



www.jccmi.edu

ASSOCIATE IN SCIENCE

page 1 of 2

ASSOCIATE IN SCIENCE (SCIE.AS)

Minimum credits:.....	60
Minimum grade in all courses:	2.0
Minimum cumulative GPA:	2.0
Minimum JCC credits:	12

NOTE: Only courses with a 2.0 or better transfer to most four-year colleges and universities. To complete the MACRAO Articulation Agreement, students need to plan their courses carefully. Completion of the Associate in Science degree does NOT guarantee the MACRAO designation.

This degree is designed for students who plan to transfer to a four-year college or university to pursue a bachelor's degree. It is selected by students planning to pursue a career in engineering, medicine, health sciences and other science related professions.

ADO 1: Write clearly, concisely and intelligibly (6 credits)**Take the following:**

ENG 131 Writing Experience

Choose one of the following:

ENG 132 Writing Experience

ENG 201 Advanced Composition

ADO 2: Speak clearly, concisely and intelligibly (3 credits)**Take the following:**

SPH 231 Communications Fundamentals

ADO 3: Demonstrate computational skills and mathematical reasoning (4-5 credits)**Choose one of the following:**

MTH 140 Precalculus

MTH 151 Calculus

MTH 154 Calculus II

ADO 4: Demonstrate scientific reasoning (4-5 credits)**Choose one of the following:**

BIO 110 Introduction to Biology

BIO 131 General Biology

BIO 132 Human Biology

BIO 151 General Botany

BIO 152 General Zoology

BIO 220 Microbiology

CEM 141 General Chemistry I

GEL 160 Introduction to Geology

PHY 151 Astronomy

PHY 231 College Physics I

PHY 251 Modern University Physics I

ADO 5: Understand human behavior and social systems, the principles which govern them, and their implications for the present and future (3-4 credits)**Choose one of the following:**

ECN 231 Macroeconomics

ECN 232 Microeconomics

HIS 131 Western Civilization to 1555

HIS 132 Western Civilization 1555 to Present

HIS 231 Development of the US through the Civil War

HIS 232 Development of the US from the Civil War

HIS 235 20th Century History

PLS 141 American National Government

PSY 140 Introduction to Psychology

SOC 231 Principles of Sociology

ADO 6: Understand aesthetic experience and artistic creativity (3 credits)**Choose one of the following:**

ART 111 Art History: Prehistoric to 1400

ART 112 Art History: Renaissance to Present

ENG 210 Introduction to Film

ENG 246 Short Story & Novel

ENG 247 Poetry & Drama

ENG 252 Shakespeare

ENG 254 Children's Literature

ENG 255 American Literature — 19th Century

ENG 256 American Literature — 20th Century

MUS 131 Understanding Music

THR 116 Introduction to Theatre

ADO 7: Think critically**Program courses meet this requirement****ADO 8: Make responsible decisions in personal and professional contexts (1-3 credits)****Choose one of the following:**

HPF 160 Wellness

HPF 277 Stress Management

HPF 283 Managing Stress and Holistic Health

PHL 236 Ethics

ADO 9: Work productively with others, recognizing individual contributions to group success**Program courses meet this requirement****ADO 10: Understand and respect the diversity and interdependence of the world's peoples and cultures (3-4 credits)****Choose one of the following:**

ANT 131 Cultural Anthropology

ENG 236 Women in Changing Society

ENG 249 African American Literature

ENG 257 World Literature I

FRN 131 French I or higher

GEO 132 World Regions



www.jccmi.edu

ASSOCIATE IN SCIENCE

page 2 of 2

GER 131 German I or higher
 HIS 125 African-American History
 HUM 131 Cultural Connections
 PHL 243 World Religions
 PLS 262 International Relations
 MUS 130 Music of Non-Western Cultures
 SOC 235 Minority Groups in America
 SOC 236 Women in Changing Society
 SPN 131 Spanish I or higher

NATURAL SCIENCE — (16 credits)

(At least one course must be from a different discipline than taken in ADO 4.)

BIO 110 Introduction of Biology
 BIO 131 General Biology
 BIO 132 Human Biology
 BIO 151 General Botany
 BIO 152 General Zoology
 BIO 155 Human Anatomy & Physiology
 or BIO 253 Human Anatomy & Physiology I
 BIO 220 Microbiology
 CEM 131 Fundamentals of Chemistry
 CEM 132 Fundamentals of Organic & Biological Chemistry
 CEM 137 Chemistry of Life
 CEM 141 General Chemistry I
 CEM 142 General Chemistry II
 CEM 241 Organic Chemistry I
 CEM 242 Organic Chemistry II
 GEL 160 Introduction to Geology
 MTH 151 Calculus I
 MTH 154 Calculus II
 MTH 251 Calculus III
 MTH 254 Differential Equations
 PHY 131 Conceptual Physics
 PHY 151 Astronomy
 PHY 231 College Physics I
 PHY 232 College Physics II
 PHY 251 Modern University Physics I
 PHY 252 Modern University Physics II

Courses cannot be counted towards both general education and additional degree requirements.

PROGRAM REQUIREMENTS

Additional courses** so that total degree equals 60 credits:
 Plan to visit an academic advisor to obtain a guide sheet and/or to discuss requirements for your selected program of study. Students are encouraged to choose courses that transfer as equivalent credit to four-year colleges and universities. Students are responsible to see that courses taken meet the requirements for their chosen program of study.

****Additional courses exclude continuing education courses (prefix CED, CEU, CFO, CJT, CSS, ESL, LTL), courses offered through JCC's workforce training programs (prefixes JTI, PDI), and ENG 080, 085, 090, 101, 102, 109, 110, and MTH 090, 095, 098, 100, 110, 120.**