

DEPARTMENT OF GEOLOGY
COURSE CURRICULUM & MARKING SCHEME

B.Sc. I, II, III, IV Semester

GEOLOGY

(Based on Choice Based Credit System)

SESSION : 2025-26



ESTD : 1958

**GOVT. V.Y.T. PG AUTONOMOUS COLLEGE,
DURG, 491001 (C.G.)**

(Former Name – Govt. Arts & Science College, Durg)

NAAC Accredited Grade A⁺, College with CPE - Phase III (UGC), STAR COLLEGE (DBT)

Phone : 0788-2212030

Website - www.govtsciencecollegedurg.ac.in, Email – autonomousdurg2013@gmail.com

Scheme of Papers in B.Sc. I / II / III / IV Semester Geology 2025-26 as per UGCF (NEP 2020)					
Semester	DSC	DSE	SEC	VAC	TOTAL CREDITS OF SEMESTER
B.Sc. I Sem	Fundamentals of Geology (3T+1P=4C)			VAC for Geology - Disaster Management (2C)	20
B.Sc. II Sem	Essentials of Geology (3T+1P=4C)		Rainwater Harvesting (2C)		20
B.Sc. III Sem	Igneous and metamorphic petrology (3T+1P=4C)	Earth and Climate (3T+1P=4C)			20
B.Sc. IV Sem	Sedimentary Petrology & Crustal Evolution (3T+1P=4C)	Environmental Geology (3T+1P=4C)			20

Chairperson /H.O.D

Subject Expert

Subject Expert

Subject Expert

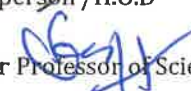
Senior Professor of Science Faculty

Departmental members

Alumnus

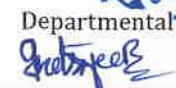
Student

Four Year Undergraduate Program
Semester I Geology
Session 2025-26
DSC : Fundamentals of Geology


Chairperson /H.O.D

Senior Professor of Science Faculty


Subject Expert


Subject Expert

Departmental members


Subject Expert

Alumnus

Student

FOUR YEAR UNDERGRADUATE PROGRAM

DEPARTMENT OF GEOLOGY

COURSE CURRICULUM

PART-A:Introduction			
Program: Bachelor in Geology (Certificate/Diploma/Degree)		Semester: I	
		Session: 2025-2026	
1	Course Code	DSC-GESC-01T	
2	Course Title	Fundamentals of Geology	
3	Course Type	Discipline Specific Course (Theory)	
4	Pre-requisite(if any)	As per Government norms	
5	Course Learning Outcomes (CLO)	After success fully completing this course, the students will be able to: 1.Understand basics of Geology, Solarsystem and internal structure of the Earth, origin and age of the Earth 2.Underst and the theories of continental drift and plate tectonics 3. Understand causes and effects of earthquakes and explain weathering and its products 4.Describe concepts of geomorphology and landforms developed by various geological agencies 5. Explain about the physiographic and tectonic divisions of India	
6	Credit Value	3 Credits	(Credit=15hours-learning&observation)
7	Total Marks	Max.Marks:100(70+30)	Min. Passing Marks : 40
PART-B:CONTENT OFTHE COURSE			
Total No. of Teaching-learning Periods (01hour per period)-45 Periods(45 Hours)			
Unit	Topics(Course Contents)		No. of Period
I	General Geology& Geodynamics: Introduction to Geology; Geology and its relation with other branches of science; Earth and solar system; Theories regarding origin and age of the Earth; Shape and structure of the Earth; Introduction to Continental Drift, Sea-floor spreading & Plate Tectonics. Introduction to Geomorphology: Definition of Geomorphology; Erosional & Depositional features of various Geomorphological Agents (River, Wind and Glacial).		15
II	Structural Geology: Its definition; Attitude of Beds (Dip and Strike). Introduction to Fold, Fault and Joints. Economic Geology: Its definition, Introduction to important Indian mineral deposits (metallic and non-metallic). Introduction to important ore forming processes (magmatic, hydrothermal, supergene sulphide enrichment, mechanical concentration)		15
III	Stratigraphy: Its definition, Principles of Stratigraphy, Types of Correlation, Geological Time Scale. Palaeontology: Its definition, Fossil, Mode of Preservation, Uses of Fossil, Index Fossil		15
IV	Applied Geology: Definition and Scope of Hydrogeology. Definition and Scope of Engineering Geology. Definition and Scope of Mining Geology. Definition and Scope of Environmental Geology, Definition and Scope of Mineral Exploration		15

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Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members

Alumnus

Student

Part-C	
Learning Resource: Text Books, Reference Books, Others	
Text Books Recommended-	
- भौतिक-भूविज्ञान- डॉ. मुकुल घोष - भौतिक-भूविज्ञान- डॉ. जे .पी. तिवारी एव बी.सिंह .के . - भूआकृति विज्ञान- डॉ.सविन्द्रसिंह . - भूविज्ञान एक परिचय .विद्यासागर दुबे .डॉ - - भूगतिकी एिं भूआकृति विज्ञान- डॉ. दीपकराज तिवारी - Holmes,A. DorisLHolmesEdit., Principles of Physical Geology, Van Nostrand Reinhold, 1978. - Mahapatra,G.B., Textbook of Physical Geology, CBS, India, 2018 - Mathur,S.M., Physical Geology of India, NBT India,1991 - Miller, WilliamJ., Physical Geology: An Introduction. D Van Nostrand Co., 5th Ed., 1949 - Mukerjee,P.K., Text Book of Geology. World Press Private Ltd, 2013. - Thornbury,W.D., Principles of Geomorphology. New Age International, 2nd Edition, 196 12.	
Principles of Geomorphology: A.F. Ahmad	
E-resources	
https://opentextbc.ca/physicalgeology2ed/front-matte/rdownload-a-pdf/ https://archive.org/details/in.ernet.dli.2015.233340/page/n15/mode/2up https://egyankosh.ac.in/ https://sites.google.com/ignou.ac.in/bscgeology - SWAYAM-https://swayam.gov.in/explorer?searchtext - Nationaldigitallibraryhttps://ndl.iitkgp.ac.in - e-PGpathshala (MHRD)portal, https://egpg.inflibnet.ac.in	

PART-D: Assessment and Evaluation- Theory		
Suggested Continuous Evaluation Methods:		
Maximum Marks: 100Marks		
Continuous Internal Assessment(CIA): 30Marks		
End Semester Exam (ESE): 70 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/Quiz-(2):20+20 Assignment/Seminar -10 Total Marks -30	Better marks out of the two Test/ Quiz+ obtained marks in Assignment shall be considered against 30 Marks
End Semester Exam (ESE):	Two section- A&B SectionA:Q1.Objective-10x1=10Mark;Q2.Short answertype-5x4 =20Marks SectionB: Descriptive answer type questions, 1 out of 2 from each unit- 4x10=40 Marks	

 Chairperson /H.O.D
 Subject Expert
 Subject Expert
 Senior Professor of Science Faculty
 Departmental members
 Alumnus
 Student

PART-A:Introduction				
Program: Bachelor in (Certificate/Diploma/Degree)		Semester: I		Session: 2025-2026
1	Course Code	DSC-GESC-01P		
2	Course Title	Fundamentals of Geology		
3	Course Type	Discipline Specific Course (Practical)		
4	Pre-requisite(if any)	As per Government norms		
5	Course Learning Outcomes(CLO)	After successfully completing this course, the students will be able to: 1) Identify and describe various landforms in geomorphologic models. 2) Interpret topographical maps		
6	Credit Value	1Credit	(Credit=30 hours Laboratory or Field learning/ Training)	
7	Total Marks	Max. Marks:50		Min Passing Marks: 20
Part B: Content of the Course				
Total No. of learning-Training/performance Periods: 30Periods (30 Hours)				
Module	Topics(Course contents)			No. of Period
Lab./Field Training/ Experiment Contents of Course,	1. Physical properties of minerals. 2. Introduction to Clinometer Compass and its use. 3. Study of Geomorphological Models.			30

Chairperson /H.O.D

Subject Expert

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Subject Expert

Senior Professor of Science Faculty

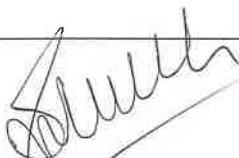
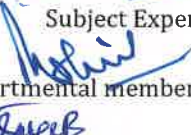
Departmental members

Alumnus

Student

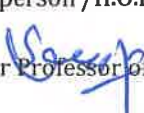
Part-C	
Learning Resource: Text Books, Reference Books, Others	
Text Books Recommended-	
- भौतिक-भूविज्ञान- डॉ. मुकुल घोष - भौतिक-भूविज्ञान- डॉ. जेपी .. तिवारी एव बी.सिंह .कें . - भूआकृति विज्ञान- डॉसविन्द्रसिंह . - भूविज्ञान एक परिचय .विद्यासागर दुबे .डॉ - - भूगतिकी एिं भूआकृति विज्ञान- डॉ. दीपकराज तिवारी	
- Holmes,A.DorisL.HolmesEdit.,PrinciplesofPhysicalGeology,VanNostrand Reinhold, 1978. - Mahapatra,G.B.,TextbookofPhysicalGeology,CBS,India,2018 - Mathur,S.M.,PhysicalGeologyofIndia,NBTIndia,19919.Miller,WilliamJ., Physical Geology: An Introduction. D Van Nostrand Co., 5th Ed., 1949 - Mukerjee, P.K., Text Book of Geology. World Press Private Ltd, 2013. - Thornbury,W.D.,PrinciplesofGeomorphology.NewAgeInternational,2ndEdition, 196 12. Principles of Geomorphology: A.F. Ahmad	
E-resources	
https://opentextbc.ca/physicalgeology2ed/front-matte/rdownload-a-pdf/ https://archive.org/details/in.ernet.dli.2015.233340/page/n15/mode/2up https://egyankosh.ac.in/ https://sites.google.com/ignou.ac.in/bscgeology - SWAYAM-https://swayam.gov.in/explorer?searchtext - Nationaldigitallibraryhttps://ndl.iitkgp.ac.in - e-PG pathshala (MHRD)portal, https://egpg.inflibnet.ac.in	

PART-D:Assessment and Evaluation- Practical			
Suggested Continuous Evaluation Methods:			
Maximum Marks: 50 Marks			
Continuous Internal Assessment (CIA):15Marks End Semester Exam (ESE): 35 Marks			
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar+Attendance-05 Total Marks -15	Better marks out of the two Test/ Quiz + obtained marks in Assignment shall be considered against 15 Marks	
End Semester Exam (ESE):	Laboratory/Field Skill Performance: On spot Assessment A. Performed the Task based on lab. work -20 Marks B. Spotting based on tools & technology (written)-10Marks C. Viva-voce (based on principle/ technology) -05Marks	Managed by Course teacher as Per lab. status	

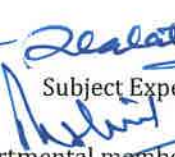
 Chairperson /H.O.D
 Subject Expert
 Subject Expert
 Subject Expert
Senior Professor of Science Faculty
Departmental members
Alumnus
Student

Four Year Undergraduate Program
Semester II Geology
Session 2025-26
DSC : Essentials of Geology


Chairperson /H.O.D


Senior Professor of Science Faculty


Subject Expert

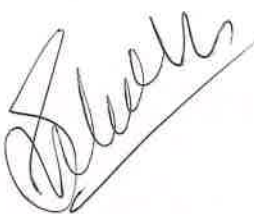

Departmental members

Alumnus

Subject Expert

Student

PART-A:Introduction				
Program: Bachelor in Geology (Certificate/Diploma/Degree)		Semester: II		Session:2025-2026
1	Course Code	DSC-GESC-02T		
2	Course Title	Essentials of Geology		
3	Course Type	Discipline Specific Course (Theory)		
4	Pre-requisite(if any)	As per Government norms		
5	Course Learning Outcomes(CLO)	After successfully completing this course, the students will be able to: 1. Explain about the basics of crystallography, various crystal forms, crystallographic axes and symmetry elements. 2. Describe various forms of normal classes of various crystal systems. Classify the minerals in various silicate groups and explain their varieties. 3. Describe the physical properties of various minerals. 4. Describe the optical characteristics of various minerals.		
6	Credit Value	3 Credits	(Credit=15hours-learning&observation)	
7	Total Marks	Max.Marks:100(70+30)		Min Passing Marks : 40
PART-B: CONTENT OF THE COURSE				
Total No. of Teaching-learning Periods(01 hour per period)-45 Periods(45 Hours)				
Unit	Topics(Course Contents)			No. of Period
I	Mineralogy: Definition of Mineral, Mineral Classification (Ore forming, rock forming, metallic & Non-metallic etc.). Physical, chemical and optical properties of minerals.			15
II	Crystallography: Definition of Crystal, Crystal Lattice, Classification of Crystal System. Silicate Structure and its types along with mineral examples.			15
III	Petrology: Rock Cycle. Types and Mode of formation of different Rocks (Igneous, Metamorphic and Sedimentary) and their properties. Texture and Structure of Igneous, Metamorphic and Sedimentary rocks.			15
IV	Tabular Classification Igneous Rocks. Classification of Sedimentary Rocks: Clastic, non-Clastic and Biogenic. Types and Agents of Metamorphism.			15



Chairperson /H.O.D



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Senior Professor of Science Faculty

Departmental members

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Part-C

Learning Resource: Text Books, Reference Books, Others

1. खनिज तथा क्रिस्टलविज्ञान -डॉ.बी.सी.जैश
2. खनिज विज्ञान के सिद्धान्त डॉ.ए.पी. अग्रवाल
3. प्रकाशीय खनिज विज्ञान के मूल तत्व - विंचेल
4. खनिज तथा क्रिस्टल विज्ञान -डॉ. दीपकराज तिवारी
5. Gribble,C.D.Rutley'sElementsofMineralogy.CBS,2005.
6. FordW.E.;Dana'sTextBookofMineralogy.CBS,2006.
7. Perkins,D.;Mineralogy,PrenticeHallIndia,3rded.2012.
8. Rathore, B.S.; Basics of Crystallography, Mineralogy and Geochemistry. Notion Press in dia,2020
9. Sharma, R.S. and Sharma, Anurag; Crystallography and Mineralogy- Concepts and Methods. Geol. Soc. Ind., Bengaluru, 2013.

e-resources:

1. <https://www.mindat.org>
2. <https://www.mooc-list.com/tags/minerals>
3. <https://epgp.inflibnet.ac.in/Home>
4. <https://archive.org/details/in.ernet.dli.2015.233340/page/n15/mode/2up>
5. <https://egvankosh.ac.in/>
6. <https://sites.google.com/ignou.ac.in/bscgeology>
7. SWAYAM-<https://swayam.gov.in/explorer?searchtext>
8. National digital library <https://ndliitkgp.ac.in>
9. e-P Gpathshala (MHRD)portal, <https://epgp.inflibnet.ac.in>

PART-D:Assessmentand Evaluation-Theory

Suggested Continuous Evaluation Methods:

Maximum Marks: 100Marks

Continuous Internal Assessment (CIA): 30Marks

End Semester Exam (ESE): 70 Marks

Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/Quiz-(2):20+20 Assignment/Seminar- 10 TotalMarks-30	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against 30 Marks
End Semester Exam (ESE):	Two section- A&B SectionA:Q1.Objective-10x1=10Mark;Q2.Short answertype-5x4 =20Marks Section B: Descriptive answer type questions, 1outof2 from each unit-4x10=40 Marks	

Chairperson /H.O.D

Subject Expert

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Senior Professor of Science Faculty

Departmental members

Alumnus

Student

PART-A:Introduction			
Program: Bachelor in (Certificate/Diploma/Degree)		Semester: I	
		Session:2025-2026	
1	Course Code	DSC-GESC-02P	
2	Course Title	Essentials of Geology	
3	Course Type	Discipline Specific Course (practical)	
4	Pre-requisite(if any)	As per Government norms	
5	Course Learning Outcomes(CLO)	After successfully completing this course, the students will be able to: 1. Understand the megascopic properties of Quartz and Feldspar group of minerals 2. Understand the megascopic properties of pyroxene group of minerals 3. Understand megascopic properties of Amphibole group of minerals 4. Describe the megascopic properties of olivine and Mica group of Minerals. 5. Describe microscopic identification of minerals. 6. Identify the various crystal Systems and Symmetry through crystal models 7. Assess the miller Indices of the crystal models 8. Identify Twinning in crystals.	
6	Credit Value	1Credit	(Credit=30hoursLaboratoryorFieldlearning/ Training)
7	Total Marks	Max.Marks:50	Min Passing Marks: 20
PartB:Contentofthe Course			
Total No. of learning- Training/performance Periods:30 Periods (30 Hours)			
Module	Topics(Course contents)		No. of Period
Lab./Field Training/ Experiment Contents of Course	1) Microscopic study of minerals and rocks. 2) Plotting of important mineral deposits on the outline map of India.		30


Chairperson /H.O.D


Subject Expert


Subject Expert

Subject Expert

Senior Professor of Science Faculty

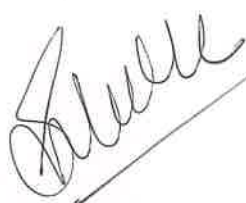
Departmental members

Alumnus

Student

Part-C	
Learning Resource: Text Books, Reference Books, Others	
1. खनिज तथा क्रिस्टलविज्ञान -डॉ.बी.सी.जैश 2. खनिज विज्ञान के सिद्धान्त डॉ.ए.पी. अग्रवाल 3. प्रकाशीय खनिज विज्ञान के मूल तत्व - विंचेल 4. खनिज तथा क्रिस्टल विज्ञान -डॉ. दीपकराज तिवारी 5. Gribble, C.D. Rutley's Elements of Mineralogy. CBS, 2005. 6. Ford W.E.; Dana's Text Book of Mineralogy. CBS, 2006. 7. Perkins,D.; Mineralogy, Prentice Hall India, 3rded. 2012. 8. Rathore, B.S.; Basics of Crystallography, Mineralogy and Geochemistry. Notion Press India, 2020 9. Sharma, R.S. and Sharma, Anurag; Crystallography and Mineralogy- Concepts and Methods. Geol. Soc. Ind., Bengaluru, 2013.	
e-resources:	
10. https://www.mindat.org 11. https://www.mooc-list.com/tags/minerals 12. https://epgp.inflibnet.ac.in/Home 13. https://archive.org/details/in.ernet.dli.2015.233340/page/n15/mode/2up 14. https://egyankosh.ac.in/ 15. https://sites.google.com/ignou.ac.in/bscgeology 16. SWAYAM-https://swayam.gov.in/explorer?searchtext 17. National digital library https://ndl.iitkgp.ac.in 18. e-PG pathshala(MHRD)portal, https://epgp.inflibnet.ac.in	

PART-D:AssessmentandEvaluation-Practical			
Suggested Continuous Evaluation Methods:			
Maximum Marks: 50Marks			
Continuous Internal Assessment (CIA): 15 Marks End			
Semester Exam (ESE): 35 Marks			
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar+Attendance-05 Total Marks -15	Better marks out of the two Test/ Quiz + obtained marks in Assignment shall be considered against 15 Marks	
End Semester Exam (ESE):	Laboratory/Field Skill Performance: On spot Assessment A. Performed the Task based on lab. work -20 Marks B. Spotting based on tools & technology (written) -10Marks C. Viva-voce(based on principle/technology) -05Marks		Managed by Course teacher as Per lab. status


Chairperson /H.O.D


Subject Expert


Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members

Alumnus

Student

Four Year Undergraduate Program
Semester II Geology
Session 2025-26
SEC: Rainwater Harvesting



Chairperson /H.O.D

Senior Professor of Science Faculty



Subject Expert

Departmental members



Subject Expert

Alumnus

Subject Expert

Student

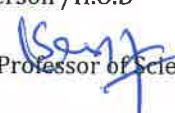
PART-A:Introduction				
Program: Bachelor in..... (Certificate/Diploma/Degree)		Semester: II		Session:2025-2026
1	Course Code	GESEC-01		
2	Course Title	RAIN WATER HARVESTING		
3	Course Type	Skill Enhancement Course (Theory)		
4	Pre-requisite(if any)	As per Government norms		
5	Course Learning Outcomes(CLO)	On completion of Course, the students should be able to 1. Define key rain water harvesting concepts, terms, and principles 2. Assess a site for rainwater harvesting potential and water uses 3. Make strategic decisions about what features and systems to use for a site 4. Design a conceptual integrated rain water harvesting plan for a site 5. Refine a conceptual rainwater harvesting plan With relevant systems details		
6	Credit Value	2 Credits	(Credit=30hours-learning&observation)	
7	Total Marks	Max. Marks: 50(35+11)		Min Passing Marks: 20
PART-B:CONTENTOFTHECOURSE				
Total No. of Teaching-learning Periods (01 hour per period)-30 Periods (30Hours)				
Unit	Topics (Course Contents)			No. of Period
I	1) Water and its distribution 2) Water cycle 3) Rain Water Harvesting–Concepts &Terms 4) Rain Water Harvesting system			11
II	1) Selection Procedure for Rain Water Harvesting Site 2) Rain Water Runoff, Runoff Coefficient, Infiltration 3) Roof Rain Water Harvesting system 4) Government Policies regarding Rain Water Harvesting system			11


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Subject Expert


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Senior Professor of Science Faculty


Departmental members

Alumnus

Student

Part -C	
Learning Resource: Text Books, Reference Books, Others	
Text Books Recommended -	
1. CPWD Rain Water Harvesting & Conservation Manual –2022 Prabhakar Singh A Puri Publication	
2. Rain water Harvesting for Dry lands and Beyond, Volume 1,3 rd edition” Rain source Press.2019Lancaster,Brad	
3. Rainwater Harvesting : In Urban Centers within the Hard Rock Terrain of the Deccan Basalt of India, Dr. Anil Lalwani Springer International Publishing AG2021	
Online Resources	
http://www.rainwaterharvesting.org/	

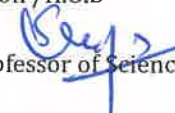
PART-D:Assessment and Evaluation-Theory		
Suggested Continuous Evaluation Methods:		
Maximum Marks:		
	50Marks	
Continuous Internal Assessment (CIA):	15Marks	
End Semester Exam (ESE):	35Marks	
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/ Quiz-(2): 5+5 Assignment/ Seminar- 5 Total Marks- 30	Better marks out of the two Test/ Quiz + obtained marks in Assignment shall be considered against 15 Marks
End Semester Exam (ESE):	Two section–A&B Section A: Q1.Objective –10 x1=10 Mark; Q2.Shortanswertype - 5x2=10Marks Section B: Descriptive answer type questions, 3 out of 5 from each unit- 3x5=15 Marks	

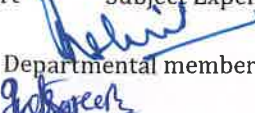

Chairperson /H.O.D


Subject Expert


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Senior Professor of Science Faculty


Departmental members

Alumnus

Student

Four Year Undergraduate Program
Semester III Geology
Session 2025-26
DSC : Igneous and Metamorphic Petrology


Chairperson /H.O.D

Senior Professor of Science Faculty


Subject Expert

Departmental members


Subject Expert

Alumnus

Subject Expert

Student

PART-A:Introduction				
Program: Bachelor in Geology (Certificate/Diploma/Degree)		Semester: III		Session:2025-2026
1	Course Code	DSC-GESC-03T		
2	Course Title	Igneous And Metamorphic Petrology		
3	Course Type	Discipline Specific Course (Theory)		
4	Pre-requisite(if any)	As per Government norms		
5	Course Learning Outcomes(CLO)	On completion of Course, the students should be able to - 1. Discuss about the formation of igneous rocks, their texture and structures 2. Explain about forms and classification of igneous rocks 3. Explain about the formation of metamorphic rocks, their texture and structure 4. Identify and classify various types of metamorphic rocks. 5. Explain the concept of metamorphic facies, ACF, AKF and AFM diagrams.		
6	Credit Value	3 Credits	(Credit=15hours-learning & observation)	
7	Total Marks	Max.Marks:100 (70+30)		Min Passing Marks : 40
PART-B:CONTENT OFTHE COURSE				
Total No. of Teaching-learning Periods(01 hour per period)-45 Periods(45 Hours)				
Unit	Topics(Course Contents)			No. of Period
I	Igneous petrology: 1) Magma-Definition, Origin, Composition 2) Bowen's Reaction series 3) Magmatic Differentiation & Assimilation 4) Bicomponent Magma- i) Albite- Anorthite System ii) Diopside Anorthite System 5) Tricomponent- Diopside- Anorthite- Albitesystem			15
II	Igneous Petrology: 1) Texture, Structure, Forms of Igneous rock 2) Classification of Igneous rock 3) Petrography of Acidic Igneous rock 4) Petrography of Intermediate Igneous rock 5) Petrography of Basic and Ultrabasic Igneous Rock			15
III	Metamorphic Petrology: 1) Metamorphosism -Definition & Agents 2) Metamorphosism -FaciesandGrades 3) Texture and structure of metamorphic rocks 4) Classification of metamorphic rocks 5) Paragenetic Diagram, ACF and AKF			15
IV	Metamorphic Petrology: 1) Thermal Metamorphism of Argillaceous rock 2) Thermal Metamorphism of Impure Lime stone 3) Metamorphism of Basic Igneous rock 4) Paired Metamorphism 5) Petrography of Slate, Phyllite, Schist, Gneiss, Marble, Quartzite, Amphibolite, Khondalite, Charnoknite			15

Chairperson / H.O.D

Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members

Alumnus

Student

Part-C	
Learning Resource: Text Books, Reference Books, Others	
(1) शैलिकी के सिद्धान्त - डॉ अंबिका प्रसाद अग्रवाल (2) शैलिकी के सिद्धान्त - ए. जी. झोंगरन (3) Principles of petrology G.W. Tyrell (4) Petrology-H. William, F.J. Turner & E.M. Gilbert (5) Petrology of igneous & metamorphic rocks of India-S.C. Chattarjee (7) Metamorphism & Metamorphic rocks of India-S. Ray 8) Principles of igneous and metamorphic petrology John D. Winter E-resources 1. https://epgp.inflibnet.ac.in/Home 2. https://archive.org/details/in.ernet.dli.2015.233340/page/n15/mode/2up 3. https://egyankosh.ac.in/ 4. https://sites.google.com/ignou.ac.in/bscgeology 5. SWAYAM-https://swayam.gov.in/explorer?searchtext 6. National digital library https://ndli.itknp.ac.in 7. e-PG pathshala(MHRD) portal, https://epgp.inflibnet.ac.in	

PART-D: Assessment and Evaluation -Theory		
Suggested Continuous Evaluation Methods:		
Maximum Marks:	100 Marks	
Continuous Internal Assessment (CIA):	30 Marks	
End Semester Exam (ESE):	70 Marks	
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/Quiz-(2):20+20 Assignment/Seminar- 10 Total Marks-30	Better marks out of the two Test / Quiz+ obtained marks in Assignment shall be considered against 30 Marks
End Semester Exam (ESE):	Two section- A & B Section A: Q1.Objective-10x1= 10Mark; Q2. Short answer type-5x4 =20 Marks Section B: Descriptive answer type questions, 1 out of 2 from each unit- 4x10=40Marks	


Chairperson /H.O.D


Subject Expert


Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members

Alumnus

Student

PART-A: Introduction			
Program: Bachelor in (Certificate/Diploma/Degree)		Semester: III	
		Session:2025-2026	
1	Course Code	DSC-GESC-03P	
2	Course Title	IGNEOUS AND METAMORPHIC PETROLOGY	
3	Course Type	Discipline Specific Course (practical)	
4	Pre-requisite(if any)	As per Government norms	
5	Course Learning Outcomes (CLO)	On completion of Course, the students should be able to- 1. Identify the igneous, and metamorphic rocks in hand specimens and thin sections.	
6	Credit Value	1Credit	(Credit=30hoursLaboratoryorFieldlearning/ Training)
7	Total Marks	Max.Marks:50	Min Passing Marks: 20
Part B: Content of the Course			
Total No. of learning- Training/performance Periods: 30 Periods (30 Hours)			
Module	Topics(Course contents)		No. of Period
Lab./Field Training/ Experiment Contents of Course,	1) Diagrammatic representation of various forms of igneous & Metamorphic rocks 2) Diagrammatic representation of various structures of igneous & Metamorphic rocks		30

Chairperson /H.O.D

Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

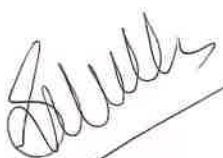
Departmental members

Alumnus

Student

Part-C	
Learning Resource: Text Books, Reference Books, Others	
• शैलिकी के सिद्धान्त - डॉ अंबिका प्रसाद अग्रवाल • शैसलकी के सिद्धान्त - ए जी झीगरन • Principles of petrology G.W.Tyrell • Petrology-H.William, F.J.Turner & E.M.Gilbert • Petrology of igneous & metamorphic rocks of India-S.C. Chattarjee • Metamorphism& Metamorphic rocks of India-S.Ray • Principles of igneous and metamorphic petrology john D. winter	
E-resources • https://epgp.inflibnet.ac.in/Home • https://archive.org/details/in.ernet.dli.2015.233340/page/n15/mode/2up • https://egyankosh.ac.in/ • https://sites.google.com/ignou.ac.in/bscgeology • SWAYAM-https://swayam.gov.in/explorer?searchtext • National digital library https://ndl.iitkgp.ac.in • e-PGpathshala(MHRD)portal,https://epgp.inflibnet.ac.in	

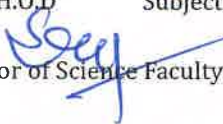
PART-D:Assessment and Evaluation-Practical			
Suggested Continuous Evaluation Methods: Maximum Marks: 50Marks Continuous Internal Assessment (CIA):15 Marks End Semester Exam (ESE): 35 Marks			
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar+Attendance-05 Total Marks -15	Better marks out of the two Test/ Quiz + obtained marks in Assignment shall be considered against 15 Marks	
End Semester Exam (ESE):	Laboratory/Field Skill Performance: On spot Assessment A. Performed the Task based on lab. work -20 Marks B. Spotting based on tools & technology (written) -10Marks C. Viva-voce(based on principle/technology) -05Marks	Managed by Course teacher as Per lab. status	


Chairperson /H.O.D


Subject Expert


Subject Expert


Subject Expert


Senior Professor of Science Faculty


Departmental members


Alumnus

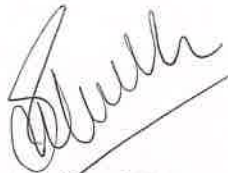
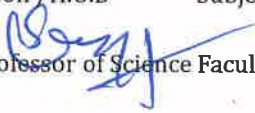
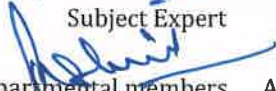
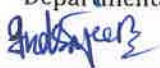

Student

Four Year Undergraduate Program

Semester III Geology

Session 2025-26

DSE: Earth and Climate.

			
Chairperson /H.O.D	Subject Expert	Subject Expert	Subject Expert
			
Senior Professor of Science Faculty	Departmental members	Alumnus	Student

Part A Introduction			
Program: Diploma Course		Class: B.Sc. III Semester	Year: 2025 Session: 2025-2026
S.No.			
1	Course Code	GESE-- 01T	
2	Course Title	Earth and Climate.	
3	Course Type	Discipline Elective Course.	
4	Pre-requisite (if any)	As per institutional guidelines.	
5	Course Learning Outcomes (CLO)	On completion of Course, the students should be able to - Understand the climate and its effect. Understand the Atmosphere, Biosphere and Hydrosphere.	
6	Credit Value	Theory : 03	
7	Total Marks	Max. Marks: 100=70TH + 30 Internal assessment	Minimum Passing Marks : 40

Part B Content of the Course		
Total Lectures: 45		
Unit	Topics	No. of Lectures
I	Climate system: Forcing and Responses Components of the climate system Climate forcing, Climate controlling factors , Climate system response, response rates and interactions within the climate system, Feedbacks in climate system.	11
II	Heat budget of Earth, Incoming solar radiation, receipt and storage of heat. Heat transformation Earth's heat budget. Interactions amongst various sources of earth's heat	11
III	Atmosphere-Hydrosphere Layering of atmosphere and atmospheric Circulation Atmosphere and ocean interaction and its effect on climate, Heat transfer in ocean Global oceanic conveyor belt and its control on earth's climate. Surface and deep circulation Sea ice and glacial ice.	11
IV	Response of biosphere to Earth's climate Climate Change: natural vs. anthropogenic effects Humans and climate change ,Future perspectives Brief introduction to archives of climate change Archive based climate change data from the Indian continent Monsoon, Mechanism of monsoon Monsoonal variation through time Factors associated with monsoonal intensity, Effects of monsoon	12

Chairperson /H.O.D

Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members Alumnus

Student

Part C
Learning Resources

1. Rudiman, W.F., 2001. Earth's climate: past and future. Edition 2, Freeman Publisher.
2. Rohli, R.V., and Vega, A.J., 2007. Climatology. Jones and Barlett
3. Lutgens, F., Tarbuck, E., and Tasa, D., 2009. The Atmosphere: An Introduction to Meteorology. Pearson Publisher
4. Aguado, E., and Burt, J., 2009. Understanding weather

E-resources

1. <https://epgp.inflibnet.ac.in/Home>
2. <https://archive.org/details/in.ernet.dli.2011.233340/page/n111/mode/2up>
3. <https://egyankosh.ac.in/>
4. <https://sites.google.com/ignou.ac.in/bscgeology>
5. SWAYAM – <https://swayam.gov.in/explorer?searchtext>
6. National digital library – <https://ndl.iitkgp.ac.in>
7. e-PG pathshala (MHRD) portal, <https://epgp.inflibnet.ac.in>

PART-D: Assessment and Evaluation-Theory

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 Marks
 Continuous Internal Assessment (CIA): 30 Marks End
 Semester Exam (ESE): 70 Marks

Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/Quiz-(2) :20+20 Assignment/Seminar- 10 Total Marks-30	Better marks out of the two Test/Quiz+ obtained marks in Assignment shall be considered against 30 Marks
End Semester Exam (ESE):	Two section– A&B Section A: Q1. Objective–10x1=10 Mark; Q2. Short answer type–5x4=20 Marks Section B: Descriptive answer type questions, 1 out of 2 from each unit–4x10=40 Marks	

Chairperson /H.O.D.

Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members

Alumnus

Student

PART-A: Introduction			
Program: Bachelor in Geology (Certificate/Diploma/Degree)		Semester:	Session: 2025-2026
1	Course Code	DSE-GESE-01P	
2	Course Title	EARTH & CLIMATE	
3	Course Type	Discipline Specific Course (Practical)	
4	Pre-requisite (if any)	As per Government norms	
5	Course Learning Outcomes(CLO)	On completion of Course, the students should be able to - Understand the climate and its effect. Understand the Atmosphere, Biosphere and Hydrosphere.	
6	Credit Value	1 Credit	(Credit=30hours Laboratory or Field learning/ Training)
7	Total Marks	Max. Marks: 50	Min Passing Marks: 20

Part B: Content of the Course		
Total No. of learning-Training/performance Periods: 30 Periods (30 Hours)		
Module	Topics (Course contents)	No. of Period
Lab./Field Training/ Experiment Contents of Course,	1. Study of Rainfall pattern 2. Climatological Study of Indian Subcontinent 3. Assignment related to Climatic/Climate Change with Examples	30

Part-C	
Learning Resource: Text Books, Reference Books, Others	
Text Books Recommended- -Climatology by D.S Lal -Oceanography by D.S Lal -Physical Geography by D R Khullar -Physical Geography By Savindra Singh -Invitation to oceanography by Paulr. Pinet -Essentials of oceanography by Tom S Garrison -Introduction to physical oceanography by Robert H Stewart	

Chairperson / H.O.D

Subject Expert

Subject Expert

Subject Expert

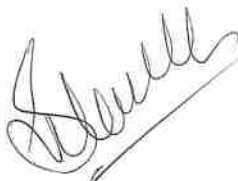
Senior Professor of Science Faculty

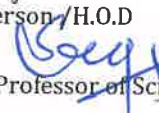
Departmental members

Alumnus

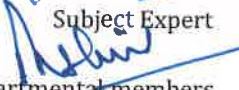
Student

PART-D:Assessment and Evaluation -Practical			
Suggested Continuous Evaluation Methods: Maximum Marks: 50Marks Continuous Internal Assessment (CIA):15Marks End Semester Exam (ESE): 35 Marks			
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/Quiz-(2): 10&10 Assignment/Seminar+Attendance-05 TotalMarks-15	Better marks out of the two Test/ Quiz + obtained marks in Assignment shall Be considered against 15Marks	
End Semester Exam (ESE):	Laboratory/Field Skill Performance: On spot Assessment A. Performed the Task based on lab. work -20 Marks B. Spotting based on tools & technology (written) -10Marks C. Viva-voce (based on principle / technology) -05Marks	Managed by Course teacher as Per lab. status	

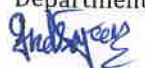

Chairperson/H.O.D


Senior Professor of Science Faculty


Subject Expert


Subject Expert

Subject Expert


Departmental members

Alumnus

Student

**Four Year Undergraduate Program
Semester IV Geology
Session 2025-26**

DSC : Sedimentary Petrology & Crustal Evolution


Chairperson /H.O.D

Senior Professor of Science Faculty


Subject Expert

Departmental members


Subject Expert

Alumnus

Subject Expert

Student

PART-A:Introduction				
Program: Bachelor in Geology (Certificate/Diploma/Degree)		Semester: IV		Session: 2025-2026
1	Course Code	DSC-GESC-04T		
2	Course Title	SEDIMENTARY PETROLOGY & CRUSTAL EVOLUTION		
3	Course Type	Discipline Specific Course (Theory)		
4	Pre-requisite(if any)	As per Government norms		
5	Course Learning Outcomes(CLO)	On completion of Course, the students should be able to- 1) Discuss about the formation of sedimentary rocks, their texture and structures 2) Explain classification of sedimentary rocks, 3) Identify, describe and classify sedimentary rocks using hand specimens 4) The formation of sedimentary rocks, their textures and structures		
6	Credit Value	3 Credits	(Credit=15hours-learning&observation)	
7	Total Marks	Max. Marks:100(70+30)		Min Passing Marks : 40
PART-B:CONTENT OFTHE COURSE				
Total No. of Teaching-learning Periods(01 hour per period)-45 Periods(45 Hours)				
Unit	Topics(Course Contents)			No. of Period
I	Sedimentary Petrology: 1) Origin, Transportation, and Deposition of Sediments 2) Sedimentary Depositional Environment- Aeolian 3) Sedimentary Depositional Environment-Fluvial 4) Sedimentary Depositional Environment-Coastal 5) Sedimentary Depositional Environment-Abyssal			15
II	Sedimentary Petrology: 1) Sedimentary Facies 2) Lithification and Diagenesis 3) Texture and structures of sedimentary rocks 4) Classification of Sedimentary rocks-Clastic, Non-Clastic, Biogenic 5) Petrogenetic description of Sedimentary rocks-Shale, Sandstone, Limestone, Dolomite, Breccia, Conglomerate, Siltstone			15
III	Crustal Evolution: 1) Crust, Mantle, core 2) Oceanic ridges, Mantle plume, Continental rift 3) Craton, Arcsystem 4) Orogeny, plate Tectonics 5) Hotspots			15
IV	Crustal Evolution: 1) Super Continent-Formation, Cycle ,Break up, Mantle plume events 2) Continental Growths 3) Continental Growth rates 4) Mantle Plume events throughout Earth History 5) Metallogeny and its relation to its Evolution in crustal Growth			15

Chairperson /H.O.D

Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

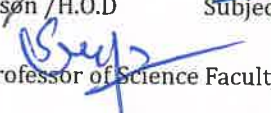
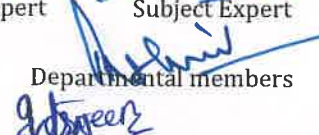
Departmental members

Alumnus

Student

Part-C	
Learning Resource: Text Books, Reference Books, Others	
1) शैलिकी के सिद्धान्त - डॉ अंबिका प्रसाद अग्रवाल 2) शैसलकी के सिद्धान्त - ए जी झींगरन 3) Principles of petrology G.W. Tyrell 4) Petrology-H. William, F.J. Turner & E.M. Gilbert 5) (6)A text book of sedimentary petrology-Verma &Prasad 6) Sedimentary rocks -F.J. Pettijohn 7) Introduction of Sedimentology -S. Sengupta 8) Sedimentary environment -H.G. Readings 9) Petrology of sedimentary rocks: Sambog 10) Earth as an evolving planet system: Kent C. Condie	
E-resources 1. https://epgp.inflibnet.ac.in/Home 2. https://archive.org/details/in.ernet.dli.2015.233340/page/n15/mode/2up 3. https://egyankosh.ac.in/ 4. https://sites.google.com/ignou.ac.in/bscgeology 5. SWAYAM-https://swayam.gov.in/explorer?searchtext 6. Nationaldigitallibraryhttps://ndl.iitkgp.ac.in 7. e-PGpathshala(MHRD)portal,https://epgp.inflibnet.ac.in	

PART-D:Assessmentand Evaluation-Theory		
Suggested Continuous Evaluation Methods:		
Maximum Marks: 100Marks		
Continuous Internal Assessment(CIA): 30Marks		
End Semester Exam(ESE): 70 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/Quiz-(2):20+20 Assignment/Seminar- 10 TotalMarks-30	Better marks out of the two Test/ Quiz+ obtained marks in Assignment shall be considered against 30 Marks
End Semester Exam (ESE):	Two section- A&B SectionA:Q1.Objective-10x1=10Mark;Q2.Short answertype-5x4 =20Marks Section B: Descriptive answer type questions, 1outof 2 from each unit-4x10=40 Marks	

 Chairperson /H.O.D
 Subject Expert
 Subject Expert
 Senior Professor of Science Faculty
 Departmental members
 Alumnus
 Student

PART-A:Introduction			
Program: Bachelor in (Certificate/Diploma/Degree)		Semester: IV	
		Session:2025-2026	
1	Course Code	DSC-GESC-04P	
2	Course Title	SEDIMENTARY PETROLOGY & CRUSTAL EVOLUTION	
3	Course Type	Discipline Specific Course (Practical)	
4	Pre-requisite(if any)	As per Government norms	
5	Course Learning Outcomes(CLO)	On completion of Course, the students should be able to- 1) Identify the Sedimentary rocks in hand specimens and thin sections.	
6	Credit Value	1Credit	(Credit=30hoursLaboratoryorFieldlearning/ Training)
7	Total Marks	Max.Marks:50	Min Passing Marks: 20
PartB: Content of the Course			
Total No. of learning- Training/performancePeriods:30Periods(30 Hours)			
Module	Topics(Course contents)		No. of Period
Lab./Field Training/ Experiment Contents of Course,	1) Megascopic studies of various sedimentary rocks. 2) Microscopic studies of various sedimentary rocks. 3) Diagrammatic representation of various structures of sedimentary 4) Diagrammatic representation of sedimentary provinces of India in outline map of India. 5) Fence diagram		30

Chairperson /H.O.D

Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members

Alumnus

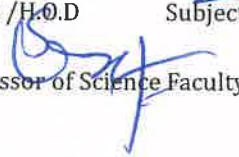
Student

Part-C	
Learning Resource: Text Books, Reference Books, Others	
1) शैलिकी के सिद्धान्त - डॉ अंबिका प्रसाद अग्रवाल 2) शैसलकी के सिद्धान्त - ए जी झींगरन 3) Principles of petrology G.W. Tyrell 4) Petrology-H. William, F.J. Turner & E.M. Gilbert 5) (6)A text book of sedimentary petrology-Verma &Prasad 6) Sedimentary rocks -F.J. Pettijohn 7) Introduction of Sedimentology -S. Sengupta 8) Sedimentary environment -H.G. Readings 9) Petrology of sedimentary rocks: Sambog 10) Earth as an evolving planet system: Kent C. Condie	
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PART-D:AssessmentandEvaluation-Practical			
Suggested Continuous Evaluation Methods: Maximum Marks: 50Marks Continuous Internal Assessment (CIA):15 Marks End Semester Exam (ESE): 35 Marks			
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar+Attendance-05 Total Marks -15	Better marks out of the twoTest/ Quiz + obtained marks in Assignment shall be considered against 15 Marks	
End Semester Exam (ESE):	Laboratory/Field Skill Performance: On spot Assessment A. Performed the Task based on lab. work -20 Marks B. Spotting based on tools & technology (written) -10Marks C. Viva-voce(based on principle/technology) -05Marks	Managed by Course teacheras Per lab. status	


 Chairperson /H.O.D

 Subject Expert

 Subject Expert

 Senior Professor of Science Faculty

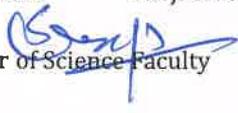
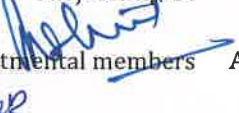
 Departmental members
 Alumnus
 Student

Four Year Undergraduate Program

Semester IV Geology

Session 2025-26

DSE : Environmental Geology

 Chairperson /H.O.D	 Subject Expert	 Subject Expert		
 Senior Professor of Science Faculty	 Departmental members	 Alumnus		
	 Student			

PART-A:Introduction			
Program: Bachelor in Geology (Certificate/Diploma/Degree)		Semester: IV	
		Session:2025-2026	
1	Course Code	DSE-GESE-02T	
2	Course Title	ENVIRONMENTAL GEOLOGY	
3	Course Type	Discipline Specific Elective Course (Theory)	
4	Pre-requisite(if any)	As per Government norms	
5	Course Learning Outcomes(CLO)	On completion of this course, the students will be able to demonstrate the acquisition of: 1) Understanding the basics of Environmental geology, pollution, Mitigation of pollution, Environmental management	
6	Credit Value	3 Credits	Credit=1 (1hours - learning & observation)
7	Total Marks	Max.Marks:100(70+30)	Min Passing Marks : 40
PART-B:CONTENT OF THE COURSE			
Total No. of Teaching-learning Periods(01 hour per period)-45 Periods(45 Hours)			
Unit	Topics(Course Contents)		No. of Period
I	1.1 Concept of ecosystem/ecology 1.2 Fundamental concepts of environmental geology 1.3 Nature and its degradation 1.4 Impact of man and natural system		11
II	2.1 Conservation principle, conservation of mineral and fuel resources 2.2 Conservation of soil and water resources 2.3 Problem pertaining to urbanization, causes and remedies 2.4 Problem pertaining to wasteland and wetlands		11
III	3.1 Human modification of nature in surface and subsurface by engineering construction Dams, Reservoirs, Bridges and Buildings. 3.2 Human settlement and contamination of atmosphere, soil, surface water and ground water by waste disposal and agro industries 3.3 Global warming, Ozone layer depletion 3.4 Drought, Desertification and salinization		11
IV	Elementary ideas of Natural hazards measure and mitigation:- 4.1 Landslides 4.2 Volcanic activity, earthquake 4.3 River flooding, cyclones, tsunami, 4.4 Erosion and coastal erosion		12

Chairperson/H.O.D

Subject Expert

Subject Expert

Subject Expert

Senior Professor of Science Faculty

Departmental members

Alumnus

Student

Part-C	
Learning Resource: Text Books, Reference Books, Others	
Text Books Recommended- Bryant,E.(1985):Natural Hazards, Cambridge Univ. Press. –Keller,E.A.(1978):Environmental Geology, Belland Howell, USA. –Nagabhushaniah,H.S.(2001):Goundwaterin Hydrosphere,CBSPubl. –Perry,C.T. and Taylor, K.G.(2006):Environmental Sedimentology, Blackwell Publ. –Singh,S.(2001):Geomorphology, Pustakalaya Bhawan, Allahabad. –Todd,D.K. (1995): Groundwater Hydrology, John Wileyand Sons. –Valdiya,K.S.(1987):Environmental Geology– Indian Context, Tata McGraw Hill.	

PART-D:Assessmentand Evaluation-Theory		
Suggested Continuous Evaluation Methods:		
Maximum Marks: 100Marks		
Continuous Internal Assessment(CIA): 30Marks		
End Semester Exam(ESE): 70 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test/Quiz-(2):20+20 Assignment/Seminar- 10 TotalMarks-30	Better marks out of the two Test/ Quiz+ obtained marks in Assignment shall be considered against 30 Marks
End Semester Exam (ESE):	Two section– A&B SectionA:Q1.Objective–10x1=10Mark;Q2.Short answertype-5x4=20Marks SectionB:Descriptiveanswertypequestions,1outof2fromeachunit-4x10=40 Marks	

Chairperson /H.O.D

Senior Professor of Science Faculty

Subject Expert

Departmental members

Subject Expert

Alumnus

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Student

PART-A:Introduction			
Program: Bachelor in Geology (Certificate/Diploma/Degree)		Semester: IV	
		Session:2025-2026	
1	Course Code	DSE-GESE-02P	
2	Course Title	ENVIRONMENTAL GEOLOGY	
3	Course Type	Discipline Specific Elective Course (Practical)	
4	Pre-requisite(if any)	As per Government norms	
5	Course Learning Outcomes(CLO)	After Successfully completing this course, the students will be able to 1. Understand the environment 2. Describe the geological aspect of interaction between environment and geological processes 3. Explain Mitigation of pollution. 4. Describe Environmental management plan	
6	Credit Value	1Credit	(Credit=30hoursLaboratoryorFieldlearning/ Training)
7	Total Marks	Max.Marks:50	Min Passing Marks: 20
PartB: Content of the Course			
Total No. of learning -Training/ performance Periods: 30Periods (30 Hours)			
Module	Topics(Course contents)		No. of Period
Lab./Field Training/ Experiment Contents ofCourse,	Case study of any Environmental project in nearby area allotted by supervisor/guide		30

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