Packaging Curriculum Guide for PACKAGING SCIENCE TRACK (fall 2016 or later)

University Requirements—**PKG MAJORS DO NOT NEED ISP/ISB**

|  |  |  |  |
| --- | --- | --- | --- |
| Course | Credits | Prereqs | Semester Offered |
| WRA 110-150 | 4 | None | FS, SS, US |
| IAH 201-210 | 4 | Completion of Tier 1 writing | FS, SS, US |
| IAH 211 or higher | 4 | IAH 201-210 | FS, SS, US |
| ISS 200 level | 4 | None | FS, SS, US |
| ISS 300 level | 4 | ISS 200 Level | FS, SS, US |

**Math and Science**

|  |  |  |  |
| --- | --- | --- | --- |
| Course | Credits | Prereqs | Semester Offered |
| CEM 141: General Chemistry | 4 | MTH 103 preferred | FS, SS, US |
| CEM 161: Chemistry Lab | 1 | CEM 141 or concurrently | FS, SS, US |
| CEM 143: Survey of Organic Chemistry | 4 | CEM 141  | FS, SS, US |
| PHY 231: Physics 1 | 3 | MTH 103 | FS, SS, US |
| PHY 232: Physics 2 | 3 | PHY 231 | FS, SS |
| FSC 342: Food Safety **or** MMG 201: Fundamentals of Microbiology  | 3 | CEM 141 | FSC 342: FS onlyMMG 201: SS, US |
| MTH 132: Calculus 1 | 3 | MTH 103 and 114, or 116, or placement test | FS, SS, US |
| MTH 133: Calculus 2 | 4 | MTH 132 | FS, SS, US |
| STT 200, 201, or 315: Statistics  | 3-4 | MTH 103 or higher | FS, SS, US |

**\*\*CEM 141, PHY 231, MTH 132 and MTH 133 MUST be complete prior to reaching 56 credits for junior admission to the PKG program. A 2.0 is required in these classes. A 3.0 overall GPA is required for junior admission\*\***

**\*\*Substitutions for higher level math and science coursework completed are accepted\*\***

**Concentration area (PKG science or PKG Value Chain Management) selected by Junior year**

Required Business/Economics

|  |  |  |  |
| --- | --- | --- | --- |
| Course | Credits | Prereq | Semester offered |
| EC 201: Microeconomics **or** EC 202: Macroeconomics | 3 | None | FS, SS, US |
| MKT 327: Intro to Marketing **or** SCM 303: Intro to Supply Chain Management | 3 | Junior standing | FS, SS, US |

**Packaging Core—Science Track**

|  |  |  |  |
| --- | --- | --- | --- |
| Course | Credits | Prereqs | Semester Offered |
| PKG 101: Principles of PKG | 3 | None | FS, SS, US |
| PKG 102: Intro PKG seminar | 2 | PKG 101 or concurrent, PKG majors only | FS, SS |
| PKG 221: Glass and Metal | 2 | PKG majors, CEM 141, PHY 231, PKG 102 or concurrent, sophomore status | FS, SS |
| PKG 315: PKG Decision Systems | 3 | PKG major, MTH 132, PKG 221 or concurrent  | FS, SS |
| PKG 322: Paper and Paperboard | 4 | PKG majors, CEM 143, STT 200, MTH 133, PKG 221 or concurrent | FS, SS |
| PKG 323: Plastics | 4 | PKG majors, CEM 143, STT 200, MTH 133, PKG 221 or concurrent | FS, SS |
| PKG 410: Distribution PKG Dynamics | 4 | PKG majors, PKG 322/323 | FS, SS |
| PKG 411: PKG Development Technology  | 3 | PKG majors, PKG 322/323 | FS, SS |
| PKG 432: PKG Processes | 4 | PKG majors, PKG 322/323, PHY 232 | FS, SS |
| PKG 452: Medical PKG **or** PKG 455: Food PKG | 3-4 | PKG majors, PKG 322/323 | PKG 452: FSPKG 455: SS |
| PKG 485: PKG Development | 3 | PKG majors, all previous PKG core, senior standing | FS, SS |
| PKG 486: PKG senior capstone | 3 | PKG 485, senior standing | FS, SS |

**PKG Electives—6 credits required**

|  |  |  |  |
| --- | --- | --- | --- |
| Course | Credits | Prereqs | Semester Offered |
| PKG 430: Packaging for Fast Moving Consumer Goods (FMCG) | 3 | PKG 322/323 | FS |
| PKG 470: Packaging Sustainability | 3 | PKG 315, 322, 323 | SS |
| PKG 452: Medical PKG | 4 | PKG 322 OR 323 | FS  |
| PKG 455: Food PKG | 3 | PKG 322&323 | SS |
| PKG 465: Value Chain | 3 | PKG 322/323 | FS, SS |
| PKG 477: Hazmat PKG | 3 | PKG 322 &323 recommended | US online |
| PKG 480: PKG Laws and Regulations | 3 | PKG 322 & 323 | SS online**WILL NOT RUN SS18** |
| PKG 490: Directed Studies**DOES NOT COUNT TOWARD PKG ELECTIVES** | 1-3 | Approval of professorOverride Only | FS, SS, US |
| PKG 491: Special Topics | 1-4 | Varies—includes study abroad programs | FS, SS, US |
| PKG 493: Internship**Maximum 6 credits—only counts toward PKG electives ONCE, second internships count as free electives** | 3 | PKG 101, 221, 315, 322, 323. Override Only | FS, SS, US |

\*Note: PKG 452 and 455 are listed both places. They cannot double count for the core requirement and the elective requirement. HOWEVER, if you take one for the core, you may take the other as an elective (i.e. PKG 452 to count for core packaging science requirement, PKG 455 to count for 3 credits of PKG elective)

**PACKAGING SCIENCE CONCENTRATION**

**9 credits required, cannot double count with any classes taken previously to meet degree requirements. This is not an exhaustive list—consult with your advisor. At least one course must be at 300 level.**

|  |  |  |  |
| --- | --- | --- | --- |
| Course | Credits | Prereqs | Semester Offered |
| BMB 200: Intro to Biochem | 4 | CEM143 | FS (Live), US (online) |
| BMB 400: Intro to Bioinformatics | 3 | STT 200, MMG201 OR BMB 200 | FS |
| CSE 231: intro to programming 1 | 4 | MTH 132 | FS, SS, US |
| CSE 232: intro to programming 2 | 4 | MTH 132, CSE 231 | FS, SS |
| CSUS 200: Intro to Sustainability | 3 | None | FS, SS |
| CSUS 300: Theoretical Foundations of Sustainability | 3 | CSUS 200, WRA 101 | FS, SS |
| FOR 414: Renewable Wood Products | 3 | CEM 141 | FS |
| FSC 211: Principles of Food Science | 3 | None | FS (live), US (online) |
| FSC 325: Food Processing Unit Operations | 3 | FSC 211 |  |
| FSC 342: Food Safety | 3 | None | FS only |
| FSC 401: Food Chemistry | 3 | BMB 200, junior or seniors | SS |
| FSC 421: Food Laws and Regulations | 3 | FSC 211 or HNF 150 or HNF 260 or ABM 100 | SS |
| FSC 440: Food Microbiology | 3 | MMG 201 | FS |
| FSC 441: Food microbiology lab | 2 | FSC 440 or concurrently, WRA 101 | FS |
| MMG 201: Fundamentals of Microbiology | 3 |  | SS, US |
| MMG 301: Intro Microbiology | 3 | BS 161, CEM 143 | FS, SS, US |
| MMG 302: Intro Lab for Allied Health Microbio | 1 | MMG 201 or 301 | FS, SS, US |
| MMG 425: Microbial Ecology | 3 | MMG 301 recommended | SS |
| MMG 445: Microbial Biotech | 3 | MMG 301, WRA 101 | FS, US |
| STT 464: Stats for biologists | 3 | MTH 103, previous stats course | FS |
| ENE 280: Principles of Environmental Engineering Science | 3 | CEM 141, MTH 132 | FS, SS |
| BE 429: Fundamentals of Food Engineering | 3 | FSC 325, MTH 132, PHY 231Recommended FSC 211 | SS |
| CEM 262: Quantitative Analysis | 3 | CEM 142, 162 | FS, SS, US |
| CEM 311: Inorganic Chem | 3 | CEM 142 | SS |
| CEM 333: Instrumental Methods and Applications | 3 | CEM 262, CEM 143 | SS |
| MSE 250: Materials Science and Engineering | 3 | CEM 141 | FS, SS, US |
| MSE 260: Electronic, Magnetic, Thermal, and Optical Properties of Materials | 3 | MSE 250, PHY 184 | SS |
| PHM 211: Pharmacology and Toxicology in Society | 2 | None | SS, US |
| PHM 351: Fundamentals of Drug Safety | 2 | BS 161, juniors or seniors | SS |
| MTH 234: Multivariable Calc | 4 | MTh 133 | FS, SS, US |
| MTh 235: Differential Equations | 3 | MTH 234 | FS, SS, US |
| MTH 299: Transitions | 4 | MTH 132, MTH 133 or concurrently | FS, SS, US |
| MTH 309: Linear Algebra | 3 | MTH 133, MTH 299 | FS, SS, US |

\*\*Students will need to take free electives to get to the degree requirement of 120 total credits. This will equal approximately 10-12 credits, depending on each individual student’s previous coursework. These credits can be used to meet prereqs for courses in their concentration, a minor, additional packaging electives or internships, or on any other coursework a student wishes to explore\*