

S-08th July, 2014 AC after Circulars from Circular No.84 &amp; onwards

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**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY****CIRCULAR NO.ACAD/SU/Sci./Syllabus/93/2014**

It is hereby notified for information of all concerned that, on the recommendations of the Ad-hoc Boards and Dean, Faculty of Science, the **Academic Council at its meeting held on 08-07-2014** has accepted the following revised syllabi as mentioned against their nomenclature for **B.Sc. & M.Sc. under the Faculty of Science :-**

Sr. No.	Revised Syllabus	Semester
[1]	B.Sc. Environment Science [Optional]	I & II
[2]	B.Sc. Sericulture [Optional]	I & II
[3]	B.Sc. Automobile Technology Degree Course	I & II
[4]	B.Sc. Workshop Technology Degree Course	I & II
[5]	B.Sc. Refrigeration & Air Conditioning Degree Course	I & II
[6]	B.Sc. Forensic Science Degree Course	III & IV
[7]	B.Sc. Polymer Chemistry [Optional]	III & IV
[8]	B.Sc. Environment Science [Optional]	III & IV
[9]	M.Sc. Plant Breeding & Molecular Genetics	III & IV

This is effective from the **Academic Year 2014-2015** and onwards.

These syllabi are available on the University Website.

All concerned are requested to note the contents of this circular and bring the notice to the students, teachers and staff for their information and necessary action.

University Campus,  
Aurangabad-431 004.  
REF.NO.ACAD/SU/B.SC. & M.SC./  
2014/16264-463  
**A.C.S.A.I.No.462[18].**

Date:- 12-08-2014.

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**Director,**  
**Board of College and**  
**University Development.**

S-08th July, 2014 AC after Circulars from Circular No.84 & onwards

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**Copy forwarded with compliments to :-**

- 1] **The Principals, affiliated concerned Colleges,  
Dr. Babasaheb Ambedkar Marathwada University.**
- 2] The Director, University Network & Information Centre, UNIC, with  
**a request to upload the above all syllabi on University Website.**

**Copy to :-**

- 1] The Controller of Examinations,
- 2] The Superintendent, [B.Sc. Unit],
- 3] The Superintendent, [M.Sc. Unit],
- 4] The Superintendent, [Eligibility Unit],
- 5] The Programmer [Computer Unit-1] Examinations,
- 6] The Programmer [Computer Unit-2] Examinations,
- 7] The Director, [E-Suvidha Kendra], in-front of Registrar's Quarter,  
Dr. Babasaheb Ambedkar Marathwada University,
- 8] The Public Relation Officer,
- 9] The Record Keeper,  
Dr. Babasaheb Ambedkar Marathwada University.

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B.Sc.1st Sericulture (OPT)

**Dr Babasaheb Ambedkar Marathwada University**  
**Aurangabad.**



**Revised Syllabus**  
**SERICULTURE**  
**(Optional)**  
**B.Sc – I Year**  
**Semester I and II**

**Effective from 2014-2015 & onwards**  
**Progressively.**

B.Sc.Ist Sericulture (OPT)

## **Semester – I**

Paper I – General Sericulture.

Paper II – Sericulture industry and its status.

Paper III – Practical – based on I and II.

## **Semester – II.**

Paper IV – Biology and Breeding of mulberry.

Paper V – Mulberry Agronomy.

Paper VI – Practical based on paper IV and V.



B.Sc.Ist Sericulture (OPT)

**Dr. Babasaheb Ambedkar Marathwada University**  
**AURANGABAD.**

**B.Sc . Sericulture in Semester Pattern System.**

**B.Sc. I year – Sericulture.**

Semester	Course code	Paper No.	Title of paper	Marks
I	Seri - 101	Paper - I	General Sericulture	50
	Seri - 102	Paper - II	Sericulture industry status	50
	Seri - 103	Paper - III	Practicals based on paper -I and II	50
II	Seri - 104	Paper - IV	Biology and Breeding of mulberry	50
	Seri - 105	Paper - V	Mulberry Agronomy	50
	Seri - 106	Paper - VI	Practical based on IV andV.	50

B.Sc.Ist Sericulture (OPT)

**B.Sc. I Semester I**  
**Course Code – SERI-101**  
**Sericulture Theory Paper – I**  
**(General Sericulture)**

Maximum Marks – 50

Total periods – 45

- (1) Introduction to Sericulture – what is Sericulture ? scope of Sericulture- Science of Sericulture.
- (2) Origin and history of Sericulture industry and spread of sericulture to other Countries – silk route/road.
- (3) Systematic position of mulberry and non-mulberry silkworms.
- (4) Type of silkworm and their host plants and their distribution.
- (5) Life history of mulberry and non-mulberry silkworms.
- (6) Outline of different reeling machines and reeling processes.
- (7) Employment Potential in Sericulture. (Direct and indirect)
- (8) Economics of sericulture and comparison of economics of Sericulture with Other important agricultural crops (area specific)
- (9) Role of women in sericulture and women empowerment through Sericulture.
- (10) Introduction to mechanization in sericulture (cultivation and reeling level).
- (11) Introduction to disinfectant materials used in sericulture.

B.Sc.Ist Sericulture (OPT)

**Course Code – SERI – 102**

**Sericulture Theory Paper – II**

**(Sericulture industry and its status)**

Maximum Marks – 50

Total periods – 45

- (1) Status of silk industry in traditional and non traditional States of India .
- (2) Silk industry in India and other countries (Thailand, China, Japan, South Korea, Brazil) – Present Status and Trends of development.
- (3) Organization of sericulture industry in India – Central silk Board and State Directorate of Sericulture.
- (4) Cocoon and raw silk production and its marketing setup in India for mulberry and non-mulberry sector.
- (5) Introduction to seed organization. (Seed cocoon production and silkworm egg Production-hybrid, pure and legislation.)
- (6) Value added products of sericulture industry and its utility. (silkmilk, mulberry as a fodder, mulberry tea, cosmetics and medicines, pupa oil, use of pupa As feed, vermicompost)
- (7) Sericulture Research and development in India.  
-Important of Sericulture research.
- (8) Essential requirements for introduction and development of Sericulture and Agro-climatic conditions and soil types needed.
- (9) Future scope and importance of Sericulture industry with special reference to India.
- (10) Problems and prospects of sericulture in India.

B.Sc.Ist Sericulture (OPT)

**Course Code – SERI-103**

**Paper. III**

**(Based on Theory paper – I and II)**

Maximum Marks -50

Total periods - 15  
Practicals -

- 1) Preparation of map showing distribution of different host plants, their Varieties and sericulture activities.
- 2) Study of different type of silkworms.
- 3) Study of life history stages of different silkworm.
- 4) Study of different host plants of silkworm.
- 5) Identification and study of derier scale.  
Epprovate country charka cottage basin.
- 6) Study of different implements for mechanization in sericulture.  
(Leaf chopping machine, shoot harvesting and mulberry cutting preparation Machine, Humidifier, power spray, duster)
- 7) Study different disinfectants and bed distinflectants used in sericulture industry
- 8) Preparation of Histograms and other graphs of silk and cocoon production in major traditional and non-traditional states of India.
- 9) Identification and study of sericulture products, by-products.  
(Cocoon, silkworm, mulberry tea, pupa, pupa oil cosmetics, Jam, Jelly, wine, Vermicompost handi crafts etc)
- 10) Field –visit –  
Collection and Preparation and submission of herbarium sheets of different host  
Plants and life cycle stages of silkworm.



B.Sc.Ist Sericulture (OPT)

**Course Code - SERI-201**

**Semester – II**

**Sericulture Theory paper IV**

**(Biology and breeding of mulberry)**

Maximum Marks – 50

Total periods – 45

1. Origin and distribution of mulberry and Study of different mulberry Varieties cultivated in India and abroad.
2. Rain fed and irrigated mulberry varieties. (S-13, RFS 1635 Rain fed) and (VI, S-36 Irrigated)
3. Climate condition required for mulberry cultivation.
4. Morphology, taxonomy and anatomy of mulberry plant.
5. Selection of mulberry varieties for plantation.
6. Propagation of mulberry – Asexual and Sexual. (Layering, budding)
7. Role of phyto-hormones in germination and rooting (Auxin and phyto - Hormones)
8. Breeding methods-polyploidy, mutation, hybridization technology.

Total period - 45

B.Sc.Ist Sericulture (OPT)

**Course Code - SERI-202**  
**Semester – II**  
**Sericulture Theory paper V**  
**(Mulberry Agronomy)**

Maximum Marks – 50

Total periods – 45

1. Selection and preparation of land for Mulberry cultivation.
2. Preparation and maintenance of Nursery.
3. Soils suitable for mulberry cultivation.
4. Soil testing improvement measures.
5. Plantation methods and their advantages and disadvantages.
6. Mulberry garden maintenance (Rain fed and irrigated)
  - Garden implements.
  - Irrigation.
  - Water management in dry land.
  - Mannures, fertilizers and their applications.
  - Inter cultivation practices.
  - Planting schedule and methods of pruning with their advantages and disadvantages.
  - Common weeds of mulberry garden and their control.
  - Different methods of leaf harvesting.
7. Study of different foliar spray in mulberry (Micronutrients, plant growth promoters.)
8. Economics of mulberry leaf production.

B.Sc.Ist Sericulture (OPT)

**Course Code - SERI-106**

**Semester – II**

**Sericulture practical paper VI.**

**(Based on Theory paper IV and V.)**

**Maximum Marks – 50**

**Total periods – 15**

**Practicals**

1. External morphology of mulberry plants.
2. Study of different varieties of mulberry with their characteristics features.
3. Morphological studies – Root, stem, branching leaf, flower.
4. Anatomy – stem, root, leaf, bud.
5. Asexual methods of reproduction budding, Layering cutting.
6. Cytological techniques for study of mitosis and meiosis.
7. Soil testing.
8. Preparation of nursery bed and plantation material (cutting)
9. Study of garden implements.
10. Study of plantation methods.
11. Study of diff. methods of pruning.
12. Study of different types of fertilizers and manures, micronutrient and plant growth with hormones.
13. Estimation of leaf yield and harvesting methods.
14. Preparation of flow chart of annual schedule of operation for one acre of irrigated and rain fed garden.

B.Sc.Ist Sericulture (OPT)

**Recommended Books :**

1. Manual on Sericulture, FAO Agricultural Service Bulletins of United Nations.
2. Hand book of Silkworm Rearing by Tazim Fuji Publishing co.Ltd. Tokyo, Japan.
3. Hand book of Practical Sericulture by Ullal and Narsimhanna, CSB, Bangalore
4. Manual of Silkworm Engineering Production by Narsimhanna, CSB, Bangalore.
5. Appropriate Techniques on Sericulture by Jolly S.Manfert, CSB, Bangalore.
6. Text book on Tropical Serriculture by Japan Cooperative Volunteers, Tokyo.
7. CCRTI Bulletins, CSB, Bangalore.
8. Principles of Agronomy by V.T. Subbaiah Mudaliar.
9. Irrigation – Theory and Practice by A.M. Michael.
10. Hand Book on Agriculture, ICAR, New Delhi.
11. Lank and Soil by Rayachaudhri.
12. Agro-cottage Industry Sericulture by Hiware C.J. Daya Publishing House New Delhi.
13. Imms text book of Entomology.
14. Economic Entomology of South India by Ramakrishna Iyyar.
15. Sulabh Reshim Nirmiti (Marathi) by Hiware Chandrashekhar, Contentental Publications, Pune.
16. Sheti Reshmachi (Marathi), by Dr. M.G. Babare. Manjusha Publications, Naldurg.

**JOURNALS**

1. Indian Silk, CSB, Bangalore.
2. Indian Journal of Sericulture, CSB, Bangalore.
3. Annadata, Eenadu Publications, Hydrabad.

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