate Local, National, Regional and Global developmental needs in the curriculum
3. The existing courses were streamlined with focus on Employability, Entrepreneurship and Skill development
4. In order to facilitate the courses, it was decided to sign MOUs to collaborate with organizations relating to the discipline that would be helpful to the students.

The Common Courses offered met the need to sensitise the students by incorporating aspects like Gender, Environment, Sustainable living, Human Values and Professional Ethics in the curriculum.

It was also decided to introduce Internship at the end of second semester.

B.Sc. Curriculum

Core Course 1

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3. In **unit 3 of module 1** - causes of evolution are added before evidences of evolution, in order to convey the importance of "Origin and Evolution of life"
4. It is also suggested to shift the major postulates namely isolation, mutation, genetic drift and speciation **from unit 3 of Module 1 in Sem I to unit 7 of Module 1 in Sem VI** i.e. the Core course – Genetics, Plant Breeding and Horticulture

Module 2 Introduction to Botany

It is recommended to have **2 units in module 2** in order to better structure the course.

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Unit 2 - of 12 hours

- Types of classification
(Study of Life cycle not required)

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PRACTICALS

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3. The example of pour plate method is specified in, “Demonstrate the culture of bacteria”, under the practical of Microbiology
4. No other changes are incorporated in the syllabus.

Core Course 3

Phycology and Bryology

No changes are made in the syllabus

Core Course 4

Pteridology, Gymnosperms and Paleobotany

No changes are made in the syllabus

Core Course 5

Anatomy, Reproductive Botany and Microtechnique

A small portion of course 1, module 3 is included in module 3 of this course, since it fits better here.

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Core Course 6

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Core Course 7

Plant Physiology and Biochemistry

Lowry's method specified for "Quantitative estimation of protein using colorimeter"
(Practical No. 5)

Core Course 8

Environmental Science and Human Rights.

The UGC Syllabus is adopted (50 hours).

Global conservation efforts (4 hours) is incorporated as Unit 2

Open Course

Agribased Microenterprises

No changes are made in the syllabus

Core Course 9

Genetics, Plant Breeding and Horticulture

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Core Course 10

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No changes are made in the syllabus

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No changes are made in the syllabus

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Complementary Course 4

Anatomy and Applied Botany

Module 2, Unit 1 - Sub topics added under **Procedure of hybridization** – selection of parents, emasculation and pollination.

Module 3 – Plant Tissue culture:

1. MS medium specified under culture media
2. Surface sterilization specified for ex plants
3. Inoculation and incubation processes added

It was decided to continue the UGC sponsored Add on Course the in the curriculum:

Add on Course

1. Medicinal and Ornamental Plants – Certificate Course in B.Sc. I year
2. Medicinal and Ornamental Plants –Diploma Course in B.Sc. II year
3. Medicinal and Ornamental Plants –Advanced Diploma Course in B.Sc. III year

It was decided to introduce Extra credit courses in the curriculum

Extra Credit Courses

1. Solid Waste Management
2. Processing and Preservation of fruits and vegetables

Agenda Item No. 2 PG Curriculum

M.Sc. Botany

It was decided to follow the existing syllabus of M.G. University without any change in the theory papers and practical papers.

Agenda Item No.3 Other matters arising from the floor

Dr. Mini Chacko (Chairperson)
In the absence of Member Secretary

(Read and confirmed)

Dr. Mini Chacko
(Chairman)

Kottayam
26.04.2018