

**VILLANOVA UNIVERSITY - MECHANICAL ENGINEERING DEPARTMENT**  
**UNDERGRADUTE DEGREE AUDIT for MECHATRONICS MINOR (updated 3/19/2012)**

**Freshman Year (I)**

		credits
FALL		
113 CHM	1103 Chemistry Lab I	1
113 CHM	1151 Chemistry I	4
124 ACS	1000 Trads in Conversation	3
160 MAT	1500 Calculus I	4
182 THL	1000 Christian Faith and Life	3
332 EGR	1200 Interdisciplinary projects I	3
		18

**SPRING**

113 CHM	1156 Chemistry II	4
124 ACS	1001 Modernity & Discontent	3
160 MAT	1505 Calculus II	4
177 PHY	2400 Physics I	3
332 EGR	1205 Interdisciplinary projects II	3
		17

**Sophomore Year (II)**

		credits
FALL		
362 ME	2502 Professional Dev. Seminar	1
160 MAT	2500 Calculus III	4
177 PHY	2402 Physics II	3
177 PHY	2403 Physics Lab	1
362 ME	2100 Statics	3
362 ME	2505 Analysis & Design	4
		16

**SPRING**

362 ME	2900 M.E. Lab I	1
160 MAT	2705 Differential Equations	4
362 ME	3100 Thermodynamics	3
315 CEE	2103 Mechanics of Solids	3
362 ME	2101 Dynamic Systems I	3
118 COM	1101 Business & Prof. Comm.	3
		17

Total Credits 68

**Junior Year (III)**

		credits
FALL		
362 ME	3102 Dynamic Systems II	3
362 ME	3950 Heat Transfer	3
362 ME	3402 Solid Mechanics & Design I	3
362 ME	3600 Fluid Mechanics	3
330 ECE	2052 Fund. of Electrical Egr	3
330 ECE	2053 Fund. of Electrical Egr. Lab	1
		16

**SPRING**

362 ME	3333 Manufacturing Engineering	3
362 ME	3300 Materials Science I	3
362 ME	Restricted ME Elective <sup>1</sup>	3
362 ME	3900 M.E. Lab II	1
330 ECE	2054 Fund. Of Electrical Egr. II	3
	Theology > 2000	3
		16

**Senior Year (IV)**

		credits
FALL		
362 ME	ME Elec./Conc. Elec. <sup>3</sup>	3
	ME/ECE Elective <sup>7</sup>	3
362 ME	5005 Capstone Design I	2
362 ME	Restricted ME lab Elective <sup>8</sup>	1
	Theology > 2000 or Any PHI	3
ETH	2050 Eth Trad & Contemp Life <sup>5</sup>	3
		15

**SPRING**

362 ME	5006 Capstone Design II	2
362 ME	ME/ECE Elective <sup>7</sup>	3
330 ECE	2042 Fund. Of Computer Egr. I	3
330 ECE	2043 Fund. Of Computer Egr. Lab	1
	Statistics Elective <sup>6</sup>	3
	Humanities/Social Science <sup>2</sup>	3
		15

Total Credits 62

<sup>1</sup> must be selected from ME 3103, ME 3403, ME 4850; students must take the appropriate course in their concentration if one is selected

<sup>2</sup> Course selection available from catalog or advisor

<sup>3</sup> must be selected from the ME electives listed for the students in one of the concentrations; any ME elective for others

<sup>4</sup> a) ME elective or b) appropriate elective from "hard" sciences and/or other Eng. Depts. or c) a course from the student's minor

<sup>5</sup> This course may be replaced with an approved ethics course from the student's minor

<sup>6</sup> must be selected from MAT 4310 or MAT 5700

<sup>7</sup> one from ME5203, ME 5411, ME5421 & one from ECE 3550, ECE 5390, ECE 5450, ECE 5800. These courses may be replaced by approved ME, ECE, or EGR graduate courses

<sup>8</sup> must be selected from ME 4001, ME 4002, ME 4003; students must take the appropriate lab in their concentration if one is selected