

Mathematics in the Modern World

Introduction

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Conference and Enrichment Sessions on the New General Education Curriculum
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Mathematics in the Modern World

Training of GE trainers, Ateneo de Manila University, October 10–28, 2017



Matematika sa Makabagong Daigdig

Training of GE trainers, Ateneo de Manila University, October 10–28, 2017



Mathematics in the Modern World

Second-generation GE faculty training, Ateneo de Naga University, April 24, 2017–May 13, 2017



Second Generation Faculty Training on the New General Education Core Courses
"Mathematics in the Modern World"
April 24 - May 13, 2017



New General Education Curriculum

The new general education curriculum (CHED, 2013) will soon replace the one described in CHED (1996).

It is intended to generally start academic year 2018–2019, but “[i]n light of the transition models implemented by some private basic education schools where they re-label the grades, such that students will graduate as early as 2016, the new GE shall be implemented earlier than 2018” (CHED, 2013, p. 10).

CMO no. 20, s. 2013 (CHED, 2013) is “a set of minimum standards for the general education component of all degree programs that applies to private and public Higher Education Institutions in the country.”

Mathematics in the Modern World

Description (CHED, 2013)

Nature of mathematics, appreciation of its practical, intellectual, and aesthetic dimensions, and application of mathematical tools in daily life.

According to CHED (2016), “the sample or suggested course syllabi can be used as guides,” and “[p]ublic and private HEIs may adopt the sample or suggested course syllabi in the teaching and in the delivery of the content of the new GEC. For record purposes, the HEIs shall inform the CHED Regional Offices (CHEDROs) of their implementation of the new GEC.”

A sample syllabus can be found at
<http://api.ched.ph/api/v1/download/2760>

Mathematics in the Modern World

Brief explanation (CHED, 2013)

The course begins with an introduction to the nature of mathematics as an exploration of patterns (in nature and the environment) and as an application of inductive and deductive reasoning. By exploring these topics, students are encouraged to go beyond the typical understanding of mathematics as merely a bunch of formulas, but as a source of aesthetics in patterns of nature, for example, and a rich language in itself (and of science) governed by logic and reasoning.

Mathematics in the Modern World

Brief explanation (continuation) (CHED, 2013)

The course then proceeds to survey ways in which mathematics provides a tool for understanding and dealing with various aspects of present day living, such as managing personal finances, making social choices, appreciating geometric designs, understanding codes used in data transmission and security, and dividing limited resources fairly. These aspects will provide opportunities for actually doing mathematics in a broad range of exercises that bring out the various dimensions of mathematics as a way of knowing and test the students' understanding and capacity.

Mathematics in the Modern World

The Nature of Mathematics

- ▶ Mathematics in Our World
- ▶ Mathematical Language and Symbols
- ▶ Problem Solving and Reasoning

Mathematics as a Tool

- ▶ Data Management
- ▶ Geometric Designs
- ▶ Codes
 - Linear Programming
 - The Mathematics of Finance
- ▶ Apportionment and Voting
 - Logic
- ▶ The Mathematics of Graphs
 - Mathematical Systems

- Commission on Higher Education. (1996, September 25). *New general education curriculum (GEC)*. Retrieved March 31, 2017, from <http://www.ched.gov.ph/wp-content/uploads/2013/07/CMO-No.59-s1996.pdf> (CMO no. 59, s. 1996)
- Commission on Higher Education. (2013, June 28). *General education curriculum: Holistic understandings, intellectual and civic competencies*. Retrieved March 31, 2017, from <http://www.ched.gov.ph/wp-content/uploads/2013/07/CMO-No.20-s2013.pdf> (CMO no. 20, s. 2013)
- Commission on Higher Education. (2016, October 3). *Sample or suggested syllabi for the new general education (GEC) core courses*. Retrieved March 31, 2017, from <http://api.ched.ph/api/v1/download/3481> (Memorandum from the Chairperson)