

# Master Program in Applied Geophysics

## Research Fields

Sesimic Method  
Magnetic Method  
Gravity Method  
IP/Resistivity Method  
GPR Method



For more information,  
please visit the following website.  
[www.geol.science.cmu.ac.th](http://www.geol.science.cmu.ac.th)



## Master of Science Program in Applied Geophysics (International Program)

### Type 1 (Plan A Type A1)

<b>Degree Requirements</b>	<b>36</b>	<b>credits</b>
<b>A. Thesis</b>		
212797 Master's Thesis	36	credits
<b>B. Academic Activities</b>		
<p>(1) A student has to organize and present a seminar on his/her thesis progress for at least 2 times.</p> <p>(2) The whole or part of a thesis must be published or accepted for publication in an international journal, which is, listed in international database with student's name as the first author for at least 1 paper and at least 1 master's thesis work or a part of master's thesis work must be presented in an international conference accepted by the field of study.</p> <p>(3) A student has to report thesis progression to the Graduate School every semester, for approval by the Chairman of the Graduate Study Committee.</p>		
<b>C. Non-credit Courses</b>		
<p>(1) Graduate School requirement: a foreign language</p> <p>(2) Program requirement : with approval of the Graduate Program Administrative Committee, the student may select courses related to his/her thesis</p>		

### Type 2 (Plan A Type A2)

<b>Degree Requirements</b>	<b>a minimum of 36</b>	<b>credits</b>
<b>A. Coursework</b>		
<b>a minimum of 24 credits</b>		
1. Graduate courses		
1.1 Field of Specialization		
a minimum of 18 credits		
1.1.1 Required courses		
a minimum of 9 credits		
212701 Geophysical Processes of the Earth	3	credits
212703 Geophysical Signal Analysis	3	credits
212791 Seminar in Applied Geophysics 1	1	credit
212793 Geophysical Reading and Writing	2	credits
1.1.2 Elective courses		
a minimum of 9 credits		
Student can enroll the followings courses or the graduate courses that newly opened in Applied Geophysics with the consent of the graduate program administration committee.		
212711 Seismic Prospecting	3	credits
212712 Seismic Data Processing	3	credits
212713 Seismic Attribute Analysis	3	credits
212714 Seismic Data Interpretation	3	credits
212716 Seismic Anisotropy	3	credits
212721 Electrical and Electromagnetic Prospecting	3	credits
212731 Gravity and Magnetic Prospecting	3	credits
212741 Borehole Geophysics	3	credits
212752 Seismic Expression of Structural Styles	3	credits
212781 Problems in Mining and Petroleum Geophysics	2	credits
212782 Problems in Environmental and Engineering Geophysics	2	credits

	212783	Advanced Geophysical Apprenticeship	2	credits
	212785	Risk and Economic Analysis of Prospects	3	credits
	212789	Selected Topics in Applied Geophysics	3	credits
	212792	Seminar in Applied Geophysics 2	1	credit
	212796	Special Problems in Applied Geophysics	3	credits
1.2	Other courses (if any) a maximum of		3	credits
1.2.1	Required courses - Non -			
1.2.2	Elective courses (if any) a maximum of		3	credits

Other relevant graduated courses in related disciplines can be taken for credits with the consent of the Graduate Program Administration Committee. If student does not take other relevant graduated courses in related disciplines, he/she may enroll in any courses listed in 1.1.2 for 3 credits.

2. Advanced undergraduate courses (if any) a maximum of 3 credits  
 Advanced undergraduate courses in related disciplines can be taken for credits with the consent of the Graduate Program Administration Committee. If student does not take advanced undergraduate course, he/she may enroll in any courses listed in 1.1.2 for 3 credits.

#### B. Thesis

	212799	Master's Thesis	12	credits
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#### C. Non-credit Courses

- (1) Graduate School requirement : a foreign language  
 (2) Program's requirement : A student without prior knowledge in Geology, Physics or Mathematics must take courses in Geology, Physics, and Mathematics by approval of the Graduate Program Administrative Committee or select from the list below

- For student with geology or other similar background

	212771	Mathematics and Physics for Geophysicists	3	credits
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- For student with physics or mathematics or other similar background

	212773	Geology for Geophysicists	3	credits
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#### D. Academic Activities

- (1) A student has to present the thesis progression at least once an academic year throughout the study period by the guidelines from the Graduate Program Administrative Committee.  
 (2) The whole or part of a thesis must be published or accepted for publication in an international journal, which is, listed in international database or presented in an international conference, which has proceedings with student's name as the first author for at least 1 paper.

### Type 3 (Plan B)

<b>Degree Requirements</b>	<b>a minimum of</b>	<b>36</b>	<b>credits</b>
<b>A. Coursework</b>	<b>a minimum of</b>	<b>30</b>	<b>credits</b>
1. Graduate courses	a minimum of	30	credits
1.1 Field of Specialization	a minimum of	27	credits
1.1.1 Required courses		6	credits
212703 Geophysical Signal Analysis		3	credits
212791 Seminar in Applied Geophysics 1		1	credit
212793 Geophysical Reading and Writing		2	credits
1.1.2 Elective courses	a minimum of	21	credits
Student can enroll the followings courses or the graduate courses that newly opened in Applied Geophysics with the consent of the graduate program administration committee.			
212711 Seismic Prospecting		3	credits
212712 Seismic Data Processing		3	credits
212713 Seismic Attribute Analysis		3	credits
212714 Seismic Data Interpretation		3	credits
212716 Seismic Anisotropy		3	credits
212741 Borehole Geophysics		3	credits
212752 Seismic Expression of Structural Styles		3	credits
212785 Risk and Economic Analysis of Prospects		3	credits
212789 Selected Topics in Applied Geophysics		3	credits
212796 Special Problems in Applied Geophysics		3	credits
1.2 Other courses (if any)	a maximum of	3	credits
1.2.1 Required courses			- Non -
1.2.2 Elective courses (if any)	a maximum of	3	credits
Student can enroll the followings courses with the consent of the Graduate Program Administration Committee. If student does not take other relevant graduated courses in related disciplines, he/she may enroll in any courses listed in 1.1.2 for 3 credits.			
205765 Petroleum Systems		3	credits
2. Advanced undergraduate courses			- Non -
<b>B. Independent Study</b>			
212798 Independent Study		6	credits
<b>C. Non-credit Courses</b>			
(1) Graduate School requirement	:	a foreign language	
(2) Program requirement	:	Under the recommendation of the Graduate Program Administrative Committee in Applied Geophysics.	
<b>D. Academic Activities</b>			
At least 1 independent study work or part of independent study work must be published in CMU Graduate Journal or in other academic publication approved by the field of study and the graduate school with the student as the first author.			
<b>E. Comprehensive Examination</b>			

Having submitted a request form to the Graduate School, approved by general advisor or major independent study advisor, a student must then complete a comprehensive examination.