

**CORE CURRICULUM AND MINIMUM  
ACADEMIC STANDARD (CCMAS)  
FOR NIGERIAN UNIVERSITY  
SYSTEM**

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**Presenter:**

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**DATE: 27<sup>TH</sup> MAY 2023**

# NATIONAL WORKSHOP:



The Nigerian Institution Of  
Mechanical Engineers

(A Division of the Nigerian Society of Engineers)

ENGR. OLUFUNMILADE AKINGBAGHOHUN, FNSE, FNIMechE  
NATIONAL CHAIRMAN

## REVISED CORE CURRICULUM AND MINIMUM ACADEMIC STANDARD FOR NIGERIAN UNIVERSITY SYSTEM

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# OUTLINE

## 1.0 INTRODUCTION

### 1.1 National University Commission (NUC)

## 2.0 Core Curriculum and Minimum Academic Standard (CCMAS)

### 2.1 Mechanical Engineering Programm

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# 1.0 INTRODUCTION

In keeping with its mandate of making university education in Nigeria more responsive to the needs of the society, the National Universities Commission commenced the journey to restructure the BMAS in 2018, introducing in its place, the Core Curriculum and Minimum Academic Standards (CCMAS), to reflect the 21st Century realities, in the existing and new disciplines and programmes in the Nigerian University System.

# 1.1 National University Commission (NUC)

Responsible for

Regulation of all programmes in Nigeria Universities

Granting approval for the establishment of all higher educational Institutions offering degree programmes in Nigeria Universities

Ensure quality assurance of all academic programmes



# 2.0 Core Curriculum and Minimum Academic Standards (CCMAS)

## 70% CCMAS GLOBAL COURSE STRUCTURE

LEVEL	GST/ ENT	BASIC SCI.	GET	MEE	SIWES	TOTAL UNITS
100	04	18	03	01	-	26
200	04	-	26	-	03	33
300	04	-	18	01	04	27
400	-	-	-	13	08	21
500	-	-	05	08	-	13
TOTAL	12	18	52	23	15	120

## PRESENT GLOBAL COURSES STRUCTURE (UNIMAID)

LEVEL	GST/ ENT	BASIC SCI.	GET	MEE	SIWES	TOTAL UNITS
100	10	31	06	-	-	47
200	10	12	26	03	02	53
300	02	06	21	23	03	55
400	-	-	09	29	06	44
500	-	-	05	43	-	48
TOTAL	22	49	67	98	11	247

## 2.1 Mechanical Engineering Programme

# Philosophy

to produce self-reliant and confident graduates

develop ingenuity and originality in problem solving.



## 2.2 Entry Requirement

UTME  
5 YEARS

- 5 CREDITS

DE  
4 YEARS

- 5 CREDITS
- ND
- HND



## 2.3 Graduation Requirements

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### UNIFIED TERTIARY MATRICULATION EXAMINATION (UTME) MODE

Must have registered 150 – 180 units of courses

15 – 24 credit loads per semester

Must have passed all registered courses and obtained a minimum CGPA not less than 1.00

15 credit units of SIWES

8 credit units of GST

4 credit units of Entrepreneurship

### DIRECT ENTRY (DE) MODE

Must have registered 120 – 150 units of courses

15 – 24 credit loads per semester

Must have passed all registered courses and obtained a minimum CGPA not less than 1.00

15 credit units of SIWES

8 credit units of GST

4 credit units of Entrepreneurship

## 2.4

# CCMAS 70% COURSES

### COURSE STRUCTURE

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Level	Unit(s)
100	26
200	33
300	27
400	21
500	13
<b>TOTAL</b>	<b>120</b>

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**PART ONE**

Course Code	Course Title	Units	Status
CHM 101	General Chemistry I	2	C
CHM 102	General Chemistry II	2	C
CHM 107	General Practical Chemistry I	1	C
CHM 108	General Practical Chemistry II	1	C
MTH 101	Elementary Mathematics I	2	C
MTH 102	Elementary Mathematics II	2	C
MTH 103	Elementary Mathematics III	2	C
MEE 101	Introduction to Mechanical Engineering	1	C

**PART ONE**

Course Code	Course Title	Units	Status
PHY 101	General Physics I	2	C
PHY 103	General Physics III	2	C
PHY 107	General Practical Physics I	1	C
PHY 108	General Practical Physics II	1	C
GST 111	Communication in English	2	C
GST 112	Nigerian People and Culture	2	C
GET 101	Engineer in Society	1	C
GET 102	Engineering Graphics and Solid Modelling I	2	C

PART TWO			
Course Code	Course Title	Units	Status
GET 204	Students Workshop Practice	2	C
GET 202	Engineering Materials	3	C
GET 206	Fundamentals of Thermodynamics	3	C
GET 205	Fundamentals of Fluid Mechanics	3	C
GET 201	Applied Electricity I	3	C
GET 208	Strength of Materials	3	C

PART TWO			
Course Code	Course Title	Units	Status
GST 212	Philosophy, Logic and Human Existence	2	C
GET 210	Engineering Mathematics II	3	C
ENT 211	Entrepreneurship and Innovation	2	C
GET 209	Engineering Mathematics I	3	C
GET 211	Computing and Software Engineering	3	C
GET 299	SIWES I	3	C

**PART THREE**

<b>Course Code</b>	<b>Course Title</b>	<b>Units</b>	<b>Status</b>
ENT 312	Venture Creation	2	C
GET 301	Engineering Mathematics III	3	C
GET 302	Engineering Mathematics IV	3	E
GET 304	Technical Writing and Communication (including Seminar Presentation Skills)	3	C
GET 305	Engineering Statistics and Data Analytics.	3	C
GET 306	Renewable Energy Systems and Technology	3	C
GET 307	Introduction to Artificial Intelligence, Machine Learning and Convergent Technologies	3	C
MEE 306	Computer-Aided Design and Manufacture	1	E
GST 312	Peace Studies and Conflict Resolution	2	C
GET 399	SIWES II	4	C

## PART FOUR

Course Code	Course Title	Units	Status
MEE 401	Mechanical (Machine) Engineering Design II	2	C
MEE 402	Theory (Mechanics) of Machines I	2	E
MEE 403	Applied (Engineering) Thermodynamics I	2	E
MEE 404	Applied Fluid Mechanics	2	E
MEE 405	Heat and Mass Transfer	3	E
MEE 407	Advanced Mechanics of Materials	2	E
GET 499	SIWES	8	C

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**PART FIVE**

<b>Course Code</b>	<b>Course Title</b>	<b>Units</b>	<b>Status</b>
GET 501	Engineering (Project) Management	3	C
MEE 501	Applied Design	2	C
MEE 590	B.Eng. Project	6	C



# INDEGINEOUS INSTITUTION 30% ADDITIONAL COURSES TO THE CCMAS

## COURSE STRUCTURE

Level	Unit(s)
200	11
300	13
400	09
500	12
<b>TOTAL</b>	<b>45</b>

## EXAMPLE OF UNIMAID 30% CCMAS

Course Code	Course Title	Unit(s)	Status	LH	PH
UNIMAID-MEE 213	Plumbing Practice I	3	C	45	
UNIMAID-MEE 215	Solar System Installation	3	C	45	
UNIMAID-MEE 222	Auto. Maint.and Repair I	2	C	30	
UNIMAID-MEE 224	Foundry Practice I	3	C	45	
<b>Total</b>		<b>11</b>			

200 Level		
Course Code	Course Title	Unit(s)
UNIMAID-MEE 213	Plumbing Practice I	3
UNIMAID-MEE 215	Solar PV System Installation	3
UNIMAID-MEE 222	Automobile Maintenance and Repair I	2
UNIMAID-MEE 224	Foundry Practice I	3
Total		11

300 Level		
Course Code	Course Title	Unit(s)
UNIMAID-MEE 313	Plumbing Practice II	3
UNIMAID-MEE 315	Solid Waste Management	3
UNIMAID-MEE 322	Automobile Maintenance and Repair II	3
UNIMAID-MEE 324	Foundry Practice II	3
UNIMAID-MEE 326	Automobile Maintenance and Repair Practical	1
Total		13

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400 Level		
Course Code	Course Title	Unit(s)
UNIMAID-MEE 417	Metalworking Practice I	3
UNIMAID-MEE 419	Mechanical Building Services and Maintenance I	3
UNIMAID-MEE 421	Refrigeration and Air Conditioning Maintenance Practice I	3
Total		9

500 Level		
Course Code	Course Title	Unit(s)
UNIMAID-MEE 531	Metalworking Practice II	3
UNIMAID-MEE 533	Refrigeration and Air Conditioning Maintenance Practice II	3
UNIMAID-MEE 535	Carpentry and Joinery	3
UNIMAID-MEE 537	Mechanical Building Services and Maintenance II	3
Total		12

# CONCLUSION

In conclusion, graduate of Mechanical Engineering are prepared to:

1. engage in engineering practice for sustainable development;
2. Motivated for meaningful lifelong learning via graduate education in engineering or related fields, participation in professional development and/or industrial training courses, and/or obtain engineering certification;
3. develop successful careers as mechanical engineers and apply the obtained knowledge and skills in mechanical engineering education to address the full range of technical and societal problems with professional engineering competence, creativity, imagination, confidence and responsibility;
4. occupy positions of increasing responsibility and/or assignments and aspire to positions of leadership within their profession for enhanced community participation and qualitative service delivery; and
5. exhibit the highest ethical and professional standards, and, as agents of positive change, communicate the importance and excitement of Mechanical Engineering

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THANK YOU FOR LISTENING