

**GENERAL REQUIREMENTS FOR THE
ASSOCIATE IN APPLIED SCIENCE
(AAS) DEGREE**

The Associate in Applied Science Degree is an undergraduate award designed for students planning to specialize in technical, business, semi-professional, and supervisory fields that are career oriented. The outline below provides the general guidelines from Board Policy and is used by the college to design specific degree programs. A student pursuing an AAS degrees must follow the specific requirements for the program as outlined in the catalog.

Area I: Written Composition3-6 Credit Hours

- A course or course combination that promotes effective written and oral communication skills.

Area II: Humanities and Fine Arts.....3-6 Credit Hours

- In addition to Literature, disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.

**Area III: Natural Science and
Mathematics.....6-11 Credit Hours**

- In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.
- A minimum of 3 hours in Mathematics required.

**Area IV: History, Social, and
Behavioral Sciences.....3-6 Credit Hours**

- In addition to History, the Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.

**Area I-IV: General Education
Requirements.....15-29 Credit Hours**

**Area V: Technical Core, Technical
Concentration, and Electives.....31-61 Credit Hours**

- Area V courses are courses appropriate to the degree requirements, occupational or technical specialty requirements, core courses, and electives.

Total Hours Required60-76 Credit Hours

**GENERAL REQUIREMENTS FOR THE
CERTIFICATE (CER)**

The certificate award is designed for students seeking a specialized set of skills for employment or professional advancement. The outline below provides the general guidelines from Board Policy and is used by the college to design specific certificate programs. A student pursuing any of the certificate programs must follow the specific requirements for the program as outlined in the catalog.

Area I: Written Composition3-6 Credit Hours

- A minimum of one written composition course which may have a discipline specific prefix other than COM or ENG or the integration of written communication proficiencies within a required discipline-specific course(s).

Area II: Humanities and Fine Arts.....0-6 Credit Hours

**Area III: Natural Science and
Mathematics.....3-7 Credit Hours**

- A minimum of one mathematics course which may have a discipline specific prefix other than MAH or MTH or the integration of mathematics proficiencies within a required discipline-specific course(s).

**Area IV: History, Social, and
Behavioral Sciences.....0 Credit Hours**

**Area I-IV: General Education
Requirements.....6-19 Credit Hours**

**Area V: Technical Core, Technical
Concentration, and Electives.....11-54 Credit Hours**

Total Hours Required30-60 Credit Hours

**GENERAL REQUIREMENTS FOR THE
CAREER TECHNICAL EDUCATION SHORT
TERM CERTIFICATE (STC)**

The career technical education short term certificate award is designed to equip students with a focused set of skills for an entry level position in business or industry. The outline below provides the general guidelines from Board Policy and is used by the college to design specific career technical education short term certificate programs. A student pursuing any of the short term certificate programs must follow the specific requirements for the program as outlined in the catalog.

Area I: Written Composition0-3 Credit Hours

Area II: Humanities and Fine Arts.....0 Credit Hours

**Area III: Natural Science and
Mathematics.....0-3 Credit Hours**

**Area IV: History, Social, and
Behavioral Sciences.....0 Credit Hours**

**Area I-IV: General Education
Requirements.....0-6* Credit Hours**

**Area V: Technical Core, Technical
Concentration, and Electives.....9-29 Credit Hours**

Total Hours Required9-29 Credit Hours

**Certificates with 6 hours of general education credits, must have a minimum of 15 total credit hours.*

AIR CONDITIONING AND REFRIGERATION

Associate in Applied Science Degree Air Conditioning and Refrigeration

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101, PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total.....	6 hours

Area III – Natural Sciences and Mathematics

CIS 146 Microcomputer Applications	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
Math, Science, or CIS Elective.....	3-4 hours
Total.....	9-11 hours

Area IV – History, Social and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100, HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Course

Technical Core

ACR 111 Principles of Refrigeration	3 hours
ACR 112 HVACR Service Procedures	3 hours
ACR 113 Refrigeration and Piping Practices	3 hours
ACR 121 Principles of Electricity for HVACR	3 hours
ACR 122 HVACR Electric Circuits	3 hours
ACR 123 HVAC/R Electrical Components	3 hours
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Cooperation Education Electives.....	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
Technical Specialty	24 hours
ACR courses by advisement	
Total Area V.....	51 hours
Total Hours Required for Degree	72-74 hours

Short-Term Certificate in Air Conditioning and Refrigeration

ACR 111 Principles of Refrigeration	3 hours
ACR 112 HVACR Service Procedures	3 hours
ACR 113 Refrigeration and Piping Practices	3 hours
ACR 121 Principles of Electricity for HVACR	3 hours
ACR 122 HVACR Electric Circuits.....	3 hours
ACR 123 HVAC/R Electrical Components	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total Hours Required for Short-Term Certificate	21 hours

Certificate in Air Conditioning and Refrigeration

ENG 101 English Composition	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours

MTH 116 Mathematical Applications or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
ACR 111 Principles of Refrigeration	3 hours
ACR 112 HVACR Service Procedures	3 hours
ACR 113 Refrigeration and Piping Practices	3 hours
ACR 121 Principles of Electricity for HVACR	3 hours
ACR 122 HVACR Electric Circuits.....	3 hours
ACR 123 HVAC/R Electrical Components	3 hours
ACR courses by advisement.....	18 hours
Total Hours Required for Certificate	54-55 hours

Suggested Career Pathway in Air Conditioning and Refrigeration

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

ACR 111 Principles of Refrigeration	3 hours
ACR 112 HVACR Service Procedures	3 hours
ACR 113 Refrigeration Piping Practices	3 hours
ENG 101 English Composition I	3 hours
WKO 110 NCCER Core	3 hours
Total.....	15 hours

**Eligible for certifications in NCCER and EPA 608*

Semester 2

ACR 121 Principles of Electricity for HVACR	3 hours
ACR 122 HVACR Electric Circuits	3 hours
ACR 123 HVACR Electrical Components	3 hours
MTH 116 or any 100-level MTH	3 hours
Total.....	12 hours

**Eligible for a Short-Term Certificate in Air Conditioning and Refrigeration and HVAC Excellence Electrical Certification*

Semester 3

ACR 147 Refrigerant Transition and Rec. Theory	3 hours
ACR 134 Ice Machines	3 hours
ACR 203 Commercial Refrigeration	3 hours
ACR 205 Duct Design and Air Distribution.....	3 hours
CIS 146 Microcomputer Applications	3 hours
Total.....	15 hours

Semester 4

ACR 148 Heat Pumps.....	3 hours
ACR 210 Troubleshooting HVACR Systems	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
Area IV Elective.....	3 hours
WKO 106 Workplace Essentials.....	3 hours
Total.....	15 hours

**Eligible for a Certificate in Air Conditioning and Refrigeration, HVAC Excellence Troubleshooting Certification, National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 5

ACR 128 Heat Load Calculations.....	3 hours
-------------------------------------	---------

ACR 200 Review For Contractors Exam..... 3 hours
 Cooperative Education Electives 3 hours
 Choose from: ADM 150, ADM 151, ADM 152, ADM 153,
 ADM 154

Area II Humanities and Fine Arts Elective 3 hours
 Area IV Social and Behavioral Science Elective..... 3 hours

Total..... 15 hours

**Eligible to sit for the State of Alabama Heating and Air Conditioning Contractors Exam*

Eligible for AAS degree in Air Conditioning and Refrigeration

BUILDING CONSTRUCTION & CARPENTRY

Short-Term Certificate in Carpentry – Level 1

WKO 110 NCCER Core 3 hours
 CAR 111 Construction Basics..... 3 hours
 CAR 112 Floors, Walls, and Site Prep 3 hours
 CAR 113 Floors, Walls, and Site Prep Lab..... 3 hours
 CAR 114 Construction Basics Lab 3 hours

Total Hours Required for Short-Term Certificate 15 hours

Short-Term Certificate in Carpentry – Level 2

CMT 102 Construction Blueprint Reading..... 3 hours
 CAR 122 Concrete and Forming 3 hours
 CAR 123 Concrete and Forming Lab 3 hours
 BUC 131 Interior and Exterior Finishes 3 hours
 MAS 111 Masonry Fundamentals..... 3 hours
 CAR 226 Metal Framing 3 hours

Total Hours Required for Short-Term Certificate 18 hours

BUSINESS ADMINISTRATION

Associate in Applied Science Degree Business Administration

Area I – Written Composition

ENG 101 English Composition I 3 hours
Total..... 3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking 3 hours
 Humanities and Fine Arts Elective 3 hours
 Choose from: ART 100, 203, 204; MUS 101, PHL 206;
 REL 100, 151, 152; SPA 201, 202; THR 120, 126
Total..... 6 hours

Area III – Natural Sciences and Mathematics

MTH 116 or any 100-level MTH..... 3-4 hours
 CIS 146 Microcomputer Applications 3 hours
Total..... 6-7 hours

Area IV – History, Social and Behavioral Sciences

Area IV Elective..... 3 hours
 Choose from: GEO 100, HIS 101, 102, 201, 202; POL 211;
 PSY 200, 210; SOC 200, 210
Total..... 3 hours

Area V – Pre-Professional, Major, and Elective Courses

BUS 241 Principles of Accounting I..... 3 hours
 BUS 242 Principles of Accounting II 3 hours
 BUS 263 The Legal and Social Environment of Business 3 hours
 BUS 275 Principles of Management..... 3 hours
 ECO 231 Principles of Macroeconomics..... 3 hours
 ECO 232 Principles of Microeconomics 3 hours
 BUS 245 or BUS 246..... 3 hours
 BUS 248 Managerial Accounting 3 hours
 BUS 215 Business Communication..... 3 hours
 ACC 129 Individual Income Taxes..... 3 hours
 ACT 249 Payroll Accounting..... 3 hours
 Elective Courses by Advisement 15 hours
Total Area V..... 48 hours
Total Hours Required for Degree 66-67 hours

COSMETOLOGY

See Salon and Spa Management

CYBERSECURITY

See Computer Information Systems

COMPUTER INFORMATION SYSTEMS

Associate in Applied Science Degree Computer Information Systems

Area I – Written Composition

ENG 101 English Composition I 3 hours
Total..... 3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking 3 hours
 Humanities and Fine Arts Elective 3 hours
 Choose from: ART 100, 203, 204; MUS 101; PHL 206;
 REL 100, 151, 152; SPA 201, 202; THR 120, 126
Total..... 6 hours

Area III – Natural Science and Mathematics

CIS 146 Microcomputer Applications 3 hours
 MTH 100 or higher (excluding MTH 110 & MTH 116) 3-4 hours
 Math, Science or CIS Elective 3-4 hours
Total..... 9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective..... 3 hours
 Choose from: ECO 231, 232; GEO 100; HIS 101, 102,
 201, 202; POL 211; PSY 200, 210; SOC 200, 210
Total..... 3 hours

Area V – Pre-Professional, Major, and Elective Courses

CIS 149 Introduction to Computers..... 3 hours
 CIS 150 Introduction to Computer Programming & Logic 3 hours
 CIS 199 Network Communications 3 hours
 CIS 268 Software Support 3 hours
 CIS 269 Hardware Support..... 3 hours
 WKO 106 Workplace Skills..... 3 hours

CIS Electives.....	9-15 hours
CIS 212 or CIS 251.....	3-6 hours
MTH 112 or higher (excluding MTH 116).....	3 hours
Business Electives or OAD 101, 103, 243.....	3-6 hours
Total Area V.....	42 hours
Total Hours for Degree.....	63-65 hours

**Short-Term Certificate in Computer Information Systems
– Computer Graphics and Web Design**

CIS 151 Graphics for the World Wide Web.....	3 hours
CIS 207 Web Development.....	3 hours
CIS 208 Intermediate Web Development.....	3 hours
CIS 209 Advanced Web Development.....	3 hours
CIS 199 Introduction to Networking Communication.....	3 hours
CIS Elective.....	3 hours
Total Hours Required for Short-Term Certificate.....	21 hours

**Short-Term Certificate in Computer Information Systems
– Office Technology Support**

CIS 149 Introduction to Computers.....	3 hours
CIS 146 Microcomputer Applications.....	3 hours
CIS 199 Introduction to Networking Communication.....	3 hours
CIS 207 Web Development.....	3 hours
CIS 268 Software Support.....	3 hours
CIS 269 Hardware Support.....	3 hours
Total Hours Required for Short-Term Certificate.....	18 hours

**Short-Term Certificate in Computer Information Systems –
Cybersecurity**

Two options are offered

Option 1 is for those who have expertise, experience, and certification as a network administrator but need additional education for cybersecurity. Option 2 assumes no experience as a network administrator.

OPTION 1

**Short-Term Certificate in Computer Information Systems –
Security + Add-on**

To be eligible, students must show proof of having passed IC³, A+ and Network+ certifications.

CIS 246 Ethical Hacking.....	3 hours
CIS 280 Network Security.....	3 hours
CIS 282 Computer Forensics.....	3 hours
CIS 296 Special Topics.....	3 hours
Total Hours Required for Certificate.....	12 hours

OPTION 2

**Short-Term Certificate in Computer Information Systems –
Cybersecurity Technician**

CIS 146 Microcomputer Applications.....	3 hours
CIS 149 Introduction to Computers.....	3 hours
CIS 199 Network Communications.....	3 hours
CIS 246 Ethical Hacking.....	3 hours
CIS 268 Software Support.....	3 hours
CIS 269 Hardware Support.....	3 hours
CIS 280 Network Security.....	3 hours
CIS 282 Computer Forensics.....	3 hours
CIS 296 Special Topics.....	3 hours
Total Hours Required for Certificate.....	27 hours

CHILD DEVELOPMENT

**Associate in Applied Science Degree
Child Development**

As required by licensed childcare facilities and state funded preschools, the child development student is required to submit to a criminal background check prior to completing field experiences and the practical teaching experience. Students who cannot clear a background check will not be allowed to complete the necessary experiences for all child development courses and would be required to withdraw from the program.

Area I – Written Composition

ENG 101 English Composition I.....	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking.....	3 hours
Humanities and Fine Arts Elective.....	3 hours
Choose from: ART 100, 203, 204; MUS 101; PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications.....	3 hours
Math, Science or CIS Elective.....	3-4 hours
Total.....	9-11 hours

Area IV – History, Social, and Behavioral Sciences

PSY 200 or SOC 200 General Psychology or Introduction to Sociology.....	3 hours
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Courses

CHD 100 Introduction to Early Care & Education of Children.....	3 hours
CHD 201 Child Growth & Development Principles.....	3 hours
CHD 202 Children’s Creative Experiences.....	3 hours
CHD 203 Children’s Literature & Language Development.....	3 hours
CHD 204 Methods & Materials for Teaching Children.....	3 hours
CHD 205 Program Planning for Education.....	3 hours
CHD 206 Children’s Health & Safety.....	3 hours
CHD 209 Infant and Toddler Education Programs.....	2 hours
CHD 210 Educating Exceptional Children.....	3 hours
CHD 215 Supervised Practical Experience in Child Development.....	3 hours
CHD 217 Math and Science for Young Children.....	3 hours
Program Electives.....	8-9 hours
Choose from: CHD 208, 211, 212, 214, 220, 221, 224; SPA 101, 102, 201, 202; PHL 206; PSY 200, 210; SOC 200, 210; BUS 215	
EMS 100 Cardiopulmonary Resuscitation I.....	1 hour
WKO 106 Workplace Skills.....	3 hours
Total Area V.....	44-45 hours
Total Hours for Degree.....	65-68 hours

Short-Term Certificate in Infant/Toddler

CHD 100 Introduction to Early Care and Education.....	3 hours
CHD 206 Children’s Health and Safety.....	3 hours
CHD 209 Infant and Toddler Education Programs.....	3 hours
Total Hours Required for Short-Term Certificate.....	9 hours

Short-Term Certificate in Preschool/Family Child Care

CHD 100 Introduction to Early Care and Education	3 hours
CHD 206 Children’s Health and Safety	3 hours
CHD 204 Materials and Methods for Teaching Young Children	3 hours
Total Hours Required for Short-Term Certificate	9 hours

Short-Term Certificate in Early Childhood Education

CHD 206 Children’s Health and Safety	3 hours
CHD 209 Infant and Toddler Education Programs	3 hours
Choose from: CHD 203, 204, 205, or 215	3 hours
Total Hours Required for Short-Term Certificate	9 hours

Short-Term Certificate in Child Development

CHD 201 Child Growth and Development	3 hours
CHD 209 Program Planning for Educating Young Children	3 hours
CHD 210 Educating Exceptional Children	3 hours
Total Hours Required for Short-Term Certificate	9 hours

CRIMINAL JUSTICE

**Associate in Applied Science Degree
Criminal Justice**

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101; PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH	3-4 hours
CIS 146 Microcomputer Applications	3 hours
Math, Science, or CIS Elective	3-4 hours
Total	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total	3 hours

Area V – Technical Requirements

CRJ 100 Introduction to Criminal Justice	3 hours
CRJ 110 Introduction to Law Enforcement	3 hours
WKO 106 Workplace Skills	3 hours
CRJ 280 Internship in Criminal Justice	3 hours
CRJ Electives (by advisement)	24-30 hours
Other Electives	0-6 hours
Choose from: POL 211, 220; SOC 200, 210; PSY 200, 210	
Total Area V	42 hours
Total Hours Required for Degree	63-64 hours

Short-Term Certificate in Criminal Justice

CRJ 100 Introduction to Criminal Justice	3 hours
--	---------

CRJ Electives by advisement	12 hours
Total Hours Required for Short-Term Certificate	15 hours

Certificate in Law Enforcement

ENG 101 English Composition I	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH	3-4 hours
CIS 146 Microcomputer Applications	3 hours
CRJ 100 Introduction to Criminal Justice	3 hours
CRJ 110 Introduction to Law Enforcement	3 hours
CRJ Electives by advisement	21 hours
WKO 106 Workplace Skills	3 hours
Total Hours Required for Certificate	42-43 hours

CULINARY ARTS

Short-Term Certificate in Culinary Arts

CUA 110 Basic Food Preparation	3 hours
CUA 111 Foundation in Nutrition	3 hours
CUA 112 Sanitation, Safety & Service	2 hours
CUA 120 Basic Food Preparation Lab	2 hours
CUA 204 Foundations of Baking	3 hours
CUA Electives	9 hours
Select from:	
CUA 114 Meal Management	3 hours
CUA 115 Advanced Food Prep	3 hours
CUA 130 Chocolate & Truffles	3 hours
CUA 203 Stocks & Sauces	3 hours
CUA 217 Introduction to Pastries	2 hours
Total Hours Required for Short-Term Certificate	22 hours

**DRAFTING AND DESIGN
TECHNOLOGY**

**Associate in Applied Science Degree
Drafting and Design Technology**

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101; PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total	6 hours

Area III – Natural Science and Mathematics

CIS 146 Microcomputer Applications	3 hours
MTH 116 or any 100-level MTH	3-4 hours
Math, Science, or Computer Science	3-4 hours
Total	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total	3 hours

Area V – Pre-Professional, Major, and Elective Courses

ADM 101 Precision Measurement.....	3 hours
Technical Cooperative Education	3 hours
ADM 150, 151, 152, 153, 154	
ADM 160 Additive Manufacturing Production Techniques	3 hours
ADM 114 Design Innovation.....	3 hours
DDT 104 Basic Computer-Aided Drafting & Design	3 hours
DDT 117 Manufacturing Processes	3 hours
DDT 124 Basic Technical Drawing	3 hours
DDT 144 Basic 3D Modeling	3 hours
DDT 220 Advanced Technical Drawing.....	3 hours
DDT 225 Structural Steel Drafting.....	3 hours
DDT 236 Design Project.....	3 hours
MTT 218 Computer Integrated Manufacturing (CIM).....	3 hours
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
3D Elective Sequence	6 hours
MDT 147 and MDT 187 (Inventor)	
or MDT 202 and MDT 252 (SolidWorks)	
Total Area V.....	48 hours
Total Hours Required for Degree	69-71 hours

Short-Term Certificate in Drafting and Design Technology

– 3D Solid Modeling

ADM 101 Precision Measurement.....	3 hours
ADM 114 Design Innovation.....	3 hours
ADM 160 Additive Manufacturing Production Techniques	3 hours
DDT 144 Basic 3D Modeling	3 hours
MDT 147 or MDT 202.....	3 hours
Total Hours Required for the Short-Term Certificate.....	15 hours

Certificate in Drafting and Design Technology – 3D Solid Modeling

ENG 101 English Composition I.....	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
ADM 101 Precision Measurement.....	3 hours
ADM 114 Design Innovation.....	3 hours
ADM 160 Additive Manufacturing Production Techniques	3 hours
DDT 144 Basic 3D Modeling	3 hours
MDT 147 or MDT 202.....	3 hours
MDT 187 or MDT 252.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total Hours Required for the Certificate.....	33-34 hours

Short-Term Certificate in Drafting and Design Technology

– CADD

ADM 101 Precision Measurement.....	3 hours
DDT 104 Basic Computer Aided Drafting and Design	3 hours
DDT 124 Basic Technical Drawing	3 hours
DDT 144 Basic 3D Modeling	3 hours
Total Hours Required for Short-Term Certificate	12 hours

Certificate in Drafting and Design Technology – CADD

ENG 101 English Composition	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
ADM 101 Precision Measurement.....	3 hours

DDT 104 Basic Computer Aided Drafting and Design	3 hours
DDT 124 Basic Technical Drawing	3 hours
DDT 144 Basic 3D Modeling	3 hours
MTT 218 Computer Integrated Manufacturing (CIM).....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total Hours Required for Certificate	30-31 hours

Short-Term Certificate in Drafting and Design Technology

– Additive Manufacturing

ADM 101 Precision Measurement.....	3 hours
ADM 114 Design Innovation.....	3 hours
DDT 117 Manufacturing Processes	3 hours
DDT 144 Basic 3D Modeling	3 hours
MTT 218 Computer Integrated Manufacturing (CIM).....	3 hours
ADM 160 Additive Manufacturing Production Techniques	3 hours
MDT 147 or MDT 202.....	3 hours
Total Hours Required for Short-Term Certificate	21 hours

Certificate in Drafting and Design Technology

– Additive Manufacturing

ENG 101 English Composition I	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
ADM 101 Precision Measurement.....	3 hours
ADM 114 Design Innovation.....	3 hours
DDT 117 Manufacturing Processes	3 hours
DDT 144 Basic 3D Modeling	3 hours
MTT 218 Computer Integrated Manufacturing (CIM).....	3 hours
ADM 160 Additive Manufacturing Production Techniques	3 hours
MDT 147 or MDT 202.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total Hours Required for Certificate	36-37 hours

Short-Term Certificate in Drafting and Design Technology

– Technical Drawing

ADM 101 Precision Measurement.....	3 hours
DDT 104 Basic Computer Aided Drafting and Design	3 hours
DDT 124 Basic Technical Drawing	3 hours
DDT 144 Basic 3D Modeling	3 hours
DDT 220 Advanced Technical Drawing.....	3 hours
DDT 225 Structural Steel Drafting.....	3 hours
Total Hours Required for Short-Term Certificate	18 hours

Certificate in Drafting and Design Technology

– Technical Drawing

ENG 101 English Composition I	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
ADM 101 Precision Measurement.....	3 hours
DDT 104 Basic Computer Aided Drafting and Design	3 hours
DDT 124 Basic Technical Drawing	3 hours
DDT 144 Basic 3D Modeling	3 hours
DDT 220 Advanced Technical Drawing.....	3 hours
DDT 225 Structural Steel Drafting	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total Hours Required for the Certificate	33-34 hours

Suggested Career Pathway in Drafting & Design Technology

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

ADM 101 Precision Measurement.....	3 hours
DDT 104 Basic Computer Aided Drafting and Design	3 hours
DDT 117 Manufacturing Processes	3 hours
MTH 116 Mathematical Applications or 100 level Math.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours

Total..... 15 hours

**Eligible for a certification in NCCER, MSSC, or AUTOCAD Certified User Credential*

Semester 2

DDT 124 Basic Technical Drawing	3 hours
DDT 144 Basic 3D Modeling	3 hours
MTT 218 Computer Integrated Manufacturing (CIM)	3 hours
ENG 101 English Composition I.....	3 hours
CIS 146 Microcomputer Applications	3 hours

Total..... 15 hours

**Eligible for a Short-Term Certificate in CADD and NOCTI CAD Certification*

Semester 3

ADM 114 Design Innovations	3 hours
ADM 160 Additive Manufacturing Production Techniques	3 hours
DDT 225 Structural Steel Drafting.....	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
Area III Math, Science or Computer Science elective.....	3 hours

Total..... 15 hours

**Eligible for a Certificate in CADD*

Semester 4

DDT 220 Advanced Technical Drawing.....	3 hours
3D I – ELEC First 3D Elective (MDT 147 or MDT 202)	3 hours
WKO 106 Workplace Essentials.....	3 hours
Area II Elective.....	3 hours

Total..... 12 hours

**Eligible for Technical Drawing Short-Term Certificate and Certificate; 3D Modeling Short-Term Certificate; Additive Manufacturing Short-Term Certificate and Certificate; NOCTI Mechanical Drafting Certification; National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 5

3D II – ELEC Second 3D Elective (MDT 187 or MDT 252).....	3 hours
DDT 236 Design Project.....	3 hours
Cooperative Education Electives	3 hours
.....Choose from: ADM 150, ADM 151, ADM 152, ADM 153	
.....ADM 154	
Area IV Social and Behavioral Science Elective.....	3 hours

Total..... 12 hours

**Eligible for Inventor Certified User or Solidworks Associate Credential; 3D Modeling Certificate*

Eligible for AAS degree in Drafting and Design Technology

EMERGENCY MEDICAL SERVICES

Associate in Applied Science Degree Emergency Medical Services

The Northeast Alabama Community College Emergency Medical Services Education Program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.com) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).

Area I – Written Composition

ENG 101 English Composition I.....	3 hours
------------------------------------	---------

Total..... 3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
---	---------

Humanities and Fine Arts Elective

Choose from: ART 100, 203, 204; MUS 101; PHL 206**; REL 100, 151, 152; SPA 201, 202; THR 120, 126

***PHL 206 is recommended.*

Total..... 6 hours

Area III – Natural Science and Mathematics

BIO 201 Human Anatomy and Physiology I.....	4 hours
---	---------

BIO 202 Human Anatomy and Physiology II.....	4 hours
--	---------

MTH 116 or any 100-level MTH.....	3-4 hours
-----------------------------------	-----------

Total..... 11-12 hours

Area IV – History, Social and Behavioral Sciences

Area IV Elective.....	3 hours
-----------------------	---------

Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200**, 210

Total..... 3 hours

***SOC 200 is recommended*

Area V – Pre-Professional, Major, and Elective Courses

EMS 106 Medical Terminology for Health Professionals	2 hours
--	---------

EMS 118 Emergency Medical Technician.....	9 hours
---	---------

EMS 119 Emergency Medical Technician Clinical	1 hour
---	--------

EMS 240 Paramedic Operations.....	2 hours
-----------------------------------	---------

EMS 241 Paramedic Cardiology	3 hours
------------------------------------	---------

EMS 242 Paramedic Patient Assessment.....	2 hours
---	---------

EMS 257 Paramedic Applied Pharmacology.....	2 hours
---	---------

EMS 243 Paramedic Pharmacology	1 hour
--------------------------------------	--------

EMS 244 Paramedic Clinical I	1 hour
------------------------------------	--------

EMS 245 Paramedic Medical Emergencies.....	3 hours
--	---------

EMS 246 Paramedic Trauma Management	3 hours
---	---------

EMS 247 Paramedic Special Populations.....	2 hours
--	---------

EMS 248 Paramedic Clinical II	3 hours
-------------------------------------	---------

EMS 253 Paramedic Transition to the Workforce	2 hours
---	---------

EMS 254 Advanced Competencies for Paramedic	2 hours
---	---------

EMS 255 Paramedic Field Preceptorship	5 hours
---	---------

EMS 256 Paramedic Team Preceptorship.....	1 hour
---	--------

EMS Elective	0-7 hours
--------------------	-----------

Total Area V..... 44 hours

Total Hours Required for Degree67-75 hours

**Emergency Medical Technician (EMT)
(Short-Term Certificate)**

EMS 106 Medical Terminology for Health Professionals	2 hours
EMS 118 Emergency Medical Technician (EMT).....	9 hours
EMS 119 EMT Clinical	1 hour
Total Hours Required for Short-Term Certificate	12 hours

Advanced EMT (AEMT) (Short-Term Certificate)

Current Alabama EMT license is required for registration.

EMS 155 Advanced Emergency Medical Technician (AEMT).....	7 hours
EMS 156 AEMT Clinical.....	2 hours
Total Hours Required for Short-Term Certificate	9 hours

Paramedic (Certificate)

Current AL EMT license and EMS 189 are required for registration.

ENG 101 English Composition I	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
EMS 189	4 hours
EMS 240 Paramedic Operations.....	2 hours
EMS 241 Paramedic Cardiology	3 hours
EMS 242 Paramedic Patient Assessment.....	2 hours
EMS 243 Paramedic Pharmacology	1 hour
EMS 244 Paramedic Clinical I	1 hour
EMS 245 Paramedic Medical Emergencies.....	3 hours
EMS 246 Paramedic Trauma Management	3 hours
EMS 247 Paramedic Special Populations.....	2 hours
EMS 248 Paramedic Clinical II	3 hours
EMS 253 Paramedic Transition to the Workforce	2 hours
EMS 254 Advanced Competencies for Paramedic	2 hours
EMS 255 Paramedic Field Preceptorship	5 hours
EMS 256 Paramedic Team Leadership.....	1 hour
EMS 257 Paramedic Applied Pharmacology.....	2 hours
Total Hours Required for Certificate	42-43 hours

**Suggested Career Pathway
in Emergency Medical Services – Paramedic**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

EMS 106 Medical Terminology for Health Professionals	2 hours
EMS 118 Emergency Medical Technician.....	9 hours
EMS 119 Emergency Medical Technician Clinical	1 hour
Total.....	12 hours

**Eligible for a Short-Term Certificate in Emergency Medical Services-Basic EMT and to sit for NREMT EMT Certification*

Semester 2

ENG 101 English Composition I	3 hours
BIO 201 Human Anatomy and Physiology I	4 hours
MTH 116 or any 100-level MTH.....	3 hours
Area II Humanities & Fine Arts Elective.....	3 hours
Total.....	13 hours

Semester 3

EMS 240 Paramedic Operations.....	2 hours
-----------------------------------	---------

EMS 241 Paramedic Cardiology	3 hours
EMS 242 Paramedic Patient Assessment.....	2 hours
EMS 257 Paramedic Applied Pharmacology.....	2 hours
EMS 243 Paramedic Pharmacology	1 hours
EMS 244 Paramedic Clinical I	1 hours
BIO 202 Human Anatomy and Physiology II.....	4 hours
Total.....	15 hours

Semester 4

EMS 245 Paramedic Medical Emergencies.....	3 hours
EMS 246 Paramedic Trauma Management	3 hours
EMS 247 Paramedic Special Populations.....	2 hours
EMS 248 Paramedic Clinical II	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
Total.....	14 hours

Semester 5

EMS 253 Paramedic Transition to the Workforce	2 hours
EMS 254 Advanced Competencies for Paramedic	2 hours
EMS 255 Paramedic Field Preceptorship	5 hours
EMS 256 Paramedic Team Preceptorship.....	1 hour
Area IV History, Social, and Behavioral Science	3 hours
Total.....	13 hours

**Eligible for certifications in: Advanced Cardiac Life Support, Pediatric Advanced Life Support, Pre-Hospital Trauma Life Support, Advanced Medical Life Support, Emergency Pediatric Care and The Difficult Airway Course EMS*
**Eligible to sit for NREMT Paramedic Certification*

Eligible for AAS degree in Emergency Medical Services-Paramedic

ENGINEERING TECHNICIAN

**Associate in Applied Science Degree
Engineering Technician**

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101; PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 112 PreCalculus Algebra.....	3 hours
CIS 146 or CIS 251	3 hours
PHY 201 General Physics I Trig-Based.....	4 hours
Total.....	10 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Courses

EGR 101 Engineering Foundations	3 hours
ENT 106 Principles of Engineering Tech	3 hours
ENT 140 Applied Statics	3 hours
ENT 221 Quality and Productivity	3 hours
ENT 222 Introduction to Project Management.....	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
INT 119 Principles of Mechanical Measurement and Technical Drawing.....	3 hours
MTH 113 PreCalculus Trigonometry	3 hours
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
DDT or MDT Elective Sequence.....	6 hours
Program advisor-approved electives.....	12 hours
Total Area V.....	54 hours
Total Hours Required for the AAS Degree	76 hours

Short-Term Certificate in Engineering Technician

EGR 101 Engineering Foundations	3 hours
ENT 106 Principles of Engineering Technology	3 hours
INT 119 Principles of Mech. Measurement & Technical Drawing.....	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
Program advisor-approved courses.....	12 hours
Total Hours Required for Short-Term Certificate	24 hours

Certificate in Engineering Technician

ENG 101 English Composition I.....	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
CIS 146 or 251	3 hours
WKO 106 or 131.....	3 hours
PHY 201 General Physics I Trig. Based.....	4 hours
EGR 101 Engineering Foundations	3 hours
ENT 106 Principles of Engineering Technology	3 hours
ENT 140 Applied Statics.....	3 hours
INT 119 Principles of Mech. Measurement & Technical Drawing.....	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
MTH 112 PreCalculus Algebra.....	3 hours
MTH 113 PreCalculus Trigonometry	3 hours
DDT/MDT Sequence.....	6 hours
Total Hours Required for Certificate	43 hours

**Suggested Career Pathway
in Engineering Technician**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

EGR 101 Engineering Foundations	3 hours
INT 119 Principles of Mech Measurement.....	3 hours
MTH 112 Precalculus Algebra.....	3 hours

DDT 144 Solid Modeling I.....	3 hours
WKO 131 MSSC Industrial Safety**.....	3 hours
Total.....	15 hours

***MSSC Safety Certification*

Semester 2

ENT 106 Principles of Engineering Tech	3 hours
MTH 113 Precalculus Trigonometry	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
MDT XXX Solid Modeling II	3 hours
Total.....	15 hours

**ETA DC EM1 Exam and ETA DC EM2 Exam*

**Eligible for STC in ENT*

Semester 3

CIS 146 Microcomputer Applications	3 hours
ENG 101 English Composition	3 hours
Elective Mech/Elec/Indus Emphasis Elective	3 hours
Area IV History, Social and Behavioral Science	3 hours
Total.....	12 hours

Semester 4

ENT 140 Applied Statistics.....	3 hours
ENT 222 Intro to Project Management.....	3 hours
Elective Mech/Elec/Indus Emphasis Elective	3 hours
PHY 201 General Physics I Trig Based.....	4 hours
SPH 107 Fundamentals of Public Speaking	3 hours
Total.....	16 hours

**Eligible for CER in ENT*

Semester 5

Area II Humanities and Fine Arts Elective	3 hours
WKO 106 Workplace Skills.....	3 hours
ENT 221 Industrial Quality and Productivity	3 hours
Elective Mech/Elec/Indus Emphasis Elective	3 hours
Elective Mech/Elec/Indus Emphasis Elective	3 hours
Total.....	15 hours

**Eligible for OSHA 10-Hour Card*

Semester 6

Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153 ADM 154	
Total.....	3 hours

**Eligible for NOCTI Certification*

Eligible for AAS degree in Engineering Technology

INDUSTRIAL ELECTRONICS TECHNOLOGY

**Associate in Applied Science Degree
Industrial Electronics Technology**

The Industrial Electronics Technology Program is approved by the Electronics Technicians Association — International (ETA-I).

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101; PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 100 or higher (excluding MTH 116).....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
Math, Science, or Computer Science Elective.....	3 hours
Total.....	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Courses

ILT 108 Intro to Instrumentation and Process Control	3 hours
ILT 109 Electrical Blueprint Reading	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
ILT 162 Solid State Fundamentals.....	3 hours
ILT 163 Digital Fundamentals	3 hours
ILT 166 Motors and Transformers.....	3 hours
ILT 194 Programmable Logic Controls.....	3 hours
ILT 195 Troubleshooting Techniques	3 hours
ILT 197 Motor Controls I.....	3 hours
ILT 276 Elements of Industrial Control II	3 hours
ILT 277 Elements of Industrial Control II Lab	2 hours
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
ILT or Program advisor-approved electives.....	5 hours
Total Area V.....	49 hours
Total Hours Required for Degree	70-72 hours

Short-Term Certificate in Industrial Electronics Technology – General

ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
ILT Electives (any ILT courses).....	9 hours
Total Hours Required for Short-Term Certificate	15 hours

Short-Term Certificate in Industrial Electronics Technology – Industrial Electrical Technician

ILT 109 Electrical Blueprint Reading.....	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
ILT 162 Solid State Fundamentals.....	3 hours
ILT 163 Digital Fundamentals	3 hours
ILT 166 Motors and Transformers.....	3 hours

ILT 194 Programmable Controls I.....	3 hours
ILT 197 Motor Controls I.....	3 hours
Total Hours Required for Short-Term Certificate	24 hours

Certificate in Industrial Electronics Technology – Industrial Control Technician

ENG 101 English Composition I.....	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 100 or higher (excluding MTH 116).....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
ILT 109 Electrical Blueprint Reading.....	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
ILT 162 Solid State Fundamentals.....	3 hours
ILT 163 Digital Fundamentals	3 hours
ILT 166 Motors and Transformers.....	3 hours
ILT 194 Programmable Controls I.....	3 hours
ILT 197 Motor Controls I.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Total Hours Required for Certificate	39-40 hours

Suggested Career Pathway in Industrial Electronics Technology

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals	3 hours
ILT 109 Blueprint Reading	3 hours
ENG 101 English Composition I.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total.....	15 hours

**Eligible for ETA EM1 and EM2 Certification and for a certification in NCCER or MSSC*

Semester 2

ILT 197 Motor Controls.....	3 hours
ILT 162 Solid State Electronics	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
CIS 146 Microcomputer Applications	3 hours
Total.....	12 hours

**Eligible for ETA Analog EM3 Certification and a Short-Term Certificate in Industrial Electronics Technology*

Semester 3

ILT 163 Digital Electronics.....	3 hours
ILT 166 Motors & Transformers.....	3 hours
ILT 194 Programmable Logic Controls.....	3 hours
MTH 116 or any 100-level MTH.....	3 hours
Area III Math or Science or Computer Science Elective.....	3 hours
Total.....	15 hours

Semester 4

ILT 195 Troubleshooting Techniques	3 hours
ILT 276 Advanced Industrial Controls.....	3 hours
ILT 277 Advanced Industrial Controls.....	3 hours
Area IV History, Social, and Behavioral Science.....	3 hours

WKO 106 Workplace Essentials 3 hours
Total..... 15 hours

**Eligible for a Certificate in Industrial Electronics Technology, National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 5

ILT 216 Industrial Robotics 3 hours
 ILT 217 Industrial Robotics Lab 3 hours
 ILT 108 Introduction to Instrumentation & Process Control..... 3 hours
 Cooperative Education Electives 3 hours
 Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154
 Area II Humanities & Fine Arts Elective..... 3 hours
Total..... 15 hours

Eligible for AAS degree in Industrial Electronics Technology

INDUSTRIAL SYSTEMS TECHNOLOGY

**Associate in Applied Science Degree
 Industrial Systems Technology –
 Electrical & Instrumentation**

Area I – Written Composition

ENG 101 English Composition I 3 hours
Total..... 3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking 3 hours
 Humanities and Fine Arts Elective 3 hours
 Choose from: ART 100, 203, 204, MUS 101, PHL 206, REL 100, 151, 152, SPA 201, 202, THR 120, 126
Total..... 6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH..... 3-4 hours
 Math, Science, or Computer Science Elective 3-4 hours
 CIS 146 Microcomputer Applications 3 hours
Total..... 9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective..... 3 hours
 Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210
Total..... 3 hours

Area V Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options

INT 117 Principles of Industrial Mechanics 3 hours
 Cooperative Education Electives 3 hours
 Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154
 WKO 106 Workplace Skills..... 3 hours
 WKO 110, 131, 132, 133, or 134..... 3 hours
Technical Core Total 12 hours

ILT 108 Intro to Instruments & Process Control 3 hours
 ILT 118 Construction Wiring NEC 3 hours
 ILT 160 DC Fundamentals..... 3 hours

ILT 161 AC Fundamentals..... 3 hours
 ILT 162 Solid State Fundamentals..... 3 hours
 ILT 163 Digital Fundamentals 3 hours
 ILT 166 Motors & Transformers I 3 hours
 ILT 194 Programmable Logic Controls 3 hours
 ILT 197 Motor Controls I..... 3 hours
 ILT 231 National Electric Code 3 hours
 INT 118 Fundamentals of Industrial
 Hydraulics and Pneumatics 3 hours
 Program advisor-approved elective 3 hours
Total Area V..... 48 hours
Total Hours Required for Degree 69-71 hours

Short-Term Certificate in Industrial Systems Technology

– Basic Electrical

ILT 160 DC Fundamentals..... 3 hours
 ILT 161 AC Fundamentals..... 3 hours
 ILT 118 Construction Wiring NEC 3 hours
 ILT 231 National Electric Code 3 hours
Total Hours Required for Short-Term Certificate 12 hours

Short-Term Certificate in Industrial Systems Technology

– Electrical & Instrumentation

ILT 160 DC Fundamentals..... 3 hours
 ILT 161 AC Fundamentals..... 3 hours
 ILT 162 Solid State 3 hours
 ILT 197 Motor Controls I..... 3 hours
 Program advisor-approved elective 3 hours
Total Hours Required for the Short-Term Certificate..... 15 hours

Certificate in Industrial Systems Technology

– Electrical & Instrumentation

ENG 101 English Composition I 3 hours
 SPH 107 Fundamentals of Public Speaking 3 hours
 MTH 116 or any 100-level MTH..... 3-4 hours
 CIS 146 Microcomputer Applications 3 hours
 WKO 106 Workplace Skills..... 3 hours
 INT 117 Principles of Industrial Mechanics 3 hours
 INT 118 Fundamentals of Industrial
 Hydraulics and Pneumatics 3 hours
 ILT 231 NEC..... 3 hours
 ILT 118 Construction Wiring NEC 3 hours
 ILT 160 DC Fundamentals..... 3 hours
 ILT 161 AC Fundamentals..... 3 hours
 ILT 194 Programmable Logic Controls 3 hours
 Program advisor-approved electives..... 12 hours
Total Hours Required for the Certificate..... 48-49 hours

**Suggested Career Pathway
 in Industrial Systems Technology
 Electrical and Instrumentation Option**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

ILT 160 DC Fundamentals..... 3 hours
 ILT 161 AC Fundamentals 3 hours
 Area V Program Advisor Approved Elective..... 3 hours

ENG 101 English Composition I 3 hours
 WKO 110, 131, 132, 133, or 134 3 hours
Total..... 15 hours

**Eligible for ETA EM1 and EM2 Certification and for a certification in NCCER or MSSC*

Semester 2

ILT 197 Motor Controls 3 hours
 ILT 162 Solid State Fundamentals 3 hours
 SPH 107 Fundamentals of Public Speaking 3 hours
 MTH 100 Math 116 or any other 100-level Math 3 hours
Total..... 12 hours

**Eligible for Short-Term Certificate in Industrial Systems Technology – Electrical and Instrumentation*

Semester 3

ILT 163 Digital Electronics 3 hours
 ILT 166 Motors & Transformers 3 hours
 ILT 194 Programmable Logic Controls 3 hours
 ILT 118 Construction Wiring NEC 3 hours
Total..... 12 hours

**Eligible for ETA Digital EM4 Certification*

Semester 4

INT 118 Fundamentals of Industrial Hydraulics
 and Pneumatics 3 hours
 ILT 231 National Electric Code 3 hours
 CIS 146 Microcomputer Applications 3 hours
 Area III Math or Science or Computer Science Elective 3 hours
 WKO 106 Workplace Essentials 3 hours
Total..... 15 hours

**Eligible for a Certificate in Industrial Systems Technology – ISI, National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 5

ILT 108 Introduction to Instrumentation & Process Control 3 hours
 INT 117 Principles of Industrial Mechanics 3 hours
 Area IV History, Social, and Behavioral Science 3 hours
 Cooperative Education Electives 3 hours
 Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154
 Area II Humanities & Fine Arts Elective 3 hours
Total..... 15 hours

Eligible for AAS degree in Industrial Systems Technology – Electrical and Instrumentation

**Associate in Applied Science Degree
 in Industrial Systems Technology –
 Mechanical Maintenance**

Area I – Written Composition

ENG 101 English Composition I 3 hours
Total..... 3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking 3 hours

Humanities and Fine Arts Elective 3 hours
 Choose from: ART 100, 203, 204, MUS 101, PHL 206,
 REL 100, 151, 152, SPA 201, 202, THR 120, 126

Total..... 6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH 3-4 hours
 Math, Science or CIS Elective 3-4 hours
 CIS 146 Microcomputer Applications 3 hours
Total..... 9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective 3 hours
 Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202;
 POL 211; PSY 200, 210; SOC 200, 210

Total..... 3 hours

Area V – Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options

INT 117 Principles of Industrial Mechanics 3 hours
 Cooperative Education Electives 3 hours
 Choose from: ADM 150, ADM 151, ADM 152, ADM 153,
 ADM 154

WKO 106 Workplace Skills 3 hours
 WKO 110, 131, 132, 133, or 134 3 hours

Technical Core Total 12 hours

INT 118 Fundamentals of Industrial
 Hydraulics and Pneumatics 3 hours
 INT 126 Preventative Maintenance 3 hours
 INT 127 Principles of Industrial Pumps and Piping 3 hours
 MTT 147 Introduction to Machine Shop I 3 hours
 MTT 148 Introduction to Machine Shop I Lab 3 hours
 MTT 149 Introduction to Machine Shop II 3 hours
 MTT 150 Introduction to Machine Shop II Lab 3 hours
 WDT 108 SMAW Fillet/OFC 3 hours
 WDT 122 SMAW Fillet/OFC Lab 3 hours
 WDT 217 SMAW Carbon Pipe 3 hours
 WDT 257 SMAW Carbon Pipe Lab 3 hours
 WDT 115 GTAW Carbon Pipe 3 hours
 WDT 155 GTAW Carbon Pipe Lab 3 hours
Total Area V 51 hours
Total Hours Required for Degree 72-75 hours

Short-Term Certificate in Industrial Systems Technology

– Mechanical Maintenance

INT 117 Principles of Industrial Mechanics 3 hours
 INT 118 Hydraulics and Pneumatics 3 hours
 INT 126 Preventative Maintenance 3 hours
 INT 127 Principles of Industrial Pumps and Piping Systems 3 hours
Total Hours required for Short-Term Certificate 12 hours

Certificate in Industrial Systems Technology

– Mechanical Maintenance

ENG 101 English Composition I 3
 SPH 107 Fundamentals of Public Speaking 3 hours
 MTH 116 or any 100-level MTH 3-4 hours
 CIS Elective 3 hours
 INT 117 Fundamentals of Hydraulics and Pneumatics 3 hours
 INT 126 Preventative Maintenance 3 hours

WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Mechanical Maintenance Electives by Advisement	24 hours
Total Hours Required for the Certificate.....	48-49 hours

**Suggested Career Pathway
in Industrial Systems Technology
Mechanical Maintenance Technician Option**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

MTT 147 Introduction to Machine Shop I.....	3 hours
MTT 148 Introduction to Machine Shop Lab I	3 hours
CIS 146 Microcomputer Applications	3 hours
ENG 101 English Composition I.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total.....	15 hours

**Eligible for a certification in NCCER or MSSC and a NIMS MMSI Certification*

Semester 2

INT 117 Principles of Industrial Mechanics	3 hours
MTT 149 Introduction to Machine Shop II	3 hours
MTT 150 Introduction to Machine Shop Lab II	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 100 Math 116 or any other 100-level Math	3 hours
Total.....	15 hours

**Eligible for Short-Term Certificate in Industrial Systems Technology – Mechanical Maintenance and a NIMS Drill Press AND/OR Job Planning, Bench Work, Layout Certification*

Semester 3

INT 126 Preventive Maintenance	3 hours
ILT 118 Construction Wiring NEC	3 hours
WDT 108 SMAW Fillet/OFC	3 hours
WDT 122 SMAW Fillet/OFC Lab.....	3 hours
Total.....	12 hours

**Eligible for a AWS or NCCER Welding Certification*

Semester 4

WDT 217 SMAW Carbon Pipe.....	3 hours
WDT 257 SMAW Carbon Pipe Lab	3 hours
WDT 115 GTAW Carbon Pipe	3 hours
WDT 155 GTAW Carbon Pipe Lab	3 hours
Area III Math or Science or Computer Science Elective.....	3 hours
Total.....	15 hours

**Eligible for a Certificate in Industrial Systems Technology – IMM and a AWS or NCCER Welding Certification*

Semester 5

INT 127 Principles of Industrial Pumps and Piping	3 hours
WKO 106 Workplace Essentials.....	3 hours
Area IV History, Social, and Behavioral Science	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	

Area II Humanities & Fine Arts Elective.....	3 hours
Total.....	15 hours

**Eligible for a National Career Readiness Certificate and OSHA 10 Hour Card*

**Eligible for AAS degree in Industrial Systems Technology –
Mechanical Maintenance Option**

**Associate in Applied Science Degree
Industrial Systems Technology –
Multi-Skilled Maintenance Technician**

Area I – Written Composition

ENG 101 English Composition I.....	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204, MUS 101, PHL 206, REL 100, 151, 152, SPA 201, 202, THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH.....	3-4 hours
Math, Science or CIS Elective	3-4 hours
CIS 146 Microcomputer Applications	3 hours
Total.....	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total.....	3 hours

Area V Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options

INT 117 Principles of Industrial Mechanics	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Technical Core Total	12 hours

INT 118 Fundamentals of Industrial Hydraulics and Pneumatics	3 hours
INT 126 Preventive Maintenance	3 hours
INT 127 Principles of Industrial Pumps and Piping	3 hours
INT 134 Principles of Industrial Maintenance Welding & Cutting Techniques.....	3 hours
ILT 118 Construction Wiring NEC	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
ILT 195 Troubleshooting Techniques	3 hours
ILT 197 Motor Controls I.....	3 hours
ILT 231 NEC.....	3 hours
Program advisor-approved electives.....	6 hours
Total Area V.....	48 hours
Total Hours Required for the Degree.....	69-72 hours

**Certificate in Industrial Systems Technology
– MultiSkilled Maintenance Technician**

ENG 101 English Composition I	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
WKO 106 Workplace Skills.....	3 hours
INT 117 Principles of Industrial Mechanics	3 hours
INT 118 Fundamentals of Industrial Hydraulics and Pneumatics	3 hours
ILT 231 NEC.....	3 hours
ILT 118 Construction Wiring NEC.....	3 hours
ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals.....	3 hours
ILT 195 Troubleshooting Techniques	3 hours
ILT 197 Motor Controls I.....	3 hours
Program advisor-approved electives.....	12 hours
Total Hours Required for the Certificate.....	48-49 hours

**Suggested Career Pathway
in Industrial Systems Technology**

Multi-Skilled Maintenance Technician Option

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

ILT 160 DC Fundamentals.....	3 hours
ILT 161 AC Fundamentals	3 hours
CIS 146 Microcomputer Applications	3 hours
ENG 101 English Composition I.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total.....	15 hours

**Eligible for ETA EM1 and EM2 Certification and for a certification in NCCER or MSSC*

Semester 2

Area V Program Advisor Approved Elective.....	3 hours
INT 117 Principles of Industrial Mechanics	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 100 Math 116 or any other 100-level Math	3 hours
Total.....	12 hours

**Eligible for Short-Term Certificate in Industrial Systems Technology – Multi-Skilled Technician*

Semester 3

INT 126 Preventive Maintenance	3 hours
INT 118 Fundamentals of Industrial Hydraulics & Pneumatics	3 hours
ILT 197 Motor Controls.....	3 hours
ILT 118 Construction Wiring NEC.....	3 hours
Total.....	12 hours

Semester 4

ILT 195 Troubleshooting Techniques	3 hours
ILT 231 National Electric Code	3 hours
Area V Program Advisor Approved Elective.....	3 hours
Area III Math or Science or Computer Science Elective.....	3 hours

WKO 106 Workplace Essentials.....	3 hours
Total.....	15 hours

**Eligible for a Certificate in Industrial Systems Technology – ISS, National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 5

INT 127 Principles of Industrial Pumps and Piping	3 hours
INT 134 Principles of Industrial Maintenance Welding and Metal Cutting	3 hours
Area IV History, Social, and Behavioral Science	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
Area II Humanities & Fine Arts Elective.....	3 hours
Total.....	15 hours

**Eligible for AAS degree in Industrial Systems Technology
– Multi-Skilled Technician Option**

MACHINE TOOL TECHNOLOGY

**Associate in Applied Science Degree
in Industrial Systems Technology –
Machine Tool Technology**

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204, MUS 101, PHL 206, REL 100, 151, 152, SPA 201, 202, THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH.....	3-4 hours
Math, Science or CIS Elective	3-4 hours
CIS 146 Microcomputer Applications	3 hours
Total.....	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options

INT 117 Principles of Industrial Mechanics	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Technical Core Total	12 hours

INT 119 Principles of Mechanical Measurement and Technical Drawing.....	3 hours
MTT Electives (Any MTT or CNC courses).....	30 hours
Total Area V.....	45 hours
Total Hours Required for the AAS Degree.....	66-68 hours

Short-Term Certificate in Machine Tool Technology

MTT or CNC Courses (by advisement).....	12 hours
Total Hours Required for Short-Term Certificate.....	12 hours

Short-Term Certificate in Machine Tool Technology

– Stamping and Forming

CNC 158 Die Fundamentals.....	3 hours
CNC 160 Die Construction and Tryout.....	3 hours
CNC 161 Die Maintenance and Repair.....	3 hours
CNC 232 Basic Tool and Die.....	4 hours
Total Hours Required for Short-Term Certificate.....	13 hours

Certificate in Industrial Systems Technology

– Machine Tool Technology

ENG 101 English Composition I.....	3 hours
SPH 107 Fundamentals of Public Speaking.....	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications.....	3 hours
INT 117 Principles of Industrial Maintenance.....	3 hours
INT 119 Principles of Mechanical Measurements & Technical Drawing.....	3 hours
WKO 106 Workplace Skills.....	3 hours
WKO 110, 131, 132, 133 or 134.....	3 hours
MTT or CNC Electives (by advisement).....	24 hours
Total Hours Required for Certificate.....	48-49 hours

**Suggested Career Pathway
in Industrial Systems Technology –
Machine Tool Technology**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

MTT 147 Introduction to Machine Shop I.....	3 hours
MTT 148 Introduction to Machine Shop Lab I.....	3 hours
CIS 146 Microcomputer Applications.....	3 hours
Area IV History or Social or Behavioral Science elective.....	3 hours
INT 119 Principles of Mechanical Measurement and Technical Drawing.....	3 hours
Total.....	15 hours

**Eligible for NIMS MMSI Certification*

Semester 2

MTT 141 Basic CNC Milling Programming I.....	3 hours
MTT 241 CNC Milling Lab I.....	3 hours
INT 117 Principles of Industrial Mechanics.....	3 hours
ENG 101 English Composition I.....	3 hours
Total.....	12 hours

**Eligible for a Short-Term Certificate in Machine Tool Technology and a NIMS CNC Mill Operator Certification*

Semester 3

MTT 149 Introduction to Machine Shop II.....	3 hours
MTT 150 Introduction to Machine Shop Lab II.....	3 hours
MTH 100 Math 116 or any other 100-level Math.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total.....	12 hours

**Eligible for a NIMS Drill Press AND/OR Job Planning, Bench Work, Layout Certification and for a certification in NCCER or MSSC*

Semester 4

MTT 140 Basic CNC Turning Programming I.....	3 hours
MTT 243 CNC Turning Lab I.....	3 hours
Area III Math or Science or Computer Science Elective.....	3 hours
SPH 107 Fundamentals of Public Speaking.....	3 hours
WKO 106 Workplace Essentials.....	3 hours
Total.....	15 hours

**Eligible for a Certificate in Industrial Systems Technology – MTT, National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 5

MTT 213 Advanced CNC Milling.....	3 hours
MTT 242 CNC Milling Lab II.....	3 hours
MTT 218 Computer Integrated Manufacturing (CIM).....	3 hours
Cooperative Education Electives.....	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
Area II Humanities & Fine Arts Elective.....	3 hours

Total.....	15 hours
-------------------	-----------------

**Eligible for NIMS CNC Milling Certification*

**Eligible for AAS degree in Industrial Systems Technology –
Machine Tool Technology**

WELDING TECHNOLOGY

**Associate in Applied Science Degree
in Industrial Systems Technology –
Welding Technology**

Area I – Written Composition

ENG 101 English Composition I.....	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking.....	3 hours
Humanities and Fine Arts Elective.....	3 hours
Choose from: ART 100, 203, 204, MUS 101, PHL 206, REL 100, 151, 152, SPA 201, 202, THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH.....	3-4 hours
Math, Science or CIS Elective.....	3-4 hours
CIS 146 Microcomputer Applications.....	3 hours
Total.....	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200; 210	
Total.....	3 hours

Area V Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options

INT 117 Principles of Industrial Mechanics	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
WKO 106 Workplace Skills.....	3 hours
WKO 110 NCCER Core.....	3 hours
Technical Core Total	12 hours

INT 119 Principles of Mechanical Measurement and Technical Drawing.....	3 hours
WDT Electives (Any WDT courses)	30 hours
Total Area V	45 hours
Total Hours Required for the AAS Degree	66-68 hours

Short-Term Certificate in Welding Technology

WDT Courses (by advisement).....	12 hours
Total Hours Required for Short-Term Certificate	12 hours

Short-Term Certificate in Welding Technology

– Structural Welding

WDT 120 Shielded Metal Arc Welding Groove.....	3 hours
WDT 125 SMAW Fillet/OFC Lab.....	3 hours
WDT 108 or WDT 109	3 hours
WDT 122 or WDT 123	3 hours
WKO 110 NCCER Core.....	3 hours
Total Hours Required for Short-Term Certificate	15 hours

Certificate in Industrial Systems Technology

– Welding Technology

ENG 101 English Composition I.....	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
WKO 106 Workplace Skills.....	3 hours
WKO 110 NCCER Core.....	3 hours
INT 117 Principles of Industrial Mechanics	3 hours
INT 119 Principles of Mechanical Measurement and Technical Drawing.....	3 hours
WDT Electives	24 hours
Total Hours Required for the Certificate.....	48-49 hours



**Suggested Career Pathway
in Industrial Systems Technology
Welding Option**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

WDT 108 SMAW Fillet/OFC	3 hours
WDT 109 SMAW Fillet/PAC/CAC	3 hours
CIS 146 Microcomputer Applications	3 hours
Area II Humanities & Fine Arts Elective.....	3 hours
WKO 110, 131, 132, 133, or 134.....	3 hours
Total.....	15 hours

**Eligible for a certification in NCCER or MSSC and AWS Certification*

Semester 2

WDT 119 Gas Metal Arc/Flux Cored Arc Welding.....	3 hours
WDT 124 Gas Metal Arc/Flux Cored Arc Welding/ Lab	3 hours
INT 117 Principles of Industrial Mechanics	3 hours
ENG 101 English Composition I	3 hours
Total.....	12 hours

**Eligible for a Short-Term Certificate in Welding Technology and AWS Certification*

Semester 3

WDT 228 Gas Tungsten Arc Welding	3 hours
WDT 268 Gas Tungsten Arc Welding/ Lab	3 hours
MTH 116 or any 100-level MTHs	3 hours
INT 119 Principle of Mechanical Measurement and Technical Drawing.....	3 hours
Total.....	12 hours

**Eligible for AWS Certification*

Semester 4

WDT 157 Consumable Welding Processes.....	3 hours
WDT 158 Consumable Welding Processes.....	3 hours
Area III Math or Science or Computer Science Elective.....	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
WKO 106 Workplace Essentials.....	3 hours
Total.....	15 hours

**Eligible for a Certificate in Industrial Systems Technology-WDT, National Career Readiness Certificate and OSHA 10 Hour Card and AWS Certification*

Semester 5

WDT 180 Special Projects.....	3 hours
WDT 181 Special Projects/Lab.....	3 hours
Area IV History, Social, and Behavioral Science	3 hours
Cooperative Education Electives	3 hours
Choose from: ADM 150, ADM 151, ADM 152, ADM 153, ADM 154	
Total.....	12 hours

**Eligible for AWS Certification*

**Eligible for AAS degree in Industrial Systems Technology-
Welding Option**

MEDICAL ASSISTING TECHNOLOGY

**Associate in Applied Science Degree
Medical Assisting Technology**

The Medical Assisting Technology Program is approved by the American Medical Technologists Association.

Area I – Written Composition

ENG 101 English Composition I 3 hours
Total..... 3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking 3 hours
Humanities and Fine Arts Elective 3 hours
Choose from: ART 100, 203, 204; MUS 101; PHL 206;
REL 100, 151, 152; SPA 201, 202; THR 120, 126
Total..... 6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH..... 3-4 hours
BIO 103 Principles of Biology 4 hours
CIS 146 Microcomputer Applications 3 hours
Total..... 10-11 hours

Area IV – History, Social, and Behavioral Sciences

PSY Elective 3 hours
Total..... 3 hours

Area V – Pre-Professional, Major, and Elective Courses

MAT 101 or OAD 211 3 hours
MAT 102 or BIO 201 3-4 hours
MAT 103 or BIO 202 3-4 hours
MAT 111 Clinical Procedures I for the Medical Assistant..... 3 hours
MAT 120 Medical Administrative Procedures I 3 hours
MAT 121 Medical Administrative Procedures II..... 3 hours
MAT 125 Laboratory Procedures I for the Medical Assistant ... 3 hours
MAT 200 Management of Office Emergencies 2 hours
MAT 211 Clinical Procedures II for the Medical Assistant 3 hours
MAT 215 Laboratory Procedures II for the Medical Assistant... 3 hours
MAT 216 Medical Pharmacology for the Medical Office 4 hours
MAT 229 Medical Assisting Preceptorship 3 hours
Electives..... 8 hours
Choose from: MAT 128, MAT 220, MAT 218,
MAT 222 or OAD 212; MAT 228;
MAT 239; HIT 230; HIT 232; HIT 116; HIT 283
WKO 106 Workplace Skills..... 3 hours
EMS 100 or EMS 101 1 hour
Total Area V..... 48-50 hours
Total Hours Required for Degree 70-72 hours

Short-Term Certificate in Medical Assisting Technology

– General

MAT 101 or OAD 211 3 hours
MAT 102 or BIO 201 3-4 hours
MAT 103 or BIO 202 3-4 hours
MAT 111 Clinical Procedures I for the Medical Assistant..... 3 hours
MAT 120 Medical Administrative Procedures I 3 hours
MAT 121 Medical Administrative Procedures II..... 3 hours

WKO 106 Workplace Skills..... 3 hours
Total Hours Required for Certificate 21-23 hours

**Short-Term Certificate in Medical Assisting Technology
– Phlebotomist**

MAT 125 Laboratory Procedures I for the Medical Assistant 3 hours
MAT 215 Laboratory Procedures II for the Medical Assistant... 3 hours
MAT 239 Phlebotomy Preceptorship..... 3 hours
EMS 100 or EMS 101 1 hours
Total Hours Required for Short-Term Certificate 10 hours

**Short-Term Certificate in Medical Assisting Technology
– EKG Technician**

MAT 101 or OAD 211 3 hours
MAT 102 or BIO 201 3-4 hours
MAT 111 Clinical Procedures I for the Medical Patient..... 3 hours
MAT 218 EKG Technician..... 3 hours
EMS 100 or EMS 101 1 hours
Total Hours Required for Certificate 13-14 hours

**Short-Term Certificate in Medical Assisting Technology
– Medical Coding**

MAT 101 or OAD 211 3 hours
MAT 102 or BIO 201 3-4 hours
MAT 103 or BIO 202 3-4 hours
CIS 146 or OAD 125 3 hours

(Note: All above are prerequisites for the courses below)

HIT 116 or MAT 216 2-4 hours
HIT 230 Medical Coding Systems I 3 hours
HIT 232 Medical Coding Systems II 3 hours
MAT 220 Medical Office Insurance..... 3 hours
HIT 283 Medical Coding Professional Practice 2 hours
Total Hours Required for Certificate 25-28 hours

NURSING

**Associate in Applied Science Degree
Associate Degree Nursing**

Area I – Written Composition

ENG 101 English Composition I 3 hours
Total 3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking 3 hours
Humanities/Fine Arts Elective 3 hours
Choose from: ART 100, 203, 204; MUS 101: PHL 206*;
REL 100, 151, 152; SPA 201, 202; THR 120, 126;
ENG 251, 252, 262, 271 (only after the completion of EH 102)
***PHL 206 is preferred.*
Total..... 6 hours

Area III – Natural Science and Mathematics

MTH 100, 110, 112, 113, 120 or 125..... 3 hours
BIO 201 Human Anatomy and Physiology I 4 hours
BIO 202 Human Anatomy and Physiology II 4 hours
BIO 220 General Microbiology 4 hours
Total..... 15 hours

Area IV – History, Social, and Behavioral Sciences

PSY 200 General Psychology	3 hours
PSY 210 Human Growth and Development	3 hours
Total.....	6 hours

Area V – Pre-Professional, Major, and Elective Courses

NUR 112 Fundamental Concepts of Nursing	7 hours
NUR 113 Nursing Concepts I	8 hours
NUR 114 Nursing Concepts II	8 hours
NUR 115 Evidenced Based Clinical Reasoning	2 hours
NUR 211 Advanced Nursing Concepts	7 hours
NUR 221 Advanced Evidence Based Clinical Reasoning	7 hours
Total Area V.....	39 hours
Total Hours Required for Degree	69 hours

Practical Nursing Certificate

ENG 101 English Composition I	3 hours
MTH 100, 110, 112, 113, or 125	3 hours
BIO 201 Human Anatomy and Physiology I	4 hours
BIO 202 Human Anatomy and Physiology II	4 hours
PSY 200 General Psychology	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
NUR 112 Fundamental Concepts of Nursing	7 hours
NUR 113 Nursing Concepts I	8 hours
NUR 114 Nursing Concepts II	8 hours
NUR 115 Evidenced Based Clinical Reasoning	2 hours
Total Hours Required for Certificate	45 hours

OFFICE ADMINISTRATION

**Associate in Applied Science Degree
Office Administration**

Area I – Written Composition

ENG 101 English Composition I.....	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101, PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total.....	6 hours

Area III – Natural Sciences and Mathematics

CIS 146 Microcomputer Applications	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
Total.....	6-7 hours

Area IV – History, Social and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: GEO 100, HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Course

Technical Core – Required of all options	
OAD 103 Intermediate Keyboarding.....	3 hours
OAD 125 Word Processing.....	3 hours

OAD 138 Records/Information Management.....	3 hours
BUS 215 Business Communication.....	3 hours
BUS 241 Principles of Accounting I.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Technical Core Total	18 hours

ECO 231 or 232	3 hours
BUS 245 Accounting with Quickbooks.....	3 hours
OAD 131 Business English	3 hours
OAD 200 or 212.....	3 hours
ACT/BUS/OAD Electives	15 hours
Choose from: ACT 249; BUS 242, 248; OAD 101, 126, 202, 211, 218, 231, 241, 243, 246	
Total Area V.....	45 hours
Total Hours Required for Degree	63-64 hours

**Associate in Applied Science Degree
Office Administration
Medical Office Option**

Area I – Written Composition

ENG 101 English Composition I.....	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101, PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total.....	6 hours

Area III – Natural Sciences and Mathematics

CIS 146 Microcomputer Applications	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
Total.....	6-7 hours

Area IV – History, Social and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: GEO 100, HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total.....	3 hours

**Area V – Pre-Professional, Major, and Elective Course
Core Courses**

Technical Core – Required of all options	
OAD 103 Intermediate Keyboarding.....	3 hours
OAD 125 Word Processing.....	3 hours
OAD 138 Records/Information Management.....	3 hours
BUS 215 Business Communication.....	3 hours
BUS 241 Principles of Accounting I.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Technical Core Total	18 hours

ECO 231 or 232	3 hours
MAT 101 or OAD 211	3 hours
OAD 212 Medical Transcription	3 hours
OAD/MAT/HIT Electives	9-12 hours
Choose from: MAT 120 or OAD 214; MAT 220 or OAD 215; MAT 121; MAT 128; OAD 241; or HIT 230, HIT 232	

ACT/BUS/OAD Electives	6-9 hours
Choose from: ACT 249; BUS 242, 248; OAD 101, 126, 131, 200 218, 231, 241, 243, 246	
Total Area V	45 hours
Total Hours Required for Degree	63-64 hours

**Associate in Applied Science Degree
Office Administration
Paralegal Option**

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204; MUS 101, PHL 206; REL 100, 151, 152; SPA 201, 202; THR 120, 126	
Total	6 hours

Area III – Natural Sciences and Mathematics

CIS 146 Microcomputer Applications	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
Total	6-7 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200, 210	
Total	3 hours

Area V – Pre-Professional, Major, and Elective Course

Technical Core – Required of all options	
OAD 103 Intermediate Keyboarding.....	3 hours
OAD 125 Word Processing.....	3 hours
OAD 138 Records/Information Management.....	3 hours
BUS 215 Business Communication.....	3 hours
BUS 241 Principles of Accounting I.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Technical Core Total	18 hours

BUS 263 The Legal and Social Environment of Business	3 hours
OAD 202 Legal Transcription	3 hours
ACT/BUS/OAD Electives	6-9 hours
Choose from: ACT 249; BUS 242, 248; OAD 101, 126, 218, 231, 241, 243, 246	
Paralegal electives.....	24 hours
Choose eight courses from PRL 101, 102, 103, 150, 160, 192, 210, 220, 230, 240, 262, 282, OAD 241	
Total Area V	57 hours
Total Hours Required for Degree	69-70 hours

SALON AND SPA MANAGEMENT

**Associate in Applied Science Degree
in Salon and Spa Management – Cosmetology**

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204, MUS 101, PHL 206, REL 100, 151, 152, SPA 201, 202, THR 120, 126	
Total	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH.....	3-4 hours
Math, Science or CIS Elective	3-4 hours
CIS 146 Microcomputer Applications	3 hours
Total	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200; 210	
Total	3 hours

Area V – Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options	
SAL 133 Salon Management Technology	3 hours
SAL 201 Entrepreneurship for Salon/Spa.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Technical Core Total	9 hours

COS 111 Introduction to Cosmetology.....	3 hours
COS 112 Introduction to Cosmetology Lab	3 hours
COS 113 Theory of Chemical Services	3 hours
COS 114 Chemical Services Lab.....	3 hours
COS 115 Hair Coloring Theory	3 hours
COS 116 Hair Coloring Lab	3 hours
COS 117 Basic Spa Techniques.....	3 hours
COS 118 Basic Spa Techniques Lab.....	3 hours
COS 123 Cosmetology Salon Practices.....	3 hours
COS 143 Specialty Hair Preparation Techniques	3 hours
COS 144 Hair Shaping and Design	3 hours
COS 190 Internship in Cosmetology	3 hours
Total Area V	45 hours
Total Hours Required for the AAS Degree	66-68 hours

Certificate in Salon & Spa Management – Cosmetology

ENG 101 English Composition I	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
WKO 106 Workplace Skills.....	3 hours
SAL 133 Salon Management Technology	3 hours
COS 111 Introduction to Cosmetology.....	3 hours
COS 112 Introduction to Cosmetology Lab	3 hours

COS 113 Theory of Chemical Services	3 hours
COS 114 Chemical Services Lab.....	3 hours
COS 115 Hair Coloring Theory	3 hours
COS 116 Hair Coloring Lab	3 hours
COS 117 Basic Spa Techniques.....	3 hours
COS 118 Basic Spa Techniques Lab.....	3 hours
COS 123 Cosmetology Salon Practices.....	3 hours
COS 143 Specialty Hair Preparation Techniques	3 hours
COS 144 Hair Shaping and Design	3 hours
COS 190 Internship in Cosmetology.....	3 hours
Total Hours Required for Certificate	54-55 hours

**Suggested Career Pathway
in Salon and Spa Management –
Cosmetology**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

COS 111 Introduction To Cosmetology.....	3 hours
COS 112 Introduction To Cosmetology Lab	3 hours
COS 113 Theory Of Chemical Services	3 hours
COS 114 Theory Of Chemical Services Lab	3 hours
Total.....	12 hours

**Eligible for Barbicide Certification*

Semester 2

COS 115 I Hair Coloring Theory.....	3 hours
COS 116 Hair Coloring Theory Lab.....	3 hours
COS 123 Cosmetology Salon Practices.....	3 hours
SAL 133 Salon Management Technology	3 hours
MTH 116 or any 100-level MTH.....	3 hours
Total.....	15 hours

**Eligible for Backscratchers Certification in Gel, Fiberglass and Dip Nails*

Semester 3

COS 117 Basic Spa Techniques.....	3 hours
COS 118 Basic Spa Techniques Lab.....	3 hours
COS 143 Specialty Hair Prep Techniques	3 hours
ENG 101 English Composition I.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Total.....	15 hours

**Eligible for National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 4

CIS 146 Microcomputer Applications	3 hours
SAL 133 Salon Management Technology	3 hours
COS 144 Hair Shaping & Design	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
COS 190 Internship In Cosmetology.....	3 hours
Total.....	15 hours

**Eligible for Certificate in Salon and Spa Management-COS*

Semester 5

Area IV History, Social, and Behavioral Science	3 hours
SAL 201 Entrepreneurship For Salon.....	3 hours

Area II Humanities & Fine Arts Elective.....	3 hours
Total.....	9 hours

**Eligible to sit for the Alabama Board of Cosmetology Exam*

**Eligible for AAS degree in Salon and Spa Management-
Cosmetology Option**

**Associate in Applied Science Degree
in Salon and Spa Management – Esthetics**

Area I – Written Composition

ENG 101 English Composition I.....	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204, MUS 101, PHL 206, REL 100, 151, 152, SPA 201, 202, THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH.....	3-4 hours
Math, Science or CIS Elective.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
Total.....	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200; 210	
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options

SAL 133 Salon Management Technology	3 hours
SAL 201 Entrepreneurship for Salon/Spa.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Technical Core Total	9 hours

COS 117 Basic Spa Techniques.....	3 hours
COS 118 Basic Spa Techniques Lab.....	3 hours
COS 127 Esthetics Theory.....	3 hours
COS 134 Advanced Esthetics	3 hours
COS 135 Advanced Esthetics Applications	3 hours
COS 163 Facial Treatments	3 hours
COS 164 Facial Machine.....	3 hours
COS 165 Related Subjects Estheticians.....	3 hours
COS 168 Bacteriology and Sanitation	3 hours
COS 190 Internship in Cosmetology	3 hours
COS 191 Co-Op.....	3 hours
Total Area V.....	42 hours
Total Hours Required for Degree	63-65 hours

Short-Term Certificate in Cosmetology – Esthetics

SAL 133 Salon Management Technology	3 hours
SAL 201 Entrepreneurship for the Salon/Spa.....	3 hours
COS 117 Basic Spa Techniques.....	3 hours
COS 118 Basic Spa Techniques Lab.....	3 hours

COS 163 Facial Treatments	3 hours
COS 164 Facial Machine	3 hours
COS 168 Bacteriology and Sanitation	3 hours
COS 190 Internship in Cosmetology	3 hours
COS 191 Co-op in Cosmetology	3 hours
Total Hours Required for Certificate	27 hours

Certificate in Salon & Spa Management – Esthetics

ENG 101 English Composition I	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications	3 hours
WKO 106 Workplace Skills.....	3 hours
SAL 133 Salon Management Technology	3 hours
SAL 201 Entrepreneurship for Salon/Spa.....	3 hours
COS 117 Basic Spa Techniques	3 hours
COS 118 Basic Spa Techniques Lab.....	3 hours
COS 127 Esthetics Theory.....	3 hours
COS 134 Advanced Esthetics	3 hours
COS 135 Advanced Esthetics Applications	3 hours
COS 163 Facial Treatments	3 hours
COS 164 Facial Machines	3 hours
COS 165 Related Subjects Estheticians.....	3 hours
COS 168 Bacteriology & Sanitation.....	3 hours
COS 190 Internship in Cosmetology	3 hours
COS 191 Co-Op in COS.....	3 hours
Total Hours Required for Certificate	54-55 hours

**Suggested Career Pathway
in Salon and Spa Management
Esthetics Option**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

COS 117 Basic Spa Techniques	3 hours
COS 118 Basic Spa Techniques Lab.....	3 hours
COS 190 Internship In Cosmetology	3 hours
SAL 201 Entrepreneurship For Salon.....	3 hours
Total.....	12 hours

Semester 2

SAL 133 Salon Management Technology	3 hours
COS 191 Co-op.....	3 hours
COS 168 Bacteriology And Sanitation	3 hours
COS 163 Facial Treatments	3 hours
COS 164 Facial Machines	3 hours
Total.....	15 hours

**Eligible for Short-Term Certificate in Esthetics*

Semester 3

MTH 116 or any 100-level MTH.....	3 hours
CIS 146 Microcomputer Applications	3 hours
COS 127 Esthetics Theory.....	3 hours
ENG 101 English Composition I.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Total.....	15 hours

**Eligible for National Career Readiness Certificate and OSHA 10 Hour Card*

Semester 4

COS 165 Related Subjects-Estheticians	3 hours
COS 134 Advanced Esthetics	3 hours
SPH 107 Fundamentals of Public Speaking	3 hours
SAL 201 Entrepreneurship For Salon.....	3 hours
COS 135 Advanced Esthetics Applications	3 hours
Total.....	15 hours

**Eligible for Certificate in Salon and Spa Management-EST*

Semester 5

Area IV History, Social, and Behavioral Science	3 hours
Area II Humanities & Fine Arts Elective.....	3 hours
Area III Math or Science or Computer Science Elective.....	3 hours
Total.....	9 hours

**Eligible to sit for the Alabama Board of Cosmetology Exam*

Eligible for AAS degree in Salon and Spa Management- Esthetics Option

**Associate in Applied Science Degree
in Salon and Spa Management
– Therapeutic Massage**

Area I – Written Composition

ENG 101 English Composition I	3 hours
Total.....	3 hours

Area II – Humanities and Fine Arts

SPH 107 Fundamentals of Public Speaking	3 hours
Humanities and Fine Arts Elective	3 hours
Choose from: ART 100, 203, 204, MUS 101, PHL 206, REL 100, 151, 152, SPA 201, 202, THR 120, 126	
Total.....	6 hours

Area III – Natural Science and Mathematics

MTH 116 or any 100-level MTH.....	3-4 hours
Math, Science or CIS Elective	3-4 hours
CIS 146 Microcomputer Applications	3 hours
Total.....	9-11 hours

Area IV – History, Social, and Behavioral Sciences

Area IV Elective.....	3 hours
Choose from: ECO 231, 232; GEO 100; HIS 101, 102, 201, 202; POL 211; PSY 200, 210; SOC 200; 210	
Total.....	3 hours

Area V – Pre-Professional, Major, and Elective Courses

Technical Core – Required of all options	
SAL 133 Salon Management Technology	3 hours
SAL 201 Entrepreneurship for Salon/Spa.....	3 hours
WKO 106 Workplace Skills.....	3 hours
Technical Core Total	9 hours

MSG 101 Introduction to Therapeutic Massage.....	2 hours
MSG 102 Therapeutic Massage Lab I	3 hours
MSG 103 Anatomy and Physiology	3 hours
MSG 104 Musculoskeletal and Kinesiology I.....	3 hours
MSG 105 Therapeutic Massage Supervised Clinical I.....	2 hours
MSG 200 Business and Marketing Plans.....	1 hour

MSG 201 Therapeutic Massage for Special Populations.....	2 hours
MSG 202 Therapeutic Massage Lab II.....	3 hours
MSG 203 Pathology.....	3 hours
MSG 204 Musculoskeletal and Kinesiology II.....	3 hours
MSG 205 Therapeutic Massage Supervised Clinical II.....	2 hours
MSG 206 Licensure Exam Review.....	1 hour
EMS 103 First Aid/CPR.....	1 hour
Electives.....	7 hours

Choose from: BUS, COS, HED, SAL, or CIS

Total Area V.....	45 hours
Total Hours Required for Degree	66-68 hours

Short-Term Certificate in Therapeutic Massage

MSG 101 Introduction to Therapeutic Massage.....	2 hours
MSG 102 Therapeutic Massage Lab I.....	3 hours
MSG 103 Anatomy and Physiology*.....	3 hours
MSG 104 Musculoskeletal and Kinesiology I.....	3 hours
MSG 105 Therapeutic Massage Supervised Clinical I.....	2 hours
MSG 200 Business and Marketing Plans.....	1 hour
MSG 201 Therapeutic Massage for Special Populations.....	2 hours
MSG 202 Therapeutic Massage Lab II.....	3 hours
MSG 203 Pathology.....	3 hours
MSG 204 Musculoskeletal and Kinesiology II.....	3 hours
MSG 205 Therapeutic Massage Supervised Clinical II.....	2 hours
MSG 206 Licensure Exam Review.....	1 hour
EMS 103 First Aid/CPR.....	1 hour

Total Hours Required for Short-Term Certificate	29 hours
--	-----------------

*BIO 201 is an approved substitute for MSG 103.

**Certificate in Salon & Spa Management –
Therapeutic Massage**

ENG 101 English Composition I.....	3 hours
SPH 107 Fundamentals of Public Speaking.....	3 hours
MTH 116 or any 100-level MTH.....	3-4 hours
CIS 146 Microcomputer Applications.....	3 hours
WKO 106 Workplace Skills.....	3 hours
SAL 133 Salon Management Technology.....	3 hours
MSG 101 Introduction to Therapeutic Massage.....	2 hours
MSG 102 Therapeutic Massage Lab.....	3 hours
MSG 103 Anatomy & Physiology.....	3 hours
MSG 104 Musculoskeletal & Kinesiology.....	3 hours
MSG 105 Therapeutic Massage Supervised Clinical I.....	2 hours
MSG 200 Business & Marketing Plans.....	1 hour
MSG 201 Therapeutic Massage for Special Populations.....	2 hours
MSG 202 Therapeutic Massage Lab II.....	3 hours
MSG 203 Pathology.....	3 hours
MSG 204 Musculoskeletal & Kinesiology II.....	3 hours
MSG 205 Therapeutic Massage Supervised Clinical II.....	2 hours
MSG 206 Licensure Exam Review.....	1 hour
EMS 103 First Aid/CPR.....	1 hour
Elective (Choose from BUS, COS, EMS, HED, or CIS).....	7 hours
Total Hours Required for Certificate	54-55 hours

**Suggested Career Pathway
in Salon and Spa Management
Massage Therapy Option**

This is a suggested Career Pathway for full-time students. Other options are available for part-time students. Students should consult an advisor.

Semester 1

MSG 101 Intro To Therapeutic Massage.....	2 hours
MSG 102 Therapeutic Massage Lab I.....	3 hours
MSG 103 Anatomy and Physiology.....	3 hours
MSG 104 Musculoskeletal and Kinesiology.....	3 hours
SPH 107 Fundamentals of Public Speaking.....	3 hours

Total.....	14 hours
-------------------	-----------------

*Eligible for National Career Readiness Certificate and OSHA 10 Hour Card

Semester 2

MSG 105 Therapeutic Massage Supervised Clinical I.....	2 hours
MSG 201 Therapeutic Massage For Special Population.....	2 hours
MSG 202 Therapeutic Massage Lab II.....	3 hours
MSG 204 Musculoskeletal And Kinesiology II.....	3 hours
EMS 103 First Aid/CPR.....	1 hour
CIS 146 Microcomputer Applications.....	3 hours

Total.....	14 hours
-------------------	-----------------

*Eligible for AHA CPR/First Aid Certification

Semester 3

MTH 116 or any 100-level MTH.....	3 hours
MSG 200 Business and Marketing Plans.....	1 hours
MSG 203 Pathology.....	3 hours
MSG 205 Therapeutic Massage Supervised Clinical II.....	2 hours
MSG 206 National Certification Exam Review.....	1 hours
ENG 101 English Composition I.....	3 hours

Total.....	13 hours
-------------------	-----------------

*Eligible for Short-Term Certificate in Massage Therapy

Semester 4

WKO 106 Workplace Skills.....	3 hours
SAL 133 Salon Management Technology.....	3 hours
Area II Humanities & Fine Arts Elective.....	3 hours
Area III Math or Science or Computer Science Elective.....	3 hours

Total.....	12 hours
-------------------	-----------------

*Eligible for Certificate in Salon and Spa Management-MSG

Semester 5

Area IV History, Social, and Behavioral Science.....	3 hours
SAL 201 Entrepreneurship For Salon.....	3 hours
Elective in BUS, COS, HED, SAL or CIS.....	3 hours
Elective in BUS, COS, HED, SAL or CIS.....	4 hours

Total.....	12 hours
-------------------	-----------------

*Eligible to sit for the Alabama Board of Massage Therapy Exam

**Eligible for AAS degree in Salon and Spa Management – Massage
Therapy Option**

WORKPLACE SKILLS

Short-Term Certificate in Workplace Skills

– Certified Production Technician

WKO 131 or WKO 110.....	3 hours
WKO 132, ENT 221, INT 119, ADM 101, or MTT 148.....	3 hours
WKO 133, MTT 147, ENT 106, or DDT 117.....	3 hours
WKO 134, INT 126, or ENT 242.....	3 hours

Total Hours Required for Short-Term Certificate	12 hours
--	-----------------