

CHM 191, 192; minimum of 24 earned credits, cumulative average of 2.0 or better.

Freshman Year

Fall CHM 191* (General Chemistry I)¹
MTH 141 (Calculus I)

Spring CHM 192** (General Chemistry II)²
MTH 142 (Calculus II)

Sophomore Year

Fall CHM 212 (Quantitative Analysis)¹
Laboratory²
CHM 291[†] (Organic Chemistry Lecture I)¹
PHY 203, 273 (Elementary Physics I)
MTH 243 (Multivariate Calculus)

Spring CHM 292^{††} (Organic Chemistry II and
PHY 204, 274 (Elementary Physics II)
MTH 244 (Differential Equations)
CHM 391(Forensic Science Seminar)

Junior Year

Fall CHM 335 (Physical Chemistry Lab)¹
CHM 431(Physical Chemistry I)¹
CHM 391(Forensic Science Seminar)

Spring CHM 432 (Physical Chemistry II)²
CHM 412 (Instrumental Methods of Analysis)²
CHM 414 (Instrumental Methods of Analysis Lab)²
CHM 392 (Introduction to Criminalistics)²

Senior Year

Fall CHM 354 (Undergraduate Research)
CHM 401 (Intermediate Inorganic Chemistry)¹
CHM 425 (Advanced Organic Laboratory)¹
CHM 427 (Intermediate Organic Chemistry)¹

Spring CHM 354 (Undergraduate Research)
CHM 441 (Chemistry of Biological Systems)²
CHM 391(Forensic Science Seminar)

* CHM 101, 102 may be used to substitute

** CHM 112, 114 may be used to substitute

† CHM 227 may be used to substitute

†† CHM 226 + CHM 228 may be used to substitute

¹ Only offered Fall semesters² Only offered Spring semesters**General Education Requirements [a total of 40 credits is required with at least 3 credits in every outcome satisfied, no more than 12 credits from a single discipline, and 1 Grand Challenge Course (G)]** (updated 5/2/2018)

A1, STEM: AFS 105G, 190, APG 201, 282G, AST 108, 118, AVS 101, BIO 101, 101H, 102, 103, 104, 105, 181G, 256G, 282G, BPS 201, 203, CHM 101, 103, CMB 190, 260G, 265G, CVE 323, 323H, 325G, EEC 234G, EGR 133, 213G, GEO 100, 102, 102H, 103, 110, 113, 120, 204, 234G, GWS 220, HPR 131G, 135, 230G, 233, ISE 261G, 461G, KIN 375G, MTH 103, 105, 106, 107, 108, 108H, 111, 131, 141, 142, 180, 208, 243, NFS 207, 210, NRS 100, 190, 234G, 330G, OCG 103G, 106G, 110, 111, 123G, 131, 200G, PHL 215, 425G, PHY 109, 110, 111, 112, 185, 186, 203, 203H, 204, 204H, 205, 205H, 273, 273H, 274, 274H, 275, 275H, PLS 150, SUS 261G, 461G, TMD 113, 113H

A2, Social & Behavioral Sciences: AAF 239, AFS 132G, 132GH, APG 202, 203, AVS 132G, 132GH, BUS 104GH, CCJ 230, COM 243G, CPL 202, ECN 201, 201H, 202, EDC 304, 306, 312, EEC 105, 350G, 352G, GEG 202, GWS 150, 150H, HDF 150, 150H, 208, 225, 318G, 440, HIS 112, 305, 305H, 308, HLT 100, 200, HPR 124, 224G, 392, HSS 130G, KIN 123, 123H, LAN 220, MAF 100, 220, MTH 109, NFS 212G, 276G, NRS 300, NUR 150, 150H, 260, 260H, 270, 270H, PHL 421G, PLS 132G, 132GH, PSC 113, 116G, 306, 421G, PSY 103, 113, 113H, 130G, 232, SOC 100, 212, 230, THN 260, 260H, 270, 270H

A3, Humanities: AAF 150, 150H, 247, 248, 355, ARB 111, 112, 120, 211, ART 120, 251, 252, CHN 101, 101H, 102, 103, 111, 111H, 112, 112H, 113, 113H, 114, 114H, 205, 206, 215H, 216, 216H, CLA 110, 391, 395, 396, 397, CLS 160, EGR 316G, ENG 105, 110, 160, 242, 243, 245, 247, 248, 252, 260, 263, 263H, 264, 265, 265H, 280, 302, 303, 304, 357G, 368, 381, 385, 387, FRN 101, 102, 103, 104, 120G, 151, 204, 207, 307, 309, 320, GER 101, 102, 103, 104, 111, 112, 113, 114, 205, 206, 215, GRK 101, 102, 301, 302, 497, GWS 385, HBW 101, 102, HIS 110, 114, 115G, 117, 119G, 141, 142, 150, 150H, 164, 176, 178, 341, 349, 352, 355, 358, 374, 375, 379, 393, HPR 147, 316, ITL 100, 101, 102, 103, 104, 205, 206, 315, 320, 390, JOR 110, 110H, JPN 101, 102, 103, 104, KIN 475, 478, LAN 191, 192, LAT 101, 102, 301, 302, 497, MAF 300, PHL 101, 103, 103H, 212, 212H, 217, 235, 235H, 316G, POR 101, 102, 103, 104, PSC 221, RLS 111, 125, 131, 221, 226, RUS 101, 102, SPA 100, 101, 102, 103, 104, 110, 205, 206, 207, 210, THE 381, 383, TMD 326G

A4, Arts & Design: ART 101, 103, 105, 207, CLS 451, EGR 105, 106, ENG 451, FLM 100, 101, 101H, 203, 204, 205, 206, 451, HPR 344, LAR 201, 202, MUS 101, 105, 106, 227, 292, 293, THE 100, 351, 352, TMD 126, 240

B1, Write Effectively: AAF 366, AME 204, BIO 482G, CCJ 476, CLA 110, ENG 105, 110, 243, 260, 263, 263H, 264, 265, 280, 357G, FLM 203, GEO 204, HIS 110, 114, 171, 172, 305, 308, 308G, 310, 311, 327, 342, 346, 357, 358, 366, 374, 375, 393, HPR 142, 147, 344, MUS 101, PHL 103, 103H, 215, PSC 476, PSY 103, SOC 476, THE 381, 383, TMD 240, WRT 104, 104H, 106, 106H, 201, 227, 332, 334

B2, Communicate Effectively: COM 100, 100H, EDC 304, 429, FRN 350, HIS 350, 350H, HPR 131G, 346G, LIB 150, NFS 458, NUR 270, 270H, OCE 496, THE 100, THN 270, 270H, TMD 126, WRT 227, 332, 334

B3, Mathematical, Statistical, and Computational: BUS 111, CSC 101, 104, 106, 106H, 201, EEC 355, GEO 200, HDF 405, MTH 103, 104, 106, 107, 108, 108H, 109, 111, 131, 141, 142H, 180, 208, 243, MUS 227, NFS 207, 210, OCG 111, 250, 350, 351, PHL 101, PHY 111, 112, 185, 186, 205, 275, PSC 405, STA 220

B4, Information Literacy: APG 201, BIO 396, BPS 203, CHN 306, CLA 497, CMB 260G, 265G, COM 108G, 460, CSC 101, EDC 102, 102H, 103G, 312, EEC 345G, 355, 432, ENG 245, 302, 303, 304, 368, 385, FRN 304, GEO 102, 102H, 103, 110, 120, 200, GWS 150, 150H, 220, 385, HDF 225, 318G, HIS 117, 145, 146, 304, 310, 311, 327, 333, 339, 349, 362, 364, 365, 495, HLT 200, HPR 142, 183G, 233, ISE 261G, KIN 123, 123H, 375G, LIB 150, 250, 250H, 350, NUR 160, OCG 106G, 110, 131, PHP, 305, 405, RLS 226, SCM 101, SUS 108G, 261G, 460, THE 351, 352, WRT 104, 104H, 106, 106H, 201

C1, Civic Knowledge & Responsibilities: BUS 104GH, COM 108G, 460, CPL 202, CVE 323, 323H, ECN 202, EDC 306, EGR 120G, 316G, FRN 309, GEG 202, HDF 414, 440, 480, 481, HIS 119G, 119GH, 141, 145, 146, 339, 350, 350H, 362, 364, 365, HLT 100, HPR 124, 224G, 392, HSS 130G, ITL 390, JOR 110, 110H, LIB 350, MAF 100, 220, NUR 444, PHL 316G, PSC 113, 306, PSY 130G, SUS 108G, 460, THE 338G

C2, Global Responsibilities: APG 202, 282G, ARB 111, 112, 120, 211, BIO 256G, 282G, CHE 452, CHN 101, 101H, 102, 103, 111, 111H, 112, 112H, 113, 113H, 114, 114H, 205, 206, 215, 215H, 216, 216H, 306, CLA 391, 395, 396, 397, 497, CLS 160, 451, CVE 325G, EEC 345G, ENG 160, 252, 451, FLM 100, 101, 101H, 204, 205, 206, 451, FRN 101, 102, 103, 104, 151, 204, 207, 307, 320, GEO 100, GER 101, 102, 103, 104, 111, 112, 113, 114, 205, 206, 215, GRK 101, 102, 301, 302, 497, HBW 101, 102, HIS 112, 164, 171, 172, 176, 178, 379, HPR 135, ISE 461G, ITL 100, 101, 102, 103, 104, 205, 206, 315, 320, JPN 101, 102, 103, 104, LAN 191, 192, LAT 101, 102, 301, 302, 497, NRS 300, 330G, OCG 103G, 123G, 200G, PHL 217, 235, 235H, 452G, POR 101, 102, 103, 104, PSC 116G, 221, 416, 417, 431, RLS 111, 221, RUS 101, 102, SCM 101, SPA 101, 102, 103, 104, 110, 111, 205, 206, 207, SUS 461G, TMD 103G, 326G

C3, Diversity: AAF 150, 150H, 247, 248, 355, 366, AME 204, CMD 493G, EDC 102, 102H, 103G, ENG 242, 247, 248, 381, 387, 450G, FRN 120G, 304, GWS 441, HDF 150, 412, HIS 115G, 142, 150, 341, 342, 346, 352, 355, 357, 366, HPR 183G, 316, KIN 475, 478, LAN 220, MAF 300, MUS 105, 106, NFS 212G, NUR 150, 150H, 260, 260H, 280G, PHL 212, 212H, 421G, PSC 421G, 441, SPA 210, THN 260, 260H

D1, Integrate & Apply: AVS 472, BIO 396, 482G, BME 484, 485, BUS 445, 445H, CHE 452, CHM 353, 354, CVE 498, EEC 432, ELE 480, ENG 450G, FRN 350, GEO 320, GWS 441, HDF 405, 412, 414, 480, HIS 304, 495, HPR 346G, ISE 402, KIN 420, MCE 402, NFS 458, NRS 450G, 452G, NUR 444, OCE 496, OCG 108G, 350, 351, PHP 405, 595, PSC 402, 405, 416, 417, 431, 441, 461, 472, 476, SAF 400G, SOC 476, THE 338G

Grand Challenge Courses: AFS 105G, 132G, 132GH, APG 282G, AVS 132G, 132GH, BIO 181G, 282G, BUS 104GH, CMB 260G, CMD 493G, COM 108G, 243G, CVE 325G, EDC 103G, EEC 234G, 345G, 350G, 352G, EGR 120G, 213G, 316G, ENG 357G, FRN 120G, GEO 234G, HDF 318G, HIS 115G, 119G, 308G, HPR 131G, 183G, 230G, 346G, HSS 130G, ISE 261G, KIN 375G, NFS 212G, 276G, NRS 234G, 450G, 452G, OCG 103G, 108G, 123G, 200G, PHL 316G, 421G, 452G, PLS 132G, 132GH, PSC 116G, 421G, PSY 130G, SAF 400G, SUS 108G, THE 338G, TMD 103G, 326G