## MECHANICAL ENGINEERING PROGRAM: FIRST AND SECOND YEARS STANDARD TRACK SEMESTER I SEMESTER II SEMESTER III SEMESTER IV APMA E2000 (4) and E2001 (0) and ORCA E2500 (3)6 either semester MATHEMATICS MATH UN1101 (3) MATH UN1102 (3) APMA E2101 (3)1 Linear Algebra (3)2 and ODE (3)3 UN1401 (3) UN1402 (3) → UN1403 (3)<sup>4</sup> PHYSICS ➤ UN2601 (3.5)<sup>4</sup> UN1601 (3.5) -UN1602 (3.5) (three tracks, choose one) UN2801 (4.5) →UN2802 (4.5) one semester lecture (3-4) **CHEMISTRY** UN1403 or UN1404 or Lab UN1500 (3)5 UN2045 or UN1604 UNIVERSITY CC1010 (3) either semester WRITING HUMA CC1001, HUMA CC1002, COCI CC1101. COCI CC1102. REQUIRED or Global Core (3-4) or Global Core (3-4) NONTECHNICAL COURSES HUMA UN1121 or ECON UN1105 (4) and UN1123 (3) UN1155 recitation (0) REQUIRED TECHNICAL ENME E3105 (4) COURSES COMPUTER Computer language: COMS W1004 or COMS W1005 (3) or ENGI E1006 (3) (in semester I or III) SCIENCE **PHYSICAL** UN1001 (1) UN1002 (1) **EDUCATION** THE ART OF ENGI E1102 (4) either semester **ENGINEERING**

<sup>&</sup>lt;sup>1</sup> Students who take APMA E2101 must complete an additional 3 point course in math or basic science with one of the following course designators: MATH, PHYS, CHEM, BIOL, STAT, APMA, or EEEB. One technical elective 3000-level or higher), with the approval of your ME faculty adviser, may be substituted for this purpose.

<sup>&</sup>lt;sup>2</sup> Linear algebra may be fulfilled by either APMA E3101 or MATH UN2010.

<sup>&</sup>lt;sup>3</sup> Ordinary differential equations may be fulfilled by either MATH UN2030 or MATH UN3027.

 $<sup>^{\</sup>rm 4}$  May substitute EEEB UN2001, BIOL UN2005, or higher.

<sup>&</sup>lt;sup>5</sup> May substitute Physics Lab UN1494 (3) or UN3081 (2).

<sup>&</sup>lt;sup>6</sup> Offered in spring semester.

MECHANICAL ENGINEERING: THIRD AND FOURTH YEARS STANDARD TRACK							
	SEMESTER V	SEMESTER VI	SEMESTER VII	SEMESTER VIII			
REQUIRED COURSES	MECE E3018 (3) Lab I  MECE E3100 (3) Fluids I  MECE E3301 (3) Thermodynamics  MECE E3408 (3) Graphics and design  MECE E3414 (3) <sup>1</sup> Mechanics of solids for mechanical engineers	MECE E3028 (3) Lab II  ENME E3106 (3) Dynamics and vibrations  MECE E3311 (3) Heat transfer  MECE E3610 (3) Materials and processes in manufacturing  ELEN E1201 (3.5) <sup>2</sup> Intro. elec. eng.	MECE E3409 (3) Machine design MECE E3420 (3) Engineering design: concept	MECE E3430 (3) Engineering design: creation  EEME E3601 (3) Classical control sys.			
TECHNICAL ELECTIVES <sup>3</sup>	9 points <sup>s</sup>						
NONTECH ELECTIVES <sup>4</sup>	Students must complete the 27-point requirement. <sup>6</sup>						
TOTAL ESTIMATED POINTS <sup>7</sup>	15–16	16.5–19.5	12–15	12			

<sup>&</sup>lt;sup>1</sup> Required for class of 2025 and beyond.

<sup>&</sup>lt;sup>2</sup> Strongly recommended to be taken in Semester III or IV.

<sup>&</sup>lt;sup>3</sup> If APMA E2101 is taken instead of Linear algebra and ODE, students must complete an additional 3-point course in math or basic science with one of the following course designators: MATH, PHYS, CHEM, BIOL, STAT, APMA, or EEEB. One technical elective (3000-level or higher), with the approval of your ME faculty adviser, may be substituted for this purpose.

<sup>&</sup>lt;sup>4</sup> Not required for Combined Plan students.

 $<sup>^{\</sup>rm 5}$  9 points required; 6 must be MECE courses.

<sup>&</sup>lt;sup>6</sup> See page 9; not required for Combined Plan students.

<sup>&</sup>lt;sup>7</sup> Students must complete a minimum of 128 points to graduate.

## MECHANICAL ENGINEERING PROGRAM: FIRST AND SECOND YEARS EARLY DECISION TRACK

	SEMESTER I	SEMESTER II	SEMESTER III	SEMESTER IV		
			APMA E2000 (4) and E2001 (0) <b>and</b> ORCA E2500 (3) <sup>6</sup> either semester			
MATHEMATICS	MATH UN1101 (3)	MATH UN1102 (3)		APMA E2101 (3) <sup>1</sup> or Linear Algebra (3) <sup>2</sup> and ODE (3) <sup>3</sup>		
PHYSICS (three tracks, choose one)	UN1401 (3)	UN1402 (3) ———————————————————————————————————	➤ UN1403 (3) <sup>4</sup>			
CHEMISTRY	one semester lecture (3–4) UN1403 or UN1404 or UN2045 or UN1604	Lab UN1500 (3) <sup>5</sup>				
UNIVERSITY WRITING	CC1010 (3) either semester					
REQUIRED NONTECHNICAL COURSES			HUMA CC1001, COCI CC1101, or Global Core (3–4)	HUMA CC1002, COCI CC1102, or Global Core (3–4)		
REQUIRED TECHNICAL COURSES		ENME E3105 (4) Mechanics	MECE E3414 (3) <sup>7</sup> Mechanics of solids for mechanical engineers	ELEN E1201 (3.5) Intro. to elec. eng. MECE E3408 (3) Graphics and design		
COMPUTER SCIENCE	Computer language: COMS W1004 or COMS W1005 (3) or ENGI E1006 (3) (in semester I and III)					
PHYSICAL EDUCATION	UN1001 (1)	UN1002 (1)				
THE ART OF ENGINEERING	ENGI E1102 (4) either semester					

<sup>1</sup>Students who take APMA E2101 must complete an additional 3 point course in math or basic science with one of the following course designators: MATH, PHYS, CHEM, BIOL, STAT, APMA, or EEEB. One technical elective (3000-level or higher), with the approval of your ME faculty adviser, may be substituted for this purpose.

<sup>&</sup>lt;sup>2</sup> Linear algebra may be fulfilled by either APMA E3101 or MATH UN2010.

 $<sup>^{\</sup>rm 3}$  Ordinary differential equations may be fulfilled by either MATH UN2030 or MATH UN3027.

<sup>&</sup>lt;sup>4</sup> May substitute EEEB UN2001, BIOL UN2005, or higher.

 $<sup>^{\</sup>rm 5}\,{\rm May}$  substitute Physics Lab UN1494 (3) or UN3081 (2).

<sup>&</sup>lt;sup>6</sup> Offered in spring semester.

<sup>&</sup>lt;sup>7</sup> Required for class of 2025 and beyond.

## MECHANICAL ENGINEERING: THIRD AND FOURTH YEARS EARLY DECISION TRACK SEMESTER V SEMESTER VI SEMESTER VII SEMESTER VIII MECE E3028 (3) Lab II MECE E3018 (3) Lab I ENME E3106 (3) MECE E3409 (3) Dynamics and vibrations Machine design MECE E3430 (3) MECE E3100 (3) Engineering design: MECE E3311 (3) Fluids I **REQUIRED** MECE E3420 (3) creation Heat transfer COURSES Engineering design: MECE E3301 (3) EEME E3601 (3) concept MECE E3610 (3) Thermodynamics Classical control systems Materials and processes in manufacturing MECE E1008 (1) Intro to machining (either semester) **REQUIRED** HUMA UN1121 or UN1123 ECON UN1105 (4) and NONTECHNICAL (3)UN1155 recitation (0) COURSES **TECHNICAL** 9 points 3 **ELECTIVES**<sup>1</sup> **NONTECH** Students must complete the 27-point requirement.4 **ELECTIVES TOTAL ESTIMATED** 12-16 16-19 12-15 12 POINTS<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> If APMA E2101 is taken instead of Linear Algebra and ODE, students must complete an additional 3-point course in math or basic science with one of the following course designators: MATH, PHYS, CHEM, BIOL, STAT, APMA, or EEEB. One technical elective (3000-level or higher), with the approval of your ME faculty adviser, may be substituted for this purpose.

<sup>&</sup>lt;sup>2</sup> Students must complete a minimum of 128 points to graduate.

<sup>&</sup>lt;sup>3</sup> 9 points required; 6 must be MECE courses.

<sup>&</sup>lt;sup>4</sup> See page 9; not required for Combined Plan students.