

S-30th May, 2015 AC after Circulars from Circular No.1 & onwards++ - 42 -

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY**CIRCULAR NO. SU/Sci./B.Sc. Syll./38/2015**

It is hereby inform to all concerned that, on the recommendation of the various Board of Studies, Ad-hoc Boards & Committees, the Hon'ble Vice-Chancellor has accepted the revised semester-wise syllabi on behalf of the Academic Council under Section-14[7] of the Maharashtra Universities Act, 1994 in the Faculty of Science as under :-

Sr. No.	Name of the Subject	Semester
[1]	B.Sc. Polymer Chemistry IInd Year, [Optional]	V & VI
[2]	B.Sc. Networking and Multimedia IInd Year, Three Year Degree Course	V & VI
[3]	B.Sc. Dry Land Agriculture IInd Year, [Optional]	III & IV
[4]	B.Sc. Sericulture IInd Year, [Optional]	III & IV
[5]	B.Sc. Workshop Technology IInd Year, Three Year Degree Course	III & IV
[6]	M.Sc. Botany IInd Year [at college level]	III & IV

This is effective from the Academic Year 2015-16 & onwards as appended herewith.

All concerned are requested to note the contents of the 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 / SCI./
2015/
Date:- 28-07-2015.

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Director,
Board of College and
University Development.

Copy forwarded with compliments to:-

- 1] The Principals, affiliated concerned colleges,
Dr. Babasaheb Ambedkar Marathwada University

Copy to :-

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

Dr. Babasaheb Ambedkar Marathwada University.

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B.Sc.IInd Dryland Agri.

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**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANAGABAD.**



Revised Syllabus of B. Sc. IInd Year

DRYLAND AGRICULTURE

Semester III & IV

[Effective from 2015-16 & onwards]

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B.Sc.IInd Dryland Agri.

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**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANAGABAD.**

**B. Sc. DRYLAND AGRICULTURE
COURSE STRUCTURE IN SEMESTER PATTERN**

B. Sc. IInd Year

Semester	Paper No.	Title of Paper	Lectures	Marks
III	VII (TH)	Soil Conservation	45	50
	VIII (TH)	Rain Water Management	45	50
	IX (PR)	Practical Based on Paper-VII	45	50
	X (PR)	Practical Based on Paper-VIII	45	50
IV	XI (TH)	Soil Conservation	45	50
	XII (TH)	Rain Water Management	45	50
	XIII (PR)	Practical Based on Paper-XI	45	50
	XIV (PR)	Practical Based on Paper-XII	45	50

Note: - For theory paper 1 credit= 15 Periods/ Lectures.
For Practical paper 1 credit=30 Periods / Lectures.

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B. Sc. IInd Dry Land Agriculture (Theory)
Semester III
Paper IX
(Soil Conservation)

Unit-1

- 1) Soil nutrients: - Concept of soil fertility and its evaluation. (10)
- 2) Soil Farming Process:- Soil profile and its development, soil classification.(soil taxonomy) (05)

Unit-2

- 1) Soil Physical properties: - Texture, structure, bulk density, water holding capacity. (15)

Unit-3

- 1) Soil Chemical Properties: - P^H, conductivity, CEC, exchangeable basis, dissolve salts. (08)
- 2) Different types of rain fed soil, their fertility and productivity, potentials and problem. (07)

B.Sc.IInd Dryland Agri.

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B. Sc. IInd Dry Land Agriculture (Theory)
Semester III
Paper X
(Rainwater Management)

Unit-1

- 1) Study of water shade:- Definition, planning and development, water harvesting and recycling of water. (15)

Unit-1

- 1) Rainwater availability and distribution behavior. (07)
- 2) Principles of water conservation:- In-situ moisture conservation, runoff- harvesting, tillage practices to maximize infiltration.(08)

Unit-3

1. Choice of crops and cropping system to enhance rain water conservation. (04)
2. Mulching, Definition, kinds of mulching materials, their availability and efficiency, Role of mulching in rainwater conservation. (08)
3. Socio-economic aspects of rainwater harvesting and use. (03)

B.Sc.IIInd Dryland Agri.

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B. Sc. IInd Dry Land Agriculture (Practical)
Semester III
Paper IX
(Soil Conservation)

- 1) Farm implements (indigenous and improved) and machineries used for field operations, seed bed preparation, sowing, fertilizer Placement, weeding, interculturing, harvesting, threshing, dehuling, insect control, duster and sprays.
- 2) Chemical properties:- PH. Conductivity, cation exchange capacity, exchangeable basic dissolved salts.
- 3) Physical properties:- Particle size distribution, infiltration rate, permeability, available water.
- 4) Fertility related analysis:- Available N. P. K and organic carbon
- 5) Study of soil profile.

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B. Sc. IInd Dry Land Agriculture (Practical)
Semester III
Paper XII
(Rainwater Management)

- 1) Design criteria of different soil water conservation structures.
- 2) Preparation of model water shade plants.
- 3) Design for layout of various water harvesting structures.
- 4) Measures for in situ soil and moisture conservation.

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B. Sc. IInd Dry Land Agriculture (Theory)
Semester IV
Paper XI
(Soil Conservation)

Unit-1

- 1) Soil related problem, their management, salinity, sodacity, alkalinity, water logging diversity, degradation from drainage. (06)
- 2) Land use capability classification. (04)
- 3) Soil erosion:- factors affecting soil erosion, types of soil erosion, methods of soil erosion, control, role of soil erosion problems. (05)

Unit-2

- 4) Development of cropping for soil and water conservation, controlling gullies, terracing, contour bunding, strip cropping, mulching. (07)
- 5) Soil fertility management, fertilizer use, crop residues management, organic and green manuring, integrated nutrient use and supply system. (08)

Unit-3

- 6) Soil and rain water conservation techniques, runoff and its Improvement, development of cropping patterns for soil and water conservation, conservation of soil moisture in Dry Land farming areas. Problem of excess water. Shifting cultivation. (15)

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B. Sc. IInd Dry Land Agriculture (Theory)
Semester IV
Paper XII
(Rainwater Management)

Unit-1

- 1) Water storage system, farm and community ponds, their design. (04)
- 2) Drainage:- types, drainage coefficient planning and layout of field drainage. (06)
- 3) Rain water harvesting for ground water recharge, digging construction and location of percolation tanks. (05)

Unit-2

- 1) Traditional system of rainwater conservation and their improvement through modern systems of rainwater management. (05)
- 2) Rainwater recycling techniques, Drip and Micro sprinkler system pitcher irrigation. (06)
- 3) Choice of water efficient crops, critical periods of irrigation. (04)

Unit-3

- 1) Standard agronomic techniques to improve rainwater use, efficiency, interculturing, weed control, contour cultivation, broad bed and furrow, raised and sunken bed systems. Dead furrow, zing terracing, micro water harvesting techniques for trees. (15)

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B. Sc. IInd Dry Land Agriculture (Practical)
Semester IV
Paper XIII
(Soil Conservation)

- 1) Gravimetric measurement of soil moisture.
- 2) Selection of crops based on water holding capacity.
- 3) Design criteria of different soil conservation structure.
- 4) Identification of various types of soil erosion in the field.
- 5) Cost estimation of gully control contour and graded bunding and terracing.
- 6) Visit to agro farm site.

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B. Sc. IInd Dry Land Agriculture (Practical)
Semester IV
Paper VIX
(Rainwater Management)

- 1) Design for storage structures at appropriate site.
- 2) Planning and development of water shade.
- 3) Surface and sub surface drainage plans and problems on drainage coefficient.
- 4) Visit to model water shade.

B.Sc.IInd Dryland Agri.

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Submitted by-

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