

**B.S. in INDUSTRIAL ENGINEERING**  
Suggested 4-Year Academic Flowchart

**FALL:**  
Swinburne, Australia  
CEA Madrid, Spain  
TECNUN, Spain  
Lucerne, Switzerland

**SPRING:**  
Munich, Germany

**FALL:**  
Lucerne, Switzerland  
KTH, Sweden  
TECNUN, Spain  
Swinburne, Australia

Updated 7/6/17

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR			
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	
Intro to IME <b>IME 101 (1)</b>		Intro to Design & Manufacturing <b>IME 144 (4)</b> <small>(Recom: IME 140 or ME 129)</small>	Process Improvement Fundamentals <b>IME 223 (4)</b> <small>(MATH 141, Recom: IME 101)</small>	Industrial Costs & Controls <b>IME 239 (3)</b> <small>(IME 223)</small>	Engineering Economics <b>IME 314 (3)</b> <small>(MATH 241)</small>	Operations Research I <b>IME 301 (4)</b> <small>(MATH 244)</small>	Human Factors Engineering <b>IME 319 (3)</b> <small>(PSY 201 or 202: Jr Standing)</small>	Data Management & System Design <b>IME 312 (4)</b> <small>(CSC 232)</small>	Production Planning & Control Systems <b>IME 410 (4)</b> <small>(IME 342 or 305)</small>	Senior Design Project I <b>IME 481 (2)<sup>2</sup></b> <small>(Sr. Standing, Instr. consent)</small>	Senior Design Project II <b>IME 482 (3)<sup>2</sup></b> <small>(IME 481)</small>	
Graphics Comm. & Modeling <b>IME 140 (2)</b>	General Chem for Physical Sci & Engineering I <b>CHEM 124 (4)</b> <small>[B3/B4]</small>	Basic Electronics Manufacturing <b>IME 156 (2)</b>	General Physics III <b>PHYS 133 (4)</b> <small>(PHYS 131, HNRS 131, or PHYS 141; MATH 142, Recom: MATH 241)</small>	General Psychology <b>PSY 201 or PSY 202 (4)</b> <small>[D4]</small>	<b>Take concurrently: BIO 213 (2) &amp; BMED 213 (2)</b> <small>(MATH 142, Recom: CHEM 124) [B2]</small>	Project Org & Management <b>IME 303 (4)</b> <small>(IME 314 &amp; Jr Standing)</small>	Engineering Test Design & Analysis <b>IME 326 (4)</b> <small>(STAT 321 w/min C-)</small>	Operations Research II <b>IME 305 (4)</b> <small>(IME 301 or STAT 321)</small>	Simulation <b>IME 420 (4)</b> <small>(IME 305, 326 or 327)</small>	Facilities Planning & Design <b>IME 443 (4)</b> <small>(IME 144, 223, 314, &amp; 305 or 342, Recom: IME 319 &amp; 420)</small>	Approved Technical Elective <b>(3)<sup>1</sup></b>	
Mfg. Proc: Net Shape <b>IME 141 (1)</b>	General Physics IA <b>PHYS 141 (4)</b> <small>(MATH 141 w/min C-, MATH 142 or 1821) [Add'l Area B]</small>	General Physics II <b>PHYS 132 (4)</b> <small>(PHYS 131, HNRS 131, or PHYS 141)</small>	Calculus IV <b>MATH 241 (4)</b> <small>(MATH 143)</small>	Linear Analysis I <b>MATH 244 (4)</b> <small>(MATH 143)</small>	Probability & Stats for Engineers & Scientists <b>STAT 321 (4)</b> <small>(MATH 142) [B6]</small>	Electric Circuit Theory & Lab <b>EE 201 (3) &amp; 251 (1)</b> <small>(MATH 244 &amp; PHYS 133)</small>	Electronics <b>EE 321 (3)</b> <small>(EE 201)</small>	Approved Technical Elective <b>(3)<sup>1</sup></b>	Quality Engineering <b>IME 430 (4)</b> <small>(IME 326, 327, 503, STAT 302, or 312)</small>	Supply Chain & Logistics Management <b>IME 417 (4)</b> <small>(IME 342 or 410)</small>	Approved Technical Elective <b>(4)<sup>1</sup></b>	
Calculus I <b>MATH 141 (4)</b> <small>[B1]</small>	Calculus II <b>MATH 142 (4)</b> <small>(MATH 141 w/min C-)</small> <small>[B1]</small>	Calculus III <b>MATH 143 (4)</b> <small>(MATH 142 w/min C-)</small> <small>[Add'l Area B]</small>		Engineering Statics <b>ME 211 (3)</b> <small>(PHYS 131 or 141, MATH 241)</small>	Engineering Dynamics <b>ME 212 (3)</b> <small>(MATH 241; ME 211 or ARCE 211)</small>	Mechanics of Materials I <b>CE 204 (3)</b> <small>(ME 211)</small>	Materials Engineering & Lab <b>MATE 210(3) &amp; 215(1)</b> <small>*</small>		Ergonomics Laboratory <b>IME 429 (1)</b> <small>(IME 319; &amp; 326 or 327)</small>			
Expository Writing <b>ENGL 133 or 134 (4)** [A1]</b> <small>Can be taken anytime during Freshman Year</small>		Computer Prog. for Scientists & Engineers <b>CSC 232 (3)</b> <small>(MATH 118 or equiv.)</small>		GE (4) <small>**</small>								
Oral Communication <b>COMS 101 or 102 (4)** [A2]</b> <small>Can be taken anytime during Freshman Year</small>												
GE (4) <small>**</small>		Technical Writing for Engineers <b>ENGL 149 (4) [A3]</b> <small>(Completion of GE A1 with a C- or better; Recom: Completion of GE A2) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years</small>										
16	16	17	16	18	14	15	18	15	17	14	14	
			<b>FALL-SPRING:</b> CSU IP Queretaro, Mexico			<b>SUMMER:</b> TECNUN, Spain			<b>SUMMER:</b> TECNUN, Spain Munich, Germany			<b>TOTAL:</b> 190

**FALL 2<sup>nd</sup> Yr: CEA Madrid, Spain:** PHYS 133, EE 201, MATE 210, MATH 244, ME 211, ME 212; GE C1 or C2

**CEA Paris, France:** Math 241, ME 211; GE C1 or C2, C4

**FALL-SPRING 2<sup>nd</sup> Yr: CSU IP Queretaro, Mexico:** MATE 210, CE 204, MATH 241, MATH 244, ME 211, ME 212, ME 341; GE C1 or C2

**SUMMER 2<sup>nd</sup> Yr: TECNUN, Spain:** GE C1 or C2 and Tech Electives (2 units)

**FALL 3<sup>rd</sup> Yr: CEA Madrid, Spain:** EE 201, MATE 210, ME 341; GE C1 or C2

**Lucerne, Switzerland:** IME 303, IME 429, CSC 232, EE 201, EE 321, Tech Electives

**Swinburne, Australia:** MATE 210, BIO 213, EE 201, Tech Electives

**TECNUN, Spain:** CE 204, EE 201, EE 321, IME 314, IME 319, IME 417, IME 420, Tech Electives

**SPRING 3<sup>rd</sup> Yr: Munich, Germany:** EE 321, MATE 210, IME 319, Tech Electives

**SUMMER 3<sup>rd</sup> Yr: TECNUN, Spain:** GE C1 or C2 and Tech Electives (2 units)

**Munich, Germany:** GE C1 or C2 and Tech Electives (6 units)

**FALL 4<sup>th</sup> Yr: KTH, Sweden:** IME 239, IME 303, IME 443, IME 417, Tech Electives

**Lucerne, Switzerland:** IME 303, IME 429, CSC 232, EE 201, EE 321, Tech Electives

**TECNUN, Spain:** CE 204, EE 201, EE 321, IME 314, IME 319, IME 417, IME 420, Tech Electives

**Swinburne, Australia:** MATE 210, BIO 213, EE 201, Tech Electives