


UNIVERSITY OF MYSORE
Estd. 1916

VishwavidyanilayaKaryasoudha
Crawford Hall, Mysuru- 570 005

No.AC2(S)/55/2024-25

Dated: 20.07.2024

Notification

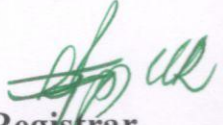
Sub:- Syllabus and Scheme of Examinations of Sericulture (UG) Programme (I & II Semester) with effect from the Academic year 2024-25.

- Ref:-** 1. Decision of Board of Studies in Sericulture (CB) meeting held on 08-06-2024.
2. Decision of the Faculty of Science & Technology meeting held on 19-06-2024.
3. Decision of the Academic Council meeting held on 28-06-2024.

The Board of Studies in Sericulture (CB) which met on 08-06-2024 has resolved to recommend & approved the Syllabus and Scheme of examinations of Sericulture (UG) programme (I & II Semester) with effect from the Academic year 2024-25.

The Faculty of Science & Technology and Academic Council at their meetings held on 19-06-2024 and 28-06-2024 respectively has also approved the above said Syllabus and Scheme of examinations hence it is hereby notified.

The Syllabus and Scheme of Examinations content may be downloaded from the University Website i.e., www.uni-mysore.ac.in.


Registrar
Registrar
University of Mysore
Mysore

To:-

1. All the Principal of affiliated Colleges of University of Mysore, Mysore.
2. The Registrar (Evaluation), University of Mysore, Mysuru.
3. The Chairman, BOS/DOS in Sericulture, Manasagangothri, Mysore.
4. The Dean, Faculty of Science & Technology, DOS in Mathematics, MGM.
5. The Director, Distance Education Programme, Moulya Bhavan, Manasagangothri, Mysore.
6. The Director, PMEB, Manasagangothri, Mysore.
7. Director, College Development Council, Manasagangothri, Mysore.
8. The Deputy Registrar/Assistant Registrar/Superintendent, Administrative Branch and Examination Branch, University of Mysore, Mysuru.
9. The PA to Vice-Chancellor/ Registrar/ Registrar (Evaluation), University of Mysore, Mysuru.
10. Office Copy.

UNIVERSITY  OF MYSORE

**ACADEMIC CURRICULUM AND EXAMINATION PATTERN
UNDER STATE EDUCATION POLICY - 2024 IN B.Sc. COURSE**

(Duration of the Course: 3 Years/6 Semesters)

SYLLABUS FOR I AND II SEMESTER B.Sc. IN SERICULTURE (UG) L:T:P = 3:0:2

Seme ster	Course	Title of the Paper	Instruc tion Hrs (L:T:P) /Week	Credit	Durati on of Exam (Hrs.)	Marks		Total Marks
						IA (C1+ C-2)	Final Exam (C-3)	
DISCIPLINE SPECIFIC CORE (DSC) COURSE								
I	DSC-1(SER) A Theory	Mulberry and Silkworm Biology	3:0:0	3	3	10+10	80	100
	DSC-1(SER) A Practical	Mulberry and Silkworm Biology	0:0:2	2	3	05+05	40	50
II	DSC-2(SER) B Theory	Mulberry Cultivation and Silkworm Rearing	3:0:0	3	3	10+10	80	100
	DSC-2(SER) B Practical	Mulberry Cultivation and Silkworm Rearing	0:0:2	2	3	05+05	40	50

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CHAIRMAN 08/06/24
Board of Studies in Sericulture
University of Mysore
Manasagangotri, Mysuru



SERICULTURE SYLLABUS (UG)

I SEMESTER		
DSC-1 (SER) A: MULBERRY AND SILKWORM BIOLOGY		
THEORY		3 Hrs/ Weeks X 16 Weeks=48hrs.
Unit-1		
1	Introduction to Sericulture – Origin and history of Sericulture – Silk road, spread of Sericulture to Europe, South Korea, Japan, India and other countries.	4hrs.
2	Sericulture map of India and World. Components of Sericulture.	2hrs.
3	Sericulture organization in India and Karnataka ; role of state departments of Sericulture, CSB, Universities and NGOs in Sericulture development.	3hrs.
4	Sericultural practices in tropical and temperate climate. Employment generation in sericulture- Role of women in sericulture.	3hrs.
Unit-2		
5	Sericultural practices in rain-fed and irrigated conditions; traditional and non-Traditional areas.	2hrs.
6	Salient features, economic importance of the family Moraceae. Phytogeography and systematics of the genus <i>Morus</i> L. and its species. Botanical description of mulberry.	4hrs.
7	Morphology of mulberry and Floral biology of mulberry: Structure of male and female flowers, Catkins.	3hrs.
8	Anther and ovule in mulberry; micro- and mega sporogenesis; development of male and female gametophytes; pollination, fertilization.	3hrs.
Unit-3		
9	Anatomy of mulberry internal structure of stem, root, petiole and leaf lamina; secondary growth in root and stem. Structure and organization.	4hrs.
10	General characteristic features of insects; classification of sericigenous insects ; Characteristic features of the order Lepidoptera; detailed study of the families- Saturniidae and <i>Bombycidae</i> .	2hrs.
11	Classification of silkworms based on moultnism, voltinism and geographical distribution; popular silk worm breeds and hybrids of Karnataka; their Economic traits.	2hrs.
12	Insect egg: Morphology and structure ; polyembryony, parthenogenesis. Gametogenesis- Oogenesis and Spermatogenesis.	4hrs.
Unit-4		
13	Fertilization and Embryonic development in silkworm <i>Bombyx mori</i> .	4hrs.
14	Life cycle of <i>Bombyx mori</i> ; Morphology of egg, larva, pupa and adult.	2hrs.
15	Morphology and anatomy of digestive, circulatory, excretory, respiratory, Nervous system of silkworm larva.	3hrs.
16	Morphology and anatomical structure of Silk gland, reproductive systems of silkworm.	3hrs.

DSC-1 (SER)A: MULBERRY AND SILKWORM BIOLOGY

PRACTICAL

12 PRACTICALS OF 4HRS. EACH

1	Sericulture maps: (a) World maps and Silk Road. (b) Sericulture map of India and Karnataka.	1 Prac.
2	Taxonomic description of mulberry.	1 Prac.
3	Study of five popular mulberry cultivars of Karnataka (Mysore local, K ₂ , S ₃₆ , S ₁₃ and V ₁)	1 Prac.
4	Mounting of Pollen grains, Ovule and Embryo.	1 Prac.
5	Anatomy of petiole, leaf lamina, stem and root.	1 Prac.
6	Anatomy of petiole, leaf lamina, stem and root	1 Prac.
7	Lifecycle of <i>Bombyx mori</i> - Morphology of egg, larva, pupa and adult of <i>Bombyx mori</i> .	1 Prac.
8	Embryo mounting: 7 th , 8 th and 9 th day	1 Prac.
9	Sex separation in larva, pupa and adult of the silkworm <i>Bombyx mori</i> .	1 Prac.
10	Dissection and display of: (a) Digestive system of silkworm larva. (b) Silk glands.	1 Prac.
11	(c) Mounting of larval mouth parts and spiracle. (d) Nervous system of silkworm larva.	2 Prac.
12	Dissection and display of: (a) Reproductive system of male and female moths.	2 Prac.

SCHEME OF PRACTICAL EXAMINATION

Duration-3hrs.

Max. Marks = 40

Q1	Taxonomic description of any one of the popular mulberry varieties. (Mysore local / K ₂ / S ₃₆ / S ₁₃ / V ₁) Note: Distribution of marks. a) Identification of the variety-4 b) Diagnostic features -4 c) Sericultural importance -2	10marks
Q2	Sectioning and Mounting of Petiole/ Leaf Lamina/ Stem/ Root/ Pollen grains/ Ovule/ Embryo. (OR) Mounting of 7 th / 8 th / 9 th day embryo/ larval skin / spiracle / body scales of silk moth/ Mouth parts Note: Distribution of marks a) Staining procedure -3 b) Preparation and display -4 c) Labeled diagram and Identification-3	10marks
Q3	Any one of the following : Dissect and Display. Male and Female reproductive system / Silk glands / Digestive system / Nervous system Note: Distribution of marks a) Dissection and display - 5 b) Labeled diagram with description - 5	10marks
Q4	Identify and comment on the spots A, B, C and D. (Any four from the practical syllabus/ 2.5 for each)	10marks

II SEMESTER

**DSC-2(SER) B: MULBERRY CULTIVATION AND SILKWORM REARING
THEORY**

3HRS/ WEEK X 16WEEKS=48 HRS

Unit-1

1	Definition of soil, soil structures, soil textures and soil profile. Types of soils in India, soil conservation methods.	4hrs.
2	Importance of soils fertility with reference to mulberry cultivation; soil analysis- soil sampling, soil pH, organic carbon and NPK level.	3hrs.
3	Propagation of mulberry- seedling, sapling, grafting and layering.	2hrs.
4	Establishment of mulberry garden: Areas under mulberry cultivation in India, Species and Varieties under cultivation in India, General Descriptions, Climatic requirements, Soil conditions, mulberry cultivation under rain-fed and irrigated conditions. Mechanization in mulberry cultivation	3hrs.

Unit-2

5	Introduction to different types of Manures and fertilizers: Bio fertilizers, Foliar nutrition, Plant nutrients (macro and micro nutrients), composting, vermicomposting.	4hrs.
6	Estimation of leaf yield: Importance of leaf quality. Inter cultivation and Mulching practices: Purpose, methods, time and frequency.	4hrs.
7	Irrigation: Importance, Source, methods, periodicity and quantity of irrigation, over- irrigation and its effects.	2hrs.
8	Leaf harvesting: harvesting methods (leaf and shoot harvests); transportation and preservation of harvested leaf and shoots. Pruning-Objectives, Importance And methods.	2hrs.

Unit-3

9	Rearing house: Location, orientation, plan and utilities; model rearing house; low-cost rearing house. Rearing appliances- shelf and shoot rearing; requirements of rearing appliances (per unit rearing of 100dfls).	4hrs.
10	Disinfection of rearing house and rearing appliances; disinfectants (formalin, bleaching powder, chlorine dioxide, slaked lime and iodine compounds); Rearing and personal hygiene.	3hrs.
11	Selection of silkworm races/ breeds for rearing-advantages and dis advantages of bivoltine and multivoltine pure races/ breeds and hybrids.	2hrs.
12	Incubation-definition, requirement of environmental conditions, incubation devices; identification of different stages of development; black boxing and its importance.	3hrs.

Unit-4

13	Chawki rearing: Preparation; brushing and its methods; types of chawki rearing – traditional and improved method; optimum environmental conditions; methods and frequency of feeding; methods of bed cleaning; spacing; moulting and care during moult.	3hrs.
14	Late age silkworm rearing: Methods; optimum environmental conditions; feeding quantity and frequency; methods of bed cleaning; spacing; moulting and care during moult.	3hrs.
15	Identification of spinning larva; spinning; mounting and mounting density; types of mountages, their advantages and disadvantages; environmental Requirements during spinning.	3hrs.
16	Harvesting: Time of harvesting; sorting, storage/ preservation, packaging and Transport of cocoons: leaf- cocoon ratio; maintenance of rearing records.	3hrs.

DSC-B(SER)B: MULBERRY CULTIVATION AND SILKWORM REARING

PRACTICAL

12 PRACTICALS OF 4 HRS. EACH

1	Determination of soil pH and water holding capacity in different soil Samples.	1 Prac.
2	Mulberry Farm implements.	1 Prac.
3	Preparation of land, pits and rows; preparation of rooting media (fieldwork).	1 Prac.
4	Raising of sapling and seedling (fieldwork).	1 Prac.
5	Inter cultivation, mulching, irrigation, pruning and estimation of leaf yield. (Demonstration and exercise).	1 Prac.
6	Grafting and Layering in mulberry.	1 Prac.
7	Harvesting and preservation techniques; leaf selection for different instars.	1 Prac.
8	Rearing houses-model rearing house and low-cost rearing house. Rearing appliances and their uses	2 Prac.
9	Disinfection-Types of disinfectants-concentration and dosage requirement; Preparation of spray formulation of disinfectants.	1 Prac.
10	Incubation of silkworm eggs-Methods; black boxing.	1 Prac.
11	Brushing: Methods; Calculation of Hatching percentage. Chawki Rearing; paraffin paper and blue polythene sheet. Bed cleaning: bed cleaning net.	1 Prac.
12	Moulting: Identification of moulting larva, care during moulting. Late Age Silkworm Rearing: Methods. Mounting and mounting density; harvesting of cocoons; assessment of cocoons; types of mountages; Maintenance of records for silkworm rearing.	2 Prac.

SCHEME OF PRACTICAL EXAMINATION

Duration-3hrs.

Max. Marks=40

Q1	Determination of soil pH / water holding capacity/grafting/ layering Note: Distribution of marks	10marks
	a) Procedure -3	
	b) Labeled Diagram -2 c) To conduct Experiment -5	
Q2	Calculations and procedure about disinfection/ brushing/ bed cleaning/ Hatching percentage. Note: Distribution of marks	10marks
	a) Procedure/ Description -5 b) To conduct Experiment/ calculation -5	
Q3	Identify and comment on the spots A, B, C and D. (Any four from the practical syllabus/ 2.5 marks for each)	10marks
Q4	Submission of fieldwork/field visit/ rearing report and Viva-voce (Any five questions from the practical syllabus)	10marks

COMPONENTS OF INTERNAL ASSESSMENT

Sl no	THEORY PAPER		Marks Allotted
1	C-1	Submission of one Assignment by each student	10 marks
	C-2	Conduct of Internal Class Test	10marks
PRACTICAL COURSE			
2	C-1	Student Attendance	5 marks
	C-2	Evaluation of students class record	5 marks

THEORY QUESTION PAPER PATTERN FOR C-3 EXAMINATION

Sl. No	Type of question	Marks per Question	No. of Questions	Answerable Questions	Total
1	Define/Mention/Expand the following	2	06	05	10
2	Write short notes on the following	4	06	05	20
3	Give brief answers on the following	6	05	03	18
4	Write in detail/explain the following	8	06	04	32
Total =					80

Approved Members


 08/06/2024

 08/06/24

 8/6/24

 8/6/24


 8/6/24

 08/06/2024

 08/6/24

 8/6/24

 08/06/24


PROF. T.S. JAGADEESH KUMAR 08/6/24
 Chairman - BoS (CB)
CHAIRMAN
 Board of Studies in Sericulture
 University of Mysore
 Manasagangotri, Mysuru

Proceedings of the Meeting of Board of studies in Sericulture (CB) held on 8TH June, 2024
at 11.30AM in the Department of Studies in Sericulture Science,



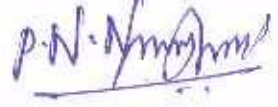
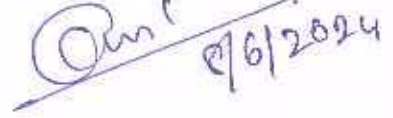




University of Mysore, Manasagangothri, Mysuru-06

Ref: 1. Order No. ED166/UNE/2023 Dated 08-05-2024

2. Letter No: AC2(S)/07/2024-25 Dated 23-05-2024

Members present

Signature

- | | | |
|---|------------|---|
| 1. Prof. D.M. Mamatha
Head , Department of Bioscience and Sericulture
S.P. Mahila University, Tirupati ,
Andra Pradesh | (External) | 
08/06/2024 |
| 2. Prof. Ramakrishna Naika
Head , College of sericulture
UAS , Chintamani | (External) | 
08/06/2024 |
| 3. Dr P.N. Narase Gowda
Head .Department of Biotechnology
VV Puram . Bengaluru | (External) |  |
| 4. Dr. K.B. Chandrashekar
Scientist -D CSR&TI . Mysuru | (Internal) | 
08/06/2024 |
| 5. Prof. H.B. Mahesha
Head, Department of Sericulture
Yuvarajas College, Mysuru | (Internal) | 
8/6/24 |
| 6. Prof. Rohith L Shankar
Department of Sericulture
Yuvarajas College, Mysuru | (Internal) |  |
| 7. Dr. M.N. Srinivasa
Head and Associate Professor
Department of Sericulture
Maharanis Science College for Women's
Mysuru | (Internal) | 
8/6/24 |
| 8. Prof. H.B. Manjuntha
DOS in Sericulture Science
University of Mysore, Mysuru | (Internal) | 
8/6/2024 |

10. Prof. B. Sannappa
DOS in Sericulture Science
University of Mysore, Mysuru

(Internal)

B. Sannappa
8/6/24

11. Prof. M.N. Anil Kumar
DOS in Sericulture Science
University of Mysore, Mysuru

(Internal)

M.N. Anil Kumar
8/6/24

12. Dr. R.S. Umakanth
Associate Professor
DOS in Sericulture Science
University of Mysore, Mysuru

(Internal)

R.S. Umakanth
8/6/24

13. Prof. T.S. Jagadeesh Kumar
Chairman –DOS & BOS in Sericulture (CB)
DOS in Sericulture Science
University of Mysore, Mysuru

(Internal)

T.S. Jagadeesh Kumar
8/6/2024

Meeting Proceedings:

The Chairman (BoS) welcomed all the members of Board of Studies in Sericulture (CB). As per the University letter No: AC2(S)/07/2024-25 dated 23-05-2024 the matter was placed and discussed meticulously before the BOS meeting. The structure, curriculum and syllabus for the I and II semesters undergraduate course in Sericulture offered at University of Mysore, Mysore and approved the syllabus by all the members for the academic year 2024-25 and the soft copy of the syllabus sent to e-mail syndicatesection123@gmail.com for information and hard copy has been submitted to the University of Mysore, Mysore for further needful and chairman thanked all the members.

Thanking you,

T.S. Jagadeesh Kumar
8/6/24
Prof. T.S. Jagadeesh Kumar
Chairman: BOS in Sericulture (CB)

CHAIRMAN
Board of Studies in Sericulture
University of Mysore
Manasagangotri, Mysuru