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## DEBRA THANA SAHID KSHUDIRAM SMRITI MAHAVIDYALAYA

(Autonomous)

P.O.- CHAKSHYAMPUR , DIST.- PASCHIM MEDINIPUR PIN:-7221124 , WEST BENGAL, INDIA

### DEPARTMENT OF GEOGRAPHY

3 years Major and Minor course

### Syllabus Framework for the Semester-1 ( Major & Minor)

Level	YR.	SEM	Course Type	Course Code	Course Title	Credit	L-T-P	Marks			
								CA	ESE	Total	
B.Sc. (Hons.)	1 <sup>st</sup>	I	<b>SEMESTER-I</b>								
			Major-1	GEOH MJ101	T: Geotectonics and Geomorphology (Theory) P: Practical	4	3-0-1	15	60	75	
			SEC	GEOSE C01	P: Basics of Computer and G.I.S	3	0-0-3	10	40	50	
			AEC	AEC01	Communicative English -1 ( <i>common for all programmes</i> )	2	2-0-0	10	40	50	
			MDC	MDC01	Multidisciplinary Course -1 ( <i>to be chosen from the list</i> )	3	3-0-0	10	40	50	
			VAC	VAC01	ENVS ( <i>common for all programmes</i> )	4	2-0-2	50	50	100	
			Minor (Disc.-I)	GEO MI 01	T: Fundamentals of Earth System Science ( <i>To be taken by students of other Disciplines</i> )	4	3-1-0	15	60	75	
			<b>Semester-I Total</b>						<b>20</b>		

CC = Core Course, AECC = Ability Enhancement Compulsory Course, GE = Generic Elective , SEC = Skill Enhancement Course DSE = Discipline Specific Elective, CA= Continuous Assessment, ESE= End Semester Examination, TBD=To be decided, CT = Core Theory, CP=Core Practical, L = Lecture, T = Tutorial, P = Practical, MIL = Modern Indian Language, ENVS = Environmental Studies,



## For 4 years Course

### MAJOR (MJ) Paper: GEOHMJ101 T

**MJ-1: Geotectonics and Geomorphology (Theory) Credits 03 (Full Marks: 40)**

#### **MJ-1T: Geotectonics and Geomorphology (Theory)**

1. Geological time scale: Tectonic and biological history of Earth; Dating of Rocks: absolute and relative dating. Earth's interior with special reference to seismology. Isostasy: Models of Airy and Pratt
2. Continental Drift; Plate Tectonics: Processes along different margins and resulting landforms. Types of Fold and Fault; Sea floor spreading
3. Geomorphic processes and resultant forms: Weathering, Mass wasting, River, Glacier and Wind.
4. Structural impact on landforms: Drainage and landform development on Horizontal, Homoclinal, Folded and Faulted structures.
5. Cyclic and Non-cyclic models of landscape evolution: Views of Davis, Penck, King, Chorley, Schumm and Hack

#### **Suggested Reading:**

- Bloom A. L., 2001: Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, Third edition, New Delhi.
- Maity, Ramkrishna, Geotectonics and Geomorphology: An Insight into Process-form Relationship. Nabodaya Publications, Kolkata. ISBN 978-81-961853-2-9
- বসু, মাইতি ; আধুনিক ভূমিরূপ বিজ্ঞান (ভূ -গঠন ও বিবর্তন ) নবোদয় পাবলিকেশন.
- Bridges E. M., 1990: World Geomorphology, Cambridge University Press, Cambridge.
- Christopherson, Robert W., (2011), Geosystems: An Introduction to Physical Geography, 8 Ed., Macmillan Publishing Company
- Kale V. S. and Gupta A., 2001: Introduction to Geomorphology, Orient Longman, Hyderabad.
- Knighton A. D., 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London.
- Selby, M.J., (2005), Earth's Changing Surface, Indian Edition, OUP



- Skinner, Brian J. and Stephen C. Porter (2000), *The Dynamic Earth: An Introduction to physical Geology*, 4th Edition, John Wiley and Sons
- Thornbury W. D., 1969: *Principles of Geomorphology*, Wiley.



**MJ-1P: Geotectonics and Geomorphology (Practical) for 4 years Course**  
**Paper: GEOHMJ101P                      Credit: - 1                      Full Marks: 20**

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1. Characteristics of Rocks and minerals and their identification: (specification of 10 Rocks and 10 Minerals)
  2. Reading and Construction map; Concept of Scale (Linear, comparative, diagonal and vernier). Geological Maps: Understanding topography, structure, relation between topography and structure, geological succession and geological history through construction of geological sections on horizontal, homoclinal, folded and faulted structures.
  3. Laboratory Note Book and Viva- Voce. (5)
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**Suggested Reading:-**

1. R.P.Misra; Fundamentals Of Cartography; Concept Publishing Company Pvt.Ltd. ,New Delhi - 110059.
2. R.L.Singh, Rana P.B.Singh; Elements Of Practical Geography; Kalyani Publishers,New DelhiLudhiana.
3. Sankar Adhikari Honours Beboharik Bhugal Dove Publishing House Kolkata



**SKILL ENHANCEMENT COURSE (SEC) for 4 years Course**  
**Paper: - GEOSEC01**

**SEC 1P: Basics of Computer and G.I.S (Practical)      Credits 03      Full Marks: 50**

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**A. Basic Knowledge of Computer:**

1. Knowing computer: what is computer, basic application of computer, computer memory, concepts of hardware and software; operating system; running an application, viewing of files, folders and directories, creating and renaming of files and folders.
2. Understanding word processing (Google Dox.)
3. Using spreadsheet: basics of spreadsheet; manipulation of cells; formulas and functions; editing of spreadsheet, printing of spreadsheet (MS Excel).
4. Concept of internet; application of internet; World Wide Web; email.
5. Google form: generation, submission and data extraction
6. Making a small presentation: MS PowerPoint

**B. Basic Knowledge About G.I.S and its Application:**

1. Introduction to G.I.S
  2. Spatial Data Representation ( Raster and vector)
  3. Data structure of G.I.S (Points, Lines and polygon)
  4. Geo-referencing of Maps
  5. Viva- voce based on laboratory notebook (5).
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**Suggested Reading:-**

- Barte, Thomas C. (1977): Digital Computer Fundamental; McGraw Hill.
- Chauhan, S.; Chauhan, A. and Gupta, K. (2006): Fundamental of Computer; Firewall Media.



- Flake, L.J.; McClintock, C.E. and Turner, S. (1989): Fundamental of Computer Education; Wordsworth Pub. Co.
- Leon, A .and Leon,M.(1999): Introduction to Computer, USB Publishers' Distributors Ltd.
- Malvino, A.P. and Leach, D.P. (1981): Digital Principles and Applications; Tata McGraw Hill.
- Mano, Moris M. and Kime, Charles R. (2004): Logic and Computer Design Fundamental; Prentice Hall.
- Rajaraman, V. ( 2003): Fundamentals of Computer, Prentice Hall Publisher
- Sarkar, A. and Gupta, S.K (2002) Elements of computer Science, S Chand and Company, New Delhi
- Blissmer (1996): Working with MS Word; Houghton Mifflin Co.
- Johnson, Steve (2007): Microsoft Power Point 2007; Pearson Paravia Bruno.
- Leon, A .and Leon,M.(1999): Introduction to Computer, USB Publishers' Distributors Ltd.
- Leon, A. and Leon, M.( 1999): A beginners Guide to Computers, Vikas
- Rajaraman, V. (2008): Computer Primer; Prentice Hall of India Pvt. Ltd.
- Sarkar, A. and Gupta, S.K (2002) Elements of computer Science, S Chand and Company, New Delhi
- Shepard, Aaron (2007): Perfect Pages; Shepard Publications.
- Tyson, Herbert L. (2007): Microsoft Word 2007 bible; John Wiley.
- Walkenbach, John (2007): Excel 2007 Bible; John Wiley
- Sankib Mazumdar Remote Sensing And G. I. S. Amar Pustakalay, Block 6,Stall 8 , Bankim Chatterjee
- Tanmoy Karon Remote Sensing And GIS Rupali Publication, Chandannagar
- Thomas M. Lillesand, Ralph W. Kiefer, Jonathan W. Chipman Ramote Sensing And Image Interpretation John Wiley & Sons(Asia) Pte. Ltd, (Singapore )
- V C Jha Geomorphology And Remote Sensing Acb Publications,Calcutta.



**Syllabus Framework for the Semester-1 (Minor) for 4 years Course**  
**Paper:- GEOMI01**

**MI – 1T: Fundamentals of Earth System Science Credits 04 Full marks: 75**

- 1. Geotectonics:** Earth's interior, Isostasy, Plate tectonics. Sea floor Spreading.
- 2. Geomorphology:** - Geomorphic processes and resultant forms: Weathering, Mass wasting, River, Glacier and Wind, Landscape evolution models of Davis, and Hack
- 3. Hydrology:** - Hydrological Cycle. Hydrological Parameters: Run off, Infiltration and evapotranspiration. Occurrence and storage of Groundwater.
- 4. Climatology:** -Composition and layering of the atmosphere. Factors of Insolation, Heat budget of the atmosphere. Pressure belts and general circulation in the atmosphere. Tropical cyclones. Monsoon Mechanism.
- 5. Soil Geography:** -Factors of soil formation. Concept of Soil profile (Laterites and Podzols), soils. Physical and chemical properties: soil texture, structure, pH, organic matter and NPK. Soil erosion and its management.

**Suggested Reading:**

- Bloom A. L., 2001: Geomorphology: A Systematic Analysis of Late Cenozoic Landforms, Prentice-Hall of India, Third edition, New Delhi.
- Maity, Ramkrishna, Geotectonics and Geomorphology: An Insight into Process-form Relationship. Nabodaya Publications, Kolkata. ISBN 978-81-961853-2-9
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- Bridges E. M., 1990: World Geomorphology, Cambridge University Press, Cambridge.
- Christopherson, Robert W., (2011), Geosystems: An Introduction to Physical Geography, 8 Ed., Macmillan Publishing Company
- Kale V. S. and Gupta A., 2001: Introduction to Geomorphology, Orient Longman, Hyderabad.
- Knighton A. D., 1984: Fluvial Forms and Processes, Edward Arnold Publishers, London.
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- Skinner, Brian J. and Stephen C. Porter (2000), The Dynamic Earth: An Introduction to physical Geology, 4th Edition, John Wiley and Sons
- Thornbury W. D., 1969: Principles of Geomorphology, Wiley
- Rafhik Ahamed . Abohaya O Jalabayu Bigan; Ghankosh Prakashani 38/2-K Bangla Bazaar,Dhaka 1100.
- Sandeep Kumar Choudhary; Soil Geography New Central Book Agency (Pvt) Limited,New Delhi
- Samir Adak,Sambhunath Singh Mura, Sulekha Adak Bhu-Jalabidya Tapati Publisher.
- Samir Adak, Mousam Majumder, Suparna Majumder, Mafizul Haque Bhu-Parichoy(3year's Pass Course) 4th Paper Tapoti Publisher, Tawn Colonichokh, Medinipur, Paschim Medinipur.
- Barry R. G. and Carleton A. M., 2001: Synoptic and Dynamic Climatology, Routledge, UK.
- Barry R. G. and Corley R. J., 1998: Atmosphere, Weather and Climate, Routledge, New York.
- Critchfield H. J., 1987: General Climatology, Prentice-Hall of India, New Delhi
- □Lutgens F. K., Tarbuck E. J. and Tasa D., 2009: The Atmosphere: An Introduction to Meteorology, Prentice-Hall, Englewood Cliffs, New Jersey.
- Oliver J. E. and Hidore J. J., 2002: Climatology: An Atmospheric Science, Pearson Education, New Delhi.
- Trewartha G. T. and Horne L. H., 1980: An Introduction to Climate, McGraw-
- Td Biswas & Sk Mukherjee Text Book Of Soil Science Mcgraw Hill Education (India) Private Limited



