

# Master & Doctor of Philosophy Programs in Applied Physics

## Research Fields

Computational Condensed Matter Physics  
Experimental Condensed-Matter Physics  
Microfluidic Physics  
Plasma and Beam Physics  
Laser Cooling and Trapping of Neutral Atoms  
Atmospheric Physics  
Astrophysics



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



## Master of Science Program in Applied Physics

### Type 2 (Plan A Type A2)

Degree Requirements Total	a minimum of	<b>38</b>	credits
A. Coursework	a minimum of	<b>26</b>	credits
1. Graduate courses	a minimum of	26	credits
1.1 Field of concentration courses	a minimum of	26	credits
1.1.1 Required courses		17	credits
217701	Mechanics for Applied Physics	3	credits
217703	Quantum Mechanics for Applied Physics	3	credits
217705	Electromagnetism for Applied Physics	3	credits
217707	Computational Methods and Microcontroller for Physics Problems	2	credits
217708	Advanced Research Instruments and Data Analysis	2	credits
217717	Computational Methods and Microcontroller for Physics Problems Laboratory	1	credit
217718	Advanced Research Instruments and Data Analysis Laboratory	1	credit
217791	M.S. Seminar in Applied Physics 1	1	credit
217792	M.S. Seminar in Applied Physics 2	1	credit
1.1.2 Elective courses	a minimum of	9	credits

A student may select any courses related to his/her thesis research from the following courses.

207741	Theory of Solids 1	3	credits
207742	Theory of Solids 2	3	credits
217726	Solar Cell Technology	3	credits
217733	Thermodynamics of Materials	3	credits
217734	Thermodynamics and Kinetics	3	credits
217746	Atomic and Molecular Physics	3	credits
217747	Gas Sensor Technology	3	credits
217751	Nanoscience	3	credits
217752	Nanotechnology	3	credits
217761	Atmospheric Physics	3	credits
217762	Atmospheric Modelling	3	credits

217763	Climate Change Assessment	3	credits
217773	Laser and Applied Optics	3	credits
217775	Optical Metrology	3	credits
217781	Radio Frequency Linear Accelerator	3	credits
217782	Ion Beam and Plasma Processing for Material Modification	3	credits
217783	Electromagnetic Radiation from Relativistic Electrons	3	credits
217789	Selected Topics in Applied Physics	3	credits
217795	Special Problems in Applied Physics	3	credits

or select other graduate courses related to his/her thesis with an approval of his/her advisor and the Graduate Program Administrative committee from courses in graduate level in Physics (207...), Applied Physics (217...), Teaching Physics (225... .) and Astronomy (226...).

1.2 Other courses -none-

2. Advanced undergraduate courses -none-

#### **B. Thesis**

217799	Master's Thesis	12	credits
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#### **C. Non-credit Course**

1. Graduate School's requirement - a foreign language
2. Program's requirement - none

#### **D. Academic Activities**

At least 1 master's thesis work or a part of master's thesis work must be published or at least accepted to publish in an international journal indexed in ISI or Scopus or Web of Science database or in a national journal listed in TCI Tier 1 database or as a full paper in an international conference's proceedings with the student as the first author.