Associate of Science

The associate of science degree from JCCC:

- is designed as a professional-oriented degree for transfer to another college or university to support progress toward earning a bachelor's degree.

- requires a minimum of 60 college-level credit hours within specified categories with 15 credit hours earned at JCCC and a 2.0 or higher GPA.

- requires a minimum of 34 credit hours of Kansas Systemwide General Education requirements.

- requires a minimum of 26 additional credit hours of open electives, including 6 hours of STEM (Science, Technology, Engineering, and Mathematics (p. 9)) electives.

- requires the completion of a JCCC Cultural Diversity course (p. 15) from a list of approved courses. Some of the courses in this list will also meet Kansas Systemwide General Education requirements.

The associate of science degree is designed as a transfer degree. Students should refer to transfer information (https://www.jccc.edu/student-resources/transfer/), meet with a JCCC counselor (https://www.jccc.edu/student-resources/counseling/academic-counseling/), and create a plan when selecting courses.

Kansas Systemwide General Education Requirements

English (6 hrs.)

Code	Title	Hours
ENGL 121	Composition I*	3
ENGL 122	Composition II*	3

Communications (3 hrs.)

Code	Title	Hours
3 hours required from the following courses:		
COMS 120	Interpersonal Communication	3
or COMS 121	Public Speaking	
or COMS 125	Personal Communication	

Math and Statistics (3 hrs.)

Code	Title	Hours
MATH 165	Finite Mathematics*	3
MATH 171	College Algebra*	3
MATH 172	Trigonometry*	3
MATH 173	Precalculus*	5
MATH 175	Discrete Mathematics and its Applications*	3
MATH 181	Statistics*	3
MATH 231	Business and Applied Calculus I*	3
MATH 232	Business and Applied Calculus II*	3
MATH 241	Calculus I*	5
MATH 242	Calculus II*	5
MATH 243	Calculus III*	5
MATH 254	Differential Equations*	4
MATH 285	Statistics for Business*	4

Natural and Physical Sciences (4-5 hrs.)

Code	Title	Hours
Minimum 4 hours of a lab science required from the following courses:		
Natural Science		
BIOL 121	Introductory Biology for Non-Majors	4
BIOL 125	General Botany	5

BIOL 127	General Zoology	5
BIOL 135	Principles of Cell and Molecular Biology	4
BIOL 140	Human Anatomy	4
BIOL 144	Human Anatomy and Physiology*	5
BIOL 150	Biology of Organisms*	5
BIOL 161	Introduction to Biotechnology	4
BIOL 225	Human Physiology*	4
BIOL 230	Microbiology*	3
BIOL 231	Microbiology Lab*	2
EVRN 130	Environmental Science	3
EVRN 131	Environmental Science Lab*	1
Physical Science		
ASTR 122	Astronomy	4
CHEM 120	Chemistry in Society*	4
CHEM 122	Principles of Chemistry*	5
CHEM 124	General Chemistry I Lecture*	4
CHEM 125	General Chemistry I Lab*	1
CHEM 131	General Chemistry II Lecture*	4
CHEM 132	General Chemistry II Lab*	1
CHEM 140	Principles of Organic & Biological Chemistry*	5
GEOS 130	General Geology	5
GEOS 140	Physical Geography	3
GEOS 141	Physical Geography Lab*	2
PHYS 130	College Physics I*	5
PHYS 131	College Physics II*	5
PHYS 220	Engineering Physics I*	5
PHYS 221	Engineering Physics II*	5
PSCI 120	Physical Science	4

Social and Behavioral Sciences (6 hrs.)

Code	Title	Hours
6 hours required from two subject areas:		
Anthropology		
ANTH 125	Cultural Anthropology [±]	3
ANTH 126	Physical Anthropology	3
ANTH 130	World Cultures [±]	3
ANTH 142	World Prehistory [±]	3
ANTH 165	Linguistic Anthropology [±]	3
Criminal Justice		
CJ 121	Introduction to Criminal Justice System	3
CJ 141	Criminal Law	3
CJ 223	International Criminal Justice Systems [±]	3
Economics		
ECON 132	Survey of Economics	3
ECON 230	Principles of Macroeconomics	3
ECON 231	Principles of Microeconomics	3
Geography		
GEOS 145	World Regional Geography [±]	3
GEOS 155	Human Geography [±]	3
Legal Studies		
LAW 120	Introduction to Paralegal Studies	3
LAW 121	Introduction to Law	3

Political Science

POLS 122	Political Science	3
POLS 124	American National Government	3
POLS 126	State and Local Government	3
POLS 132	Introduction to Comparative Government ±	3
POLS 135	International Relations ±	3
POLS 175	Environmental Policy and Law	3
POLS 192	Political Theory ±	3
POLS 200	Model United Nations ±	3
POLS 220	Introduction to Public Policy	3
POLS 245	Introduction to Public Administration	3
Psychology		
PSYC 121	Applied Psychology	3
PSYC 130	Introduction to Psychology	3
PSYC 215	Child Development*	3
PSYC 218	Human Development*	3
Sociology		
SOC 122	Introduction to Sociology ±	3
SOC 125	Social Problems ±	3
SOC 131	Sociology of Families	3
SOC 146	Introduction to Social Work and Social Welfare ±	3
Women and Gender Studies		
WGS 201	Global Women's Studies ±	3

Arts and Humanities (6 hrs.)

Code	Title	Hours
6 hours required from two subject areas:		
Art History		
ARTH 180	Art History: Ancient to Medieval ±	3
ARTH 182	Art History: Renaissance to Modern	3
ARTH 184	Art History: Twentieth Century ±	3
ARTH 188	History of Photography	3
ARTH 200	Women, Art, and Society ±	3
English		
English (Literature)		
ENGL 130	Introduction to Literature*	3
ENGL 214	Environmental Literature*	3
ENGL 215	U.S. Latino and Latina Literature* ±	3
ENGL 217	Literature by Women* ±	3
ENGL 227	Introduction to Poetry*	3
ENGL 230	Introduction to Fiction*	3
ENGL 232	Children's Literature* ±	3
ENGL 235	Drama as Literature*	3
ENGL 236	British Literature to 1800*	3
ENGL 237	British Literature after 1800*	3
ENGL 246	American Literature I*	3
ENGL 247	American Literature II*	3
ENGL 254	Masterpieces of the Cinema*	3
English (Writing)		
ENGL 123	Technical Writing I*	3
ENGL 140	Writing for Interactive Media*	3
ENGL 222	Advanced Composition: The Art of the Essay*	3

ENGL 223	Introduction to Creative Writing*	3
Communications		
COMS 180	Intercultural Communication	3
Film and Media Studies		
FMS 100	Intro to Film	3
FMS 200	Intro to Filmmaking and Media Aesthetics	3
Foreign Languages		
FL 120	Elementary German I [±]	5
FL 121	Elementary German II* [±]	5
FL 130	Elementary Spanish I [±]	5
FL 131	Elementary Spanish II* [±]	5
FL 140	Elementary French I [±]	5
FL 141	Elementary French II* [±]	5
FL 165	Elementary Chinese I [±]	5
FL 166	Elementary Chinese II* [±]	5
FL 170	Elementary Japanese I [±]	5
FL 171	Elementary Japanese II* [±]	5
FL 182	Intermediate Japanese I* [±]	5
FL 183	Intermediate Japanese II* [±]	5
FL 192	Intermediate Chinese I* [±]	3
FL 193	Intermediate Chinese II* [±]	3
FL 220	Intermediate German I* [±]	3
FL 221	Intermediate German II* [±]	3
FL 230	Intermediate Spanish I* [±]	3
FL 231	Intermediate Spanish II* [±]	3
FL 240	Intermediate French I* [±]	3
FL 241	Intermediate French II* [±]	3
History		
HIST 120	Local and Kansas History [±]	3
HIST 125	Western Civilization: Ancient World to the Renaissance	3
HIST 126	Western Civilization: Scientific Revolution to the Modern Age	3
HIST 128	Medieval History [±]	3
HIST 129	Early Modern Europe 1500-1789	3
HIST 130	European History Since 1789	3
HIST 132	History of Africa [±]	3
HIST 135	Eastern Civilization [±]	3
HIST 137	African American History [±]	3
HIST 140	U.S. History to 1877	3
HIST 141	U.S. History Since 1877	3
HIST 143	Ancient Greece, the Near East and Egypt [±]	3
HIST 145	History of Ancient Rome [±]	3
HIST 149	History of India [±]	3
HIST 151	World History: Traditional [±]	3
HIST 152	World History: Modern World [±]	3
HIST 160	Modern Russian History [±]	3
HIST 162	Modern Latin America [±]	3
HIST 165	History of China [±]	3
HIST 167	Introduction to History: Japan [±]	3
HIST 180	North American Indian History [±]	3
HIST 195	History of the Middle East [±]	3
HIST 210	Environmental History of North America	3
HIST 250	American West	3

HIST 260	Women in U.S. History [±]	3
Humanities		
HUM 122	Introduction to Humanities	3
HUM 145	World Humanities: Ancient to Medieval [±]	3
HUM 146	World Humanities: Renaissance to Modern [±]	3
HUM 155	Classical Mythology	3
HUM 156	Contemporary Approaches to World Mythology [±]	3
HUM 165	Introduction to Chinese Culture	3
HUM 167	Introduction to Japanese Culture [±]	3
Journalism		
JOUR 120	Mass Media and Society	3
Music		
MUS 121	Introduction to Music Listening	3
MUS 125	Introduction to Jazz Listening	3
MUS 126	Introduction to World Music [±]	3
MUS 128	History of Rock and Roll Music [±]	3
Philosophy		
PHIL 121	Introduction to Philosophy	3
PHIL 124	Logic and Critical Thinking	3
PHIL 128	Environmental Ethics	3
PHIL 130	Food Ethics	3
PHIL 143	Ethics	3
PHIL 154	History of Ancient Philosophy	3
PHIL 176	Philosophy of Religion	3
Photography		
PHOT 200	Foundations in Photography	3
Religion		
REL 120	Exploring World Religions [±]	3
REL 125	Asian Religions [±]	3
REL 126	Religions of the West [±]	3
Theater		
THEA 120	Introduction to Theater	3

Cavalier Credits (6 hrs.)

Code	Title	Hours
Communications		
COMS 120	Interpersonal Communication	3
COMS 121	Public Speaking	3
COMS 125	Personal Communication	3
COMS 180	Intercultural Communication [±]	3
Math and Statistics		
MATH 165	Finite Mathematics*	3
MATH 171	College Algebra*	3
MATH 172	Trigonometry*	3
MATH 173	Precalculus*	5
MATH 175	Discrete Mathematics and its Applications*	3
MATH 181	Statistics*	3
MATH 231	Business and Applied Calculus I*	3
MATH 232	Business and Applied Calculus II*	3
MATH 241	Calculus I*	5
MATH 242	Calculus II*	5
MATH 243	Calculus III*	5

MATH 254	Differential Equations*	4
MATH 285	Statistics for Business*	4
Natural and Physical Sciences		
Natural Science		
BIOL 121	Introductory Biology for Non-Majors	4
BIOL 125	General Botany	5
BIOL 127	General Zoology	5
BIOL 135	Principles of Cell and Molecular Biology	4
BIOL 140	Human Anatomy	4
BIOL 144	Human Anatomy and Physiology*	5
BIOL 150	Biology of Organisms*	5
BIOL 161	Introduction to Biotechnology	4
BIOL 225	Human Physiology*	4
BIOL 230	Microbiology*	3
BIOL 231	Microbiology Lab*	2
EVRN 124	Oceanus: Essentials of Oceanography (non-lab science)	3
EVRN 130	Environmental Science	3
EVRN 131	Environmental Science Lab*	1
EVRN 134	Principles of Sustainability (non-lab science)	3
Physical Science		
ASTR 120	Fundamentals of Astronomy (non-lab science)	3
ASTR 122	Astronomy	4
CHEM 120	Chemistry in Society*	4
CHEM 122	Principles of Chemistry*	5
CHEM 124	General Chemistry I Lecture*	4
CHEM 125	General Chemistry I Lab*	1
CHEM 131	General Chemistry II Lecture*	4
CHEM 132	General Chemistry II Lab*	1
CHEM 140	Principles of Organic & Biological Chemistry*	5
ENGR 121	Engineering Orientation	2
GEOS 130	General Geology	5
GEOS 140	Physical Geography	3
GEOS 141	Physical Geography Lab*	2
PHYS 130	College Physics I*	5
PHYS 131	College Physics II*	5
PHYS 220	Engineering Physics I*	5
PHYS 221	Engineering Physics II*	5
PSCI 120	Physical Science	4
Social and Behavioral Sciences		
Anthropology		
ANTH 125	Cultural Anthropology ±	3
ANTH 126	Physical Anthropology	3
ANTH 130	World Cultures ±	3
ANTH 142	World Prehistory ±	3
ANTH 165	Linguistic Anthropology ±	3
Criminal Justice		
CJ 121	Introduction to Criminal Justice System	3
CJ 141	Criminal Law	3
CJ 223	International Criminal Justice Systems ±	3
Economics		
ECON 132	Survey of Economics	3
ECON 230	Principles of Macroeconomics	3

ECON 231	Principles of Microeconomics	3
Geography		
GEOS 145	World Regional Geography	3
GEOS 155	Human Geography	3
Legal Studies		
LAW 120	Introduction to Paralegal Studies	3
LAW 121	Introduction to Law	3
Political Science		
POLS 122	Political Science	3
POLS 124	American National Government	3
POLS 126	State and Local Government	3
POLS 132	Introduction to Comparative Government ±	3
POLS 135	International Relations ±	3
POLS 175	Environmental Policy and Law	3
POLS 192	Political Theory ±	3
POLS 200	Model United Nations ±	3
POLS 220	Introduction to Public Policy	3
POLS 245	Introduction to Public Administration	3
Psychology		
PSYC 121	Applied Psychology	3
PSYC 130	Introduction to Psychology	3
PSYC 215	Child Development*	3
PSYC 218	Human Development*	3
Sociology		
SOC 122	Introduction to Sociology ±	3
SOC 125	Social Problems ±	3
SOC 131	Sociology of Families	3
SOC 146	Introduction to Social Work and Social Welfare ±	3
Women and Gender Studies		
WGS 201	Global Women's Studies ±	3
Arts and Humanities		
Art History		
ARTH 180	Art History: Ancient to Medieval ±	3
ARTH 182	Art History: Renaissance to Modern	3
ARTH 184	Art History: Twentieth Century ±	3
ARTH 188	History of Photography	3
ARTH 200	Women, Art, and Society ±	3
English		
English (Literature)		
ENGL 130	Introduction to Literature*	3
ENGL 214	Environmental Literature*	3
ENGL 215	U.S. Latino and Latina Literature* ±	3
ENGL 217	Literature by Women* ±	3
ENGL 227	Introduction to Poetry*	3
ENGL 230	Introduction to Fiction*	3
ENGL 232	Children's Literature* ±	3
ENGL 235	Drama as Literature*	3
ENGL 236	British Literature to 1800*	3
ENGL 237	British Literature after 1800*	3
ENGL 246	American Literature I*	3
ENGL 247	American Literature II*	3
ENGL 254	Masterpieces of the Cinema*	3

English (Writing)		
ENGL 123	Technical Writing I*	3
ENGL 140	Writing for Interactive Media*	3
ENGL 222	Advanced Composition: The Art of the Essay*	3
ENGL 223	Introduction to Creative Writing*	3
Film and Media Studies		
FMS 100	Intro to Film ±	3
FMS 200	Intro to Filmmaking and Media Aesthetics ±	3
Foreign Languages		
FL 120	Elementary German I ±	5
FL 121	Elementary German II* ±	5
FL 130	Elementary Spanish I ±	5
FL 131	Elementary Spanish II* ±	5
FL 140	Elementary French I ±	5
FL 141	Elementary French II* ±	5
FL 165	Elementary Chinese I ±	5
FL 166	Elementary Chinese II* ±	5
FL 170	Elementary Japanese I ±	5
FL 171	Elementary Japanese II* ±	5
FL 182	Intermediate Japanese I* ±	5
FL 183	Intermediate Japanese II* ±	5
FL 192	Intermediate Chinese I* ±	3
FL 193	Intermediate Chinese II* ±	3
FL 220	Intermediate German I* ±	3
FL 221	Intermediate German II* ±	3
FL 230	Intermediate Spanish I* ±	3
FL 231	Intermediate Spanish II* ±	3
FL 240	Intermediate French I* ±	3
FL 241	Intermediate French II* ±	3
History		
HIST 120	Local and Kansas History ±	3
HIST 125	Western Civilization: Ancient World to the Renaissance	3
HIST 126	Western Civilization: Scientific Revolution to the Modern Age	3
HIST 128	Medieval History ±	3
HIST 129	Early Modern Europe 1500-1789	3
HIST 130	European History Since 1789	3
HIST 132	History of Africa ±	3
HIST 135	Eastern Civilization ±	3
HIST 137	African American History ±	3
HIST 140	U.S. History to 1877	3
HIST 141	U.S. History Since 1877	3
HIST 143	Ancient Greece, the Near East and Egypt ±	3
HIST 145	History of Ancient Rome ±	3
HIST 149	History of India ±	3
HIST 151	World History: Traditional ±	3
HIST 152	World History: Modern World ±	3
HIST 160	Modern Russian History ±	3
HIST 162	Modern Latin America ±	3
HIST 165	History of China ±	3
HIST 167	Introduction to History: Japan ±	3
HIST 180	North American Indian History ±	3
HIST 195	History of the Middle East ±	3

HIST 210	Environmental History of North America	3
HIST 250	American West	3
HIST 260	Women in U.S. History ±	3
Humanities		
HUM 122	Introduction to Humanities	3
HUM 145	World Humanities: Ancient to Medieval ±	3
HUM 146	World Humanities: Renaissance to Modern ±	3
HUM 155	Classical Mythology	3
HUM 156	Contemporary Approaches to World Mythology ±	3
HUM 165	Introduction to Chinese Culture	3
HUM 167	Introduction to Japanese Culture ±	3
Journalism		
JOUR 120	Mass Media and Society	3
Music		
MUS 121	Introduction to Music Listening	3
MUS 125	Introduction to Jazz Listening	3
MUS 126	Introduction to World Music ±	3
MUS 128	History of Rock and Roll Music ±	3
Philosophy		
PHIL 121	Introduction to Philosophy	3
PHIL 124	Logic and Critical Thinking	3
PHIL 128	Environmental Ethics	3
PHIL 130	Food Ethics	3
PHIL 143	Ethics	3
PHIL 154	History of Ancient Philosophy	3
PHIL 176	Philosophy of Religion	3
Photography		
PHOT 200	Foundations in Photography	3
Religion		
REL 120	Exploring World Religions ±	3
REL 125	Asian Religions ±	3
REL 126	Religions of the West ±	3
Theater		
THEA 120	Introduction to Theater	3

General Education Hours: 34-35

STEM - Science, Technology, Engineering, and Mathematics Courses (6 hrs.)

Code	Title	Hours
Requires the completion of 6 additional credit hours to be selected from the following courses:		
Astronomy		
ASTR 120	Fundamentals of Astronomy	3
ASTR 122	Astronomy	4
Automation Engineer Technology		
AET 110	Industrial Maintenance	3
AET 120	Industrial Fluid Power	3
AET 122	Industrial Code	3
AET 140	Actuator and Sensor Systems*	3
AET 160	Programmable Logic Controllers I*	3
AET 185	LAN Cabling and Installation	3
AET 240	Industrial Robotics*	3
AET 255	Motor Controls and Variable Frequency Drives*	3
AET 260	Programmable Logic Controllers II*	3

Biology

BIOL 121	Introductory Biology for Non-Majors	4
BIOL 125	General Botany	5
BIOL 127	General Zoology	5
BIOL 132	Introduction to Public Health	3
BIOL 135	Principles of Cell and Molecular Biology	4
BIOL 140	Human Anatomy	4
BIOL 144	Human Anatomy and Physiology*	5
BIOL 145	Human Anatomy and Physiology Dissection*	1
BIOL 150	Biology of Organisms*	5
BIOL 161	Introduction to Biotechnology	4
BIOL 205	General Genetics*	4
BIOL 225	Human Physiology*	4
BIOL 227	Human Pathophysiology*	4
BIOL 230	Microbiology*	3
BIOL 231	Microbiology Lab*	2
BIOL 235	The Science of Human Nutrition*	3
BIOL 240	General Pharmacology*	3

Chemistry

CHEM 100	Preparation for Chemistry	3
CHEM 120	Chemistry in Society*	4
CHEM 122	Principles of Chemistry*	5
CHEM 124	General Chemistry I Lecture*	4
CHEM 125	General Chemistry I Lab*	1
CHEM 131	General Chemistry II Lecture*	4
CHEM 132	General Chemistry II Lab*	1
CHEM 140	Principles of Organic & Biological Chemistry*	5
CHEM 220	Organic Chemistry I*	5
CHEM 221	Organic Chemistry II*	5
CHEM 250	Biochemistry*	4

Computer Information Systems

CIS 124	Introduction to Computer Concepts and Applications	3
CIS 142	Beginning Programming using Python	4
CIS 201	Introduction to Information Systems*	3
CIS 204	UNIX Scripting and Utilities*	3
CIS 208	Mobile Application Development*	4
CIS 240	Advanced Topics in Java*	4
CIS 242	Introduction to System Design and Analysis*	3
CIS 260	Database Management*	4
CIS 264	Application Development and Programming*	4
CIS 270	Information Systems Internship*	3
CIS 275	Web-Enabled Database Programming*	4
CIS 292	Special Topics:*	1-4

Computer Science

CS 134	Programming Fundamentals	4
CS 200	Concepts of Programming Algorithms Using C++*	4
CS 201	Concepts of Programming Algorithms using C#*	4
CS 202	Concepts of Programming Algorithms using Python*	4
CS 205	Concepts of Programming Algorithms using Java*	4
CS 210	Discrete Structures I*	3
CS 211	Discrete Structures II*	3
CS 235	Object-Oriented Programming Using C++*	4

CS 236	Object-Oriented Programming Using C#*	4
CS 250	Basic Data Structures using C++*	4
CS 252	Basic Data Structures Using Python*	4
CS 255	Basic Data Structures Using Java*	4
Computer Support Specialist		
CSS 105	Introduction to Personal Computers: Windows	1
CSS 106	Introduction to Personal Computers: Macintosh	1
CSS 108	Word Processing I: MS Word*	1
CSS 109	Google Apps*	1
CSS 110	Spreadsheets I: MS Excel*	1
CSS 111	Spreadsheets II: MS Excel*	1
CSS 113	Spreadsheets I, II & III: MS Excel*	3
CSS 114	Databases I: MS Access*	1
CSS 115	Databases II: MS Access*	2
CSS 118	Groupware: Outlook*	1
CSS 120	Computer User Support Skills*	3
CSS 121	Introduction to Project Management*	1
CSS 123	E-Presentation: MS PowerPoint*	1
CSS 125	Word Processing II: MS Word*	1
CSS 128	PC Applications: MS Office	3
CSS 138	Operating Systems: Windows*	1
CSS 140	Digital Devices and Online Technologies*	3
CSS 228	PC Applications II: MS Office*	3
CSS 290	Computer Support Specialist Internship*	2
CSS 292	Special Topics:*	1-3
Construction Management		
CMGT 100	Industrial Safety/OSHA-30	3
CMGT 105	Construction Methods	3
CMGT 123	Building Codes*	3
CMGT 125	Construction Specifications*	2
CMGT 129	Construction Management	3
CMGT 140	Construction Materials*	3
CMGT 150	Construction Safety/OSHA-30	3
CMGT 160	Green Building Fundamentals*	3
CMGT 205	Advanced Construction Methods*	3
CMGT 225	Construction Documents*	2
CMGT 227	Construction Cost Estimating*	3
CMGT 229	Advanced Construction Management*	3
CMGT 271	Construction Management Internship*	3
Data Science		
DS 210	Introduction to Data Science	3
DS 220	Data Visualization	3
DS 230	SQL for Data Analysis	3
DS 240	Introduction to Statistical Programming	3
DS 260	Data Mining*	3
DS 270	Introduction to Machine Learning*	3
DS 280	Big Data Architecture	3
Electronics		
ELEC 120	Introduction to Electronics	3
ELEC 125	Digital Electronics I	4
ELEC 134	DC Circuits*	4
ELEC 186	CompTIA A+ Core 1	3

ELEC 212	Fundamentals of Light and Lasers*	3
ELEC 227	Digital Electronics II*	4
ELEC 234	AC Circuits*	4
ELEC 235	Digital Systems and Applications*	4
ELEC 236	Semiconductor Devices*	4
ELEC 240	Electronic Communication Systems*	4
ELEC 251	Laser Systems and Applications*	3
ELEC 252	Specialized Lasers and System Integration*	3
ELEC 271	Electronics Internship*	1-3
Engineering		
ENGR 121	Engineering Orientation	2
ENGR 131	Engineering Graphics I:AutoCAD*	4
ENGR 251	Statics*	3
ENGR 254	Dynamics*	3
Environmental Science		
EVRN 115	Natural History of Kansas	3
EVRN 124	Oceanus: Essentials of Oceanography	3
EVRN 130	Environmental Science	3
EVRN 131	Environmental Science Lab*	1
EVRN 134	Principles of Sustainability	3
EVRN 155	Bioethics*	3
EVRN 255	Freshwater Ecology	4
Game Development		
GAME 102	The Business of Games	3
GAME 104	Introduction to Game Development	1
GAME 105	Beginning Game Creation	3
GAME 120	Game Design I*	4
GAME 121	Game Programming I*	4
GAME 131	User-Centered Design*	4
GAME 132	Game Level Editing*	4
GAME 134	Game World Creation*	4
GAME 136	Game Prototyping*	4
GAME 180	Artificial Intelligence for Games*	3
GAME 220	Game Design II*	4
GAME 221	Game Programming II*	4
GAME 235	Game Quality Assurance*	2
GAME 238	Serious Game Design*	3
GAME 242	Agile Game Development*	3
GAME 250	Game Capstone*	4
GAME 255	Mobile Game Programming*	4
GAME 292	Special Topics:*	3
Geoscience		
GEOS 130	General Geology	5
GEOS 140	Physical Geography	3
GEOS 141	Physical Geography Lab*	2
GEOS 145	World Regional Geography	3
GEOS 155	Human Geography	3
Health Care Information Systems		
HCIS 225	Healthcare Data Analytics	2
HCIS 235	Care Coordination and Interoperable Health IT Systems	2
HCIS 245	Population Health	2
HCIS 255	Technology Concepts and Cybersecurity in Healthcare	2

HCIS 262	Customer Service in the Health Environment	2
HCIS 263	Working with Health Information Technology (HIT) Systems	2
HCIS 264	Configuration and Implementation of Electronic Health Records	2
HCIS 265	Installation and Maintenance of Health IT Systems	2
HCIS 267	EHR Design, Functionality and Usability	3
HCIS 270	Health Information Systems Internship*	2
HCIS 271	The Culture of Healthcare	2
HCIS 272	Terminology in Health Care Settings	2
HCIS 273	Quality Improvement in Healthcare	2
HCIS 274	Healthcare Workflow Analysis and Redesign	2
HCIS 277	Training and Instructional Design	2
Information Technology		
IT 120	CompTIA A+ Core 2	3
IT 141	Introduction to Networks	3
IT 150	Switching, Routing, and Wireless Essentials*	3
IT 151	VMware vSphere Essentials*	3
IT 152	Google Cloud Fundamentals*	3
IT 153	AWS Cloud Foundations*	3
IT 155	Microsoft Administration Fundamentals*	3
IT 175	Cybersecurity Fundamentals*	3
IT 202	IT Scripting*	3
IT 204	Enterprise Networking, Security and Automation*	3
IT 206	Network Security Fundamentals*	3
IT 207	AWS Cloud Operations*	3
IT 223	Azure Administration*	3
IT 224	Microsoft 365 Administration*	3
IT 230	Linux Fundamentals	3
IT 231	Linux Administration*	3
IT 238	Digital Forensics*	3
IT 239	Ethical Hacking*	3
IT 257	Cybersecurity Operations*	3
IT 271	Information Technology Internship I*	3
IT 272	Information Technology Internship II*	3
IT 292	Special Topics:*	1-3
Mathematics		
MATH 165	Finite Mathematics*	3
MATH 171	College Algebra*	3
MATH 172	Trigonometry*	3
MATH 173	Precalculus*	5
MATH 175	Discrete Mathematics and its Applications*	3
MATH 181	Statistics*	3
MATH 191	Math and Physics for Games I*	4
MATH 210	Mathematics for Elementary Teachers I*	3
MATH 212	Math for Elementary Teachers II*	3
MATH 231	Business and Applied Calculus I*	3
MATH 232	Business and Applied Calculus II*	3
MATH 241	Calculus I*	5
MATH 242	Calculus II*	5
MATH 243	Calculus III*	5
MATH 246	Elementary Linear Algebra*	3
MATH 254	Differential Equations*	4
MATH 285	Statistics for Business*	4

MATH 292	Special Topics:*	1-3
Physical Science		
PSCI 120	Physical Science	4
Physics		
PHYS 130	College Physics I*	5
PHYS 131	College Physics II*	5
PHYS 191	Math and Physics for Games I*	4
PHYS 220	Engineering Physics I*	5
PHYS 221	Engineering Physics II*	5
Science		
SCI 292	Special Topics:*	1-5
Sustainable Agriculture		
SAG 142	Small Farm Business Planning and Management	3
SAG 165	Farm Producer Food Safety	3
SAG 167	Local Food Production	3
SAG 170	Value-Added Production	3
SAG 205	Agroecology in the Americas	3
SAG 225	On-Farm Plant Breeding	3
SAG 245	Principles of Sustainable Market Farming	3
SAG 250	Sustainable Food Systems*	3
SAG 255	Organic and Integrated Pest Management	3
SAG 260	Sustainable Soil Management	3
SAG 272	Sustainable Agriculture Fall Practicum	2
SAG 274	Sustainable Agriculture Spring Practicum	2
SAG 276	Sustainable Agriculture Summer Practicum	2
SAG 285	Sustainable Agriculture and Food Systems Internship*	2
Web Development and Digital Media		
WEB 110	HTML and CSS	3
WEB 112	Professional Skills for the Digital Developer	3
WEB 114	Web Scripting: JavaScript I*	2
WEB 116	Digital Media Concepts	2
WEB 118	Digital Workflow	3
WEB 120	Web Analytics*	3
WEB 121	Digital Media Assets*	4
WEB 122	CSS Techniques & Projects*	3
WEB 124	Web Scripting: JavaScript II*	2
WEB 125	Digital Video Tools	1
WEB 126	Technical Interface Skills*	3
WEB 128	Server Scripting: PHP with MySQL*	2
WEB 172	WordPress I*	1
WEB 225	Advanced Digital Video Tools*	1
WEB 231	User Experience*	4
WEB 233	Visual Storytelling	3
WEB 234	Web Apps I*	3
WEB 236	Content Management Systems Development*	3
WEB 237	Emerging Technologies*	3
WEB 238	Interactive Scripting: JQuery*	4
WEB 239	Introduction to Application Programming Interfaces (APIs)*	2
WEB 240	HTML and CSS II*	3
WEB 243	Search Engine Optimization*	1
WEB 245	Motion Graphics Tools*	1
WEB 290	Web Development and Digital Media Capstone*	3

WEB 292	Special Topics:*	1-3
WEB 294	Web Development and Digital Media Internship*	1

Open Elective Hours

Code	Title	Hours
Open electives are non-developmental courses meeting degree requirements. Please consult with a JCCC counselor for more information. (https://catalog.jccc.edu/coursedescriptions/)		19-20

STEM and Elective Hours: 25-26

Total Program Hours: 60

Cultural Diversity Courses

Code	Title	Hours
These courses fulfill JCCC's Cultural Diversity requirement for the AA, AFA, and AS degrees.; one course required.		
Anthropology		
ANTH 125	Cultural Anthropology	3
ANTH 130	World Cultures	3
ANTH 134	Native Americans	3
ANTH 135	American Indian Art	3
ANTH 142	World Prehistory	3
ANTH 150	People and Cultures of Mesoamerica	3
ANTH 153	The Anthropology of the Paranormal & Supernatural	3
ANTH 165	Linguistic Anthropology	3
Art History		
ARTH 135	American Indian Art	3
ARTH 180	Art History: Ancient to Medieval	3
ARTH 184	Art History: Twentieth Century	3
ARTH 186	Art History: Introduction to Asian Art	3
ARTH 200	Women, Art, and Society	3
Biology		
BIOL 132	Introduction to Public Health	3
Business		
BUS 235	Introduction to International Business	3
Communications		
COMS 180	Intercultural Communication	3
Criminal Justice		
CJ 223	International Criminal Justice Systems	3
Education and Early Childhood		
EDUC 221	Diversity, Equity and Inclusion for K-12 Educators	3
English (Literature)		
ENGL 215	U.S. Latino and Latina Literature*	3
ENGL 217	Literature by Women*	3
ENGL 232	Children's Literature*	3
ENGL 244	Literature of American Popular Music*	3
Film and Media Studies		
FMS 100	Intro to Film	3
FMS 200	Intro to Filmmaking and Media Aesthetics	3
Foreign Languages		
FL 120	Elementary German I	5
FL 121	Elementary German II*	5
FL 130	Elementary Spanish I	5
FL 131	Elementary Spanish II*	5

FL 135	Basic Spanish for Hospitality Management	3
FL 140	Elementary French I	5
FL 141	Elementary French II*	5
FL 165	Elementary Chinese I	5
FL 166	Elementary Chinese II*	5
FL 170	Elementary Japanese I	5
FL 171	Elementary Japanese II*	5
FL 182	Intermediate Japanese I*	5
FL 183	Intermediate Japanese II*	5
FL 220	Intermediate German I*	3
FL 221	Intermediate German II*	3
FL 230	Intermediate Spanish I*	3
FL 231	Intermediate Spanish II*	3
FL 240	Intermediate French I*	3
FL 241	Intermediate French II*	3
FL 288	Spanish for Heritage and Advanced Speakers of Spanish*	3
Geography		
GEOS 145	World Regional Geography	3
GEOS 155	Human Geography	3
Global and International Studies		
GIST 101	Study Abroad Reflections*	1-3
GIST 250	Introduction to Globalization	3
Health Care		
HC 125	International Awareness Field Study	2
History		
HIST 120	Local and Kansas History	3
HIST 128	Medieval History	3
HIST 132	History of Africa	3
HIST 135	Eastern Civilization	3
HIST 137	African American History	3
HIST 143	Ancient Greece, the Near East and Egypt	3
HIST 145	History of Ancient Rome	3
HIST 149	History of India	3
HIST 150	Islam: Religion and Civilization	3
HIST 151	World History: Traditional	3
HIST 152	World History: Modern World	3
HIST 160	Modern Russian History	3
HIST 162	Modern Latin America	3
HIST 165	History of China	3
HIST 167	Introduction to History: Japan	3
HIST 180	North American Indian History	3
HIST 195	History of the Middle East	3
HIST 260	Women in U.S. History	3
Humanities		
HUM 137	Introduction to Russian Culture	3
HUM 145	World Humanities: Ancient to Medieval	3
HUM 146	World Humanities: Renaissance to Modern	3
HUM 150	Islam: Religion and Civilization	3
HUM 156	Contemporary Approaches to World Mythology	3
HUM 167	Introduction to Japanese Culture	3
Journalism		
JOUR 220	International Media	3

Music

MUS 126	Introduction to World Music	3
MUS 128	History of Rock and Roll Music	3

Philosophy

PHIL 142	History of Asian Philosophy	3
PHIL 177	Feminist Theory	3

Photography

PHOT 200	Foundations in Photography	3

Physical Education, Health and Recreation

HPER 251	Sport and Society	3

Political Science

POLS 132	Introduction to Comparative Government	3
POLS 135	International Relations	3
POLS 192	Political Theory	3
POLS 200	Model United Nations	3

Psychology

PSYC 205	Human Sexuality*	3
PSYC 220	Social Psychology*	3

Religion

REL 120	Exploring World Religions	3
REL 125	Asian Religions	3
REL 126	Religions of the West	3
REL 150	Islam: Religion and Civilization	3

Sociology

SOC 122	Introduction to Sociology	3
SOC 125	Social Problems	3
SOC 146	Introduction to Social Work and Social Welfare	3
SOC 165	Contemporary Chinese Society	3
SOC 180	Inequality and Diversity in The United States	3
SOC 240	Sociology of Community	3
SOC 270	Men and Masculinities	3

Sustainable Agriculture

SAG 205	Agroecology in the Americas	3

Women and Gender Studies

WGS 201	Global Women's Studies	3
WGS 220	The Many Women of Islam	3

*   This course has registration requirements.
±   This course fulfills JCCC's Cultural Diversity requirement for the AA, AFA, and AS degrees.