



# University of Oum El Bouaghi

## Master's degree in Geology

### 1. Program Description:

This training requires a good knowledge of fundamental geology. It is reserved for students holding a bachelor's degree in fundamental geology, geoscience, geology and environment, and other licenses in the field of Earth and universe sciences. It will be completed by the study of the dynamics of sedimentary basins, the relationship between diagenesis and deposit environments, petrophysics and logs, other geophysical methods, in particular refraction and reflection seismic, etc. Knowledge of geology on the one hand and geophysical methods on the other makes it possible to predict and quantify energy and mining resources in the earth's crust.

### Semester 1 :

Teaching Unit	SHV	WHV				Coeff.	Credits	Evaluation Mode	
	14-16 sem	Course	TUT.	LAB	Others			Continuous	Exam
<b>Fundamental TU</b>									
<b>FTU1 (O/P) Sedimentary Basins</b>	<b>90h</b>	<b>3h</b>		<b>3h</b>		<b>5</b>	<b>9</b>		
Module 1: Deposition Environments and Diagenesis	45h	1h30		1h30		3	5	x	x
Module2: Dynamics of Sedimentary Basins	45h	1h30		1h30		2	4	x	x
<b>FTU2 (O/P) Sedimentary rocks and Tectonics</b>	<b>112h30</b>	<b>3h</b>	<b>1h30</b>	<b>3h</b>		<b>4</b>	<b>9</b>	x	x
Module 1: Sedimentary rocks	45h	1h30		1h30		2	5	x	x
Module 2: Tectonics	67h30	1h30	1h30	1h30		2	4	x	x

<b>Methodological TU</b>									
<b>MTU1 (O/P) Applied Geophysics</b>	<b>60h</b>	<b>1h30</b>	<b>2h30</b>			<b>3</b>	<b>5</b>		
Module 1: Applied Geophysics	60h	1h30	2h30			3	5	x	x
<b>MTU2 (O/P) Techniques of Drilling</b>	<b>45h</b>	<b>1h30</b>	<b>1h30</b>			<b>2</b>	<b>4</b>		
Module 1: Techniques of Drilling	45h	1h30	1h30			2	4	x	x
<b>Discover TU</b>									
<b>DTU1 (O/P): Water et Soil</b>	<b>45h</b>	<b>1h30</b>	<b>1h30</b>			<b>2</b>	<b>2</b>		
Module 1: Water et Soil	45h	1h30	1h30			2	2	x	x
<b>Transversal TU</b>									
<b>TTU1(O/P) English scientific</b>	<b>22h30</b>	<b>1h30</b>				<b>1</b>	<b>1</b>		
Module 1: English I	22h30	1h30				1	1	x	x
<b>1Total Semester</b>	<b>375h</b>	<b>12h</b>	<b>7h</b>	<b>6h</b>		<b>17</b>	<b>30</b>		

## Semester 2

Teaching Unit	VHS	WHV				Coeff	Credits	Evaluation Mode	
	14-16 sem	Course	TUT.	LAB	Others			Continuous	Exam
<b>Fundamental TU</b>									
<b>FTU1(O/P) Sedimentary Basins</b>	<b>112h30</b>	<b>4h30</b>	<b>3h</b>			<b>5</b>	<b>9</b>		
Module 1: Georesources	45h	1h30	1h30			2	4		
Module 2: Reservoirs & Exploration	22h30	1h30				2	2		
Module 3: Petrophysics et Well logging	45h	1h30	1h30			1	3		
<b>FTU2(O/P): Geology of Algeria</b>	<b>90h</b>	<b>3h</b>		<b>3h</b>		<b>4</b>	<b>9</b>		
Module 1: Geology of Northern Algeria	45h	1h30		1h30		2	5		
Module 2: Sedimentary Basins of Northern Algeria	45h	1h30		1h30		2	4		
<b>Methodological TU</b>									
<b>MTU1(O/P) Geomatics et Remote sensing</b>	<b>60h</b>	<b>3h</b>	<b>1h</b>		<b>10</b>	<b>3</b>	<b>6</b>		
Module 1: Geomatics	22h30	1h30			<b>5</b>	2	3		
Module 2: Remote sensing & GIS	37h30	1h30	1h		<b>5</b>	1	3		
<b>MTU2 (O/P) Field techniques and data interpretation</b>	<b>45h</b>	<b>1h30</b>	<b>1h30</b>		<b>5</b>	<b>2</b>	<b>3</b>		
Module 1 Field techniques and data interpretation	45h	1h30	1h30		<b>5</b>	2	3		
<b>Discover TU</b>									
<b>DTU1(O/P) Technical improvement of rocks</b>	<b>45h</b>	<b>1h30</b>	<b>1h30</b>		<b>5</b>	<b>2</b>	<b>2</b>		
Module 1: Technical improvement of rocks	45h	1h30	1h30		<b>5</b>	2	2		

<b>Transversal TU</b>									
<b>TTU1(O/P) English</b>	<b>22h30</b>	<b>1h30</b>			<b>5</b>	<b>1</b>	<b>1</b>		
Module 1: English II	22h30	1h30			<b>5</b>	<b>1</b>	<b>1</b>		
<b>Total Semester 2</b>	<b>375h</b>	<b>15h</b>	<b>7h</b>	<b>3h</b>		<b>17</b>	<b>30</b>		

### Semester 3

Teaching Unit	VHS	WHV				Coeff.	Credits	Evaluation Mode	
	14-16 sem	Course	TUT.	LAB	Others			Continuous	Exam
<b>Fundamental TU</b>									
<b>FTU1(O/P) Geology of Algeria</b>	<b>90h</b>	<b>3h</b>		<b>3h</b>		<b>4</b>	<b>9</b>		
Module 1: Geology of Southern Algeria	45h	1h30		1h30		2	5		
Module2: Sedimentary Basins of Southern Algeria	45h	1h30		1h30		2	4		
<b>FTU2(O/P) Internship in laboratory or field and Hydrogeology</b>	<b>112h30</b>	<b>1h30</b>		<b>6h</b>		<b>5</b>	<b>9</b>		
Module 1: Internship in the laboratory or in the field	67h30			4h30		3	5		
Module2: Hydrogeology	45h	1h30		1h30		2	4		
<b>Methodological TU</b>									
<b>MTU1(O/P): Geomorphology</b>	<b>22h30</b>	<b>1h30</b>				<b>2</b>	<b>3</b>		
Module 1: Geomorphology	22h30	1h30				2	3		
<b>MTU2(O/P) Applied IT</b>	<b>45h</b>	<b>1h30</b>		<b>1h30</b>		<b>1</b>	<b>3</b>		

Module 1: Geosciences Softwares	45h	1h30		1h30		1	3		
<b>MTU3(O/P): Project</b>	<b>37h30</b>	<b>1h30</b>	<b>1h</b>			<b>2</b>	<b>3</b>		
Module 1: Project	37h30	1h30	1h			2	3		
<b>Discover TU</b>									
<b>DTU1(O/P): Geological hazards</b>	<b>45h</b>	<b>1h30</b>	<b>1h30</b>			<b>2</b>	<b>2</b>		
Module 1: Geological hazards	45h	1h30	1h30			2	2		
<b>Transversal TU</b>									
<b>TTU1(O/P) Organizations and professions of geology</b>	<b>22h30</b>	<b>1h30</b>				<b>1</b>	<b>1</b>		
Module 1: Organizations and professions of geology	22h30	1h30				1	1		
<b>Total Semester 3</b>	<b>375h</b>	<b>12h</b>	<b>2h30</b>	<b>10h30</b>		<b>17</b>	<b>30</b>		

**Semester 4 :**

	<b>VS</b>	<b>Coeff.</b>	<b>Credits</b>
Personal work	200h00	9	18
Field and laboratory	150h00	5	9
Internship and Seminars	25h00	3	3
<b>Total Semester 4</b>	375h00	17	30