Learning Mathematics in General Foundation Programs: Proposed Omani Initiative

SEBTI KERBAL (Chairperson of MWG)
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Sultan Qaboos University
PURPOSE OF STANDARDS
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- To Guide HEPs in the Development of Their GFPs
- To Provide the Benchmark against which OAC Accreditation Panels will assess GFPs for the Purpose of Program Accreditation
GENERAL FOUNDATION PROGRAMS: Areas of Learning
Four Areas of Learning

- English Language
Four Areas of Learning

- English Language
- General Study skills
Four Areas of Learning

- English Language
- General Study skills
- Computing
Four Areas of Learning

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- Mathematics
MATHEMATICS AREA
OVERVIEW

Aim of Mathematics Program
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- Background on Omani Secondary School
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- Mathematics Program Structure
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- APPENDIX: ABBREVIATIONS
AIM OF MATH PROGRAM

To ensure that students are equipped with the mathematical understanding and skills necessary to meet the cognitive and practical requirements of higher education or postsecondary studies in a variety of disciplines.
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- Bridge the gap in mathematical skills between secondary school and higher education
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- Bridge the gap in mathematical skills between secondary school and higher education.
- Prepare students to learn and solve mathematical problems in English.
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To ensure that students are equipped with the mathematical understanding and skills necessary to meet the cognitive and practical requirements of higher education or postsecondary studies in a variety of disciplines.

- Bridge the gap in mathematical skills between secondary school and higher education.
- Prepare students to learn and solve mathematical problems in English.
- Enable students to meet the prescribed learning outcomes.
AIM OF MATH PROGRAM

Prepare Omani students to acquire necessary knowledge and skills for further studies
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- Prepare Omani students to acquire necessary knowledge and skills for further studies
- Improve study skills so as have a smooth transition from high school to higher education studies
Background on Omani Sec.School
Omani students are given the choice in Grades 11 and 12 to study

Either "Pure Mathematics" ⇒ higher education in Eng., Sci., IT, etc.
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Omani students are given the choice in Grades 11 and 12 to study

- Either "Pure Mathematics" $\Rightarrow$ higher education in Eng., Sci., IT, etc.
- Or "Applied Mathematics" $\Rightarrow$ higher education in Business, Adm., Art, etc.
Based on the above student background we developed two categories of learning outcomes:

- "Basic Mathematics" (Mandatory for all students) called (Set 1)
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- "Basic Mathematics " (Mandatory for all students) called (Set 1)
- " Optional" includes two Groups:  
  (a) Applied Mathematics (Set 2)  
  (b) Pure Mathematics (Set 3)
Learning Outcomes: An overview
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- Populated a table with learning outcomes from the previous data
Learning Outcomes: An overview

- Collected International benchmarks of Mathematics Standards for Foundation programs: USA, CANADA, AUSTRALIA, SOUTH AFRICA, UAE.
- Considered National and International Mathematics Standards for Foundation programs
- Populated a table with learning outcomes from the previous data
- Developed draft1 (accordingly to Bloom’s Taxonomy) academic standards for Foundation programs offered in Oman and sent to Dr. Richard Voorhees an international expert for feedback
Learning Outcomes: An overview

After Feedback from the international expert and the working team we developed Draft2
Learning Outcomes: An overview

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- Draft2 updated and presented at the Symposium (SQU, January 2007).
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- Draft2 updated and presented at the Symposium (SQU, January 2007).
- After Feedback from Parallel sessions and online discussion groups a Final Draft (Compiled and edited by Martin Carroll, OAC) is available to the public on the OAC website http://www.oac.gov.om/qa/prog/dev/ until 14/4/2007
- Mathematics Program Structure including Learning Outcomes is shown in the Final Draft (Contact Mr. Martin or Dr. S. Razvi at www.oac.gov.om)
Math Working Group Members

Dr. Sebti Kerbal (Sultan Qaboos University), Chairman
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- **Dr. Nasir Ahmad Khan** (Mazoon College)
- **Dr. Joseph Mani** (Modern College of Business and Science)
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