



# J.F. DRAKE STATE

## COMMUNITY & TECHNICAL COLLEGE

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*Catalog Addendum 0004 Catalog 2016-18 v1*

**EFFECTIVE June 28, 2017** – J.F. Drake State Community & Technical College has updated the Instructional Programs to include the following:

**New Short Certificates (STC) Programs offerings:**

- **MSSC**
- **APPLE**
- **Natural Hair**

**Changes to the minimum hours for graduation:**

- **Medical Assisting (AAS)**
- **Medical Assisting (STC)**

MTH110	Finite Mathematics	3
MTH112	Pre-Calculus Algebra	3
MTH113	Pre-Calculus Trigonometry I	3
MTH115	Pre-Calculus Algebra & Trigonometry	4
MTH116	Mathematical Applications	3
MTH120	Calculus and Its Application	3
MTH125	Calculus I	4
MTH126	Calculus II	4
MTH227	Calculus III	4

**Area IV: History, Social & Behavioral Sciences**

No Requirements

**Area V: Pre-professional, Major and Elective Courses 20 Cr. Hrs. (18 required, 2 institutional)**

*Note: All of the following courses listed in this section are required except ACT201, OAD101 and RDG114.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
ACT201	Entrepreneurism	3
ELT108	DC Fundamentals	3
ELT109	AC Fundamentals	3
ELT209	Motor Controls I	3
ELT230	Residential Wiring Methods II	3
ELT241	Programmable Controls	3
OAD101	Beginning Keyboarding	3
RDG114	Critical Reading	3

***Institutional Requirements (2 credits):***

*Note: ORI101 must be taken in the first semester. WKO107 must be taken in the final semester.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
ORI101	Orientation to College	1
WKO107	Workplace Skills Preparation	1

**Total Certificate Credit Hours 29**

**MANUFACTURING SKILLS STANDARDS COUNCIL (MSSC) CERTIFICATION**

J.F. Drake State Community and Technical College has developed a short-term certificate to implement nationally recognized industry certification programs driven by industries' hiring practices and workforce occupational forecasts. The MSSC will be for credit and non-credit options. This STC is comprised of 12 credit hours to include courses in the following areas: Safety, Quality Practices and Measurement, Manufacturing Processes and Production, and Maintenance Awareness.

**Short Certificate**

**Area I: Written Composition 0 Cr. Hrs.**

No Requirements

**Area II: Humanities and Fine Arts 0 Cr. Hrs.**

No Requirements

**Area III: Natural Sciences and Mathematics 0 Cr. Hrs.**

No Requirements

**Area IV: History, Social & Behavioral Sciences 0 Cr. Hrs.**

No Requirements

**Area V: Pre-professional, Major and Elective Courses 12 Cr. Hrs.**

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
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WKO131	MSSC Safety Course	3
WKO132	MSSC Quality Practice and Measurement Course	3
WKO133	MSSC Manufacturing Processes and Production Course	3
WKO134	MSSC Maintenance Awareness Course	3

**Total Certificate Credit Hours** 12

### MSSC CPT (WKO) Course Descriptions

**WKO131 – MSSC Safety Course (3 cr. hrs.)** This course is designed to provide students with knowledge and skills related to safety in a manufacturing environment. Topics covered include

- Work in a safe and productive manufacturing workplace
- Perform safety and environmental inspections
- Perform emergency drills and participate in emergency teams
- Identify unsafe conditions and take corrective action
- Provide safety orientation for all employees
- Train personnel to use equipment safely
- Suggest process and procedures that support safety of work environment
- Fulfill safety and health requirements for maintenance, installation and repair
- Monitor safe equipment and operator performance
- Utilize effective, safety-enhancing workplace practices

This course is equivalent to AUT 102.

Students completing this course will receive an MSSC certificate in Safety. Students completing courses WKO 131, 132, 133 and 134 will receive the Certified Production Technician credential.

**WKO132 – MSSC Quality Practice and Measurement Course (3 cr. hrs.)** This course is designed to provide students with knowledge and skills related to quality practices and measurement in a manufacturing environment. Topics covered include

- Participate in periodic internal quality audit activities
- Check calibration of gages and other data collection equipment
- Suggest continuous improvements
- Inspect materials and product/process at all stages to ensure they meet specifications
- Document the results of quality problems
- Communicate quality problems
- Take corrective actions to restore or maintain quality
- Record process outcomes and trends
- Identify fundamentals of blueprint reading
- Use common measurement systems and precision measurement tools

This course is equivalent to ADM 106.

Students completing this course will receive an MSSC certificate in quality practices and measurement. Students completing courses WKO 131, 132, 133 and 134 will receive the Certified Production Technician credential.

**WKO133 – MSSC Manufacturing Processes and Production Course (3 cr. hrs.)** This course is designed to provide students with knowledge and skills related to manufacturing processes and production in a manufacturing environment. Topics covered include

- Identify customer needs
- Determine resources available for the production process
- Set up equipment for the production process
- Set team production goals
- Make job assignments

- Coordinate work flow with team members and other work groups
- Communicate production and material requirements and product specifications
- Perform and monitor the process to make the product
- Document product and process compliance with customer requirements
- Prepare final product for shipping or distribution

This course is equivalent to AUT 144.

Students completing this course will receive an MSSC certificate in manufacturing processes and production. Students completing courses WKO 131, 132, 133 and 134 will receive the Certified Production Technician credential.

**WKO134 – MSSC Maintenance Awareness Course (3 cr. hrs.)** This course is designed to provide students with knowledge and skills related to maintenance awareness in a manufacturing environment. Topics covered include

- Prepare preventative maintenance and routine repair
- Monitor indicators to ensure correct operations
- Perform all housekeeping to maintain production schedule
- Recognize potential maintenance issues with basic production systems, including knowledge of when to inform maintenance personnel about problems with:
  - electrical systems;
  - pneumatic systems
  - hydraulic systems;
  - machine automation systems
  - lubrication systems
  - bearings and couplings

This course is equivalent to MET 220.

Students completing this course will receive an MSSC certificate in maintenance awareness. Students completing courses WKO 131, 132, 133 and 134 will receive the Certified Production Technician credential.

## Electrical (ELT) Course Descriptions

**ELT108 – DC Fundamentals (3 cr. hrs.)** This course is designed to provide students with a working knowledge of basic direct current (DC) electrical principles. Topics include safety, basic atomic structure and theory, magnetism, conductors, insulators, use of Ohm's law to solve for voltage, current, and resistance, electrical sources, power, inductors, and capacitors. Students will perform lockout/tagout procedures, troubleshoot circuits and analyze series, parallel, and combination DC circuits using the electrical laws and basic testing equipment to determine unknown electrical quantities. This course is also taught as ILT 160. PREREQUISITE: As required by program.

**ELT109 – AC Fundamentals (3 cr. hrs.)** This course is designed to provide students with a working knowledge of basic alternating current (AC) electrical principles. Topics include basic concepts of electricity, electrical components, basic circuits, measurement instruments, the laws of alternating current, and electrical safety with lockout procedures. Hands on laboratory exercises are provided to analyze various series, parallel, and combination alternating current circuit configurations containing resistors, inductors, and capacitors. Upon course completion, students will be able to describe and explain alternating current circuit fundamentals such as RLC circuits, impedance, phase relationships, and power factors. They should also be able to perform fundamental tasks associated with troubleshooting, repairing, and maintaining industrial AC systems. This course is also taught as ILT161. PREREQUISITE: As required by program.

CIS222	Database management – SQL	3
CIS245	Cyber Terrorism	3
CIS246	Ethical Hacking	3
CIS249	Microcomputer Operating Systems	3
CIS251	C++ Programming	3
CIS252	Advanced C++ Programming	3
CIS255	JAVA Programming	3
CIS256	Advance Java	3
CIS268	Software Support	3
CIS269	Hardware Support	3
CIS270	CISCO I	3
CIS271	CISCO II	3
CIS272	CISCO III	3
CIS273	CISCO IV	3
CIS276	Server Administration	3
CIS277	Network Services Administration	3
CIS280	Network Security	3
CIS281	Systems Analysis and Design	3
CIS282	Computer Forensics	3
CIS284	Internship	3
CIS287	SQL Server	3
CIS294	Special Topics Data Structures	3
CIS296	Special Topics Intro Dig DS	3
EET115	Concepts of Digital Electronics	5
EET186	Microcomputer Fundamentals	3
EET232	Microcomputer Fundamentals Lab	2
EET254	Computer Repair Lab	2
EET255	PC Repair	3
EET256	Microprocessors	3
EET257	Microprocessor Lab	2
MTH100	Intermediate College Algebra	3
OAD101	Beginning Keyboarding	3
RDG114	Critical Reading	3

***Institutional Requirements (2 credits):***

*Note: ORI101 must be taken in the first semester. WKO107 must be taken in the final semester.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
ORI101	Orientation to College	1
WKO107	Workplace Skills Preparation	1

Total Degree Credit Hours 66

**Short Certificate – Apple Certification**

App Development with Swift is a full-year course designed by Apple engineers and educators to teach students elements of app design using Swift, one of the world’s most popular programming languages. Students will learn to code and design fully functional apps, gaining critical job skills in software development and information technology.

Area I: Written Composition 0 Cr. Hrs.

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
	No Requirements	

Area II: Humanities and Fine Arts

No Requirements

Area III: Natural Sciences and Mathematics 0 Cr. Hrs.

No Requirements

Area IV: History, Social & Behavioral Sciences 0 Cr. Hrs.

No Requirements

Area V: Pre-professional, Major and Elective Courses 9 Cr. Hrs.

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
CIS155	Introduction to Mobile App Development	3
CIS217	iOS App Development	3
CIS259	Advanced Mobile App Development	3

Total Certificate Credit Hours 9

**Area V: Pre-professional, Major and Elective Courses** 20 Cr. Hrs.  
(18 required, 2 institutional)

*Note: CIT211, CIT212, CIT213 CIT214, CIT222, CIT223 are required courses.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
CIT211	Teaching and Curriculum Development	3
CIT212	Teaching Mentorship	3
CIT213	Cosmetology Instructor Co-op	3
CIT214	Lesson Plan Methods and Development	3
CIT222	Aud/Vis Materials & Methods	3
CIT223	Aud/Vis Materials & Methods Applications	3

***Institutional Requirements (2 credits):***

*Note: ORI101 must be taken in the first semester. WKO107 must be taken in the final semester.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
ORI101	Orientation to College	1
WKO107	Workplace Skills Preparation	1

**Total Certificate Credit Hours** 20

**Short Certificate - Natural Hair**

This 9 credit hour short term certificate in Natural Hair is designed to educate the learner on everything they need to know about growing longer, healthier natural hair and more. Natural hair's texture has not been tampered with relaxers and/or texturizers. This STC covers everything related to natural hair care from shampooing to styling. Topics include hair, health, hair extensions, hair braiding, dreadlocks and culture from a holistic approach.

**Area I: Written Composition** 0 Cr. Hrs

No Requirements

**Area II: Humanities and Fine Arts** 0 Cr.Hrs

No Requirements

**Area III: Natural Sciences and Mathematics** 0 Cr. Hrs

No Requirements

**Area IV: History, Social & Behavioral Sciences** 0 Cr. Hrs

No Requirements

**Area V: Pre-professional, Major and Elective Courses** 9 Cr. Hrs.

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
COS111	Introduction to Cosmetology	3
COS112	Introduction to Cosmetology Lab	3
COS146	Hair Additions	3
<b>Total Certificate Credit Hours</b>		<b>9</b>

## Associate of Applied Science Degree

### MEDICAL ASSISTING

The Medical Assisting Program is intended to prepare students to provide patient care in physician's offices, minor emergency centers, long-term care facilities, and other types of free-standing medical clinics. In the clinical role, the medical assistant provides assistance to the physician during assessment and examination of patients, treatment interventions, and in-office diagnostic protocols. Students in this program will learn to perform physical assessments, take medical histories, take and record vital signs, administer medications, perform venipuncture, and interpret basic laboratory results.

Medical Assistants are also prepared to assume office administrative roles in physician's offices, including scheduling procedures, billing protocols, coding mechanisms, typing of medical correspondence utilizing appropriate medical terminology, office accounting procedures, and insurance processing.

Upon completion of this program, the student will be awarded the A.A.S. – Associate in Applied Science degree—and will be eligible to take the certification examination conducted by the American Medical Technologist Association (AMT).

#### Area I: Written Composition 6 Cr. Hrs.

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
ENG101	English Comp. I	3
ENG102	English Comp. II	3

#### Area II: Humanities and Fine Arts 3 Cr. Hrs.

*Note: If transferring to a 4 year institution, students are highly recommended to take a sequence of 6 hours in either Literature (AreaII) or History (AreaIV). An additional 3*

*hours in humanities and fine arts must be taken along with SPH 106, SPH107, SPA101 or SPA102 to satisfy requirements in Area II.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
ART100	Art Appreciation	3
ART203	Art History I	3
ENG251	American Literature I	3
ENG252	American Literature II	3
ENG261	English Literature I	3
ENG262	English Literature II	3
ENG271	World Literature I	3
ENG272	World Literature II	3
MUS101	Music Appreciation	3
PHL206	Ethics & Society	3
REL100	History of World Religions	3
REL151	Survey of Old Testament	3
REL152	Survey of New Testament	3
SPA101	Introductory Spanish I	3
SPA102	Introductory Spanish II	3
SPH106	Fundamentals of Oral Communication	3
SPH107	Fundamentals of Public Speaking	3
THR120	Theater Appreciation	3
THR126	Intro to Theater	3

#### Area III: Natural Sciences and Mathematics 10 Cr. Hrs.

*Note: CIS146 is required. MTH100 or higher is required. One science class is required.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
CIS146	Microcomputer Applications	3
MTH100	Intermediate College Algebra	3
MTH110	Finite Mathematics	3
MTH112	Pre-Calculus Algebra	3
MTH113	Pre-Calculus Trigonometry I	3
MTH115	Pre-Calculus Algebra & Trigonometry	4
MTH120	Calculus and Its Application	3
MTH125	Calculus I	4
MTH126	Calculus II	4
MTH227	Calculus III	4
BIO103	Principles of Biology I	4

BIO104	Principles of Biology II	4
BIO201	Human Anatomy & Physiology I	4
BIO202	Human Anatomy & Physiology II	4
CHM111	College Chemistry I	4
CHM112	College Chemistry II	4
GEO101	Principles of Physical Geography I	4
GEO102	Principles of Physical Geography II	4
PHS111	Physical Science I	4
PHS112	Physical Science II	4
PHY120	Intro to Physics	4
PHY201	General Physics I	4
PHY202	General Physics II	4
PHY213	Gen. Physics with Calculus I	4
PHY214	Gen. Physics with Calculus II	4

**Area IV: History, Social and Behavioral Sciences** 3 Cr. Hrs.

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
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ECO231	Principles of Macroeconomics	3
ECO232	Principles of Microeconomics	3
GEO100	World Regional Geography	3
HIS101	Western Civilization I	3
HIS102	Western Civilization II	3
HIS121	World History I	3
HIS122	World History II	3
HIS201	US History I	3
HIS202	US History II	3
POL200	Intro to Political Science	3
PSY200	General Psychology	3
PSY210	Human Growth and Development	3
SOC200	Intro to Sociology	3

**Area V: Pre-professional, Major and Elective Courses** 42 Cr. Hrs.

(40 required, 2 institutional)

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
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BIO120	Medical Terminology	3
MAT102	Medical Assisting Theory I	3
MAT103	Medical Assisting Theory II	3
MAT111	Clinical Procedures I for the Medical Assistant	3

MAT120	Medical Administrative Procedures I	3
MAT121	Medical Administrative Procedures II	3
MAT125	Laboratory Procedures I for the Medical Assistant	3
MAT200	Management of Office Emergencies	2
MAT211	Clinical Procedures II for the Medical Assistant	3
MAT215	Laboratory Procedures II for the Medical Assistant	3
MAT216	Medical Pharmacology for the Medical Office	4
MAT220	Medical Office Insurance	3
MAT228	Medical Assisting Review Course	1
MAT229	Medical Assisting Preceptorship	3

**Institutional Requirements (2 credits):**

*Note: Institutional requirement course ORI101 must be taken in the 1<sup>st</sup> semester. Institutional requirement course WKO107 must be taken in the final semester.*

<i>Course</i>	<i>Title</i>	<i>Cr. Hrs.</i>
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ORI101	Orientation to College	1
WKO107	Workplace Skills Preparation	1

**Total Degree Credit Hours** 64

**Short Certificate**

**Area I: Written Composition**

No requirements

**Area II: Humanities and Fine Arts**

No Requirements



Area III: Natural Sciences and Mathematics 0 Cr. Hrs

Course	Title	Cr. Hrs.
No Requirements		

Area IV: History, Social & Behavioral Sciences

No Requirements

Area V: Pre-professional, Major and Elective Courses 18 Cr. Hrs.

*Note: All of the courses listed for this section are required except BIO103, BIO201, CIS 130, CIS146, MAT101, MAT222, MAT239, OAD101 and RDG114.*

Course	Title	Cr. Hrs.
BIO120	Medical Terminology	3
MAT102	Medical Assisting Theory I	3
MAT103	Medical Assisting Theory II	3
MAT111	Clinical Procedures I for the Medical Assistant	3
MAT120	Medical Administrative Procedures I	3
MAT121	Medical Administrative Procedures II	3
<b>Total Certificate Credit Hours</b>		<b>18</b>

**Medical Assisting (MAT) Course Descriptions**

**BIO 120 – Medical Terminology (3 cr. hrs.)** This course is designed for medical assistants, student nurses, and others in medically related fields. The course will focus on the more common prefixes, roots, and suffixes used to construct medical terms with these word parts to determine the meanings of new or unfamiliar terms. The student will learn a system of word building which will enable them to interpret medical terms. PREREQUISITE: None.

**MAT102 – Medical Assisting Theory I (3 cr. hrs.)** A description of anatomical descriptors and the cell introduces the student to and serves as an overview of the body's systems. The structure and function of the nervous, sensory, integumentary, muscular, skeletal, respiratory, and cardiovascular systems are taught with the diseases related to these systems presented. Upon completion, students should be able to demonstrate a basic working knowledge of these body systems. PREREQUISITE: None.

**MAT103 – Medical Assisting Theory II (3 cr. hrs.)** The structure and function of the digestive, urinary, reproduction, endocrine, and immune systems are presented. Disease processes that are related to these systems will be included. Basic concepts of reproduction, growth and development, and nutrition are taught. Upon completion, students should be able to demonstrate a basic working knowledge of these body systems. PREREQUISITE: None.

**MAT111 – Clinical Procedures I for the Medical Assistant (3 cr. hrs.)** This course includes instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with examination, and patient education. Upon completion, students will be able to demonstrate competence in exam room procedures. PREREQUISITE: None.

**MAT120 – Medical Administrative Procedures I (3 cr. hrs.)** This course introduces medical office administrative procedures. Topics include appointment scheduling, telephone techniques, managing the physician's schedule, handling mail, preparing and maintaining medical records, and patient orientation. Upon completion, students should be able to perform basic medical secretarial skills. PREREQUISITE: CIS146, OAD101 or type 30 wpm or enroll in ENG 101

**MAT121 – Medical Administrative Procedures II (3 cr. hrs.)** This course is the continuation of Medical Administrative Procedures I. Topics

include physical plant maintenance, equipment, and supplies, inventories, liability coverage, medical economics, and an introduction to insurance procedures. Upon completion students should be able to manage the economics of the medical office and supervise personnel. PREREQUISITE: BIO103, BIO201, ENG101, MAT120

**MAT125 – Lab Procedures I for the Medical Assistant (3 cr. hrs.)** This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective diagnostic tests, such as a CBC, screening and follow-up of test results and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics. PREREQUISITE: MAT102

**MAT200- Management of Office Emergencies (2 cr. hrs.)** This course is designed to instruct students in handling emergencies in the medical office. Emergencies presented will include cardiovascular emergencies, diabetic emergencies, seizures, syncope, hyperthermia and hypothermia, shock, musculoskeletal emergencies, and poisoning. Upon completion, students should be able to recognize emergency situations and take appropriate actions.

**MAT211 – Clinical Procedures II for the Medical Assistant (3 cr. hrs.)** This course includes instruction in vital signs and special examination procedures. Emphasis is placed on interviewing skills, appropriate triage and preparing patients for diagnostic procedures. Upon completion, students should be able to assist with special procedures.

**MAT215 – Laboratory Procedures II for the Medical Assistant (3 cr. hrs.)** This course instructs the student in the fundamental theory and lab application for the medical office. Microbiology, urinalysis, serology, blood chemistry, and venipuncture theory as well as venipuncture collection procedures are discussed and performed. Upon completion, students should be able to perform basic lab tests/skills on course topics.

**MAT216 – Medical Pharmacology for the Medical Office (4 cr. hrs.)** This course teaches the commonly administered drugs used in the medical field including their classifications, actions, indications, contraindications, and side effects on the body. Correct demonstration of drug calculation, preparation, administration, and documentation are also taught. Upon completion, students should be able to demonstrate safe drug administration and recognize common medical classifications and their patient implications.

**MAT220 – Medical Office Insurance (3 cr. hrs.)** In this course emphasis is placed on insurance procedures with advanced diagnostic and procedural coding in the outpatient facility. Study will include correct completion of insurance forms and coding. Upon completion, students should be able to demonstrate proficiency in coding for reimbursements..

**MAT228 – Medical Assistant Review Course (1 cr. hr.)** This course includes a general review of administrative and clinical functions performed in a medical office. The course will assist the student or graduate in preparing for national credentialing examination. PREREQUISITE: None.

**MAT229 – Medical Assistant Practicum – (3 cr. hrs.)** This course is designed to provide the opportunity to apply clinical, laboratory, and administrative skills in a physician's office, clinic or outpatient facility. The student will gain experience in applying knowledge learned in the classroom in enhancing competence, in strengthening professional communications and interactions. Upon completion, students should be able to perform as an entry-level Medical Assistant. Content of this course is aligned with standards and guidelines from the American Association of Medical Assisting.

## **PRACTICAL NURSING**

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Practical Nursing is a comprehensive course of study that combines theory with clinical practice. The curriculum is designed to provide qualified individuals with an opportunity to