

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY



CIRCULAR NO.SU/B.Sc./08/2022

It is hereby inform to all concerned that, the syllabi prepared by the Board of Studies and Ad-hoc Boards with recommendation of the Dean, Faculty of Science & Technology, the Hon'ble Vice-Chancellor has accepted the **following syllabi of Bachelor of Science with Regulation under the scheme of Choice Based Credit & Grading System** in his emergency powers under section 12(7) of the Maharashtra Public Universities Act, 2016 on behalf of the Academic Council as appended herewith.

Sr.No.	Courses	Semester
1.	B.Sc.Electronics(Optional)	Ist and IInd semester (First Year)
2.	B.A./B.Sc.Mathematics(Optional)	Ist and IInd semester (First Year)
3.	B.Sc.Chemistry(Optional)	Ist and IInd semester (First Year)
4.	B.Sc.Physics(Optional)	Ist and IInd semester (First Year)
5.	B.Sc.Analytical Chemistry	Ist and IInd semester (First Year)
6.	B.Sc.Geology (Optional)	Ist to VIth semester (First to Third)

This is effective from the Academic Year 2022-23 and onwards.

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.SU/2022/ 6852-62
Date:- 10.08.2022.

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*Deputy Registrar,
Academic Section*

Copy forwarded with compliments to :-

- 1] **The Principal of all concerned Colleges,**
Dr. Babasaheb Ambedkar Marathwada University,
- 2] **The Director, University Network & Information Centre, UNIC, with a request to upload this Circular on University Website.**

Copy to :-

- 1] **The Director, Board of Examinations & Evaluation, Dr.BAMU,A'bad.**
- 2] The Section Officer,[B.Sc.Unit] Examination Branch,Dr.BAMU,A'bad.
- 3] The Programmer [Computer Unit-1] Examinations, Dr.BAMU,A'bad.
- 4] The Programmer [Computer Unit-2] Examinations, Dr.BAMU,A'bad.
- 5] The In-charge,[E-Suvidha Kendra], Rajarshi Shahu Maharaj Pariksha Bhavan, Dr.BAMU,A'bad.
- 6] The Public Relation Officer, Dr.BAMU,A'bad.
- 7] The Record Keeper, Dr.BAMU,A'bad.

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Choice Based Credit System (CBCS) Curriculum

For

Faculty Of Science And Technology

Course Structure And Scheme Of Examination

B.Sc. Three Year Undergraduate Degree Program

Bsc S.Y.

Semester III

Semester III								
	Course Code	Course Title	Teaching Time/Week	Credits	Scheme Of Examination			
					Max Marks	CIA	UA	Min Marks
Optional I (DSC-1C) Core courses	GEO-311	Physical-Mineralogy and Igneous Petrology (Theory Paper-V)	2 hours	2	50	10	40	20
	GEO-312	Crystallography and Optical mineralogy (Theory Paper-VI)	2 hours	2	50	10	40	20
	GEO-321	Lab Course 3 (based on GEO-311)	3 hours	1.5	50	10	40	20
	GEO-322	Lab Course 4 (based on GEO-312)	3 hours	1.5	50	10	40	20
Skill Enhancement Course (SEC-1)	GEO-313	SEC-1 Any one skill to be chosen out of two SEC-1(A) Identification of Mineral SEC-1 (B) Identification of Rock	2 hours	2	50	10	40	20
	XXX-331	Communication skills in English-III	3 hours	3	50	10	40	20
Ability Enhancement Compulsory Course (AECC-3)	XXX-332	Marathi/Hindi/Urdu/Sanskrit A student can opt for any one of these languages (SL-III)	3 hours	3	50	10	40	20
Additional Credits		Computer ability	2 hours	2*	50	10	40	20
			18	15	350	70	200	140
Total Credits for Semester III : 15 (Theory : 12 : Laboratory : 3)								

Semester : IIIrd

Subject: Geology

Core Course : GEO-313

Paper : Skill Enhancement Course (SEC-1)

Paper Name : SEC-1(A)Identification of Mineral

Sr. No	Topics	Total Periods	Marks
UNIT I	Introduction to Minerals Introduction to rock forming and ore minerals, classification of economic mineral deposits. Formation of minerals: Introduction and description of geological processes of mineral formation, Crystallizations from melt.	10	10
UNIT II	Physical properties of minerals Colour, Streak, Luster, Form or Habit, Cleavage, Fracture, Hardness, Specific Gravity (Sp.gr.) etc.	10	10
UNIT III	Properties of minerals Physical properties, chemical composition, and diagnostic Properties for the identification of minerals. Ore minerals and gangue minerals.	10	10
UNIT IV	Properties, occurrences and distribution of the following minerals Quartz, Milky, Quartz, Smoky quartz, Amethyst, Chalcedony, Agate, jasper, Flint, Opal, Orthoclase, Plagioclase, Biotite, Muscovite, Garnet, Olivine, Hornblende, Apophyllite, Stilbite, Kyanite, Talc, Calcite, Fluorite, Gypsum, Barytes, Magnetite, Haematite, Chromites, Chalcopryite, Galena, Pyrolusite, Bauxite, Graphite.	10	10
UNIT V	Tutorials, seminars and Assignments	05	10

Semester : IIIrd

Subject: Geology

Core Course : GEO-311

Paper : Skill Enhancement Course (SEC-1)

Paper Name : SEC-1 (B) Identification of Rock

Sr. No	Topics	Total Periods	Marks
UNIT I	Introduction to Rocks Introduction to Rock Cycle. Types of Rocks (Igneous, Sedimentary and Metamorphic)	10	10
	Formation of Rocks: (Igneous, Sedimentary and Metamorphic)		
UNIT II	Megascopic Identification of Igneous Rocks Texture, Structure and Classification Discordant and Concordant Bodies. Granite, Basalt, Diorite, Dolerite, Gabbro, Pegmatite, Synite, Trachyte, Dunite, Andesite, Norite and their varieties (Ultrabasic, Basic, Intermediate and Acidic).	10	10
UNIT III	Megascopic Identification of Sedimentary Rocks Texture, Structure and Classification. Sandstone, limestone, Shale, Dolomite, Marl, Breccia and Conglomerate Laterite Bauxite and their Varieties (Clastic, Nonclastic and Residual)	10	10
UNIT IV	Megascopic Identification of Metamorphic Rocks Texture, Structure and Classification Quartzite, Marble, Schist, Gneiss, Slate, Phyllite and their varieties (Type of Metamorphism and Parent Rock)	10	10
UNIT V	Tutorials, seminars and Assignments	05	10

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For

Faculty Of Science And Technology

Course Structure And Scheme Of Examination

B.Sc. Three Year Undergraduate Degree Program

Bsc S.Y.

Semester IV

Semester IV								
	Course Code	Course Title	Teaching Time/Week	Credits	Scheme Of Examination			
					Max Marks	CIA	UA	Min Marks
Optional I (DSC-1D) Core courses	GEO-411	Sedimentary and Metamorphic Petrology (Theory Paper-VII)	2 hours	2	50	10	40	20
	GEO-412	Structural Geology and Paleontology (Theory Paper-VIII)	2 hours	2	50	10	40	20
	GEO-421	Lab Course 5 (based on GEO-411)	3 hours	1.5	50	10	40	20
	GEO-422	Lab Course 6 (based on GEO-412)	3 hours	1.5	50	10	40	20
Skill Enhancement Course (SEC-2)	GEO-413	SEC-2 Any one skill to be chosen out of two SEC-2(C) Geological Mapping SEC-2 (D) Identification of Tectonic feature in field	2 hours	2	50	10	40	20
Ability Enhancement Compulsory Course (AECC-4)	XXX-431	Communication skills in English-IV	3 hours	3	50	10	40	20
	XXX-432	Marathi/Hindi/Urdu/Sanskrit A student can opt for any one of these languages (SL-IV)	3 hours	3	50	10	40	20
Additional Credits		Computer ability	2 hours	2*	50	10	40	20
			18	15	350	70	280	140
Total Credits for Semester IV : 15 (Theory : 12 : Laboratory : 3)								

Semester : IV

Subject: Geology

Core Course : GEO-413

Paper : Skill Enhancement Course (SEC-2)

Paper Name : SEC-2(C) Geological Mapping

Sr. No	Topics	Total Periods	Marks
UNIT I	Reading of Toposheet (Toposheet Number, Scale, Latitude Longitude, Conventional Signs and Symbols)	10	10
UNIT II	Study of Clinometer and Brunton Compass (Dip and Strike)	10	10
UNIT III	Marking location in Toposheet, Bearing (Back and Fore), Concept of Map reading (Contour, Hill, Valley, Highground, Spur, Saddle and Basin)	10	10
UNIT IV	Junction Beds, Horizontal and Inclined Beds, Thickness Of Beds, Discordant and Concordant Bodies, Fold, fault and Unconformity.	10	10
UNIT V	Tutorials, seminars and Assignments	05	10

Semester : IV

Subject: Geology

Core Course : GEO-413

Paper : Skill Enhancement Course (SEC-2)

Paper Name : SEC-2(D) Identification of Tectonic feature in field

Sr. No	Topics	Total Periods	Marks
UNIT I	Introduction to structural geology; Diastrophic and non-diastrorphic structures; Components of structural elements: planar and linear features, concept of dip and strike, trend and plunge, rake/pitch	10	10
UNIT II	Application of primary and secondary structures for determining order of Superposition; Unconformity and its types. In Field as well as by using Models of Structures, Inlier and Outlier, Types of Unconformity.	10	10
UNIT III	Fold, its Morphology and Classification and Fault its Morphology and Classification In Field as well as by using Models of Fold, fault and their Types.	10	10
UNIT IV	Mountain, Volcano and earthquake In Field as well as by using Models, Charts of Mountains, Volcanoes and Earthquake	10	10
UNIT V	Tutorials, seminars and Assignments	05	10