

## MEM - CURRICULUM AND PLAN

### List of Pre- MEM Courses

In order to prepare for our MEM Program, it would be helpful to have taken classes in Engineering Economy, Operation Research, Engineering Statistics and Production Planning and Control. The number of courses required from this category differs from an applicant to another according to the degree of relevance of his/her education and area of expertise to the field of Underground.

The Pre-MEM Course List	Credits
Engineering Economy	3.00
Operation Research	3.00
Engineering Statistics	3.00
Production Planning and Control	3.00

### Core & General Courses: (9 core courses, 27 Credit hours)

7 Courses, 21 credit hours in Engineering Management and 2 courses, 6 credit hours in Business Administration

Regardless of the MEM option, all students are required to complete the following courses:

### Core courses in Engineering Management

<b>ENGM 510</b>	Advanced Engineering Statistics	3 Credit hours
<b>ENGM 515</b>	Advanced Engineering Economy	3 Credit hours
<b>ENGM 520</b>	Quality and Performance Management	3 Credit hours
<b>ENGM 530</b>	Concepts and Principles of Engineering Management	3 Credit hours
<b>ENGM 540</b>	Production/Operations Management	3 Credit hours
<b>ENGM 550</b>	Project Management	3 Credit hours
<b>ENGM 560</b>	Safety Engineering	3 Credit hours
	<b>Total</b>	<b>21</b>

### Core courses in Business Administration

<b>ACCT 532</b>	Managerial Accounting	3 Credit hours
<b>HRM 510</b>	Human Resources Management	3 Credit hours
	<b>Total</b>	<b>6</b>

### Areas of Concentration (2 courses, 6 hours)

The MEM program is designed to include 3 option areas to cater different interests of the professional students. For the option areas, student is required to select 2 courses under the option area selected.

## MEM Option Areas (Elective Courses)

- |                            |                |
|----------------------------|----------------|
| 1. Construction Management | 6 credit hours |
| 2. Industrial Management   | 6 credit hours |
| 3. Quality Management      | 6 credit hours |

## MEM Option Areas (Elective Courses):

In addition to the 9 core courses of the program, 2 courses must be taken to complete the option credits to qualify student for graduation in the MEM degree with option.

### 1. Construction Management Option Credit hours

ENGM 570	Construction Scheduling and Cost Estimating	3
ENGM 571	Contract Management and Project Delivery System	3
ENGM 572	Construction Risk Management	3

### 2. Industrial Management Option Credit hours

ENGM 580	Organizational Change Management	3
ENGM 581	Systems Engineering	3

### 3. Quality Management Option Credit hours

ENGM 590	Quality Control	3
ENGM 591	Reliability Engineering	3

## MEM Approved Technical Elective Courses

Two courses (6 credit hours) should be chosen from the following approved technical elective courses:

<b>MKT 510</b>	<b>Marketing Management</b>	3
<b>FIN 511</b>	<b>Financial Management</b>	3
<b>EPR 510</b>	<b>Entrepreneurship</b>	3
<b>IBM 511</b>	<b>International Business Management</b>	3
<b>MIS 510</b>	<b>Management Information Systems</b>	3
<b>MGT 581</b>	<b>Business Strategies</b>	3
<b>HRM 536</b>	<b>Cultural Diversity in Business</b>	3

## MEM Case Study Report

This last course is **designed to be taken during the last semester** culminating all aspects of engineering management in the chosen area of concentration.

<b>ENGM 595</b>	<b>Case Study Report</b>	<b>3</b>
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**MEM - COURSE PLAN PER SEMESTER****2-Year Plan****First Year**

<b>First Semester</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Credits Hours</b>	<b>Pre-Request</b>
ENGM 510	Advanced Engineering Statistics	3	<b>ENGM 332</b>
ENGM 560	Safety Engineering	3	
ENGM 530	Concepts & Principles of Engineering Management	3	
ENGM 515	Advanced Engineering Economy	3	<b>ENGM 255</b>
<b>Total Semester Credits 12</b>			

<b>Second Semester</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Credits Hours</b>	<b>Pre-Request</b>
ENGM 520	Quality and Performance Management	3	<b>ENGM 510</b>
ENGM 540	Production/Operations Management	3	<b>ENGM 451</b>
ACCT 532	Managerial Accounting	3	<b>ENGM 515</b>
ENGM 550	Project Management	3	<b>ENGM 530</b>
<b>Total Semester Credits :12</b>			

**Second Year**

<b>Third Semester</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Credits Hours</b>	<b>Pre-Request</b>
	Area of Concentration Course I	3	<b>ENGM 520</b>
	Area of Concentration Course II	3	<b>ENGM 560</b>
HRM 510	Human Resources Management	3	<b>ACCT 532</b>
	Approved Elective I	3	<b>ENGM 540</b>
<b>Total Semester Credits :12</b>			

<b>Fourth Semester</b>			
<b>Course Code</b>	<b>Course Title</b>	<b>Credits Hours</b>	<b>Pre-Request</b>
ENGM 595	Case Study Report	3	<b>HRM 510, ENGM 311</b>
	Approved Elective II	3	<b>ENGM 540, ACCT 532</b>
<b>Total Semester Credits :6</b>			

**2-Year Plan**  
**TERM I COURSES**

First Year – First Term		Credit Hours	Prerequisite
ENGM 510	Advanced Engineering Statistics	3	ENGM 332
ENGM 515	Advanced Engineering Economy	3	ENGM 255
ENGM 530	Concepts and Principles of Engineering Management	3	-
ENGM 560	Safety Engineering	3	-
<b>Total</b>		<b>12</b>	

**TERM II COURSES**

First Year – Second Term		Credit Hours	Prerequisite
ENGM 520	Quality and Performance Management	3	ENGM 510
ENGM 540	Production/Operations Management	3	ENGM 451
ENGM 550	Project Management	3	ENGM 530
ACCT 532	Managerial Accounting	3	ENGM 515
<b>Total</b>		<b>12</b>	

**TERM III COURSES**

Second Year – Third Semester		Credit Hours	Prerequisite
-	Area of Concentration Course I	3	ENGM 520
-	Area of Concentration Course II	3	ENGM 560
-	Human Resource Management	3	ACCT 532
-	Approved Technical Elective I	3	ENGM 540
<b>Total</b>		<b>12</b>	

**TERM IV COURSES**

Second Year – Fourth Semester		Credit Hours	Prerequisite
ENGM 595	Case Study Report	3	HRM 510,ENGM 311
-	Approved Technical Elective II	3	ENGM 540,ACCT 532
-	-	-	-
-	-	-	-
<b>Total</b>		<b>6</b>	