Admission Notice

New Post-Graduate Programme

3yr-MSc.Tech (Applied Geophysics)

Admission notice for 3yr-MSc.Tech (Applied geophysics) Programme in the Department of Applied Geology, Dibrugarh University, Assam (India) for the academic session 2020-2021.

Total number of seats: 20

Eligibility:

Candidates having ***BSc. (Physics major) or, BSc. (Geology major with Physics & Mathematics) degree or, BTech. (Petroleum Engineering or Petroleum Geosciences or equivalent Earth Science related streams) degree*** from any UGC recognized University securing at least 60% marks in aggregate (or, OGPA 7.0 in the scale of 10.0 points). Candidates are supposed to appear for a written Entrance Examination Test [**Subjects:** ***Physics (Graduation pass course level)*****: 50%; *General awareness, Reasoning, Technical English, General mathematical aptitude, Imaginative power*** **:50%;Question Type:** Objective **Time**: 2 hrs.] Based on the Entrance Examination Test performance, a merit list of the selected candidates will be displayed on the Dibrugarh University website and candidates after payment of the prescribed fee shall be admitted for the Programme.

Note: *Relaxation and Reservation: As per the Rule*.

Course fee:

Rs. 30,000/- per semester (for 1st - 5th) and Rs. 15,000/ (for the 6th semester)
Approximate expenditure for the programme: Rs. 1, 90,000 (Tuition fees + Semester examination fees + Miscellaneous for six semesters)

Objectives:

The basic objective behind offering Applied Geophysics as an MSc. Tech Programme principally to the students having major in Physics and Geology (with Mathematics and Physics) at the graduation level is three-fold. First, to generate quality human resources in the 'high skill' segment of workers who are supposed to explore, develop and exploit principal natural resources like oil, water and minerals in a sustainable manner and increasing thereby the practical importance of higher education in nation building. Secondly, introduction of more down-to-earth steps so that the academia-industry symbiosis becomes more meaningful as well as useful. Developing the software-based learning skill has been given additional weightage.

Making the students confident enough not only to face interviews rather to face different challenges of life while playing leadership roles is the third objective.

Special Features:

1. Industry as well as research oriented balanced syllabus.
2. Faculties having industrial as well as long years of academic background.
3. Earth system science approach.
4. Continuous interactions with the resource persons from the premiere oil industries like the OIL and the ONGC.
5. Serious project work.
6. Better training for availing job prospect.
7. Purposeful research orientation.

Job prospect:

We don't guarantee jobs but the track record of the department shows that the employability of the students passing out of this department in premiere industries like OIL, ONGC, GSI, Shell, Schlumberger, Halliburton, Reliance, NHPC and many other reputed concerns is quite impressive. Moreover, students are motivated to enhance their competitive edge and grow research oriented minds to keep their learning curve up in a sustainable manner. As a result, a number of students have joined PhD programmes in institutions like IIT Bombay, IIT Kharagpur, IIT Roorkee and of course in state Universities like the Cotton, Guwahati and Dibrugarh.

Programme structure:

In conformity with the stated objectives, the first year of the Programme is devoted to introduce the philosophy of scientific exploration in general and exploration geophysics in particular. Earth System Science approach with emphasis on climate change has been included which is supposed to act as a broader perspective. To develop geophysical goal oriented computational skill, a course 'Geoscientific data analysis with MATLAB' has been introduced. The second year is principally devoted to core issues like Seismology and Seismic methods of data acquisition & processing. Besides these, there is in-depth coverage of Gravity and Magnetic Methods. Electrical methods along with Electromagnetic methods are given sufficient weightage. Elective papers include Hydrogeology and ground water investigations, and Principles of Stratigraphy. Moreover, there is a 'Field Visit' component which is planned as per convenience. The third year is devoted principally to more specialized issues of exploration applications like seismic data interpretation, well logging and Reservoir Geophysics. Options are given to choose from latest fields of concern like 'Decision Analysis and Value of Information' and 'Simulation modelling in environmental science' etc. Besides the regular field work, serious project works of six months' duration having strictly monitored periodic submission of progress reports related to exploration under the joint supervision of the Department of Applied Geology, Dibrugarh University and reputed organizations (OIL, ONGCL, CSIR- NEIST etc.) will be conducted in the final sixth semester to promote research aptitude of the candidates.

SEMESTER-I

Course No.	Course	L P Cr	Marks		
			IS	ES	Total
Core Courses					
AGP-101	Philosophy of Science & Exploration	3 - 3	40	60	100
AGP-102	Earth System Science	3 - 3	40	60	100
AGP-103	Applied Mathematics for Geophysics	3 - 3	40	60	100
AGP-104	Geoscientific Data Analysis with Matlab	3 - 3	40	60	100
Practical					
AGP-104-P	Geoscientific Data Analysis with Matlab	1 1	20	30	50
Discipline Specific Elective Courses (DSE)					
AGP-1D-1	Physics Essential	4 - 4	40	60	100
AGP-1D-2	Geology Essential	4 - 4	40	60	100
Ability Enhancement Courses (AEC) [offered by the department]					
AGP-1A-1	Technical English & Professional Communication	2 2	20	30	50

Total Marks for Semester-I: 600
Total Credits: **19(Minimum)**

SEMESTER - II

Course No.	Course	L P Cr	Marks		
			IS	ES	Total
Core Courses					
AGP-201	Geophysical Inversion	3 - 3	40	60	100
AGP-202	Geophysical Prospecting	3 - 3	40	60	100
AGP-203	Geophysical signal theory	3 - 3	40	60	100
AGP-204	Numerical Analysis and Computer programming	3 - 3	40	60	100
Practical					
AGP-204-P	Numerical Analysis and Computer programming	1 - 1	20	30	50
Discipline Specific Elective Courses (DSE)					
AGP-2D-1	Hydrogeology & Ground water investigations	3 1 4	40	60	100
AGP-2D-2	Principles of Stratigraphy	4 - 4	40	60	100
Ability Enhancement Courses (AEC) [offered by other departments]					
AGP-2A-1	Summer Training-I: Field/Industrial visit	2 2	20	30	50

Total Marks for Semester-II: 600
Total Credits: **19(Minimum)**

SEMESTER: III

Course No.	Course	L	P	Cr	Marks		
					IS	ES	Total
Core Courses							
AGP-301	Seismology	3		3	40	60	100
AGP-302	Geophysical Tools I: Seismic Methods (Data Acquisition & Processing)	3		3	40	60	100
AGP-303	Geophysical Tools II: Electrical & Electro Magnetic Methods	3		3	40	60	100
AGP-304	Image Processing & Geographic Information System	3		3	40	60	100
Practical							
AGP-301-P	Seismology	-	1	1	20	30	50
AGP-302-P	Geophysical Tools I: Seismic Methods (Data Acquisition & Processing)	-	1	1	20	30	50
AGP-303-P	Geophysical Tools II: Electrical & Electro Magnetic Methods	_	1	1	20	30	50
AGP-304-P	Image Processing & Geographic Information System	_	1	1	20	30	50
Discipline Specific Elective Courses (DSE)							
AGP-3D-1	Decision Analysis and Value of Information	4		4	40	60	100
AGP-3D-2	Fluvial Dynamics and Tectonic Geomorphology	4	-	4	40	60	100
Generic Elective Courses (GE) [offered by the Applied Geology Department]							
AGP-3G-1	Water Science, Policy & Governance	4	-	4	40	60	100
Generic Elective Courses (GE) [offered by other departments]							
PT-3G-4	Petroleum Reservoir Engineering	2	2	4	40	60	100
PT- 3G-5	Basic Drilling Technology	3	1	4	40	60	100
Ability Enhancement Courses (AEC) [offered by other departments]							
AGP-3A-1	Winter Training-Lab visit		2	2	20	30	50

Total Marks for Semester-III: 750

Total Credits: **22(Minimum)**

SEMESTER- IV

Course No.	Course	L	P	Cr	Marks		
					IS	ES	Total
Core Courses							
AGP-401	Geophysical Tools III: MT & GPR Methods	3		3	40	60	100
AGP-402	Geophysical Tools IV: Gravity & Magnetic Methods	3		3	40	60	100
AGP-403	Geophysical Tools V: Well Logging	3		3	40	60	100
AGP-404	Reservoir Geophysics	3		3	40	60	100
Practical							
AGP-401-P	Geophysical Tools III: MT & GPR Methods		1	1	20	30	50
AGP-402-P	Geophysical Tools IV: Gravity & Magnetic Methods		1	1	20	30	50
AGP-403-P	Geophysical Tools V: Well Logging		1	1	20	30	50
AGP-404-P	Reservoir Geophysics		1	1	20	30	50
Discipline Specific Elective Courses (DSE)							
AGP-4D-1	Marine Geophysics	4		4	40	60	100
AGP-4D-2	Geothermics and Geodynamics	4	-	4	40	60	100
Generic Elective Courses (GE) [offered by the Applied Geology Department]							
AGP-4G-1	Environmental Geophysics	4	-	4	40	60	100
Ability Enhancement Courses (AEC) [offered by other departments]							
AGP-4A-1	Summer Training-II-Field/Industrial visit		2	2	20	30	50

Total Marks for Semester-IV: 750

Total Credits: **22(Minimum**

SEMESTER- V

Course No.	Course	L P Cr	Marks		
			IS	ES	Total
Core Courses					
AGP-501	Formation Evaluation	3 1 4	40	60	100
AGP-502	Seismic Data Interpretation and Basin Analysis	3 1 4	40	60	100
AGP-503	Sequence Stratigraphy	3 1 4	40	60	100
AGP-504	Simulation modeling in environmental science	3 1 4	40	60	100
Practical					
AGP-501-P	Formation Evaluation	1 1	20	30	50
AGP-502-P	Seismic Data Interpretation and Basin Analysis	1 1	20	30	50
AGP-503-P	Sequence Stratigraphy	1 1	20	30	50
AGP-504-P	Simulation modeling in environmental science	1 1	20	30	50
Discipline Specific Elective Courses (DSE)					
AGP-5D-1	Advanced Seismology	4 4	40	60	100
AGP-5D-2	Geomagnetism	4 - 4	40	60	100
Ability Enhancement Courses (AEC) [offered by the department]					
AGP-5A-1	Research Methodology & Science Writing	2 - 2	20	30	50
Ability Enhancement Courses (AEC) [offered by other departments]					
AGP-5A-2	Industrial Management	2 - 2	20	30	50

Total Marks for Semester-V: 750

Total Credits: **22(Minimum)**

SEMESTER- VI

Course No.	Course	L P Cr	Marks		
			IS	ES	Total
Core Courses					
AGP-601	Dissertation/Project Work	12			500
AGP-602	Seminar	4			100
AGP-603	Grand Comprehensive Test	4			100
AGP-604	Comprehensive Viva Voce	2			50

Total Marks for Semester-VI: 750
Total Credits: **22**

Cumulative Total Marks (I+II+III+IV+V+VI semesters)
=600+600+750+750+750+750=4200
Cumulative Total Credits (I+II+III+IV+V+VI semesters)
=**19+19+22+22+22+22=126 (Minimum)**

Semester	Courses with Credits									
	Core (Fixed)		Elective (minimum one)		AEC (minimum)				Total (Minimum)	
	Theory	Practical	DSE	GE						
I	4 Courses × 3 Credits=12	1 Course ×1 Credit =1	1 Course × 4 Credit =4	1 Course × 4 Credit =4	1 Course × 2 Credit =2				19	
II	4 Courses × 3 Credits=12	1 Course ×1 Credit =1	1 Course × 4 Credit =4		1 Course × 2 Credit =2				19	
III	4 Courses × 3 Credits=12	4 Courses ×1 Credit = 4	1 Course × 4 Credit =4	1 Course × 4 Credit =4	1 Course × 2 Credit =2				22	
IV	4 Courses × 3 Credits=12	4 Courses ×1 Credit = 4	1 Course × 4 Credit =4	1 Course × 4 Credit =4	1 Course × 2 Credit =2				22	
V	4 Courses × 3 Credits=12	4 Courses ×1 Credit = 4	1 Course × 4 Credit =4		1 Course × 2 Credit =2				22	
VI	Dissertation/Project work (12)		Seminar (4)		Grand Composite Test (4)		Composite Viva Voce (2)		22	

Note:
Core: Core Courses (Compulsory) / Credits: 3 (Only Theory) / Credits: 4 (Theory + Practical)
DSE: Discipline Specific Elective (Intra-Departmental / Credit: 4)
GE: Generic Elective (Inter-Departmental / Inter-Disciplinary / Credits: 4)
AEC: Ability Enhancement Courses (Inter-Disciplinary / Credits: 2)
L: Numbers of weekly lectures (Each of 1 hr duration and 1 Credit)
P: Numbers of weekly practical (Each of 2hrs duration and 1 Credit)
IS: In-semester marks/ ES: End-semester Marks/ TM: Total Marks

Important Dates & Admission Schedule:

1.Online registration shall begin on: **25.10.2020**
2.Online registration will be closed on: **15.11.2020**
3. Entrance Examination: **23.11.2020**
4. Interview and admission will be held on: **26.11.2020**

For further details, please contact:

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