

# BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING TECHNOLOGY

## 2016-2017 Degree Requirements

**TOTAL CREDITS FOR DEGREE: 131**

**UNIVERSITY CORE CURRICULUM 42 credits**

**Required Courses:**

COMM 101	Oral Comm. & Pres.	3 credits
* ENGL 101	College Composition	3 credits
UNIV 101	City-University Life	3 credits
	Senior Capstone	3 credits

**Choose thematic core courses in the following:**

Explore the World - Choice 1	3 credits
Explore the World - Choice 2	3 credits
Investigate Science	3 credits
Investigate Mathematics	3 credits
Interpret Creative Works	3 credits
Understand People - Choice 1	3 credits
Understand People - Choice 2	3 credits
Succeed in Business	3 credits
Appreciate & Apply the Arts	3 credits
Discover Technology	3 credits

\*One Writing Intensive course in addition to ENGL 101 is required for graduation.

**MAJOR REQUIREMENTS: 89 credits (C = taken in the Core)**

ENGL 218	Technical Writing	3	ET 204	Programming for Eng. Tech.	3
CHEM 101	General Chem. I (Investigate Science)	C	ET 405	Fund. of Engr. Exam I	0
CHEM 102	General Chemistry II	3	ET 406	Fund. of Engr. Exam II	0
CHEM 103	General Chemistry Lab I	1	ET 407	Prof. Prob. in Eng. Tech. (Senior Capstone)	C
CHEM 104	General Chemistry Lab II	1	ETGR 205	Engineering Tech. Graphics	3
MATH 175	Elementary Statistics	3	MET 101	Statics	3
MATH 180	College Algebra (Investigate Math)	C	MET 102	Dynamics	3
MATH 185	Trigonometry	2	MET 212	Properties of Materials	3
MATH 190	Calculus I	4	MET 213	Strength of Materials	3
MATH 210	Calculus II	4	MET 214	Strength of Materials Lab	1
MATH 230	Linear Algebra <b>OR</b>	3	MET 215	Thermodynamics	3
MATH 310	Differential Equations	3	MET 320	Kinematics of Machine Elem.	4
NSET 101	Intro to NSET (Discover Technology)	C	MET 331	Engr. Des. using Pro/ENGINEER	3
PHYS 103	Physics Lab I	1	MET 405	Heat Transfer	4
PHYS 104	Physics Lab II	1	MET 411	Fluid Mechanics	3
PHYS 201	Fundamentals of Physics I	3	MET 412	Fluid Mechanics Lab	1
PHYS 202	Fundamentals of Physics II	3	MET 416	Mechanical Vibrations	3
EET 102	DC Circuits	3	MET 421	Machine Design: Theory & Proj	4
EET 103	AC Circuits	3	MET 424	Finite Element Analysis (FEA)	3
EET 104	DC Circuits Lab	1	MET 425	FEA with ANSYS	2
EET 105	AC Circuits Lab	1			

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## **2016-2017 Degree Requirements**

### **STUDENT LEARNING OUTCOMES**

**Upon successful completion of this program, a student will be able to:**

1. Analyze and design structural systems.
2. Analyze and design mechanical systems in motion.
3. Analyze and design thermal systems and processes.
4. Use engineering software in design and analysis and create engineering software.
5. Apply mathematics, physics, chemistry, and material properties.
6. Collaborate in lab and classroom settings.
7. Produce effective documents and oral presentations.
8. Plan and manage technical projects.
9. Grow professionally through independent learning.
10. Take the Fundamentals of Engineering Examination as a first step towards licensure.
11. Know professional laws and codes.
12. Understand the personal and professional roles of an engineering technologist in society.