National Chiao Tung University, Department of Applied Mathematics
Table of Undergraduate Required Courses and Regulation for "Field Courses Completion Certificate"

Revised May, 2012

1. The table of required courses and the respective credit hours are as follows:

Freshmen		Sophomore		Junior	
1st semester	2nd semester	1st semester	2nd semester	1st semester	2nd semester
Calculus I (4)	Calculus II (4)	Advanced Calculus I (4)	Advanced Calculus II (4)	Numerical Analysis I (3)	Complex Analysis (3)
Linear Algebra I (3)	Linear Algebra II (3)	Algebra I (3)	Algebra II or Partial Differential Equations (3)	Discrete Mathematics (3)	
Introduction to Computer Science I (3)	Introduction to Computer Science II (3)	Differential Equations I (3)	Probability Theory (3)	Statistics (3)	
Elementary Mathematics (3)	Introduction to Practice of Mathematical Software (1)				
General Physics (4)	General Physics II (4)				

2. Students who have taken courses from the same field, adding up to more than 6 credit hours with an average of more than 70 and having passed at least two of the courses can apply for a "Field Courses Completion Certificate" at the department office. The certificate will be issued after approval by the course committee. Each student is allowed to apply for more than one field certificate. Field certificates might be useful when applying for graduate school and jobs. The above applies to all enrolled students.

Fields	Courses (G) stands for graduate courses
Mathematical Modeling and Scientific Computing	Applied Mathematics Methods (G), Introduction to Scientific Computing (G), Partial Differential Equations (G)
Financial Engineering and Probability	Advanced Statistics, Stochastic Processes, Advanced Probability (G), Real Analysis (G)
Differential Equations and Dynamical Systems	Introduction to Partial Differential Equations, Introduction to Dynamical Systems, Ordinary Differential Equations (G)
Discrete Mathematics and Optimization	Basic Graph Theory, Coding Theory (G), Graph Theory (G), Cryptography (G)
Number Theory, Geometry and Analysis	General Topology, Geometry, Introduction to Analysis, Elementary Number Theory (G)