Student Name: Date:

THE UNIVERSITY OF HAWAI'I - KAPI'OLANI COMMUNITY COLLEGE

ASSOCIATE IN SCIENCE IN NATURAL SCIENCE - ENGINEERING

Effective Fall 2023

60 credits minimum and 2.0 grade point ratio (GPR) or higher for all courses applicable toward the degree

CHEM 161 (General Chemistry I) Prereq(s): "C" or higher in MATH 103. Recommended: MATH 135. CHEM 161L (General Chemistry I Lab) Prereq(s): "C" or higher in MATH 103 and credit or concurrent enrollment in CHEM 161. CHEM 162 (General Chemistry II) Prereq(s): "C" or higher in CHEM 161; and "C" or higher in MATH 103. Recommended: MATH 135. III. ENGINEERING (28 - 29 Credits) COURSE CR EE 160 (Programming for Engineers) Prereq(s): MATH 135 or higher math or MATH 140 or higher placementt. Recommend MATH 140. MATH 242 (Calculus II) Prereq(s): "C" or higher in MATH 241 (formerly MATH 205) or "C" or higher in an equivalent course. PHYS 170 (General Physics I) Prereq(s): "C" or higher or concurrent enrollment in MATH 242 (formerly MATH 206). See KapCC Catalog. PHYS 170L (General Physics Lab I) Prereq(s): "C" or higher or concurrent enrollment in PHYS 170. PHYS 272 (General Physics Lab II) Prereq(s): MATH 242 (formerly MATH 206); and PHYS 170 and PHYS 170L. PHYS 272L (General Physics Lab II) Prereq(s): PHYS 170 and PHYS 170 and PHYS 170L and credit or concurrent enrollment in PHYS 272. MATH 243 (Calculus III) Prereq(s): "C" or higher in MATH 242 (formerly MATH 206). CE 270 or EE 211 (Applied Mechanics I or Basic Circuit Analysis) See KapCC Catalog for prerequisites. MATH 244 (Calculus IV) Prereq(s): "C" or higher in MATH 243 (formerly MATH 231).	I. GENERAL EDUCATION (19 Credits)		COURSE	CR	GR
MATH 241 (formerly MATH 205)	course	sfer			
Group & (FGA): ANTH 151: ART 175: RET 151: REL 149WS 149					
Diversification Arts, Humanities, & Literatures (DA, DH, DL): (1 course - SP 251 recommended for UH Mānoa College of Engineering) ART 101, 104, 105, 105, 107, 1070, 111, 112, 113, 114, 115, 116, 123, 190, 207, 213, 214, 223, 225, 243, 244, 245, 223, 280, 280, 291, 205, 231C, 233, SP 151, 233, 291; THEA 101, 221, 222 Humanities (DH): MBC 122, 122, 131, 132, 150, 212, 213, HWST 222, IS 161; MUS 108, 114, 1218, 1216, 121C, 121D, 1212, 122C, 1213, 201, 206, 226, 231C, 233, SP 151, 233, 291; THEA 101, 221, 222 Humanities (DH): MBC 102, MBS 103, 170, 280, CHNS 280, HAW 280, HBT 231, 232, 241, 242, 281, 282, 284, 288. HUM 280 (any alpha); 287 (any alpha); HWST 100, 107, 207, 216, 287, 281, 281, 282, 1282, 281, 282, 281, 282, 284, 288. HUM 280 (any alpha); 271, 272, ENG 270 (any alpha), 273 (any alpha), 273 (any alpha); 274, 272, 272, 287, 281, 281, 282, 281, 282, 281, 282, 281, 282, 281, 282, 284, 288. HUM 281, 282, 289, any alpha), 271, 272, ENG 270 (any alpha), 271 (any alpha), 272 (any alpha), 273 (any alpha); HAW 281, 282, HWST 270; LLEA 239, SPAN 250 Diversification Social Sciences (DS): (1 course - ECON 120, 130, or 131 recommended for UH Mānoa College of Engineering) ANTH 200, 210, ASAN 100, BOT 105, COM 201; ECON 120, 130, 131; ED 284, 288, ES 101; HDFS 230 (formerly FAMR 230); HWST 255, LING 150; PAGS 108, POLS 110, 120, 130, 207; PSY 100, 170, 202, 212, 240, 250, 260, 270; SLT 102, 103, SOC 100, 274, 216, 231, 251, 257, SOC 252, SP 181; SW 200 LICHMISTRY COURSES (7 Credits) I. CHEM 151 (General Chemistry I) Prereq(s): "C" or higher in MATH 103. Recommended: MATH 135. CHEM 161 (General Chemistry I) Prereq(s): "C" or higher in MATH 140 or higher in MATH 103. Recommended MATH 140. CHEM 152 (General Chemistry I) Prereq(s): "C" or higher in All reliance or reliance or higher in All reliance	Group A (FGA): ANTH 151; ART 175; HIST 151; REL 149/WS 149 Group B (FGB): ANTH 152; ART 176; GEO 102; HIST 152; SSCI 102				
ANTH 200, 210: ASAN 100: BOT 105: COM 201: ECON 120, 130, 131; ED 284, 289; ES 101: HDFS 230 (formerly FAMR 230): HWST 255; LING 150; PACS 108: POLS 110, 120, 130, 207; PSY 100, 170, 202, 212, 240, 250, 260, 270; SLT 102, 103; SOC 100, 214, 218, 231, 251, 257; SOCS 225; SP 181; SW 200 II. CHEMISTRY COURSES (7 Credits)	Arts (DA): College of Engineering) ART 101, 104, 105, 106J, 107, 107D, 111, 112, 113, 114, 115, 116, 123, 189, 207, 213, 214, 223, 225, 243, 244, 245, 253, 269 (any alpha); DNCE 121, 122, 131, 132, 150, 212, 213; HWST 222; IS 161; MUS 108, 114, 121B, 121C, 121D, 121Z, 122Z, 183, 201, 206, 229, 231C, 253; SP 151, 233, 251; THEA 101, 221, 222 Humanities (DH): AMST 201; ART 270; ASAN 201, 202; ASL 290; CHNS 290; HAW 290; HIST 231, 232, 241, 242, 281, 282, 284, 288; HUM 269 (any alpha), 295 (any alpha); HWST 100, 107, 207, 216, 257, 281, 281L, 282, 282L, 285; IS 109; JPN 131, 290; KOR 290; LING 102; MUS 106, 170, 290; PHIL 100, 101, 103, 213, 250; REL 151, 215, 222; SLT 202 (any alpha) Literatures (DL): EALL 261, 262, 269 (any alpha), 271, 272; ENG 270 (any alpha), 271 (any alpha), 272 (any alpha), 273 (any alpha);				
CHEM 161 (General Chemistry I) Prereq(s): "C" or higher in MATH 103. Recommended: MATH 135. CHEM 161L (General Chemistry ILab) Prereq(s): "C" or higher in MATH 103 and credit or concurrent enrollment in CHEM 161. CHEM 162 (General Chemistry II) Prereq(s): "C" or higher in CHEM 161; and "C" or higher in MATH 103. Recommended: MATH 135. III. ENGINEERING (28 - 29 Credits) COURSE CR G EE 160 (Programming for Engineers) Prereq(s): MATH 135 or higher math or MATH 140 or higher placementt. Recommend MATH 140. MATH 242 (Calculus II) Prereq(s): "C" or higher in MATH 241 (formerly MATH 205) or "C" or higher in an equivalent course. PHYS 170 (General Physics I) Prereq(s): "C" or higher or concurrent enrollment in MATH 242 (formerly MATH 206). See KapCC Catalog. PHYS 170L (General Physics Lab I) Prereq(s): "C" or higher or concurrent enrollment in PHYS 170. PHYS 272 (General Physics Ib) Prereq(s): MATH 242 (formerly MATH 206); and PHYS 170 and PHYS 170. PHYS 272L (General Physics Lab II) Prereq(s): PHYS 170 and PHYS 170 and PHYS 170 and PHYS 170. PHYS 272L (General Physics Ib) Prereq(s): "C" or higher in MATH 242 (formerly MATH 206). CE 270 or EE 211 (Applied Mechanics I or Basic Circuit Analysis) See KapCC Catalog for prerequisites. MATH 244 (Calculus IV) Prereq(s): "C" or higher in MATH 243 (formerly MATH 231). IN ELECTIVES (5 - 6 Credits) (** indicates strongly recommended courses) ASTR 110; BIOC 141, 244; BIOL 101, 101, 124, 124, 130, 130L, 17, 171L, 172, 172L, 265, 265L, 275, 275L; BOT 101, 101L, 105, 130, 130L, 201, 201L; CHEM 100, 272, 272L, 273, 273L; CE 270**, 271**; EE 211**, 260**, 296**; ERTH (formerly GG) 101L, 103; ICS 101, 100, 111, 111, 141, 211, 212, 241; MATH 100, 111, 112, 115, 215; ME 213***, MICR 130, 140, 161, 230, 240; OCN 101, 201, 201L; OLEST 101, 201L; PHYL (formerly ZOLL) 141, 144L, 142L, 160, 160L; PHYS 151, 151L, 152, 152L, 274**; SCI 295 (alpha)**; ZOOL 200, 200L. Any 101, 102, 201, 202 course that fulfills the KapCC AA/HSL requirement. Any course on the KapCC AA/DA, AA/DH,	ANTH 200, 210; ASAN 100; BOT 105; COM 201; ECON 120, 130, 131; ED 284, 289; ES 101; HDFS 230 (formerly FAMR 230); HWST 255; LING 150; PACS 108; POLS 110, 120, 130, 207; PSY 100, 170, 202, 212, 240, 250, 260, 270;	_			
CHEM 161L (General Chemistry II Lab) Prereq(s): "C" or higher in MATH 103 and credit or concurrent enrollment in CHEM 161. CHEM 162 (General Chemistry II) Prereq(s): "C" or higher in CHEM 161; and "C" or higher in MATH 103. Recommended: MATH 135. III. ENGINEERING (28 - 29 Credits) EE 160 (Programming for Engineers) Prereq(s): MATH 135 or higher math or MATH 140 or higher placementt. Recommend MATH 140. MATH 242 (Calculus II) Prereq(s): "C" or higher in MATH 241 (formerly MATH 205) or "C" or higher in an equivalent course. PHYS 170 (General Physics I) Prereq(s): "C" or higher or concurrent enrollment in MATH 240. (Seneral Physics Lab I) Prereq(s): "C" or higher or concurrent enrollment in PHYS 170. PHYS 272 (General Physics Lab II) Prereq(s): "MATH 242 (formerly MATH 206); and PHYS 170 and PHYS 170L. PHYS 272 (General Physics Lab II) Prereq(s): PHYS 170 and PHYS 170 and PHYS 170 and PHYS 272. MATH 243 (Calculus III) Prereq(s): "C" or higher in MATH 242 (formerly MATH 206). CE 270 or EE 211 (Applied Mechanics I or Basic Circuit Analysis) See KapCC Catalog for prerequisites. MATH 244 (Calculus IV) Prereq(s): "C" or higher in MATH 243 (formerly MATH 231). IV. ELECTIVES (5 - 6 Credits) (** indicates strongly recommended courses) ASTR 110; BIOC 141, 244; BIOL 101, 1011, 124, 124L, 130, 130L, 171, 171L, 172, 172L, 265, 265L, 275, 275L; BOT 101, 101L, 105, 130, 130L, 201, 201L; CHEM 100, 272, 272L, 273, 273L; CE 270**, 271***; EE 211**, 260**, 296**; ERTH (formerly GG) 101L, 103; ICS 101, 110, 111, 141, 211, 212, 241; MATH 100, 111, 112, 115, 215, MBC 213**, MICR 130, 140, 161, 230, 240; OCN 101, 101, 101, 201; PHYL (formerly ZOLL) 141, 141L, 142, 142L, 160, 160L; PHYS 151, 151L, 152, 152L, 274***; SCI 295 (alpha)**; ZOOL 200, 200L, Any 101, 102, 201, 202 course that fulfills the KapCC AA/HSL requirements. Note: Hawaiian/Second Language not required for UH Mānoa College of	II. CHEMISTRY COURSES (7 Credits)		COURSE	CR	GR
EE 160 (Programming for Engineers) Prereq(s): MATH 135 or higher math or MATH 140 or higher placementt. Recommend MATH 140. MATH 242 (Calculus II) Prereq(s): "C" or higher in MATH 241 (formerly MATH 205) or "C" or higher in an equivalent course. PHYS 170 (General Physics I) Prereq(s): Credit or concurrent enrollment in MATH 242 (formerly MATH 206). See KapCC Catalog. PHYS 170L (General Physics Lab I) Prereq(s): "C" or higher or concurrent enrollment in PHYS 170. PHYS 272 (General Physics II) Prereq(s): MATH 242 (formerly MATH 206); and PHYS 170 and PHYS 170L. PHYS 272L (General Physics Lab II) Prereq(s): PHYS 170 and PHYS 170 and credit or concurrent enrollment in PHYS 272. MATH 243 (Calculus III) Prereq(s): "C" or higher in MATH 242 (formerly MATH 206). CE 270 or EE 211 (Applied Mechanics I or Basic Circuit Analysis) See KapCC Catalog for prerequisites. MATH 244 (Calculus IV) Prereq(s): "C" or higher in MATH 243 (formerly MATH 231). IV. ELECTIVES (5 - 6 Credits) (** indicates strongly recommended courses) COURSE CR ASTR 110; BIOC 141, 244; BIOL 101, 101L, 124, 124L, 130, 130L, 171, 171L, 172, 1265, 265L, 275, 275L; BOT 101, 101L, 105, 130, 130L, 201, 201L; CHEM 100, 272, 272L, 273, 273L; CE 270**, 271**; EE 211**, 260**, 296**; ERTH (formerly GG) 101L, 103; ICS 101, 110, 111, 141, 211, 212, 241; MATH 100, 111, 112, 115, 215; ME 213**; MICR 130, 140, 161, 230, 240; OCN 101, 201, 201; OEST 101, 201; PHYL (formerly ZOOL) 141, 141L, 142, 142L, 160, 160L; PHYS 151, 151L, 152, 152L, 274**; SCI 295 (alpha)**; ZOOL 200, 200L. Any 101, 102, 201, 202 course that fulfills the KapCC AA/HSL requirement. Any course on the KapCC AA/HSL requirement. Any course on the KapCC AA/HSL requirement and course on the KapCC AA/HSL requirement. Note: Hawaiian/Second Language not required for UH Mānoa College of	CHEM 161L (General Chemistry I Lab) Prereq(s): "C" or higher in MATH 103 and credit or concurrent enrollment in CHEM 161.				
MATH 242 (Calculus II) Prereq(s): "C" or higher in MATH 241 (formerly MATH 205) or "C" or higher in an equivalent course. PHYS 170 (General Physics I) Prereq(s): Credit or concurrent enrollment in MATH 242 (formerly MATH 206). See KapCC Catalog. PHYS 170L (General Physics Lab I) Prereq(s): "C" or higher or concurrent enrollment in PHYS 170. PHYS 272 (General Physics II) Prereq(s): MATH 242 (formerly MATH 206); and PHYS 170 and PHYS 170L. PHYS 272L (General Physics Lab II) Prereq(s): PHYS 170 and PHYS 170 and PHYS 170. PHYS 272L (General Physics Lab II) Prereq(s): PHYS 170 and PHYS 170L and credit or concurrent enrollment in PHYS 272. MATH 243 (Calculus III) Prereq(s): "C" or higher in MATH 242 (formerly MATH 206). CE 270 or EE 211 (Applied Mechanics I or Basic Circuit Analysis) See KapCC Catalog for prerequisites. MATH 244 (Calculus IV) Prereq(s): "C" or higher in MATH 243 (formerly MATH 231). IV. ELECTIVES (5 - 6 Credits) (** indicates strongly recommended courses) COURSE CR ASTR 110; BIOC 141, 244; BIOL 101, 101L, 124, 124L, 130, 130L, 71, 171L, 172, 172L, 265, 265L, 275, 275L; BOT 101, 101L, 105, 130, 130L, 201, 201L; CHEM 100, 272, 272L, 273, 273L; CE 270**, 271**; EE 211**, 260**, 296**; ERTH (formerly GG) 101L, 103; ICS 101, 101, 111, 141, 211, 212, 241; MATH 100, 111, 112, 115, 215; ME 213**; MICR 130, 140, 161, 230, 240; OCN 101, 201, 201L; OEST 101, 201; PHYL (formerly ZOOL) 141, 141L, 142, 142L, 160, 160L; PHYS 151, 151L, 152, 152L, 274**; SCI 295 (alpha)**; ZOOL 200, 200L. Any 101, 102, 201, 202 course that fulfills the KapCC AA/HSL requirement. Any course on the KapCC AA/HAL AA/DA, AA/DB lists that has not already been used to fulfill General Education requirements. Note: Hawaiian/Second Language not required for UH Mănoa College of	III. ENGINEERING (28 - 29 Credits)		COURSE	CR	GR
ASTR 110; BIOC 141, 244; BIOL 101, 101L, 124, 124L, 130, 130L, 171, 171L, 172, 172L, 265, 265L, 275, 275L; BOT 101, 101L, 105, 130, 130L, 201, 201L; CHEM 100, 272, 272L, 273, 273L; CE 270**, 271**; EE 211**, 260**, 296**; ERTH (formerly GG) 101L, 103; ICS 101, 110, 111, 141, 211, 212, 241; MATH 100, 111, 112, 115, 215; ME 213**; MICR 130, 140, 161, 230, 240; OCN 101, 201, 201L; OEST 101, 201; PHYL (formerly ZOOL) 141, 141L, 142, 142L, 160, 160L; PHYS 151, 151L, 152, 152L, 274**; SCI 295 (alpha)**; ZOOL 200, 200L. Any 101, 102, 201, 202 course that fulfills the KapCC AA/HSL requirement. Any course on the KapCC AA/DA, AA/DH, AA/DL, AA/DS lists that has not already been used to fulfill General Education requirements. Note: Hawaiian/Second Language not required for UH Mānoa College of	MATH 242 (Calculus II) Prereq(s): "C" or higher in MATH 241 (formerly MATH 205) or "C" or higher in an equivalent course. PHYS 170 (General Physics I) Prereq(s): Credit or concurrent enrollment in MATH 242 (formerly MATH 206). See KapCC Catalog. PHYS 170L (General Physics Lab I) Prereq(s): "C" or higher or concurrent enrollment in PHYS 170. PHYS 272 (General Physics II) Prereq(s): MATH 242 (formerly MATH 206); and PHYS 170 and PHYS 170L. PHYS 272L (General Physics Lab II) Prereq(s): PHYS 170 and PHYS 170L and credit or concurrent enrollment in PHYS 272. MATH 243 (Calculus III) Prereq(s): "C" or higher in MATH 242 (formerly MATH 206). CE 270 or EE 211 (Applied Mechanics I or Basic Circuit Analysis) See KapCC Catalog for prerequisites. MATH 244 (Calculus IV) Prereq(s): "C" or higher in MATH 243 (formerly MATH 231).				
101, 101L, 105, 130, 130L, 201, 201L; CHEM 100, 272, 272L, 273, 273L; CE 270**, 271**; EE 211**, 260**, 296**; ERTH (formerly GG) 101L, 103; ICS 101, 110, 111, 141, 211, 212, 241; MATH 100, 111, 112, 115, 215; ME 213**; MICR 130, 140, 161, 230, 240; OCN 101, 201L; OEST 101, 201; PHYL (formerly ZOOL) 141, 141L, 142, 142L, 140, 160L; PHYS 151, 151L, 152, 152L, 274**; SCI 295 (alpha)**; ZOOL 200, 200L. Any 101, 102, 201, 202 course that fulfills the KapCC AA/HSL requirement. Any course on the KapCC AA/DA, AA/DH, AA/DL, AA/DS lists that has not already been used to fulfill General Education requirements. Note: Hawaiian/Second Language not required for UH Mānoa College of	IV. ELECTIVES (5 - 6 Credits) (** indicates strongly recommended courses)		COURSE	CR	GR
	101, 101L, 105, 130, 130L, 201, 201L; CHEM 100, 272, 272L, 273, 273L; CE 270**, 271**; EE 211**, 260**, 296**; ERTH (formerly GG) 101L, 103; ICS 101, 110, 111, 141, 211, 212, 241; MATH 100, 111, 112, 115, 215; ME 213**; MICR 130, 140, 161, 230, 240; OCN 101, 201, 201L; OEST 101, 201; PHYL (formerly 200L) 141, 141L, 142, 142L, 160, 160L; PHYS 151, 151L, 152, 152L, 274**; SCI 295 (alpha)**; ZOOL 200, 200L. Any 101, 102, 201, 202 course that fulfills the KapCC AA/HSL requirement. Any course on the KapCC AA/DA , AA/DL , AA/DL , AA/DS lists that has not already been used to fulfill General Education requirements. Note: Hawaiian/Second Language not required for UH Mānoa College of				

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Please refer to the current KapCC Catalog for residency, curriculum, and other graduation requirements.

Thinking about transfer to UH Mānoa? Consider Writing Intensive (WI) and/or Hawaiian, Asian & Pacific Issues (HAP) focus courses at KapCC.