

## Integrated B.Sc. (Hons.)-M.Sc. Program in Applied Geology

### FIRST SEMESTER

Code	Subject	L	T	P	Credit
BGL101	Earth System Science	3	0	0	3
BGL 102	Mineralogy & Crystallography	3	1	0	4
BGL 103	Geomorphology & Photogeology	3	1	0	4
BHU101	English (Breadth)	3	0		3
BCH 101	Chemistry I	3	1	0	4
BMTH101	Mathematics I	3	1	0	4
BCH 191	Chemistry Lab I	0	0	2	2
BSD 181	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 1<sup>ST</sup> SEMESTER</b>					<b>25</b>

### SECOND SEMESTER

Code	Subject	L	T	P	Credit
BGL 201	Sedimentology	3	0	0	3
BGL 202	Palaentology	3	0	0	3
BGL 203	Principles of Structural geology	3	0	0	3
BGL 204	Optical Mineralogy Practical	0	0	4	4
BGL 205	Sedimentology/Paleontology Practical	0	0	3	3
BCH 201	Chemistry II	3	1	0	4
BGL 206	Field Training 1	0	0	0	4
BSD 281	Skill Development	0	0	1	1
BSD 282	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 2<sup>ND</sup> SEMESTER</b>					<b>26</b>

### THIRD SEMESTER

Code	Subject	L	T	P	Credit
BGL 301	Igneous petrology	3	1	0	4
BGL 302	Metamorphic petrology	3	1	0	4
BGL 303	Geology of India	3	1	0	4
BGL 391	Igneous Petrology Practical		0	4	4
BGL 392	Metamorphic petrology Practical		0	4	4
BGL 393	Structural Geology Practical		0	4	4
BSD 381	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 3<sup>RD</sup> SEMESTER</b>					<b>26</b>

### FOURTH SEMESTER

Code	Subject	L	T	P	Credit
BGL 401	Economic Geology	3	1	0	4
BGL 402	Geostatistics	4	0	0	4
BGL 403	Engineering Geology	3	1	0	4
BGL 404	Photogeology, Remote sensing and GIS	2	0	0	2
BGL 405	Photogeology, Remote sensing and GIS Practical	0	0	2	2
BGL 406	Economic Geology Practical	0	0	2	4
BGL 407	Field training – II	0	0	0	4
BSD 481	Skill Development	0	0	1	1
BSD 482	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 4<sup>TH</sup> SEMESTER</b>					<b>26</b>

## FIFTH SEMESTER

Code	Subject	L	T	P	Credit
BGL 501	Geophysics	3	1	0	4
BGL 502	Hydrogeology	3	1	0	4
BGL 503	Exploration Geology	3	1	0	4
BGL 504	Coal and petroleum geology	3	1	0	4
BGL 505	Evolution of life through time	3	1	0	4
BGL 506	Environmental Geosciences	3	1	0	4
BSD 582	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 5<sup>TH</sup> SEMESTER</b>					<b>25</b>

## SIXTH SEMESTER

Code	Subject	L	T	P	Credit
BGL 601	Introduction to geochemistry	3	1	0	4
BGL 602	Earth energy resources	3	1	0	4
BGL 603	Computer applications in geosciences	2	2	0	4
BGL 604	Quaternary geology and palaeoclimate	3	1	0	4
BGL 605	Project Work	0	0	0	4
BGL 606	Field Training III	0	0	0	4
BSD 681	Skill Development	0	0	1	1
BSD 682	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 6<sup>TH</sup> SEMESTER</b>					<b>26</b>

## SEVENTH SEMESTER

Code	Subject	L	T	P	Credit
MGL 701	Earth surface processes	4	1	0	5
MGL 702	Mineral sciences	4	1	0	5
MGL 703	Sedimentary environment and basin analysis	4	1	0	5
MGL 704	Deformation, rheology and tectonics	4	1	0	5
MSD 781	Skill Development	0	0	1	1
MSD 782	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 7<sup>TH</sup> SEMESTER</b>					<b>22</b>

## EIGHTH SEMESTER

Code	Subject	L	T	P	Credit
MGL 801	Geochemistry	3	1	0	4
MGL 802	Igneous petrogenesis and lithospheric evolution	3	1	0	4
MGL 803	Metamorphic phase equilibria and origins	3	1	0	4
MGL 804	Groundwater sciences	3	1	0	4
MGL805	Field training – IV	0	0	0	4
MSD 881	Skill Development	0	0	1	1
MSD 882	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 8<sup>TH</sup> SEMESTER</b>					<b>22</b>

## NINTH SEMESTER

Code	Subject	L	T	P	Credit
MGL 901	Optional paper – I	3	1	0	4
MGL 902	Optional paper – II	3	1	0	4
MGL 903	Optional paper – III	3	1	0	4
MGL 904	Project Work / Dissertation	0	0	0	12
MSD 981	Skill Development	0	0	1	1
MSD 982	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 9<sup>TH</sup> SEMESTER</b>					<b>26</b>

## TENTH SEMESTER

Code	Subject	L	T	P	Credit
BGL 1001	Optional paper – IV	3	1	0	4
MGL 1002	Optional paper – V	3	1	0	4
MGL 1003	Optional paper – VI	3	1	0	4
MGL 1004	Project Work / Dissertation	0	0	0	12
MSD 1081	Skill Development	0	0	1	1
MSD 1082	Project and seminar	0	0	1	1
<b>TOTAL CREDITS OF 10<sup>TH</sup> SEMESTER</b>					<b>26</b>

<b>TOTAL CREDITS OF 10 SEMESTERS</b>					<b>252</b>
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## LIST OF ELECTIVE PAPERS

### NINTH SEMESTER

Code	Subject	L	T	P	Credit
	Analytical methods in geosciences	3	1	0	4
	Applied stratigraphy	3	1	0	4
	Methods and processes in vertebrate paleontology	3	1	0	4
	Ore geology and mineral economics	3	1	0	4
	Water resources management	3	1	0	4
	Micropaleontology and oceanography	3	0	0	4

### TENTH SEMESTER

Code	Subject	L	T	P	Credit
	Applied geophysics	3	1	0	4
	Earthquake geology and seismotectonics	3	1	0	4
	Natural hazards and disaster management	3	1	0	4
	Rock mechanics and rock engineering	3	1	0	4
	Tectonic geomorphology	3	1	0	4