DEGREE OF MASTER OF PHILOSOPHY
CHOICE BASED CREDIT SYSTEM

SYLLABUS FOR
M.PHIL. SERICULTURE
(SEMESTER PATTERN)
(For Candidates admitted in the Colleges affiliated to Periyar University from 2017-2018 onwards)
REGULATIONS

OBJECTIVES
To provide course of study to postgraduates in Sericulture with a view to strengthen their foundations for undertaking M.Phil work in theoretical and Applied Sericulture.

ELIGIBILITY FOR ADMISSIONS
Good academic record with first or second class Masters Degree in Sericulture of Periyar University or in examination recognized there equivalent to.

DURATION
The duration of the M.Phil course will be one year.

COURSE STRUCTURE
Course Structure for M.Phil., (Sericulture) Under CBCS
(For the candidates admitted from the year 2017-2018 onwards)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Course</th>
<th>Subject Title</th>
<th>Exam Hrs</th>
<th>Credits</th>
<th>University Examination</th>
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<td>Internal (25%)</td>
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<td>External (75%)</td>
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<td>Total</td>
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<tr>
<td>1.</td>
<td>Paper I</td>
<td>Research Methodology</td>
<td>3</td>
<td>4</td>
<td>25</td>
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<td>75</td>
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<td>2.</td>
<td>Paper II</td>
<td>Recent Advances in Sericulture</td>
<td>3</td>
<td>4</td>
<td>25</td>
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<td>3.</td>
<td>Paper III</td>
<td>Optional subject (Guide Paper)</td>
<td>3</td>
<td>4</td>
<td>25</td>
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<td>4.</td>
<td>Paper IV</td>
<td>*Dissertation Evaluation</td>
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<td>Viva - voce</td>
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<td>TOTAL</td>
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<td>500</td>
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*For 200 Marks
EXAMINATIONS:

Question Paper Pattern for M.Phil Sericulture Course.

Time: 3Hrs Max.75

Part A – (5 x 5 = 25 Marks)
Answer ALL question choosing either 'a' or 'b'

Part B – (5 x 10 = 50 Marks)
Answer ALL questions choosing either 'a' or 'b'

University conducts the examination for Paper – I and Paper – II at the end of First Semester.

 Supervisor will provide syllabus and two sets of Question Paper for Paper – III to the University. The controller of examinations will conduct the examination for Paper – III at the end of First Semester.

Passing minimum in each Paper is 50%

Theory Papers:

Total marks for each Paper is 100. 25 marks for Internal and 75 marks for University Examination. The Internal Assessments may be in the form of Combination of Periodical tests and Assignments for Theory Papers. The Components are:

1. Attendance = 05 Marks
2. Assignment/Seminar = 10 Marks
3. Test = 10 Marks

Total = 25 Marks

Dissertation:

The Marks for the Dissertation is 200 and the Components are:

Evaluation:

1. Evaluation of Project report by External Examiner : 100 Marks
2. Evaluation of Project report by Internal Examiner : 50 Marks

Viva – Voce conducted by Supervisor and External Examiner in the Department : 50 Marks

Total : 200 Marks

Dissertation should be valued by the Supervisor and the External Examiner.

Viva – voce should be conducted by the Supervisor and the External Examiner.
M.PHIL. SERICULTURE
PART – I
PAPER I : RESEARCH METHODOLOGY

UNIT I  Instrumentation

Light Microscopy – Phase contrast microscopy – Electron Microscopy (SEM & TEM)
Spectrophotometer – Gas – Liquid Chromatography – High performance Liquid
Chromatography, Clinical and Ultra centrifugation, pH meter.

UNIT II  Biochemical aspects

Agarose Gel Electrophoresis – PolyAcailamide Gel electrophoresis (PAGE) – DNA
extraction Methods – Phenol and CTAB methods – protein and amino acid separation
and estimation – estimation of carbohydrate, starch, chlorophyll by
spectrophotometer, determination of soil pH, EC, Sodium absorption ratio.

UNIT III  Sericiculture

Mulberry plantations – spacing, nursery, Fertilizer requirements – identification of
diseases of mulberry – design of rearing houses for silk worm- Chawki rearing –
brushing – disease free laying – grainage – raw silk% - acid treatment for diapausing
eggs – cocoon assessment and sorting – reeling of cocoon on Charka – dyeing of silk
fiber – silk testing.

UNIT V  Statistics and Computer Application

Measures of central tendency – 't' test, F test, Chi square test, ANOVA one way and
two way, correlation coefficient, Regression. Software for computer analysis – Excel
and SPSS.

UNIT V  Research Methodology

Identification – selection and scope of research problems –research methodology –
review of literature, planning and execution of research – thesis writing – preparation
and presentation of research for journals and conference
REFERENCE BOOKS:


5. Tazima 1978. The Silkworm an Important Laboratory Tool, Kodansha publication, Tokyo, Japan.


8. Comprehensive Statistical Software. SPSS South Asia, No. 20, 11th A Main, Millers Road, Vasanth Nagar, Bangalore – 560 052.
M.PHIL. SERICULTURE

PART – I

PAPER II : RECENT ADVANCES IN SERICULTURE

UNIT I  Mulberry Cultivation


UNIT II Silk Rearing


UNIT III  Pests and Diseases of Silkworm

Integrated method for control of pest and disease in silkworm – Viral, Bacterial, Fungal and microsporidian diseases – Prevention techniques.

UNIT IV  Silk Reeling


UNIT V  Non – Mulberry Sericulture

M.Phil. SERICULTURE

REFERENCE BOOKS:


