

# BS-MS IN MATERIALS SCIENCE ENGINEERING

Student Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

**[New - AY 2018-19]**

Year	Fall				Winter				Spring				Summer				Total Cr		
	Lec	Lab	Cr	Grade	Lec	Lab	Cr	Grade	Lec	Lab	Cr	Grade	Lec	Lab	Cr	Grade			
<b>I</b>	MATH 121 - Calculus I		4.0		MATH 122 - Calculus II		4.0		MATH 200 - Multivar. Calculus		4.0							<b>48.0</b>	
	CHEM 101 - General Chemistry I		3.5		CIVC 101 - Intro. to Civic Engagement (GE)		1.0		Undes. Gen. Ed. #1 - (GE)		3.0								
	UNIV E101 - The Drexel Experience (GE)		1.0		PHYS 101 - Fund. of Physics I		4.0		PHYS 102 - Fund. of Physics II		4.0								
	ENGL 101 - Comp. & Rhet I: Inq & Exp. Res. (GE)		3.0		CHEM 102 - General Chemistry II		4.5		ENGL 102 - Comp. & Rhet. II (GE)		3.0								
	ENGR 111 - Intro. to Engineering Design & Data		3.0		ENGR 131 or 132 - Intro. Progr. for Eng/Progr. for Eng.		3.0		ENGR 113 - First Year Engineering Design		3.0								
			<b>14.5</b>				<b>16.5</b>				<b>17.0</b>								
<b>II</b>	PHYS 201 - Fund of Physics III		4.0		ENGR 210 - Intro. to Thermo.		3.0											<b>34.0</b>	
	ENGR 220 - Fund. of Materials		4.0		MATE 221 - Intro. to Mech. Beh. of Mat'l's.		3.0												
	ENGR 231 - Linear Eng'g. Systems		3.0		ENGR 232 - Dyn. Eng'g. Systems		3.0		<i>INDUSTRY</i>				<i>INDUSTRY</i>						
	Free Elective #1 -		3.0		CHEM 241 - Organic Chemistry I		4.0												
	BIO 107 - Cells, Genetics & Physiology		3.0		ENGL 103 - Comp. & Rhet. III: Themes & Genres (GE)		3.0												
			<b>18.0</b>				<b>16.0</b>												
<b>III</b>	MATE 214 - Intro. to Polymers	4.0	0.0	4.0		MATE 245 - Kinetics of Mat'l's.	4.0	0.0	4.0									<b>37.5</b>	
	MATE 240 - Thermo. of Materials	4.0	0.0	4.0		MATE 341 - Defects in Solids	3.0	0.0	3.0										
	MATE 280 - Adv. Mat'l's. Lab.	2.5	3.0	4.0		MATE 315 - Proc. of Polymers	3.0	3.0	4.5		<i>INDUSTRY</i>		<i>INDUSTRY</i>						
	MATE 355 - Struct. & Charactn.	3.0	0.0	3.0		PHIL 315 - Engineering Ethics (GE)	3.0	0.0	3.0										
	ECON 201 - Prin. of Microeconomics (GE)	4.0	0.0	4.0		ECON 202 - Prin. of Macroeconomics (GE)	4.0	0.0	4.0										
			<b>19.0</b>				<b>18.5</b>												
<b>IV</b>	MATE 366 - Proc. of Metallic Mat'l's. (WI)	3.0	3.0	4.5		MATE 345 - Proc. of Ceramics	3.0	3.0	4.5		Tech. Elec./Track #2 -	3.0	0.0	3.0				<b>56.0</b>	
	MATE 370 - Mech. Beh. of Solids	3.0	0.0	3.0		MATE 351 - Elect. & Photon. Props.	4.0	0.0	4.0		Tech. Elec./Track #3 -	3.0	0.0	3.0					
	MATE 455 - Biomedical Materials	3.0	0.0	3.0		CHEC 353 - Phys. Chem. & Apps III	4.0	0.0	4.0		MATE 410 - Case Studies in Mat'l's.	3.0	0.0	3.0		<i>VACATION</i>			
	CHE 350 (335 previously) - Stat. & Design of Exp	3.0	0.0	3.0		Free Elective #2 -	3.0	0.0	3.0		MATE 5XX - (Selected Core #1 (SC))	3.0	0.0	3.0					
	Undes. Gen. Ed. #2 - (GE)	3.0	0.0	3.0		MATE 510 - Thermo. of Solids (Req.)	3.0	0.0	3.0		MATE 5XX - (Optional (OC))	3.0	0.0	3.0					
			<b>19.5</b>				<b>18.5</b>						<b>18.0</b>						
<b>V</b>	MATE 491 - Senior Proj. Design I (WI)	1.0	2.0	2.0		MATE 492 - Senior Proj. Design II	1.0	4.0	3.0		MATE 493 - Senior Proj. Des. III (WI)	1.0	4.0	3.0				<b>50.0</b>	
	Tech. Elec./Track #4 -	3.0	0.0	3.0		Undes. Gen. Ed. #3 - (GE)	3.0	0.0	3.0		Undes. Gen. Ed. #4 - (GE)	3.0	0.0	3.0					
	MATE 535 - Numerical Eng. Methods (Req.)	3.0	0.0	3.0		MATE 5XX - (Selected Core #2 (SC))	3.0	0.0	3.0		MATE 5XX - (Optional (OC))	3.0	0.0	3.0					
	MATE 512 - Intro. to Solid State Mat'l's. (Req.)	3.0	0.0	3.0		MATE 5XX - (Optional (OC))	3.0	0.0	3.0		MATE 5XX - (Optional (OC))	3.0	0.0	3.0					
	MATE 5XX - (Optional (OC))	3.0	0.0	3.0		MATE 5XX - (Optional (OC))	3.0	0.0	3.0		MATE 5XX - (Selected Core #3 (SC))	3.0	0.0	3.0					
			<b>17.0</b>				<b>15.0</b>						<b>18.0</b>						

**225.5**

**NOTES:**  
**Undesignated General Education (GE):** Any 3 **non-technical** courses of 3 credits or more. See: [http://www.drexel.edu/coe/resources/current\\_undergrad/electives/liberal\\_studies\\_electives/](http://www.drexel.edu/coe/resources/current_undergrad/electives/liberal_studies_electives/)  
**Technical Elective/Track:** Any **upper level** Math, Science or Engineering course, consistent with the recommendations for one of the MSE Tracks and approved by the Track Coordinator.

**Graduate: 45.0**  
**Undergraduate: 180.5**

SC = "Selected Core" Courses - select 3 from the list.  
 OC = "Optional Courses"

**Students:** Use "Fill" colors to indicate the status of your courses, and record the grades you received for each course completed.

- Green: Courses Completed
- Red: Courses with an F, INC or NGR
- Yellow: Courses being taken in current AY
- Blue: Courses to be taken in the future

**Advisor:** Sign and date below after advising meeting each year.

Year I:
Year II:
Year III:
Year IV:
Year V:

- \*\*Selected Core (SC)\*\* Courses: (Select 3 Courses)**
- MATE 501: Structure and Properties of Polymers (CL) (25)
  - MATE 507: Kinetics of Materials (SM) (35)
  - MATE 514: Structure, Symmetry & Properties of Materials (JR) (25)
  - MATE 515: Experimental Techniques in Materials (SM) (15)
  - MATE 610: Mechanical Behavior of Solids (AZ) (25)
  - MATE 661: Biomedical Materials I (MM) (35)
- Plus any additional relevant courses if approved by the Graduate Advisor and Thesis Advisor.
- Note: Fall - 15; Winter - 25; Spring - 35

- \*\*Optional Courses (OC)\*\*:**
- MATE 541: Intro. to TEM and Related Techniques (MT) (25)
  - MATE 542: Nuclear Fuel Cycle & Materials (MT) (35)
  - MATE 543: Thermal Spray Technology (RK)
  - MATE 544: Nanostructured Polymeric Materials (CL) (TBD)
  - MATE 560: Powder Metallurgy I (TBD)
  - MATE 563: Ceramics (MB) (35)
  - MATE 572: Materials for High Temperature & Energy (MB)(35)
  - MATE 573: Electrical, Magnetic and Optical Char'n. of Energy Mat'l's. (SM) (35)
  - MATE 576: Recycling of Materials (CS) (35)
  - MATE 580: S/T Biosurfaces (CS)
  - MATE 580: S/T Particulate Materials (AZ)
  - MATE 580: S/T Smart Materials & Sensors (CS)
  - MATE 580: S/T Carbon Materials II (YG)
  - MATE 580: S/T Advanced Ceramics Processing (WS)
  - MATE 582: Materials for Energy Storage (EP) (35)
  - MATE 583: Environmental Effects on Materials (CW) (25)
  - MATE 585: Nanostructured Carbon Materials (YG) (35)
  - MATE 602: Soft Materials (CL) (35)
  - MATE 702: Natural Polymers (CS) (35)

**Advisor Notes/Comments:**

Student ID: