

### ASSOCIATE OF APPLIED SCIENCE

## MECHANICAL ENGINEERING TECHNOLOGY – DESIGN MAJOR

**2023-24 Catalog** 

Effective Summer 2023

4058

The catalog in force is assigned to students based on the academic year they first applied to the college, and changes only when students change their major or request the change in writing. Refer to Policy No. 3357:15-13-28.

Engineering Technology Department

Business, Engineering, and Information Technologies Division

TECHNICAL Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year	
DET121	Engineering Drawing	3			
DET124	Working Drawings	3	DET121 and Co-DET125		
MET223	Dynamics	2	MET124		
DET226	Geometric Dimensioning and Tolerancing	2	DET124		
MET226	Technical Project - Mechanical and Design	2	Pre-Co-MET228 and Pre- Co-DET125		
MET225	Manufacturing Processes	3			
or AIT122	or Machine Tools	or 4			
MET228	Machine Design	4	MET124		
DET126	Customizing AutoCAD	3	DET125		
DET230	AutoCAD Inventor with 3D Printing and Scanning	3	DET125		
DET131	Pro/ENGINEER (Creo Parametric)	3	DET125		
DET132	SolidWorks with 3D Printing and Scanning	3	DET125		
	Total	31-32			
NON-TECH Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year	

NON-TECH Course Number	Course Title	Credits	Pre- and Co-Requisites	Completed Sem./Year
SSC101	Student Success Seminar^^	1	Take first semester	
DET125	Basic AutoCAD	3		
ITD122	Computer Applications for Professionals^	3	ITD100 or Proficiency	
MET123	Material Science	3		
MET124	Statics and Strength of Materials	4	Pre-Co-PHY121 <b>or</b> Pre-Co-PHY221	
MTH135	Precalculus^ – A student may take MTH125 (College Algebra) and MTH130 (Trigonometry) over two semesters to satisfy this requirement.	5	MTH025 or Proficiency	
PHY121	College Physics I with Algebra (lab)	4	MTH135 or (MTH125 and MTH130) or Proficiency	
ENG124	College Composition^	3	Co-ENG024 or Co- ENG011 or Proficiency	
ENG221	Technical Report Writing	3	ENG124	
	Select one (1) Arts & Humanities Elective from the list below <sup>1</sup>	3	Check for prerequisites	
Total		32		
TOTAL CREDIT HOURS		63-64		

<sup>^</sup>Based on SSC placement scores

<sup>^^</sup>To promote student success, this course should be taken in the first semester

<sup>&</sup>lt;sup>1</sup>Arts & Humanities Elective: ENG233, ENG234, ENG236, ENG237, HIS121, HIS122, PHL122

Effective Summer 2023

# MECHANICAL ENGINEERING TECHNOLOGY – DESIGN MAJOR

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#### PART-TIME STUDENT ADVISING NOTES

#### Academic Advising

Students should make an appointment to see their advisor before registering for classes each semester. They should have prepared a completed registration form, including courses they wish to take, prior to this meeting.

#### Course Sequence

The semester-by-semester listing below provides the normal scheduling option for part-time associate degree students who plan to finish in eight semesters.

SCI.01   Student Success Seminar^   Take first semester	First Semester		Credit	Pre- or Co-requisites
MTH135         Precalculus. — A student may take MTH125 (College Algebra) and MTH130 (Trigonomery) over two senesters to statisfy this requirement.         5         MTH025 or Proficiency           ITD122         Computer Applications for Professionals or Professionals or Profice in Prof	SSC101	Student Success Seminar^	<u>Hours</u> 1	Taka first samastar
Algebray and MTH130 (Trigonometry) over two semesters to satisfy this requirement.           ITD122         Computer Applications for Professionals*         3 g         ITD100 or Proficiency           Second Semester         Possible of Professionals*         3 co-ENG024 or Co-ENG011 or Proficiency           DET121         Engineering Drawing         3 co-ENG024 or Co-ENG011 or Proficiency           DET125         Basic AutoCAD         3 co-ENG024 or Co-ENG011 or Proficiency           Third Semester           PHY121         College Physics I with Algebra (lab)*         4 MTH135 or (MTH125 and MTH130) or Proficiency           MET124         Statics and Strength of Materials         2 Pre-Co-PHY121 or Pre-Co-PHY221           Fourth Semester           DET124         Working Drawings         3 DET121 and Co-DET125           DET224         Working Drawings         3 DET125           DET124         Working Drawings         3 DET125           DET125           DET126         Customizing AutoCAD         2 DET125           DET126         Geometric Dimensioning and Tolerancing         2 DET125           MET226         Geometric Dimensioning and Tolerancing         2 DET125           MET228         Machine Tools         4 DET125				
Semesters to satisfy this requirement.   2	WITITIOS		3	WITHOUS OF Fronteiency
ITD122         Computer Applications for Professionals^         3         ITD100 or Proficiency           Second Semester DET121         Engineering Drawing         3         Co-ENG024 or Co-ENG011 or Proficiency           DET125         Basic AutoCAD         3         Co-ENG024 or Co-ENG011 or Proficiency           Third Semester PHY121           PHY121         College Physics I with Algebra (lab)^         4         MTH135 or (MTH125 and MTH130) or Proficiency           MET124         Statics and Strength of Materials         4         Pre-Co-PHY121 or Pre-Co-PHY121 or Pre-Co-PHY121 or Pre-Co-PHY221           Fourth Semester         Working Drawings         3         DET121 and Co-DET125           DET230         AutoCAD Inventor with 3D Printing and Scanning         3         DET125           DET126         Customizing AutoCAD         3         DET125           DET128         Machine Doing and Tolerancing         2         DET124           MET123         Material Science         3         MET124           Sixth Semester         7         MET124           MET225         Manufacturing Processes         3         OET125           Or         Or         Or         Or           AIT122         Machine Tools         4         DET125				
Second Semester   DET121   Engineering Drawing   3   3   Co-ENG024 or Co-ENG011 or Proficiency   Proficiency	ITD122		3	ITD100 or Proficiency
Second Semester         DET121         Engineering Drawing         3         Co-ENG024 or Co-ENG011 or Proficiency           ENG124         College Composition*         3         Co-ENG024 or Co-ENG011 or Proficiency           DET125         Basic AutoCAD         2         Proficiency           Third Semester           PHY121         College Physics I with Algebra (lab)*         4         MTH135 or (MTH125 and MTH130) or Proficiency           MET124         Statics and Strength of Materials         4         Pre-Co-PHY121 or Pro-Co-PHY221           MET124         Statics and Strength of Materials         4         Pre-Co-PHY121 or Pro-Co-PHY221           MET124         Working Drawings         3         DET124 and Co-DET125           DET126         Working Drawings         3         DET121 and Co-DET125           DET126         Customizing AutoCAD         3         DET125           DET126         Customizing AutoCAD         3         DET125           BET127         Material Science         3         DET124           MET1223         Material Science         3         MET124           MET223         Dynamics         2         MET124           Sixth Semester         MET225         Machine Tools         4         A	11D122	Computer Applications for Froiessionals		11D100 of 11offciency
DET121         Engineering Drawing         3         Co-ENG024 or Co-ENG011 or Proficiency           DET125         Basic AutoCAD         2         7           Third Semester           PHY121         College Physics I with Algebra (lab)^         4         MTH125 or (MTH125 and MTH130) or Proficiency           MET124         Statics and Strength of Materials         4         Pre-Co-PHY221 or Pre-Co-PH			9	
College Composition				
DET125   Basic AutoCAD   3   9				
DET125         Basic AutoCAD         3 g           Third Semester PHY121         College Physics I with Algebra (lab)^         4         MTH135 or (MTH125 and MTH130) or Proficiency (MTH125 and MTH130) or Proficiency (MTH125 and MTH130) or Proficiency (MTH125 and MTH130) or Pre-Co-PHY211 or Pre-Co-PHY212 or PHY212 or Pre-Co-PHY212 or PHY212 or PHY212 or PHY212 or PHY212 or	ENG124	College Composition <sup>^</sup>	3	
Third Semester           PHY121         College Physics I with Algebra (lab)^         4         MTH125 and MTH130) or Proficiency Proficiency           MET124         Statics and Strength of Materials         4         Pre-Co-PHY121 or Pre-Co-PHY221           Eourth Semester         8         7           DET124         Working Drawings         3         DET121 and Co-DET125           DET230         AutoCAD Inventor with 3D Printing and Scanning         3         DET125           DET126         Customizing AutoCAD         2         DET125           Pith Semester           DET226         Geometric Dimensioning and Tolerancing         2         DET124           MET223         Material Science         3         DET124           MET223         Dynamics         2         MET124           Sixth Semester         Manufacturing Processes         3         MET124           MET225         Manufacturing Processes         3         DET125           Or         Or         Or         Or           AIT122         Machine Tools         4         MET225           MET228         Machine Design         4         MET125           Seventh Semester	D. D. W. A. F.	D 1 4 4 6 1 D		Proficiency
Third Semester           PHY121         College Physics I with Algebra (lab)^         4         MTH125 or (MTH125 and MTH130) or Proficiency           MET124         Statics and Strength of Materials         4         Pre-Co-PHY121 or Pre-Co-PHY211 or Pre-Co-PHY211 or Pre-Co-PHY211 or Pre-Co-PHY211 or Pre-Co-PHY221           Fourth Semester         8         Pre-Co-PHY211 or Pre-Co-PHY21 or Pre-Co-PHY221           DET124         Working Drawings         3         DET121 and Co-DET125           DET230         AutoCAD Inventor with 3D Printing and Scanning         3         DET125           DET126         Customizing AutoCAD         3         DET125           PET226         Geometric Dimensioning and Tolerancing         2         DET124           MET123         Material Science         3         DET124           MET223         Dynamics         2         MET124           Sixth Semester         MET225         Manufacturing Processes         3         DET124           MET226         Machine Tools         4         DET125           AIT122         Machine Tools         4         MET125           Pro/ENGINEER (Creo Parametric)         3         DET125           Seventh Semester         MET228         Machine Design         4         MET26	DET125	Basic AutoCAD	<u>3</u>	
PHY121         College Physics I with Algebra (lab)^         4         MTH125 or (MTH125 and MTH130) or Proficiency           MET124         Statics and Strength of Materials         4         Pre-Co-PHY121 or Pre-Co-PHY21 or Pre-Co-PHY211 or Pre-Co-PHY212 or			9	
MET124         Statics and Strength of Materials         4         (MTH125 and MTH130) or Proficiency Proficiency Proficiency Proficiency Pre-Co-PHY121 or Pre-Co-PHY221           Fourth Semester         8           DET124         Working Drawings         3         DET121 and Co-DET125           DET230         AutoCAD Inventor with 3D Printing and Scanning         3         DET125           DET126         Customizing AutoCAD         2         DET125           Fifth Semester           DET226         Geometric Dimensioning and Tolerancing         2         DET124           MET123         Material Science         3         MET124           MET223         Dynamics         2         MET124           Sixth Semester         3         MET124           MET223         Dynamics         3         MET124           Sixth Semester           MET225         Manufacturing Processes         3         DET125           Or         Or         Or         Or         Or           AlT122         Machine Tools         4         DET125           DET131         Pro/ENGINEER (Creo Parametric)         3         DET125           Seventh Semester           MET226         Technica	Third Semester			
MET124         Statics and Strength of Materials         4         Proficiency Pre-Co-PHY121 or Pre-Co-PHY121 or Pre-Co-PHY121 or Pre-Co-PHY121 or Pre-Co-PHY121 or Pre-Co-PHY1221           Fourth Semester         B           DET124         Working Drawings         3         DET121 and Co-DET125           DET230         AutoCAD Inventor with 3D Printing and Scanning         3         DET125           DET126         Customizing AutoCAD         3         DET125           Fifth Semester           DET226         Geometric Dimensioning and Tolerancing         2         DET124           MET123         Material Science         3         DET124           MET223         Dynamics         2         MET124           Sixth Semester           MET225         Manufacturing Processes         3         DET134           Or         Or         A         A           AIT122         Machine Tools         4         DET125           Seventh Semester           MET228         Machine Design         4         MET124           DET132         SolidWorks with 3D Printing and Scanning         3         DET125           Eighth Semester				

See first page for footnotes.