

S-30th May, 2015 AC after Circulars from Circular No.1 & onwards++ - 32 -

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY**CIRCULAR NO.SU/Sci./B.Sc. Syll./31/2015**

It is hereby notified for information to all the 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 in the Faculty of Science as under** on behalf of the Academic Council under Section-14[7] of the Maharashtra Universities Act, 1994 :-

Sr. No.	Name of the Subject	Semester
[1]	B.Sc. Automobile Technology IInd Year, [Three Year Degree Course].	III & IV
[2]	B.Sc. Horticulture IInd Year, [Optional].	III & IV
[3]	B.Sc. Chemistry IIIrd Year, [Optional].	V & VI
[4]	B.Sc. Analytical Chemistry IIIrd Year, [Optional].	V & VI
[5]	B.Sc. Agrochemical & Fertilizer IIIrd Year, [Optional].	V & VI
[6]	B.Sc. Geology IIIrd Year, [Optional].	V & VI
[7]	B.Voc. Multimedia & Animation, [Three Year Degree Course].	I to IV
[8]	B.Voc. [1] Industrial Automation, [2] Automobile & [3] Travel & Tourism, [Three Year Degree Course].	I to VI
[9]	B.Voc. Jewellery Design & Gemology, IInd Year [Three Year Degree Course].	III & IV
[10]	Diploma in Industrial Automation for Community College at University Campus.	

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./
2015/6860-7259
Date:- 08-07-2015.

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Director,
Board of College and
University Development.

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

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Copy forwarded with compliments to:-

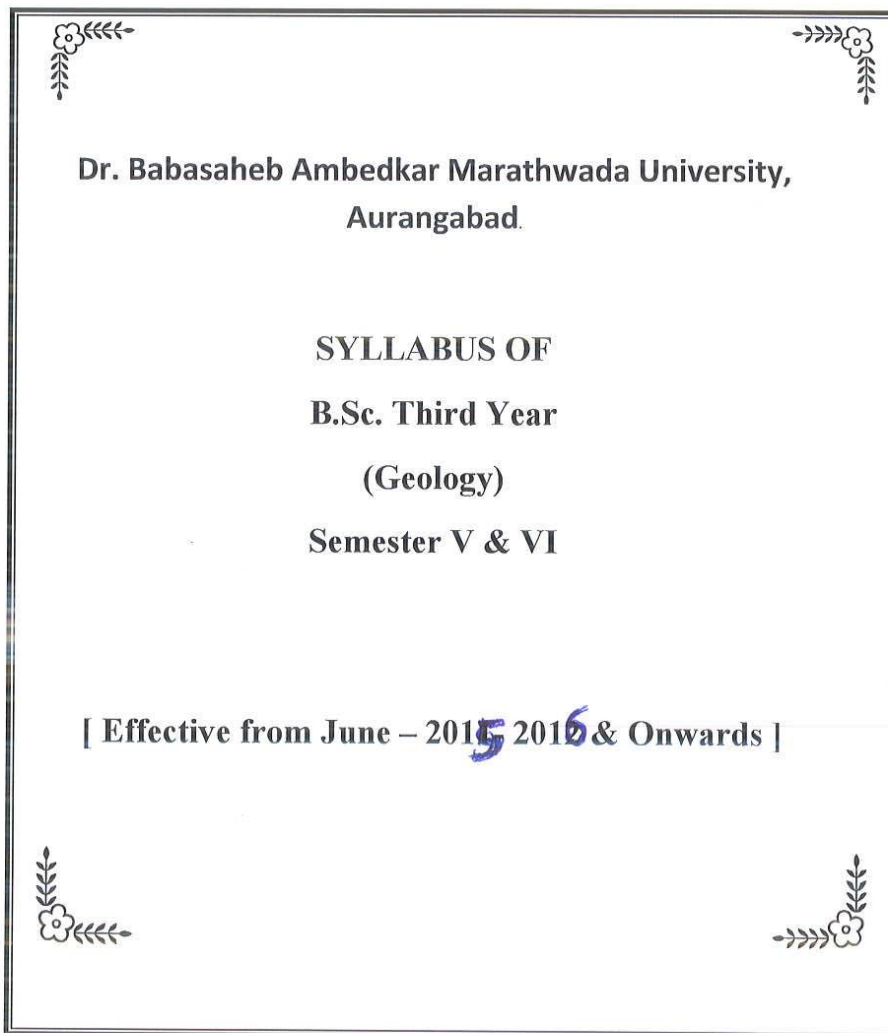
- 1] The Director, C.V.E.T., Dr. Babasaheb Ambedkar Marathwada University Campus, Aurangabad.
- 2] The Principals, affiliated concerned colleges, Dr. Babasaheb Ambedkar Marathwada University

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, [B.C.S. Unit],
 - 5] The Programmer [Computer Unit-1] Examinations,
 - 6] The Programmer [Computer Unit-2] Examinations,
 - 7] The Record Keeper.
- Dr. Babasaheb Ambedkar Marathwada University.

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Dr. Babasaheb Ambedkar Marathwada University

B. Sc. III Year Geology, Semester Vth & VIth

Course Structure

Year	Semester	Paper No.	Title	Hours	Marks
IIIrd	Vth	Paper - XVII	Indian Geology	45	50
		Paper - XVIII	Economic Geology	45	50
		Paper - XXI	Practical - Economic Geology	45	50
		Paper - XXII	Practical -Stratigraphy of Structural Geology	45	50
	VIth	Paper - XIX	Applied Geology – I	45	50
		Paper - XX	Applied Geology – II	45	50
		Paper - XXIII	Practical- Remote Sensing and Engineering Geology	45	50
		Paper - XXIV	Practical - Hydrogeology	45	50

Dr. Babasaheb Ambedkar Marathwada University**B. Sc. III Year Geology, Semester Vth & VIth****Course Structure**

Year	Semester	Paper No.	Title	Hours	Marks
IIIrd	Vth	Paper - XVII	Indian Geology	45	50
		Paper - XVIII	Economic Geology	45	50
		Paper - XXI	Practical - Economic Geology	45	50
		Paper - XXII	Practical -Stratigraphy of Structural Geology	45	50
	Vith	Paper - XIX	Applied Geology – I	45	50
		Paper - XX	Applied Geology – II	45	50
		Paper - XXIII	Practical- Remote Sensing and Engineering Geology	45	50
		Paper - XXIV	Practical - Hydrogeology	45	50

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

B.Sc. – III Year Geology

Semester V

Semester V

Paper XVII

Indian Geology

Sr. No.	Syllabus	No. of lectures
1.	General review of stratigraphical units of Peninsular and Extra peninsular India.	01
2.	Distribution, classification, Lithology, fossil content if any and economic importance of the following major groups of Peninsular and Extra peninsular India.	20
	a) Archaeans:- Sargur, Dharwar and associated Intrusives, Sausar, Sakoli, Chilpighat, Iron ore group, Bundel Khand gneiss, Banded Gneissic complex, Aravalli, Raialo.	06
	b) Cuddapah, Kurnool, Vindhyan, Kaladgi, Kamthee.	03
	c) Gondwanas, Umaria marine beds.	04
	d) Jurassic of Kutch Cretaceous of Tiruchirapalli Cuddalore and Rajahmundry sandstones	04
	e) Deccan traps. Occurrence, Distribution, Lithology Varieties of basalts and their field characters. Intertrappean and Infratrappean beds. Lameta and Bagh beds	03
	f) Geology of Spiti, Geology of Kashmir, Petroliferous formation of Assam.	02
	g) Siwaliks, Mammalian fossils and their extinction.	02
	h) Pleistocene- Karewas of Kashmir.	02
	Total	45

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Aurangabad**

B.Sc. – III Year Geology

Semester V

Paper XVIII

Economic Geology

Sr. No.	Syllabus	No. of lectures
1.	Magma as a source of mineral deposits	02
2.	Processes of formation of Mineral deposits. a) Magmatic concentration b) Metasomatism and Metamorphism c) Hydrothermal Processes. i) Cavity filling deposits ii) Replacement deposits d) Oxidation and Supergene Sulphide enrichment. e) Sedimentation. f) Residual and Mechanical Concentration. g) Evaporation and Sublimation	25
3.	Economic mineral deposits of India. a) Geological, geographical distribution of following mineral deposits. Iron, manganese, Chromites, Copper, Lead, Zinc, Gold, Bauxite, Barytes, Gypsum, Asbestos and Mica. b) Occurrence, formation and distribution of petroleum and natural gas and coal deposits. c) Precious and Semi precious Gemstones	18
	Total	45

Semester VI**Paper XIX****Applied Geology – I**

Sr. No.	Syllabus	No. of lectures
1.	Introduction to various Geoexploration techniques employed in the prospecting of useful human resources in the earth crust	02
2.	Geo-chemical and Geo-botanical method of prospective method Geophysical methods of prospecting a) Gravity method b) Magnetic method c) Seismic reflection method, seismic refraction method d) Electrical resistivity methods e) Radioactive method and	15
3.	Introduction to Remote sensing Remote sensing techniques as employed in surface mapping	05
4.	Well logging and subsurface mapping	02
5.	Impact of Geoexploration on the environment	02
6.	Application of Geology in the construction of major civil Engineering structures	03
7.	Geological investigations for civil Engineering projects and selection of suitable sites such as a) Major dams, reservoirs and tunnels	04
8.	Problems of land slide, stability of slope and effective measures to stop such calamity	03
9.	Engineering properties of rocks	04
10.	Methods of Drilling and techniques of preservation of cores effectively	05
Total		45

Semester VI**Paper XX****Applied Geology – II**

Sr. No.	Syllabus	No. of lectures
1.	Hydrological cycle, concept of Hydrology, Hydrogeology and Geohydrology	02
2.	Hydrological properties of Rocks, Porosity, Permeability, Storativity, Transmissivity, Specific yield, Safe yields, Storage coefficient	10
3.	Aquifers and their classification	04
4.	Movement of Ground Water Darcy's Law	03
5.	Well inventory and preparation of static water level and hydrogeological maps	05
6.	Occurrence of Groundwater in Igneous, sedimentary and metamorphic rocks	
7.	Concept of watershed Management, soil conservation measures, water conservation structures, importance of hydrogeology in watershed development.	10
8.	Hydrogeological characters, occurrence and availability of ground water in Deccan basaltic rocks	04
9.	Hydrochemical parameters of ground water	02
	Total	45

Semester VI

Paper XXI (Practical) Economic Geology

Sr. No.	Syllabus	No. of lectures
A	Identification of following ore industrial minerals in land specimens Magnetite, Hematite, Pyrite, Laterite, Limonite, Goethite, Pyrolusite, Psilomelane, Rhodonite, Rhodrosite, Chalcopyrite, Cuprite, Bornite, Covellite, Chalcocite, Malachite, Azurite, Chromite, Galena, Sphalerite, Bauxite, Stibnite, Cassiterite, Wolframite, Realgar, Orpiment, Baryte, Magnesite, Gypsum, Mica, Talc, Kyanite, Asbestos and Semiprecious Stones.	04
B	Important occurrences of various economics minerals petroleum and coal to be depicted in the map of India	04
C	Normative calculations of saturated rocks	07
Total		15

Paper XXII (Practical) Stratigraphy of Structural Geology

Sr. No.	Syllabus	No. of lectures
A	Depiction of various stratigraphic units in the map of India	05
B	Advanced structural maps, Completion of outcrops	07
C	Depiction of petroliferous basins in the map of India	03
Total		15

Paper XXIII Practical – Remote Sensing and Engineering Geology

Sr. No.	Syllabus	No. of lectures
A	Study of Satellite Imageries. Interpretation of Geomorphological features from the Imageries	05
B	Study of aerial photographs identification of various Geomorphological landforms and their interpretation.	05
C	Feasibility of construction of civil engineering project like dams, tunnel, bridges etc. in the geological maps showing various structural features and selection of suitable sites.	05
	Total	15

Paper XXIV Practical – Hydrogeology

Sr. No.	Syllabus	No. of lectures
A	Groundwater prospecting by Geophysical Resistivity survey	4
B	Hydrogeological problems (Darcy's law etc)	3
C	Well inventory survey & preparation of hydrogeological Maps, lithologs and delineation of Aquifers	5
D	Chemical analysis of water sample	3
	Total	15

List of Books

No.	Title	Author
1	Principal of petrology	Tyrrel
2	Structural Geology	Billing
3	Text. Book of Mineralogy	Dana
4	Rutleys elements of Mineralogy	CD Gribble
5	Economic Geology	Bateman
6	Economic mineral deposits of India	N L Sharma
7	Geology of India	Wadia
8	Engineering and General Geology	Parbingsingh
9	Igneous and Metanorphic petrology	Turner and Verhoogen
10	Mineralogy Petrology & Economic Geology	ISM
11	Ground water Hydrology	Todd
12	A Geology of Engineering	Blyth
13	Geophysical prospecting	Dobrin
14	Photogeology	Lillisand and Kaifer
15	Text Book of Engineering Geology	R B Gupte
16	Remote sensing for Land resources Planning	Sharma V.K.
17	Ground water	Raghunath
18	Geology of India	Krishnan
19	Hand book of minerals, crystals and rocks	Alexander
20	Sedimentary rock	Pettijhon
21	Economic Mineral Deports	Bateman
22	Remote sensing principal & application	Patel A N & Singh
23	Gold mining industry in India	Geological soc. of India
25	Petroleum Geology	Leveresen