

### ASSOCIATE DEGREE OPTIONS & REQUIREMENTS

JCC offers four associate degrees. Each degree includes general education classes as well as specific program courses. Students should select an associate degree based on their plan of study or career goal.

#### ASSOCIATE IN ARTS (AA), ASSOCIATE IN SCIENCE (AS)

Students intending to transfer to another college or university usually select one of these degree programs. Students choose from courses that prepare them for a variety of professions and academic disciplines. *Note: Students are not required to earn a degree prior to transferring.*

#### ASSOCIATE IN APPLIED SCIENCE (AAS)

This degree prepares students for entry into a technical or skilled occupational career immediately following JCC.

#### ASSOCIATE IN GENERAL STUDIES

This degree is for students who want to plan their own program of study not defined by a specific job or career. The degree's flexibility allows the creation of a unique learning experience, such as combining the student's JCC experience with other academic institutions or community organizations, to prepare for or create a specialized career option.

### GRADUATION REQUIREMENTS

1. A minimum cumulative grade point average of 2.0 overall. (Some programs have additional grade and course requirements. Follow the guide sheet for your program and meet with an academic advisor for complete information.) **Important: only courses with a 2.0 or better will transfer to most four-year colleges and universities.**
2. Completion of specific courses in a degree.
3. A minimum of 60 credits.
4. A minimum of 12 credits earned at JCC, unless otherwise specified.
5. A completed Application for Graduation for an associate degree submitted by the deadline date to Registration and Records, located in the JCC Student Center, George E. Potter Center, or to JCC centers. Students have five academic years to apply for graduation from the time they complete their last course at JCC. See Graduation and

Commencement, page 20. Applications are available at all locations; official audits are processed by the Registrar's Office.

6. Completion of the degree requirements from any catalog of entry issued during continuous enrollment. Students, who are not continuously enrolled and have completed degree requirements, must meet the requirements of the catalog in effect at the time of graduation application. Students re-entering who have not completed degree requirements must follow catalog in effect at time of their re-entry date.
7. Coursework completed within a reasonable time period. This may require repeating certain essential courses, even though a passing grade was previously earned. An essential course involves material that affects skill development and successful performance and/or contains content likely to change significantly over time, as determined by appropriate academic departments.
8. A minimum of 12 additional credits, beyond those credits completed for one degree, are required to earn a second associate's degree. Two degrees are not to be conferred in the same graduation period.

### CERTIFICATE REQUIREMENTS

1. A minimum cumulative grade point average of 2.0 overall. (Some programs have additional grade and course requirements. Follow the guide sheet for your program and meet with an academic advisor for complete information.) **Important: only courses with a 2.0 or better will transfer to most four-year colleges and universities.**
2. Completion of specific courses in a certificate.
3. A minimum of 30 credits.
4. A minimum of 12 credits earned at JCC.
5. A completed Application for Graduation for a certificate submitted by the deadline date to Registration and Records, located in the JCC Student Center, Potter Center, main campus or to any JCC Center. Students have five academic years to apply for graduation from the time they completed their last course at JCC. See Graduation and Commencement, Applications are available at all locations, or the JCC website, however, official audits are processed by the Registrar's Office.

6. Completion of the certificate requirements from any catalog of entry during continuous enrollment. Students, who are not continuously enrolled and have completed certificate requirements, must meet the requirements of the catalog in effect at the time of graduation application. Students re-entering who have not completed the certificate requirements must follow the catalog in effect at the time of their re-entry date.
7. Coursework completed within a reasonable time period. This may require repeating certain essential courses, even though a passing grade was previously earned. An essential course involves material that affects skill development and successful performance and/or contains content that is likely to significantly change over time, as determined by appropriate academic departments.
8. A minimum of six additional hours, beyond those credits completed for one certificate, are required to earn a second certificate. Two certificates are not be conferred in the same graduation period.

**SKILL SET CREDENTIALS**

JCC offers “Skill Set Credentials” that are a coordinated set of courses whose purpose is to enable students to quickly achieve a specific occupational goal. Each of these credentials will: 1) require no fewer than 12 and no more than 28 credit hours; 2) provide a coherent set of skills and knowledge of benefit to students within specific career areas; 3) serve as building blocks toward certificates or associate degrees; 4) require students to have no developmental education holds or have special permission of the appropriate academic department.

**GENERAL EDUCATION PHILOSOPHY — a message to students from the JCC faculty**

General education promotes essential skills and understandings that collectively define the educated person; it is the centerpiece of all degree and certificate programs at JCC. The completion of general education by associate degree candidates and other students is consistent with the College's mission. The general education requirement is designed to ensure breadth of knowledge and to promote intellectual inquiry among all students, regardless of their area of study.

JCC faculty want students to observe, to identify ideas, issues, problems. We want students to evaluate and analyze what they see - by historical perspective, by scientific evidence, by consideration of values, by articulating what is seen within a community of learners. We want students to apply their understanding of these processes to new problems and to think critically. Most important, we want them to become curious and excited to discover and wonder, to reflect and

create. These are common human experiences we designed general education to foster.

JCC has identified two strategies to help students achieve the goals established by this philosophy of general education. Because JCC's vision includes a variety of educational, cultural and economic goals, the general education requirements involve both traditional intellectual exploration and practical skill development.

The first strategy for reaching these goals, traditional intellectual exploration, is accomplished through the completion of 17 credits of coursework in the following subject areas:

<b>English</b>	<b>3 credits</b>
<b>Mathematics</b>	<b>3 credits</b>
<b>Science</b>	<b>4 credits</b>
<b>Social Science</b>	<b>3 credits</b>
<b>Humanities</b>	<b>3 credits</b>
<b>Health/Physical Fitness</b>	<b>1 credit</b>

Specific courses needed in each of these categories are outlined in the program of study.

The second strategy, development of practical skills, is guided by the associate degree outcomes (ADOs). These are the skills which you should possess upon graduation from JCC:

**HIGHEST PRIORITY SKILLS**

1. The ability to communicate clearly, concisely, and intelligibly, using writing/oral skills.
2. The ability to comprehend and use information including written and oral forms.
3. Computational skills and understanding appropriate to the program of study.
4. Critical thinking and problem-solving.
5. Working productively with others.
6. Scientific reasoning.
7. Facility in the use of computers and other technologies appropriate to the program of study.
8. An understanding of wellness and the relationship between life-style choices and the quality of life.

**TRANSCENDENT UNDERSTANDINGS**

9. An understanding of social, political, and economic systems.

10. An understanding of human behavior.
11. A knowledge of science and technology.
12. An appreciation of the visual and performing arts.
13. An international perspective and the interdependency of all peoples and nations.
14. An understanding of, and appreciation for, our multi-ethnic and multi-cultural society.
15. An historical perspective. Both strategies are used in designing each program of study. Students fulfill the requirements as they proceed through the courses in each program.

### **SUBSTITUTIONS & WAIVERS FOR GENERAL EDUCATION REQUIREMENTS**

Students who encounter hardships with required general education courses while pursuing a planned educational program may request consideration of alternative courses through a substitution and/or waiver process. Each request must be reviewed and recommended by the department chair of the course under review and approved by the academic dean. Substitution and waiver guidelines and forms are available from department chairs, advisors and the registrar's office.

### **STUDENT ASSESSMENT AT JCC**

Assessment is a vital part of the academic life at JCC. The purpose of assessment is to measure student progress in the knowledge, skills and attitudes they exhibit from their studies. Assessment is conducted during class time, at the conclusion of programs of study, and at important stages of the academic cycle on a year by year basis.

Students are expected to complete a variety of assessments during their college career. These include course examinations, portfolios, attitude surveys, journals and demonstrations of skills used in occupational fields. A standardized test is administered in selected classes to measure overall student success in the achievement of basic foundational skills. Other assessments are made after students leave JCC that help faculty know the long-range effects of their teaching on student employment and the success of students who transfer to other colleges and universities.

Teachers identify course learning objectives and communicate them to students in their course syllabi, in classroom materials, or in teacher-led discussions about course goals. Learning objectives are closely aligned with the Associate Degree Outcomes. Feedback from student

performance on the learning objectives provides faculty with an assessment of the teaching and learning that occurs.

### **ACADEMIC SKILLS REQUIREMENTS**

The associate degree and certificate requirements at JCC include proficiency in the academic skills of reading and writing. Similarly, associate degrees and most certificates include proficiency in mathematics. To ensure development of students' abilities in these skills, the College offers an academic skills development program.

The first phase of the program occurs upon entry to the College when students' competencies are assessed via ACT scores and/or College-administered placement assessments. Students with an ACT composite score of 18 and mathematics score of 18 are exempt from placement assessments and are deemed ready to enter all college-level courses. Students with prior successful college coursework may also be exempt. JCC accepts recent Course Placement scores from other Michigan colleges.

**Writing:** All JCC students seeking a degree are required to pass the college-level writing course, ENG 131: Writing Experience. Upon completion of the writing placement assessment, students whose results indicate a need for further development in writing must enroll in ENG 101: Introduction to Writing and successfully complete the writing post-assessment before proceeding to the required college-level writing course.

All JCC students seeking a certificate are required to demonstrate proficiency in writing. To demonstrate proficiency, students must successfully complete the writing placement assessment. If the assessment indicates a need for further development in writing, students must enroll in ENG 101: Introduction to Writing and successfully complete the writing post-assessment. In addition, some certificates require students to pass the college-level writing course, ENG 131: Writing Experience.

**Reading:** All JCC students obtaining a degree or certificate are required to demonstrate proficiency in reading. Upon completion of the reading placement assessment students whose results indicate a need for further development in reading must enroll in ENG 109: Reading Essentials or ENG 110: College Reading.

**Mathematics:** All JCC students seeking an associate in arts, associate in science or associate in general studies degree are required to pass a mathematics course best suited to their program of study. Upon completion of the mathematics placement assessment, students whose results indicate a need for further development in mathematics must enroll in MTH 110: Pre-Algebra and complete the course with at least a 2.0 grade. Additional mathematics work beyond MTH 110 may be required for completion of the degree.

Most JCC students seeking an associate in applied science degree are required to pass a mathematics course, and all are required to demonstrate proficiency in mathematics. Upon completion of the mathematics placement assessment, students whose results indicate a need for further development in mathematics must enroll in MTH 110: Pre Algebra and complete the course with a 2.0 grade. Additional mathematics work beyond MTH 110 may be required for completion of some degrees.

Some JCC students obtaining a certificate are required to pass a mathematics course and/or demonstrate proficiency in mathematics, and all are required to complete the mathematics placement assessment. If the certificate requires demonstration of proficiency of mathematics and the student's results indicate a need for further development in mathematics, the student must enroll in MTH 110: Pre Algebra and complete the course with a 2.0 grade. If the certificate does not require demonstration of proficiency in mathematics, no further mathematics work is required.

**Guidelines:** ENG 101, ENG 102, ENG 109, ENG 110, and MTH 110 carry academic credit and grades earned are included in calculating the student's grade point average. The credits for these courses, however, constitute additional graduation requirements beyond the total number of credits required for an associate in arts (AA), associate in science (AS), and most associate in applied science (AAS) degrees.

**ASSOCIATE IN ARTS**

Minimum credits: .....	.60
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 must plan their courses carefully. Completion of the associate in arts 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 such fields as business, education, psychology and social work.

**GENERAL EDUCATION REQUIREMENTS — (17 credits)**

**ENGLISH — (3 credits)**

ENG 131 Writing Experience .....	3
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**MATHEMATICS — (3 credits)**

**Choose one of the following:**

MTH 111 Foundations of Mathematics .....	3
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MTH 131 Intermediate Algebra .....	4
MTH 133 Introduction to Probability and Statistics .....	3
MTH 140 Precalculus .....	5
MTH 151 Analytic Geometry and Calculus I .....	4

**SCIENCE — (4 credits)**

**Choose one of the following:**

BIO 131 General Biology .....	4
BIO 132 Human Biology .....	4
BIO 151 General Botany .....	4
BIO 152 General Zoology .....	4
BIO 155 Human Anatomy and Physiology .....	5
CEM 121 Chemistry of Life .....	4
CEM 131 General Chemistry .....	4
CEM 132 Organic and Biological Chemistry .....	4
CEM 141 General Inorganic Chemistry .....	5
CEM 142 Gen. Inorganic Chemistry w/ Analysis .....	5
GEL 160 Introduction to Geology .....	4
NSC 131 Contemporary Science .....	4
PHY 131 Conceptual Physics .....	4
PHY 151 Astronomy .....	4
PHY 231 College Physics I .....	4
PHY 251 Modern University Physics I .....	5

**SOCIAL SCIENCE — (3 credits)**

**Choose one of the following:**

ANT 131 Introduction to Anthropology .....	3
CRJ 101 Criminal Law .....	3
CRJ 104 Criminal Justice Psychology .....	3
CRJ 111 Introduction to Criminal Justice .....	3
CRJ 120 Human Relations for Corrections .....	3
CRJ 127 Corrections Law .....	3
ECN 231 Macroeconomics .....	3
ECN 232 Microeconomics .....	3
GEO 131 Physical Geography .....	3
HIS 120 Ancient History .....	3
HIS 131 Western Civilization to 1555 .....	4
HIS 132 Western Civilization, 1555 - Present .....	4
HIS 231 Dev. of the U.S. through the Civil War .....	3
HIS 232 Dev. of the U.S. from the Civil War .....	3
PLS 141 American National Government .....	3
PSY 140 Introduction to Psychology .....	4
PSY 152 Social Psychology .....	3
PSY 251 Abnormal Psychology .....	3
PSY 252 Developmental Psychology .....	3
SOC 152 Social Psychology .....	3
SOC 231 Principles of Sociology .....	3
SOC 236* Women in a Changing Society .....	3

**HUMANITIES — (3 credits)****Choose one of the following:**

ART 111 Art History: Prehistoric to 1400	3
ART 112 Art History: Renaissance - Present	3
ENG 210 Introduction to Film	3
ENG 236* Women in a Changing Society	3
ENG 246 Short Story and Novel	3
ENG 247 Poetry and Drama	3
ENG 249 African American Literature	3
ENG 252 Shakespeare	3
ENG 254 Children's Literature	3
ENG 255 American Literature 19th Century	3
ENG 256 American Literature 20th Century	3
ENG 257 World Literature I	3
HUM 131 Cultural Connections	3
MUS 130 Survey of Non-Western Music	3
MUS 131 Understanding Music	3
MUS 133 Music Education	3
MUS 151 Music Theory I	3
MUS 152 Music Theory II	3
PHL 231 Introduction to Philosophy	3
PHL 232 Logic	3
THR 116 Introduction to Theatre	3

**HEALTH AND FITNESS — (1 credit)****Choose one of the following:**

HPF 160 Wellness	1
HPF 168 Weight Training & Conditioning	2
HPF 221 Jazz Techniques	3
HPF 268 Advanced Weight Training	2
HPF 277 Stress Management	2
HPF 278 Stress Management for Parents	2

*\*Cannot be double-counted: prefix chosen at registration cannot be changed.*

**ADDITIONAL DEGREE REQUIREMENTS — (19 credits)****WRITTEN AND ORAL COMMUNICATION— (3 credits)**

ENG 132 Writing Experience	3
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**NATURAL SCIENCE — (4 credits)**

*(Different discipline than taken in general education)*

**Choose one of the following:**

BIO 131 General Biology	4
BIO 132 Human Biology	4
BIO 151 General Botany	4
BIO 152 General Zoology	4
BIO 155 Human Anatomy	5
BIO 220 Microbiology	4
CEM 121 Chemistry of Life	4
CEM 131 General Chemistry	4

CEM 132 Organic and Biological Chemistry	4
CEM 141 General Inorganic Chemistry	5
CEM 142 Gen. Inorganic Chemistry w/ Analysis	5
CEM 241 Organic Chemistry	5
CEM 242 Organic Chemistry	5
GEL 160 Introduction to Geology	4
NSC 131 Contemporary Science	4
PHY 131 Conceptual Physics	4
PHY 151 Astronomy	4
PHY 231 College Physics I	4
PHY 232 College Physics II	4
PHY 251 Modern University Physics I	5
PHY 252 Modern University Physics II	5

**SOCIAL SCIENCE — (6 credits)**

*(At least one course must be from different discipline than taken in general education)*

**Choose two of the following:**

ANT 131 Cultural Anthropology	3
CRJ 111 Introduction to Criminal Justice	3
CRJ 117 Criminology	3
ECN 231 Macroeconomics	3
ECN 232 Microeconomics	3
GEO 131 Physical Geography	3
GEO 132 World Regions	3
GEO 220 Weather and Climate	3
GEO 232 Geography of U.S. and Canada	3
HIS 120 Ancient History	3
HIS 131 Western Civilization to 1555	4
HIS 132 Western Civilization 1555 to Present	4
HIS 231 Dev. of the U.S. through the Civil War	3
HIS 232 Dev. of the U.S. from the Civil War	3
PLS 141 American National Government	3
PSY 140 Introduction to Psychology	4
PSY 152 Social Psychology	3
PSY 251 Abnormal Psychology	3
PSY 252 Developmental Psychology	3
PSY 290 Human Sexuality	3
SOC 117 Criminology	3
SOC 152 Social Psychology	3
SOC 231 Principles of Sociology	3
SOC 235 Minority Groups in America	3
SOC 236* Women in a Changing Society	3
SOC 251 Modern Social Problems	3

**HUMANITIES — (6 credits)**

*(At least one course must be from different discipline than taken in general education.)*

**Choose two of the following:**

ART 111 Art History: Prehistoric - 1400	3
ART 112 Art History: Renaissance - Present	3
ENG 210 Introduction to Film	3

ENG 236\* Women in Changing Society .....3  
 ENG 246 Short Story & Novel .....3  
 ENG 247 Poetry and Drama .....3  
 ENG 249 African American Literature .....3  
 ENG 252 Shakespeare .....3  
 ENG 255 American Literature - 19th Century .....3  
 ENG 256 American Lit. of the 20th Century .....3  
 ENG 257 World Literature I .....3  
 FRN 131 Elementary French .....4  
 FRN 132 Elementary French .....4  
 FRN 231 Intermediate French .....4  
 FRN 232 Intermediate French .....4  
 GER 131 Elementary German .....4  
 GER 132 Elementary German .....4  
 GER 231 Intermediate German .....4  
 GER 232 Intermediate German .....4  
 HIS 120 Ancient History .....3  
 HIS 131 Western Civilization to 1555 .....4  
 HIS 132 Western Civilization 1555 to Present .....4  
 HIS 231 Dev. of the US Through the Civil War .....3  
 HIS 232 Dev. of the US from the Civil War .....3  
 HUM 131 Cultural Connections .....3  
 MUS 130 Survey of Non-Western Music .....3  
 MUS 131 Understanding Music .....3  
 MUS 151 Music Theory I .....4  
 MUS 152 Music Theory II .....4  
 PHL 231 Introduction to Philosophy .....3  
 PHL 232 Logic .....3  
 SPN 131 Elementary Spanish .....4  
 SPN 132 Elementary Spanish .....4  
 SPN 231 Intermediate Spanish .....4  
 SPN 232 Intermediate Spanish .....4  
 THR 116 Introduction to Theatre .....3

\* 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 discuss requirements for 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, CSS), classes offered through JCC's workforce training programs (prefixes JTI, PDI), and ENG 101, 102, 109, 110, MTH 090, 100, and 110 and MTT 009.

If the transfer college or university of your choice is a MACRAO signator, it is recommended that you complete the

requirements of The MACRAO Articulation Agreement (see page 40).

**ASSOCIATE IN SCIENCE**

Minimum credits: .....60  
 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.

**GENERAL EDUCATION REQUIREMENTS — (18 credits)**

**ENGLISH — (3 credits)**

ENG 131 Writing Experience .....3

**MATHEMATICS — (4 credits)**

Choose one of the following:

MTH 140 Precalculus .....5  
 MTH 151 Analytic Geometry and Calculus I .....4

**SCIENCE — (4 credits)**

Choose one of the following:

BIO 131 General Biology .....4  
 BIO 132 Human Biology .....4  
 BIO 151 General Botany .....4  
 BIO 152 General Zoology .....4  
 BIO 155 Human Anatomy .....5  
 CEM 121 Chemistry of Life .....4  
 CEM 131 General Chemistry .....4  
 CEM 132 Organic and Biological Chemistry .....4  
 CEM 141 General Inorganic Chemistry .....5  
 CEM 142 Gen. Inorganic Chemistry w/ Analysis .....5  
 GEL 160 Introduction to Geology .....4  
 NSC 131 Contemporary Science .....4  
 PHY 131 Conceptual Physics .....4  
 PHY 151 Astronomy .....4  
 PHY 231 College Physics I .....4  
 PHY 251 Modern University Physics I .....5

**SOCIAL SCIENCE— (3 credits)****Choose one of the following:**

ANT 131 Cultural Anthropology	3
CRJ 101 Criminal Law	3
CRJ 104 Criminal Justice Psychology	3
CRJ 111 Introduction to Criminal Justice	3
CRJ 120 Human Relations for Corrections	3
CRJ 127 Corrections Law	3
ECN 231 Macroeconomics	3
ECN 232 Microeconomics	3
GEO 131 Physical Geography	3
HIS 120 Ancient History	3
HIS 131 Western Civilization to 1555	4
HIS 132 Western Civilization, 1555 to Present	4
HIS 231 Dev. of the U.S. through the Civil War	3
HIS 232 Dev. of the U.S. from the Civil War	3
PLS 141 American National Government	3
PSY 140 Introduction to Psychology	4
PSY 152 Social Psychology	3
PSY 251 Abnormal Psychology	3
PSY 252 Developmental Psychology	3
SOC 152 Social Psychology	3
SOC 231 Principles of Sociology	3
SOC 236* Women in a Changing Society	3

**HUMANITIES — (3 credits)****Choose one of the following:**

ART 111 Art History: Prehistoric - 1400	3
ART 112 Art History: Renaissance - Present	3
ENG 210 Introduction to Film	3
ENG 236* Women in a Changing Society	3
ENG 246 Short Story & Novel	3
ENG 247 Poetry and Drama	3
ENG 249 African American Literature	3
ENG 252 Shakespeare	3
ENG 254 Children's Literature	3
ENG 255 American Literature 19th Century	3
ENG 256 American Literature 20th Century	3
ENG 257 World Literature I	3
HUM 131 Cultural Connections	3
MUS 130 Survey of Non-Western Music	3
MUS 131 Understanding Music	3
MUS 133 Music Education	3
MUS 151 Music Theory I	4
MUS 152 Music Theory II	4
PHL 231 Introduction to Philosophy	3
PHL 232 Logic	3
THR 116 Introduction to Theatre	3

*\*Cannot be double-counted: prefix chosen at registration cannot be changed.*

**HEALTH AND FITNESS — (1 credit)****Choose one of the following:**

HPF 160 Wellness	1
HPF 168 Weight Training & Conditioning	2
HPF 221 Jazz Techniques	3
HPF 268 Advanced Weight Training	2
HPF 277 Stress Management	2
HPF 278 Stress Management for Parents	2

**ADDITIONAL DEGREE REQUIREMENTS (19 Credits)****WRITTEN AND ORAL COMMUNICATION — (3 credits)**

ENG 132 Writing Experience	3
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**NATURAL SCIENCE — (16 credits)**

*(At least one course must be from different discipline than taken in general education.)*

BIO 131 General Biology	4
BIO 132 Human Biology	4
BIO 151 General Botany	4
BIO 152 General Zoology	4
BIO 155 Human Anatomy and Physiology	5
BIO 220 Microbiology	4
CEM 121 Chemistry of Life	4
CEM 131 General Chemistry	4
CEM 132 Organic and Biological Chemistry	4
CEM 141 General Inorganic Chemistry	5
CEM 142 Gen Inorganic Chemistry w/ Analysis	5
CEM 241 Organic Chemistry	5
CEM 242 Organic Chemistry	5
GEL 160 Introduction to Geology	4
MTH 151 Calculus I	4
MTH 154 Calculus II	5
MTH 251 Calculus III	4
MTH 254 Differential Equations	4
PHY 131 Conceptual Physics	4
PHY 151 Astronomy	4
PHY 231 College Physics I	4
PHY 232 College Physics II	4
PHY 251 Modern University Physics I	5
PHY 252 Modern University Physics II	5

*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 guidesheet 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, CSS), classes offered through JCC's workforce training programs (prefixes JTI, PDI), and ENG 101, 102, 109, 110, and MTH 090, 100, 110, 120.**

## ASSOCIATE IN GENERAL STUDIES

Minimum credits:	60
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. If students want to complete the MACRAO Articulation Agreement, they need to plan their courses carefully. Completion of the associate in general studies degree does not guarantee the MACRAO designation.**

This degree is adapted to a student's needs, interests and capabilities.

### GENERAL EDUCATION REQUIREMENTS (17 credits)

#### ENGLISH — (3 credits)

ENG 131 Writing Experience	3
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#### MATHEMATICS — (3 credits)

##### Choose one of the following:

MTH 111 Foundations of Mathematics	3
MTH 112 Business Math	3
MTH 120 Beginning Algebra	4
MTH 131 Intermediate Algebra	4
MTH 133 Introduction to Probability & Statistics	3
MTH 140 Precalculus	5
MTH 151 Calculus I	4

#### SCIENCE — (4 credits)

##### Choose one of the following:

BIO 131 General Biology	4
BIO 132 Human Biology	4
BIO 151 General Botany	4
BIO 152 General Zoology	4
BIO 155 Human Anatomy and Physiology	5
CEM 121 Chemistry of Life	4
CEM 131 General Chemistry	4
CEM 132 Organic and Biological Chemistry	4
CEM 141 General Inorganic Chemistry	5
CEM 142 Gen. Inorganic Chemistry w/ Analysis	5
GEL 160 Introduction to Geology	4

NSC 131 Contemporary Science	4
PHY 131 Conceptual Physics	4
PHY 151 Astronomy	4
PHY 231 College Physics I	4
PHY 251 Modern University Physics II	5

#### SOCIAL SCIENCE — (3 credits)

##### Choose one of the following:

ANT 131 Cultural Anthropology	3
CRJ 101 Criminal Law	3
CRJ 104 Criminal Justice Psychology	3
CRJ 111 Introduction to Criminal Justice	3
CRJ 120 Human Relations for Corrections	3
CRJ 127 Corrections Law	3
ECN 231 Macroeconomics	3
ECN 232 Microeconomics	3
GEO 131 Physical Geography	3
HIS 120 Ancient History	3
HIS 131 Western Civilization to 1555	4
HIS 132 Western Civilization 1555 to Present	4
HIS 231 Dev. of the U.S. through the Civil War	3
HIS 232 Dev. of the U.S. from the Civil War	3
PLS 141 American National Government	3
PSY 140 Introduction to Psychology	4
PSY 152 Social Psychology	3
PSY 251 Abnormal Psychology	3
PSY 252 Developmental Psychology	3
SOC 152 Social Psychology	3
SOC 231 Principles of Sociology	3
SOC 236* Women in a Changing Society	3

#### HUMANITIES — (3 credits)

##### Choose one of the following:

ART 111 Art History: Prehistoric - 1400	3
ART 112 Art History: Renaissance - Present	3
ENG 210 Introduction to Film	3
ENG 236* Women in a Changing Society	3
ENG 246 Short Story and Novel	3
ENG 247 Poetry and Drama	3
ENG 249 African American Literature	3
ENG 252 Shakespeare	3
ENG 254 Children's Literature	3
ENG 255 American Literature - 19th Century	3
ENG 256 American Lit. of the 20th Century	3
ENG 257 World Literature I	3
HUM 131 Cultural Connections	3
MUS 130 Survey of Non-Western Music	3
MUS 131 Understanding Music	3
MUS 133 Music Education	3
MUS 151 Music Theory I	4
MUS 152 Music Theory II	4
PHL 231 Introduction to Philosophy	3

PHL 232 Logic .....	3
THR 116 Introduction to Theatre .....	3

*\*Cannot be double-counted: prefix chosen at registration cannot be changed.*

#### HEALTH AND FITNESS — (1 credit)

**Choose one of the following:**

HPF 160 Wellness .....	1
HPF 168 Weight Training & Conditioning .....	2
HPF 221 Jazz Techniques .....	3
HPF 268 Advanced Weight Training .....	2
HPF 277 Stress Management .....	2
HPF 278 Stress Management for Parents .....	2

#### ADDITIONAL DEGREE REQUIREMENTS (9 credits)

#### WRITTEN AND ORAL COMMUNICATION — (3 credits)

**Choose one of the following:**

ENG 132 Writing Experience .....	3
ENG 232 Technical and Business Writing .....	3
SPH 231 Communication Fundamentals .....	3

**Total of 6 credits from two of the three following areas:  
Natural Science, Social Science and Humanities.**

#### NATURAL SCIENCE

*(Different discipline than taken in general education)*

BIO 131 General Biology .....	4
BIO 132 Human Biology .....	4
BIO 151 General Botany .....	4
BIO 152 General Zoology .....	4
BIO 155 Human Anatomy and Physiology .....	5
BIO 220 Microbiology .....	4
CEM 121 Chemistry of Life .....	4
CEM 131 General Chemistry .....	4
CEM 132 Organic and Biological Chemistry .....	4
CEM 141 General Inorganic Chemistry .....	5
CEM 142 Gen. Inorganic Chemistry w/ Analysis .....	5
GEL 160 Introduction to Geology .....	4
NSC 131 Contemporary Science .....	4
PHY 131 Conceptual Physics .....	4
PHY 151 Astronomy .....	4
PHY 231 College Physics I .....	4
PHY 232 College Physics II .....	4
PHY 251 Modern University Physics I .....	5
PHY 252 Modern University Physics II .....	5

#### SOCIAL SCIENCE

*(Different discipline than taken in general education)*

ANT 131 Cultural Anthropology .....	3
CRJ 111 Introduction to Criminal Justice .....	3
CRJ 117 Criminology .....	3

ECN 231 Macroeconomics .....	3
ECN 232 Microeconomics .....	3
GEO 131 Physical Geography .....	3
GEO 132 World Regions .....	3
GEO 220 Weather and Climate .....	3
GEO 232 Geography of U.S. and Canada .....	3
HIS 120 Ancient History .....	3
HIS 131 Western Civilization to 1555 .....	4
HIS 132 Western Civilization, 1555 to Present .....	4
HIS 231 Dev. of the U.S. Through the Civil War .....	3
HIS 232 Dev. of the U.S. from the Civil War .....	3
PLS 141 American National Government .....	3
PSY 140 Introduction to Psychology .....	4
PSY 152 Social Psychology .....	3
PSY 251 Abnormal Psychology .....	3
PSY 252 Developmental Psychology .....	3
PSY 290 Human Sexuality .....	3
SOC 117 Criminology .....	3
SOC 152 Social Psychology .....	3
SOC 231 Principles of Sociology .....	3
SOC 235 Minority Groups in America .....	3
SOC 236* Women in a Changing Society .....	3
SOC 251 Modern Social Problems .....	3

#### HUMANITIES

*(At least one course must be from different discipline than taken in general education)*

ART 111 Art History: Prehistoric - 1400 .....	3
ART 112 Art History: Renaissance - Present .....	3
ENG 210 Introduction to Film .....	3
ENG 236* Women in a Changing Society .....	3
ENG 246 Short Story & Novel .....	3
ENG 247 Poetry & Drama .....	3
ENG 249 African American Literature .....	3
ENG 252 Shakespeare .....	3
ENG 255 American Literature -19th Century .....	3
ENG 256 American Lit. of the 20th Century .....	3
ENG 257 World Literature I .....	3
FRN 131 Elementary French I .....	4
FRN 132 Elementary French II .....	4
FRN 231 Intermediate French I .....	4
FRN 232 Intermediate French II .....	4
GER 131 Elementary German .....	4
GER 132 Elementary German .....	4
GER 231 Intermediate German .....	4
GER 232 Intermediate German .....	4
HIS 120 Ancient History .....	3
HIS 131 Western Civilization to 1555 .....	4
HIS 132 Western Civilization 1555 to Present .....	4
HIS 231 Dev. of U.S. Through the Civil War .....	3
HIS 232 Dev. of the U.S. from the Civil War .....	3
HUM 131 Cultural Connections .....	3
MUS 130 Survey of Non-Western Music .....	3

MUS 131 Understanding Music .....	3
MUS 151 Music Theory I .....	4
MUS 152 Music Theory II .....	4
PHL 231 Introduction to Philosophy .....	3
PHL 232 Logic .....	3
SPN 131 Elementary Spanish I .....	4
SPN 132 Elementary Spanish II .....	4
SPN 231 Intermediate Spanish I .....	4
SPN 232 Intermediate Spanish II .....	4
THR 116 Introduction to Theatre .....	3

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

### PROGRAM REQUIREMENTS

Additional courses\*\* so that total degree equals 60 credits:  
Plan to see an academic advisor to discuss requirements for your selected program of study.

*\*\*Additional courses exclude continuing education courses (prefix CED, CEU, CFO, CSS) or classes offered through JCC's workforce training programs (prefixes JTI, PDI).*

## ASSOCIATE IN APPLIED SCIENCE

This degree is recommended for students who plan to enter a specific occupation upon graduation from JCC.

### DEGREE, ELECTIVE & RELATED REQUIREMENTS

Plan to see an academic advisor to obtain a guide sheet and/or to discuss requirements for your selected program of study. Degree requirements are also available on our web page.

## IMPORTANT INFORMATION FOR TRANSFER STUDENTS

You may be able to earn as much as half your bachelor's degree program (freshmen and sophomore years) at JCC. A bachelor's degree at most four-year colleges and universities requires 124 semester credits hours, and most colleges accept 60-64 credits from JCC. Some allow students to transfer more credits but still require about 60 hours to be taken at their institution.

You can decide whether or not to earn an associate degree from JCC before transferring. Transfer students who do wish to earn a degree usually pursue an associate in arts or an associate in science. Colleges with completion or fast-track degree programs for working adults may allow students to transfer all the credits earned from an associate in applied science degree. Others may accept up to 90 credits earned at JCC and require an additional 30 credit hours. In other programs, it is to the students advantage to complete the MACRAO Articulation Agreement (see page 40).

Earning a degree from JCC doesn't automatically qualify students to enter as a junior at the transfer institution. Four-year institutions reserve the right to evaluate each course completed at JCC for transfer credit.

### The Transferability of Courses Depends On:

- the intended transfer college,
- the program of study, i.e., the major and/or minor(s),
- the grade received in the JCC course (2.0 is minimum acceptable grade point),
- whether or not the transfer college has an equivalent course,
- and the level of the course (e.g. an intermediate algebra course may be acceptable for one program, but not for others that require higher levels of mathematics).

Students are encouraged to keep the syllabi and course materials (including quizzes/tests, notes from courses, and names/authors of texts) of all courses they intend to transfer.

Transfer courses are formally articulated with about 20 four-year colleges and universities and recognized by other colleges and universities throughout the United States.

### TOOLS TO HELP TRANSFER STUDENTS

Each transfer institution has its own requirements for admission, majors, general education, second admit programs, and so on. Requirements are stated in the transfer college's catalog or you can go to the JCC website at [www.jccmi.edu](http://www.jccmi.edu); go to Academics; go to Online Documents; go to Information for Transfer Students where you will see a listing of the four year universities and colleges with course equivalencies and how to navigate directly to the individual university or college of interest.

General guidelines are available to help students choose courses that transfer to their preferred college. JCC maintains course equivalency sheets that detail the transfer status of JCC courses to many other colleges and universities (available on JCC's main campus, in the racks located in the lobby of McDivitt Hall, from academic advisors and on the JCC website). Program guide sheets are available that list JCC courses that meet general education and specific program requirements at various senior institutions. Guide sheets are available in the Student Center on JCC's main campus or in the main office at the Lenawee, LeTarte Hillsdale or Johnson Downtown centers, or on the web at: [www.jccmi.edu/Transfer/](http://www.jccmi.edu/Transfer/).

**TRANSFER PROCEDURE - A CHECKLIST**

Review the following checklist at least a year prior to transferring; JCC suggests starting in your first semester.

1. See a JCC academic advisor.
2. Decide the college to which you intend to transfer. Colleges vary in requirements.
3. Decide on a program of study or major. JCC academic advisors provide program guide sheets outlining which courses to take. Also, request a catalog from your intended transfer college.
4. Visit transfer colleges, and talk with staff and students.
5. Apply for transfer admission well in advance of the anticipated date of transfer. Applications are available from the transfer institution.
6. Request official transcripts of courses and grades to be mailed from each college or university you have attended to your intended transfer institution. Transcripts are only accepted if they are mailed directly by the college or university and have the official seal. Request JCC transcripts from the Records Office; there is no charge.
7. Complete the appropriate financial aid application materials. Financial assistance is not awarded until the student is accepted by the institution. Request financial aid transcripts from each previous institution attended, regardless of whether or not you ever applied for financial aid from that college or university. Request a JCC financial transcript from Student Financial Services; there is no charge.

**SPECIAL NOTE ON FOREIGN LANGUAGE REQUIREMENTS**

Some four-year colleges and universities require competency in a foreign language equivalent to two years of college study. Students transferring to an institution requiring competency in a foreign language should consider meeting this requirement before transferring.

**SECOND ADMIT PROGRAMS**

Some programs at four-year institutions require more than the general college admissions requirements. For instance, even though a student may get accepted by Michigan State University, he/she will need to fulfill additional requirements before being accepted into the College of Education. To find

out about entry standards and application deadlines, check with the specific academic department (e.g. education, business, engineering) at the transfer institution or check their college catalog.

**PRE-PROFESSIONAL PROGRAMS**

Students interested in pursuing curricula such as law, medicine, dentistry and other advanced degrees may choose to enroll in pre-professional programs at JCC (pre-law, pre-medical, pre-dental, etc.) Follow the sequence of courses recommended by the transfer institution.

Entrance tests required for professional degrees - GMAT, GRE, MCAT, LSAT and others - are usually taken prior to the senior year in college. JCC students should check on the availability of preparation coursework at the transfer institution.

## MACRAO ARTICULATION AGREEMENT WITH COLLEGES & UNIVERSITIES

The Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO) Articulation Agreement facilitates the transfer of students from community colleges to four-year colleges and universities in Michigan. The agreement ensures that students who have completed the requirements of the MACRAO Articulation Agreement as defined by JCC have satisfied the freshman and sophomore level general education requirements at other participating schools.

By carefully choosing courses, students may obtain an associate degree from JCC and complete The MACRAO Articulation Agreement. However, students do not need to obtain a degree to earn the MACRAO designation. If students meet all the requirements of the agreement, they should contact JCC Records Services and request the MACRAO designation on their transcripts.

The following colleges participate to some degree with JCC in the MACRAO Articulation Agreement:

Adrian College  
 Albion College  
 Baker College  
 Calvin College  
 Central Michigan University  
 Cleary College  
 Concordia College  
 Davenport College  
 Detroit College of Business  
 Eastern Michigan University  
 Ferris State University  
 Grand Valley State University  
 Lake Superior State University  
 Lawrence Technological University  
 Madonna College  
 Marygrove College  
 Michigan Technological University  
 Northern Michigan University  
 Northwood University  
 Oakland University  
 Olivet College  
 Rochester College  
 Saginaw Valley State University  
 Siena Heights University  
 Spring Arbor University  
 St. Mary's College  
 Western Michigan University

## REQUIREMENTS OF THE MACRAO ARTICULATION AGREEMENT

Minimum grade 2.0 for each course

*Note: This list reflects only current classes. The registrar's office maintains a historical listing of courses that are accepted as part of MACRAO.*

### ENGLISH COMPOSITION – (6 credits)

English (ENG) 131 and 132

### NATURAL SCIENCE

**(8 credits total from two disciplines; one must be laboratory science)**

Biology (BIO) 131, 132, 151, 152, 155, 220

Chemistry (CEM) 121, 131, 132, 141, 142

Geology (GEL) 160

Mathematics (MTH) 133, 140, 151, 154, 251, 254

Natural Science (NSC) 131

Physics (PHY) 131, 151, 231, 232, 251, 252

### SOCIAL SCIENCE

**(8 credits total from two disciplines)**

Anthropology (ANT) 131

Criminal Justice (CRJ) 111, 117

Economics (ECN) 231, 232

Geography (GEO) 131, 132

History (HIS) 120, 131, 132, 231, 232

Psychology (PSY) 140, 152, 245, 251, 252, 290

Political Science (PLS) 141

Sociology (SOC) 117, 152, 231, 235, 236, 251

### HUMANITIES

**(8 credits total from two disciplines)**

Art (ART) 111, 112

English (ENG) 210, 236, 246, 247, 249, 252, 255, 256, 257

French (FRN) 131, 132, 231, 232

German (GER) 131, 132, 231, 232

History (HIS) 120, 131, 132, 231, 232

Humanities (HUM) 131

Music (MUS) 130, 131, 151, 152

Philosophy (PHL) 231, 232,

Spanish (SPN) 131, 132, 231, 232

Theatre (THR) 116