



**DEPARTMENT OF APPLIED GEOLOGY
DIBRUGARH UNIVERSITY
DIBRUGARH -786004, ASSAM, INDIA**

Admission Notice
For

Post M.Sc. Two Years' M.Tech Programme in Exploration Geophysics
for the Academic Session 2019-2020.

Total number of seats: **15**

Tuition fee: Rs. 36,000/- per semester (for 1st -2nd -3rd) and Rs. 18,000/ (for the 4th semester)
Approximate net expenditure for the programme: Rs. 1, 50,000 (for four semesters)
Session starts from: 1st August, 2019.

Objectives:

The basic objective behind offering Exploration Geophysics as an M.Tech Programme is three fold. First, to generate quality human resources in the 'high skill' segment of workers belonging to Exploration Geophysics 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. Thirdly, to encourage young minds to pursue research works on the geophysical problems of different sedimentary basins and in particular the Assam Arakan Basin.

What can you expect from this programme?

1. Industry as well as research oriented balanced syllabus, thoroughly updated, CBCS system of evaluation.
2. Faculties having industrial as well as long years of academic background.
3. Earth system science approach.
4. Continuous interactions with the premiere oil industries like the OIL, MECL and ONGCL and other organizations like the NEIST (under the CSIR) and NHPC.
5. Practical problem solving method of teaching
6. Serious project work.
7. Better job prospect.
8. Purposeful research orientation.

Programme structure:

In conformity with the stated objectives, the first semester of the Programme is devoted to introduce the philosophy of scientific exploration in general and exploration geophysics in particular. As the students joining this programme are broadly having either Physics or Earth Science background, an elective bridge course has been introduced depending upon the needs of the students. Earth System Science approach with emphasis on climate change has been

included which is supposed to act as a broader perspective. To develop the computational skill besides 'Numerical Analysis and Computer programming', a new course 'Geoscientific data analysis with MATLAB' has been introduced. The second semester is principally devoted to Inversion theories, Seismology and Seismic methods of data acquisition & processing. Besides this, there is in-depth coverage of Gravity and Magnetic Methods. Elective papers include Hydrogeology and ground water investigations, Practical aspects of the GIS and Principles of Stratigraphy. Moreover, there is a 'Field Visit' component which is planned as per convenience. The third semester is devoted principally to core issues of exploration like seismic data interpretation, well logging and Reservoir Geophysics. Options were given to choose from latest fields of concern like 'Decision Analysis and Value of Information' and 'Simulation modeling 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.) are conducted to promote research aptitude of the candidate.

PROGRAMME STRUCTURE

SEMESTER-I

Course No.	Course	L	P	Cr	Marks		
					IS	ES	Total
Core Courses							
EG-101	Foundation for Geophysics	4	-	4	40	60	100
EG-102	Earth System Science	4	-	4	40	60	100
EG-103	Numerical Analysis and Computer programming	3	1	4	40	60	100
EG-104	Geoscientific Data Analysis with Matlab	3	1	4	40	60	100
Discipline Specific Elective Courses (DSE)							
EG-1D-1	Physics Essential	4	-	4	40	60	100
EG-1D-2	Geology Essential	4	-	4	40	60	100
Generic Elective Courses (GE) [offered by the Applied Geology Department]							
EG-1G-1 (AG-3G-1)	Water Science, Policy and Governance	4	-	4	40	60	100
Generic Elective Courses (GE) [offered by other departments]							
PT 3G1	Oil Well Production Technology	3	1	4	40	60	100
PT 3G3	Petroleum Geochemistry	3	1	4	40	60	100
Ability Enhancement Courses (AEC) [offered by other departments]							
ENG-A	Technical English & Professional Communication	2		2	20	30	50

SEMESTER-II

Course No.	Course	L	P	Cr	Marks		
					IS	ES	Total
Core Courses							
EG-201	Geophysical Inversion	4	-	4	40	60	100
EG-202	Geophysical Tools I: Seismology & Seismic methods	3	1	4	40	60	100
EG-203	Geophysical signal theory & Data processing	3	1	4	40	60	100
EG-204	Geophysical Tools II: Gravity & Magnetic Methods	3	1	4	40	60	100
Discipline Specific Elective Courses (DSE)							
EG-2D-1	Hydrogeology & Ground water investigations	3	1	4	40	60	100
EG-2D-2	Principles of Stratigraphy	4	-	4	40	60	100
Generic Elective Courses (GE) [offered by the Applied Geology Department]							
EG-2G-1	<i>Patala Darshan</i> -Looking into the Earth using Geophysical Tools	4	-	4	40	60	100
Ability Enhancement Courses (AEC) [offered by the department]							
EG-2A1	Field/Industrial visit		2	2	20	30	50

SEMESTER-III

Course No.	Course	L	P	Cr	Marks		
					IS	ES	Total
Core Courses							
EG-301	Geophysical Tools III: Electrical and EM Techniques	3	1	4	40	60	100
EG-302	Geophysical Tools IV: Well logging & its applications	3	1	4	40	60	100
EG-303	Seismic stratigraphy and Basin Analysis	3	1	4	40	60	100
EG-304	Reservoir Geophysics	3	1	4	40	60	100
Discipline Specific Elective Courses (DSE)							
EG-3D-1	Decision Analysis and Value of Information	4		4	40	60	100
EG-3D-2	Simulation modeling in environmental science	4	-	4	40	60	100
Generic Elective Courses (GE) [offered by other departments]							
PT 3G4	Petroleum Reservoir Engineering	2	2	4	40	60	100
PT 3G5	Basic Drilling Technology	3	1	4	40	60	100
Ability Enhancement Courses (AEC) [offered by the department]							
EG-3A1	Elements of GIS		2	2	20	30	50

SEMESTER- IV

Project Work

Students are encouraged to take up problems having principally industrial implications or of more fundamental research concerns under the joint supervision of Dibrugarh University and external organizations.

Problems chosen can be purely geophysical / or any earth science related issues having geophysical components / or, multi-disciplinary problems having broader societal concerns having geophysical components. Greater emphasis is given on 'new lights' thrown on problems and enrichment of current status of knowledge.

Cumulative Total Marks (I+II+III+IV semesters)=650+550+650+650=2500

Cumulative Total Credits (I+II+III+IV semesters)=26+22+26+26=100

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

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, ONGCL, GSI, Shell, Schlumberger, Halliburton, Reliance, NHPC and many other reputed concerns is quite good. Moreover, students are motivated to enhance their competitive edge and grow research oriented minds to keep their learning curve up in a sustainable manner. Lately, a number of students after passing out have joined research projects in various IITs and DST sponsored programmes.

Eligibility:

Candidates having M.Sc./M.Sc. Tech. degree in Applied Geology/ Geology/ Physics/ Mathematics, B.Tech. (Petroleum Engineering or Petroleum Geosciences or equivalent Earth Science related streams) degree from any UGC recognized University securing at least 55% marks in aggregate (or, OGPA 7.0 in the scale of 10.0 points) and having Mathematics as a core subject in the degree level. Candidates who have cleared GATE will get preference. Candidates are supposed to appear for a written Entrance Examination Test [**Subjects: General awareness, Reasoning, Technical English, General mathematical aptitude, Imaginative power** etc. **NO SYLLABUS. Question Type:** Objective (60%) Subjective (40%) **Time:** 2 hrs.] Based on the overall performance (Academic Result as well as Entrance Examination Test Result) of the eligible candidates, a merit list of the selected candidates will be published and candidates after payment of the prescribed fee shall be admitted for the course.

Note: *Relaxation in respect of S.C. and S.T. may be allowed as per provision made by the Govt. of India and Govt. of Assam.*

How to apply:

The intending candidates need to apply online through the “Online Application Submission” portal of Dibrugarh University which is available at www.dibru.online from **21.06.2019**. The application fee of **Rs.500/-** needs to be paid at the time of applying online through Debit Card / Credit Card / Internet Banking. On successful submission of the Application, an Acknowledgement Slip with “SUCCESS” status will be generated. Candidates are advised to download and print the Acknowledgement Slip along with the submitted Application Form and Admit Card for future reference. A step-by-step instruction of the Application Process is available on the homepage of the “Online Application Submission” portal.

Admission Procedure and Schedule:

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| a) Start of Online Registration | : 21.06.2019 |
| b) Last date for Submission of Online Application | : 24.07.2019(upto 5.00 pm) |
| c) Date of Entrance Exam | : 26.07.2019 |
| d) Date of Interview and Admission | : 29.07.2019 |

For further details, please contact:

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Sd/- Dr. B.C. Borah
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