

**UMass****Dartmouth**

COLLEGE OF ENGINEERING

CLASS OF 2029 AND BEYOND

(CATALOG YEAR OF 2025-2026 AND BEYOND)

Electrical and Computer
Engineering Department**BACHELOR OF SCIENCE IN COMPUTER ENGINEERING AND ELECTRICAL ENGINEERING****FRESHMAN YEAR**

First Semester				Second Semester					
	I	L	C		I	L	C		
ENL 101	Critical Writing & Reading I	3	0	3	ENL 102	Critical Writing & Reading II	3	0	3
EGR 111	Intro. Engineering & Computing ¹	2	3	3	ECE 171	Data Structures	3	2	4
MTH 153	Calculus Applied Science & Eng. I ²	4	0	4	MTH 154	Calculus Applied Science & Eng. II	4	0	4
ECE 170	Introduction to Programming	3	2	4	PHY 113	Classical Physics I ³	3½	1½	4
	University Studies Elective ⁴	3	0	3		University Studies Elective ⁴	3	0	3
				17					18

SOPHOMORE YEAR

First Semester				Second Semester							
	I	L	C		I	L	C		I	L	C
ECE 201	3	1½	3½	ENL 266	3	0	3	Technical Communications ⁵			
ECE 260	3	1½	3½	ECE 202	3	1½	3½	Circuit Theory II			
MTH 213	4	0	4	ECE 263	3	1½	3½	Embedded System Design			
PHY 114	3½	1½	4	MTH 212	3	0	3	Differential Equations			
ECE 258	2	3	3		3	0	3	University Studies Elective ⁴			
18				16							

JUNIOR YEAR

<u>First Semester</u>				<u>Second Semester</u>				<u>Third Semester</u>			
	<u>I</u>	<u>L</u>	<u>C</u>		<u>I</u>	<u>L</u>	<u>C</u>		<u>I</u>	<u>L</u>	<u>C</u>
ECE 311 Digital Electronics	3	3	4	ECE 310 Engineering Ethics	1	0	1	ECE 330 Engineering Mathematics	3	3	4
ECE 320 Discrete-Time Linear Systems	3	1½	3½	ECE 312 Analog Electronics	3	3	4	ECE 332 Engineering Mathematics	3	3	4
ECE 370 Real-Time Embedded RMS	3	1½	3½	ECE 321 Continuous-Time Linear Systems	3	1½	3½	ECE 334 Engineering Mathematics	3	3	4
MTH 331 Probability	3	0	3	ECE 355 Applied Discrete Structures ⁶	3	0	3	ECE 336 Engineering Mathematics	3	3	4
Science Elective ¹⁰	3	0	3	ECE 384 Random Signals & Noise	3	0	3	ECE 338 Engineering Mathematics	3	3	4
				ECE 368 Digital Design	2	3	3	ECE 340 Engineering Mathematics	3	3	4
								ECE 342 Engineering Mathematics	3	3	4
								ECE 344 Engineering Mathematics	3	3	4
								ECE 346 Engineering Mathematics	3	3	4
								ECE 348 Engineering Mathematics	3	3	4
								ECE 350 Engineering Mathematics	3	3	4
								ECE 352 Engineering Mathematics	3	3	4
								ECE 354 Engineering Mathematics	3	3	4
								ECE 356 Engineering Mathematics	3	3	4
								ECE 358 Engineering Mathematics	3	3	4
								ECE 360 Engineering Mathematics	3	3	4
								ECE 362 Engineering Mathematics	3	3	4
								ECE 364 Engineering Mathematics	3	3	4
								ECE 366 Engineering Mathematics	3	3	4
								ECE 368 Engineering Mathematics	3	3	4
								ECE 370 Engineering Mathematics	3	3	4
								ECE 372 Engineering Mathematics	3	3	4
								ECE 374 Engineering Mathematics	3	3	4
								ECE 376 Engineering Mathematics	3	3	4
								ECE 378 Engineering Mathematics	3	3	4
								ECE 380 Engineering Mathematics	3	3	4
								ECE 382 Engineering Mathematics	3	3	4
								ECE 384 Engineering Mathematics	3	3	4
								ECE 386 Engineering Mathematics	3	3	4
								ECE 388 Engineering Mathematics	3	3	4
								ECE 390 Engineering Mathematics	3	3	4
								ECE 392 Engineering Mathematics	3	3	4
								ECE 394 Engineering Mathematics	3	3	4
								ECE 396 Engineering Mathematics	3	3	4
								ECE 398 Engineering Mathematics	3	3	4
								ECE 400 Engineering Mathematics	3	3	4
								ECE 402 Engineering Mathematics	3	3	4
								ECE 404 Engineering Mathematics	3	3	4
								ECE 406 Engineering Mathematics	3	3	4
								ECE 408 Engineering Mathematics	3	3	4
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								ECE 412 Engineering Mathematics	3	3	4
								ECE 414 Engineering Mathematics	3	3	4
								ECE 416 Engineering Mathematics	3	3	4
								ECE 418 Engineering Mathematics	3	3	4
								ECE 420 Engineering Mathematics	3	3	4
								ECE 422 Engineering Mathematics	3	3	4
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								ECE 426 Engineering Mathematics	3	3	4
								ECE 428 Engineering Mathematics	3	3	4
								ECE 430 Engineering Mathematics	3	3	4
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								ECE 434 Engineering Mathematics	3	3	4
								ECE 436 Engineering Mathematics	3	3	4
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								ECE 452 Engineering Mathematics	3	3	4
								ECE 454 Engineering Mathematics	3	3	4
								ECE 456 Engineering Mathematics	3	3	4
								ECE 458 Engineering Mathematics	3	3	4
								ECE 460 Engineering Mathematics	3	3	4
								ECE 462 Engineering Mathematics	3	3	4
								ECE 464 Engineering Mathematics	3	3	4
								ECE 466 Engineering Mathematics	3	3	4
								ECE 468 Engineering Mathematics	3	3	4
								ECE 470 Engineering Mathematics	3	3	4
								ECE 472 Engineering Mathematics	3	3	4
								ECE 474 Engineering Mathematics	3	3	4
								ECE 476 Engineering Mathematics	3	3	4
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								ECE 482 Engineering Mathematics	3	3	4
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								ECE 500 Engineering Mathematics	3	3	4
								ECE 502 Engineering Mathematics	3	3	4
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								ECE 506 Engineering Mathematics	3	3	4
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								ECE 556 Engineering Mathematics	3	3	4
								ECE 558 Engineering Mathematics	3	3	4
								ECE 560 Engineering Mathematics	3	3	4
								ECE 562 Engineering Mathematics	3	3	4
								ECE 564 Engineering Mathematics	3	3	4
								ECE 566 Engineering Mathematics	3	3	4
								ECE 568 Engineering Mathematics	3	3	4
								ECE 570 Engineering Mathematics	3	3	4
								ECE 572 Engineering Mathematics	3	3	4
								ECE 574 Engineering Mathematics	3	3	4
								ECE 576 Engineering Mathematics	3	3	4
								ECE 578 Engineering Mathematics	3	3	4
								ECE 580 Engineering Mathematics	3	3	4
								ECE 582 Engineering Mathematics	3	3	4
								ECE 584 Engineering Mathematics	3	3	4
								ECE 586 Engineering Mathematics	3	3	4
								ECE 588 Engineering Mathematics	3	3	4
								ECE 590 Engineering Mathematics	3	3	4
								ECE 592 Engineering Mathematics	3	3	4
								ECE 594 Engineering Mathematics	3	3	4
								ECE 596 Engineering Mathematics	3	3	4
								ECE 598 Engineering Mathematics	3	3	4
								ECE 600 Engineering Mathematics	3	3	4
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								ECE 616 Engineering Mathematics	3	3	4
								ECE 618 Engineering Mathematics	3	3	4
								ECE 620 Engineering Mathematics	3	3	4
								ECE 622 Engineering Mathematics	3	3	4
								ECE 624 Engineering Mathematics	3	3	4
								ECE 626 Engineering Mathematics	3	3	4
								ECE 628 Engineering Mathematics	3	3	4
								ECE 630 Engineering Mathematics	3	3	4
								ECE 632 Engineering Mathematics	3	3	4
								ECE 634 Engineering Mathematics	3	3	4
								ECE 636 Engineering Mathematics	3	3	4
								ECE 638 Engineering Mathematics	3	3	4
								ECE 640 Engineering Mathematics	3	3	4
								ECE 642 Engineering Mathematics	3	3	4
								ECE 644 Engineering Mathematics	3	3	4
								ECE 646 Engineering Mathematics	3	3	4
								ECE 648 Engineering Mathematics	3	3	4
								ECE 650 Engineering Mathematics	3	3	4
								ECE 652 Engineering Mathematics	3	3	4
								ECE 654 Engineering Mathematics	3	3	4
								ECE 656 Engineering Mathematics	3	3	4
								ECE 658 Engineering Mathematics	3	3	4
								ECE 660 Engineering Mathematics	3	3	4
								ECE 662 Engineering Mathematics	3	3	4
								ECE 664 Engineering Mathematics	3	3	4
								ECE 666 Engineering Mathematics	3	3	4
								ECE 668 Engineering Mathematics	3	3	4
								ECE 670 Engineering Mathematics	3	3	4
								ECE 672 Engineering Mathematics	3	3	4
								ECE 674 Engineering Mathematics	3	3	4
								ECE 676 Engineering Mathematics	3	3	4
								ECE 678 Engineering Mathematics	3	3	4
								ECE 680 Engineering Mathematics	3	3	4
								ECE 682 Engineering Mathematics	3	3	4
								ECE 684 Engineering Mathematics	3	3	4
								ECE 686 Engineering Mathematics	3	3	4
								ECE 688 Engineering Mathematics	3	3	4
								ECE 690 Engineering Mathematics	3	3	4
								ECE 692 Engineering Mathematics	3	3	4
								ECE 694 Engineering Mathematics			

SENIOR YEAR

<u>First Semester</u>				<u>Second Semester</u>			
	<u>I</u>	<u>L</u>	<u>C</u>		<u>I</u>	<u>L</u>	<u>C</u>
ECE 457 Design Project I ⁷	3	0	3	ECE 458 Design Project II ⁸	3	0	3
ECE 335 Electromagnetic Theory I	3	0	3	ECE 336 Electromagnetic Theory II	3	0	3
ECE 471 Communication Theory	3	0	3	Technical Elective ⁹	3	0	3
Technical Elective ⁹	3	0	3	Science Elective ¹⁰	3	0	3
Technical Elective ⁹	3	0	3	University Studies Elective ⁴	3	0	3
EGR 303 Engineering Economics ¹¹	3	0	<u>3</u>	ECE 369 Computer Networks	3	0	<u>3</u>
			18				18

TOTAL CREDITS = 139½

I = Instruction (hours)

L = Laboratory (hours)

C = Number of Credits

¹ This course meets the University Studies Cluster 1E requirement: Foundation for Learning through Engagement.² This course meets the University Studies Cluster 1D requirement: Mathematics.³ This course meets the University Studies Cluster 2A requirement: Science of the Natural World.⁴ See University Studies requirements (Clusters 3A, 3B, 4A, and 4B).⁵ This course meets the University Studies Cluster 1C requirement: Intermediate Writing.⁶ For only the dual majors, this course is considered equivalent to MTH 221.⁷ This course meets the University Studies Cluster 5B requirement: Learning through Engagement.⁸ This course meets the University Studies Cluster 5A requirement: Capstone Study.⁹ Must be taken from approved list of courses:(<https://www.umassd.edu/engineering/ece/undergraduate/curriculum-and-courses/electrical-engineering-technical-electives/>)¹⁰ Must be chosen from this list: BIO, BNG, CHM, MAR, or MLS course; or a PHY course numbered above 150. One of the courses must come from the University Studies cluster 2B (Science in the Engaged Community) approved list (www.umassd.edu/universitystudies/approvedcourses/).¹¹ This course meets the University Studies Cluster 4C requirement: The Nature of the Global Society.