CAMPUS LOCATIONS

Springlake Campus • Oklahoma City, OK 73111
Business Conference Center (BCC) • 1900 Springlake Drive
Child Care Training Center (CCC) • 3901 Martin Luther King Avenue
Economic Development Center (EDC) • 1700 Springlake Drive
Financial Services (FS) • 1600 Springlake Drive
Health Careers Center (HCC) • 1720 Springlake Drive
Information Technology Center (ITC) • 1800 Springlake Drive
Metro Career Academy (MCA) 1901 Springlake Drive 73111
STEM Academy (STEM) • 1700 Staton Drive

Aviation Career Campus (ACC)
Will Rogers World Airport
5600 S. MacArthur Boulevard
Oklahoma City, OK 73179

Downtown Business Campus (DBC)
Chase Cotter Tower
100 N. Broadway, 3rd Floor
Oklahoma City, OK 73102

South Bryant Campus (SBC)
4901 S. Bryant Avenue
Oklahoma City, OK 73129
<table>
<thead>
<tr>
<th>Table of Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information ................................................. I-VI</td>
</tr>
<tr>
<td>Accounting and Banking Services ................................. 1</td>
</tr>
<tr>
<td>Accounts Payable/Receivable Clerk ................................. 2</td>
</tr>
<tr>
<td>Financial Clerk ......................................................... 3</td>
</tr>
<tr>
<td>Financial Services Representative ................................. 4</td>
</tr>
<tr>
<td>Full Charge Bookkeeper ............................................... 5</td>
</tr>
<tr>
<td>Payroll Accounting Clerk .............................................. 6</td>
</tr>
<tr>
<td>Administrative Assisting .............................................. 9</td>
</tr>
<tr>
<td>Administrative Assistant ............................................. 10</td>
</tr>
<tr>
<td>Aircraft Maintenance .................................................. 13</td>
</tr>
<tr>
<td>Aerospace Maintenance Foundations ............................... 14</td>
</tr>
<tr>
<td>Airframe Mechanic .................................................... 15</td>
</tr>
<tr>
<td>Airframe Mechanic - Evening ........................................... 16</td>
</tr>
<tr>
<td>Aviation Maintenance Technician ..................................... 17</td>
</tr>
<tr>
<td>Aviation Maintenance Technician - Evening ....................... 18</td>
</tr>
<tr>
<td>Powerplant Mechanic .................................................. 19</td>
</tr>
<tr>
<td>Powerplant Mechanic - Evening ....................................... 20</td>
</tr>
<tr>
<td>Auto Body Repair ....................................................... 25</td>
</tr>
<tr>
<td>Combination Collision repair Technician .......................... 26</td>
</tr>
<tr>
<td>Non-Structural Repair Technician .................................... 27</td>
</tr>
<tr>
<td>Auto Service ............................................................. 29</td>
</tr>
<tr>
<td>Automotive Maintenance &amp; Light Repair ......................... 30</td>
</tr>
<tr>
<td>Technician - NATEF Compliant ........................................ 31</td>
</tr>
<tr>
<td>Avionics Electronics Technician ...................................... 35</td>
</tr>
<tr>
<td>Avionics Technician .................................................... 36</td>
</tr>
<tr>
<td>Electronics Technician ................................................ 37</td>
</tr>
<tr>
<td>Biomedical Sciences Academy ....................................... 41</td>
</tr>
<tr>
<td>Biomedical Sciences Academy ........................................ 42</td>
</tr>
<tr>
<td>Climate and Energy Control Technologies ......................... 45</td>
</tr>
<tr>
<td>Commercial Refrigeration Technician ............................. 46</td>
</tr>
<tr>
<td>HVAC/R Technician - Evening ......................................... 47</td>
</tr>
<tr>
<td>HVAC/R Technician ..................................................... 49</td>
</tr>
<tr>
<td>Residential HVAC Installer ............................................. 50</td>
</tr>
<tr>
<td>Residential HVAC Installer - Evening ............................... 51</td>
</tr>
<tr>
<td>Computer Repair &amp; Networking ...................................... 53</td>
</tr>
<tr>
<td>Desktop Support Technician ........................................... 54</td>
</tr>
<tr>
<td>Network PC Support Specialist ....................................... 55</td>
</tr>
<tr>
<td>Network Sysyms Technician (Security Emphasis) ................ 56</td>
</tr>
<tr>
<td>PC Support Technician ................................................ 57</td>
</tr>
<tr>
<td>Construction Trades .................................................... 61</td>
</tr>
<tr>
<td>Finish Carpenter ......................................................... 62</td>
</tr>
<tr>
<td>Frame Carpenter ........................................................ 63</td>
</tr>
<tr>
<td>Maintenance/Repair Carpenter ....................................... 64</td>
</tr>
<tr>
<td>Cosmetology ............................................................... 67</td>
</tr>
<tr>
<td>Cosmetologist - Evening ............................................... 68</td>
</tr>
<tr>
<td>Cosmetologist - High School ......................................... 69</td>
</tr>
<tr>
<td>Cosmetology Facialist Instructor ..................................... 70</td>
</tr>
<tr>
<td>Cosmetology Master Instructor ....................................... 71</td>
</tr>
<tr>
<td>Cosmetology Nail Technician Instructor ............................ 72</td>
</tr>
<tr>
<td>Esthetician - Evening ................................................... 73</td>
</tr>
<tr>
<td>Esthetician - High School .............................................. 74</td>
</tr>
<tr>
<td>Nail Technician - Evening .............................................. 75</td>
</tr>
<tr>
<td>Nail Technician - High School ........................................ 76</td>
</tr>
<tr>
<td>Culinary Arts ............................................................. 79</td>
</tr>
<tr>
<td>Baker Assistant .......................................................... 80</td>
</tr>
<tr>
<td>Banquet Caterer .......................................................... 81</td>
</tr>
<tr>
<td>Culinarian - MCA .......................................................... 82</td>
</tr>
<tr>
<td>Culinarian - SBC ........................................................... 83</td>
</tr>
<tr>
<td>Culinary Arts Assistant - MCA ........................................ 84</td>
</tr>
<tr>
<td>Culinary Arts Assistant - SBC ......................................... 85</td>
</tr>
<tr>
<td>Restaurant Manager ..................................................... 86</td>
</tr>
<tr>
<td>Dental Assisting ........................................................ 89</td>
</tr>
<tr>
<td>Dental Assistant ........................................................ 90</td>
</tr>
<tr>
<td>Drafting Technician ..................................................... 93</td>
</tr>
<tr>
<td>CADD Architectural Technician ....................................... 94</td>
</tr>
<tr>
<td>CADD Civil Technician .................................................. 95</td>
</tr>
<tr>
<td>CADD Manufacturing Technician ..................................... 96</td>
</tr>
<tr>
<td>Early Childhood Development ....................................... 99</td>
</tr>
<tr>
<td>Early Care and Education Director ................................. 100</td>
</tr>
<tr>
<td>Early Care and Education Master Teacher .......................... 101</td>
</tr>
<tr>
<td>Early Care and Education Teacher Assistant ....................... 102</td>
</tr>
<tr>
<td>Paraprofessional Teacher Assistant/Child Development Assoc. 103</td>
</tr>
<tr>
<td>Electrical Technology .................................................. 107</td>
</tr>
<tr>
<td>Electrician's Assistant Unlimited Complete ......................... 108</td>
</tr>
<tr>
<td>Residential Electrician's Assistant ................................... 109</td>
</tr>
<tr>
<td>Entrepreneurship ......................................................... 111</td>
</tr>
<tr>
<td>Entrepreneurship Introduction ......................................... 112</td>
</tr>
<tr>
<td>Small Business Entrepreneur .......................................... 113</td>
</tr>
<tr>
<td>Graphic Design ........................................................... 115</td>
</tr>
<tr>
<td>Production Artist ........................................................ 116</td>
</tr>
<tr>
<td>Visual Arts Specialist ................................................... 117</td>
</tr>
<tr>
<td>Health Careers Certification .......................................... 119</td>
</tr>
<tr>
<td>Advanced Unlicensed Assistant ....................................... 120</td>
</tr>
<tr>
<td>Nurse Aide ................................................................. 121</td>
</tr>
<tr>
<td>Pharmacy Clerk ......................................................... 122</td>
</tr>
<tr>
<td>Pharmacy Technician .................................................... 123</td>
</tr>
<tr>
<td>Physical Therapy Aide .................................................... 124</td>
</tr>
<tr>
<td>Horticulture ............................................................... 127</td>
</tr>
<tr>
<td>Floral Design Entrepreneur ............................................. 128</td>
</tr>
<tr>
<td>Horticulture Entrepreneur .............................................. 129</td>
</tr>
<tr>
<td>Horticulture Technician ............................................... 130</td>
</tr>
<tr>
<td>Landscape Designer (T&amp;I) ............................................... 131</td>
</tr>
<tr>
<td>Law Enforcement Services ............................................. 133</td>
</tr>
<tr>
<td>Law Enforcement Officer Prep ......................................... 134</td>
</tr>
<tr>
<td>Legal Office Services ................................................... 137</td>
</tr>
<tr>
<td>Legal Office Assistant .................................................. 138</td>
</tr>
<tr>
<td>Legal Receptionist ....................................................... 139</td>
</tr>
<tr>
<td>Medical Assisting ......................................................... 141</td>
</tr>
<tr>
<td>Medical Assistan ......................................................... 142</td>
</tr>
<tr>
<td>Medical Office Technology ............................................ 145</td>
</tr>
<tr>
<td>Electronic Records Specialist ......................................... 146</td>
</tr>
<tr>
<td>Medical Insurance Coder ................................................ 147</td>
</tr>
<tr>
<td>Medical Office Assistant .............................................. 148</td>
</tr>
<tr>
<td>Practical Nursing ......................................................... 151</td>
</tr>
<tr>
<td>1+1 Practical Nurse ...................................................... 152</td>
</tr>
<tr>
<td>Practical Nurse ............................................................ 153</td>
</tr>
<tr>
<td>Pre-Engineering .......................................................... 157</td>
</tr>
<tr>
<td>PLTW Pre-Engineering ................................................... 158</td>
</tr>
<tr>
<td>Radiologic Technology .................................................. 161</td>
</tr>
<tr>
<td>Radiologic Technologist ................................................. 162</td>
</tr>
<tr>
<td>Surgical Technology ..................................................... 165</td>
</tr>
<tr>
<td>Surgical Technologist ................................................... 166</td>
</tr>
<tr>
<td>Video &amp; Web Design ..................................................... 169</td>
</tr>
<tr>
<td>Digital Cinema &amp; Web Specialist .................................... 170</td>
</tr>
<tr>
<td>Welding ................................................................. 173</td>
</tr>
<tr>
<td>Combination Welder .................................................... 174</td>
</tr>
<tr>
<td>SMAW Structural Welder ............................................... 175</td>
</tr>
<tr>
<td>Structural and Pipe Welder .............................................. 176</td>
</tr>
<tr>
<td>Structural Welder ........................................................ 177</td>
</tr>
</tbody>
</table>

Metro Technology Centers • Catalog 2016-2017 • 405-595-4678
OUR MISSION, VISION, COMMITMENT, CORE VALUES & STRATEGIC GOALS

Our Mission
Metro Technology Centers prepares people for successful employment and life in a global society.

Our Vision
Metro Technology Centers will be recognized as a strategic partner in economic development by preparing a high-quality workforce.

Our Commitment
Metro Technology Centers seeks to provide the highest quality programs and services enabling students to succeed in their chosen career field. (Board Policy BP-1007)

Our Core Values
Customer-focused
Learning-centered
Accountable and ethical
Innovative
Nurturing, sensitive and supportive
Dedicated to continuous quality improvement
Agile and flexible

Our Core Competencies
Holistic approach to education
Career and technical training
HIGH SCHOOL STUDENTS

High school juniors and seniors from the following schools may attend Metro Tech tuition FREE:

- Oklahoma City Public Schools
- Crooked Oak Public Schools
- Millwood Public Schools
- Private
- Home-schooled
- Alternative
- Charter

**Students must have maintained 85% attendance** from the previous semester and must have completed core requirements for 9th or 10th grade before enrolling at Metro Tech.

**Free bus transportation** is provided to and from participating high schools. High school students attend either morning or afternoon sessions.

**Tuition waivers** may be available for students who continue their education at Metro Tech after high school graduation. Students earn high school credits for completing a full-time career major. College credit is also available for most career majors.

**Reciprocity agreements** allow students outside of Metro Tech’s district to attend when a career major is not available at their local technology center.

**STEPS TO ENROLL-HIGH SCHOOL STUDENTS IN-DISTRICT STUDENTS**

Step 1  Attend presentation at your high school
Step 2  Complete career preference survey
Step 3  Complete high school application
Step 4  Return all forms to the Metro Tech recruiter at your high school
Step 5  Visit with a Metro Tech staff member to complete enrollment process

**IN-DISTRICT HOME SCHOOLED AND PRIVATE SCHOOLED STUDENTS, OUT-OF-DISTRICT STUDENTS**

Step 1  Visit Enrollment Services Monday-Friday, 7:30am - 4:30pm.
Step 2  Complete career preference survey.
Step 3  Complete high school application.
Step 4  Home schooled students need to bring a completed and notarized affidavit to the:

    **Enrollment, Recruitment and Transition Services**
    **Business Conference Center**
    **Springlake Campus**
    **1900 Springlake Drive**

Step 5  Turn in all forms to the career advisor.
Step 6  Student will be assigned a recruiter who will assist in completing the enrollment process.
ADULT STUDENTS
Adults may attend on a full-time or half-time basis. A 600-hour career major takes approximately five months to complete on a full-time basis. Most career majors are self-paced and may require more or less time to complete. College credit is available for most career majors with the $8/college hour transcripting fee included in the tuition cost. Books, supplies and related fees may cost extra.

STEPS TO ENROLL – ADULTS
Step 1 Complete the application and assessment testing at the Enrollment Center. A photo ID is required.
Step 2 Meet with a career tech advisor.
Step 3 Make payment or arrange for financial aid. A $35 non-refundable deposit is required.
Step 4 Meet with a site counselor. Additional documentation may be required.

Enrollment Center
Springlake Campus
Business Conference Center
1900 Springlake Drive
Oklahoma City, OK
M-F 7:30 a.m. – 4:30 p.m.

Services available:
Career major enrollment
Short-term enrollment
Assessment testing
Financial aid
Job placement services

For extended hours during peak enrollment, refer to the Metro Tech website: www.metrotech.edu/majors/howtoenroll.html

Financial Aid
Financial aid in the form of scholarships, grants, veteran’s benefits, loans and tuition waiver programs are available for qualified persons enrolled in full-time career majors. Students may apply for the Federal Pell Grant and Stafford Loan Programs online by completing the Free Application for Federal Student Aid (FAFSA) at www.fafsa.ed.gov. For more information, call 595-4446 or 595-4436.

General Information
Course times may vary by campus.
The following is a guideline:
Morning session: 7:40-10:30 a.m.
Afternoon session: 11:25 a.m.-2:15 p.m.
Lunch: 10:30-11:25 a.m.
Evening session: varies by major (adult only)

College Credit
Some certifications and/or licenses obtained at Metro Technology Centers may be applicable towards an associate’s degree from a community college in Oklahoma. For more information visit www.metrotech.edu.

Students with Disabilities
Metro Tech provides reasonable accommodations and support for students with disabilities covered by the Americans with Disabilities Act (ADA), Section 504 of the Rehabilitation Act of 1973 and Individuals with Disabilities Education Act (IDEA). If you have concerns or need an accommodation, please call Jade Carter, 405.595.4418, or email jade.carter@metrotech.edu.

Accreditation
Metro Technology Centers is accredited by:
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
PAYMENT SCHEDULE FOR FULL-TIME STUDENTS

FULL-TIME STUDENTS’ PAYMENT SCHEDULE FOR TUITION, BOOKS AND SUPPLIES

Metro Tech students are responsible for ensuring that all fees for tuition, books and supplies are paid on time. Payments are to be made in person or by mail to the office of the Bursar in the Business Conference Center, 1900 Springlake Drive, Oklahoma City, OK 73111. Fees for tuition, books and supplies for full-time students are due and payable on the first day of class.

Students may make arrangements with the Bursar to establish a payment plan according to the following schedule:

<table>
<thead>
<tr>
<th>For career majors:</th>
<th>Fees for tuition, books and supplies will be collected:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 1,650 hours</td>
<td>In two installments equal to one-half of the total cost of the tuition, books and supplies</td>
</tr>
<tr>
<td></td>
<td>• First installment due within first 30 days of career major</td>
</tr>
<tr>
<td></td>
<td>• Second installment due at beginning of the second half of the career major</td>
</tr>
<tr>
<td>1,651 hours and up (AMT, Radiologic Technologist)</td>
<td>In four installments equal to one-fourth of the total cost of the tuition, books and supplies</td>
</tr>
<tr>
<td></td>
<td>• First installment due within first 30 days of career major</td>
</tr>
<tr>
<td></td>
<td>• Second through fourth installments due at beginning of each of those quarters of the career major</td>
</tr>
</tbody>
</table>

A $20 monthly penalty will be assessed on the unpaid balance of an installment.

A full-time student who does not pay fees for tuition, books, and supplies according to the schedule above will not be allowed to attend classes until all fees are paid or arrangements to establish a payment plan have been made through the Bursar.

Students who must repeat a course due to low scores will be required to pay additional tuition for the course that must be repeated.

Financial aid and/or agency-sponsored students are exempt from tuition penalties. Tuition collection for these students will follow Federal regulations and/or the sponsoring agency’s policy.
FULL-TIME STUDENTS’ TUITION REFUND POLICY

Full-time students who desire to withdraw from or drop a course or career major will request a tuition refund in writing and provide proof of withdrawal to the Bursar in the Business Conference Center, 1900 Springlake Drive, Oklahoma City, OK 73111. Non-attendance does not constitute withdrawal from a course/career major.

Full-time students will be entitled to the following refunds:

<table>
<thead>
<tr>
<th>If student has:</th>
<th>Refund will be:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled in career major but not started or for a course credited through advanced standing</td>
<td>100%</td>
</tr>
<tr>
<td>Completed up to 25% of scheduled hours for career major</td>
<td>75%</td>
</tr>
<tr>
<td>Completed between 25% and 50% of scheduled hours for career major</td>
<td>50%</td>
</tr>
<tr>
<td>Completed between 50% and 75% of scheduled hours for career major</td>
<td>25%</td>
</tr>
<tr>
<td>Completed 75% or more of scheduled hours for career major</td>
<td>0%</td>
</tr>
</tbody>
</table>

No refunds will be given for books, supplies, or any other non-tuition items. If a full-time student’s tuition is paid through financial aid or agency assistance, refunds will be handled according to the rules and policies of the tuition source.
Accounting and Banking Services

- Accounts Payable/Receivable Clerk
- Financial Clerk
- Financial Services Representative
- Full Charge Bookkeeper
- Payroll Accounting Clerk
ACCOUNTING & BANKING SERVICES

Accounts Payable/Receivable Clerk

**Career Major Description**
Accounts payable/receivable clerks provide the clerical support necessary to pay the financial obligations of a business. In this major students learn basic office skills as well as beginning, advanced and computerized accounting principles. They process payments made to the business, take appropriate action on overdue payments, maintain records and make deposits.

**Average Oklahoma Salary**
$12/hour

**Helpful Attributes and Abilities**
- Reading, language and math skills at the 8th grade level or above
- Detail oriented
- Good organizational and critical thinking skills

**Who Can Enroll**
Juniors, Seniors & Adults

**Location**
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

**Financial Aid**
Available for those who qualify

**Student Organization**
BPA-Business Professionals of America

**Certifications Available**
Accounts Payable Clerk (ODCTE)
Accounts Receivable Clerk (ODCTE)
Certiport IC3

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

**Course Title**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Technology</td>
<td>120</td>
</tr>
<tr>
<td>• Computer Literacy</td>
<td></td>
</tr>
<tr>
<td>• Basic Internet</td>
<td></td>
</tr>
<tr>
<td>• Basic Network Concepts</td>
<td></td>
</tr>
<tr>
<td>• Basic Word Processing, Spreadsheets, Presentations &amp; Database Software</td>
<td></td>
</tr>
<tr>
<td>Fundamentals of Administrative Technologies</td>
<td>120</td>
</tr>
<tr>
<td>• Office Procedures</td>
<td></td>
</tr>
<tr>
<td>• Telephone Etiquette</td>
<td></td>
</tr>
<tr>
<td>• Advanced Word Processing &amp; Spreadsheet Software</td>
<td></td>
</tr>
<tr>
<td>Accounting I</td>
<td>120</td>
</tr>
<tr>
<td>Accounting II</td>
<td>120</td>
</tr>
<tr>
<td>Computerized Accounting</td>
<td>120</td>
</tr>
<tr>
<td>• Quickbooks</td>
<td></td>
</tr>
<tr>
<td>Business Financial Management &amp; Accounting Capstone</td>
<td>165</td>
</tr>
<tr>
<td>• Work-based learning experiences</td>
<td></td>
</tr>
<tr>
<td>• Projects</td>
<td></td>
</tr>
<tr>
<td>• Certifications</td>
<td></td>
</tr>
<tr>
<td>• Portfolios</td>
<td></td>
</tr>
</tbody>
</table>

**Career Major Length**
765 Hours

**Average Oklahoma Salary**
$12/hour

**Helpful Attributes and Abilities**
- Reading, language and math skills at the 8th grade level or above
- Detail oriented
- Good organizational and critical thinking skills

**Who Can Enroll**
Juniors, Seniors & Adults

**Location**
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

**Financial Aid**
Available for those who qualify

**Student Organization**
BPA-Business Professionals of America

**Certifications Available**
Accounts Payable Clerk (ODCTE)
Accounts Receivable Clerk (ODCTE)
Certiport IC3

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
ACCOUNTING & BANKING SERVICES

Financial Clerk

Career Major Description
Financial clerks record all monies coming into or leaving an organization. Their records are vital to an organization’s need to keep track of revenues and expenses. In this major students learn fundamental office skills and accounting principles.

Average Oklahoma Salary
$12/hour

Helpful Attributes and Abilities
- Reading, language and math skills at the 8th grade level or above
- Detail oriented
- Good organizational and critical thinking skills

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3
Deposit Teller (ODCTE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title

<table>
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<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
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<td>Fundamentals of Technology</td>
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</tr>
<tr>
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<td>120</td>
</tr>
<tr>
<td>• Office Procedures</td>
<td></td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
<td>• Advanced Word Processing &amp; Spreadsheet Software</td>
<td></td>
</tr>
<tr>
<td>Accounting I</td>
<td>120</td>
</tr>
<tr>
<td>• Work-based learning experiences</td>
<td></td>
</tr>
<tr>
<td>• Projects</td>
<td></td>
</tr>
<tr>
<td>• Certifications</td>
<td></td>
</tr>
<tr>
<td>• Portfolios</td>
<td></td>
</tr>
<tr>
<td>Business Financial Management &amp; Accounting Capstone</td>
<td>165</td>
</tr>
<tr>
<td>• Work-based learning experiences</td>
<td></td>
</tr>
<tr>
<td>• Projects</td>
<td></td>
</tr>
<tr>
<td>• Certifications</td>
<td></td>
</tr>
<tr>
<td>• Portfolios</td>
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</tr>
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Career Major Length
525 Hours
ACCOUNTING & BANKING SERVICES

Financial Services Representative

Career Major Description
In this major students learn basic banking and credit principles along with the use of a variety of office machines used in the banking industry. Students gain interpersonal and telephone skills needed to provide exceptional customer service. Students obtain their own credit report during orientation and must pass OSBI, drug and credit checks prior to beginning their work-based learning experiences.

Average Oklahoma Salary
$11/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Detail oriented
• Good organizational and critical thinking skills

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3
Deposits Teller (ODCTE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title
<table>
<thead>
<tr>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundamentals of Technology</td>
</tr>
<tr>
<td>Computer Literacy</td>
</tr>
<tr>
<td>Basic Internet</td>
</tr>
<tr>
<td>Basic Network Concepts</td>
</tr>
<tr>
<td>Basic Word Processing, Spreadsheets, Presentations &amp; Database Software</td>
</tr>
<tr>
<td>Banking Technologies</td>
</tr>
<tr>
<td>Banking and Financial Services</td>
</tr>
<tr>
<td>Customer Relations</td>
</tr>
<tr>
<td>Capstone</td>
</tr>
</tbody>
</table>

Career Major Length 600 Hours

Average Oklahoma Salary
$11/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Detail oriented
• Good organizational and critical thinking skills

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3
Deposits Teller (ODCTE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Full Charge Bookkeeper

**Career Major Description**
Learn to solve accounting problems using computerized software and electronic spreadsheets. Develop an in-depth understanding of accounting concepts, theories and procedures and their effects on financial reporting and analysis of business. In this major students learn basic office skills as well as beginning, advanced, computerized and payroll accounting principles. Students will also produce and analyze financial statements.

**Average Oklahoma Salary**
$13/hour

**Helpful Attributes and Abilities**
- Reading, language and math skills at the 8th grade level or above
- Detail oriented
- Good organizational and critical thinking skills

**Who Can Enroll**
Juniors, Seniors & Adults

**Location**
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

**Financial Aid**
Available for those who qualify

**Student Organization**
BPA-Business Professionals of America

**Certifications Available**
Certiport IC3
Full Charge Bookkeeper (ODCTE)

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

**Course Title** | **Hours**
--- | ---
Fundamentals of Technology | 120
- Computer Literacy
- Basic Internet
- Basic Network Concepts
- Basic Word Processing, Spreadsheets, Presentations & Database Software

Fundamentals of Administrative Technologies | 120
- Office Procedures
- Telephone Etiquette
- Advanced Word Processing & Spreadsheet Software

Administrative Technologies II | 120
- Advanced Database & Presentation Software
- Integration of Software Packages

Accounting I | 120

Accounting II | 120

Payroll Accounting | 120

Computerized Accounting | 120
- Quickbooks

Business Financial Management & Accounting Capstone | 165
- Work-based learning experiences
- Projects
- Certifications
- Portfolios

**Career Major Length** | 1005 Hours
ACCOUNTING & BANKING SERVICES

Payroll Accounting Clerk

Career Major Description
Payroll accounting clerks prepare, process, and maintain a company’s payrolls. In this major students learn basic office skills as well as beginning, advanced, computerized and payroll accounting principles.

Average Oklahoma Salary
$13/hour

Helpful Attributes and Abilities
- Reading, language and math skills at the 8th grade level or above
- Detail oriented
- Good organizational and critical thinking skills

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3
Payroll Accounting Clerk (ODCTE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title                  Hours                   
Fundamentals of Technology .............................................................120
- Computer Literacy
- Basic Internet
- Basic Network Concepts
- Basic Word Processing, Spreadsheets, Presentations
  & Database Software
Fundamentals of Administrative Technologies ..................................120
- Office Procedures
- Telephone Etiquette
- Advanced Word Processing & Spreadsheet Software
Administrative Technologies II ..........................................................120
- Advanced Database & Presentation Software
- Integration of Software Packages
Accounting I .......................................................................................120
Payroll Accounting .............................................................................120
Computerized Accounting .................................................................120
- Quickbooks
Business Financial Management & Accounting Capstone ................165
- Work-based learning experiences
- Projects
- Certifications
- Portfolios

Career Major Length 885 Hours

Average Oklahoma Salary
$13/hour

Helpful Attributes and Abilities
- Reading, language and math skills at the 8th grade level or above
- Detail oriented
- Good organizational and critical thinking skills

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3
Payroll Accounting Clerk (ODCTE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
**COURSE DESCRIPTIONS**

**ACCOUNTING & BANKING SERVICES**

**Accounting I 120 hours**
This course provides students with a strong foundation in generally accepted accounting principles and techniques needed for success in accounting careers or other business related fields. Prerequisite: Fundamentals of Technology, Fundamentals of Administrative Technologies, Administrative Technologies II

**Accounting II 120 hours**
This course provides students with a strong foundation in advanced accounting principles and techniques needed for success in accounting or other business related fields. Prerequisite: Accounting I

**Administrative Technologies II 120 hours**
This course builds on skills learned in the Fundamentals of Administrative Technology course and provides students with the ability to utilize, analyze and manipulate data through a database application. The integration of multiple applications builds critical thinking skills as students utilize the appropriate applications needed to complete case projects. Prerequisite: Fundamentals of Technology, Fundamentals of Administrative Technologies

**Banking and Financial Services 120 hours**
In this course, students learn the principles and practices of banking and credit in the United States. Students calculate math concepts needed in banking and credit and consider technological advances and their impact on the banking industry. Students engage in critical thinking exercises and “real business” problem solving in the modern practice of finance. They also gain skills needed to be a bank teller. Prerequisite: Fundamentals of Technology, Fundamentals of Administrative Technologies

**Banking Technologies 120 hours**
In this course, students build Word and Excel skills along with Outlook. They gain 10-key skills and learn to use a variety of office machines required in the bank industry. Prerequisite: Fundamentals of Technology

**Business, Financial Management & Accounting Capstone 165 hours**
Work-based learning experience, project-based instruction and additional industry certifications will be utilized to reinforce skills obtained within any career major in the Business, Management and Administration cluster. Students will make final preparation for industry certifications and will finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All other courses in career major

**Computerized Accounting 120 hours**
This course is designed to integrate accounting principles using computerized accounting system(s). Prerequisite: Accounting I, Accounting II

**Customer Relations 120 hours**
In this course, students learn the personal and telephone skills needed to provide exceptional customer service in the banking industry. Students also learn the specifics of banking ethics, laws and regulations. Prerequisite: Fundamentals of Technology, Banking Technologies, Banking and Financial Services

**Financial Communications 120 hours**
In this course, students prepare letters, memos and reports focused on financial issues. In addition, students gain data base and presentation software skills. Prerequisite: Math of Finance, Personal Finance, Consumer Lending

**Financial Services Representative 120 hours**
Work-based learning experience, project-based instruction and additional industry certifications will be utilized to reinforce skills obtained within any career major in the Business, Management and Administration cluster. Students will make final preparation for industry certifications and will finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All other courses in career major

**Fundamentals of Administrative Technologies 135 hours**
This course builds on the beginning business skills gained in the Fundamentals of Technology course and provides students with the concepts, principles, and attitudes needed to understand how an office is operated and managed in a rapidly changing global environment. The integration of state-of-the-art personal computing is done throughout the course.

**Fundamentals of Technology 120 hours**
This course provides students with the fundamental concepts, principles, and ideas needed to understand how business is operated and managed in a rapidly changing global environment setting. Students also learn job readiness and soft skills that are critical for success in any workplace setting. Students are introduced to new and emerging technology such as GPS/GIS and podcasting.

**Office Administrative & Management 150 hours**
This course builds on the skills gained in the Fundamentals of Administrative Technologies courses and focuses on higher level content and strategies necessary to effectively engage students in technology and managerial skills needed for success in competitive business careers. This course is designed to enhance administrative support and management skills needed in the workplace.

**Payroll Accounting 120 hours**
This course provides students with a strong foundation in payroll principles and techniques needed for success in accounting careers or other business-related fields. Prerequisite: Accounting I, Accounting II
Metro Technology Centers does not discriminate on the basis of race, color, national origin, sex/gender, age, marital or veteran status, religion, pregnancy, or qualified disability in recruitment, hiring, placement, assignment to work tasks, hours of employment, levels of responsibility, and pay. For special accommodations, call: 405-595-4418, or e-mail: denise.north@metrotech.edu
Administrative Assisting

- Administrative Assistant
Administrative Assistant

Career Major Description
This major prepares students for careers in administrative support and office management. Students gain high-level technology and managerial skills needed for success in competitive business careers. Office procedures, telephone etiquette and the integration of computer software packages are also covered in this major. Students gain skills required for the Certiport IC3 certification.

Course Title Hours
Fundamentals of Technology .............................................................120
• Computer Literacy
• Basic Internet
• Basic Network Concepts
• Basic Word Processing, Spreadsheets, Presentations & Database Software
Fundamentals of Administrative Technologies .................................135
• Office Procedures
• Telephone Etiquette/Customer Service
• Advanced Word Processing & Spreadsheet Software
Administrative Technologies II .........................................................120
• Advanced Database & Presentation Software
• Integration of Software Packages
Office Administration & Management ................................................150
• Business Communications
• Desktop Publishing
Administrative Assistant Capstone ....................................................150
• Work-based learning experiences
• Projects
• Certifications
• Portfolios
Career Major Length 675 Hours

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Strong interpersonal skills
• Good oral and written communication skills
• Positive attitude
• Dependability

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COURSE DESCRIPTION

ADMINISTRATIVE ASSISTANT

Administrative Assistant Capstone 150 hours
Work-based learning experience, project-based instruction and additional industry certifications will be utilized to reinforce skills obtained within any career major in the Business, Management and Administration cluster. Students will make final preparation for industry certifications and will finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All other courses in career major

Administrative Technologies II 120 hours
This course builds on skills learned in the Fundamentals of Administrative Technology course and provides students with the ability to utilize, analyze, and manipulate data through a database application. The integration of multiple applications builds critical thinking skills as students utilize the appropriate applications needed to complete case projects. Prerequisite: Fundamentals of Administrative Technologies

Fundamentals of Administrative Technologies 135 hrs
This course builds on the beginning business skills gained in the Technology course and provides students with the concepts, principles, and attitudes needed to understand how an office is operated and managed in a rapidly changing global environment. The integration of state-of-the-art personal computing is done throughout the course. Prerequisite: Fundamentals of Technology

Office Administration & Management 150 hrs
This course builds on the skills gained in the Fundamentals of Administrative Technologies courses and focuses on higher level content and strategies necessary to effectively engage students in technology and managerial skills needed for success in competitive business careers. This course is designed to enhance administrative support and management skills needed in the workplace. Prerequisite: Fundamentals of Technology, Fundamentals of Administrative Technologies, Fundamentals of Administrative Technologies II

Fundamentals of Technology 120 hrs
This course provides students with the fundamental concepts, principles, and ideas needed to understand how business is operated and managed in a rapidly changing global environment. Students also learn job readiness and soft skills that are critical for success in any workplace setting. Students are introduced to new and emerging technology such as GPS/GIS and podcasting.
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Aircraft Maintenance

- Aerospace Maintenance Foundations
- Airframe Mechanic
- Airframe Mechanic - Evening
- Aviation Maintenance Technician
- Aviation Maintenance Technician - Evening
- Powerplant Mechanic
- Powerplant Mechanic - Evening
AIRCRAFT MAINTENANCE

Aerospace Maintenance Foundations

**Career Major Description**
High school students in this major will take coursework to work towards the Federal Aviation Administration (FAA) Aviation Maintenance Technician (AMT) certification. Students will learn to perform maintenance, preventative maintenance, and alterations of aircraft and aircraft systems. The AMF major consists of all FAA-approved part 147 General curriculum as well as courses in sheet-metal, non-metallic structures, and welding. In addition to aircraft maintenance and repair, students will be exposed to other Oklahoma aerospace industries that could include flight, aircraft manufacturing, accident investigation and safety, as well as military aerospace occupational specialties. The AMF Capstone will allow students to apply their gained knowledge of aviation and flight principles by introducing students to Unmanned Aircraft Systems (UAS). There will need to be a continuation of study in order to become AMT certified.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ACC Orientation &amp; Safety I</td>
<td>15</td>
</tr>
<tr>
<td>Aviation Math</td>
<td>30</td>
</tr>
<tr>
<td>Basic Physics and Aerodynamics</td>
<td>45</td>
</tr>
<tr>
<td>Ground Handling and Servicing</td>
<td>30</td>
</tr>
<tr>
<td>Aviation Secondary Hand and Power Tools</td>
<td>36</td>
</tr>
<tr>
<td>Materials and Processes, NDI, Precision Measuring</td>
<td>75</td>
</tr>
<tr>
<td>Federal Aviation Regulations, Publications and Records</td>
<td>45</td>
</tr>
<tr>
<td>Aircraft Drawings</td>
<td>30</td>
</tr>
<tr>
<td>Aviation Weight and Balance</td>
<td>37.5</td>
</tr>
<tr>
<td>Fluid Lines and Fittings</td>
<td>30</td>
</tr>
<tr>
<td>Basic Electricity DC and Batteries</td>
<td>60</td>
</tr>
<tr>
<td>Basic Electricity AC</td>
<td>45</td>
</tr>
<tr>
<td>Workforce Staging I</td>
<td>46.50</td>
</tr>
<tr>
<td>ACC Orientation &amp; Safety II</td>
<td></td>
</tr>
<tr>
<td>Aviation Solid State Circuits</td>
<td>37.5</td>
</tr>
<tr>
<td>Aircraft Cleaning and Corrosion Control</td>
<td>30</td>
</tr>
<tr>
<td>Sheet Metal Structural Repair</td>
<td>120</td>
</tr>
<tr>
<td>Nonmetallic Structural Repair Fabric and Finish</td>
<td>127.50</td>
</tr>
<tr>
<td>Aircraft Welding</td>
<td>30</td>
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<tr>
<td>Aviation Career Exploration</td>
<td>45</td>
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<td>AMF Capstone: Unmanned Aircraft Systems</td>
<td>60</td>
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<tr>
<td>Workforce Staging II</td>
<td>60</td>
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</table>

**Career Major Length**

1050 Hours

**Average Oklahoma Salary**
$9/hour

**Helpful Attributes and Abilities**
- General math, Algebra I, general science or equivalent courses
- Reading and math skills at the 10th grade level or above
- Good manual dexterity and agility
- Average or better mechanical aptitude
- Ability to comprehend and apply basic math and physics concepts

**Who Can Enroll**
Juniors & Seniors

**Location**
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

**Student Organization**
SkillsUSA
Professional Aviation Maintenance Association (PAMA)

**Industry Accreditations**
Federal Aviation Administration (FAA)

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

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AIRCRAFT MAINTENANCE

Airframe Mechanic

Career Major Description
Learn to inspect and perform or supervise maintenance, preventive maintenance, and alteration of aircraft and aircraft systems. This major is designed for the person who desires to work with airframes and other similar structures performing assembly, repair, rigging and inspections on a variety of control systems. It prepares you for entry employment in aviation maintenance or in a variety of service technician positions throughout the world. The Airframe Mechanic major is certified under Part 147 of the Federal Aviation Regulations with an FAA-approved and supervised curriculum.

Average Oklahoma Salary
$21/hour

Helpful Attributes and Abilities
• General math, Algebra I, general science or equivalent courses
• Reading and math skills at the 10th grade level or above
• Good manual dexterity and agility
• Average or better mechanical aptitude
• Ability to comprehend and apply basic math and physics concepts

Who Can Enroll
Adults

Location
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA
Professional Aviation Maintenance Association (PAMA)

Certifications Available
FAA Airframe Mechanic

Industry Accreditations
Federal Aviation Administration (FAA)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title Hours
Aviation Math ................................................................. 30
Basic Physics and Aerodynamics ..................................... 45
Ground Handling and Servicing ....................................... 30
Aircraft Drawings .......................................................... 30
Fluid Lines and Fittings ................................................... 30
Materials and Processes, NDI, Precision Measuring .......... 75
Aircraft Cleaning and Corrosion Control ......................... 30
Weight and Balance ...................................................... 37.5
Federal Aviation Regulations, Publications & Records ....... 45
Basic Electricity DC and Batteries .................................. 60
Basic Electricity AC ....................................................... 45
Solid State Circuits ....................................................... 37.5
Aircraft Electrical Systems .......................................... 52.5
Aircraft Wiring Practices .............................................. 45
Aircraft Structures, Aerodynamics, Assembly and Rigging . 67.5
Nonmetallic Structural Repair Fabric and Finish ................ 127.5
Sheet Metal Structural Repair ........................................ 120
Aircraft Welding ......................................................... 30
Hydraulics and Pneumatics .......................................... 60
Landing Gear and Position/Warning Systems ................... 75
Cabin Atmosphere Control Systems .............................. 30
Instruments and Communication/Navigation Systems ....... 37.5
Ice, Rain and Fire Protection Systems ............................ 30
Fuel Systems .............................................................. 30
Airframe Inspections .................................................. 75

Career Major Length 1275 Hours

Note: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.

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AIRCRAFT MAINTENANCE

Airframe Mechanic - Evening

Career Major Description
Learn to inspect and perform or supervise maintenance, preventive maintenance, and alteration of aircraft and aircraft systems. This major is designed for the person who desires to work with airframes and other similar structures performing assembly, repair, rigging and inspections on a variety of control systems. It prepares you for entry employment in aviation maintenance or in a variety of service technician positions throughout the world. The Airframe Mechanic major is certified under Part 147 of the Federal Aviation Regulations with an FAA-approved and -supervised curriculum.

Average Oklahoma Salary
$21/hour

Helpful Attributes and Abilities
- General math, Algebra I, general science or equivalent courses
- Reading and math skills at the 10th grade level or above
- Good manual dexterity and agility
- Average or better mechanical aptitude
- Ability to comprehend and apply basic math and physics concepts

Who Can Enroll
Adults

Location
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA
Professional Aviation Maintenance Association (PAMA)

Certifications Available
FAA Airframe Mechanic

Industry Accreditations
Federal Aviation Administration (FAA)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Note: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.

Course Title ................................................... Hours
Aviation Math .................................................. 30
Basic Physics and Aerodynamics ....................... 45
Ground Handling and Servicing ....................... 30
Aircraft Drawings ........................................... 30
Fluid Lines and Fittings ................................... 30
Materials and Processes, NDI, Precision Measuring ... 75
Aircraft Cleaning and Corrosion Control ............ 30
Weight and Balance ........................................ 37.5
Federal Aviation Regulations, Publications & Records 45
Basic Electricity DC and Batteries ...................... 60
Basic Electricity AC ......................................... 45
Solid State Circuits ........................................ 37.5
Aircraft Electrical Systems ............................. 52.5
Aircraft Wiring Practices .................................. 45
Aircraft Structures, Aerodynamics, Assembly and Rigging 67.5
Nonmetallic Structural Repair Fabric and Finish 127.5
Sheet Metal Structural Repair .......................... 120
Aircraft Welding ............................................. 30
Hydraulics and Pneumatics ............................. 60
Landing Gear and Position/Warning Systems ........ 75
Cabin Atmosphere Control Systems ................ 30
Instruments and Communication/Navigation Systems .......... 37.5
Ice, Rain and Fire Protection Systems ................ 30
Fuel Systems .............................................. 30
Airframe Inspections .................................... 75

Career Major Length 1275 Hours

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16
Aviation Maintenance Technician

Career Major Description
Learn to inspect and perform or supervise maintenance, preventive maintenance, and alteration of aircraft and aircraft systems. This major prepares the student with the knowledge and skill required to pass both the Airframe Mechanic and the Powerplant Mechanic exams administered by the FAA to gain entry level employment in aviation and other maintenance fields throughout the world. The Aviation Maintenance Technician major is certified under Part 147 of the Federal Aviation Regulations with an FAA-approved and -supervised curriculum.

Average Oklahoma Salary
$21/hour

Helpful Attributes and Abilities
- General math, Algebra I, general science or equivalent courses
- Reading and math skills at the 10th grade level or above
- Good manual dexterity and agility
- Average or better mechanical aptitude
- Ability to comprehend and apply basic math and physics concepts

Who Can Enroll
Adults

Location
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA
Professional Aviation Maintenance Association (PAMA)

Certifications Available
FAA Airframe and Powerplant Mechanic

Industry Accreditations
Federal Aviation Administration (FAA)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Note: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.

Course Title                      Hours
Aviation Math ................................................................. 30
Basic Physics and Aerodynamics......................... 45
Ground Handling and Servicing .................................. 30
Aircraft Drawings ............................................................. 30
Fluid Lines and Fittings ............................................... 30
Materials and Processes, NDI, Precision Measuring ....... 75
Aircraft Cleaning and Corrosion Control ..................... 30
Weight and Balance .......................................................... 37.5
Federal Aviation Regulations, Publications & Records .... 45
Basic Electricity DC and Batteries ............................... 60
Basic Electricity AC ........................................................... 45
Solid State Circuits ......................................................... 37.5
Aircraft Electrical Systems .......................................... 52.5
Aircraft Wiring Practices ............................................... 45
Aircraft Structures, Aerodynamics, Assembly and Rigging .... 67.5
Nonmetallic Structural Repair Fabric and Finish .............. 127.5
Sheet Metal Structural Repair ....................................... 120
Aircraft Welding ............................................................... 30
Hydraulics and Pneumatics ........................................... 60
Landing Gear and Position/Warning Systems ................. 75
Cabin Atmosphere Control Systems .............................. 30
Instruments and Communication/Navigation Systems .... 37.5
Ice, Rain and Fire Protection Systems ......................... 30
Fuel Systems ................................................................. 30
Airframe Inspections ....................................................... 75
Power Plant Electrical Systems ................................. 67.5
Power Plant Wiring Practices .......................................... 30
Fundamentals of Turbine Engines ............................. 52.5
Power Plant Instrumentation and Fire Protection .......... 22.5
Turbine Induction, Exhaust, Cool, Lube, Start and Ignition Systems .... 45
Turbine Fuels and Metering .......................................... 37.5
Turbine Engine Removal, Overhaul and Installation .......... 90
Turbine Engine Inspection, Repair, Alteration and Troubleshooting .... 60
Basic Propeller Systems ................................................... 30
Complex Propeller Systems ............................................. 30
Fundamental of Reciprocating Engines ...................... 52.5
Reciprocating Induction, Exhaust, Cool, Lube and Start Systems .... 45
Reciprocating Fuels and Metering ............................... 37.5
Reciprocating Ignition Systems ................................. 45
Reciprocating Engine Removal, Overhaul and Installation .... 90
Reciprocating Engine Inspection, Repair, Alteration & Troubleshooting ... 45

Career Major Length                        2055 Hours

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AIRCRAFT MAINTENANCE

Aviation Maintenance Technician - Evening

**Career Major Description**
Learn to inspect and perform or supervise maintenance, preventive maintenance, and alteration of aircraft and aircraft systems. This major prepares the student with the knowledge and skill required to pass both the Airframe Mechanic and the Powerplant Mechanic exams administered by the FAA to gain entry level employment in aviation and other maintenance fields throughout the world. The Aviation Maintenance Technician major is certified under Part 147 of the Federal Aviation Regulations with an FAA-approved and -supervised curriculum.

**Course Title**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
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<td>30</td>
</tr>
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**Career Major Length**

2055 Hours

**Average Oklahoma Salary**

$21/hour

**Helpful Attributes and Abilities**

- General math, Algebra I, general science or equivalent courses
- Reading and math skills at the 10th grade level or above
- Good manual dexterity and agility
- Average or better mechanical aptitude
- Ability to comprehend and apply basic math and physics concepts

**Who Can Enroll**

Adults

**Location**

Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

**Financial Aid**

Available for those who qualify

**Student Organization**

SkillsUSA
Professional Aviation Maintenance Association (PAMA)

**Certifications Available**

FAA Airframe and Powerplant Mechanic

**Industry Accreditations**

Federal Aviation Administration (FAA)

**Metro Tech Accreditations**

Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Note: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.

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18

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AIRCRAFT MAINTENANCE

Powerplant Mechanic

Career Major Description
Learn to inspect and perform or supervise maintenance, preventive maintenance, and alteration of aircraft systems. This major is designed for the person who desires to work on engines, turbines or other power generating devices and prepares you for entry employment in aviation maintenance or in a variety of service technician positions throughout the world. The Power Plant Mechanic major is certified under Part 147 of the Federal Aviation Regulations with an FAA-approved and-supervised curriculum.

Average Oklahoma Salary
$21/hour

Helpful Attributes and Abilities
• General math, Algebra I, general science or equivalent courses
• Reading and math skills at the 10th grade level or above
• Good manual dexterity and agility
• Average or better mechanical aptitude
• Ability to comprehend and apply basic math and physics concepts

Who Can Enroll
Adults

Location
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA
Professional Aviation Maintenance Association (PAMA)

Certifications Available
FAA Powerplant Mechanic

Industry Accreditations
Federal Aviation Administration (FAA)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Note: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.

Course Title Hours
Aviation Math ................................................................. 30
Basic Physics and Aerodynamics ................................. 45
Ground Handling and Servicing ................................. 30
Aircraft Drawings .......................................................... 30
Fluid Lines and Fittings ................................................... 30
Materials and Processes, NDI, Precision Measuring .......... 75
Aircraft Cleaning and Corrosion Control ................. 30
Weight and Balance .................................................. 37.5
Federal Aviation Regulations, Publications & Records ..... 45
Basic Electricity DC and Batteries ................................. 60
Basic Electricity AC ..................................................... 45
Solid State Circuits ....................................................... 37.5
Power Plant Electrical Systems .................................. 67.5
Power Plant Wiring Practices ....................................... 30
Fundamentals of Turbine Engines ......................... 52.5
Power Plant Instrumentation and Fire Protection .......... 22.5
Turbine Induction, Exhaust, Cool, Lube, Start and Ignition Systems 45
Turbine Fuels and Metering ........................................ 37.5
Turbine Engine Removal, Overhaul and Installation .... 90
Turbine Engine Inspection, Repair, Alteration and Troubleshooting.. 60
Basic Propeller Systems ................................................ 30
Complex Propeller Systems ........................................... 30
Fundamental of Reciprocating Engines ................. 52.5
Reciprocating Induction, Exhaust, Cool, Lube and Start Systems .... 45
Reciprocating Fuels and Metering ............................ 37.5
Reciprocating Ignition Systems .................................... 45
Reciprocating Engine Removal, Overhaul and Installation .......... 90
Reciprocating Engine Inspection, Repair,
Alteration & Troubleshooting .................................. 45

Career Major Length 1275 Hours
AIRCRAFT MAINTENANCE

Powerplant Mechanic - Evening

Career Major Description
Learn to inspect and perform or supervise maintenance, preventive maintenance, and alteration of aircraft systems. This major is designed for the person who desires to work on engines, turbines or other power generating devices and prepares you for entry employment in aviation maintenance or in a variety of service technician positions throughout the world. The Power Plant Mechanic major is certified under Part 147 of the Federal Aviation Regulations with an FAA-approved and-supervised curriculum.

Course Title Hours
Aviation Math ................................................................. 30
Basic Physics and Aerodynamics ................................. 45
Ground Handling and Servicing ................................. 30
Aircraft Drawings ....................................................... 30
Fluid Lines and Fittings .................................................. 30
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Reciprocating Induction, Exhaust, Cool, Lube and Start Systems .... 45
Reciprocating Fuels and Metering ............................... 37.5
Reciprocating Ignition Systems ..................................... 45
Reciprocating Engine Removal, Overhaul and Installation .... 90
Reciprocating Engine Inspection, Repair, Alteration & Troubleshooting 45

Career Major Length 1275 Hours

Average Oklahoma Salary
$21/hour

Helpful Attributes and Abilities
- General math, Algebra I, general science or equivalent courses
- Reading and math skills at the 10th grade level or above
- Good manual dexterity and agility
- Average or better mechanical aptitude
- Ability to comprehend and apply basic math and physics concepts

Who Can Enroll
Adults

Location
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

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COURSE DESCRIPTION

AIRCRAFT MAINTENANCE

Aircraft Cleaning and Corrosion Control 30 hours
This course provides instruction in the different types of corrosion and the causes of each. Students will identify and use the proper materials and processes to remove corrosion by products, treat corroded areas and apply the proper type of protection.

Aircraft Drawings 30 hours
This course provides training in the information presented on typical aircraft blueprints, graphs and charts. The purpose, function and types of aircraft drawings will be covered. Students will extract information from blueprints, schematics and graphs, and make aircraft sketches suitable for use on an FAA Form 337.

Aircraft Electrical Systems 52.5 hours
This course provides instruction in troubleshooting complex aircraft electrical systems. The student will install electrical system components and check these systems for proper operation. The student will be introduced to modern electronic control devices such as logic circuit components and digital electronics. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Aircraft Structures, Aerodynamics, Assembly and Rigging 67.5 hours
This course provides instruction in the different types of aircraft structure and their functions. Students will cover high-speed aerodynamics as related to aircraft structural design for transonic and supersonic speeds. Students will rig and check the alignment of fixed-wing aircraft. In addition, hands-on training will be provided in assembling aircraft components, including flight control surfaces and balancing, rigging and inspecting movable primary and secondary flight control systems. Students will cover rotary-wing aerodynamics and will be introduced to the process of rigging rotary-wing aircraft. At the end of the session, comprehensive training will be provided on the proper procedures for jacking an aircraft. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Aircraft Welding 30 hours
This course provides instruction on the different welding methods used in aircraft repair. Students will be introduced to the procedures for welding magnesium, titanium, aluminum and stainless steel, and the procedures for soldering stainless steel and fabricating tubular structures. In addition, hands-on training will be provided in soldering, brazing, gas-welding and arc-welding steel. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Airframe Inspections 75 hours
This course provides instruction on the regulations, requirements and procedures for performing aircraft inspections. Students will perform airframe conformity and airworthiness inspections. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Aircraft Wiring Practices 45 hours
This course provides instruction in aircraft electrical wiring installations. Students will route and secure wires in bundles or conduit and install the proper termination for given situations. Students will also service and repair wiring installations. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

AMF Capstone: Unmanned Aircraft Systems 75 hours
The AMF Capstone will allow students to apply their knowledge of aviation and flight principles to build and fly their own drone. Students will be introduced to Unmanned Aircraft Systems (UAS), one of the fastest growing segments of the aviation industry. Covered in this course will be the background and history of UAS, regulatory requirements, and uses for UAS in agricultural, military, homeland security, and commercial applications.

AMT Aviation Secondary Orientation & Safety I / II 75 hours
Student will learn proper safety procedures for the aviation campus, including Hangar and Aircraft Safety, and review ACC policies and procedures.

AMT Aviation Secondary Workforce Staging I / II 75 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.

Aviation Secondary Hand and Power Tools 36 hours
This course provides instruction in the use of common hand and power tools used by the Aviation Maintenance Technician.

Aviation Secondary Aviation Career Exploration 36 hours
In this course, students will learn about a variety of aviation careers. In addition to Aviation Maintenance, career areas could include flight, aircraft manufacturing, accident investigation and safety as well as corresponding military aerospace occupational specialties. In this dynamic, fast-paced course, students will have the opportunity to explore various aerospace organizations throughout Oklahoma.

Basic Electricity AC 45 hours
This course provides instruction in the theory and principles of alternating current circuits. Students will compute and observe the effects of inductance, capacitance, and impedance in alternating current systems. Students will also construct basic AC electrical circuits, perform circuit analysis using electrical diagrams and measuring instruments, and conduct basic troubleshooting.

Basic Electricity DC and Batteries 60 hours
Students will receive instruction in the theory and principles of electricity, direct current circuits, and aircraft batteries. Students will use basic electricity laws and formulas in calculating and measuring voltage, current, power and resistance in electrical systems. Students will construct basic DC electrical circuits, perform circuit analysis using electrical diagrams and measuring instruments and conduct basic troubleshooting. Students will also inspect and service a lead-acid battery and a nickel cadmium battery.

Basic Physics and Aerodynamics 45 hours
This course provides instruction in the scientific principles that apply to the operation of aircraft, engines, and the equipment that the aviation maintenance technician will use on a daily basis. In addition, the makeup of the atmosphere, basic aerodynamics for fixed-wing aircraft, and stability and control will be covered.

Basic Propeller Systems 30 hours
This course provides instruction in the basic design and operating principle of propellers. Students will balance propellers and repair aluminum alloy propeller blades. In addition they will remove, install, track and perform routine maintenance on fixed-pitch propeller systems. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director / Assistant Director.

Cabin Atmosphere Control Systems 30 hours
This course provides instruction on the components and operation of aircraft cabin atmospheric systems. Students will be introduced to inspecting, checking, troubleshooting, servicing and repairing heating, cooling, air conditioning, pressurization systems and air cycle machines. Hands-on training will be provided in inspecting, checking, troubleshooting, servicing and repairing oxygen systems Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.
Complex Propeller Systems 30 hrs
This course provides instruction in the design and operating principles of constant speed and feathering propellers and their reciprocating and turbine engine applications. Students will install, track and perform routine maintenance on these complex propeller systems. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director / Assistant Director.

Federal Aviation Regulations Publications and Records 45 hours
This course provides instruction in identifying the permanent records that must be maintained for an aircraft, the scope and details of the items to be inspected during a 100-hour inspection, logbook entry requirements for a 100-hour inspection and the proper record-keeping of aircraft maintenance in general. The Federal Aviation Regulations that govern the construction and maintenance practices of modern aircraft will also be covered as well as aircraft manufacturers’ maintenance publications. In addition, students will learn the privileges and limitations of the mechanic certificate and discuss Human Factors/Maintenance Resource Management.

Fluid Lines and Fittings 30 hours
This course provides training in the identification and installation of fluid line components. Students will fabricate a rigid or flexible fluid line and install it on an aircraft system.

Fuel Systems 30 hours
This course provides instruction on the components and operation of the aircraft fuel system. Students will be introduced to checking and servicing fuel dump systems; performing fuel management transfer and defueling procedures; and inspecting, checking and repairing pressure refueling systems. Hands-on training will be provided in repairing fuel system components; inspecting and repairing quantity indicating systems; and inspecting, checking, servicing, troubleshooting and repairing the total fuel system. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Fundamentals of Automotive Service (NATEF aligned) 45 hours
This course covers occupational health and safety and tools and equipment identification, usage and operation. The student will learn about the history, current state and future of the automotive service industry. This course will cover dealership and independent operations. The student will learn vehicle identification and how to look up service information using several different sources. The student will learn vehicle maintenance, which will include fluid level checks and adjustments, peripheral electrical system checks and tire inspection and air pressure adjustment. In this course the student will learn basic measuring instruments used in vehicle service and diagnosis, as well as communication skills used throughout the automotive service industry.

Fundamentals of Reciprocating Engines 52.5 hours
This course provides instruction in the operating principles of aircraft reciprocating engines. Students will identify the basic components of a reciprocating engine and explain their function. They will be able to describe an engine from its identification number. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director / Assistant Director.

Fundamentals of Turbine Engines 52.5 hours
This course provides instruction in the operating theory of aircraft gas turbine engines. Students will identify the basic components of a turbine engine, differentiate between turbine engine designs, describe the types of turbine engines, trace the airflow through a turbine engine and explain changes in the pressure, velocity and temperature of the air. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director / Assistant Director.

Ground Handling and Servicing 30 hours
This course provides instruction in safe ground handling procedures and aircraft movement, tie-down and storage. Students will also identify aviation fuels and determine the proper fuel for a particular aircraft.

Hydraulics and Pneumatics 60 hours
This course provides instruction on the components and operation of aircraft hydraulic and pneumatic systems. Hands-on training will be provided in identifying and selecting hydraulic fluids and repairing hydraulic and pneumatic power systems components. Finally the student will inspect, check, service, troubleshoot and repair a complete hydraulic and pneumatic power system. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Ice, Rain and Fire Protection Systems 30 hours
This course provides instruction on the components and operation of these systems. Students will inspect, check, service, troubleshoot and repair airframe ice and rain control systems. Instruction will be provided for inspecting, checking and servicing smoke and carbon monoxide detection systems. Students will inspect, check, service, troubleshoot and repair aircraft fire detection and extinguishing systems. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Instruments and Communication/Navigation Systems 37.5 hours
This course provides instruction in the components and operation of these two systems. Students will be introduced to inspecting, checking, troubleshooting, servicing and repairing electronic flight instrument systems and both mechanical and electrical heading, speed, altitude, temperature, pressure and position-indicating systems to include the use of built-in test equipment. Hands-on training will be provided in installing instruments and performing a static pressure system leak test. Students will also be introduced to inspecting, checking, troubleshooting, autopilot, servos and approach coupling systems. In addition instruction will include inspecting, checking and servicing electronic communication and navigation systems. This will include VHF passenger address interphones and static discharge devices, VOR, ILS, LORAN, radar beacon transponders, flight management computers and GPWS. Hands-on training will be provided in inspecting and repairing antenna and electronic equipment installations. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Landing Gear and Position/Warning Systems 75 hours
This course provides instruction on various aircraft landing systems and their operation. Students will inspect, check, service and repair landing gear, retraction systems, shock struts, brakes, wheels, tires and steering systems. Students will also inspect, check and service landing gear position and warning systems, antiskid systems and other indicating and warning systems. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Materials and Processes, NDI, Precision Measuring 75 hours
This course provides instruction in the relative strengths and advantages of common aircraft materials and the identification systems used for aluminum and steel. Students will become familiarized with the heat treating process. Students will identify and select common nonmetallic materials and learn proper use and handling procedures. Students will learn to identify appropriate NDI methods and perform various types of inspections including dye penetrant, magnetic particle, eddy current, and ultrasonic inspections. They will also receive instruction in the identification, selection and installation of common aircraft hardware. Students will select and install solid shank rivets to airworthy standards. Students will also learn to perform precision measuring.
Mathematics (Aviation related majors)  30 hours
This course provides instruction in all of the mathematical computations required in the aviation maintenance curriculum. Students will first be given a basic math review. Students will solve problems involving ratios, proportions, percentages, areas, volumes and conversions. Power and roots and scientific notation will also be used. In addition, instruction in basic algebra operations, geometry and trigonometry will be provided.

Nonmetallic Structural Repair Fabric and Finish  127.5 hours
In this course, students will identify types of wood structures and wood defects and will service and repair wood structures. They will identify various types of fabric; describe methods used in applying fabric; and describe the procedures for inspecting, testing, and repairing fabric and fiberglass. Students will also identify types of composite elements; inspect, test, and repair bonded structures; and install fasteners. In addition, students will describe various methods for working with plastics and will inspect, check, and repair an acrylic window, door, or an interior surface. Students will identify, select, and apply finishing materials and will also identify defects. Student must have completed the General program or have been authorized to attend this course by the Director/Assistant Director.

Powerplant Electrical Systems  67.5 hours
This course provides instruction in power-plant electrical installations and electrical power generating systems for both reciprocating and turbine engines. Students will install engine electrical wiring, controls, switches, indicators, and protective devices and check for proper operation of generators and alternators. Students will service these systems and repair system components. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Powerplant Instrumentation and Fire Protection  22.5 hours
This course provides instruction on the types and functions of turbine and reciprocating engine instruments, including pressure measuring, temperature measuring, mechanical measuring, and instrument marking and installation. Students will identify the components and describe the operation of the common methods used for fire detection and extinguishing in both piston and turbine application. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Powerplant Wiring Procedures  30 hours
This course provides instruction in powerplant electrical wiring installations for both reciprocating and turbine engines. Students will route and secure wires in bundles or conduit and install the proper termination for given situations. Students will also service and repair wiring installations. Prerequisite: Student must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Reciprocating Engine Inspection, Repair, Alteration and Troubleshooting  45 hours
This course provides instruction in the procedures and troubleshooting methods used during the repair of reciprocating engines. Students will service and repair a reciprocating engine and perform authorized alterations as required. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Reciprocating Engine Removal, Overhaul and Installation  90 hours
This course provides instruction in the procedures and troubleshooting methods used during the repair of reciprocating engines. Students will service and repair a reciprocating engine and perform authorized alterations as required. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Reciprocating Fuels and Metering  37.5 hours
This course provides instruction in reciprocating engine fuels, fuel controls, fuel pumps, filters and other system components. The student will inspect, check, service, troubleshoot and repair reciprocating engine fuel metering systems and their components. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Reciprocating Ignition Systems  45 hours
This course provides instruction in reciprocating ignition systems and their components. Students will inspect, service and troubleshoot ignition systems and perform maintenance on ignition system components. Students will also overhaul a magneto and ignition harness. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Reciprocating Induction, Exhaust, Cool, Lube and Start Systems  45 hours
This course provides instruction in the components and operation of ice and rain control systems as well as intake, exhaust, cooling, lubrication and starting systems commonly found on reciprocating engines. Students will service and repair various components of these systems and service both wet and dry sump lubrication systems. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Sheet Metal Structural Repair  120 hrs
This course provides hands-on training in the forming, laying out, bending and installation of sheet metal. Students will identify structures, stresses and tools associated with sheet metal. Students will select, install and remove special fasteners; install conventional rivets; and inspect and repair sheet metal structures. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Turbine Engine Inspection, Repair, Alteration and Troubleshooting  60 hours
This course provides instruction in the procedures and troubleshooting methods used during the repair of turbine engine. Students will service and repair a turbine engine and perform authorized alterations as required. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Turbine Engine Removal, Overhaul and Installation  90 hours
This course provides instruction in the procedures and inspection methods used during the overhaul of turbine engines and the instrumentation used to monitor engine conditions. Students will remove, overhaul, and reinstall a turbine engine and perform a conformity and airworthiness inspection on the engine. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Turbine Fuels and Metering  37.5 hrs
This course provides instruction in turbine engine fuels, fuel controls, fuel pumps, filters and other system components. The student will inspect, check, service, troubleshoot and repair turbine engine fuel metering systems and their components. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.
Turbine Induction, Exhaust, Cool, Lube, Start and Ignition Systems 45 hours
This course provides instructions on the components and operation of ice and rain control systems as well as intake, exhaust, cooling, lubrication, ignition and starting systems commonly found on turbine engines. Students will service and repair various components of these systems and service both wet and dry sump lubrication systems. Prerequisite: Student must have completed the general and airframe program or have been authorized to attend this course by the Director/Assistant Director.

Weight and Balance 37.5 hours
This course provides instruction in the importance of weight and balance, the required calculations for weight and balance checks, equipment changes, extreme loading checks and the addition of ballast. Students will weigh aircraft, complete a weight and balance check, and record data.

Workforce Staging 30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.
Auto Body Repair

- Combination Collision Repair Technician
- Non-Structural Repair Technician
Combination Collision Repair Technician

Career Major Description
Students in this major will learn how to complete non-structural collision repair and automotive refinishing. The courses that will be covered include non-structural damage analysis and minor dent repair, plastics repair and all aspects painting and refinishing. Students will also learn how to use various tools in repairing damage and to remove and install handles, moldings, trim, and bolted body parts. In addition, the student will learn to MIG weld to industry standard following I-CAR standards. This career major also includes painting preparation, sanding processes, color matching and adjusting color, removing and installing glass, and the process of written estimates. Students will learn about handling, storage and disposal of hazardous materials and selecting proper personal protective equipment and maintenance. The hours completed in this major are aligned with NATEF standards.

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
- Reading and math skills at the 8th grade level or above
- Good health and physical condition
- Good eye-hand coordination
- Ability to think critically and logically
- Ability to organize one’s work
- Sheet metal/welding, wood shop, industrial art and mechanical ability
- Ability to organize movements around and under automobiles
- Ability to mentally plan collision repair

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Industry Accreditations
National Institute for Automotive Service Excellence (ASE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title | Hours
--- | ---
Introduction to Collision Repair Technology | 45
Auto Collision Trim & Hardware | 30
Auto Collision Non-Structural Metal Straightening/Repair | 90
Auto Collision MIG (GMAW) Welding | 105
Automotive Body Panel Adjustment and Alignment | 45
Refinish Preparation | 130
Refinish Application | 145
Refinish Color Adjustment | 75
Refinish Blending & Painting Defects | 60
Auto Collision Plastic Component Repair & Replacement | 60
Automotive Glass Replacement | 60
Auto Collision Damage Analysis | 75
Auto Collision Written Estimating | 30
Automotive Detailing | 60
Workforce Staging | 30

Career Major Length 1040 Hours

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
- Reading and math skills at the 8th grade level or above
- Good health and physical condition
- Good eye-hand coordination
- Ability to think critically and logically
- Ability to organize one’s work
- Sheet metal/welding, wood shop, industrial art and mechanical ability
- Ability to organize movements around and under automobiles
- Ability to mentally plan collision repair

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Industry Accreditations
National Institute for Automotive Service Excellence (ASE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
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AUTO BODY REPAIR

Non-Structural Repair Technician

Career Major Description
Students in this major will learn skills in basic collision repair including damage analysis to determine necessary repair procedure. Students will cover the operation of tools and personal safety equipment maintenance. They will learn how to use metal straightening tools to repair minor dents and dings in sheet metal as well as metal shrinking and stretching techniques. Students will also learn the techniques for mixing and applying body filler, selecting the proper sandpaper and sanding equipment, techniques for properly sanding the cured body filler to original contour, and how to prepare the repair for primer. Also included is the removal and installation of handles, trim, moldings and locks. The hours completed in this major are aligned with NATEF standards.

Course Title Hours
Introduction to Collision Repair Technology .......................................45
Automotive Detailing .................................................................60
Auto Collision Written Estimating ....................................................30
Auto Collision Damage Analysis .....................................................75
Auto Collision Non-Structural Metal Straightening/Repair ......................90
Auto Collision MIG (GMAW) Welding .............................................105
Auto Collision Trim & Hardware ......................................................30
Auto Collision Plastic Component Repair & Replacement ..................60
Auto Collision Body Panel Adjustment and Alignment ..........................45
Automotive Glass Replacement .......................................................60
Workforce Staging ...........................................................................30

Career Major Length 630 Hours

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Good health and physical condition
• Good eye-hand coordination
• Ability to think critically and logically
• Ability to organize one’s work
• Sheet metal/welding, wood shop, industrial art and mechanical ability
• Ability to organize movements around and under automobiles
• Ability to mentally plan collision repair

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Student Organization
SkillsUSA

Industry Accreditations
National Institute for Automotive Service Excellence (ASE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COURSE DESCRIPTION
AUTO BODY REPAIR

Auto Collision Damage Analysis 75 hours
Within this course the students will learn to inspect a damaged vehicle and correctly identify damage. This damage analysis will cover the entire vehicle from minor to major damage with structural misalignment. This course will cover the different types of vehicle construction found on the road today, such as uni-body, full body-over-frame and the hybrid frame/semi-unibody. Students will learn to look for indicators of damage and how collision energy is managed and travels through a vehicle during a collision. Some of the measuring equipment that will be covered is the centerline gauge, tram bar, universal measuring system and computer measuring systems. Measuring of the vehicle structure will be cover with the students learning to set-up and analyze the measurements to determine damage. The students will learn to look at damage in 3-dimension, which are length, width and height.

Auto Collision MIG (GMAW) Welding 105 hours
In this course the student will learn about the specific personal safety equipment used when MIG welding, and how to protect the vehicle when welding. The student will cover the MIG welding equipment and how to tune and troubleshoot the welder. Students will learn to join two pieces of metal using the appropriate process and joint selection. The welding joints covered will be: lap/fillet, butt, butt w/backing and plug. Students will learn techniques for welding in the vertical and overhead position using I-Car specific specifications.

Auto Collision Non-Structural Metal Straightening/Repair 90 hours
In this course the student will learn the basics of using metal straightening tools, such as dollies and hammers to repair minor dents and dings in sheet metal. Students will cover techniques to repair contours and body-lines in sheet metal. Metal shrinking and stretching will be taught to help students bring the metal back to original contour. Students will learn about the different body fillers. Students will learn techniques to mix and apply body filler. Students will learn to select the proper sandpaper and sanding equipment and learn techniques to sand the cured body filler to original contour then prepare the repair for primer.

Auto Collision Plastic Component Repair & Replacement 60 hours
In this course the student will learn to identify different types of plastic used in the construction of vehicles. Students will learn to make repair/replace decisions on plastic parts. Students will learn to prepare for both single and two-sided repairs on plastic parts.

The course includes both adhesive type repairs and plastic welding. Sheet Molded Compound (SMC) identification along with one-sided and two-sided repairs will be covered.

Auto Collision Trim & Hardware 30 hours
Within this course the student will learn about the different fasteners used in vehicle construction. Students will cover removing and installing trim, locks and trim panels while experiencing different types of hardware or attachment methods.

Auto Collision Written Estimating 30 hours
This course will cover how an estimate becomes the communication tool between the repair facility and the insurance company or customer. In this course the student will learn to write an accurate damage report by collecting the pertinent information from the customer and the vehicle while using procedure pages in manual estimating guides. Students will learn to look up parts prices and labor hours as well as how to make repair judgment calls when straightening panels. The student will assemble all of the information into a complete damage estimate.

Automotive Body Panel Adjustment and Alignment 45 hours
In this course the students will learn to remove, install and align bolted body parts. Some of the parts covered in this course will be fenders, hoods, doors, decklids, bumpers and bumper covers. This course will also cover wind noise and water leak detection related to panel alignment.

Automotive Detailing 60 hours
In the detailing course the student will learn to complete the refinishing repair. In doing this the student will learn to sand and polish the refinishing material after curing, prepare for delivery by washing and cleaning interior and exterior of the vehicle.

Automotive Glass Replacement 60 hours
In this course the student will learn to identify types of automotive glass. Common and specialty tools used to remove and install glass will be covered. Students will learn techniques to remove and install stationary glass and be able to identify the properties and characteristics of primers, adhesives and sealants. Students will also cover movable glass and learn some techniques of trouble shooting the mechanisms and methods to remove and install movable glass components.

Introduction to Collision Repair Technology 45 hours
In this course the student will cover tools and equipment, safety, hazardous material handling and storage. The student will be taught to identify safety and hazardous warning information for products used in the collision repair industry and the Right-To-Know Act. Students will also study the collision repair industry and the preparation of the vehicle for entering the repair facility.

Refinish Application 145 hours
Spray gun operation will be covered in great detail and applied to different products used in refinishing. Students will learn about corrosion protection products and how to mix and apply them, which will include etching primers, primer surfacer and sealing materials. Seam sealers and chip resistant coatings will be covered to demonstrate their role and application process. Students will learn about topcoats, like basecoat/clear coat products and their application techniques. Included in this course is instruction to determine the cause and corrective action for finish failures.

Refinish Blending & Painting
Defects 60 hours
In this course the students learn to apply the refinishing material to perform an undetectable repair. Included in this course will be instruction on how to determine the cause and corrective action for refinishing defects and failures.

Refinish Color Adjustment 75 hours
In this course the students learn to make a spray-out panel and how to evaluate the color match. Techniques and strategies for adjusting the color for an acceptable color match are taught. Students learn techniques to help adjust high metallic/mica colors as well as tri-coat colors.

Refinish Preparation 130 hours
In this course students learn how to prepare surfaces for the refinishing process. The student covers topics about sandpaper and sanding equipment and learn techniques to choose the proper grit and how to operate sanding equipment. This course will provide instruction in masking techniques and products used to mask and protect areas not in the refinishing operation. The students learn proper techniques for block and finish sanding prior to topcoat application. Students learn to apply proper substrate cleaning before the application of refinishing products.

Workforce Staging 30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.
Auto Service

• Automotive Maintenance & Light Repair Technician - NATEF Aligned

• Automotive Service Technician - NATEF Compliant
Auto Service

Automotive Maintenance & Light Repair Technician-NATEF Aligned

Career Major Description
Students in this major will cover the skills necessary to enter the automotive industry to perform light repair and maintenance duties. Students will concentrate on courses in introduction, brakes, steering & suspension, electrical electronics, and engine performance. They will learn how to test and lubricate engines and other major components and replace worn parts before they cause breakdowns. The student will also perform diagnostics to determine whether a component is salvageable or needs to be replaced. The hours completed in this major are aligned with the four required minimum ASE/NATEF standards. ASE certification is recommended and industry recognized.

Course Title                                                                 Hours
Fundamentals of Automotive Service (NATEF aligned) .................................. 45
Fundamentals of Automotive Service (NATEF aligned) .................................. 45
Automotive Brakes (NATEF aligned) ............................................................ 105
Automotive Engine Repair (NATEF aligned) ................................................. 125
Automotive Electrical/Electronics (NATEF aligned) ..................................... 230
Automotive Steering and Suspension (NATEF aligned) ................................ 95
Workforce Staging ....................................................................................... 30

Career Major Length 630 Hours

Average Oklahoma Salary
$14/hour

Helpful Attributes and Abilities
• Reading and math skills at the 9th grade level or above
• Basic computer literacy/skills
• Ability to understand theory and technical information
• Ability to read and comprehend textbook and shop manuals
• Ability to complete basic math problems
• Good health, physical condition and manual dexterity
• Ability to lift heavy objects and stand/work on your feet for extended periods of time
• Endurance to work under adverse weather conditions
• Good communication skills

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Pending

Student Organization
SkillsUSA

Industry Accreditations
National Institute for Automotive Service Excellence (ASE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Auto Service

Career Major Description
According to the most recent NATEF Automotive Service Technician standards, students in this major will cover the skills necessary to become an entry-level technician. Students will concentrate on courses in introduction, brakes, steering & suspension, electrical/electronics, engine performance, heating & air conditioning, engine repair, automatic transmission, and manual drive train and axles. They will learn how to diagnose and complete brake service, perform vehicle steering and suspension alignment, as well as electrical theory, electrical/electronic diagnostics. Students will cover engine performance diagnostics and techniques for repair using a variety of diagnostic equipment. This career major includes automotive heating, air conditioning and the student will learn how to evacuate and recharge air-conditioning systems using the proper refrigerant, as well as diagnostics of the heat and A/C system. Students will use advanced diagnostic and repair equipment to troubleshoot complex automotive systems. This career major is intended to provide courses closely aligned with NATEF hours and tasks. ASE certification is recommended and industry recognized.

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
• Reading and math skills at the 9th grade level or above
• Basic computer literacy/skills
• Ability to understand theory and technical information
• Ability to read and comprehend textbook and shop manuals
• Ability to complete basic math problems
• Good health, physical condition and manual dexterity
• Ability to lift heavy objects and stand/work on your feet for extended periods of time
• Endurance to work under adverse weather conditions
• Good communication skills

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Course Title
Hours
Fundamentals of Automotive Service (NATEF aligned) ................. 45
Automotive Brakes (NATEF compliant) ............................................ 95
Automotive Engine Performance (NATEF compliant) .............. 160
Automotive Engine Repair (NATEF compliant) ............................... 130
Automotive Automatic Transmission (NATEF compliant) ........... 80
Automotive Electrical/Electronics (NATEF compliant) .............. 210
Automotive Heating and Air-Conditioning (NATEF compliant) ...... 70
Automotive Steering and Suspension (NATEF compliant) .......... 95
Automotive Manual Drive Train and Axle (NATEF compliant) ........ 80
Workforce Staging ................................................................. 30

Career Major Length 995 Hours

Student Organization
SkillsUSA

Industry Accreditations
National Institute for Automotive Service Excellence (ASE)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Automotive Automatic Transmission (NATEF Compliant)  80 hours
In accordance with the most recent NATEF Automobile Service Technology task list, students in this course will learn about the components of the automatic transmission. They will learn to drain and replace automatic transmission fluid, check and adjust fluid levels on a transmission/transaxle with and without a dipstick. This course covers identifying and interpreting transmission/transaxle concerns and differentiating from an engine performance concern and determine necessary action. Students will perform pressure tests and diagnose pressure concerns using hydraulic principles (Pascal’s law). In addition, students will diagnose transmission/transaxle gear reduction/multiplication concerns using driving, driven and held member (power flow) principles. They will also perform stall test and lock-up converter system tests and determine necessary action. Students will inspect, adjust and replace external manual valve linkage, transmission range sensor/switch as well as inspect for fluid loss and replace external seals, gaskets and bushings. Also covered in this course are off-vehicle transmission/transaxle repairs including removal and re-installation of torque converter, inspect engine core/return plugs, rear crankshaft seal, alignment dowels and mating surfaces. Students will inspect, leak test and flush cooler lines and fittings and will describe operational characteristics of continuously variable transmission (CVT) and hybrid vehicle drivetrain.

Automotive Brakes (NATEF Compliant)  95 hours
This course covers braking system components, checking and adjusting brake fluids, checking wheel cylinders and adjusting parking brakes. Students will learn to check and replace brake pads, as well as to check and replace brake linings. In this course the student will learn to diagnose and repair drum and disc brake systems. Also covered will be diagnosing and repairing the entire hydraulic brake system, which will include, the master cylinder, lines and proportioning valves and stop light operation. Students will learn to diagnose and repair power assist units. Finally this course will cover diagnosis and service of wheel bearings, to include how to replace bearings and races, as well as clean, repack and adjust wheel bearing. This course covers how to diagnose, service and repair the Anti-lock Brake System (ABS). Also covered will be the ABS braking concerns caused by vehicle modifications, such as tire size, curb weight and change of final drive ratios. The student will learn to identify and inspect brake, traction, and stability control components and determine necessary action. Also covered will be the description of a regenerative braking system.

Automotive Engine Performance (NATEF Compliant)  160 hours
This course will cover the engine system components and the valve train components. Also in this course the student will learn to perform basic engine tune-up operations, such as checking and changing spark plugs, checking emission system, checking and cleaning PVC valve as well as checking and setting ignition timing, remove and replace timing belt and verify correct camshaft timing. The student will learn about the fuel system components, checking and changing the fuel and air filters, checking and setting idle speed and also cover mechanical and electric fuel pumps. In this course the student will learn to perform diagnostic techniques and determine necessary action from cylinder leakage tests, compression test and power balance tests. He/she will also learn to retrieve, record, diagnose and clear diagnostic codes from OBD I and II electronic systems. In ignition systems diagnosis and repair the student will learn about no-start, drivability and emission concerns on vehicles with electronic ignitions (distributorless) and distributor ignition systems. The student will learn to test, inspect and determine repair primary circuit wiring, distributor performance, ignition coils, pick-up sensors and triggering devices and ignition control modules. In this course the student will test fuel pressure regulation systems, service the throttle body, inspect the exhaust system and perform necessary action as well as test the electrical components of the fuel system. In the emission system this course covers positive crankcase ventilation (PCV) system, the exhaust gas recirculation (EGR) system, intake air temperature control system as well as the evaporative emissions control system. This course includes performing diagnosis using a gas analyzer, oscilloscope and engine diagnostic equipment. Students will learn to diagnose the cause of emissions or drivability resulting from failure of computerized engine controls, power control module (PCM) and interrelated systems. This course also covers diagnosis and repair action for hot and cold no-start situations, engine misfire, stalling, poor mileage, flooding and hesitation on vehicles with injection type fuel systems. The student will learn to inspect, test and clean fuel injectors as well as test the operation of turbochargers and superchargers and determine necessary action. The course will cover drivability problems resulting from exhaust gas recirculation (EGR) failure, secondary air injection and catalytic converter systems as well as failure of the intake air temperature control system, and the failure of the evaporative control system. The student will learn to check for module communication errors using a scan tool on CAN/BUS systems.

Automotive Electrical/Electronics (NATEF Compliant)  210 hours
In this course the student will learn battery testing and maintenance. This course will cover electrical theory and Digital Volt Ohm Meter (DVOM) operation. Students will learn basic system checks using a DVOM. Students will learn to soldering techniques for wiring and other connections. In this course the student will study general electrical system diagnosis. Students will learn to check voltage drop on circuits, locate shorts, test grounds, test relays and circuit breakers then determine necessary action. Students will learn to diagnose and repair starting systems, charging systems as well as horn and windshield wiper systems. Students will also learn to diagnose and repair lighting circuits, sockets and controllers. Also covered in this course will be gauges, warning devices, driver information system and sending units for gauges. Also covered in this course will be diagnosing and repairing accessories such as motor driven accessory circuits, cruise controls, electrical heated seats and mirrors and factory installed audio systems. This course will cover the Supplemental Restraint Systems (SRS) service as well as safety procedures to prevent accidental deployment. Students will learn to about module communication, including the Controller Area Network (CAN).

Automotive Engine Repair (NATEF Compliant)  130 hours
In accordance with the most recent NATEF Automobile Service Technology task list, the student will learn common fastener and thread repair to include broken bolt removal, restoration of internal and external threads and proper use of a thread insert. He/she will learn to inspect the engine assembly for fuel, oil, coolant and other leaks and determine necessary action. The student will also verify proper operation of instrument panel and warning lamps as well as identify hybrid vehicle service precautions. Also, in this course are engine oil service and engine accessory drive belt inspection and service as well as inspection of auxiliary coolers and determine necessary action. The student will learn to perform in general engine vacuum tests and general cylinder tests and to determine necessary action. In addition, he/she will learn proper installation procedures of gaskets and seals on pans and covers using correct sealers and gaskets. The student will also learn to perform oil pressure tests, as well as to test and replace thermostats, water pumps, radiators and fan clutches. This course includes inspecting, testing and replacing oil and water sending units and switches. The student will learn to inspect and determine action needed for pushrods, rocker arms, rocker arm pivots and shafts along with valve adjustments. Also covered will be cylinder head and valve train component removal and reinstallation as well
as inspection including casting cracks, gaskets and bolts, lifters and camshafts as well as drive gears and timing belts/ chains

Automotive Heating & Air-Conditioning (NATEF Compliant) 70 hours
This course covers the automotive heating systems, air conditioning systems, parts identification and function, and system operations. Also in this course the students will cover the refrigerants used in air conditioning systems and how to identify them along with Federal Legislation. Temperature control components and systems will also be identified. Students will learn about the cooling system components, identifying coolant type, checking and adjusting coolant levels as well as checking and replacing coolant hoses. Students will also learn to flush and pressure test the coolant system. In this course the student will learn to diagnose air conditioning system failure concerns, such as the protection device interrupt system, temperature control problems, climate control systems, electrical controls for heating and ventilation, load cut-off systems and other climate control malfunctions. Students will also learn to evaluate and perform the necessary action of control panel assemblies, control cables, ducts, doors and outlets.

Automotive Manual Drive Train (NATEF Compliant) 80 hours
In accordance with the most recent NATEF Automobile Service Technology task list, students in this course will identify and interpret drive train concerns and determine necessary action. The student will check fluid condition, check for leaks, drain and refill manual transmission/transaxle and final drive unit. Also included is diagnosis of clutch noise, binding, slippage, pulsation, chatter and determining proper corrective action. This course includes inspection all shift linkage and clutch control components including pedal linkage, cables, automatic adjusters, brackets and bushings, pivots, springs, and determining necessary action. The student will check fluid level of clutch master cylinder and bleed hydraulic system. He/she will inspect flywheel for wear and cracks, measure flywheel runout and crankshaft endplay and determine necessary action. In addition, the student will explain characteristics of an electronically-controlled manual transmission/transaxle. This course includes diagnosis of CV joint and U-joint noise and vibration concerns as well as determining and performing necessary action. The student will inspect, service and replace front wheel drive (FWD) bearings, hubs seals, shafts, yokes, boots, CV joints as well as check shaft balance, phasing, measure shaft runout, measure and adjust driveline angles. He/she will clean and inspect differential housing and housing vent, check for leaks, drain, refill, and adjust differential housing fluid level. The student will inspect and replace companion flange, pinion seal and measure companion flange runout. This course also includes inspecting and replacing drive axle wheel studs, drive axle shafts, seals, bearings and retainers as well as measuring axle flange runout and shaft endplay and determining necessary action. The student will inspect, adjust and repair mechanical, electrical and vacuum shifting controls, bushings, mounts, levers and brackets as well as inspect front wheel bearings and locking hubs on a four-wheel/all-wheel drive vehicle. The student will also identify concerns related to variations in tire circumference and/or final drive ratios.

Automotive Steering & Suspension (NATEF Compliant) 95 hours
In accordance with the most recent NATEF Automobile Service Technology task list, the student will learn about the steering and suspension components and quick checks for these components. The student will cover inspection, diagnosis and repair of shocks and struts. Also covered will be mounting and repair of tires and balancing of tire and wheel assembly as well as tire pressure monitoring system (TPMS) diagnosis and service. This course includes various steering system diagnosis and repair or replacement operations, including the power steering pump, tie rod ends, pitman arms, relay rods, steering dampeners, power and manual steering racks and steering gears. This course will also cover electric power-assisted steering systems and inspection thereof. Also covered will be front and rear suspension systems diagnosis and repair, including inspecting and replacement of components. Students will also learn to perform wheel alignments and how to diagnose wheel alignment issues as well as diagnosis and repair steering columns, and how to disable and enable the Supplemental Restraint System (SRS).

Fundamentals of Automotive Service (NATEF Aligned) 45 hours
This course covers occupational health and safety, tools and equipment identification, usage and operation. The student will receive instruction in the storage, handling and use of Hazardous Materials. The student will learn to write work orders and warranty reports. The students will learn about the history, current state and future of the automobile service industry. This course will cover dealership and independent operations. Students will learn vehicle identification and how to look up service information using several different sources. Students will learn vehicle maintenance, which will include fluid level checks and adjustments, peripheral electrical system checks and tire inspection and air pressure adjustment. In this course the students will learn basic measuring instruments used in vehicle service and diagnosis, as well as communication skills used throughout the automotive service industry.
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Avionics
Electronics
Technician

• Avionics Technician
• Electronics Technician
AVIONICS ELECTRONICS TECHNICIAN

Avionics Technician

As the need to maintain our nation’s vastly different aircraft continues to become more complex, the Avionics Technician career major assists students in acquiring the knowledge, education and training standards associated with the daily duties, tasks and maintenance of today’s aviation electronics. Students will learn basic principles of physics and aerodynamics as well as safe ground handling procedures, aircraft drawings, and blueprints. Through instructor-lead lectures, open discussions, NIDA instructional support software, and extensive hands-on activities, successful students will become fluent in DC circuits, AC circuits, solid-state devices and technologies, digital systems technologies (the future of aviation instrumentation, a.k.a. ‘the glass cockpit”), high-reliability soldering techniques, terminal connectivity, and troubleshooting techniques.

Average Oklahoma Wage
$26/hour

Helpful Attributes and Abilities
- General math, Algebra I, general science or equivalent courses
- Reading and math skills at the 10th grade level or above
- Good manual dexterity and agility
- Average or better mechanical aptitude
- Ability to comprehend and apply basic math and physics concepts
- An ability to work independently and as part of a team

Who Can Enroll
Adults

Recommended Prerequisites
- Successfully passed Algebra

Location
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
International Society of Certified Electronics Technicians (ISCET) Associate Level Certified Electronics Technician
National Center for Aerospace and Transportation Technologies (NCATT) Aircraft/Avionics Electronics Technician

Note: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Aviation Math</td>
<td>30</td>
</tr>
<tr>
<td>Basic Physics and Aerodynamics</td>
<td>45</td>
</tr>
<tr>
<td>Ground Handling and Servicing</td>
<td>30</td>
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<tr>
<td>Aircraft Drawings</td>
<td>30</td>
</tr>
<tr>
<td>Basic Electricity DC and Batteries</td>
<td>60</td>
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<tr>
<td>Basic Electricity AC</td>
<td>45</td>
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<tr>
<td>Solid State Circuits</td>
<td>37.5</td>
</tr>
<tr>
<td>Aircraft Electrical Systems</td>
<td>52.5</td>
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<tr>
<td>Aircraft Wiring Practices</td>
<td>45</td>
</tr>
<tr>
<td>Instruments and Communication/Navigation Systems</td>
<td>37.5</td>
</tr>
<tr>
<td>Electrical Safety for Electronics Technicians</td>
<td>15</td>
</tr>
<tr>
<td>Electronic Hand and Power Tools for Electronics Technicians</td>
<td>15</td>
</tr>
<tr>
<td>Instruments and Measurements for Electronics Technicians</td>
<td>15</td>
</tr>
<tr>
<td>DC Circuits for Electronics Technicians</td>
<td>120</td>
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<tr>
<td>AC Circuits for Electronics Technicians</td>
<td>180</td>
</tr>
<tr>
<td>Electromechanical Devices for Electronics Technicians</td>
<td>45</td>
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<tr>
<td>Semiconductor Circuits for Electronics Technicians</td>
<td>150</td>
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<tr>
<td>Semiconductor Devices for Electronics Technicians</td>
<td>90</td>
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<tr>
<td>Linear Circuits for Electronics Technicians</td>
<td>90</td>
</tr>
<tr>
<td>Digital Systems for Electronics Technicians</td>
<td>90</td>
</tr>
<tr>
<td>Microprocessor Systems for Electronics Technicians</td>
<td>60</td>
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<tr>
<td>Data Communications for Electronics Technicians</td>
<td>120</td>
</tr>
<tr>
<td>Soldering for Electronics Technicians</td>
<td>15</td>
</tr>
<tr>
<td>Mechanical Fasteners and Terminals for Electronics Technicians</td>
<td>15</td>
</tr>
<tr>
<td>Workforce Staging</td>
<td>30</td>
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</tbody>
</table>

Career Major Length
1462.5 Hours

College Credit may be available.

Note: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

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36
AVIONICS ELECTRONICS TECHNICIAN

Electronics Technician

Career Major Description
Learn to install, maintain and repair electronic circuits and equipment. Through a series of practical hands-on experiments, students will learn the correct use of safety procedures, tools, test equipment, troubleshooting procedures and soldering techniques, as supported by the theoretical components of electronics training. Students are expected to achieve a level of training sufficient for entry-level employment within the specific electronics area of their choosing, such as general electronics equipment servicing, aircraft electronic instrumentation installation and servicing, bio-medical electronic equipment installation and servicing, audio electronic equipment installation and servicing, communications/navigation equipment installation and servicing, and automotive electronics servicing. (evenings only)

Average Oklahoma Salary
$15-$24/hr

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• A basic knowledge of general science
• Good manual dexterity
• Average strength and good physical health
• An ability to work independently and as part of a team

Who Can Enroll
Adults

Recommended Prerequisites
• Successfully passed Algebra

Location
Aviation Career Campus
Will Rogers World Airport
5600 S. MacArthur
Oklahoma City, OK 73179

Financial Aid
Available for those who qualify

Student Organization
Skills USA

Certifications Available
International Society of Certified Electronics Technicians (ISCET) Associate Level Certified Electronics Technician
National Center for Aerospace and Transportation Technologies (NCATT) Aircraft/Avionics Electronics Technician

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)

Course Title Hours
Electrical Safety for Electronics Technicians ...............................................15
Electronics Hand and Power Tools for Electronics Technicians ..............15
Instruments and Measurements for Electronics Technicians ..............15
DC Circuits for Electronics Technicians ..............................................120
AC Circuits for Electronics Technicians .............................................180
Electromechanical Devices for Electronics Technicians ......................45
Semiconductor Circuits for Electronics Technicians ..........................150
Semiconductor Devices for electronics Technicians ............................90
Linear Circuits for Electronics Technicians .........................................90
Digital Systems for electronics Technicians .......................................90
Microprocessor Systems for Electronics Technicians ..........................60
Data Communications for Electronics Technicians ..........................120
Soldering for Electronics Technicians ..................................................15
Mechanical Fasteners and Terminals for Electronics Technicians.......15
Workforce Staging ...............................................................................30

Career Major Length 1050 Hours

College credit may be available

NOTE: The Aviation Career Campus adult career training programs operate on a four-day 7.5-hour schedule.
AC Circuits for Electronics Technicians 180 hours
This course covers alternating current in detail, including the concepts of frequency, amplitude and phase, and the effect alternating current has on passive devices such as resistors, capacitors, inductors, and conductors. Calculations will include capacitive and inductive reactance and resonance. Special emphasis will be placed on multi-element filters and troubleshooting AC circuits. Prerequisite: DC Circuits for Electronics Technicians

Aircraft Drawings 30 hours
This course provides training in the information presented on typical aircraft blueprints, graphs, and charts. The purpose, function, and types of aircraft drawings will be covered. Students will extract information from blueprints, schematics, and graphs, and make aircraft sketches suitable for use on an FAA Form 337.

Aircraft Electrical Systems 52.5 hours
This course provides instruction in troubleshooting complex aircraft electrical systems. The student will install electrical system components and check these systems for proper operation. The student will be introduced to modern electronic control devices such as logic circuit components and digital electronics. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Aircraft Wiring Practices 45 hours
This course provides instruction in aircraft electrical wiring installations. Students will route and secure wires in bundles or conduit and install the proper termination for given situations. Students will also service and repair wiring installations. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Basic Electricity AC 45 hours
This course provides instruction in the theory and principles of alternating current circuits. Students will compute and observe the effects of inductance, capacitance, and impedance in alternating current systems. Students will also construct basic AC electrical circuits, perform circuit analysis using electrical diagrams and measuring instruments, and conduct basic troubleshooting.

Basic Electricity DC and Batteries 60 hours
Students will receive instruction in the theory and principles of electricity, direct current circuits, and aircraft batteries. Students will use basic electricity laws and formulas in calculating and measuring voltage, current, power and resistance in electrical systems. Students will construct basic DC electrical circuits, perform circuit analysis using electrical diagrams and measuring instruments and conduct basic troubleshooting. Students will also inspect and service a lead-acid battery and a nickel cadmium battery.

Basic Physics and Aerodynamics 45 hours
This course provides instruction in the scientific principles that apply to the operation of aircraft, engines, and the equipment that the aviation maintenance technician will use on a daily basis. In addition, the makeup of the atmosphere, basic aerodynamics for fixed-wing aircraft, and stability and control will be covered.

Data Communications for Electronics Technicians 120 hours
This course teaches principles and protocols of data communications techniques, including wired and wireless, cabling, installation and troubleshooting, traditional AM and FM analog broadcasting, digital data communication techniques and microwave circuits. Emphasis will be placed on troubleshooting and repair techniques, safety and reliability. Prerequisite: Microprocessor Systems for Electronics Technicians

DC Circuits for Electronics Technicians 120 hours
This course teaches students the theory and practical principles of electronic devices and circuits. Emphasis will be placed on troubleshooting and repair techniques, safety and reliability. Prerequisite: Instruments and Measurements for Electronics Technicians

Digital Electronics 120 hours
This course teaches students about the electronic circuits used to process and control digital signals. Students are exposed to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Students will continually hone their interpersonal skills, creative abilities and understanding of the design process.

Electrical Safety for Electronic Technicians 15 hours
This course provides instruction in safety rules and regulations for electricians, precautions for electrical and mechanical hazards on the job, tool and equipment safety, first aid, CPR, blood borne pathogens, OSHA and NFPA mandated lockout/tagout, personal protective equipment, right to know and confined space entry procedures.

Electromechanical Devices for Electronics Technicians 45 hours
This course covers the many devices that convert electricity or electronic signals into other forms of power and those which convert other forms of power into electricity or electronic signals. Emphasis will be placed on troubleshooting, repair, safety and reliability. Prerequisite: Instruments and Measurements for Electronics Technicians

Electronic Hand and Power Tools for Electronics Technicians 15 hours
This course covers the proper use and maintenance of power and hand tools. Prerequisite: Electrical Safety for Electronics Technicians

Engineering Design and Development 120 hours
This course is an engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students identify a problem, complete extensive research, apply principles developed in the preceding courses and are guided by a community mentor. Prerequisite: Principles of Engineering

Ground Handling and Servicing 30 hours
This course provides instruction in safe ground handling procedures and aircraft movement, tie-down and storage. Students will also identify aviation fuels and determine the proper fuel for a particular aircraft.
Intruments and Measurements for Electronics Technicians  15 hours
This course covers the theory and practical considerations of electronic measurements, including concepts of accuracy and precision. The construction, calibration and maintenance of test equipment and special circuits to facilitate measurement will be covered in detail. The concepts of measurement error, parallax error and circuit loading will be covered. Prerequisite: Electrical Safety for Electronics Technicians

Introduction to Engineering Design  120 hours
This course teaches students problem-solving skills using a design development process. Models of product solutions are created, analyzed and communicated using solid modeling computer design software.

Instruments and Communication/Navigation Systems  37.5 hours
This course provides instruction in the components and operation of these two systems. Students will be introduced to inspecting, checking, troubleshooting, servicing and repairing electronic flight instrument systems and both mechanical and electrical heading, speed, altitude, temperature, pressure and position-indicating systems to include the use of built-in test equipment. Hands-on training will be provided in installing instruments and performing a static pressure system leak test. Students will also be instructed in inspecting, checking, troubleshooting, autopilot, servos and approach coupling systems. In addition instruction will include inspecting, checking and servicing electronic communication and navigation systems. This will include VHF passenger address interphones and static discharge devices, VOR, ILS, LORAN, radar beacon transponders, flight management computers and GPWS. Hands-on training will be provided in inspecting and repairing antenna and electronic equipment installations. Prerequisite: Students must have completed the General Program or have been authorized to attend this course by the Director/Assistant Director.

Linear Circuits for Electronics Technicians  90 hours
This course teaches students the theory and practical principles of analog electronic devices and circuits including passive and active linear electronic devices. Emphasis will be placed on troubleshooting and repair techniques, safety and reliability. Prerequisite: Semiconductor Circuits for Electronics Technicians

Materials and Processes, NDI, Precision Measuring  75 hours
This course provides instruction in the relative strengths and advantages of common aircraft materials and the identification systems used for aluminum and steel. Students will become familiarized with the heat treating process. Students will identify and select common nonmetallic materials and learn proper use and handling procedures. Students will learn to identify appropriate NDI methods and perform various types of inspections including dye penetrant, magnetic particle, eddy current, and ultrasonic inspections. They will also receive instruction in the identification, selection and installation of common aircraft hardware. Students will select and install solid shank rivets to airworthy standards. Students will also learn to perform precision measuring.

Mathematics (Aviation related majors)  30 hours
This course provides instruction in all of the mathematical computations required in the aviation maintenance curriculum. Students will first be given a basic math review. Students will solve problems involving ratios, proportions, percentages, areas, volumes and conversions. Power and roots and scientific notation will also be used. In addition, instruction in basic algebra operations, geometry and trigonometry will be provided.

Mechanical Fasteners and Terminals for Electronics Technicians  15 hours
This course covers in depth the many standards and uses of mechanical fasteners and electrical/electronic terminals used in constructing electronic circuits and devices. Special emphasis will be placed on nomenclature and specifications, print and schematic reading and mechanical construction techniques. Prerequisite: Soldering for Electronics Technicians

Microprocessor Systems for Electronics Technicians  60 hours
This course builds on the digital systems course, introducing microprocessors, memory systems, assembly language programming, and interfacing microprocessors with external circuits to control signal and power flow and sense input conditions. Digital to analog and analog to digital concepts will be taught and special emphasis will be placed on troubleshooting and repair techniques, safety and reliability. Prerequisite: Digital Systems for Electronics Technicians

Semiconductor Devices for Electronics Technicians  150 hours
This course covers the many active circuits that use semiconductors to measure, amplify, control, receive and transmit electronic signals. Specialized circuits such as bridges, classes of amplifiers, oscillators, active filters and power control circuitry will be covered. Much of the course will focus on hands-on construction, testing and troubleshooting circuits. Prerequisite: Semiconductor Devices for Electronics Technicians

Semiconductor Devices for Electronics Technicians  90 hours
This course covers two-, three- and four-layer semiconductor devices commonly used in electronic circuits, including diodes, transistors, bi-polar as well as FET technologies, and specialized devices used in measurement and power control circuits. Much of the course will focus on hands-on construction, testing and troubleshooting circuits for the purpose of examining the operation of semiconductor devices. Prerequisite: AC Circuits for Electronics Technicians

Soldering for Electronics Technicians  15 hours
This course covers the theory and essentials of preparing surfaces and leads for soldering, preparation and adjustment of soldering equipment, and procedures for through-hole, surface mount, and lead free soldering for reliability. Mil-Spec procedures will be covered briefly. Prerequisite: Electrical Safety for Electronics Technicians

Solid State Circuits  37.5 hours
This course provides instruction in the theory and principles of electron control devices. Students will compute and observe the effects of inductance, capacitance and impedance in solid-state circuitry. Students will also perform circuit analysis using electrical diagrams and measuring instruments, use various electronic control devices, and conduct basic troubleshooting.

Workforce Staging  30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. The course is designed for the development of leadership, personal development and employability skills attainment.
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Biomedical Sciences Academy

• Biomedical Sciences Academy
Biomedical Sciences Academy

Career Major Description
Students in this major will study biomedical science through the exciting Project-Lead-the-Way (PLTW) curriculum that will provide students hand on projects, labs, and experiences. Topics will include bioinformatics, human medicine, and an in depth study of the human body. In addition, students will complete advanced math and science courses. Students who complete this major will have been exposed to a diverse curriculum that will better equip them to choose and be successful in a major at the college/university level. Students will also have the strong math and science foundation needed to be prepared for a college/university program in STEM (Science, Technology, Engineering, & Mathematics) related fields. 

NOTE: Students will take the four required PLTW courses. They will then take a combination of math and sciences as determined by course availability to complete the remaining 480 hours for 2-year students, or 960 hours for 3-year students.

Average Oklahoma Salary
Varies

Helpful Attributes and Abilities
• Reading, language and math skills at the 10th grade level or above
• Ability to take directions from others
• Good eye-hand coordination
• Manual dexterity
• Ability to stand for long periods of time
• Ability to handle high stress situations
• Good physical and mental health
• Attention to detail
• Ability to organize and prioritize
• Ability to be a team player
• Ability to work in a fast-paced environment

Who Can Enroll
Juniors & Seniors

Prerequisites
• Minimum overall GPA of 3.0
• Grade level of B or above in math and science
• Algebra I (with a B or better)
• Biology I (with a B or better) or concurrent enrollment
• Geometry (with a B or better) or concurrent enrollment

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Student Organization
HOSA-Health Occupations Students of America

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title Hours
Principles of Biomedical Sciences (PLTW) 120
Biomedical Innovation (PLTW) 120
Medical Interventions (PLTW) 120
Human Body Systems (PLTW) 120
Anatomy 60
Physiology 60
Pre-AP Algebra II 120
Pre-AP Geometry 120
Pre-AP Trigonometry 60
Pre-AP Pre-Calculus 60
Pre-AP Chemistry 120
Pre-AP Physics 120
AP Calculus 120
AP Statistics 120
AP Biology 120
AP Environmental Science 120
AP Physics I 120

Career Major Length 960 Hours

Average Oklahoma Salary
Varies

Helpful Attributes and Abilities
• Reading, language and math skills at the 10th grade level or above
• Ability to take directions from others
• Good eye-hand coordination
• Manual dexterity
• Ability to stand for long periods of time
• Ability to handle high stress situations
• Good physical and mental health
• Attention to detail
• Ability to organize and prioritize
• Ability to be a team player
• Ability to work in a fast-paced environment

Who Can Enroll
Juniors & Seniors

Prerequisites
• Minimum overall GPA of 3.0
• Grade level of B or above in math and science
• Algebra I (with a B or better)
• Biology I (with a B or better) or concurrent enrollment
• Geometry (with a B or better) or concurrent enrollment

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Student Organization
HOSA-Health Occupations Students of America

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Anatomy 60 hours
Anatomy is the study of the structural complexity of the human body. This course is taught as a laboratory science for high school credit. The areas studied will include, but are not limited to: organization of the body, cells & tissues, integumentary system, skeletal system, muscular system, nervous system, endocrine system, blood, circulatory system, lymphatic & immune systems, respiratory systems, digestive system, urinary system, and reproductive system. An emphasis will be placed on active-learning exercises to help the student learn the structural organization of each body system.
Prerequisite: Algebra I, Geometry (or co-enrollment), and Biology I (or co-enrollment)

AP Biology 120 hours
AP Biology is designed to be the equivalent of a first year Biology post-secondary course. The range and depth of knowledge of the content area, type of labs, and time expenditure is elevated and extensive. Students will develop a conceptual framework for biology and an appreciation of science as a process. The course follows Collegeboard’s outline and covers eight major themes. They are: Science as a Process, Evolution, Energy Transfer, Continuity and Change, Relationship of Structure to Function, Regulation, Interdependence in Nature, Science, Technology, and Society. Labs play an integral part of this course and there are twelve lab topics that will be covered. They will provide the student with an opportunity to learn a variety of skills and facts, principles, and concepts of biology. Lab investigations will encourage higher-order thinking, generating ideas, and formulating hypotheses. All students are expected to take the AP Exam upon completion of this course.
Prerequisite: Biology I and Geometry

AP Calculus 120 hours
This course is primarily concerned with developing the students understanding of the concepts of calculus and providing experience with its methods and applications. Prerequisite: Pre-AP Trigonometry/Pre-Calculus

AP Chemistry 120 hours
Chemistry is the study of the properties of materials and the changes that materials undergo. A student will see how chemical principles operate in all aspects of our lives, from everyday activities to far-reaching matters like the development of drugs to cure cancer. Students will learn through laboratory and lecture methods using group and individual activities, cooperative learning, presentations, and technology to enhance the learning environment. Students will learn how to design and conduct experiments using a variety of laboratory techniques and technology to investigate a chemical concept. They will apply stoichiometric concepts to chemical reactions and analyze how atomic structure relates to periodicity. The student will analyze how atomic structures relate to chemical bonding and apply chemical concepts to reactions in aqueous solutions. They will learn about gas laws as well as study electrochemistry. Prerequisite: Chemistry I or Pre-AP Chemistry and Algebra I

AP Environmental Science 120 hrs
AP Environmental Science is a course that will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of environmental science.
Prerequisite: Biology I and Geometry

AP Physics I 120 hours
Through inquiry-based learning students will develop critical thinking and reasoning skills. This course covers classical mechanics/Newtonian physics at a rigorous level along with simple harmonic motion including sound, light and optics. Successful students will possess excellent geometry and algebra skills along with mastery of basic trigonometry functions.

AP Statistics 120 hours
AP Statistics is a course that introduces students to the main concepts in statistics and enables them to collect, analyze, and draw a conclusion from data. The four main concepts are: Exploring Data, Sampling and Experimentation, Anticipating Patterns, and Statistical Inference. Students are expected to take the AP Statistics Exam upon completion of the course and could receive college credit with an acceptable score. AP Statistics follows AP Central’s recommended course content.
Prerequisite: Pre-AP Trigonometry/Pre-Calculus

Biomedical Innovation 120 hours
This capstone course gives students the opportunity to work with a mentor, identify a science research topic, conduct research, write a scientific paper, and defend team conclusions and recommendations to a panel of outside reviewers. Each team will have one or more mentors from the scientific and/or medical community guiding their scientific research.
Prerequisite: Medical Interventions

Human Body Systems 120 hours
The human body is a complex system requiring care and maintenance. This course will engage students in the study of basic human physiology, especially in relationship to human health. Students will use a variety of monitors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Students will use LabView® software to design and build systems to monitor body functions.
Prerequisite: Principles of Biomedical Science

Medical Interventions 120 hours
Medical practice includes interventions to support humans in treating disease and maintaining health. Students will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will study the design and development of various medical interventions including vascular stents, cochlear implants, and prosthetic limbs. They will review the history of organ transplants and gene therapy, and read current scientific literature to be aware of cutting edge developments.

Physiology 60 hours
Physiology is the study of the intricate functional mechanisms of the human body. This course is taught as a laboratory science for high school credit. Students will conduct scientific investigations and fieldwork using scientific knowledge and methodology that will enable them to make educated conclusions based on higher-level critical thinking and problem solving skills. The areas studied will be an integration of biology and chemistry and will include, but are not limited to: chemical basis for life, cells & tissues, integumentary system, skeletal system, muscular system, nervous system, endocrine system, blood, circulatory system, lymphatic & immune systems, respiratory systems, digestive system & metabolism, urinary system, and reproductive system. Active-learning exercises will be included along with laboratory experiences.
Prerequisites: Algebra I, Geometry (or co-enrollment), and Biology I (or co-enrollment)
Pre-AP Algebra II 120 hours
This course will enhance and expand the mathematical foundations of Algebra I and Geometry. The course will stress the fundamental extension of previous mathematics and the preparation for future higher-level mathematics courses. It will involve operations with real and complex numbers as well as matrices. The problem solving processes will use functions and relations. Within the course applications of math, and while satisfying predictions based on a set of data, the use of data analysis, and statistics will be justified. Students who master Pre-AP Algebra II will gain experience with quadratic functions, conic sections, logarithmic and exponential functions, linear functions, solution methods for systems of linear functions, and

Pre-AP Chemistry 120 hours
Pre-AP Chemistry is designed to prepare students for the complex thinking that will be expected in future science courses. This course will focus on the development of the student as a scientist through the study of chemistry. Being a scientist requires a broad set of tools, including theory, problem solving, written and oral communication, interpreting data and laboratory skills. Areas covered are: Matter, atoms & periodic table, molecules & compounds, chemical reactions & stoichiometry, Aqueous solutions & reactions, Gases, Energy & Chemical Reactions, Atomic & Molecular Structure. Prerequisite: Algebra I and Biology I

Pre-AP Geometry 120 hours
This course will allow students the chance to relate mathematics to real-life situations and careers. It will build logical reasoning capabilities as well as give students an opportunity to justify conclusions in a structured manner. Students will analyze characteristics and properties of two- and three-dimensional geometric shapes. They will use visualization, spatial reasoning, and geometric modeling to solve problems. Throughout the course students connect the algebra skills previously developed to the geometric concepts. Pre-AP Geometry is a rigorous course that prepares students for higher-level mathematics. Prerequisite: Algebra I

Pre-AP Physics 120 hours
This course covers the basics of kinematics (motion) in one and two dimensions, as well as forces and vectors. Students study work, energy and power that lead into the study of momentum and the conservation of energy. Circular and projectile motion and gravitation, translational and rotational equilibrium, fluid mechanics and thermal physics will be covered. Students study electricity and magnetism then look at waves and optics. A final subject area will be atomic and nuclear physics. Good algebra skills are critical to success in this course, as well as knowledge of right angle trigonometry.

Pre-AP Trigonometry 60 hours
This course includes a study of six basic functions of trigonometry, solutions of right and oblique triangles, identities, and complex numbers. A graphing calculator is recommended and will be used as an aide to computations. Prerequisites: Algebra II or Pre-AP Algebra II

Pre-AP Pre-Calculus 60 hours
This course is designed to be in preparation for Calculus or AP Calculus. The course gives a review study of straight lines, conic sections, simplification of equations, algebraic curves, transcendental curves, a completed study of straight lines, polar coordinates, and an introduction to limits and derivatives. A graphing calculator is recommended and will be used as an aide to computations. Prerequisites: Algebra II or Pre-AP Algebra II

Principles of Biomedical Science 120 hours
This course provides an introduction to biomedical sciences through exciting “hands-on” projects and problems. Student work involves the study of human medicine, research processes and an introduction to bio-informatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. A theme through the course is to determine the factors that led to the death of a fictional person. After determining the factors responsible for the death, the students investigate lifestyle choices and medical treatments that might have prolonged the person’s life. Key biological concepts including: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease are embedded in the curriculum. Engineering principles including: the design process, feedback loops, fluid dynamics, and the relationship of structure to function are incorporated in the curriculum where appropriate. The course is designed to provide an overview of all the courses in Biomedical Sciences and to lay the scientific foundation necessary for student success in the subsequent courses. Prerequisite: Algebra I and Biology I (or co-enrollment)
Climate & Energy Control Technologies

- Commercial Refrigeration Technician
- HVAC/R Technician - Evening
- HVACR Technician
- Residential HVAC Installer
- Residential HVAC Installer - Evening
Commercial Refrigeration Technician

Career Major Description
This career major will introduce students to commercial refrigeration, exploring career opportunities in the refrigeration industry, personal safety and work practices, personal protective equipment, handling pressurized fluids, handling hazardous substances, hand and power tools, and equipment used to test and service various types of refrigeration equipment. Upon completion of this major and two years of verifiable experience in the refrigeration industry, applicants may apply to take the Oklahoma Mechanical Journeyman Refrigeration test.

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
- Math skills at the 10th grade level or above
- An ability to read and write at a 10th grade level
- An ability to compute percentages, measurements and simple fractions
- A basic knowledge of general and physical science
- Ability to climb ladders and work at heights

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
EPA Section 608 Technician Certification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title | Hours
--- | ---
Introduction to HVAC/R: Safety, Tools & Equipment | 30
Principles of Thermodynamics & Heat Transfer | 60
Piping & Piping Practices | 45
Refrigerants & Lubricants | 15
Refrigerant Recovery | 15
Refrigerant Retrofits | 15
Refrigerant System Components | 90
Electricity for HVAC/R | 60
HVAC/R Controls | 45
HVAC/R Solid State Electronics | 30
Commercial Systems & Applications | 120
Multiplexed Evaporator Systems | 90
Dispensing Freezers | 90
Transportation Refrigeration Systems | 15
Troubleshooting Refrigeration Systems | 90
Load Calculations | 15
HVAC/R Preventive Maintenance | 15
HVAC/R Codes, Regulations & Standards | 30
Professional Services | 15
Working in the Green Environment | 15
Workforce Staging | 30

Career Major Length
930 Hours
CLIMATE & ENERGY CONTROL TECHNOLOGIES

HVAC/R Technician - Evening

Learn to install, troubleshoot, adjust, and repair residential and some light commercial heating and air conditioning (HVAC) systems. This major covers the essential knowledge and skills necessary for troubleshooting and installation of various heating and air conditioning systems and includes hands-on labs for various heating, air conditioning, and refrigeration systems along with electricity, solder and brazing, piping and heat fusion processes. Specialized training for EPA certification in refrigerants is also included. After completing the major with 1,065 hours, applicants with at least one year on the job experience may apply to take the Oklahoma Mechanical Journeyman HVAC test.

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
- Math skills at the 10th grade level or above
- An ability to read and write at a 10th grade level
- An ability to compute percentages, measurements and simple fractions
- A basic knowledge of general and physical science
- Ability to climb ladders and work at heights

Who Can Enroll
Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
EPA Section 608 Technician Certification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title Hours
Introduction to HVAC/R: Safety, Tools & Equipment .......................... 30
Principles of Thermodynamics & Heat Transfer .................................. 60
Piping & Piping Practices ................................................................. 45
Refrigerants & Lubricants ................................................................. 15
Refrigerant Recovery ...................................................................... 15
Refrigerant Retrofits ...................................................................... 15
Refrigerant System Components .................................................... 90
Electricity for HVAC/R .................................................................. 60
HVAC/R Controls ........................................................................... 45
HVAC/R Solid State Electronics ...................................................... 30
Heating Systems ............................................................................ 120
Air Conditioning Systems .............................................................. 120
Air Handling ................................................................................... 45
HVAC/R System Servicing & Troubleshooting-Residential .......... 90
Load Calculations ......................................................................... 15
HVAC/R System Installation & Start-up-Residential ..................... 120
Heat Pumps ................................................................................... 30
HVAC/R Preventive Maintenance ............................................... 15
Indoor Air Quality ......................................................................... 15
HVAC/R Codes, Regulations & Standards .................................... 30
Professional Services ...................................................................... 15
Working in the Green Environment ............................................ 15
Workforce Staging ......................................................................... 30

Career Major Length 1065 Hours
HVACR Technician

Career Major Description
Learn to install, troubleshoot, adjust, and repair residential and some light commercial heating and air conditioning (HVAC) systems. This major covers the essential knowledge and skills necessary for troubleshooting and installation of various heating and air conditioning systems and includes hands-on labs for various heating, air conditioning, and refrigeration systems along with electricity, solder and brazing, piping and heat fusion processes. Specialized training for EPA certification in refrigerants is also included. After completing the major with 1,065 hours, applicants with at least one year on the job experience may apply to take the Oklahoma Mechanical Journeymen HVAC test.

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
• Math skills at the 10th grade level or above
• An ability to read and write at a 10th grade level
• An ability to compute percentages, measurements and simple fractions
• A basic knowledge of general and physical science
• Ability to climb ladders and work at heights

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
EPA Section 608 Technician Certification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title Hours
Introduction to HVAC/R: Safety, Tools & Equipment ..........................30
Principles of Thermodynamics & Heat Transfer ..................................60
Piping & Piping Practices .................................................................45
Refrigerants & Lubricants ..................................................................15
Refrigerant Recovery ............................................................................15
Refrigerant Retrofits ............................................................................15
Refrigerant System Components .......................................................90
Electricity for HVAC/R .......................................................................60
HVAC/R Controls ..............................................................................45
HVAC/R Solid State Electronics .........................................................30
Heating Systems .............................................................................120
Air Conditioning Systems ..................................................................120
Air Handling .....................................................................................45
HVAC/R System Servicing & Troubleshooting-Residential ..............90
Load Calculations ...............................................................................15
HVAC/R System Installation & Start-up-Residential .........................120
Heat Pumps .......................................................................................30
HVAC/R Preventive Maintenance .....................................................15
Indoor Air Quality .............................................................................15
HVAC/R Codes, Regulations & Standards ........................................30
Professional Services .........................................................................15
Working in the Green Environment ..................................................15
Workforce Staging ..........................................................................30

Career Major Length 1065 Hours

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
• Math skills at the 10th grade level or above
• An ability to read and write at a 10th grade level
• An ability to compute percentages, measurements and simple fractions
• A basic knowledge of general and physical science
• Ability to climb ladders and work at heights

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
EPA Section 608 Technician Certification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Residential HVAC Installer

Career Major Description
Learn to install, start up, and adjust residential heating and air conditioning (HVAC) systems using manufacturer’s literature. You will get hands-on labs for installation and start-up of common residential HVAC/R equipment. Piping and heat fusion processes and specialized training for EPA certification in refrigerants is also included. After completing the major and two years of verifiable work experience in the HVAC/R industry, applicants may apply to take the Oklahoma Journeyman HVAC test.

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
• Math skills at the 10th grade level or above
• An ability to read and write at a 10th grade level
• An ability to compute percentages, measurements and simple fractions
• A basic knowledge of general and physical science
• Ability to climb ladders and work at heights

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Student Organization
SkillsUSA

Certifications Available
EPA Section 608 Technician Certification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title | Hours
--- | ---
Introduction to HVAC/R: Safety, Tools & Equipment | 30
Principles of Thermodynamics & Heat Transfer | 60
Piping & Piping Practices | 45
Refrigerants & Lubricants | 15
Refrigerant Recovery | 15
Refrigerant Retrofits | 15
Air Handling | 45
Load Calculations | 15
HVAC/R System Installation & Start-up-Residential | 120
HVAC/R Preventive Maintenance | 15
Indoor Air Quality | 15
HVAC/R Codes, Regulations & Standards | 30
Professional Services | 15
Workforce Staging | 30

Career Major Length 465 Hours

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
• Math skills at the 10th grade level or above
• An ability to read and write at a 10th grade level
• An ability to compute percentages, measurements and simple fractions
• A basic knowledge of general and physical science
• Ability to climb ladders and work at heights

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Student Organization
SkillsUSA

Certifications Available
EPA Section 608 Technician Certification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
CLIMATE & ENERGY CONTROL TECHNOLOGIES

Residential HVAC Installer - Evening

Career Major Description
Learn to install, start up, and adjust residential heating and air conditioning (HVAC) systems using manufacturer’s literature. You will get hands-on labs for installation and start-up of common residential HVAC/R equipment. Piping and heat fusion processes and specialized training for EPA certification in refrigerants is also included. After completing the major and two years of verifiable work experience in the HVACR industry, applicants may apply to take the Oklahoma Journeyman HVAC test.

Average Oklahoma Salary
$16/hour

Helpful Attributes and Abilities
• Math skills at the 10th grade level or above
• An ability to read and write at a 10th grade level
• An ability to compute percentages, measurements and simple fractions
• A basic knowledge of general and physical science
• Ability to climb ladders and work at heights

Who Can Enroll
Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Student Organization
SkillsUSA

Certifications Available
EPA Section 608 Technician Certification

Course Title Hours
Introduction to HVAC/R: Safety, Tools & Equipment .................. 30
Principles of Thermodynamics & Heat Transfer .................... 60
Piping & Piping Practices .................................................... 45
Refrigerants & Lubricants ................................................... 15
Refrigerant Recovery ......................................................... 15
Refrigerant Retrofits .......................................................... 15
Air Handling ....................................................................... 45
Load Calculations ................................................................. 15
HVAC/R System Installation & Start-up-Residential ............... 120
HVAC/R Preventive Maintenance ...................................... 15
Indoor Air Quality ................................................................. 15
HVAC/R Codes, Regulations & Standards ......................... 30
Professional Services .......................................................... 15
Workforce Staging .............................................................. 30

Career Major Length 465 Hours

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)

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Air Conditioning Systems 120 hours
This course is an introduction to unitary cooling, central station systems, service and problem analysis, absorption refrigeration, desiccant cooling and dehumidification. Prerequisite: Refrigerant System Components

Air Handling 45 hours
This course covers the essentials knowledge and skills necessary to understand airflow principles and duct design; install, and repair duct systems; measure and balance air flow; and troubleshoot and repair air flow problems. Student will be prepared to identify appropriate filtration for an air system, i.e. mechanical and electronic, and install, troubleshoot, and maintain filtrations systems. Extensive coverage will be given to the different types of fans and blowers, testing for blower motor loading, correct rotation, and adjustment to change the volume of air moved. Prerequisite: Intro to HVAC/R: Safety, Tools and Equipment; Principles of Thermodynamics and Heat Transfer

Heat Pumps 30 hours
This course covers the essential knowledge necessary to install, service, troubleshoot, and repair heat pumps. Emphasis will be placed on air-to-air systems, but ground source systems will be introduced and briefly examined. Topics will include a review of the refrigeration cycle, reversing valves, the defrost cycle, defrost timers including electromechanical as well as solid state devices, balance point, and backup heat systems. Prerequisite: Refrigerants & Lubricants; Refrigerant Recovery; Electricity for HVAC/R; HVAC/R Controls; HVAC/R Solid State Electronics; Air Conditioning Systems

Heating Systems 120 hours
This course covers the essential knowledge and skills of installing, maintaining, servicing, troubleshooting, and repairing various heating systems, including forced air, convection, hydronic, and radiant. Gas LP, natural gas, and electrical systems will be examined. Emphasis will be placed on gas and electric forced air systems, but heat pumps (air to air and ground source) will be introduced. Hands-on labs will be an extensive part of the course. Prerequisite: HVAC/R Solid State Electronics

HVAC/R Codes, Regulations & Standards 30 hours
This course covers the essential knowledge and skills necessary to adhere to the codes and standards pertaining to the HVAC/R industry, regulations affecting ozone depletion, state and local codes, OSHA, and government licensing requirements.
Piping & Piping Practices 45 hours
This course is an introduction to piping material and fabrication, pipe sizing and troubleshooting, sheet metal, airflow principles/duct design, mechanical and electronic filtration and fans/blowers.

Principles of Thermodynamics and Heat Transfer 60 hours
This course is an introduction to matter and heat behavior, fluids and pressures, refrigeration cycle/diagrams and measurement systems.

Professional Services 15 hours
This course covers the essential knowledge and skills necessary to provide quality customer service, build character and customer relations, and participate in professional development.

Refrigerant Recovery 15 hours
This is an introduction to refrigerant safety, and recovery, recycling, and reclamation equipment and methods. Students are prepared to seek EPA certification.
Prerequisite: Refrigerants & Lubricants

Refrigerant Retrofits 15 hours
This course covers appropriate procedures in retrofitting an air conditioning or refrigeration system to run efficiently on a different refrigerant than originally equipped. Compatibility issues of refrigerants with various compressors, evaporators, condensers, expansion devices, and lubricants will be covered in depth. Proper refrigerant/lubricant recovery techniques will be reviewed and practiced.
Prerequisite: Refrigerants & Lubricants; Refrigerant Recovery

Refrigerant System Components 90 hours
This course covers the refrigeration cycle and teaches students to recognize the components of refrigeration systems including metering devices, evaporators, compressors, condensers, accessories, and access valves.
Prerequisite: Piping & Piping Practices

Refrigerants & Lubricants 15 hours
This course covers the properties and applications of the many refrigerants used in refrigeration and air conditioning applications. Refrigeration lubricants, their properties and applications, including compatibility issues with various refrigerants, principles of safe handling for refrigerants and lubricants will be important components of this course.
Prerequisite: Principles of Thermodynamics and Heat Transfer

Workforce Staging 30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.

Working in the Green Environment 15 hours
This course introduces the student to the concepts, materials and uses of environmentally safe materials and construction techniques used in the “green build” approach to construction. Students learn why going green is a smarter and more efficient process to construction and how it will impact the environment and the world we live in.
Computer Repair & Networking

- Desktop Support Technician
- Network PC Support Specialist
- Network Systems Technician (Security Emphasis)
- PC Support Technician
Desktop Support Technician

Career Major Description
Learn to service, troubleshoot, and repair personal computers; install and configure operating systems and application software; and support customer needs. Students also learn to install, configure and support an organization’s local area network (LAN), as well as to analyze situations and data requirements and to assist and manage moves and installation of existing and new equipment. Desktop support technicians utilize one-on-one consultancy to assist end users by diagnosing and resolving unique problems.

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 10th grade level or above
• Good eyesight, including eye-hand coordination and color perception
• Good manual dexterity
• Good organizational and critical thinking skills
• Good abstract reasoning skills
• Detail oriented
• Commitment to a continual learning process

Who Can Enroll
Juniors, Seniors & Adults

Prerequisite
Successful completion of PC Support Technician Career Major

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Pending

Student Organization
BPA-Business Professionals of America

Certifications Available
Internet Core and Computing IC³
Test Out PC Pro Certification
CompTIA Network+ 220-901
CompTIA Network+ 220-902
Microsoft Technology Specialist 70-680
Microsoft Technical Associate #349
Microsoft IT Professional 70-685

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title
Hours
Fundamentals of Technology .............................................................. 120
Computer Repair and Troubleshooting I ............................................. 180
Computer Repair and Troubleshooting II ........................................... 180
Client Operating Systems ................................................................. 120
Installing and Maintaining Desktop Applications................................ 120
Information Support and Services Capstone..................................... 150

Career Major Length 870 Hours

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Network PC Support Specialist

**Career Major Description**
Learn to repair, service and troubleshoot personal computers; install and configure operating systems and application software; and support customer needs. Students also learn to install, configure and support an organization’s local area network (LAN). Students in this major gain the technical skills required for CompTIA Network+ (N10-005) certifications.

**Course Title** | **Hours**
--- | ---
Fundamentals of Technology | 120
Computer Repair and Troubleshooting I | 180
Computer Repair and Troubleshooting II | 180
Network and Routing Fundamentals | 150
Information Support and Services Capstone | 150
**Career Major Length** | **780 Hours**

**Average Oklahoma Salary**
$15/hour

**Helpful Attributes and Abilities**
- Reading, language and math skills at the 10th grade level or above
- Good eyesight, including eye-hand coordination and color perception
- Good manual dexterity
- Good organizational and critical thinking skills
- Good abstract reasoning skills
- Detail oriented
- Commitment to a continual learning process

**Who Can Enroll**
Juniors, Seniors & Adults

**Prerequisite**
Successful completion of PC Support Technician Career Major

**Location**
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

**Financial Aid**
Available for those who qualify

**Certifications Available**
- Internet Core and Computing IC³
- Test Out PC Pro Certification
- CompTIA Network+ 220-901
- CompTIA Network+ 220-902
- CompTIA Network+
- Microsoft Technical Associate #366

**Student Organization**
BPA-Business Professionals of America

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Network Systems Technician (Security Emphasis)

Career Major Description
Learn to install, configure and support an organization's local area network (LAN) as well as to analyze situations and data requirements and to assist and manage moves and installation of existing and new equipment. Students learn to install, configure, maintain and manage a Windows 2008 Server Active Directory and Network Infrastructure environment. Students in this major gain the technical skills required for the CompTIA Network+ (N10-005), CompTIA Security+ (SY0-301), and work towards the server-based certifications: Microsoft Technology Specialist (MCTS) which includes Active Directory Configuration (70-640), Server 2008 Network Infrastructure Configuration (70-642), and Windows Server 2008 Administrator (70-646); and Microsoft Certified IT Professional (MCITP).

Course Title       Hours
Fundamentals of Technology ..............................................................120
Network and Routing Fundamentals ..................................................150
Client Operating Systems .................................................................120
Server Operating Systems .................................................................120
Network Management I ..............................................................120
Network Management II ..........................................................120
Network Security Awareness ..........................................................120
Network Systems Capstone ..........................................................150

Career Major Length 1020 Hours

Average Oklahoma Salary
$18/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 10th grade level or above
• Good eyesight, including eye-hand coordination and color perception
• Good manual dexterity
• Good organizational and critical thinking skills
• Good abstract reasoning skills
• Detail oriented
• Commitment to a continual learning process

Who Can Enroll
Juniors, Seniors & Adults

Prerequisite
Successful completion of PC Support Technician Career Major

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
CompTIA Network+
CompTIA Security+
Microsoft Certified Technology Specialist (MCTS)
Microsoft Certified IT Professional (MCITP)
Microsoft Technical Associate #365
Microsoft IT Professional 70-646
Microsoft Technology Specialist 70-642
Internet Core and Computing IC3
Microsoft Technical Associate #366
Microsoft Technology Specialist 70-680
Microsoft Technical Associate #349
Microsoft Technical Associate #367
Microsoft Technology Specialist 70-640

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

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PC Support Technician

Career Major Description
Learn to service, troubleshoot, and repair, personal computers; install and configure operating systems and application software; support customer needs; and understand the basic principles of networking. Students in this major gain the technical skills required for CompTIA A+ (220-801 & 220-802) certification.

Course Title | Hours
--- | ---
Fundamentals of Technology | 120
Computer Repair and Troubleshooting I | 180
Computer Repair and Troubleshooting II | 180
Information Support and Services Capstone | 150

Career Major Length 630 Hours

Average Oklahoma Salary
$13/hour

Helpful Attributes and Abilities
- Reading, language and math skills at the 10th grade level or above
- Good eyesight, including eye-hand coordination and color perception
- Good manual dexterity
- Good organizational and critical thinking skills
- Good abstract reasoning skills
- Detail oriented
- Commitment to a continual learning process

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Internet Core and Computing IC³
Test Out PC Pro Certification
CompTIA Network+ 220-901
CompTIA Network+ 220-902

Certifications Available
Internet Core and Computing IC³
Test Out PC Pro Certification
CompTIA Network+ 220-901
CompTIA Network+ 220-902

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COURSE DESCRIPTION
COMPUTER REPAIR & NETWORKING

Client Operating Systems  120 hours
Students perform desktop client administration and maintenance and provide support for users in various work environments, including professional offices, small businesses, work groups and call centers. Prerequisite: Network and routing fundamentals

Computer Repair and Troubleshooting I  180 hours
This course prepares students for the CompTIA A+ 2015 certifications. Students prepare for positions related to the maintenance of computers and computer-related equipment through hands-on simulations project-based learning, and Internet research. This course focuses on computer hardware, troubleshooting, repair and maintenance, operating systems and software, networking and security. The course also includes the communication skills and professionalism required of entry-level IT professionals in a desktop support position. Prerequisite: Fundamentals of Technology

Computer Repair and Troubleshooting II  180 hours
This course prepares students for the CompTIA A+ certification exams. Students prepare for positions related to the maintenance of computers and computer-related equipment through hands-on and project-based learning, textbook assignments, and Internet research. The focus of this course is on advanced concepts of personal computer components, operating systems, networking and security. Prerequisite: Computer Repair and Troubleshooting I.

Fundamentals of Technology  120 hrs
In this course students learn the fundamental concepts, principles, and ideas needed to understand how business is operated and managed in a rapidly changing global environment. This course also provides job readiness skills and soft skills that are critical for success in any workplace setting.

Information Support and Services Capstone  150 hours
Work-based learning experiences, project-based instruction and additional industry certifications are utilized in this course to reinforce skills obtained within any Information Technology Career Major. Students make final preparations for industry certifications as they master outlined competencies. Students will select from various project options to finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All required courses in major

Installing and Maintaining Desktop Applications  120 hours
Students perform network administration duties and provide support for network users in various work environments, including professional offices, small businesses, work groups, departments, and/or corporate information services (IS). Prerequisite: Client Operating Systems

Network and Routing Fundamentals  150 hours
Students prepare for positions related to the installation, configuration, and troubleshooting of network hardware peripherals and protocols. Students learn the basics of networking by exploring the OSI model, network topologies, cabling techniques, network communications protocols, and hardware. Prerequisite: Fundamentals of Technology, Computer Repair and Troubleshooting I and II

Network Management I  120 hours
Students prepare for positions related to the installation, configuration, and troubleshooting of network hardware peripherals and protocols. Students learn the basics of networking by exploring the OSI model, network topologies, cabling techniques, network communications protocols, and hardware. Prerequisite: Fundamentals of Technology, Computer Repair and Troubleshooting I and II

Network Management II  120 hours
Students prepare for positions related to the installation, configuration, and troubleshooting of network hardware peripherals and protocols. Students learn the basics of networking by exploring the OSI model, network topologies, cabling techniques, network communications protocols, and hardware. Prerequisite: Fundamentals of Technology, Computer Repair and Troubleshooting I and II

Network Systems Capstone  150 hours
Work-based learning experiences, project-based instruction and teamwork will be utilized to reinforce network administration skills. Students will make final preparations for industry certifications as they master competencies. Students will select from various project options to finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All required courses in major

Server Operating Systems  120 hours
This course prepares students for the Microsoft Technology Specialist 70-640 certification. Students prepare for positions in server administration and cybersecurity fields. Students will learn to setup the Active Directory during the server installation. Configuration, maintenance and administration duties are required to provide support for Configuring a Microsoft Windows Server 2008 Active Directory. Prerequisite: Client Operating Systems

Network Systems Capstone  150 hours
Work-based learning experiences, project-based instruction and teamwork will be utilized to reinforce network administration skills. Students will make final preparations for industry certifications as they master competencies. Students will select from various project options to finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All required courses in major

Network Security Awareness  120 hrs
In this course students demonstrate knowledge and competency in PC, server and internet security. Students utilize these skills in preparation for positions related to the cybersecurity on individual computers and networks. Prerequisite: Computer Repair and Networking, Network Management, Client Operating Systems
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Construction Trades

- Finish Carpenter
- Frame Carpenter
- Maintenance/Repair Carpenter
CONSTRUCTION TRADES

Finish Carpenter

Career Major Description
Students in this major will develop skills required for the installation of trim, mantels, shelving, molding and ornamental wood. Students also plan, design, construct and learn to install cabinets and countertops.

Average Oklahoma Salary
$14/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Ability to communicate well and work with others
• Ability to understand theories and technical information
• Ability to work on ladders and scaffolds
• Good eye-hand coordination
• Good health and physical condition
• Positive attitude and dependability

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Pending

Student Organization
SkillsUSA

Certifications Available
National Center for Construction Education and Research (NCCER)

Industry Accreditations
National Center for Construction Education and Research (NCCER)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title
Hours
Construction Core ............................................................................... 120
Commercial Drawings .......................................................................... 25
Exterior Finishing ................................................................................. 60
Thermal & Moisture Protection ............................................................ 15
Roofing Applications ........................................................................... 40
Drywall Installation & Finishing .......................................................... 90
Interior Trim & Finish ........................................................................... 85
Doors & Door Hardware .................................................................... 15
Cabinet Fabrication & Installation ...................................................... 120
Workforce Staging ................................................................................ 30

Career Major Length ................................................................. 600 Hours
Frame Carpenter

**Career Major Description**
Students in this career major are introduced to the basic skills of a carpenter, safety practices, basic residential framing, and carpentry tools and equipment uses and operations. Basic residential framing is included.

**Average Oklahoma Salary**
$14/hour

**Helpful Attributes and Abilities**
- Reading and math skills at the 8th grade level or above
- Ability to communicate well and work with others
- Ability to understand theories and technical information
- Ability to work on ladders and scaffolds
- Good eye-hand coordination
- Good health and physical condition
- Positive attitude and dependability

**Who Can Enroll**
Juniors, Seniors & Adults

**Location**
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

**Financial Aid**
Available for those who qualify

**Student Organization**
SkillsUSA

**Certifications Available**
National Center for Construction Education and Research (NCCER)

**Industry Accreditations**
National Center for Construction Education and Research (NCCER)

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

**Course Title**  
**Hours**
- Construction Core ................................................................. 120
- Orientation to the Trade ......................................................... 30
- Materials, Fasteners & Adhesives ......................................... 15
- Hand & Power Tools ............................................................. 15
- Intro to Construction Drawings, Specs & Layout .................. 30
- Floor Systems ................................................................. 45
- Wall Systems ................................................................. 75
- Ceiling Joist & Roof Framing .............................................. 180
- Intro to Building Envelope Systems ................................. 20
- Stair Framing ................................................................. 45
- Workforce Staging ......................................................... 30

**Career Major Length** ................................................. 605 Hours
CONSTRUCTION TRADES

Maintenance/Repair Carpenter

Career Major Description
Learn basic carpentry skills to maintain and repair residential and commercial buildings. Students will work with roof, floor and stairs systems as well as drywall and concrete. The proper use of construction equipment will be stressed along with the leadership skills needed to head a worksite crew. Skid loader training is included.

Average Oklahoma Salary
$14/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Ability to communicate well and work with others
• Ability to organize one’s work
• Ability to understand theories and technical information
• Ability to work on ladders and scaffolds
• Good eye-hand coordination
• Good health and physical condition
• Positive attitude and dependability

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
National Center for Construction Education and Research (NCCER)

Industry Accreditation
National Center for Construction Education and Research (NCCER)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title                                      Hours
Construction Core ........................................... 120
Orientation to the Trade .................................. 30
Site Layout One-Distance Measurement & Leveling .... 30
Materials, Fasteners, and Adhesives ................. 15
Exterior Finishing .......................................... 60
Intro to Construction Drawings, Specs & Layout .... 30
Floor Systems ................................................ 45
Thermal & Moisture Protection ......................... 15
Suspended Ceilings ........................................ 30
Roofing Applications ...................................... 40
Drywall Installation & Finishing ...................... 90
Doors & Door Hardware .................................... 15
Windows, Doors, Floors & Ceiling Trim ............ 30
Stairs ......................................................... 15
Cabinet Installation ....................................... 30
Light Equipment in Construction ...................... 15
Concrete and Reinforcing Materials ................. 15
Becoming a Crew Leader .................................. 15
Workforce Staging ......................................... 30

Career Major Length                             670 Hours
Becoming a Crew Leader 15 hours
This course introduces the student to the principles of project planning, scheduling, estimating, management and supervision.

Cabinet Installation 30 hours
In this course, students gain the skills required to select and install base and wall cabinets and countertops.

Cabinet Fabrication & Installation 30 hours
This course provides detailed instructions for the selection and installation of base and wall cabinets and countertops.

Ceiling Joist & Roof Framing 180 hrs
This course describes types of roofs and provides instructions for laying out rafters for gable roofs, hip roofs and valley intersections. Covers stick-built and truss-built roofs and includes basics of roof sheathing installation.

Commercial Drawings 25 hours
Students will learn how to read and interpret a set of commercial drawings and specifications.

Concrete & Reinforcing Materials 15 hours
In this course, students are introduced to properties, characteristics and uses of cement, aggregates and other materials. Types of concrete, estimating concrete volume, testing methods and concrete reinforcement are also covered.

Construction Core 120 hours
This course introduces the student to basic safety, construction math, tools, blueprints and rigging. Communications and employability skills are also stressed.

Doors and Door Hardware 15 hours
Covers the installation of metal doors and related hardware in steel-framed, wood-framed, and masonry walls. A discussion on the installation of wood doors, folding door, and pocket doors is also presented.

Drywall Installation & Finishing 60 hours
This course describes the various types of gypsum drywall, their uses, and the tools, fastening devices and methods used to install, finish, and patch them.

Exterior Finishing 60 hours
This course covers the various types of exterior finish materials and their installation procedures, including wood, metal, vinyl and fiber-cement siding.

Floor Systems 45 hours
Floor systems cover framing basics and the procedures for laying out and constructing a wood floor using common lumber, as well as engineered building materials.

Interior Trim & Finish 85 hours
Describes the different types of trim used in finish work and focuses on the proper methods for selecting, cutting, and fastening trim to provide a professional finished appearance.

Introduction to Building Envelope Systems 20 hours
This course introduces the concept of the building envelope and explains its components. It describes types of windows, skylights and exterior doors, and provides instructions for installation.

Introduction to Construction Drawings, Specs & Layout 30 hours
Covers techniques for reading and using construction drawings and specifications with an emphasis on drawings and information relevant to the carpentry trade; also introduces quantity take-offs.

Light Equipment in Construction 15 hours
This course introduces the student to light equipment used on all residential and commercial construction sites.

Materials, Fasteners and Adhesives 15 hours
This course introduces the student to construction building materials such as lumber, sheet materials, engineered wood products, structural concrete and structural steel.

Orientation to the Trade 45 hours
Orientation to the Trade reviews the history of the trade, describes the apprentice program, and identifies career opportunities for carpentry and construction workers. It lists the skills, responsibilities and characteristics a worker should possess and emphasizes the important of safety in the construction industry.

Roofing Applications 40 hours
In this course, students will learn how to properly prepare the roof desk and install roofing for residential and commercial buildings.

Site Layout One-Distance Measurement and Leveling 30 hours
This course introduces the student to principles, equipment and methods used to perform distance measurement and differential leveling. In addition, students will learn layout responsibilities of surveyors, field engineers and carpenters; use site/plot drawings and practice methods used for on-site communications.

Stairs 15 hours
This course introduces the student to the types of wooden stairs used in residential and commercial construction and layout procedures for stairs, cutting out stringers, installing and finishing stairs.

Stair Framing 45 hours
Introduces types of stairs and common building code requirements related to stairs, techniques for measuring and calculating rise, run and stairwell openings, laying out stringers, and fabricating basic stairways.

Suspected Ceilings 30 hours
In this course, students learn to layout and install suspended ceilings using in commercial construction. This includes ceiling tiles, drywall suspension systems and pan-type ceilings.

Thermal and Moisture Protection 15 hours
This course introduces the student to procedures in determining the appropriate thermal and moisture protection required to complete the project/job.

Wall Systems 75 hours
This course describes procedures for laying out and framing walls, including roughing-in door and window openings, construction corners, partition Ts and bracing walls. Also includes procedures for estimating materials required to frame walls.

Windows, Doors, Floors & Ceiling Trim 30 hours
This course introduces the student to various types of trim used in finish work. Students will learn the proper methods for selection, cutting and attaching trim to provide a quality finish.

Windows and Exterior Doors 30 hours
In this course students are introduced to the special terms associated with window and door installation. Students learn about the various kinds of windows and exterior doors and the important installation practices related to them.

Workforce Staging 30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.
Cosmetology

- Cosmetologist-Evening
- Cosmetologist-High School
- Cosmetology Facialist Instructor
- Cosmetology Master Instructor
- Cosmetology Nail Technician Instructor
- Esthetician-Evening
- Esthetician-High School
- Nail Technician-Evening
- Nail Technician-High School
**Cosmetologist - Evening**

**Career Major Description**
This major prepares students to become licensed cosmetologists who provide nail, skin, scalp, and hair care to customers to help them enhance their personal appearance. Students receive classroom instruction and hands-on training in hair styling, cutting, coloring and chemical restructuring. Included are manicures/pedicures, facials, lash and brow tinting and arching, and scalp treatments along with customer service and shop management. To obtain state licensing, students must complete 1500 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams.

**Course Title**
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Cosmetology</td>
<td>150</td>
</tr>
<tr>
<td>Shampoo/Condition/Rinses</td>
<td>60</td>
</tr>
<tr>
<td>Hairstyling</td>
<td>390</td>
</tr>
<tr>
<td>Haircutting</td>
<td>180</td>
</tr>
<tr>
<td>Manicure/Pedicure/Artificial Nail</td>
<td>90</td>
</tr>
<tr>
<td>Hair Texture Chemical Restructuring</td>
<td>240</td>
</tr>
<tr>
<td>Hair Coloring</td>
<td>120</td>
</tr>
<tr>
<td>Makeup/Facials</td>
<td>30</td>
</tr>
<tr>
<td>Lash &amp; Brow Tinting &amp; Arching</td>
<td>30</td>
</tr>
<tr>
<td>Scalp Treatments</td>
<td>30</td>
</tr>
<tr>
<td>Salon Development</td>
<td>180</td>
</tr>
</tbody>
</table>

**Average Oklahoma Salary**
$10/hour plus gratuity

**Helpful Attributes and Abilities**
- Reading and math skills at the 8th grade level or above
- An artistic touch and a high degree of manual dexterity
- Ability to get along with others
- Ability to endure sitting (manicurist) or standing (hairdresser) for long periods of time

**Who Can Enroll**
Adults

**Prerequisites**
- Minimum of an 8th grade education and 16 years of age with documentation of student’s date of birth
- English proficiency test for those who speak English as a second language
- Oklahoma State Board of Cosmetology registration; $5.00 fee required

**Location**
South Bryant Campus (evening)
4901 S. Bryant Ave.
Oklahoma City, OK 73129

**Financial Aid**
Available for those who qualify

**Student Organization**
SkillsUSA

**Industry Accreditations**
Oklahoma State Board of Cosmetology

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Cosmetologist-High School

Career Major Description
This major prepares students to become licensed cosmetologists who provide nail, skin, scalp and hair care to customers to help them enhance their personal appearance. Students receive classroom instruction and hands-on training in hair styling, cutting, coloring and chemical restructuring. Included are manicures/pedicures, facials, lash and brow tinting and arching, and scalp treatments along with customer service and shop management. To obtain state licensing, students must complete 1500 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams with 500 hours waived for high school students if high school core courses are successfully completed.

Average Oklahoma Salary
$10/hour plus gratuity

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• An artistic touch and a high degree of manual dexterity
• Ability to get along with others
• Ability to endure sitting (manicurist) or standing (hairdresser) for long periods of time

Who Can Enroll
Juniors, Seniors

Prerequisites
• Must be at least a junior in high school and be 16 years of age by November 1
• Must be registered by State Board of Cosmetology; requires a $5 fee (money order/cashier’s check), documentation of student’s date of birth prior to attending class and social security number

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title Hours
Introduction to Cosmetology-Public ................................................... 150
Shampoo/Condition/Rinses-Public ....................................................... 30
Hairstyling-Public ............................................................................... 180
Haircutting-Public ............................................................................. 120
Manicure/Pedicure/Artificial Nails-Public ............................................ 60
Hair Texture/Chemical Restructuring-Public ...................................... 180
Hair Coloring-Public ............................................................................ 90
Make-up /Facials -Public ..................................................................... 30
Lash & Brow Tinting & Arching-Public ............................................... 30
Scalp Treatments - Public ................................................................... 30
Salon Development - Public .............................................................. 100

Career Major Length ................................................................. 1000 Hours

High School Core Classes Successfully Completed........................... 500
Cosmetology Facialist Instructor

Career Major Description
This major prepares students to become licensed as qualified teachers of the art and science of skin care theory and practice in industry as well as in public or private institutions. Students receive training in teaching methods, course outlining and development, and appropriate evaluation techniques. Included are law, beauty school management, and record keeping as well as a practice teaching component in the classroom and clinic. To obtain state licensing, students must complete 1000 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams.

Course Title                      Hours
Orientation & Review of Cosmetology Curriculum .............................60
Introduction to Teaching ................................................................120
Course Outline & Development .......................................................330
Law, Beauty School Management & Recordkeeping ............................90
Teaching & Assisting in the Classroom & Clinic .............................150
Practice Teaching in the Classroom & Clinic ..................................250

Career Major Length               500-1000 Hours
(500 hours with 2 years industry experience)

Average Oklahoma Salary
$31/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Ability to get along with others
• Leadership skills
• Teamwork skills
• Knowledge in subject matter area
• Problem-solving skills
• Self-discipline

Who Can Enroll
Adults

Prerequisites
• High school diploma or GED
• Oklahoma Cosmetology License for Esthetician
• Letter from Oklahoma State Board of Cosmetology to confirm the 500-hour instructor career major eligibility
• English proficiency test for those who speak English as a second language
• Oklahoma State Board of Cosmetology registration; $5.00 fee is required

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COSMETOLOGY

Cosmetology Master Instructor

Career Major Description
This major prepares students to become licensed as qualified teachers of cosmetology theory and practice in industry as well as in public or private institutions. Students receive training in teaching methods, course outlining and development, and appropriate evaluation techniques. Included are law, beauty school management, and record keeping. To obtain state licensing, students must complete 1000 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams.

Course Title                              Hours
Orientation & Review of Cosmetology Curriculum ...............................................60
Introduction to Teaching ..................................................................................120
Course Outline & Development .....................................................................330
Law, Beauty School Management & Recordkeeping ............................................90
Teaching & Assisting in the Classroom & Clinic .............................................150
Practice Teaching in the Classroom & Clinic .................................................250

Career Major Length 500-1000 Hours
(500 hours with 2 years industry experience)

Average Oklahoma Salary
$31/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Ability to get along with others
• Leadership skills
• Teamwork skills
• Knowledge in subject matter area
• Problem-solving skills
• Self-discipline

Who Can Enroll
Adults

Prerequisites
• High school diploma or GED
• Oklahoma Cosmetology License
• Letter from Oklahoma State Board of Cosmetology to confirm the 500-hour instructor career major eligibility
• English proficiency test for those who speak English as a second language
• Oklahoma State Board of Cosmetology registration; $5.00 fee is required

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Cosmetology Nail Technician Instructor

Career Major Description
The Cosmetology Nail Technician Instructor major at Metro Tech sets the standard for teaching excellence. This major prepares students to become licensed as qualified teachers in the art and science of nail technology theory and practice in industry as well as in public or private institutions. Students receive training in teaching methods, course outlining and development, and appropriate evaluation techniques. Included are law, beauty school management, and record keeping as well as a practice teaching component in the classroom and clinic. To obtain state licensing, students must complete 1000 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams.

Course Title                  Hours
Orientation & Review of Cosmetology Curriculum .................. 60
Introduction to Teaching .................................................. 120
Course Outline & Development ............................................ 330
Law, Beauty School Management & Recordkeeping .................... 90
Teaching & Assisting in the Classroom & Clinic ...................... 150
Practice Teaching in the Classroom & Clinic ......................... 250
Career Major Length  500-1000 Hours
(500 hours with 2 years industry experience)

Average Oklahoma Salary
$31/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Ability to get along with others
• Leadership skills
• Teamwork skills
• Knowledge in subject matter area
• Problem-solving skills
• Self-discipline

Who Can Enroll
Adults

Prerequisites
• High school diploma or GED
• Oklahoma Cosmetology License for Nail Technician
• Letter from Oklahoma State Board of Cosmetology to confirm the 500-hour instructor career major eligibility
• English proficiency test for those who speak English as a second language
• Oklahoma State Board of Cosmetology registration; $5.00 fee is required

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COSMETOLOGY

Esthetician - Evening

Career Major Description
This major prepares students to become licensed estheticians who provide skin care, make-up and non-permanent hair removal services to customers. Students receive classroom instruction on functions of the skin and skin structures, disorders, and diseases along with hands-on training in cleansing and massage, makeup application, and facial treatments. Included are cosmetology laws, rules and regulations, and salon development. To obtain state licensing, students must complete 600 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams. High school students may spend additional hours in training beyond the school year to meet state licensing requirements and for major completion within one year.

Course Title Hours
Introduction to Esthetician Technology .................................................80
Facial Sciences: Histology, Dermatology & Physiology of the Skin ..180
Non-Permanent Hair Removal.................................................................40
Facials .................................................................................................200
Cosmetology Laws, Rules & Regulations ..............................................40
Salon Development-Esthetician..............................................................60
Career Major Length 600 Hours

Average Oklahoma Salary
$10/hour plus gratuity

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• A positive attitude
• Good communication skills
• Good eye-hand coordination
• Ability to relate to people in a caring empathetic manner
• Ability to endure standing or sitting for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Prerequisites
• Minimum of an 8th grade education and 16 years of age with documentation of student’s date of birth
• English proficiency test for those who speak English as a second language (Adult)
• Oklahoma State Board of Cosmetology registration; $5.00 fee required

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COSMETOLOGY

Esthetician - High School

Career Major Description
This major prepares students to become licensed estheticians who provide skin care, make-up and non-permanent hair removal services to customers. Students receive classroom instruction on functions of the skin and skin structures, disorders, and diseases along with hands-on training in cleansing and massage, makeup application, and facial treatments. Included are cosmetology laws, rules and regulations, and salon development. To obtain state licensing, students must complete 600 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams. High school students may spend additional hours in training beyond the school year to meet state licensing requirements and for major completion within one year.

Course Title                           Hours
Introduction to Esthetician Technology.................................80
Facial Sciences: Histology, Dermatology & Physiology of the Skin ..................................................180
Non-Permanent Hair Removal......................................................40
Facials ......................................................................................200
Cosmetology Laws, Rules & Regulations........................................40
Salon Development-Esthetician...................................................60

Career Major Length 600 Hours

Average Oklahoma Salary
$10/hour plus gratuity

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• A positive attitude
• Good communication skills
• Good eye-hand coordination
• Ability to relate to people in a caring empathetic manner
• Ability to endure standing or sitting for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Prerequisites
• Minimum of an 8th grade education and 16 years of age with documentation of student’s date of birth
• English proficiency test for those who speak English as a second language (Adult)
• Oklahoma State Board of Cosmetology registration; $5.00 fee required

Location
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Oklahoma City, OK 73129

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COSMETOLOGY

Nail Technician - Evening

Career Major Description
This major prepares students to become licensed nail technicians who provide manicures, pedicures, nail coloring, and nail extensions to customers. Students receive classroom instruction on composition, disorders and diseases of the nails and skin as well as hands-on training in the basic fundamentals of manicures and pedicures, artificial nails, and nail art. Salon development and cosmetology laws, rules, and regulations are also included content. To obtain state licensing, students must complete 600 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams. High school students may spend additional hours in training beyond the school year to meet state licensing requirements and for major completion within one year.

Course Title                      Hours
Introduction to Nail Technology...........................................................40
Nail Structure: Composition, Disorders & Diseases.............................60
Manicures......................................................................................80
Artificial Nails.............................................................................160
Nail Art.........................................................................................60
Pedicures.......................................................................................80
Salon Development...........................................................................80
Cosmetology Laws, Rules & Regulations............................................40
Career Major Length                          600 Hours

Average Oklahoma Salary
$10/hour plus gratuity

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• A positive attitude
• Good communication skills
• Good eye-hand coordination
• Ability to relate to people in a caring, empathetic manner
• Ability to endure sitting position for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Prerequisites
• Minimum of an 8th grade education and 16 years of age with documentation of student’s date of birth
• English proficiency test for those who speak English as a second language (Adult)
• Oklahoma State Board of Cosmetology registration; $5.00 fee required

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COSMETOLOGY

Nail Technician - High School

Career Major Description
This major prepares students to become licensed nail technicians who provide manicures, pedicures, nail coloring, and nail extensions to customers. Students receive classroom instruction on composition, disorders and diseases of the nails and skin as well as hands-on training in the basic fundamentals of manicures and pedicures, artificial nails, and nail art. Salon development and cosmetology laws, rules, and regulations are also included content. To obtain state licensing, students must complete 600 hours of instruction and pass the Oklahoma State Board of Cosmetology written and practical exams. High school students may spend additional hours in training beyond the school year to meet state licensing requirements and for major completion within one year.

Course Title Hours
Introduction to Nail Technology ........................................................... 40
Nail Structure: Composition, Disorders & Diseases ............................. 60
Manicures .............................................................................................. 80
Artificial Nails..................................................................................... 160
Nail Art .................................................................................................. 60
Pedicures ............................................................................................... 80
Salon Development ............................................................................... 80
Cosmetology Laws, Rules & Regulations ............................................ 40
Career Major Length  600  Hours

Average Oklahoma Salary
$10/hour plus gratuity

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• A positive attitude
• Good communication skills
• Good eye-hand coordination
• Ability to relate to people in a caring, empathetic manner
• Ability to endure sitting position for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Prerequisites
• Minimum of an 8th grade education and 16 years of age with documentation of student’s date of birth
• English proficiency test for those who speak English as a second language (Adult)
• Oklahoma State Board of Cosmetology registration; $5.00 fee required

Location
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Oklahoma City, OK 73129

Student Organization
SkillsUSA

Industry Accreditations
Oklahoma State Board of Cosmetology

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
**COURSE DESCRIPTION**

**COSMETOLOGY**

**Artificial Nails 160 hours**
This course teaches students techniques in applying artificial tips, nail wraps, and extensions. This will involve application of fiberglass, acrylic, sculptured and gel nails. Students will learn techniques in applying gems, foils, striping tape, appliqués, freehand paint application, and airbrushing.

**Child Guidance, Behavior & Classroom Management 50 Hours**
This course will allow students to gain knowledge in guidance theories, positive strategies that will enhance their understanding of the child guidance process by utilizing different care giving styles, specific positive discipline strategies and managing the physical environment effectively.

**Cognitive/Social Skills 100 Hours**
This course will give opportunities for students to learn cognitive and social needs of children birth to 8 years while focusing on appropriate experiences while creating a positive learning environment.

**Cosmetology Laws, Rules & Regulations 40 hours**
This course allows students to develop an understanding of the Oklahoma State Board Laws, Rules and Regulations. Students will focus on professional ethics, contamination control methods and licensure requirements as well as sanitation and safety standards.

**Course Outline & Development 330 hours**
This course provides introduction to lesson planning, development of lesson plans, and four-step teaching plan as well as teaching techniques, teaching aids, and developing, administering, and grading examinations. Prerequisite: Cosmetologist or Nail Technician or Esthetician

**Creative Arts 80 Hours**
This course is designed for students to focus on creativity, play and motor development while designing appropriate experiences for children birth to 8 years.

**Facials-Esthetician 200 hours**
This course teaches students how to cleanse, tone, exfoliate, and massage the skin as well as apply makeup. Students will learn facials with and without facial equipment. Students will also learn skin structure as it relates to the cosmetology field. The course will also address the skin and its disorders.

**Facial Sciences: Histology, Dermatology & Physiology of the Skin 180 hours**
This course addresses skin and its disorders, as well as the human anatomy. Students will learn massage manipulations and how to correctly use electricity and electrical equipment used in providing facials. Students will also focus on the importance of nutrition and its effect on the skin as well as facial product ingredients used on skin.

**Hair Coloring 120 hours**
This course reviews lifting natural hair color pigment and adding color to the hair. The course will also address how to correct hair color problems with preventative and corrective methods.

**Hair Coloring-Public 90 hours**
This course reviews lifting natural hair color pigment and adding color to the hair. The course will also address how to correct hair color problems with preventative and corrective methods.

**Hair Texture Chemical Restructuring 240 hours**
The basic hair re-structuring principles are addressed in the course. Students will learn to straighten, permanent wave and soft curl perm.

**Haircutting 180 hours**
This course teaches students how to cut, section, and apply various cutting and shaping techniques. The course teaches students to use a razor and scissors. Students apply the haircutting/shaping techniques.

**Haircutting-Public 120 hours**
This course teaches students how to cut, section, and apply various cutting and shaping techniques. The course teaches students to use a razor and scissors. Students apply the haircutting/shaping techniques.

**Haid Styling 390 hours**
This course reviews and applies the basic principles of hair styling and parting techniques. Students will also learn to shape, style and set artificial hair.

**Haid Styling Public 180 hours**
This course reviews and applies the basic principles of hair styling and parting techniques. Students will also learn to shape, style and set artificial hair.

**Introduction to Cosmetology 150 hrs**
This course provides an overview of the field of cosmetology - bacteriology, sterilization, sanitation, and safety. Students learn the skills needed to operate a safe salon as well as learn ways to prevent the spread of bacteria. Students focus on the basics of bacteriology, sterilization and sanitation as they learn to identify bacteria, infections, and the appropriate prevention. Students in cosmetology will also learn how to shampoo as well as develop an understanding of scalp treatments.

**Introduction to Cosmetology-Public 150 hours**
This course provides an overview of the field of cosmetology-bacteriology, sterilization, sanitation, and safety. Students learn the skills needed to operate a safe salon as well as learn ways to prevent the spread of bacteria. Students focus on the basics of bacteriology, sterilization and sanitation as they learn to identify bacteria, infections, and the appropriate prevention. Students in cosmetology will also learn how to shampoo as well as develop an understanding of scalp treatments.

**Introduction to Esthetician Technology 80 hours**
This course provides an overview of the field of cosmetology-bacteriology, sterilization, sanitation, and safety. Students learn the skills needed to operate a safe salon as well as learn ways to prevent the spread of bacteria. Students focus on the basics of bacteriology, sterilization and sanitation as they learn to identify bacteria, infections, and the appropriate prevention.

**Introduction to Nail Technology 40 hours**
This course provides an overview of the field of cosmetology-bacteriology, sterilization, sanitation, and safety. Students learn the skills needed to operate a safe salon as well as learn ways to prevent the spread of bacteria. Students focus on the basics of bacteriology, sterilization and sanitation as they learn to identify bacteria, infections, and the appropriate prevention.

**Lash & Brow Tinting & Arching Cosmetologist 30 hours**
This course addresses how to perform hair removal as well as shape brows. The course will also provide students experience in waxing.
<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Non-Permanent Hair Removal-Esthetician</td>
<td>40</td>
</tr>
<tr>
<td>Orientation &amp; Review of Cosmetology Curriculum</td>
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<tr>
<td>Practice Teaching in the Classroom &amp; Clinic</td>
<td>250</td>
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<td>Salon Development-Cosmetologist</td>
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<tr>
<td>Salon Development-Cosmetologist-Public</td>
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<td>Salon Development-Esthetician</td>
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<tr>
<td>Salon Development-Nail Technician</td>
<td>80</td>
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<tr>
<td>Scalp Treatments</td>
<td>30</td>
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<tr>
<td>Scalp Treatments-Public</td>
<td>30</td>
</tr>
<tr>
<td>Shampoo/Conditioning/Rinses</td>
<td>60</td>
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<tr>
<td>Shampoo/Conditioning/Rinses-Public</td>
<td>30</td>
</tr>
<tr>
<td>Teachig &amp; Assisting in the Classroom &amp; Clinic</td>
<td>150</td>
</tr>
</tbody>
</table>

This course teaches students skin and nail composition, as well as the disorders, and diseases of the nails and skin. Students will learn the functions of cells, tissues, organs and systems of the body, parts of the nail and how to identify nail diseases. This course will also address what students can work on and what to refer to a physician.
Culinary Arts

- Baker Assistant
- Banquet Caterer
- Culinarian - MCA
- Culinarian - SBC
- Culinary Arts Assistant - MCA
- Culinary Arts Assistant - SBC
- Restaurant Manager
Baker Assistant

Career Major Description
This major prepares students to assist bakers in mixing and baking ingredients according to recipes to produce breads, rolls, cookies, cakes, pies, pastries, or other baked goods. Included are basic principles, skills, and equipment of baking along with an emphasis in breads, decorated cakes, specialty desserts and chocolate candies. Internal and external internships in a specialized area of interest in culinary arts allow students to apply skills learned in the classroom and lab.

Course Title

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Service &amp; Sanitation</td>
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<tr>
<td>Basic Baking Skills</td>
<td>175</td>
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<tr>
<td>Advanced Baking Skills</td>
<td>90</td>
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<tr>
<td>Baker Assistant Practicum</td>
<td>200</td>
</tr>
</tbody>
</table>

Career Major Length 600 Hours

Average Oklahoma Salary
$9/hour

Helpful Attributes and Abilities
- Reading and math skills at the 8th grade level or above
- Good physical & mental health
- Passion for the arts, creativity & imagination
- Good eye-hand coordination & finger dexterity
- Good communication skills and teamwork
- Ability to get along with others and have a positive attitude
- Ability to stand for long periods of time

Who Can Enroll
Seniors & Adults

Prerequisite
Culinary Arts Assistant

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
FFCLA-Family, Career and Community Leaders of America
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
CULINARY ARTS

Banquet Caterer

Career Major Description
This major prepares students as banquet caterers who are responsible for the preparation and serving of quality food for large groups such as weddings, parties, or banquets as independent caterers or with large catering firms. Instruction incorporates supervision of employees, pastry and baking skills, purchasing, and distribution as well as decorating techniques and responsible alcohol service. Practicum components provide students with hands-on experience in preparation of breakfast foods, soups, vegetables, salad dressings, and sandwiches as well as hors d’oeuvres, stocks and sauces and meat/poultry/fish/shellfish dishes.

Course Title Hours
Food Service & Sanitation .................................................. 60
Supervision & Stewarding ............................................. 210
Safe Beverage Services .................................................. 30
Caterer Practicum .................................................... 300
Career Major Length 600 Hours

Average Oklahoma Salary
$13/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Good physical & mental health
• Good eye-hand coordination & finger dexterity
• Good communication skills and teamwork
• Ability to get along with others and have a positive attitude
• Ability to stand for long periods of time

Who Can Enroll
Seniors & Adults

Prerequisite
Culinary Arts Assistant

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
FCCLA-Family, Career and Community Leaders of America
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
CULINARY ARTS

Culinarian - MCA

Career Major Description
This major builds upon the skills learned in Culinary Arts Assistant by providing students with instruction in advanced culinary skills such as garde manger, bakeshop principles, nutrition, and international cuisine. Students will learn advanced dining room management principles and gain hands-on restaurant experience in our student-run restauran.

Course Title Hours
Introduction to Garde Manger .............................................................. 60
Culinary Intermediate Skills ............................................................... 120
Advanced Cookery .............................................................................. 125
Dining Room Management Skill Enhancement ................................. 120
Culinary Skills Enhancement I ............................................................ 90
Culinary Skills Enhancement II ......................................................... 90
Career Major Length 605 Hours

Average Oklahoma Salary $8-$15/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Good physical & mental health
• Passion for the arts, creativity & imagination
• Good eye-hand coordination & finger dexterity
• Good communication skills and teamwork
• Ability to get along with others and have a positive attitude
• Ability to stand for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Prerequisite
Culinary Arts Assistant

Location
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Pending

Student Organization
FCCLA-Family, Career and Community Leaders of America
SkillsUSA

Certifications Available
ServSafe

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
CULINARY ARTS

Culinary Arts - SBC

Career Major Description
This major builds upon the skills learned in Culinary Arts Assistant by providing students with instruction in advanced culinary skills such as garde manger, bakeshop principles, nutrition, and international cuisine. Students will learn advanced dining room management principles and gain hands-on restaurant experience in our student-run restaurant.

Course Title Hours
Introduction to Garde Manger .............................................................. 60
Culinary Intermediate Skills ............................................................... 120
Advanced Cookery .............................................................................. 125
Dining Room Management Skill Enhancement ................................... 120
Culinary Skills Enhancement I ............................................................. 90
Culinary Skills Enhancement II ......................................................... 90
Career Major Length 605 Hours

Average Oklahoma Salary
$8-$15/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Good physical & mental health
• Passion for the arts, creativity & imagination
• Good eye-hand coordination & finger dexterity
• Good communication skills and teamwork
• Ability to get along with others and have a positive attitude
• Ability to stand for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Prerequisite
Culinary Arts Assistant

Location
South Bryant Campus
3901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Pending

Student Organization
FCCLA-Family, Career and Community Leaders of America
SkillsUSA

Certifications Available
ServSafe

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Culinary Arts Assistant - MCA

Career Major Description
This major prepares students for a variety of food preparation skills required for a career in food services and/or food preparation. Instruction incorporates kitchen fundamentals such as safety, sanitation, and kitchen equipment with more advanced training in quantity preparation and presentation of entrees and desserts. Also covered are dining room management principles and specific subject areas such as stocks, soups and sauces. Students will have opportunities to apply the skills they learn in an external internship.

Course Title Hours
Introduction to Culinary Arts .......................................................... 60
Culinary Safety & Sanitation .......................................................... 120
Culinary Basic Skills ................................................................. 120
Dining Room Management ......................................................... 120
Culinary Arts Skills Enhancement I ............................................. 90
Culinary Arts Skills Enhancement II .......................................... 90
Career Major Length 600 Hours

Average Oklahoma Salary
$8/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Good physical & mental health
• Passion for the arts, creativity & imagination
• Good eye-hand coordination & finger dexterity
• Good communication skills and teamwork
• Ability to get along with others and have a positive attitude
• Ability to stand for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Metro Career Academy
1901 Springlake Drive.
Oklahoma City, OK 73111

Financial Aid
Pending

Student Organization
FCCLA-Family, Career and Community Leaders of America
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
CULINARY ARTS

Culinary Arts Assistant - SBC

Career Major Description
This major prepares students for a variety of food preparation skills required for a career in food services and/or food preparation. Instruction incorporates kitchen fundamentals such as safety, sanitation, and kitchen equipment with more advanced training in quantity preparation and presentation of entrees and desserts. Also covered are dining room management principles and specific subject areas such as stocks, soups and sauces. Students will have opportunities to apply the skills they learn in an external internship.

Course Title Hours
Introduction to Hospitality & Tourism ..................................................60
Culinary Basic Skills ...........................................................................120
Culinary Intermediate Skills .................................................................80
Knives and Smallware ..........................................................................40
Dining Room Management ....................................................................120
Culinary Advanced Skills .....................................................................120
Culinary Arts Capstone .......................................................................120
Career Major Length 660 Hours

Average Oklahoma Salary
$8/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Good physical & mental health
• Passion for the arts, creativity & imagination
• Good eye-hand coordination & finger dexterity
• Good communication skills and teamwork
• Ability to get along with others and have a positive attitude
• Ability to stand for long periods of time

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
FCCLA-Family, Career and Community Leaders of America
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
CULINARY ARTS

Restaurant Manager

Career Major Description
This major prepares students to become restaurant managers who manage or operate a restaurant or food service business. Instruction includes fundamentals of customer service and management, purchasing and cost control, science of nutrition and nutritional cooking that applies to the food service industry. An external internship in a specialized area of interest in culinary arts allows students to apply skills learned in the classroom and lab.

Course Title Hours
Food Service & Sanitation ............................................................ 60
Food Service Management ......................................................... 200
Cost Control & Revenue Management ....................................... 100
Nutrition ..................................................................................... 40
Restaurant Manager Practicum III .............................................. 100
Restaurant Manager Practicum IV .............................................. 100

Career Major Length  600 Hours

Average Oklahoma Salary
$18/hour

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Good physical & mental health
• Good eye-hand coordination & finger dexterity
• Good communication skills and teamwork
• Ability to get along with others and have a positive attitude
• Ability to stand for long periods of time

Who Can Enroll
Seniors & Adults

Prerequisites
• Culinary Arts Assistant major

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
FCCLA-Family, Career and Community Leaders of America
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
COURSE DESCRIPTION

CULINARY ARTS

Advanced Baking Skills 90 hours
In this course, students will learn advanced baking skills used to prepare specialty desserts, chocolate candies, yeast doughs, dough-mixing methods, dividing and pre-shaping dough, baking breads and pastries. Students will learn how to use chocolate in decorating as well as how to evaluate the quality of their finished product.

Advanced Cookery 125 hours
Students will also define and demonstrate North American, Central American, and South American cuisine, their flavor profiles, and cultural influence. Cost control and quality standards in cooking will be introduced, as well as basic nutrition and healthy food techniques.

Bake Shop Principles 75 hours
This course teaches the student the terms and equipment that will be used in baking. They will also learn the various types of mixing methods.

Baker Assistant Practicum 200 hrs
In this course, the student will experience a basic internship. This course will allow the students to apply baking skills and techniques learned in an internal practicum learned in an external internship.
Prerequisite: Culinary Assistant Major

Basic Baking Skills 175 hours
In this course, the student will learn baking skill techniques. They will gain knowledge about grains and grain processing. They will learn to make quick breads, yeast breads and rolls, sweet dough, as well as decorated cakes. Prerequisite: Culinary Assistant Major

Business & Marketing Communications 60 hours
This is a course of study in the application of marketing skills developed through a variety of informal and formal experiences. The performance-based course will emphasize effective interpersonal and team building skills along with written and oral communication techniques. Technology will be used to create and deliver presentations, enhance problem-solving situations, and practice critical thinking and decision-making. Job interview, research paper, and/or projects will culminate this course.

Caterer Practicum 300 hours
The students will gain practical lab experience in the area of soups, vegetables, salad dressings, sandwiches, as well as breakfast preparation. Students will advance their culinary skills as they have hands-on experience in preparing stocks and sauces, cooking meats, poultry, fish, and shellfish. Experience will also be gained as the students prepare salads, hors d’oeuvres, and garnishes. Prerequisite: Culinary Assistant Major

Cost Control & Revenue Management 100 hours
Course presents effective methods and principles for purchasing and cost control in food service. Students will learn how to accurately price goods and services, control costs, and maximize profits at all types of restaurants and food service businesses. Prerequisite: Culinary Assistant Major

Culinary Arts Skills Enhancement I 90 hours
This course provides students with hands-on experience in a student-run kitchen/restaurant.

Culinary Skills Enhancement II 90 hours
This course provides hands-on experience in a student-run kitchen/restaurant. Students will practice marketing seasonal menu items and specials.

Culinary Arts Skills Enhancement III 90 hours
This course provides students with hands-on experience in a student-run kitchen/restaurant. Students will practice marketing seasonal menu items and specials.

Culinary Basic Skills 120 hours
Students will learn how to use standardized recipes and measuring systems, convert recipes, identify costing methods for food costs, identify food service equipment and prepare various foods.

Culinary Intermediate Skills 120 hours
This course will introduce the students to the identification and preparation of meat, poultry and seafood. It also introduces bakeshop principles and measurements, and dessert/plate presentation.

Culinary Safety & Sanitation 120 hrs
This is a course of study in the application of marketing skills developed through a variety of informal and formal experiences. The performance-based course will emphasize effective interpersonal and team building skills along with written and oral communication techniques. Technology will be used to create and deliver presentations, enhance problem-solving situations, and practice critical thinking and decision-making. Job interview, research paper, and/or projects will culminate this course.

Dining Room Management 120 hrs
This course will help students learn and apply the service skills and techniques essential to the front of the house operations. Students will learn the importance of internal/external communication skills that include handling special situations and customer needs as well as menu design.

Dining Room Management Skills Enhancement 120 hours
Students will learn and demonstrate skills needed for effective front of the house operations in the student run restaurant.

Food & Beverage Services 120 hrs
This course focuses on the role of food and beverage service in the lodging industry. The students will analyze the functions of the food and beverage division within a lodging operation.

Food Service & Sanitation 60 hours
A study of the principles of bacteriology, food borne illness, sanitation, safety, personal hygiene, housekeeping, health regulations and inspections affecting the professional food service and hospitality industries. The safe use, cleaning and maintenance of equipment is also stressed. The principles of the Hazard Analysis Critical Control Point program (HACCP) will also be studied including the use of Material Safety Data Sheets (MSDS) to identify chemical hazards. Emphasis in the course is placed on the theory and practice of food safety and sanitation.

Food Service Management 200 hrs
In this course, the student will learn and develop skills that will help them in problem-solving, communication, and planning. Prerequisite: Culinary Assistant Major

Introduction to Culinary Arts 60 hours
This course is designed as an overview of the culinary industry. Areas of study include the many facets of the culinary industry to include food service, lodging, travel, tourism, recreation and attractions. Instruction includes guest speakers within the classroom and tours to various culinary facilities.

Introduction to Garde Manager 60 hours
This course will introduce students to the art and craft of the cold kitchen. Students will learn the different ways to creatively express their talents through food and presentations. This course includes an end of instruction completion test.
**Nutrition  40 hours**
The basic concepts and science of nutrition and nutritional cooking are explored in detail including the descriptions and uses for vitamins, minerals, fats, carbohydrates, proteins, phytochemicals, flavonoids and anti-oxidants for human health and fitness. The concepts of health and nutrition, nutrient retention, nutritional cooking techniques, nutritional menu planning and other nutritional concepts applied to professional cooking are fully explored. Prerequisite: Culinary Assistant Major

**Restaurant Manager Practicum III  100 hours**
In this course, the student will experience a basic internship. This course will allow the students to apply skills learned in an external internship. Prerequisite: Culinary Assistant Major

**Restaurant Manager Practicum IV  100 hours**
In this course, the student will experience an internship. This course will allow the students to apply skills learned in an additional external internship. Prerequisite: Culinary Assistant Major

**Safe Beverage Services  30 hours**
This course helps the student learn the fundamentals need to provide responsible alcohol service. Students will learn the steps they must follow in order to follow the law.

**Supervision & Stewarding  210 hrs**
The student will focus on human resource management and the supervision and leadership skills necessary to attract, train and retain a quality oriented hospitality/culinary staff. Emphasis will be placed on proper communication skills, dealing with diversity, and managing a quality work environment. Prerequisite: Culinary Assistant Major

**Workforce Staging  30 hours**
This course is designed to be delivered as an integrated component within the courses taken by the individual student. The course is designed for the development of leadership, personal development and employability skills.
Dental Assisting

- Dental Assistant
DENTAL ASSISTING

Dental Assistant

Career Major Description
Students in this major will learn how to perform patient care, front office and laboratory duties for the dental office. They will practice infection control, use dental materials, perform dental charting and chairside functions. The major includes clinical training at the University of Oklahoma College of Dentistry and various private dental practices in the metropolitan area.

Average Oklahoma Salary
$13/hour

Helpful Attributes and Abilities
- Reading and math skills at the 10th grade level or above
- The ability to get along with others
- The ability to stand for long periods of time
- Mental alertness
- Flexibility
- Good eye-hand coordination
- Manual/finger dexterity
- Dependability
- The ability to think quickly

Who Can Enroll
Adults

Prerequisites
- High school diploma or GED
- 18 years old
- CPR for Health Care Providers
  (American Heart Association Course)

Location
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
HOSA-Health Occupations Students of America
American Dental Assistants Association http://www.dentalassistant.org/

Certifications Available
Certified Dental Assistant – by passing the Dental Assisting National Board
(DANB http://www.danb.org/) exams
Coronal Polishing and Application of Topical Fluoride by Oklahoma Board of Dentistry
Application of Pit and Fissure Sealant by the Oklahoma Board of Dentistry
Radiation Health and Safety Permit by the Oklahoma Board of Dentistry
Assisting with the Administration of Nitrous Oxide by the Oklahoma Board of Dentistry

Course Title Hours
Academic Life Skills ................................................................. 15
Foundations of Dental Assisting ........................................ 55
Biomedical Sciences for the Dental Assistant ................ 75
Clinical Sciences for the Dental Assistant ...................... 388
• Infection Control (70 hours)
• Patient Information and Assessment (36 hours)
• Clinical Dental Assisting (70 hours)
• Practice Management (36 hours)
• Clinical Sciences (176 hours)
Dental Radiography ........................................................... 60
Dental Sciences for the Dental Assistant ...................... 195
• Head and Neck Anatomy (30 hours)
• Embryology, Histology and Tooth Morphology (48 hours)
• Dental Materials I (70 hours)
• Dental Materials II (47 hours)
Clinical Practice for the Dental Assistant ..................... 336
Advanced Chairside Functions ...................................... 26

Career Major Length 1150 Hours

Industry Accreditations
American Dental Association Commission on Dental Accreditation. The Commission is a specialized accrediting body recognized by the United States Department of Education. The Commission on Dental Accreditation can be contacted at (312) 440-4653 or at 211 East Chicago Ave., Chicago, IL 60611-2678

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810, fax (405) 743-6809
Oklahoma State Board of Education (OSBE)
2500 N. Lincoln, Oklahoma City, OK 73105-4599
phone (866) 249-9410, fax (405) 521-6205
Judy_Jolley@mail.sde.state.ok.us

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**COURSE DESCRIPTION**

**DENTAL ASSISTING**

**Academic Life Skills** 15 hours
This course is designed to provide adult students the foundation needed for success in school while preparing for certification or licensure in the chosen healthcare field. Topics of instruction include time management, resource management, study techniques, test taking skills, communication, cultural diversity, ethics and professionalism.

**Advanced Chairside Functions** 26 hours
In this course students will prepare for expanded functions of the dental assistant in Coronal Polishing/Topical Fluoride and Pit and Fisher Sealants. Students will learn the legal and ethical roles as dental assistants for these expanded functions and how to perform these expanded functions. This course follows the guidelines for each advanced function as outlined in the rules and regulations set forth by the Board of Dentistry including clinical time. Prerequisite: Acceptance to the Dental Assistant Major

**Biomedical Sciences for the Dental Assistant** 75 hours
The biomedical sciences course is designed to provide a basic understanding of body function and structure, concepts of diseases and dietary considerations for the student as well as the patient. Included areas of study are general anatomy and physiology, microbiology with the focus on dental worker and patient safety through the study of bloodborne pathogens and hazardous communications. Prerequisite: Acceptance to the Dental Assistant Major

**Clinical Practice for the Dental Assistant** 336 hours
This course provides the student opportunity to practice dental skills learned in the classroom and laboratory setting in a professional dental clinic. Prerequisite: Acceptance to the Dental Assistant major

**Clinical Sciences for the Dental Assistant** 388 hours
The content of this course prepares the student to participate in laboratory and clinical experiences necessary to develop the skills to become a dental assistant. The course provides classroom and laboratory instruction. This course is broken into three smaller courses: Practice Management (36 hours); Clinical Sciences I (162 hours); and Clinical Sciences II (162 hours). Prerequisite: Acceptance to the Dental Assistant major

**Dental Radiography** 60 hours
Upon completion of this course, students have the skills necessary to successfully take, process and mount dental radiographs. The course emphasizes the safety precautions needed in radiography. Students will identify diagnostically acceptable radiographs.

**Dental Sciences for the Dental Assistant** 195 hours
This course provides the dental assisting student with in-depth knowledge regarding dental materials, oral anatomy; a familiarity of oral histology, oral embryology, pathology, pharmacology and head and neck anatomy. This course is broken into four smaller courses: Head and Neck Anatomy (30 hours); Embryology, Histology and Tooth Morphology (48 hours); Dental Materials I (70 hours); Dental Materials II (47 hours). Prerequisite: Acceptance to the Dental Assistant major

**Foundations of Dental Assisting** 30 hours
This course includes an overview of dental specialties including all the dental team members and a review of educational requirements, responsibilities, and job duties. Prerequisite: Acceptance to the Dental Assistant major
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Drafting Technician

• Computer-Aided Drafting & Design Architectural Technician
• Computer-Aided Drafting & Design Civil Technician
• Computer-Aided Drafting & Design Manufacturing Technician
Computer-Aided Drafting & Design Architectural Technician

**Career Major Description**
Learn to convert the ideas and specifications of the engineer architect into working drawings by utilizing both manual sketching and parametric solid modeling methods that meet ANSI (American National Standards Institute) and/or AIA (American Institute of Architecture) drafting standards. Students will be trained with some of the most challenging and expanding equipment in the CAD industry. This major prepares the student for an exciting career in a CAD field or for advancing to a college or university to complete a higher degree.

**Course Title**

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<tr>
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<tr>
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<tr>
<td>Principles of CAD</td>
<td>165</td>
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<tr>
<td>3D/Parametric Modeling</td>
<td>195</td>
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<tr>
<td>Architecture Computer-Aided Drafting &amp; Design</td>
<td>120</td>
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<tr>
<td>CAD Architectural Level 1</td>
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<td>CAD Architectural Level 3</td>
<td>60</td>
</tr>
<tr>
<td>Workforce Staging</td>
<td>30</td>
</tr>
</tbody>
</table>

**Career Major Length**
855 Hours

**Average Oklahoma Salary**
$18/hour

**Helpful Attributes and Abilities**
- Ability to read at the 10th grade level
- General understanding of Geometry and Algebra
- Basic to moderate typing and computer literacy skills
- Ability to think critically and logically

**Who Can Enroll**
Juniors, Seniors & Adults

**Location**
South Bryant Campus  
4901 S. Bryant Ave.  
Oklahoma City, OK 73129

**Financial Aid**
Available for those who qualify

**Student Organization**
SkillsUSA

**Certifications Available**
Autodesk AutoCAD Certified User  
Autodesk Revit Certified User  
American Design Drafting Association (ADDA)  
Apprentice Drafter Certification

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)  
Oklahoma State Board of Education (OSBE)
Computer-Aided Drafting & Design Civil Technician

**Career Major Description**
Learn to convert the ideas and specifications of the civil engineer into working drawings by utilizing both manual sketching and parametric solid modeling methods that meet ANSI (American National Standards Institute) and/or AIA (American Institute of Architecture) drafting standards. Students will be trained with some of the most challenging and expanding equipment in the CAD industry. This major prepares the student for an exciting career in a CAD field or for advancing to a college or university to complete a higher degree.

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<tr>
<td>Material &amp; Equipment Specifications</td>
<td>45</td>
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<td>CAD Civil Introduction</td>
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<td>CAD Civil Level 1</td>
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<td>Workforce Staging</td>
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</tbody>
</table>

**Average Oklahoma Salary**
$18/hour

**Helpful Attributes and Abilities**
- Ability to read at the 10th grade level
- General understanding of Geometry and Algebra
- Basic to moderate typing and computer literacy skills
- Ability to think critically and logically

**Who Can Enroll**
Juniors, Seniors & Adults

**Location**
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

**Financial Aid**
Available for those who qualify

**Student Organization**
SkillsUSA

**Certifications Available**
- Autodesk AutoCAD Certified User
- American Design Drafting Association (ADDA)
- Apprentice Drafter Certification

**Metro Tech Accreditations**
- Oklahoma Board of Career and Technology Education (OBCTE)
- Oklahoma State Board of Education (OSBE)
DRAFTING TECHNICIAN

Computer-Aided Drafting & Design Manufacturing Technician

Career Major Description
Learn to convert the ideas and specifications of the mechanical engineer into working drawings by utilizing both manual sketching and parametric solid modeling methods that meet ANSI (American National Standards Institute) and/or AIA (American Institute of Architecture) drafting standards. Students will be trained with some of the most challenging and expanding equipment in the CAD industry. This major prepares the student for an exciting career in a CAD field or for advancing to a college or university to complete a higher degree.

Course Title                      Hours
Fundamentals of Computer-Aided Drafting & Design ...................... 120
Drawing & Document Management .................................................... 45
Principles of CAD ................................................................. 165
3D/Parametric Modeling ............................................................ 195
Engineering Computer-Aided Drafting & Design............................. 120
Manufacturing Computer-Aided Drafting & Design......................... 120
CAD Mechanical Level 1 ......................................................... 60
CAD Mechanical Level 2 ......................................................... 60
CAD Mechanical Level 3 ......................................................... 60
Workforce Staging .................................................................... 30

Career Major Length 975 Hours

Average Oklahoma Salary
$19/hour

Helpful Attributes and Abilities
• Ability to read at the 10th grade level
• General understanding of Geometry and Algebra
• Basic to moderate typing and computer literacy skills
• Ability to think critically and logically

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
Autodesk AutoCAD Certified User
Autodesk Inventor Certified User
Solidworks Associate Certification
American Design Drafting Association (ADDA)
Apprentice Drafter Certification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

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3D/Parametric Modeling 195 hours
Learn industry leading 3D/Parametric modeling software to prepare for an evolving industry. Build virtual prototypes and structures to improve design quality and reduce time-to-market. Parametric modeling design allows you the platform to provide conceptual ideas, design simulation and renderings where you can view, modify, check associativity and accuracy with confidence and ease.

Architecture Computer-Aided Drafting & Design 120 hours
This course is a basic Architectural Drafting course utilizing Computer-Aided Drafting and Design (CADD) software that develops computer skills and electronic skills and applications within the field of architectural drafting. Topics covered are advanced computer operations, introduction to residential architecture drafting, CADD application software, site conditions/plot plans, lettering and tools, residential design/room layout, structural systems and building materials, working drawings/flight plans and details, dimensioning, foundations, electrical/mechanical/plumbing, presentation drawings, interior and exterior elevations, roof plans, commercial architectural drafting, structural steel framing plans, pre-cast concrete, framing plans, foundations and walls and structural wood.

CAD Architectural Level 1 60 hours
This course is project-based, utilizing knowledge and skills learned early in the drafting coursework and at the fundamental level. This course is for the area of Architectural, with some related areas introduced. These is a project-based course and requires lab work.

CAD Architectural Level 2 60 hours
This course is project-based, utilizing knowledge and skills learned in drafting at the fundamental second level building on the projects in Level 1. This is for the Architectural Drafting majors and may include areas related. This is a project-based course and requires lab work. Prerequisite: CAD Architectural Level 1

CAD Architectural Level 3 60 hours
This course is project-based utilizing knowledge and skills learned in drafting at the intermediate third level, building on the projects in Level 2. This is for the area of Architectural Drafting; other related areas may be included. This is a project-based course and requires lab work. Prerequisite: CAD Architectural Level 2

CAD Civil Introduction 60 hours
This course will introduce students to the skills required in CAD Civil. The majority of this course will be projects based and requires lab work to practice these skills.

CAD Civil Level 1 60 hours
This course is project based, utilizing knowledge and skills learned early in drafting coursework at the fundamental level. This is for the area of Civil Drafting. This course requires lab work.

CAD Civil Level 2 60 hours
This course is project-based utilizing knowledge and skills learned in the drafting at the fundamental second level, building on the projects in Level 1. This is for the Civil-Drafting majors and may include areas related. This course requires lab work. Prerequisite: CAD Civil Level 1

CAD Civil Level 3 60 hours
This course is project-based utilizing knowledge and skills learned in drafting at the intermediate third level building on the projects in Level 2. This is for the area of Civil Drafting and other related areas may be included. This is a project-based course that requires lab work. Prerequisite: CAD Civil Level 2

CAD Mechanical Level 1 60 hours
This course is project based utilizing knowledge and skills learned early in the drafting coursework and at the fundamental level. This course is for the Mechanical area with some information related to Pipe & Electronics drafting. This course requires lab work. Prerequisite: Manufacturing Computer-Aided Drafting & Design

CAD Mechanical Level 2 60 hours
This course is project based utilizing knowledge and skills learned in drafting at the fundamental second level building on the projects in level 1. This is for the Mechanical drafting majors and it may include related areas. This course requires lab work. Prerequisite: CAD Mechanical Level 1

CAD Mechanical Level 3 60 hours
This course is project based utilizing knowledge and skills learned in the drafting at the intermediate third level building on the projects in level 2. This is for the area of Mechanical Drafting; other related areas may be included. This course requires lab work. Prerequisite: CAD Mechanical Level 2

Computer Integrated Manufacturing 120 hours
This course applies principles of robotics and automation and builds on computer solid modeling skills developed in Introduction to Engineering Design. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included.

Drawing and Document Management 45 hours
This course is for the development of skills for file management and use of technology to support effective organizational skills within occupational workflow and processes.

Engineering Computer-Aided Drafting & Design 120 hours
This course is an engineering focused drafting course utilizing Computer-Aided Drafting and Design (CADD) software that develops computer skills and electronic skills and applications within engineering applications of drafting within manufacturing. Topics covered are advanced computer operations, CAD application software, and principles of structural drafting, process pipe drawings, electronic/electrical drafting, and civil drafting

Fundamentals of Computer-Aided Drafting and Design 120 hours
This course is the basic CAD software course. Topics covered are safety, tools, equipment, media and reproduction, sketching, scale usage, drawing formats, alphabet of lines, lettering and geometric construction, computer literacy through CAD, operating systems and file utilities, software functions, office functions, hardware applications, coordinates, drawing environment, plotting, printing, multi-view drawing environment, geometry modifications and dimensioning, symbol library development, introduction to parametric and software, introduction to multiple CAD software used to manipulate text and graphics, and basic CAD applications.

Material & Equipment Specifications 45 hours
In this course, the student will develop skills in industrial plans such as tools, tolerance, and mechanical applications. Major topics covered in this course are materials and specifications, fasteners/treads, dimensioning, layouts, working drawings and multi-views. Methods of instruction include lecture, discussion, classroom exercise, projects, group activities, demonstrations, multimedia, individual learning packets, speakers, work-site learning and web based instruction.
Principles of CAD 165 hours
This course is the basic CAD software course. Topics covered are safety, tools, equipment, media CAD reproduction, sketching, scale usage, drawing formats, alphabet of lines, lettering and geometric construction, computer literacy through CAD, operating systems and file utilities, software functions, office functions, hardware applications, coordinates, drawing environment, plotting, printing, multi-view drawing environment, geometry modifications and dimensioning, symbol library development, introduction to parametric and software, introduction to multiple CAD software used to manipulate text and graphics, and basic CAD applications.

Workforce Staging 30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.
Early Childhood Development

• Early Care and Education Director
• Early Care and Education Master Teacher
• Early Care and Education Teacher Assistant
• Paraprofessional Teacher Assistant/Child - Development Associate
Early Care and Education Director

Career Major Description
This major prepares students to be directors in early care and education facilities and provides a stepping-stone for students seeking degrees in education, counseling, and child development. Instruction includes general supervision, development, and education of children along with supervisory and management opportunities in the classroom and laboratory, as well as in a supervised practicum experience. Successful completion of Director and having a high school diploma or GED meets the Oklahoma Registry requirements for bronze level through the Oklahoma Center for Early Childhood Professional Development.

Average Oklahoma Salary
$17/hour

Helpful Attributes and Abilities
• Good physical and mental health
• Patience and enthusiasm for working with children
• Good human relations skills
• Planning and organizational skills
• Creative thinking skills
• Reading and math skills at the 8th grade level or above

Who Can Enroll
Seniors & Adults

Prerequisites
• Must have a clean OSBI background check

Location
Springlake Campus
Child Care Training Center
3901 Martin Luther King Ave.
Oklahoma City, OK 73105

Average Oklahoma Salary
$17/hour

Helpful Attributes and Abilities
• Good physical and mental health
• Patience and enthusiasm for working with children
• Good human relations skills
• Planning and organizational skills
• Creative thinking skills
• Reading and math skills at the 8th grade level or above

Who Can Enroll
Seniors & Adults

Prerequisites
• Must have a clean OSBI background check

Location
Springlake Campus
Child Care Training Center
3901 Martin Luther King Ave.
Oklahoma City, OK 73105

Financial Aid
Available for those who qualify

Student Organization
FCCLA-Family, Career and Community Leaders of America

Certifications
ODCTE Director

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title | Hours
---|---
Professional Development I | 95
Intro to Nutrition, Health & Safety | 135
Intro to Guidance of Young Children | 60
Intro to Child Development | 75
Parent, Community & Program Planning I | 50
Observation & Training I | 110
Professional Development II | 75
Child Guidance, Behavior & Classroom Management | 50
Creative Arts | 80
Cognitive/Social Skills | 100
Parent, Community & Program Planning II | 105
Observation & Training II | 115
Early Care & Education Director | 250

Career Major Length 1300 Hours
Early Care and Education Master Teacher

Career Major Description
This major prepares students to be licensed teachers in early care and education facilities responsible for the general supervision, development, and education of children. In addition to learning how to attend to children’s basic needs, students learn to organize activities that stimulate a child’s physical, emotional, intellectual, social and creative growth. Instruction occurs in the classroom and laboratory as well as in a supervised practicum experience. Successful completion of Master Teacher curriculum with three months full-time experience meets the Licensing and Stars Criteria of Oklahoma for Master Teacher.

Average Oklahoma Salary
$11/hour

Helpful Attributes and Abilities
• Good physical and mental health
• Patience and enthusiasm for working with children
• Good human relations skills
• Planning and organizational skills
• Creative thinking skills
• Reading and math skills at the 8th grade level or above

Who Can Enroll
Seniors & Adults

Prerequisites
• Must have a clean OSBI background check

Location
Springlake Campus
Child Care Training Center
3901 Martin Luther King Ave.
Oklahoma City, OK 73105

Financial Aid
Available for those who qualify

Student Organization
FCCLA-Family, Career and Community Leaders of America

Certifications
ODCTE Master Teacher

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title                  Hours
Professional Development I ................................................................. 95
Intro to Nutrition, Health & Safety .................................................... 135
Intro to Guidance of Young Children ................................................... 60
Intro to Child Development ................................................................. 75
Parent, Community & Program Planning I ............................................ 50
Observation & Training I ............................................................... 110
Professional Development II ................................................................ 75
Child Guidance, Behavior & Classroom Management ........................ 50
Creative Arts ............................................................................... 80
Cognitive/Social Skills ................................................................. 100
Parent, Community & Program Planning II ...................................... 105
Observation & Training II ............................................................... 115

Career Major Length  1050 Hours

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Early Care and Education Teacher Assistant

Career Major Description
This major prepares students to provide instructional assistance to children under the direction of a licensed teacher in early care and education facilities. Students are taught health and safety, guidance, curriculum, and nutrition in a classroom/laboratory setting as well as in a supervised practicum experience. Upon successful completion of Teacher Assistant, the student is also recognized as having met the Entry Level Child Care Training (ELCCT) requirements.

Course Title
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development I</td>
<td>95</td>
</tr>
<tr>
<td>Intro to Nutrition, Health &amp; Safety</td>
<td>105</td>
</tr>
<tr>
<td>Intro to Guidance of Young Children</td>
<td>60</td>
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<tr>
<td>Intro to Child Development</td>
<td>75</td>
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<tr>
<td>Parent, Community &amp; Program Planning I</td>
<td>50</td>
</tr>
<tr>
<td>Infant &amp; Toddler Care</td>
<td>140</td>
</tr>
</tbody>
</table>

Career Major Length 525 Hours

Average Oklahoma Salary
$10/hour

Helpful Attributes and Abilities
- Good physical and mental health
- Patience and enthusiasm for working with children
- Good human relations skills
- Planning and organizational skills
- Creative thinking skills
- Reading and math skills at the 8th grade level or above

Who Can Enroll
Juniors, Seniors & Adults

Prerequisites
- Must have a clean OSBI background check

Location
Springlake Campus
Child Care Training Center
3901 Martin Luther King Ave.
Oklahoma City, OK 73105

Student Organization
FCCLA-Family, Career and Community Leaders of America

Certifications
ODCTE Teacher Assistant

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
EARLY CHILDHOOD DEVELOPMENT

Paraprofessional Teacher Assistant/Child Development Associate

Career Major Description
This major offers opportunities for students to train as paraprofessionals or teacher assistants as well as meet the academic requirements for receiving the CDA certification. Students receive an overview of early care supervision including professional development, communication skills, safety and regulations, and ethical principles. Curriculum covers special needs, curriculum development, classroom management, and discipline techniques in a classroom/laboratory setting as well as in a work-based learning experience.

Average Oklahoma Salary
$12/hour

Helpful Attributes and Abilities
• Good physical and mental health
• Patience and enthusiasm for working with children
• Good human relations skills
• Planning and organizational skills
• Creative thinking skills
• Reading and math skills at the 8th grade level or above

Who Can Enroll
Adults

Prerequisite
Must have a clean OSBI Background Check

Location
Springlake Campus
Child Care Training Center
3901 Martin Luther King Ave.
Oklahoma City, OK 73105

Financial Aid
Available for those who qualify

Student Organization
FCCLA-Family, Career and Community Leaders of America

Certifications Available
ParaPro Teacher Assistant

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title Hours
Introduction to Computers & Applications ........................................... 75
ELCCT .................................................................................................. 20
School Based or Child Care Center Practicum ................................... 100
Special Needs Paraprofessional Training .............................................. 25
Child Development Associate I .......................................................... 190
Child Development Associate II ......................................................... 190

Career Major Length  600 Hours
COURSE DESCRIPTION
EARLY CHILDHOOD DEVELOPMENT

Academic Commitment to Education (ACE) 120 hours
This course is structured around classroom lectures, activities and projects. The course also includes a component where the student is placed in teaching experiences within the school system and under the supervision of the supervising teacher and corresponding classroom teacher. The purpose is to provide a quality experience for the student-teacher and the younger students in which the student will interact. This course is aligned with ten of the fifteen Oklahoma Teaching Competencies (OTC) based on the Interstate New Teacher Assessment and Support Consortium (INTASC) principles.

Child Development
Associate I 190 hours
This course will teach students how to handle health and safety requirements and emergencies. Students will learn good nutrition and guidance techniques. Students will also learn to provide care for infants and plan activities for children. Students will practice responding to scenarios that relate to children. Observation time will be a component of the course.

Child Development
Associate II 190 hours
Students will create appropriate activities for specific developmental areas. Students will learn how to develop daily and weekly schedules, as well as practice responding to scenarios involving children and parents. Students will learn how to select books based on criteria and develop competency goals.

Child Guidance, Behavior & Classroom Management 50 hours
This course will allow students to gain knowledge in guidance theories, positive strategies that will enhance their understanding of the child guidance process by utilizing different care giving styles, specific positive discipline strategies and managing the physical environment effectively.

Classroom Management 120 hours
This course combines effective teaching skills and classroom management into one comprehensive course. It is designed to provide basic pedagogical tools necessary for creating effective teaching and learning environments. Students will be introduced to the current research on instructional approaches and strategies for teaching and learning in today’s classrooms. Students will be required to demonstrate these best practices within individual and small group experimental activities. Additionally, this course incorporates current research on the most effective strategies for improving classroom discipline, motivation, interpersonal relationships, and academic performance on all grade levels. Attention will be given to aspects of diversity and/or culture factors that influence perceptions about classroom management.

Cognitive/Social Skills 100 hrs
This course will give opportunities for students to learn cognitive and social needs of children birth to 8 years while focusing on appropriate experiences while creating a positive learning environment.

Creative Arts 80 hours
This course is designed for students to focus on creativity, play and motor development while designing appropriate experiences for children birth to 8 years.

Early Care & Education
Director 250 hours
This course is aligned with the Oklahoma Career Tech duty/task lists for early childhood care and education occupations. The curriculum incorporates state licensing regulations and standards set forth by national organizations active in early childhood care and education. The curriculum offers various components of administering a child care center program, an understanding of the director’s role in child care management; developing child care professionals; employment plans; and interactions with various situations and people are included. The necessary knowledge and skills in early childhood care and education and administration and management are incorporated. In addition, project-based activities are included to assist the students in preparing for a rewarding career. Prerequisites: Teacher Assistant, Master Teacher and Infant Toddler

Early Care & Education Infant and Toddler Care 140 hours
This course is aligned with Oklahoma Career Tech duty/task lists for early childhood care and education occupations. This in-depth study is designed to provide training in the following areas: Ensuring a Safe and Healthy Environment, Understanding Infant and Toddler Development, Developing Relationships with Families, and Managing a Child Care Program. Prerequisites: Teacher Assistant and Master Teacher

Infant and Toddler Care 140 hours
This course is designed for students that have completed Teacher Assistant and Master Teacher courses. The course is aligned with Oklahoma Career Tech duty/task lists for early childhood care and education occupations. This in-depth study is designed to provide training in the following areas: Ensuring a Safe and Healthy Environment, Understanding Infant and Toddler Development, Developing Relationships with Families, and Managing a Child Care Program. Prerequisite: Teacher Assistant and Master Teacher

Intro to Child Development 75 hrs
This course is designed to assist students in gaining a basic understanding of how children grow and develop from birth to age twelve. The course combines classroom instruction with lab experience and observation to develop competence in working with young children. The course will allow students the opportunity to experience firsthand how children develop skills during the early childhood years.

Intro to Guidance of Young Children 60 hours
This course is designed to assist students in gaining an understanding of direct and indirect guidance techniques to be used with young children. The course combines classroom instruction with lab experience and observation to develop competence in working with young children. The course will allow students the opportunity to experience firsthand what it is like to guide children’s behavior through direct and indirect methods.

Intro to Nutrition, Health & Safety 105 hours
This course provides a basic understanding of strategies to develop children and to keep them safe and healthy. The course combines classroom instruction with lab experience and observation to develop competence in maintaining a safe and healthy learning environment for children. The course will allow students the opportunity to experience firsthand how to maintain safety and health regulations and to provide nutritious meals and snacks.

Observation & Training II 115 hours
The course allows students firsthand experiences in the classroom observing and participating in lab experiences to develop competence in working with young children.

Parent, Community & Program Planning I 50 hours
This course allows students to explore methods of effectively interacting with families. Students will learn practical application of developing child centered curriculum as well as effective program planning.

Parent, Community & Program Planning II 105 hours
This course allows students to explore methods of effectively interacting with families. Students will learn practical application of developing child centered curriculum as well as effective program planning.

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### Professional Development I  95 hours
This course is designed for the development of leadership, personal development and employability skills within the field of education.

### Professional Development II  75 hrs
This course is designed for the development of leadership, personal development and employability skills within the field of education.

### ELCCT  20 hours
This class provides students with the child care/day-care center training needed to provide quality care for young children. Learning activities stress the importance of the role of the caregiver in child care work.

### Field Experience  75 hours
Students will observe classroom settings of various age levels throughout the school year. During extended field experience, students will work with small groups, prepare and present lessons and implement evaluations of activities while working under an experienced professional teacher.

### Introduction to Computers and Applications-Paraprofessional 75 hrs
This hands-on course provides students with a basic understanding of computers and their application. Students will be able to demonstrate on an introductory level the use of a computer operating system, an office suite and productivity tools as well as the Internet.

### Introduction to Computers and Applications-Teacher Prep 45 hours
This hands-on course provides students with a basic understanding of computers and their application. Students will be able to demonstrate on an introductory level the use of a computer operating system, an office suite and productivity tools as well as the Internet.

### Introduction to Secondary Education 120 hours
This course is designed to introduce Pre-Education students to the professional community of teachers, administrators, and support staff vital to the education of our nation’s youth and to the role school plays in society. This course initiates the process of developing a fundamental framework which allows students to become familiar with the culture of schools as they begin to assess their interest in the teaching profession.

### School Based or Child Care Practicum  100 hours
Students will complete an internship that relates to being a paraprofessional or working with children. The internship will be planned to meet the student's needs and will help the student broaden their educational experience.

### Special Needs Paraprofessional Training  25 hours
Students will learn the historical and legal foundations of special education, roles and responsibilities, ethical principles and professional conduct, HEP participation, disability awareness and learning strategies, planning, problem solving and communication, data collection and IEP progress monitoring, safe and healthy learning environments as well as behavior strategies.
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Electrical Technology

- Electrician’s Assistant Unlimited Complete
- Residential Electrician’s Assistant
ELECTRICAL TECHNOLOGY

Electrician’s Assistant Unlimited Complete

Career Major Description
This major prepares students as electrician’s assistants who assist in installing, diagnosing and repairing electrical systems for residential, commercial and industrial applications. Students are trained in safety practices, hand and power tools/equipment use and application and electrical theory along AC/DC circuitry, and wiring applications. Included are motors, motor control circuits, and power distribution systems as well as industrial controls. Electromechanical devices, and the National Electrical Code. Hours completed in this major can be counted toward the 8,000 hours (four years) of work experience required for the journeyman electrician license.

Average Oklahoma Salary
$18/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• A basic knowledge of general science
• Good manual dexterity
• Average strength and good physical health
• An ability to work independently and as part of a team

Who Can Enroll
Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)

Course Title Hours
General Construction Safety & First Aid ..............................................30
Electrical Safety in Construction ......................................................15
Electrical Theory in Construction .................................................120
Electrical Schematic & Blueprint Reading in Construction ..............45
Electrical Power & Hand Tools and Equipment in Construction ........30
Direct Current Circuits in Construction ..............................................60
Alternating Current Circuits in Construction .....................................90
National Electrical Code in Construction .........................................120
Residential Wiring Methods .........................................................240
Commercial Wiring Methods .........................................................120
Industrial Wiring Methods ...............................................................120
Electrical Distribution in Construction ..............................................60
Motor Theory & Operation in Construction .......................................30
Motor Control Wiring in Construction ..............................................60
Programmable Logic Controllers in Construction ............................120
Workforce Staging .................................................................30

Career Major Length 1290 Hours
Residential Electrician’s Assistant

Career Major Description
Learn to install, diagnose and repair electrical systems for residential applications. This major provides an understanding of the basic fundamentals of electricity and its practical applications, instructs the student in direct current and alternating current circuitry, teaches residential wiring, and gives the student an understanding of the National Electrical Code and how it applies to safe electrical installations. Hours completed in this major can be counted toward the 8,000 hours (four years) of work experience required for the journeyman electrician license.

Course Title Hours
General Construction Safety & First Aid .............................................. 30
Electrical Safety in Construction ......................................................... 15
Electrical Theory in Construction ......................................................... 120
Electrical Schematic & Blueprint Reading in Construction .................... 45
Electrical Power & Hand Tools and Equipment in Construction ............ 30
Direct Current Circuits in Construction ................................................ 60
Alternating Current Circuits in Construction ......................................... 90
National Electrical Code in Construction ............................................ 120
Residential Wiring Methods ............................................................... 240
Workforce Staging ............................................................................. 30
Career Major Length 780 Hours

Average Oklahoma Salary
$18/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• A basic knowledge of general science
• Good manual dexterity
• Average strength and good physical health
• An ability to work independently and as part of a team

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)
Alternating Current Circuits in Construction 90 hours
This course covers electrical theory in AC circuits and develops understanding of generation, amplitude, phase, phase shift, power factor, measurement methods, and troubleshooting skills.

Commercial Wiring Methods 120 hrs
This course covers the circuits used in wiring commercial premises including service entry and branch circuit installation, load distribution, device installation, grounding, overcurrent devices, conduit bending and installation, panels and switchboards, and hazardous locations. Prerequisite: Completion of Residential Wiring course sequence

Direct Current Circuits in Construction 60 hours
This course covers electrical theory in DC circuits and develops a student's understanding of the electrical units of volts, ohms, amps, and watts, measurement equipment and methods, interrelationships, and troubleshooting skills. Prerequisite: Electrical Safety in Construction

Electrical Distribution in Construction 60 hours
This course covers the common practices of electrical distribution and the repair and maintenance of distribution systems. Prerequisite: Completion of Residential Wiring course sequence

Electrical Power & Hand Tools and Equipment in Construction 30 hours
This course covers the safe use, operations and maintenance of power and hand tools used in construction.

Electrical Safety in Construction 15 hours
Safety rules and regulations for electricians, precautions for electrical and mechanical hazards on the job, tool and equipment safety, first aid, CPR, blood borne pathogens, OSHA and NFPA mandated lockout/tagout, personal protective equipment, right to know, and confined space entry procedures.

Electrical Schematic & Blueprint Reading in Construction 45 hours
This course prepares the student to interpret standard electrical schematics and construction blueprints.

Electrical Theory in Construction 120 hours
This course covers Ohms law and concepts of electrical theory necessary to install, maintain and troubleshoot electrical circuits.

General Construction Safety and First Aid 30 hours
General construction safety including tool and equipment safety, blood borne pathogens, CPR, PPE, confined space entry, hazardous materials and right to know.

Industrial Wiring Methods in Construction 120 hours
This course covers the circuits used in wiring industrial premises including service entry and branch circuit installation, load distribution, device installation, grounding, over-current devices, conduit bending and installation, panels and switchboards, and hazardous locations. Prerequisite: Completion of Residential Wiring course sequence and Commercial Wiring Methods

Motor Control Wiring in Construction 60 hours
This course covers relays, motor starters, overload sizing, ladder diagrams, and design of complex systems used to control motors in various commercial and industrial applications. Prerequisite: Completion of Residential Wiring course sequence

Motor Theory & Operation in Construction 30 hours
This course covers the theory of operation of AC and DC motors, their construction, selection of appropriate motors for specific applications, and feeder calculations. Prerequisite: Completion of Residential Wiring course sequence

National Electrical Code in Construction 120 hours
This course prepares the student to locate and interpret specific standards in the NFPA's National Electrical Code. Instruction includes load calculations, conductor sizing, conduit fill calculations, and standards for wiring practices.

Programmable Logic Controllers in Construction 120 hours
This course covers the application of programmable logic controllers in various commercial and industrial applications and includes the application of internal relays, timers, counters, and special functions. Analog inputs and outputs are covered. Prerequisite: Completion of Residential Wiring course sequence

Residential Wiring Methods 240 hrs
This course covers the circuits used in wiring residential premises including service entry and branch circuit installation, load distribution, device installation, grounding, overcurrent devices, and lighting.
Entrepreneurship

- Entrepreneurship-Introduction
- Small Business Entrepreneur
Entrepreneurship-Introduction

**Career Major Description**
This major introduces students to the concept of entrepreneurship. Students acquire knowledge of the nature and scope of entrepreneurship and the impact of entrepreneurship on market economies. Students examine and develop the personal traits and behaviors fundamental to becoming a successful entrepreneur, and they are exposed to the first steps of the entrepreneurial process. In addition, students develop an understanding of economic concepts and marketing functions.

**Average Oklahoma Salary**
Dependent upon the success of the business

**Helpful Attributes and Abilities**
- Reading, language and math skills at the 8th grade level or above
- Basic computer literacy
- Strong interpersonal skills
- Good oral and written communication skills
- Positive attitude
- Dependability
- Self-motivated
- Desire to succeed
- Energetic

**Who Can Enroll**
Juniors & Seniors

**Location**
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

**Financial Aid**
Available for those who qualify

**Student Organization**
SkillsUSA, DECA

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

**Course Title**                      **Hours**
Entrepreneurship Awareness..............................................................120
Business and Marketing Communications...........................................60
Entrepreneurship................................................................................120
Accounting I.......................................................................................120
Buying and Merchandising...............................................................120
Advertising Strategies........................................................................120
Career Major Capstone ......................................................................120

**Career Major Length**   **720 Hours**
ENTREPRENEURSHIP

Small Business Entrepreneur

Career Major Description
This major prepares students to start their own businesses. Self-assessment activities help students determine their entrepreneurial potential. Using skills gained in accounting, buying and merchandising, e-commerce, marketing and advertising, students develop their own detailed business plan. They also explore the economic advantages and disadvantages of international trade. Students develop leadership traits and identify their leadership potential through participation in the DECA (an association of marketing students) student organization.

Course Title                      Hours
Entrepreneurship Awareness .............. 120
Fundamentals of Technology .............. 120
Business and Marketing Communications .... 60
Entrepreneurship ......................... 120
Entrepreneurship ......................... 120
Accounting I ................................... 120
Buying and Merchandising ................. 60
E-Commerce Marketing ..................... 120
Advertising Strategies ................... 120
Advanced Entrepreneurship ............ 120
Career Major Capstone ................... 120
Career Major Length ....................... 1080 Hours

Average Oklahoma Salary
Dependent upon the success of the business

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Basic computer literacy
• Strong interpersonal skills
• Good oral and written communication skills
• Positive attitude
• Dependability
• Self-motivated
• Desire to succeed

Who Can Enroll
Juniors & Seniors

Location
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA, DECA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Entrepreneurship

Entrepreneurship

This course allows students to discover and determine their entrepreneurial aptitude. Students will explore the relationship between entrepreneurship, business and marketing skills, creative instincts, self-esteem/discipline, and independence. Career opportunities and pre-employment skills required for success in the areas of business, marketing, and management will also be introduced during this course. Students will develop leadership traits and identify their leadership potential through participation in the DECA (an association of marketing students) student organization.

Fundamentals of Technology

This course provides students with the fundamental concepts, principles, and ideas needed to understand how business is operated and managed in a rapidly changing global environment, which is needed for success in careers in business related fields. This course also provides job readiness skills and soft skills that are critical for success in any workplace setting.

Intro to Entrepreneurship

Career Major Capstone 120 hours

Internships, project-based instruction and additional industry certifications will be utilized in this course to reinforce skills obtained within the Intro to Entrepreneurship Career Major. Students will make final preparations for industry certifications as they master outlined competencies. Students will select from various project options to finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train, or participate in workplace learning opportunities to enhance skills in accordance with industry demands.

Small Business Entrepreneur

Career Major Capstone 120 hours

Internships, project-based instruction and additional industry certifications will be utilized in this course to reinforce skills obtained within the Small Business Entrepreneur Career Major. Students will make final preparations for industry certifications as they master outlined competencies. Students will select from various project options to finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train, or participate in workplace learning opportunities to enhance skills in accordance with industry demands.

Accounting I 120 hours

This course will provide students with a strong foundation in generally accepted accounting principles and techniques needed for success in careers in business related fields.

Advanced Entrepreneurship 120 hrs

This course is designed to provide a detailed study of all aspects related to starting a business. The course includes the basic fundamentals of marketing and business operations and advanced topics to consider when preparing for business ownership. Through self-assessment activities, students will identify their potential for creating a business or a marketable product/idea. Students will apply what they learn by developing their own detailed business plan. Self-employment is presented as a viable career option.

Advertising Strategies 120 hours

This is a course of study in the basic functions of advertising; its role in marketing communications mix; economics, consumer behavior, and social influence. Students will explore advertising techniques and the technology used in advertising institutions and media; campaigns and appropriations; retail and business-to-business aspects to develop and implement a promotional plan.

Business and Marketing

Communications 60 hours

This is a course of study in the application of marketing skills developed through a variety of informal and formal experiences. The performance-based course will emphasize effective interpersonal and team building skills along with written and oral communication techniques. Technology will be used to create and deliver presentations, enhance problem-solving situations, and practice critical thinking and decision-making. Job interview, research paper, and/or projects will culminate this course.

Buying and Merchandising 60 hours

This is an introductory course designed to explore the role and responsibility of a buyer and merchandiser. This course will cover job skills for the buyer or merchandiser including the ability to use mathematic formulas, budgeting, research, making purchases, and additional responsibilities of the buyer.

E-Commerce Marketing 120 hours

This is a course of study in the development of communication and marketing strategies for effective electronic commerce to take place. The primary focus is how to: market products/services, use the Internet, identify markets, and communicate with them. This course provides an overview of the marketing activities businesses need to perform in order to maximize return and meet customer expectations with electronic purchases.
Graphic Design

- Production Artist
- Visual Arts Specialist
GRAPHIC DESIGN

Production Artist

Career Major Description
Production artists design and prepare projects for print media using a variety of software packages and production skills. Students will learn common industry practices such as page layout and photo manipulation techniques, screen printing, vinyl signage and more.

Average Oklahoma Salary
$13/hour

Helpful Attributes and Abilities
- Reading and language skills at the 10th grade level or above; math skills at the 9th grade level or above
- Art background, training or natural ability
- Attention to detail
- Basic typing and computer literacy skills
- Good eye-hand coordination
- Good interpersonal skills
- Ability to self-motivate and perform under pressure
- For Vinyl Graphics Installation course only: Ability to bend, stoop and reach above the head or below the knee holding 10 pounds

Who Can Enroll
Juniors & Seniors

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
Adobe Certified Associate

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title                          Hours
Safety ............................................. 15
Graphic Design Mathematics ............ 15
Copyright Law ............................... 15
Computer Fundamentals .................. 45
Introduction to Graphic Communications .... 120
Typography .................................... 45
Digital Page Layout ....................... 180
Digital Image Manipulation ............... 60
Digital File Prep ........................... 60
Basic Illustration ......................... 90
Screen Printing and Vinyl Art Preparation ... 45
Vinyl Graphics Installation .......... 90
Independent Study and Skill Development .... 45

Career Major Length  825 Hours

Average Oklahoma Salary
$13/hour

Helpful Attributes and Abilities
- Reading and language skills at the 10th grade level or above; math skills at the 9th grade level or above
- Art background, training or natural ability
- Attention to detail
- Basic typing and computer literacy skills
- Good eye-hand coordination
- Good interpersonal skills
- Ability to self-motivate and perform under pressure
- For Vinyl Graphics Installation course only: Ability to bend, stoop and reach above the head or below the knee holding 10 pounds

Who Can Enroll
Juniors & Seniors

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
Adobe Certified Associate

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title                          Hours
Safety ............................................. 15
Graphic Design Mathematics ............ 15
Copyright Law ............................... 15
Computer Fundamentals .................. 45
Introduction to Graphic Communications .... 120
Typography .................................... 45
Digital Page Layout ....................... 180
Digital Image Manipulation ............... 60
Digital File Prep ........................... 60
Basic Illustration ......................... 90
Screen Printing and Vinyl Art Preparation ... 45
Vinyl Graphics Installation .......... 90
Independent Study and Skill Development .... 45

Career Major Length  825 Hours
Visual Arts Specialist

Career Major Description
Using a variety of industry standard software packages, students will learn graphic design concepts and the production skills necessary to design and produce professional projects using a wide range of materials. Students will manage complex projects and develop a professional portfolio of work which will include branding development, vinyl signage, screen printing and more.

Average Oklahoma Salary
$19/hour

Helpful Attributes and Abilities
• Reading and language skills at the 10th grade level or above; math skills at the 9th grade level or above
• Art background, training or natural ability
• Attention to detail
• Basic typing and computer literacy skills
• Good eye-hand coordination
• Good interpersonal skills
• Ability to self-motivate and perform under pressure
• For Vinyl Graphics Installation course only: Ability to bend, stoop and reach above the head or below the knee holding 10 pounds

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
Adobe Certified Associate

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title | Hours
--- | ---
Safety | 15
Graphic Design Mathematics | 15
Copyright Law | 15
Introduction to Graphic Communications | 120
Typography | 45
Computer Fundamentals | 45
Digital Page Layout | 180
• Adobe InDesign
Digital Image Manipulation | 60
• Adobe Photoshop
Digital File Prep | 60
Project Management Conceptual Design Process | 90
Design and Color Principles | 60
• Digital Typography | 45
Basic Illustration | 90
Digital Illustration | 90
• Adobe Illustrator
Page Layout and Publication Design | 120
Portfolio Development | 60
Screen Printing and Vinyl Art Preparation | 45
Vinyl Graphics Installation | 90
Workforce Learning Capstone (OJT) | 75
Independent Study and Skill Development | 45

Career Major Length ........................................... 1365 Hours
COURSE DESCRIPTION
GRAPHIC DESIGN

Basic Illustration 90 hours
In this course, students prepare a variety of illustrations by hand.

Computer Fundamentals 45 hours
Students learn to operate hardware components using the Macintosh computer system. They also work with software, to create a hierarchical filing System. Students practice keyboarding to increase speed and accuracy: 40 wpm/90% accuracy.

Copyright Law 15 hours
Students learn the principles of copyright law for both published and electronic materials.

Design and Color Principles 60 hours
In this course students identify and practice elements and principles of design theory.

Digital File Prep 60 hours
This course covers preparing and troubleshooting digital files for various output needs.

Digital Illustration 90 hours
Using illustration software, students create, import, edit and prepare a variety of illustrations.

Digital Image Manipulation 60 hours
Students use digital image manipulation software to create, modify and prepare a variety of images.

Digital Page Layout 180 hours
Students use a page layout software to create, modify and prepare a variety of documents.

Digital Typography 45 hours
Students apply knowledge and skills gained in the Typography course to produce digital projects.

Graphic Mathematics 15 hours
Students learn basic mathematics within the graphic areas, including addition, subtraction, division, multiplication, fractions, decimals, picas and points.

Introduction to Graphic Communications 120 hours
This course provides an introduction to the graphic communications industry.

Page Layout & Publication Design 120 hours
In this course, students will use basic layouts to produce publications.

Portfolio Development 60 hours
In this course, students design and develop projects for a personal professional portfolio.

Project Management Conceptual Design Process 90 hours
In this course students learn to manage a design project from concept to completion.

Safety 15 hours
Students learn proper safety procedures to follow in the classroom and lab.

Screen Printing and Vinyl Art Preparation 45 hours
In this course, students learn the production side of vinyl signage and screen printing of T-shirts.

designed for the development of leadership, personal development and employability skills attainment.

Typography 45 hours
Students identify type anatomy and use type appropriately to design materials.

Vinyl Graphics Installation 90 hours
Students will learn vinyl/film application services for various surfaces including vehicles, walls, floors, and windows.

Workbased Learning Capstone/OJT 75 hours
Students in this course put into practice all of the skills learned in this major. Students may work at a job site location to reinforce occupational and employability skills. This internship experience is designed to bridge the gap between school and work.
Health Careers Certification

- Advanced Unlicensed Assistant
- Nurse Aide
- Pharmacy Technician
- Physical Therapy Aide
HEALTH CAREERS CERTIFICATION

Advanced Unlicensed Assistant

Career Major Description
Students in this career major will learn the functions of an Advanced Unlicensed Assistant, which includes performing more advanced functions in an assistive role with a licensed practical nurse or registered nurse in acute care facilities. They will complete a long-term care course and then proceed into the advanced curriculum and learn how to perform sterile specimen collection, urinary catheterization, and feeding per gastrointestinal tube. Advanced Unlicensed Assistant (AUA) certification must be obtained from the Oklahoma Board of Nursing.

Course Title                      Hours
Health Careers Core Curriculum ......................................................... 225
Medical Terminology ................................................................. 45
Anatomy ................................................................. 60
Physiology ................................................................. 60
Healthcare Provider CPR and First Aid ................................................. 15
Long Term Care Assistant ................................................................. 120
Advanced Unlicensed Assistant ......................................................... 240
Career Major Length  ................................................................. 765 Hours

Average Oklahoma Salary
$10/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• A positive attitude
• A general interest in health careers
• Good communication skills
• The ability to relate to people in a caring, empathetic manner
• Good eye-hand coordination
• Good physical and mental health
• Dependability
• Ability to work effectively with a wide variety of personality types

Who Can Enroll
Seniors

Prerequisites
• Currently enrolled in high school and Metro Technology Centers with a 3.0 GPA and 92% attendance
• Completed the Nurse Aide career major

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Student Organization
HOSA-Health Occupations Students of America

Certifications Available
Advanced Unlicensed Assistant (AUA)
Certified Nurse Assistant (CNA)
CPR

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810,
fax (405) 743-6809

Oklahoma State Board of Education (OSBE)
2500 N. Lincoln
Oklahoma City, OK 73105-4599
phone (866) 249-9410, fax (405) 521-6205
Judy_Jolley@mail.sde.state.ok.us

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HEALTH CAREERS CERTIFICATION

Nurse Aide

Career Major Description
Nursing aides help patients with routine healthcare needs, bedside care, and basic nursing procedures. They are often employed in a long term care facilities and hospitals. They play a vital role in the health care team. In this major, students will complete the health care core curriculum, medical terminology, and anatomy and physiology in addition to the long term care curriculum. Students must pass the Oklahoma State Nurse Aide Registry exam for long term care assistants to work in any facility.

Course Title | Hours
--- | ---
Health Careers Core Curriculum | 225
Medical Terminology | 45
Anatomy | 60
Physiology | 60
Healthcare Provider CPR and First Aid | 15
Long Term Care Assistant | 120

Career Major Length | 525 Hours

Average Oklahoma Salary
$9/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• A positive attitude
• A general interest in health careers
• Good communication skills
• The ability to relate to people in a caring, empathetic manner
• Good eye-hand coordination
• Good physical and mental health
• Dependability
• Ability to work effectively with a wide variety of personality types

Who Can Enroll
Juniors & Seniors

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Student Organization
HOSA-Health Occupations Students of America

Certifications Available
Certified Nurse Assistant (CNA)
CPR

Metro Tech Accreditations
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Judy_Jolley@mail.sde.state.ok.us
Pharmacy Clerk

Career Major Description
Students in this major will complete anatomy and physiology, medical terminology, core healthcare provider CPR and first aid, and the health careers core curriculum course along with the first four classes of the pharmacy technician major. Students will learn about pharmacy law and ethics, pharmaceutical terminology, pharmacology and get an orientation to the pharmacy technician career. Upon completion of this major students may enroll in the pharmacy technician major and receive credit for courses completed or go to work in a retail pharmacy setting as a clerk.

Course Title Hours
Health Careers Core Curriculum ........................................................ 225
Medical Terminology ............................................................................ 45
Anatomy ............................................................................................... 60
Physiology............................................................................................. 60
Healthcare Provider CPR and First Aid ................................................ 15
Orientation to the Pharmacy Technician Career ................................... 15
Pharmacy Law and Ethics..................................................................... 15
Pharmacology for PhT .......................................................................... 75
Pharmaceutical Terminology ................................................................ 15

Career Major Length 525 Hours

Average Oklahoma Salary
$9/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• A positive attitude
• A general interest in health careers
• Good communication skills
• The ability to relate to people in a caring, empathetic manner
• Good eye-hand coordination
• Good physical and mental health
• Dependability
• Ability to work effectively with a wide variety of personality types

Who Can Enroll
Juniors & Seniors

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Student Organization
HOSA-Health Occupations Students of America

Certifications Available
CPR

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810,
fax (405) 743-6809

Oklahoma State Board of Education (OSBE)
2500 N. Lincoln
Oklahoma City, OK 73105-4599
phone (866) 249-9410, fax (405) 521-6205
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Pharmacy Technician

**Career Major Description**
After completion of the Health Careers Core Curriculum, students in this major will learn the state and federal laws concerning controlled substances, classification of drugs, and pharmaceutical math. Medical and pharmaceutical terminology will also be covered including how to properly pronounce drug names. Students will also learn the customer service and employability skills necessary to succeed in a retail pharmacy.

**Average Oklahoma Salary**
$11/hour

**Helpful Attributes and Abilities**
- Reading and math skills at the 10th grade level or above
- A positive attitude
- A general interest in health careers
- Good communication skills
- The ability to relate to people in a caring, empathetic manner
- Good eye-hand coordination
- Good physical and mental health
- Dependability
- Ability to work effectively with a wide variety of personality types

**Who Can Enroll**
Juniors & Seniors

**Location**
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

**Student Organization**
HOSA-Health Occupations Students of America

**Certifications Available**
CPR

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810,
fax (405) 743-6809

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**Course Title**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Careers Core Curriculum</td>
<td>225</td>
</tr>
<tr>
<td>Medical Terminology</td>
<td>45</td>
</tr>
<tr>
<td>Anatomy</td>
<td>60</td>
</tr>
<tr>
<td>Physiology</td>
<td>60</td>
</tr>
<tr>
<td>Healthcare Provider CPR and First Aid</td>
<td>15</td>
</tr>
<tr>
<td>Orientation to the Pharmacy Technician Career</td>
<td>15</td>
</tr>
<tr>
<td>Pharmacy Law and Ethics</td>
<td>15</td>
</tr>
<tr>
<td>Pharmacology for PhT</td>
<td>75</td>
</tr>
<tr>
<td>Pharmacological Calculations</td>
<td>60</td>
</tr>
<tr>
<td>Retail Pharmacy Operations</td>
<td>30</td>
</tr>
<tr>
<td>Pharmaceutical Terminology</td>
<td>15</td>
</tr>
<tr>
<td>Professional Skills in the Pharmacy</td>
<td>15</td>
</tr>
<tr>
<td>Pharmacy Technician Certification Preparation</td>
<td>30</td>
</tr>
<tr>
<td>Pharmacy Technician Internship</td>
<td>60</td>
</tr>
</tbody>
</table>

**Career Major Length**
720 Hours
HEALTH CAREERS CERTIFICATION

Physical Therapy Aide

Career Major Description
A physical therapy aide has many duties such as keeping the treatment area clean and prepped and assisting patients in preparation for treatment. Many physical therapy aides also have clerical duties such as paperwork, maintaining patient records, and making sure that supplies are in stock. The physical therapy aide courses include ethics and law, patient care, clerical skills, ambulation, therapeutic exercises, agents and modalities. Students practice in a variety of settings as chosen by the instructor.

Course Title
Health Careers Core Curriculum .................................................................225
Medical Terminology ...................................................................................45
Anatomy .........................................................................................................60
Physiology ......................................................................................................60
Healthcare Provider CPR and First Aid ........................................................15
Essentials of Physical Therapy Professions ....................................................60
Therapeutic Rehabilitation for the Physical Therapy Aide ...............................30
Therapeutic Modalities for the Physical Therapy Aide ....................................30
Physical Therapy Aide Mentorship .................................................................60

Career Major Length 585 Hours

Average Oklahoma Salary $9/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• A positive attitude
• A general interest in health careers
• Good communication skills
• The ability to relate to people in a caring, empathetic manner
• Good eye-hand coordination
• Good physical and mental health
• Dependability
• Ability to work effectively with a wide variety of personality types

Who Can Enroll
Juniors & Seniors

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Student Organization
HOSA-Health Occupations Students of America

Certifications Available
CPR

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810,
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Oklahoma State Board of Education (OSBE)
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Advanced Unlicensed Assistant 240 hours
The training program for Advanced Unlicensed Assistants (AUA) is designed to build on basic skills traditionally performed by nursing assistants. Selected advanced skills, legal and ethical aspects of health care and appropriate personal behaviors are presented in a format combining classroom lecture/discussion, demonstration/practice lab and clinical application. Graduates of an AUA training program are prepared to safely perform technical skills that are included on an approved skills list. Once the individual has completed the training, he/she applies for certification. The training is a minimum of 240 clock hours. Course hours are divided among the classroom, skills laboratory and clinical site. Prerequisite: Long Term Care or Basic Nursing Skills

Anatomy 60 hours
Anatomy is the study of the structural complexity of the human body. This course is taught as a laboratory science for high school credit. The areas studied will include, but are not limited to: organization of the body, cells & tissues, integumentary system, skeletal system, muscular system, nervous system, endocrine system, blood, circulatory system, lymphatic & immune systems, respiratory systems, digestive system, urinary system, and reproductive system. An emphasis will be placed on active-learning exercises to help the student learn the structural organization of each body system. Prerequisites: Algebra I, Geometry (or co-enrollment), and Biology I (or co-enrollment).

Clinical Practice for the Physical Therapy Aide 60 hours
Students will practice skills performed by the physical therapy aide in the rehabilitative clinical environment. All student activities will be monitored by a Physical Therapist or Physical Therapy Assistant.

Health Careers Core Curriculum 225 hours
This course provides a core set of competencies that students need for most health careers. Topics covered include: Effective Communication, Medical Math, Safety, IT applications, Legal and Ethical Principles and Practice, Teamwork, Health Promotion, Healthcare Delivery Systems, and Employability Skills.

Healthcare Provider CPR and First Aid 15 hours
This course will provide the most current guidelines for CPR developed by the American Heart Association. The student will receive training in Cardiopulmonary Resuscitation (CPR)/Automated External Defibrillator (AED)/Foreign Body Airway Obstruction (FBAO). The student will have an opportunity to become certified in Healthcare Provider CPR. This course will provide the knowledge for the student to perform basic first aid. Students will be provided an opportunity to gain skills towards first aide competency such as victim assessment, splinting, controlling bleeding, poisoning and burns.

Essentials of Physical Therapy Professionals 60 hours
This course will provide the student with a history of physical therapy. The course will present this occupation in the context of the rehabilitation team and emphasize how the contribution of the Physical Therapy Aide benefits the care of patients. The course explores the job opportunities that are available. Students will discuss licensure and certification for physical therapy professionals and legal/ethical issues in physical therapy. This course teaches the physical therapy aide basic skills needed to prepare a patient for treatment. Students will learn and skillfully perform a variety of transfer techniques frequently used in the clinical setting.

Health Unit Clerk 120 hours
Students in this course will learn basic computer skills, basic transcription, customer service, verbal and nonverbal communication skills, proper telephone etiquette, and organizational skills that will prepare them for the diverse role of the health unit clerk.

Long Term Care Assistant 120 hours
This course meets requirements set by the Oklahoma State Dept. of Health for Long Term Care Nurse aide curriculum. Upon completion of this course, the student will be eligible to sit for the state certification exam.

Medical Terminology 45 hours
Medical Terminology is designed to develop in the students a working knowledge of the language of medicine. Students acquire word building skills by learning prefixes, suffixes, roots and abbreviations. By relating terms to body systems, students identify proper uses of words in a medical environment. Knowledge of medical terminology enhances students’ ability to successfully secure employment or pursue advanced education in healthcare.

Orientation to the Pharmacy Technician Career 15 hours
The pharmacy industry and general rules pertaining to school, classroom and labs will be covered. Safety in the workplace and healthy work habits are emphasized throughout the year.

Pharmaceutical Terminology 15 hrs
This course is an in-depth study of pharmaceutical terminology and its applications to the health care industry. Course content focuses on identification of word parts, proper pronunciation and enunciation of medical terms, spelling of medical terms, and application of each medical term to the anatomy and physiology of the body. Correct pronunciation of drug names, which include brand, generic and chemical will also be studied.

Pharmacological Calculations 60 hours
Basics of pharmaceutical mathematics are covered to include reading, interpreting and solving calculation problems encountered in the preparation and distribution of drugs. Conversions of measurements, ratio and proportion, percentage, dilution and concentration, mill equivalents, units, intravenous flow rates, and solving dosage problems are included.

Pharmacology 60 hours
The student will identify sources, schedules and classes of drugs. The student will identify and interpret actions of drugs commonly used in a physician’s office, accurately calculate drug dosage and identify appropriate medication routes. The student will follow the written, verbal and standing physician orders and properly prepare and administer using aseptic technique as required. Prerequisite: Acceptance to the Medical Assistant major

Pharmacology & Intravenous Therapy Skills 50 hours
This course provides instruction in basic pharmacology that is needed for safe and effective medication administration. Skills include medication administration as well as IV therapy. Fluid and electrolyte balance will be included. Content includes components of medication preparation and administration including the essential knowledge needed to adequately contribute to the assessment and evaluation of the effects of medication on clients throughout the lifespan. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major

Pharmacology and Venipuncture 32 hours
Content is designed to provide basic concepts of pharmacology. The theory and practice of basic techniques of venipuncture and administration of diagnostic contrast agents and/or intravenous medications is included. The appropriate delivery of patient care during these procedures in emphasized. Prerequisite: Acceptance to the Radiologic Technologist major
Pharmacology for PhT  75 hours
This course provides the student with an overview of the major categories of classifications of drugs. Emphasis is placed on actions of drugs in the human body as well as trade and generic names.

Pharmacy Law and Ethics  15 hours
Upon completion of this course, the student will comprehend state and federal laws and regulations regarding controlled substances, storage and dispensing of controlled substances. The agencies that regulate pharmacy practice will also be studied.

Pharmacy Technician Certification Preparation  30 hours
This course will prepare the student to take and pass the national Pharmacy Technician Certification exam. Students will be given the opportunity to reinforce learning of material covered in class and while on the job training.

Pharmacy Technician Internship  60 hours
This course provides students with work-based learning experiences. Students will practice under the supervision of a pharmacist or simulate the clinical experience in a laboratory setting.

Physical Therapy Aide Mentorship  60 hours
This course is a supervised practical experience. Students will practice skills performed by the physical therapy aide in the rehabilitative clinical environment. All student activities will be monitored by a Physical Therapist or Physical Therapy Assistant.

Physiology  60 hours
Physiology is the study of the intricate functional mechanisms of the human body. This course is taught as a laboratory science for high school credit. Students will conduct scientific investigations and fieldwork using scientific knowledge and methodology that will enable them to make educated conclusions based on higher-level critical thinking and problem solving skills. The areas studied will be an integration of biology and chemistry and will include, but are not limited to: chemical basis for life, cells & tissues, integumentary system, skeletal system, muscular system, nervous system, endocrine system, blood, circulatory system, lymphatic & immune systems, respiratory systems, digestive system & metabolism, urinary system, and reproductive system. Active-learning exercises will be included along with laboratory experiences. Prerequisites: Algebra I, Geometry (or co-enrollment), and Biology I (or co-enrollment).

Professional Skills in the Pharmacy  15 hours
This course will prepare the student to meet the public in a pharmacy setting. The student will practice greeting customers, preparing prescriptions and instructing the customer on medication pickup. This course helps students develop employability skills necessary for success in the workplace, such as communication, personal responsibility and time management. Resume writing and practice job interviews will be conducted.

Retail Pharmacy Operations  30 hrs
This course will prepare the student to function in a retail pharmacy setting. The student will practice purchasing, inventory and quality assurance tasks.

Therapeutic Modalities for the Physical Therapy Aide  30 hours
This course will enable students to understand the physiological effects, indications, contraindications and safety of the use of therapeutic modalities. The student will be able to provide basic patient care; understand various types of exercises and their functions in patient education; the use of range of motion; strengthening and proprioceptive exercises for major areas of the body.

Therapeutic Rehabilitation for the Physical Therapy Aide  30 hours
This course prepares the physical therapy aide to assist patients in performing rehabilitative exercises. Students learn the proper techniques needed for client safety and comfort. This course prepares the physical therapy aide to assist with ambulation and gait training. Students learn safe practices while demonstrating competency in ambulating the client. This course teaches the physical therapy aide basic skills needed to prepare a patient for treatment. Students will learn and skillfully perform a variety of transfer techniques frequently used in the clinical setting.
Horticulture

- Floral Design Entrepreneur
- Horticulture Entrepreneur
- Horticulture Technician
- Landscape Designer
Floral Design Entrepreneur

**Career Major Description**
This major addresses the skills needed to be a successful floral designer as well as manage/own a retail floral business. Students will apply the leadership and business skills needed to succeed in the floriculture industry.

**Average Oklahoma Salary**
Dependent upon the success of the business

**Helpful Attributes and Abilities**
- Reading and math skills at the 8th grade level or above
- Some background in biology
- Good eye-hand coordination and manual dexterity
- Good physical and mental health
- Be able to work under extreme weather conditions
- An ability to work independently and as part of a team
- Dependability
- Organizational skills
- Attention to detail
- Good communication skills
- Ability to take directions from others
- Positive attitude
- Self-motivated
- Desire to succeed
- Keyboarding skills

**Who Can Enroll**
Juniors, Seniors & Adults

**Location**
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

**Financial Aid**
Available for those who qualify

**Student Organization**
SkillsUSA

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)

**Course Title**
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Techniques and Styles</td>
<td>105</td>
</tr>
<tr>
<td>Introduction to Computers and Applications-Horticulture</td>
<td>45</td>
</tr>
<tr>
<td>Floral Industry</td>
<td>30</td>
</tr>
<tr>
<td>Principles of Horticulture</td>
<td>30</td>
</tr>
<tr>
<td>Agricultural Plants</td>
<td>60</td>
</tr>
<tr>
<td>Flowers and Foliage and Cut Flower Identification</td>
<td>75</td>
</tr>
<tr>
<td>Theory and Design</td>
<td>300</td>
</tr>
<tr>
<td>Retail Flower Shop</td>
<td>200</td>
</tr>
<tr>
<td>Price Structuring</td>
<td>60</td>
</tr>
<tr>
<td>Floral Processing and Conditioning</td>
<td>30</td>
</tr>
<tr>
<td>Workforce Staging for Floral Design Entrepreneur</td>
<td>60</td>
</tr>
<tr>
<td>Insect Collection and Identification</td>
<td>30</td>
</tr>
</tbody>
</table>

**Career Major Length**
1025 Hours
Horticulture Entrepreneur

Career Major Description
This major introduces students to safe practices, use of tools and equipment and planting techniques. Students learn to care for plants, as well as the safe uses of chemicals and testing soil, as it relates to the horticulture industry. Through this major study, students will also refine skills that will help them with horticultural entrepreneurial ventures.

Average Oklahoma Salary
Dependent upon the success of the business

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Some background in biology
• Good eye-hand coordination and manual dexterity
• Good physical and mental health
• Be able to work under extreme weather conditions
• An ability to work independently and as part of a team
• Dependability
• Organizational skills
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• Keyboarding skills

Who Can Enroll
Juniors, Seniors & Adults

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Financial Aid
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Course Title Hours
Principles of Horticulture ............................................................30
Identification and Propagation of Horticulture Plants ..................90
Applying Pesticides ..................................................................45
Agricultural Plants .................................................................60
Field Scouting, Weed Collection and Insect Collection ..............60
Fertilizers and Soils .................................................................90
Greenhouse Operations & Management .....................................120
Workforce Staging ..................................................................30
Introduction to Computers & Applications Horticulture ..........45
Entrepreneurship for Horticulture .............................................105
Career Major Length 675 Hours

Average Oklahoma Salary
Dependent upon the success of the business

Helpful Attributes and Abilities
• Reading and math skills at the 8th grade level or above
• Some background in biology
• Good eye-hand coordination and manual dexterity
• Good physical and mental health
• Be able to work under extreme weather conditions
• An ability to work independently and as part of a team
• Dependability
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• Positive attitude
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• Keyboarding skills

Who Can Enroll
Juniors, Seniors & Adults

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Springlake Campus
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Financial Aid
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Student Organization
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Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)
Horticulture

Career Major Description
This major prepares students as horticultural assistants who undertake a range of tasks that relate to cultivation, growing, harvesting and maintenance of trees, plants and gardens. Students learn safe practices, use of tools and equipment, propagation and care of plants, soil testing, and preparation and safe application of chemicals. Included is information concerning construction, operation, and management of greenhouses.

Average Oklahoma Salary
$10/hr

Helpful Attributes and Abilities
- Reading and math skills at the 8th grade level or above
- Some background in biology
- Good eye-hand coordination and manual dexterity
- Good physical and mental health
- Be able to work under extreme weather conditions
- An ability to work independently and as part of a team
- Dependability
- Organizational skills
- Attention to detail
- Good communication skills
- Ability to take directions from others
- Keyboarding skills

Who Can Enroll
Juniors, Seniors & Adults

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Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)

Course Title                                Hours
Principles of Horticulture .................................30
Identification and Propagation of Horticulture Plants .................90
Applying Pesticides ..............................................45
Agricultural Plants ..............................................60
Field Scouting, Weed Collection and Insect Collection .................60
Fertilizers and Soils .............................................90
Greenhouse Operations & Management ........................120
Workforce Staging-Horticulture .............................30

Career Major Length                          525 Hours

Average Oklahoma Salary
$10/hr

Helpful Attributes and Abilities
- Reading and math skills at the 8th grade level or above
- Some background in biology
- Good eye-hand coordination and manual dexterity
- Good physical and mental health
- Be able to work under extreme weather conditions
- An ability to work independently and as part of a team
- Dependability
- Organizational skills
- Attention to detail
- Good communication skills
- Ability to take directions from others
- Keyboarding skills

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

Student Organization
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)
Landscape Designer (T&I)

Career Major Description
This T&I career major will introduce students to the skills required to be employed as a landscaper designer. Students will be trained in the tools and equipment, use of surveying equipment, proper placement of landscape materials and estimating materials used in a landscape project.

MCA students; others with approval from Chief Officer, Enrollment, Recruitment & Transition Services are able to enroll in this program.

Average Oklahoma Salary
$10/hr

Helpful Attributes and Abilities
- Reading and math skills at the 8th grade level or above
- Some background in biology
- Good eye-hand coordination and manual dexterity
- Good physical and mental health
- Be able to work under extreme weather conditions
- An ability to work independently and as a part of a team
- Dependability
- Organizational skills
- Attention to detail
- Good communication skills
- Ability to take directions from others
- Keyboarding skills

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association Commission on Accreditation & School Improvement (NCA-CASI)

Course Title                                            Hours
Landscape Design: Principles of Design                120
Landscape Design Process                                   60
Landscape Design Consideration                           60
Landscape Grounds Keeping                                120
Landscape Turf Management                               120
Landscape Tool Operation                                120
Landscape Design: Attributes of Plantings               60
Workforce Staging-Landscape Designer                    30

Career Major Length  690 Hours
**Agricultural Plants**  60 hours  
This course is designed to prepare the student for taking the Agricultural Plant Certification test.

**Applying Pesticides**  45 hours  
This course is designed to prepare the student to pass the Core Test to become a certified pesticide applicator. Covered are environmental concerns related to the use of pesticides, chemical safety and alternative pest control.

**Basic Techniques and Styles**  30 hrs  
Students will learn shapes of arrangements; seasonal, holiday and special designs; flowers to wear; and everlasting flowers.

**Fertilizers and Soils**  90 hours  
This course is designed to introduce students to the basis of plant growth, the soil and it's nutrients. Areas addressed in this course will include erosion control, soil preparation, media preparation, soil pasteurization, cultivation, seed bed preparation, soil sampling and soil tests and their interpretation.

**Field Scouting, Weed Collection and Insect Collection**  60 hours  
This course is designed to train students in the processes required to inspect fields for insects and weeds that could affect the growth of plants. It covers the processes for entering and using collected data to make a determination about appropriate nutrients and pesticides to protect plant growth.

**Floral Industry**  30 hours  
Students will learn the flower harvesting processes, distribution processes, and retail flower shop operations and careers.

**Floral Processing & Conditioning**  30 hours  
Students will learn the skills and techniques needed to maintain and increase the shelf life of cut flowers.

**Flowers and Foliage**  75 hours  
Students will learn care and handling, harvesting and identification of flowers and foliage.

**Greenhouse Operations & Management**  120 hours  
This course will cover the total operations and management of a greenhouse. Students will gain the knowledge and skills required to gain employment in the greenhouse industry and the skills to move up the career ladder. It also addresses the construction factors to consider when building a greenhouse and marketing strategies. Included is an internship in a business with greenhouse facilities.

**Horticulture Entrepreneurship**  105 hours  
This course provides students with a guide to creating a business plan as well as following basic accounting procedures. Students will also learn to identify legal issues as they relate to the profession. The course will also introduce the students to marketing their field of study.

**Identification & Propagation of Horticulture Plants**  90 hours  
This course is designed to give students practical experience in reproducing and starting horticultural plant materials through both sexual and asexual methods. Included is identification of ornamental plants.

**Landscape Design: Principles of Design**  120 hours  
This Landscape Design: Principles Of Design targets the specific areas of instruction are unity, balance, contrast, rhythm, color and texture, simplicity, ultimate effect and spatial articulation.

**Landscape Design Attributes of Plantings**  60 hours  
The Attributes of Plantings Course addresses specific areas of instruction in Aesthetic value, Wildlife Conservation and Environmental Controls.

**Landscape Designer Workforce Staging**  30 hours  
This course is designed to be delivered as an integrated component within the courses taken by the individual student. The course is designed for the development of leadership, personal development and employability skills

**Landscaping Design Considerations**  60 hours  
Landscaping Design Considerations Course identifies concerns and requirements for all engineered environments.

**Landscaping Design Process**  60 hours  
The Landscape Design Process course prepares students to design using an identified process from area assessment to final landscape plan.

**Landscaping Turf Management**  120 hours  
The Landscape Turf Management course prepares students to successfully cultivate and maintain turf areas in landscaped environments. Specific areas of instruction include Cool Weather/ Hot Weather grass, Maintenance Schedules, Lawn Establishing, Aeration, Vertical Cutting, De-thatching, Irrigation, Herbicides, Pesticides, Fungicides, and Fertilization.

**Landscaping Tool Operation**  120 hours  
The Landscape Lawn Tool Operation course provides students with skills necessary to safely and effectively operate tools associated with the landscape maintenance industry. Specific areas of instruction include Walk Behind Mower, Lawn Tractor, ZTR, Reel Mower, Verticut Machine, Edgers, Trimmers, Shears, Aerators, Tillers, Chippers, Sprayers & Spreaders, Safety for Power Tools, and Safety For Manually Operated Hand Tools.

**Price Structuring**  60 hours  
Course will teach students how to price products. They will also learn the difference in wholesale and retail pricing, as well as structuring quantity discount pricing.

**Principles of Horticulture**  30 hours  
This course is designed to prepare students for further studies in Horticulture. Careers and areas of horticulture are explored, as is how horticulture fits into the field of plant agriculture. Greenhouse watering, tools, safety, and plant growth are all aspects of this course.

**Retail Flower Shop**  200 hours  
This course focuses on the business side of a retail flower shop.

**Theory & Design**  300 hours  
Students will learn plant history, harmony, unity, color, balance, proportion, scale, focal point, rhythm line, form space, depth, texture and mechanics of floral design.

**Workforce Staging**  30 hours  
This course is designed to be delivered as an integrated component within the courses taken by the individual student. The course is designed for the development of leadership, personal development and employability skills.
Law Enforcement Services

• Law Enforcement Officer Prep
Law Enforcement Officer Prep

**Career Major Description**
This major prepares students for careers in public safety or law enforcement. Students are introduced to the basics of law enforcement through courses in police fundamentals, defensive tactics, technical investigation and criminal law. In addition, students receive training in emergency telecommunications, equipment and weapons, and ethics and professional behavior.

**Average Oklahoma Salary**
$13/hour-security guard  
$17/hour-patrol officer

**Helpful Attributes and Abilities**
- Reading and math skills at the 10th grade level or above  
- A positive attitude  
- Good communication skills  
- The ability to relate to people in a caring, empathetic manner  
- Good eye-hand coordination  
- Good physical and mental health  
- Dependability  
- Ability to work effectively with a wide variety of personality types

**Who Can Enroll**
Juniors & Seniors

**Location**
Springlake Campus  
Information Technology Center  
1800 Springlake Drive  
Oklahoma City, OK 73111

**Student Organization**
SkillsUSA

**Certifications Available**
CLEET Unarmed Security Guard  
CPR

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)  
Oklahoma State Board of Education (OSBE)

**Career Major Length**
1023 Hours

**Course Title**
- Healthcare Provider CPR and First Aid ................................................15
- Introduction to Law Enforcement .........................................................48
- Police Function and Fundamentals .......................................................48
- Unarmed Security - Phase 1 .................................................................30
- Unarmed Security - Phase 2 .................................................................30
- The Penal Code and Criminal Law .......................................................48
- Technical Investigations .......................................................................96
- Courtroom Evidence and Testimony ...................................................54
- Ethics and Professional Behavior in Law Enforcement .......................48
- Tactical and Interpersonal Communications ......................................30
- Defensive Tactics for Law Enforcement .............................................76
- Traffic Management & Accident Investigation ..................................35
- Law Enforcement Equipment and Weapons ......................................60
- Emergency Telecommunications .........................................................80
- Workforce Staging ...............................................................................60
- Introduction to Detention Services .....................................................30
- Rank and Structure .............................................................................30
- Security Procedures ............................................................................45
- Emergency Procedures ......................................................................60
- Community Policing ............................................................................40
- Law Enforcement Officer Prep Capstone ............................................60

**Course Title**
- Law Enforcement Officer Prep Capstone ............................................60

**Average Oklahoma Salary**
$13/hour-security guard  
$17/hour-patrol officer

**Helpful Attributes and Abilities**
- Reading and math skills at the 10th grade level or above
- A positive attitude
- Good communication skills
- The ability to relate to people in a caring, empathetic manner
- Good eye-hand coordination
- Good physical and mental health
- Dependability
- Ability to work effectively with a wide variety of personality types

**Who Can Enroll**
Juniors & Seniors

**Location**
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Information Technology Center  
1800 Springlake Drive  
Oklahoma City, OK 73111

**Student Organization**
SkillsUSA

**Certifications Available**
CLEET Unarmed Security Guard  
CPR

**Metro Tech Accreditations**
Oklahoma Board of Career and Technology Education (OBCTE)  
Oklahoma State Board of Education (OSBE)
COURSE DESCRIPTION

LAW ENFORCEMENT SERVICES

Community Policing 40 hours
The student will understand and have a working knowledge of the officer's role relative to community relations. Police community relations are fast becoming one of the primary concerns of law enforcement personnel. Every action by a police agency has a bearing on the relationship of the police with the community. Good or bad police community relations rest singularly on the individual officer. The absence or presence of the community's good will toward the police has a great deal to do with the efficiency and safety of the police officers when performing their duties. By definition, police community relations us the process by which the police and the community work together to identify and resolve problems that have caused discord or might cause discord between them.

Courtroom Evidence & Testimony 48 hours
This course covers the study of law, rules and types of evidence as they pertain to admissibility in the court system of the United States of America. Students learn appropriate ways to present testimony in court.

Defensive Tactics for Law Enforcement 76 hours
In this course students study and practice methods of defense employed by law enforcement officers.

Emergency Procedures 60 hours
In this course students learn to identify emergency situations typical of a corrections facility and to respond appropriately.

Emergency Communications 80 hours
In this course students learn the duties and responsibilities of a public safety telecommunications operator.

Ethics & Professional Behavior in Law Enforcement 48 hours
In this course students explore their professional duties and the rational for them when facing ethical dilemmas in the criminal justice career field.

Healthcare Provider CPR & First Aid 15 hours
This course provides the most current guidelines for CPR developed by the American Heart Association. Students receive training in Cardiopulmonary Resuscitation (CPR)/Automatic External Defibrillator (AED)/Foreign Body Airway Obstruction (FBAO). Students have an opportunity to become certified in Healthcare Provider CPR. This course provides the knowledge for students to perform basic first aid. Students are provided an opportunity to gain skills toward first aid competency such as victim assessment, splinting, controlling bleeding, poisoning and burns.

Introduction to Detention Services 30 hours
This course covers trends and developments in all elements of a modern correctional system for the treatment of juvenile and adult offenders. The history of corrections will also be discussed.

Introduction to Law Enforcement 48 hours
This course provides an introduction to the historical background, professional direction, agencies and processes, purposes, functions, ethics, administration, and technical problems of the criminal justice system. Areas examined are municipal, state, and federal systems. The powers and limitations of the law enforcement officer will be discussed.

Law Enforcement Equipment and Weapons 60 hours
This course is a study of various types of equipment and weapons currently used by law enforcement. Students study safety policies, procedures, care and maintenance of weapons.

Law Enforcement Officer Prep Capstone 60 hours
In this course students make final preparation for industry certifications and finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands.

Penal Code and Criminal Law 48 hours
In this course students study the legal basis of law enforcement including categories, features of crimes and elements of crimes, effects of legal decisions on criminal law, local ordinances and regulatory functions.

Police Function & Fundamentals 48 hours
In this course students gain the theory and basic knowledge required to perform as an entry-level peace officer. Areas of study include authority, ethics, arrest powers, collection of evidence, U.S. Constitutional law, public relations, patrolling, and criminal procedure.

Rank & Structure 15 hours
In this course students learn to identify the typical organizational structure in a law enforcement setting.

Security Procedures 45 hours
This course covers basic and advanced security procedures in a corrections setting. Topics include goals of security, contraband, counts, key and tool control, patrolling, informants, daily inspections and transporting inmates.

Tactical & Interpersonal Communications 30 hours
This course is an introduction to negotiations, communications, critical thinking, prioritization, telephone etiquette and stress management.

Technical Investigations 96 hours
In this course students study the legal and technical procedures required to gain the evidence necessary to prove the elements of crimes as defined by Title 21 Oklahoma State Statutes. The course includes the search, collection and preservation of evidence, witness and victim interviewing, preparation of reports, crime scene records, standard crime scene photography, and virtual crime scene photography.

Traffic Management & Accident Investigation 35 hours
In this course students learn the principles of traffic control, traffic safety, traffic law enforcement (Title 47, Oklahoma State Statutes), selective enforcement, traffic accident investigation and industry-accepted techniques for standard and high-risk traffic stops.

Unarmed Security – Phase 1 30 hrs
In this course students learn the basic tasks in private security training required by the Oklahoma Security Guard and Private Investigator’s Act of 1987. Areas of study include interpreting the O.S.G.P.I. Act, responding to accidents and emergencies, writing field notes, writing reports, interpreting legal powers and limitations. Upon completion of Unarmed Security Phases 1 and 2, students qualify to sit for the State Unarmed Security exam for Oklahoma State Unarmed Security Guard License.

Unarmed Security – Phase 2 30 hrs
In this course students study the private security training required by the Oklahoma Security Guard and Private Investigator’s Act of 1987. Areas of study include negotiating, public relations, performing fixed post duties, patrolling and investigating security incidents. Upon completion of Unarmed Security Phases 1 and 2, students qualify to sit for the State Unarmed Security exam for Oklahoma State Unarmed Security Guard License.

Workforce Staging 30 hours
Content of this course is integrated within the other courses of this career major and is aimed at developing students’ leadership and employability skills.
Legal Office Services

- Legal Office Assistant
- Legal Receptionist
Legal Office Assistant  Prerequisite: Legal Receptionist

Career Major Description
Learn to prepare legal correspondence and documents. In this major students learn terminology and office procedures specific to the legal field. Students use advanced computer applications skills to prepare complex legal documents and also gain knowledge of legal specialties.

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Strong interpersonal skills
• Good oral and written communication skills
• Positive attitude
• Dependability

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
ALS . . . the basic certification for legal professionals
Certiport IC3

Industry Accreditations
NALS . . . the association for legal professionals

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title  Hours
Fundamentals of Technology ..............................................................120

• Computer Literacy
• Basic Internet
• Basic Network Concepts
• Basic Word Processing, Spreadsheets, Presentations
& Database Software

Foundations for the Legal Office ....................................................180
Legal Office Procedures .................................................................200

Advanced Computer Applications for the Law Office .................180
Advanced Legal Communications ..................................................180
Legal Specialties .............................................................................180

Legal Office Assistant Capstone .....................................................150

• Work-based learning experiences
• Projects
• Certifications
• Portfolios

Career Major Length  1190 Hours
Legal Receptionist

Career Major Description
Learn basic legal office procedures to prepare for an entry level position in the legal field. In this major students gain basic office and computer skills along with legal terminology, billing and mail handling specific to the law office.

Average Oklahoma Salary
$10/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Strong interpersonal skills
• Good oral and written communication skills
• Positive attitude
• Dependability

Who Can Enroll
Juniors, Seniors & Adults

Location
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Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3

Industry Accreditations
NALS . . . the association for legal professionals

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title                                      Hours

Fundamentals of Technology..............................................................120
• Computer Literacy
• Basic Internet
• Basic Network Concepts
• Basic Word Processing, Spreadsheets, Presentations & Database Software
Foundations for the Legal Office................................. 180
Legal Office Procedures..................................................200
Legal Receptionist Capstone..................................................150
• Work-based learning experiences
• Projects
• Certifications
• Portfolios

Career Major Length  650 Hours
COURSE DESCRIPTION
LEGAL OFFICE SERVICES

Advanced Computer Applications for the Law Office  180 hours
This course provides students with the advanced software skills needed for the Legal Office. Students work with Microsoft Word and WordPerfect to learn legal document formatting. Advanced presentation software skills are also covered. Prerequisite: Foundations for the Legal Office

Advanced Legal Communications  180 hours
In this course students gain skills to communicate effectively in a law office. Transcription, dictation, legal citations, law library research and docket management are included along with advanced business correspondence and legal terminology. Prerequisite: Advanced Computer Applications for the Law Office.

Foundations for the Legal Office  180 hours
In this course students master the skills needed to use general software applications effectively in the work environment, to express themselves clearly and correctly with spoken and written language, and to learn general legal terminology and apply it correctly in appropriate settings. Prerequisite: Fundamentals of Technology

Fundamentals of Technology  120 hrs
In this course students learn the fundamental concepts, principles, and ideas needed to understand how business is operated and managed in a rapidly changing global environment. This course also provides job readiness skills and soft skills that are critical for success in any workplace setting

Legal Office Assistant Capstone  150 hours
Work-based learning experience, project-based instruction and additional industry certifications will be utilized to reinforce skills obtained within any career major in the Business, Management and Administration cluster. Students will make final preparation for industry certifications and will finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All other courses in career major

Legal Office Procedures  200 hours
In this course students master the soft skills, ethics and communication, and general administrative procedures and tasks necessary to be successfully employed in a legal office. This course provides students with the concepts, principles and attitudes needed to understand how an office is operated and managed in a rapidly changing global environment. Prerequisite: Foundations for the Legal Office

Legal Receptionist Capstone  150 hours
Work-based learning experience, project-based instruction and additional industry certifications will be utilized to reinforce skills obtained within any career major in the Business, Management and Administration cluster. Students will make final preparation for industry certifications and will finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All other courses in career major

Legal Specialties  180 hours
In this course students learn the basics of how the court system works. They also study the nine basic categories of law and become familiar with the principles that guide them. Prerequisite: Advanced Computer Applications for the Law Office
Medical Assisting

• Medical Assistant
Medical Assistant

Career Major Description
Medical assistants are multi-skilled health professionals who work primarily in ambulatory settings such as medical offices and clinics. They perform clinical and administrative tasks and their duties vary by office or clinic. The major combines classroom, laboratory and work learning components to ensure that each student achieves entry-level competencies for the medical assistant. Students practice in a variety of settings as chosen by the instructor. Students completing this career major will be eligible to sit for the Certified or Registered Medical Assistant exam.

Course Title
<table>
<thead>
<tr>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Life Skills</td>
<td>15</td>
</tr>
<tr>
<td>Medical Terminology</td>
<td>45</td>
</tr>
<tr>
<td>Clinical Procedures I</td>
<td>120</td>
</tr>
<tr>
<td>Clinical Procedures II</td>
<td>120</td>
</tr>
<tr>
<td>Pharmacology</td>
<td>60</td>
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<tr>
<td>Anatomy and Physiology</td>
<td>120</td>
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<tr>
<td>Medical Insurance and Coding</td>
<td>54</td>
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<tr>
<td>Medical Assisting Applications</td>
<td>75</td>
</tr>
<tr>
<td>Medical Informatics</td>
<td>45</td>
</tr>
<tr>
<td>Medical Law and Ethics</td>
<td>40</td>
</tr>
<tr>
<td>Administrative Medical Office Procedures</td>
<td>105</td>
</tr>
<tr>
<td>Medical Office Laboratory Procedures</td>
<td>55</td>
</tr>
<tr>
<td>Medical Assisting Simulation</td>
<td>90</td>
</tr>
<tr>
<td>Medical Assisting Externship</td>
<td>171</td>
</tr>
</tbody>
</table>

Career Major Length 1115 Hours

Average Oklahoma Salary
$11/hour

Helpful Attributes and Abilities
- Reading skills at the 10th grade level or above;
- math skills at the 8th grade level or above
- The ability to work well with others
- Mental alertness
- Dependability
- Organizational skills
- Attention to detail
- Good communication skills
- Basic typing and computer literacy skills

Who Can Enroll
Adults

Prerequisites
- High school diploma or GED
- 18 years old
- CPR for Health Care Providers
  (American Heart Association Course)

Location
Springlake Campus
Metro Career Academy
1901 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
HOSA-Health Occupations Students of America

Certifications Available
Administrative Medical Assistant,
CareerTech Testing Center (CCTC)
Certified Clinical Medical Assistant (CCMA),
National Healthcare Association (NHA)
Certified Medical Assistant,
American Association of Medical Assistants (AAMA)
Clinical Medical Assistant, CareerTech Testing Center (CCTC)
Medical Administrative Assistant (CMAA),
National Healthcare Association (NHA)
National Certified Medical Assistant,
National Center for Competency Testing (NCCT)
Phlebotomy Medical Assistant,
CareerTech Testing Center (CCTC)
Registered Medical Assistant (RMA),
American Medical Technologist (AMT)

Industry Accreditations
The Medical Assistant Program is accredited by the Commission of Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs (CAAHEP),
25400 U.S. Highway 19 North, Suite 158, Clearwater, FL 33763, (727) 210-2350

Medical Assisting Education Review Board (MAERB)
20 N. Wacker Drive, Suite 1575, Chicago, IL 60606, 1-800-282-2262, www.maerb.org

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810,
fax (405) 743-6809

Oklahoma State Board of Education (OSBE)
2500 N. Lincoln
Oklahoma City, OK 73105-4599
phone (866) 249-9410, fax (405) 521-6205
Judy_Jolley@mail.sde.state.ok.us

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### COURSE DESCRIPTION

#### MEDICAL ASSISTANT

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
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<td><strong>Medical Interventions</strong></td>
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<td>45 hours</td>
</tr>
<tr>
<td><strong>Medical Insurance and Coding</strong></td>
<td>54 Hours</td>
</tr>
</tbody>
</table>

**Academic Life Skills 15 hours**

This course is designed to provide adult students the foundation needed for success in school while preparing for certification or licensure in the chosen healthcare field. Topics of instruction include time management, resource management, study techniques, test taking skills, communication, cultural diversity, ethics and professionalism.

**Administrative Medical Office Procedures 105 hours**

Students will apply the basic concepts and principles of medical office practices and procedures with entry-level proficiency in the performance of duties in the administrative medical office. Prerequisite: Acceptance to the Medical Assistant major

**Anatomy & Physiology 120 hours**

Anatomy/Physiology is the study of the structural complexity of the human body and its intricate functional mechanisms. This course is taught as a laboratory science. Students will conduct scientific investigations and fieldwork using scientific knowledge and methodology that will enable them to make educated conclusions based on higher-level critical thinking and problem solving skills. The areas studied will be an integration of biology and chemistry and will include, but are not limited to: organization of the body, chemical basis for life, cells & tissues, integumentary system, skeletal system, muscular system, nervous system, endocrine system, blood, circulatory system, lymphatic & immune systems, respiratory systems, digestive system & metabolism, urinary system, and reproductive system. An emphasis should be placed on real-world applications, and active-learning exercises should be included along with laboratory experiences.

Prerequisite: Algebra I, Geometry (or co-enrollment), and Biology I (or co-enrollment)

**Clinical Procedures I 120 hours**

The student will receive an overview of the Medical Assistant career. An emphasis will be placed on professionalism, history of the profession, human relations, OSHA guidelines, medical asepsis, vital signs, routine medical office procedures, emergency procedures, law, ethics, communication and documentation.

Prerequisite: Acceptance to the Medical Assistant major or focus

**Clinical Procedures II 120 hours**

The student will demonstrate an understanding of such skills as maintaining the examination area, performing clinical lab tests, venipuncture, microhematocrit and twelve lead electrocardiograph (ECG). An emphasis is placed on the patient’s physical examination and treatment procedures that are performed in a medical office setting.

Prerequisite: Acceptance to the Medical Assistant major or focus

**Medical Office Laboratory Procedures 55 hours**

Students receive an overview of patient preparation, collection, handling, quality control and transporting of specimens for the most common CLIA (Clinical Laboratory Improvement Amendments) waived laboratory tests performed in a doctor’s office. Furthermore students demonstrate how to complete medical laboratory request forms and laboratory/pathology reports. Prerequisite: Acceptance to the Medical Assistant major

**Medical Assisting Applications 75 hours**

Students demonstrate proficiency in microcomputer word processing software applied to the medical office to create, modify, store, retrieve, and print documents. This course is an introduction and overview with an emphasis on learning and applying the mechanics of common software for medical office correspondence. Prerequisite: Acceptance to the Medical Assistant major

**Medical Assisting Externship 171 hrs**

This course is designed to apply the knowledge and skills acquired in previous medical assistant courses to the clinical site. Externship assignments are scheduled to provide students with adjunct faculty and supervised experience in performing the skills and competencies of a medical assistant in a physician’s office. Students will accept accountability and responsibility for their own behavior while in the learning environment and will practice within the clinical and legal framework of the profession of medical assistant. Prerequisite: Acceptance to the Medical Assistant major

**Medical Assisting Simulation 90 hours**

This course is designed to build upon previous knowledge from medical assistant courses. The student will apply critical thinking skills for medical assistants to include the process of planning, managing and delivering care to patients. During this course, the student will schedule, prepare and assist in the care of a group of virtual patients' health care needs. An emphasis will be placed on communication skills in relation to patients and their families. The student will manage a simulated clinic including patient charts, inventories, billing, scheduling, insurance form preparation, coding and other administrative and clinical duties. A variety of teaching methods, learning activities, and computer research and practical simulations are utilized. Prerequisite: Acceptance to the Medical Assistant major or focus

**Medical Interventions 120 hours**

Medical practice includes interventions to support humans in treating disease and maintaining health. Student projects will investigate various medical interventions that extend and improve quality of life, including gene therapy, pharmacology, surgery, prosthetics, rehabilitation, and supportive care. Students will study the design and development of various medical interventions including vascular stents, cochlear implants, and prosthetic limbs. They will review the history of organ transplants and gene therapy, and read current scientific literature to be aware of cutting edge developments.

**Medical Law and Ethics 40 hours**

This course covers information necessary to understand the legal and ethical standards of the medical assisting practice. Students will demonstrate a knowledge of ethical issues, contracts, healthcare worker liability, medical litigation, drug regulations, discrimination issues, OSHA rules, bioethical issues, medical records, acceptable fees, and laws that may affect the health care professional. Emphasis is placed upon the settings that employ medical assistants. Prerequisite: Acceptance to the Medical Assistant major or focus

**Medical Informatics 45 hours**

The student will gain an understanding of the automated medical office by using a computerized medical office package. Included in this software package are billing, charge slips, scheduling, insurance form preparation and patient data storage. The student will demonstrate familiarity with methods and techniques used in literary research for medical professionals. The student will further be exposed to advanced Internet research. Prerequisite: Acceptance to the Medical Assistant major

**Medical Insurance and Coding 54 Hours**

This course covers information necessary to understand medical insurance form preparation and coding as used in a medical clinical office. Students demonstrate an understanding of the legal issues of insurance claims, procedural & diagnostic coding, delinquent claims, problem solving, managed care systems, proper form preparation and several major types of medical forms.

Prerequisite: Acceptance to the Medical Assistant major
Medical Terminology  45 hours
Medical Terminology is designed to develop in the students a working knowledge of the language of medicine. Students acquire word building skills by learning prefixes, suffixes, roots and abbreviations. By relating terms to body systems, students identify proper uses of words in a medical environment. Knowledge of medical terminology enhances students’ ability to successfully secure employment or pursue advanced education in healthcare.

Pharmacology  60 hours
The student will identify sources, schedules and classes of drugs. The student will identify and interpret actions of drugs commonly used in a physician’s office, accurately calculate drug dosage and identify appropriate medication routes. The student will follow the written, verbal and standing physician orders and properly prepare and administer using aseptic technique as required. Prerequisite: Acceptance to the Medical Assistant major
Medical Office Technology

• Electronic Health Records Specialist
• Medical Insurance Coder
• Medical Office Assistant
MEDICAL OFFICE TECHNOLOGY

Electronic Health Records Specialist

Career Major Description
To meet the growing needs of healthcare facilities in maintaining electronic health records (EHR), students will learn regulatory requirements, healthcare terminology/acronyms, organizational behavior, medical business operations, and a basic understanding of practice workflow while adhering to code of conduct policies and best practices. Students will gain the knowledge and skills required to implement, deploy, and support health IT systems in various clinical settings.

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
- Reading, language and math skills at the 8th grade level or above
- Positive attitude and dependability
- Strong interpersonal skills
- Good oral and written communication skills
- Strong ethical standards

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Pending approval

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3
Certified Electronic Health Record Specialist (CEHRS)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title Hours
Fundamentals of Technology ............................................................. 120
- Computer Literacy
- Basic Internet
- Basic Network Concepts
- Basic Word Processing, Spreadsheets, Presentations & Database Software
Fundamentals of Administrative Technologies ......................... 120
- Office Procedures
- Telephone Etiquette
- Advanced Word Processing & Spreadsheet Software
Foundations of Medical Office/Medical Terminology ................ 180
Patient Billing .............................................................................. 180
Medical Insurance ..................................................................... 180
ICD-CPT Coding .................................................................... 180
Electronic Health Records I ...................................................... 120
Electronic Health Records II ..................................................... 120
Electronic Health Records Specialist Capstone ...................... 170
- Work-based learning experiences
- Projects
- Certifications
- Portfolios

Career Major Length 1370 Hours

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
- Reading, language and math skills at the 8th grade level or above
- Positive attitude and dependability
- Strong interpersonal skills
- Good oral and written communication skills
- Strong ethical standards

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Pending approval

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3
Certified Electronic Health Record Specialist (CEHRS)

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
MEDICAL OFFICE TECHNOLOGY

Medical Insurance Coder

Career Major Description
Medical coders maintain patients’ records using universally recognized coding systems to ensure compliance with federal regulations and insurance requirements. In this major students learn the medical coding skills, anatomy and terminology necessary for employment in a health care facility. Students also gain skills in patient billing and medical insurance.

Average Oklahoma Salary
$14/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Positive attitude and dependability
• Strong interpersonal skills
• Good oral and written communication skills
• Strong ethical standards

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title                               Hours
Fundamentals of Technology .................. 120
• Computer Literacy
• Basic Internet
• Basic Network Concepts
• Basic Word Processing, Spreadsheets, Presentations & Database Software

Fundamentals of Administrative Technologies .......... 120
• Office Procedures
• Telephone Etiquette
• Advanced Word Processing & Spreadsheet Software

Foundations of Medical Office/Medical Terminology .............. 180
Patient Billing ........................................... 180
Medical Insurance ......................................... 180
ICD9-CPT Coding ......................................... 180
Medical Insurance Coder Capstone ......................... 170
• Work-based learning experiences
• Projects
• Certifications
• Portfolios

Career Major Length                        1130 Hours

Average Oklahoma Salary
$14/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Positive attitude and dependability
• Strong interpersonal skills
• Good oral and written communication skills
• Strong ethical standards

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Certiport IC3

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Medical Office Assistant

Career Major Description
Demand is strong for health care professionals who can multi-task while managing health information in a computerized office environment. In this major students learn skills for entry-level employment in physicians' offices, clinics, hospitals and other health care facilities. Medical terminology, billing and insurance are covered.

Average Oklahoma Salary
$11/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Positive attitude and dependability
• Strong interpersonal skills
• Good oral and written communication skills
• Strong ethical standards

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Administrative Medical Assistant (ODCTE)
Certiport IC3

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title | Hours
--- | ---
Fundamentals of Technology | 120
• Computer Literacy
• Basic Internet
• Basic Network Concepts
• Basic Word Processing, Spreadsheets, Presentations & Database Software

Fundamentals of Administrative Technologies | 120
• Office Procedures
• Telephone Etiquette
• Advanced Word Processing & Spreadsheet Software

Foundations of Medical Office/Medical Terminology | 210
Patient Billing | 180
Medical Insurance | 180
Medical Office Assistant Capstone | 120
• Work-based learning experiences
• Projects
• Certifications
• Portfolios

Career Major Length | 930 Hours

Average Oklahoma Salary
$11/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 8th grade level or above
• Positive attitude and dependability
• Strong interpersonal skills
• Good oral and written communication skills
• Strong ethical standards

Who Can Enroll
Juniors, Seniors & Adults

Location
Springlake Campus
Information Technology Center
1800 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
BPA-Business Professionals of America

Certifications Available
Administrative Medical Assistant (ODCTE)
Certiport IC3

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Electronic Health Records I 120 hours
In this course students learn to manage electronic health information using common electronic data interchange systems. Through classroom and computer lab training students acquire the skills necessary to maintain the medical, legal, accreditation and regulatory requirements of the electronic health record and database; project management and fundamentals of change. Prerequisite: Fundamentals of Administrative Technologies

Electronic Health Records II 120 hrs
This course builds on the skills learned in the Electronic Health Records I course as students continue to learn how to manage electronic health information using common electronic data interchange systems. Through classroom and computer lab training students acquire the skills necessary to maintain the medical, legal, accreditation and regulatory requirements of the electronic health record and database; project management and fundamentals of change. Prerequisite: Electronic Health Records I

Electronic Health Records Specialist Capstone 70 hours
Work-based learning experience, project-based instruction and additional industry certifications will be utilized to reinforce skills obtained within any career major in the Business, Management and Administration cluster. Students will make final preparation for industry certifications and will finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All other courses in career major

Foundations of Medical Office/Medical Terminology 180 or 210 hours
In this course students prepare for a position as a medical office assistant, medical records technician, medical coder, or medical transcriptionist by gaining skills in medical anatomy and terminology as well as administrative routines and procedures followed in a medical office. The importance of complete accuracy and confidentiality in maintaining medical records is stressed. Additional areas emphasized in this course include preparation of patient records and medical data entry. Prerequisite: Fundamentals of Administrative Technologies.

Fundamentals of Administrative Technology 135 hrs
This course builds on the beginning business skills gained in the Fundamentals of Technology course and provides students with the concepts, principles, and attitudes needed to understand how an office is operated and managed in a rapidly changing global environment. The integration of state-of-the-art personal computing is done throughout the course. Prerequisite: Fundamentals of Technology

Fundamentals of Technology 120 hrs
This course provides students with the fundamental concepts, principles, and ideas needed to understand how business is operated and managed in a rapidly changing global environment. Students also learn job readiness and soft skills that are critical for success in any workplace setting. Students are introduced to new and emerging technology such as GPS/GIS and podcasting.

ICD9-CPT Coding 180 hours
This course introduces the basic principles and conventions of the International Classification of Diseases (ICD) as well as Current Procedural Terminology (CPT) coding. Students simulate the application of coding principles with examples and exercises based on actual case documentation. Prerequisite: Medical Insurance, Patient Billing

Medical Insurance 180 hours
In this course students learn the basic functions of processing medical insurance claims and handling cash-related accounting procedures. A computer-based training program guides students through the insurance claim form cycle and focuses on the areas in which medical office assistants encounter the greatest difficulties. Students are introduced to information about major insurance programs and federal health care legislation. Prerequisite: Patient Billing

Medical Insurance Coder Capstone 170 hours
Work-based learning experience, project-based instruction and additional industry certifications will be utilized to reinforce skills obtained within any career major in the Business, Management and Administration cluster. Students will make final preparation for industry certifications and will finalize portfolios that highlight skills and certifications. Students may also undertake special projects, cross-train or participate in workplace learning opportunities to enhance skills in accordance with industry demands. Prerequisite: All other courses in career major
Practical Nursing

- 1+1 Practical Nurse
- Practical Nurse
1+1 Practical Nurse

Career Major Description
This career major prepares the student to become a licensed practical nurse, an important member of the health care team who works under the supervision or direction of a registered nurse, licensed physician or dentist. Students will learn the role of the LPN and how to care for a variety of patients including geriatric, pediatric, oncology, and pre/post operative patients. Students will learn how to identify patient problems, identify appropriate interventions and evaluate nursing care. Graduates of this career major will be eligible to take the NCLEX-PN and become licensed through the Board of Nursing. Referal from a college partner is required for admission to the 1+1 career major.

Students in the 1+1 major must have already completed college level courses in Medical Terminology and Anatomy & Physiology.

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 12th grade level or above
• Attention to detail
• Flexibility
• Good communication skills
• Good physical and mental health
• Ability to work well with others
• Ability to relate to people in a caring, empathetic manner

Who Can Enroll
Adults w/referral from collegiate partners (OCCC, Rose State & OSU-OKC)

Prerequisites
• High school diploma or GED
• 18 years old
• CPR for Health Care Providers
(American Heart Association Course)
• Medical Terminology (2-3 college credit hours)
• Anatomy & Physiology (4 or more college credit hrs)

Location
Springlake Campus, Health Careers Center
1720 Springlake Drive, Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
HOSA-Health Occupations Students of America
OSALPN-Oklahoma State Association Licensed Practical Nurses - Student Chapter

Certifications Available
Licensed Practical Nurse (LPN)
Advanced Unlicensed Assistant (AUA)
Certified Medication Aide (CMA)
Certified Nurse Assistant (CNA)

Course Title Hours
Academic Life Skills.................................................................15
Basic Nursing Skills.................................................................91
Concepts of Nursing .................................................................40
Fundamentals of Nursing.........................................................160
Clinical I Basic Nursing ......................................................... 80
Pharmacology & Intravenous Therapy Skills .......................... 50
Medical Surgical Nursing I ..................................................... 99
Clinical II Medical Surgical Nursing Part I ......................... 168
Medical Surgical Nursing II .................................................... 99
Clinical III Medical Surgical Nursing Part II ....................... 168
Nursing Specialties ................................................................. 120
Clinical IV Maternal/Newborn, Pediatric and Mental Health ... 104
Transition to Practice ..............................................................54
Clinical V Transition to Practice ............................................. 96

Career Major Length 1344 Hours

National Council Licensure Examination for Practical Nurses (NCLEX-PN) Pass Rates:

<table>
<thead>
<tr>
<th>Dates</th>
<th>National</th>
<th>Oklahoma</th>
<th>Metro Tech</th>
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<tbody>
<tr>
<td>January 1 – December 31, 2012</td>
<td>84.23%</td>
<td>91.25%</td>
<td>93.48%</td>
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<tr>
<td>January 1 – December 31, 2013</td>
<td>84.63%</td>
<td>91.34%</td>
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<td>January 1 – December 31, 2014</td>
<td>82.59%</td>
<td>85.33%</td>
<td>94.7%</td>
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<td>January 1 – December 31, 2015</td>
<td>81.89%</td>
<td>90.72%</td>
<td>95.83%</td>
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</tbody>
</table>

Student Completion Rate:
January 1 – December 31, 2013 84.63% 91.25% 100%
January 1 – December 31, 2012 84.23% 91.25% 93.48%
January 1 – December 31, 2011 82.59% 85.33% 94.7%
January 1 – December 31, 2010 81.89% 90.72% 95.83%

Industry Accreditation
National League for Nursing Accrediting Commission, Inc
3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326
Phone: 404-975-5000, Fax: 404-975-5020

Oklahoma Board of Nursing
2915 N. Classen, Suite 524, Oklahoma City, OK 73106, 405-962-1800

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074, phone (405) 377-2000, 1-800-522-5810,
fax (405) 743-6809

Oklahoma State Board of Education (OSBE)
2500 N. Lincoln
Oklahoma City, OK 73105-4599
phone (405) 249-9410, fax (405) 521-6205
Judy_Jolley@mail.sde.state.ok.us

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Practical Nurse

Career Major Description
This career major prepares the student to become a licensed practical nurse, an important member of the health care team who works under the supervision or direction of a registered nurse, licensed physician or dentist. Students will learn the role of the LPN and how to care for a variety of patients including geriatric, pediatric, oncology, and pre/post operative patients. Students will learn how to identify patient problems, identify appropriate interventions and evaluate nursing care. Graduates of this career major will be eligible take the NCLEX-PN and become licensed through the Board of Nursing.

Average Oklahoma Salary
$15/hour

Helpful Attributes and Abilities
• Reading, language and math skills at the 12th grade level or above
• Attention to detail
• Flexibility
• Good communication skills
• Good physical and mental health
• Ability to work well with others
• Ability to relate to people in a caring, empathetic manner

Who Can Enroll
Adults

Required Prerequisites
• High school diploma or GED
• 18 years old
• Medical Terminology (2-3 college credit hours)

Recommended Prerequisite
• CPR for Health Care Providers
  (American Heart Association Course)
• Technical Anatomy & Physiology
  (4-5 college credit hours)

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
HOSA-Health Occupations Students of America
OSALPN-Oklahoma State Association Licensed Practical Nurses - Student Chapter

Certifications Available
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Certified Nurse Assistant (CNA)

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Basic Nursing Skills .............................................................. 91
Concepts of Nursing .............................................................. 40
Fundamentals of Nursing ...................................................... 160
Clinical I Basic Nursing ......................................................... 80
Pharmacology & Intravenous Therapy Skills .......................... 50
Medical Surgical Nursing I ..................................................... 99
Clinical II Medical Surgical Nursing Part I ............................ 168
Medical Surgical Nursing II .................................................. 99
Clinical III Medical Surgical Nursing Part II .......................... 168
Nursing Specialties ............................................................... 120
Clinical IV Maternal/Newborn, Pediatric and Mental Health .... 104
Transition to Practice ........................................................... 54
Clinical V Transition to Practice .......................................... 96

Career Major Length  1344 Hours

National Council Licensure Examination for Practical Nurses (NCLEX-PN) Pass Rates:

<table>
<thead>
<tr>
<th>Dates</th>
<th>National</th>
<th>Oklahoma</th>
<th>Metro Tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1 – December 31, 2012</td>
<td>84.23%</td>
<td>91.25%</td>
<td>93.48%</td>
</tr>
<tr>
<td>January 1 – December 31, 2013</td>
<td>84.63%</td>
<td>91.34%</td>
<td>100%</td>
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<tr>
<td>January 1 – December 31, 2014</td>
<td>82.59%</td>
<td>85.33%</td>
<td>94.7%</td>
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<tr>
<td>January 1 – December 31, 2015</td>
<td>81.89%</td>
<td>90.72%</td>
<td>95.83%</td>
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</tbody>
</table>

Student Completion Rate:
August 8, 2014 – December 31, 2015  64%

Rates of graduate job placement/attending school full-time:
1+1 PN  Day PN
October 1, 2014 – June 30, 2015  100%  88.5%

Industry Accreditation
National League for Nursing Accrediting Commission, Inc
3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326
Phone: 404-975-5000, Fax: 404-975-5020

Oklahoma Board of Nursing
2915 N. Classen, Suite 524, Oklahoma City, OK 73106, 405-962-1800

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810, fax (405) 743-6809

Oklahoma State Board of Education (OSBE)
2500 N. Lincoln, Oklahoma City, OK 73105-4599,
phone (866) 249-9410, fax (405) 521-6205,
Judy_Jolley@mail.sde.state.ok.us

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COURSE DESCRIPTION

PRACTICAL NURSING

Academic Life Skills 15 hours
This course is designed to provide adult students the foundation needed for success in school while preparing for certification or licensure in the chosen healthcare field. Topics of instruction include time management, resource management, study techniques, test taking skills, communication, cultural diversity, ethics and professionalism.

Basic Nursing Skills 91 hours
This course is designed to introduce students to basic nursing care for long term care patients. This course consists of 75 hours of didactic learning in which students will identify roles and responsibilities of a nurse assistant while learning basic care skills. The students will be able to identify normal and abnormal findings of basic skills. The course consists of at least 16 hours of long term clinical experience in which students will perform skills learned in the didactic portion of the course.

Clinical I Basic Nursing 80 hours
Clinical I- Basic Nursing focuses on the PN student providing comfort and assistance in performing activities of daily living for patients with common non-complicated disorders. Data collection skills will be practiced. The student will assist the client and significant others during the normal expected stages of growth and development. Experiences will be provided that will give the student opportunities to reduce the patient’s potential for developing complications or health problems related to treatments, procedures or existing conditions. Students will identify patient problems, appropriate interventions and evaluate nursing care to patients in extended care facilities. Prerequisite: Acceptance to the Practical Nurse major, 1+1 Practical Nurse major, or Nursing Prep major

Clinical II Medical Surgical Nursing Part 1 168 hours
Clinical II-Medical Surgical Nursing (Part I) focuses on the utilization of the nursing process in caring for acute care patients. The emphasis will be on prioritization, decision making, time management and critical thinking appropriate to the LPN’s scope of practice. As the student progresses, more complex patient situations will be presented and they will begin to function in a role more independent of the instructor. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major

Clinical III Medical Surgical Nursing Part 2 168 hours
Clinical III-Medical Surgical Nursing (Part II) is a continuation of the utilization of the nursing process in caring for acute care patients. The student will care for multiple patients during this clinical rotation. The emphasis will be on prioritization, decision making, time management and critical thinking appropriate to the LPN’s scope of practice. As the student progresses, more complex patient situations will be presented and they will begin to function in a role more independent of the instructor. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major

Clinical IV Maternal/Newborn, Pediatric and Mental Health 104 hrs
Clinical IV- The PN student will assist the patient and significant others during the normal expected stages of growth and development from conception throughout the life span in the clinical environment. The PN student will provide patient care related to prevention and early detection of health problems involved in maternal/newborn, pediatric and mental health nursing. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major

Clinical V Transition to Practice 96 hours
Clinical V-Transition to Practice skills are enhanced as the student functions in the role of team leader. The course will prepare the student to independently assume the role of the LPN in professional practice; a preceptor rotation assists in the completion of this transition. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major

Concepts of Nursing 40 hours
The Concepts of Nursing course focuses on the use of nursing related concepts by practical nurses as providers of care and members of the discipline in collaboration with health team members. Emphasis is placed on the concepts of learning, teamwork, communication in nursing, human development, professionalism, health promotion, nursing ethics and law, and changing health care delivery systems. Prerequisite: Acceptance to the Practical Nurse major, 1+1 Practical Nurse major, or Nursing Prep major

Fundamentals of Nursing 160 hours
The Fundamentals of Nursing course is an introduction to nursing care. Topics include utilizing the nursing process, performing assessment/data collection, and providing patient education. Principles and skills of nursing practice, documentation, and an introduction to physical assessment/data collection are taught. Special topics covering the care of the geriatric patient, the dying patient, the pre/post operative patient, and the management of pain are included in the course. Emphasis will be placed on developing critical thinking skills, demonstrating professionalism by maintaining confidentiality, recognizing legal/ethical responsibilities, acting as a patient advocate, maintaining positive patient/colleague relationships, and by implementing appropriate standards of care. Prerequisite: Acceptance to the Practical Nurse major, 1+1 Practical Nurse major, or Nursing Prep major

Medical Surgical Nursing I 99 hours
The Medical Surgical Nursing I course builds on concepts from previous courses, this course focuses on health management, maintenance and prevention of illness; care of the individual as a whole and deviations from the normal state of health. The administration of patient care includes using the nursing process, performing focused assessments, using critical thinking, and assisting with patient education. The systems included are integumentary, musculoskeletal, respiratory, cardiac, vascular, urinary and sensory. The concepts of patient care; treatments, pharmacology, and diet therapy are included within each system. Content is presented from a patient-centered approach based on Maslow’s Hierarchy of Needs. Patient care includes consideration of physiological, cognitive, psychosocial, and spiritual needs. Consideration is also given to the impact of health issues; the potential physical and mental adjustments as well as diversional and rehabilitative activities. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major

Medical Surgical Nursing II 99 hours
The Medical Surgical Nursing II course builds on concepts from previous courses, this course focuses on health management, maintenance and prevention of illness; care for the individual as a whole; and deviations from the normal state of health. Administering patient care includes use of the nursing process while performing focused assessments, using sound judgment, and providing patient education. The systems included are hematology, immunology, neurology, digestive, endocrine, and reproductive, as well as oncology nursing. The concepts of patient care, treatments, pharmacology, and diet therapy are included within each system. Content is presented from a patient-centered approach based on Maslow’s Hierarchy of Needs. Patient care involves consideration of physiological, cognitive, psychosocial, and spiritual needs within a cultural framework. Consideration is also given to the impact of health issues: the potential physical and mental adjustments required, as well as any necessary diversional or rehabilitative activities. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major
Nursing Specialties  120 hours
This course includes content in the nursing specialty areas of maternal and newborn nursing, pediatric nursing and mental health nursing. Maternal and newborn nursing includes 40 hours theory designed to familiarize the student with the holistic approach to care for the antepartum, intrapartum, postpartum client and the neonate. The normal processes of conception, fetal development, labor and delivery, postpartum period and family involvement are included. Mental health nursing includes 40 hours of theory with focus on the role of the practical nurse. The content includes the universal concepts needed to care for clients experiencing common mental health alterations, mental health issues, and client care needs that frequently challenge the geriatric client. Pediatric nursing includes 40 hours where students learn to relate normal growth and development along with the physical, emotional and social needs of the pediatric client; apply fundamental nursing skills and principles in the care of the pediatric client and family; and describe various pediatric disorders.
Prerequisite: Acceptance to the Practical Nurse major or 1+1 PN Practical Nurse major

Pharmacology & Intravenous Therapy Skills  50 hours
This course provides instruction in basic pharmacology that is needed for safe and effective medication administration. Skills include medication administration as well as IV therapy. Fluid and electrolyte balance will be included. Content includes components of medication preparation and administration including the essential knowledge needed to adequately contribute to the assessment and evaluation of the effects of medication on clients throughout the lifespan. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major

Transition to Practice  54 hours
The Transition to Practice course is designed to provide concepts to be discussed in relation to the transition from student to Licensed Practical Nurse. Beginning organization and management skills are included. The student will participate in job readiness skills. Prerequisite: Acceptance to the Practical Nurse major or 1+1 Practical Nurse major
Pre-Engineering

• PLTW Pre-Engineering
PLTW Pre-Engineering

Career Major Description
Students in this major will study pre-engineering through the exciting Project-Lead-the-Way (PLTW) curriculum that will provide students hands on projects and experiences. In addition, students will complete advanced math and science courses. Students who complete this major will have been exposed to a diverse curriculum that will better equip them to choose a major at the college/university level. Students will also have the strong math and science foundation needed to be prepared to enter a college/university program in a pre-engineering related field.

NOTE: Students will take the required PLTW courses. They will then take a combination of elective PLTW courses, math and sciences as determined by course availability to complete the remaining 480 hours for 2-year students, or 960 hours for 3-year students.

Course Title Hours
Introduction to Engineering Design (PLTW) .....................................120
Principles of Engineering (PLTW) ....................................................120
Civil Engineering and Architecture (PLTW) .....................................120
Computer Integrated Manufacturing (PLTW) ...................................120
Computer Science Principles (PLTW) ...............................................120
Digital Electronics (PLTW) ...............................................................120
Engineering Design and Development (PLTW) ...................................120
Pre-AP Algebra II ...............................................................................120
Pre-AP Geometry ...............................................................................120
Pre-AP Trigonometry ...........................................................................60
Pre-AP Pre-Calculus ..........................................................................60
Pre-AP Chemistry .............................................................................120
Pre-AP Physics .................................................................................120
AP Calculus ........................................................................................120
AP Statistics .......................................................................................120
AP Chemistry .....................................................................................120
AP Physics I .......................................................................................120
AP Environmental Science .................................................................120

Average Oklahoma Salary
Varies

Helpful Attributes and Abilities
• Reading, language and math skills at the 9th grade level or above
• Ability to take directions from others
• Good eye-hand coordination
• Manual dexterity
• Ability to stand for long periods of time
• Ability to handle high stress situations
• Good physical and mental health
• Attention to detail
• Ability to organize and prioritize
• Ability to be a team player
• Ability to work in a fast-paced environment

Who Can Enroll
Juniors & Seniors

Prerequisites
• Minimum overall GPA of 3.0
• Grade level of B or above in math and science
• Algebra I (with a B or better)
• Geometry (with a B or better) or concurrent enrollment

Location
Springlake Campus
STEM Academy
1700 Staton Drive
Oklahoma City, OK 73111

Student Organization
SkillsUSA

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

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AP Calculus 120 hours
This course is primarily concerned with developing the students understanding of the concepts of calculus and providing experience with its methods and applications. Prerequisite: Pre-AP Trigonometry/Pre-Calculus

AP Chemistry 120 hours
Chemistry is the study of the properties of materials and the changes that materials undergo. A student will see how chemical principles operate in all aspects of our lives, from everyday activities to far-reaching matters like the development of drugs to cure cancer. Students will learn through laboratory and lecture methods using group and individual activities, cooperative learning, presentations, and technology to enhance the learning environment. Students will learn how to design and conduct experiments using a variety of laboratory techniques and technology to investigate a chemical concept. They will apply stoichiometric concepts to chemical reactions and analyze how atomic structure relates to periodicity. The student will analyze how atomic structures relate to chemical bonding and apply chemical concepts to reactions in aqueous solutions. They will learn about gas laws as well as study electrochemistry. Prerequisite: Chemistry I or Pre-AP Chemistry and Algebra I

AP Environmental Science 120 hours
AP Environmental Science is a course that will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study. Yet there are several major unifying constructs, or themes, that cut across the many topics included in the study of environmental science. Prerequisite: Biology I and Geometry

AP Physics I 120 hours
Through inquiry-based learning students will develop critical thinking and reasoning skills. This course covers classical mechanics/Newtonian physics at a rigorous level along with simple harmonic motion including sound, light and optics. Successful students will possess excellent geometry and algebra skills along with mastery of basic trigonometry functions.

AP Statistics 120 hours
AP Statistics is a course that introduces students to the main concepts in statistics and enables them to collect, analyze, and draw a conclusion from data. The four main concepts are: Exploring Data, Sampling and Experimentation, Anticipating Patterns, and Statistical Inference. Students are expected to take the AP Statistics Exam upon completion of the course and could receive college credit with an acceptable score. AP Statistics follows AP Central's recommended course content. Prerequisite: Pre-AP Trigonometry/Pre-Calculus

Computer Integrated Manufacturing 120 hours
This course applies principles of robotics and automation and builds on computer solid modeling skills developed in Introduction to Engineering Design. Students use CNC equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included.

Computer Science Principles 120 hours
Using Python® as a primary tool and incorporating multiple platforms and languages for computation, this course aims to develop computational thinking, generate excitement about career paths that utilize computing, and introduce professional tools that foster creativity and collaboration. While this course can be a student's first in computer science, students without prior computing experience are encouraged to start with Introduction to Computer Science. CSP helps students develop programming expertise and explore the workings of the Internet. Projects and problems include app development, visualization of data, cybersecurity, and simulation. The course curriculum is a College Board-approved implementation of AP CS Principles.

Digital Electronics 120 hours
This course teaches students about the electronic circuits used to process and control digital signals. Students are exposed to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Students will continually hone their interpersonal skills, creative abilities and understanding of the design process.

Engineering Design and Development 120 hours
This course is an engineering research course in which students work in teams to research, design and construct a solution to an open-ended engineering problem. Students identify a problem, complete extensive research, apply principles developed in the preceding courses and are guided by a community mentor. Prerequisite: Principles of Engineering

Introduction to Engineering Design 120 hours
This course teaches students problem-solving skills using a design development process. Models of product solutions are created, analyzed and communicated using solid modeling computer design software.

Pre-AP Algebra II 120 hours
This course will enhance and expand the mathematical foundations of Algebra I and Geometry. The course will stress the fundamental extension of previous mathematics and the preparation for future higher-level mathematics courses. It will involve operations with real and complex numbers as well as matrices. The problem solving processes will use functions and relations. Within the course applications of math, and while satisfying predictions based on a set of data, the use of data analysis, and statistics will be justified. Students who master Pre-AP Algebra II will gain experience with quadric functions, conic sections, logarithmic and exponential functions, linear functions, solution methods for systems of linear functions, and matrix operations. Prerequisite: Algebra I

Pre-AP Chemistry 120 hours
Pre-AP Chemistry is designed to prepare students for the complex thinking that will be expected in future science courses. This course will focus on the development of the student as a scientist through the study of chemistry. Being a scientist requires a broad set of tools, including theory, problem solving, written and oral communication, interpreting data and laboratory skills. Areas covered are: Matter, atoms & periodic table, molecules & compounds, chemical reactions & stoichiometry, Aqueous solutions & reactions, Gases, Energy & Chemical Reactions, Atomic & Molecular Structure. Prerequisite:
Pre-AP Geometry 120 hours
This course will allow students the chance to relate mathematics to real-life situations and careers. It will build logical reasoning capabilities as well as give students an opportunity to justify conclusions in a structured manner. Students will analyze characteristics and properties of two- and three-dimensional geometric shapes. They will use visualization, spatial reasoning, and geometric modeling to solve problems. Throughout the course students connect the algebra skills previously developed to the geometric concepts. Pre-AP Geometry is a rigorous course that prepares students for higher-level mathematics. Prerequisite: Algebra I

Pre-AP Physics 120 hours
This course covers the basics of kinematics (motion) in one and two dimensions, as well as forces and vectors. Students study work, energy and power that lead into the study of momentum and the conservation of energy. Circular and projectile motion and gravitation, translational and rotational equilibrium, fluid mechanics and thermal physics will be covered. Students study electricity and magnetism then look at waves and optics. A final subject area will be atomic and nuclear physics. Good algebra skills are critical to success in this course, as well as knowledge of right angle trigonometry.

Pre-AP Trigonometry 60 hours
This course includes a study of six basic functions of trigonometry, solutions of right and oblique triangles, identities, and complex numbers. A graphing calculator is recommended and will be used as an aide to computations. Prerequisites: Algebra II or Pre-AP Algebra II

Pre-AP Pre-Calculus 60 hours
This course is designed to be in preparation for Calculus or AP Calculus. The course gives a review study of straight lines, conic sections, simplification of equations, algebraic curves, transcendental curves, a completed study of straight lines, polar coordinates, and an introduction to limits and derivatives. A graphing calculator is recommended and will be used as an aide to computations. Prerequisites: Algebra II or Pre-AP Algebra II

Principles of Engineering 120 hours
This course helps students understand the field of engineering/engineering technology. Students explore various technology systems and manufacturing processes helping them learn how engineers and technicians use math, science and technology in an engineering problem solving process to benefit people. This course also includes concerns about social and political consequences of technological change. Prerequisite: Introduction to Engineering Design
Radiologic Technology

• Radiologic Technology
RADIOLOGIC TECHNOLOGY

Radiologic Technologist

Career Major Description
Students in this major will learn how to perform imaging procedures using ionizing radiation. They will learn appropriate patient care skills as well as radiation protection procedures for their patients, themselves, and others. They will learn to operate a variety of imaging equipment, factors that affect image quality, and criteria for image evaluation. Extensive clinical assignments are included. Upon completion, graduates will satisfy the educational requirements to take the Radiography certification exam provided by the American Registry of Radiologic Technologists (ARRT).

Average Oklahoma Salary
$20/hour

Helpful Attributes and Abilities
• Good physical and mental health
• Ability to critically think and problem solve
• Ability to work well with others
• Ability to work independently
• Flexibility to work in various environments
• Ability to wear a lead apron and stand for long periods of time
• Ability to adapt to emergency situations

Who Can Enroll
Adults

Prerequisites
• High school diploma or GED
• 18 years of age
• CPR for Health Care Provider (AHA Course)
• Associate Degree (which must include 5 hours of Anatomy & Physiology and 2-3 hours of Medical Terminology) OR lack no more than 12 college credit hours from receiving such a degree

Location
Springlake Campus
Health Careers Center
1720 Springlake Drive
Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
HOSA-Health Occupations Students of America

Certifications Available
American Registry of Radiologic Technologists (ARRT) National Certification exam

Course Title                                      Hours
Academic Life Skills........................................15
Introduction to Radiologic Science & Health Care ....48
Ethics and Law in the Radiologic Sciences..............32
Patient Care in Radiologic Sciences.....................64
Pharmacology and Venipuncture............................32
Radiographic Procedures I..................................150
Image Analysis I...............................................48
Principles of Imaging........................................60
Digital Image Acquisition and Display...................64
Radiation Production and Characteristics................48
Radiographic Procedures II.................................150
Image Analysis II..............................................48
Imaging Equipment...........................................72
Clinical Practice I.............................................645
Clinical Practice II.........................................645
Introduction to Computed Tomography....................32
Radiation Biology.............................................48
Radiation Protection..........................................48
Advanced Imaging............................................48
Clinical Practice III..........................................199
Radiographic Pathology........................................32
Career Preparation for Radiography......................16
Comprehensive Program Review for Radiography........64

Career Major Length 2608 Hours

Industry Accreditations
Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850, Chicago, IL 60606-3182, (312) 704-5300
mail@jrcert.org

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810, fax (405) 743-6809

Oklahoma State Board of Education (OSBE)
2500 N. Lincoln, Oklahoma City, OK 73105-4599
phone (866) 249-9410, fax (405) 521-6205, Judy_Jolley@mail.sde.state.ok.us

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162
Academic Life Skills 15 hours
This course is designed to provide adult students the foundation needed for success in school while preparing for certification or licensure in the chosen healthcare field. Topics of instruction include time management, resource management, study techniques, test taking skills, communication, cultural diversity, ethics and professionalism.

Advanced Imaging 48 hours
This course emphasizes advanced skills and specific career knowledge for the health care professional. To broaden their knowledge of primary radiographic procedures, the student will be involved in the exploration of specialized diagnostic and/or therapeutic procedures that may include, but is not limited to, the study of advanced imaging procedures and related associated imaging modalities, analysis of radiographic/sectional images, and evaluation of ethical dilemmas. Flexibility is built into this course to provide a means for program faculty to develop the specialized knowledge and skills that may be required of students at their specific geographical location. Prerequisite: Acceptance to the Radiologic Technologist major

Career Preparation for Radiography 16 hours
This course emphasizes communication skills and specific career knowledge for the health care professional. To support an occupational job search, a functional resume will be produced that summarizes the student’s education, personal and professional achievements and work experience. To enhance their professional images, each student will construct cover letters and thank you notes that may be updated or changed as needed. Advanced career modality requirements and preparation will be investigated, as well as the requirements for professional continuing education and opportunities for life-long learning. Prerequisite: Acceptance to the Radiologic Technologist major

Clinical Practice I 645 hours
Content and clinical practice experiences should be designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through structured, sequential, competency-based clinical assignments, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined and evaluated. Prerequisite: Acceptance to the Radiologic Technologist major

Clinical Practice II 645 hours
Content and clinical practice experiences should be designed to sequentially develop, apply, critically analyze, integrate, synthesize and evaluate concepts and theories in the performance of radiologic procedures. Through structured, sequential, competency-based clinical assignments, concepts of team practice, patient-centered clinical practice and professional development are discussed, examined and evaluated. Prerequisite: Acceptance to the Radiologic Technologist major

Clinical Practice III 199 hours
This course contains content and clinical practice experiences designed to sequentially develop, apply, critically analyze, integrate, synthesize, and evaluate concepts and theories in the performance of radiologic procedures. Concepts of team practice, patient-centered clinical practice and professional development are discussed, examined, and evaluated. Practice experiences should be designed to provide patient care and assessment, competent performance of radiologic imaging procedures and total quality management. Levels of competency and outcomes measurement ensure the well being of the patient before, during, and following the radiologic procedure. Prerequisite: Acceptance to the Radiologic Technologist major

Comprehensive Program Review for Radiography 64 hours
This course provides a comprehensive review of the radiography curriculum in preparation for taking the certification exam given by The American Registry of Radiologic Technologists (ARRT). Identified areas of weakness will help the student focus on the curriculum items that need concentrated study. The computerized testing format of the ARRT exam will be emphasized. Prerequisite: Acceptance to the Radiologic Technologist major

Digital Image Acquisition and Display 64 hours
This course contains content designed to impart an understanding of the components, principles, and operation of digital imaging systems found in diagnostic radiology. Factors that impact image acquisition, display, archiving, and retrieval are discussed. The guidelines for selecting exposure factors and evaluating images within a digital system will assist students to bridge between film-based and digital imaging systems. Principles of digital system quality assurance and maintenance are presented. Prerequisite: Acceptance to the Radiologic Technologist major

Ethics and Law in Radiologic Sciences 32 hours
Content is designed to provide a fundamental background in ethics. The historical and philosophical basis of ethics, as well as the elements of ethical behavior are discussed. The student will examine a variety of ethical issues and dilemmas found in clinical practice. An introduction to legal terminology, concepts, and principles will also be presented. Topics include misconduct, malpractice, legal and professional standards and the ASRT scope of practice. The importance of proper documentation and informed consent is emphasized. Prerequisite: Acceptance to the Radiologic Technologist major

Image Analysis I 48 hours
Content is designed to provide a basis for analyzing radiographic images. Included are the importance of minimum imaging standards, discussion of a problem-solving technique for image evaluation, and the factors that can affect image quality. Actual images will be included for analysis. This course emphasizes the importance of identifying and evaluating diagnostic images. Guidance is given in the selection of accurate improvement methods. Knowledge and experience is also gained during the first year clinical evaluations with the instructor, and through routine image assessment during the Procedures course. Prerequisite: Acceptance to the Radiologic Technologist major

Image Analysis II 48 hours
Content is designed to provide a basis for analyzing radiographic images. Included are the importance of minimum imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Actual images will be included for analysis Prerequisite: Acceptance to the Radiologic Technologist major

Imaging Equipment 72 hours
Content is designed to establish a knowledge base in radiographic, fluoroscopic, mobile and tomographic equipment requirements and design. The content also provides a basic knowledge of quality control. Prerequisite: Acceptance to the Radiologic Technologist major

Image Analysis I 48 hours
Content is designed to provide a basis for analyzing radiographic images. Included are the importance of minimum imaging standards, discussion of a problem-solving technique for image evaluation, and the factors that can affect image quality. Actual images will be included for analysis. This course emphasizes the importance of identifying and evaluating diagnostic images. Guidance is given in the selection of accurate improvement methods. Knowledge and experience is also gained during the first year clinical evaluations with the instructor, and through routine image assessment during the Procedures course. Prerequisite: Acceptance to the Radiologic Technologist major

Image Analysis II 48 hours
Content is designed to provide a basis for analyzing radiographic images. Included are the importance of minimum imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Actual images will be included for analysis Prerequisite: Acceptance to the Radiologic Technologist major

Imaging Equipment 72 hours
Content is designed to establish a knowledge base in radiographic, fluoroscopic, mobile and tomographic equipment requirements and design. The content also provides a basic knowledge of quality control. Prerequisite: Acceptance to the Radiologic Technologist major
Introduction to Computed Tomography 32 hours
Content is designed to provide entry-level radiography students with the principles related to computed tomography (CT) scans.
Prerequisite: Acceptance to the Radiologic Technologist major

Introduction to Radiological Science and Health Care 48 hours
Content is designed to provide an overview of the foundations in radiography and the practitioner's role in the healthcare delivery system. Principles, practices and policies of the healthcare organizations are examined and discussed in addition to the professional responsibilities of the radiographer.
Prerequisite: Acceptance to the Radiologic Technologist major

Patient Care in Radiologic Sciences 64 hours
Content is designed to provide the basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures are described as well as infection control procedures using standard precautions. The role of the radiographer in patient education is identified.
Prerequisite: Acceptance to the Radiologic Technologist major

Pharmacology and Venipuncture 32 hours
Content is designed to provide basic concepts of pharmacology. The theory and practice of basic techniques of venipuncture and administration of diagnostic contrast agents and/or intravenous medications is included. The appropriate delivery of patient care during these procedures is emphasized. Prerequisite: Acceptance to the Radiologic Technologist major

Principles of Imaging 60 hours
Content is designed to establish a knowledge base in factors that govern and influence producing and recording radiologic images. Film and electronic imaging with related accessories are emphasized. Class demonstrations/labs are used to demonstrate theory application. Prerequisite: Acceptance to the Radiologic Technologist major

Radiation Biology 48 hours
Content is designed to provide an overview of the principles of the interaction of radiation with living systems. Radiation effects on molecules, cells, tissues, and the body as a whole are presented. Factors affecting biological response are presented, including acute and chronic effects of radiation. Prerequisite: Acceptance to the Radiologic Technologist major

Radiation Production and Characteristics 48 hours
Content is designed to establish a basic knowledge of atomic structure and terminology. Also presented are the nature and characteristics of radiation, x-ray production, and the fundamentals of photon interactions with matter. Prerequisite: Acceptance to the Radiologic Technologist major

Radiation Protection 48 hours
Content is designed to present an overview of the principles of radiation protection, including the responsibilities of the radiographer for patients, personnel, and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies, and health care organizations are incorporated. Prerequisite: Acceptance to the Radiologic Technologist major

Radiographic Pathology 32 hours
Content is designed to introduce theories of disease causation and the pathophysiologic responses pathogenesis, clinical manifestations, radiographic appearance and management of alterations in body systems are presented. Prerequisite: Acceptance to the Radiologic Technologist major

Radiographic Procedures I 150 hrs
Content is designed to provide the knowledge base necessary to perform standard radiographic procedures. Consideration is given to the evaluation of optimal diagnostic images. Laboratory experience complements the didactic portion. This course provides the student with theoretic concepts, terminology and clinical application for routine positioning procedures. Students will be given an opportunity to demonstrate their knowledge and skill in performing the simulated exams, which will later become a basis for competency in the clinical practicum. Knowledge of anatomic structures and radiographic quality will be evaluated in classroom activities. Prerequisite: Acceptance to the Radiologic Technologist major

Radiographic Procedures II 150 hours
Content is designed to provide an advanced knowledge base necessary to perform standard radiographic procedures, including basic computed tomography (CT) and special studies. Consideration is given to the evaluation of optimal diagnostic images. Laboratory experience should complement the didactic portion. This course provides the student with theoretic concepts, terminology, and clinical application for routine positioning procedures. Students will be given an opportunity to demonstrate their knowledge and skill in performing the simulated exams, which will later become a basis for competency in the clinical practicum. Knowledge of anatomic structures and radiographic quality will be evaluated in classroom activities. Prerequisite: Acceptance to the Radiologic Technologist major
Surgical Technology

- Surgical Technologist
Surgical Technologist

Career Major Description
Surgical technologists handle the instruments, supplies and equipment necessary during the surgical procedure and work closely with surgeons, anesthesiologists, registered nurses, and other surgical personnel to deliver patient care before, during and after surgery. The major combines classroom instruction, laboratory practice, and clinical experience to ensure that each graduate meets entry level competencies as a Surgical Technologist. Graduates of the Surgical Technologist major may take the NBSTSA National Certification examination.

Average Oklahoma Salary
$15/hour

Who Can Enroll
Adults

Required Prerequisites
• High school diploma or GED
• 18 years old
• CPR for Health Care Providers
  (American Heart Association Course)

Recommended Prerequisites
• Medical Terminology (3 college credit hours)
• Anatomy & Physiology (4 or more college credit hours)

Helpful Attributes and Abilities
• Reading, language and math skills at the 10th grade level or above
• Ability to take directions from others
• Good eye-hand coordination
• Manual dexterity
• Ability to stand for long periods of time
• Ability to handle high stress situations
• Good physical and mental health
• Attention to detail
• Ability to organize and prioritize
• Ability to be a team player
• Ability to work in a fast-paced environment

Location
Springlake Campus, Health Careers Center
1720 Springlake Drive, Oklahoma City, OK 73111

Financial Aid
Available for those who qualify

Student Organization
HOSA-Health Occupations Students of America

Certifications Available
Certified Surgical Technologist

Industry Accreditation
Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of ARC/STSA
Commission on Accreditation of Allied Health Education Programs 25400 US Highway 19 N., Suite 158, Clearwater, FL 33763 (727) 210-2350

Course Title                      Hours
Academic Life Skills..................15
Medical Terminology..................45
Anatomy and Physiology................120
Surgical Technology Orientation......15
Core Employability Skills............30
Introduction to Surgical Technology...30
Essentials of Surgical Asepsis........60
Surgical Case Management...............120
Surgical Tech Practicum I ............30
Surgical Patient Care..................45
Surgical Pharmacology................30
Microbiology and Wound Healing......30
Surgical Procedures I..................90
Surgical Procedures II..................75
Disaster and Emergency Preparedness ..15
Surgical Tech Practicum II ............240
Surgical Tech Practicum III ..........240

Career Major Length                1230 Hours

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education
(OhioBCE) 1500 West Seventh Ave., Stillwater, OK 74074,
phone (405) 377-2000, 1-800-522-5810,
fax (405) 743-6809, www.okcareertech.org

Oklahoma State Board of Education (OSBE)
2500 N. Lincoln
Oklahoma City, OK 73105-4599
phone (866) 249-9410, fax (405) 521-6205
Judy_Jolley@mail.sde.state.ok.us

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166  Metro Technology Centers • Catalog 2016-2017• 405-595-4678
Academic Life Skills  15 hours
This course is designed to provide adult students the foundation needed for success in school while preparing for certification or licensure in the chosen healthcare field. Topics of instruction include time management, resource management, study techniques, test taking skills, communication, cultural diversity, ethics and professionalism.

Anatomy & Physiology  120 hours
Anatomy/Physiology is the study of the structural complexity of the human body and its intricate functional mechanisms. This course is taught as a laboratory science. Students will conduct scientific investigations and fieldwork using scientific knowledge and methodology that will enable them to make educated conclusions based on higher-level critical thinking and problem solving skills. The areas studied will be an integration of biology and chemistry and will include, but are not limited to: organization of the body, chemical basis for life, cells & tissues, integumentary system, skeletal system, muscular system, nervous system, endocrine system, blood, circulatory system, lymphatic & immune systems, respiratory systems, digestive system & metabolism, urinary system, and reproductive system. An emphasis should be placed on real-world applications, and active-learning exercises should be included along with laboratory experiences.
Prerequisite: Algebra I, Geometry (or co-enrollment), and Biology I (or co-enrollment)

Core Employability Skills  30 hours
In this course students learn how employability skills enhance their employment opportunities and job satisfaction. Student are introduced to key employability skills and will learn the importance of maintaining and upgrading skills as needed. Prerequisite: Acceptance to the Surgical Technologist major

Disaster and Emergency Preparedness  15 hours
This course includes these aspects of emergency preparedness and disaster training: preparation and planning, detection and communication, incident management and support systems, safety and security, clinical/public health assessment and intervention, contingency, continuity and recovery and public health law and ethics. This is a new course for surgical technology, however it could be offered in any career major. Prerequisite: Acceptance to the Surgical Technologist major

Essentials of Surgical Asepsis  60 hours
This course will introduce the student to the principles and practices of aseptic technique, scrubbing, gowning, gloving, sterilization and disinfection. Upon completion of this course, the student will be able to discuss and demonstrate the principles of aseptic technique. Prerequisite: Acceptance to the Surgical Technologist major

Introduction to Surgical Technology  30 hours
This course is designed to provide information introducing the student to the roles and responsibilities of the surgical team and the health care system. Students will explore the ethical and legal concepts and professional responsibilities of the surgical technology field. Prerequisite: Acceptance to the Surgical Technologist major

Medical Terminology  45 hours
Medical Terminology is designed to develop in the students a working knowledge of the language of medicine. Students acquire word building skills by learning prefixes, suffixes, roots and abbreviations. By relating terms to body systems, students identify proper uses of words in a medical environment. Knowledge of medical terminology enhances students’ ability to successfully secure employment or pursue advanced education in healthcare.

Microbiology & Wound Healing  30 hours
This course is designed to provide the student with a basic background in microbiology. This course will provide a better understanding of the relationship between microorganisms and the maintenance of health and/or the prevention of disease. The course of study includes a general introduction to microbiology, infection/immunology and wound healing. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Case Management  120 hrs
This course will introduce the student to the supplies and equipment that are an integral part of their training as a Surgical Technologist, including instrumentation, suture, sponges, drains, counts, and the sterile field and draping of sterile field. Upon completion of the course, the student will be able to demonstrate competency in using supplies and equipment in the surgical environment. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Patient Care  45 hours
Upon completion of this course the student will be able to demonstrate patient care skills in the surgical environment. The course enables the student to develop techniques used to safely transport, position and prep the patient for surgery, and the proper care of surgical specimens. Students will apply these skills across the lifespan and to patients with complex needs. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Pharmacology  30 hours
This course familiarizes the student with the various drugs used in surgery and their administration. The student will demonstrate an understanding of basic anesthesia equipment, drugs and methods in order to function effectively in the surgical setting. Upon course completion the student may assist the anesthesia personnel if required. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Procedures I  90 hours
This course is designed to provide instruction in basic, intermediate and advanced core procedures outlined in the Core Curriculum for Surgical Technologists by the Association of Surgical Technologists. The student will be able to apply and demonstrate the concepts related to the following surgical procedures: General, Obstetric and Gynecological, Gastrointestinal, Otorhinolaryngological, Orthopedic Surgery. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Procedures II  75 hours
This course is designed to provide instruction in basic, intermediate and advanced specialty procedures outlined in the Core Curriculum for Surgical Technologists by the Association of Surgical Technologists. The student should be able to apply and demonstrate the concepts related to each of the following surgical procedures: Neurosurgery, Cardiothoracic, Peripheral Vascular, Oral, Maxillofacial, Plastic and Ophthalmic Surgery. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Tech Practicum I  30 hrs
This course provides practical experiences in the laboratory setting or clinical environment. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Tech Practicum II  240 hrs
This course provides clinical experience in the surgical environment. The student assumes responsibility as the first scrub role, handling instruments and supplies and equipment necessary for the surgical procedure. Emphasis is placed on core surgical procedures. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Tech Practicum III  240 hrs
This course provides advanced clinical experience in the surgical environment with minimal assistance. Emphasis is on specialty surgical procedures. Students will prepare for and complete the national certification exam. Prerequisite: Acceptance to the Surgical Technologist major

Surgical Technology Orientation  15 hours
Surgical Technology Orientation includes the basic safety concepts, individual learning styles, introduction to information technology and review of the surgical technology handbook. Prerequisite: Acceptance to the Surgical Technologist major
Video & Web Design

- Digital Video and Film Specialist
Digital Cinema and Web Specialist

Career Major Description
This major prepares students for emerging careers using digital video, web development and film studies. Students learn storytelling, video, audio, film production and editing, and finalizing content for various digital distribution. Students experience video production both in studio and in the field and develop digital portfolios to demonstrate their creative and technical skills.

Average Oklahoma Salary
$22/hour

Helpful Attributes and Abilities
• Reading and language skills at the 10th grade level or above; math skills at the 9th grade level or above
• Art background, training or natural ability
• Attention to detail
• Basic typing and computer literacy skills
• Good eye-hand coordination
• Good interpersonal skills
• Ability to self-motivate and perform under pressure

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
Adobe Certified Associate

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)

Course Title | Hours
---|---
Safety | 15
Professional and Personal Development | 15
Video/Camera | 165
Video Production Techniques I | 120
Video Systems Post Production | 45
Web Authoring/Animation | 90
Web Site Production | 90
Professionalism and Ethics | 30
Independent Studies in Video/Web Production | 120
Digital Image Manipulation | 60
Advanced Web Animation Design | 120
Post Production Digital Video Special Effects | 90
Workforce Staging | 30
Video/Web Project Planning | 45

Career Major Length | 1035 Hours

Average Oklahoma Salary
$22/hour

Helpful Attributes and Abilities
• Reading and language skills at the 10th grade level or above; math skills at the 9th grade level or above
• Art background, training or natural ability
• Attention to detail
• Basic typing and computer literacy skills
• Good eye-hand coordination
• Good interpersonal skills
• Ability to self-motivate and perform under pressure

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
Adobe Certified Associate

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
Advanced Web Animation
Design 120 hours
In this course, students will use flash software to produce advanced web animation documents.

Digital Image Manipulation  60 hours
Students use digital image manipulation software to create, modify and prepare a variety of images.

Independent Studies in Video Production 120 hours
Students at this level develop a higher level of video production skills. Activities include exploration in advanced editing projects, and individuals pursue an area of interest in video production under the direction of the instructor. Students develop digital portfolios of advanced work.

Post Production Digital Video Special Effects 90 hours
Students will create, generate, and integrate 3D special effects using computer graphics and renderings. Students will use software-generated special effects as well as 3D software to design motion graphics and visual effects that deliver the desired results.

Professional and Personal Development 15 hours
Students gain human relations skills for successful employment. Time management, self-motivation, problem solving, communication and leadership techniques are stressed. Student organization activities are included.

Professionalism and Ethics 30 hours
This course teaches professionalism and ethics as they relate to the workplace. Students also cover legal and ethical issues related to television.

Safety 15 hours
Students learn proper safety procedures to follow in the classroom and lab.

Video Production Techniques I 120 hours
Students are introduced to the basic concepts of script writing and on-camera communication skills and production techniques. The student gains practical experience in a variety of studio lab and field projects.

Video Systems - Post-Production 45 hours
The course covers post-production video techniques.

Video/Camera 165 hours
This course covers the commercial uses of the camera for effect. It covers all aspects of camera work including color, background, lighting and styles.

Web Authoring/Animation 90 hours
This course covers basic and advanced HTML, including CSS and SML.

Web Site Production 90 hours
Students use Dreamweaver software to plan, structure, design, and edit web sites.

Workforce Staging 30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.
Welding

- Combination Welder
- SMAW Stuctural Welder
- Structural Welder
Combination Welder

Career Major Description
The Combination Welder career major prepares students to do quality welding for a variety of construction and manufacturing jobs using multiple structural welding techniques. Instruction will cover welding theory and safety fabrication, layout, print reading, symbols, math, welding codes, metal characteristics/properties and oxyfuel cutting. Students will learn to perform high quality welds in accordance with welding procedure specifications used in a variety of welding occupations.

Average Oklahoma Salary
$19/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• An ability to compute percentages, measurements and simple fractions
• A basic knowledge of general science
• Good eye-hand coordination

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
AWS Standard Welders Qualification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)

Course Title
Fundamentals of Welding ................................................................. 30
Fundamentals of Cutting Processes .................................................. 30
Oxyfuel Cutting .................................................................................. 30
SMAW Electrodes ............................................................................. 15
SMAW Equipment & Setup .............................................................. 15
Welding Joint Fit-Up & Adjustment ................................................... 15
Beads & Fillet Welds-SMAW ............................................................. 180
Weld Quality ..................................................................................... 15
Plasma Arc Cutting ............................................................................ 15
SMAW Open V-Groove Welds ....................................................... 120
Groove Welds with Backing-SMAW ............................................. 70
Open Root Pipe Welds-SMAW ....................................................... 120
Metal Characteristics & Properties ................................................... 30
Metal Preparation & Heat Treatments .............................................. 30
Air Carbon Arc Cutting & Gouging ................................................... 15
Welding Detail Drawings ................................................................. 30
Welding Blueprints ......................................................................... 15
GMAW/FCAW Equipment & Setup ................................................. 15
GMAW Structural Plate .................................................................. 95
GMAW Pipe Welding ....................................................................... 80
FCAW Structural Plate ................................................................... 100
FCAW Pipe ..................................................................................... 45
GTAW Equipment & Filler Materials .............................................. 15
GTAW Structural Plate .................................................................... 80
GTAW Aluminum Plate ................................................................. 45
GTAW Carbon Steel Pipe ............................................................... 90
Workforce Staging .......................................................................... 30

Career Major Length 1370 Hours
SMAW Structural Welder

Career Major Description
Learn to do structural welding to use either in construction or as a structural steel fabricator. This major covers welding theory, fabrication, layout, print reading, welding symbols, math, and welding codes with an emphasis in Shielded Metal Arc Welding (stick) techniques.

Average Oklahoma Salary
$14/hour

Helpful Attributes and Abilities
- Reading and math skills at the 10th grade level or above
- An ability to compute percentages, measurements and simple fractions
- A basic knowledge of general science
- Good eye-hand coordination

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
AWS Standard Welders Qualification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)

Course Title
Hours
Fundamentals of Welding ..........................................................30
Fundamentals of Cutting Processes ..........................................30
Oxyfuel Cutting .................................................................30
SMAW Electrodes .........................................................15
SMAW Equipment & Setup ...............................................15
Welding Joint Fit-Up & Adjustment .......................................15
Beads & Fillet Welds-SMAW ............................................180
Weld Quality .................................................................15
SMAW Open V-Groove Welds ............................................120
Groove Welds with Backing-SMAW ....................................70
Metal Characteristics & Properties .......................................30
Metal Preparation & Heat Treatments ....................................30
Welding Detail Drawings ..................................................30
Welding Blueprints .........................................................15
Workforce Staging ..........................................................30
Career Major Length 655 Hours

Average Oklahoma Salary
$14/hour

Helpful Attributes and Abilities
- Reading and math skills at the 10th grade level or above
- An ability to compute percentages, measurements and simple fractions
- A basic knowledge of general science
- Good eye-hand coordination

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
AWS Standard Welders Qualification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)
WELDING

Structural Welder

Career Major Description
Learn to do structural welding to use either in construction or as a structural steel fabricator. This major covers welding theory, fabrication, layout, print reading, welding symbols, math, and welding codes with specialized instruction in Shielded Metal Arc Welding (stick), Gas Metal Arc Welding (MIG), Flux-cored Arc Welding (FCAW), and Gas Tungsten Arc Welding (TIG) techniques. This major offers specialized preparation for structural certification by the American Welding Society (AWS).

Course Title                      Hours
Fundamentals of Welding           30
Fundamentals of Cutting Processes 30
Oxyfuel Cutting                   30
SMAW Electrodes                   15
SMAW Equipment & Setup            15
Welding Joint Fit-Up & Adjustment 15
Beads & Fillet Welds-SMAW         180
Weld Quality                      15
Plasma Arc Cutting                15
SMAW Open V-Groove Welds          120
Groove Welds with Backing-SMAW    70
Metal Characteristics & Properties 30
Air Carbon Arc Cutting & Gouging  15
Welding Detail Drawings           30
Welding Blueprints                15
GMAW/FCAW Equipment and Setup     15
GMAW Structural Plate             95
FCAW Structural Plate             100
GTAW Equipment & Filler Materials 15
GTAW Structural Plate             80
GTAW Aluminum Plate               45
Workforce Staging                 30

Career Major Length 1035 Hours

Average Oklahoma Salary
$14-16/hour

Helpful Attributes and Abilities
• Reading and math skills at the 10th grade level or above
• An ability to compute percentages, measurements and simple fractions
• A basic knowledge of general science
• Good eye-hand coordination

Who Can Enroll
Juniors, Seniors & Adults

Location
South Bryant Campus
4901 S. Bryant Ave.
Oklahoma City, OK 73129

Financial Aid
Available for those who qualify

Student Organization
SkillsUSA

Certifications Available
AWS Standard Welders Qualification

Metro Tech Accreditations
Oklahoma Board of Career and Technology Education (OBCTE)
Oklahoma State Board of Education (OSBE)
North Central Association-Commission on Accreditation & School Improvement (NCA-CASI)
**COURSE DESCRIPTION**

**WELDING**

**Air Carbon Arc Cutting and Gouging** 15 hours
This course is an introduction to carbon arc cutting equipment and procedures. The course covers how to identify electrodes and safe operations of equipment. Instructions in performing carbon arc cutting and gouging work assignments are also given in this course. Prerequisite: Completion of SMAW Structural Welder course sequence

**Beads & Fillet Welds SMAW 180 hrs**
This course is an introduction to the preparation and setup of arc welding equipment and the processes of striking an arc. It also covers how to make stringers, weave overlapping beads and fillet welds.

**Fundamentals of Welding 30 hours**
This course is an introduction to basic welding safety, math, hand tools, power tools, blueprints, rigging, communication skills and employability skills.

**Fundamentals of Cutting Processes 30 hours**
This course is an introduction to uses of safety equipment, protecting clothing, and procedures for cutting metals.

**FCAW Structural Pipe 45 hours**
This course is an introduction to how to set up FCAW equipment, the procedures and techniques used to make V-groove pipe welds with FCAW in the 1G-ROTATED, 2G, 5G, and 6G positions. Prerequisite: Completion of Structural Welder course sequence

**FCAW Structural Plate 100 hours**
This course covers how to build a pad of stringer and weave beads using filler metals and shielding gas. Students will learn how to perform FCAW multi-pass fillet welds on plate in multiple positions. Prerequisite: Completion of SMAW Structural Welder course sequence

**GMAW Pipe Welding 80 hours**
This course is an introduction to open root V-groove welding of pipe in the 2G, 5G and 6G positions. Prerequisite: Completion of Structural Welder course sequence

**GMAW Structural Plate 95 hours**
This course covers how to build a pad of stringer and weave beads using filler metals and shielding gas. Students will learn how to perform GMAW multi-pass fillet welds on plate in multiple positions. Prerequisite: Completion of SMAW Structural Welder course sequence

**GMAW/FCAW Equipment and Setup 15 hours**
This course is an introduction to safety procedures for GMAW and FCAW equipment and explains the filler metals and shielding gases used to perform GMAW and FCAW. It also covers equipment setup and operations. Prerequisite: Completion of SMAW Structural Welder course sequence

**GTAW Aluminum Plate 45 hours**
This course is an introduction to open root V-groove welding of aluminum plate in the 2G, 5G and 6G positions. Prerequisite: Completion of SMAW Structural Welder course sequence

**GTAW Carbon Steel Pipe 90 hours**
This course is an introduction to how to set up GTAW equipment, procedures and techniques used to make V-groove pipe welds with GTAW in the 1G-ROTATED, 2G, 5G and 6G positions. Prerequisite: Completion of Structural Welder course sequence

**GTAW Structural Plate 80 hours**
This course is an introduction in how to pad in all positions using GTAW and carbon steel filler metal. Students will learn how to make multi-pass V-butt open-groove weld with carbon steel filler metal in the 1G, 2G, 3G, and 4G positions. Prerequisite: Completion of SMAW Structural Welder course sequence

**GTAW Equipment and Filler Materials 15 hours**
This course is an introduction to GTAW safety, identification of uses of GTAW equipment, filler metals and shielding gases and setup of equipment. Prerequisite: Completion of SMAW Structural Welder course sequence

**Manufacturing Computer-Aided Drafting & Design 120 hours**
This course is a manufacturing focused drafting course utilizing Computer-Aided Drafting and Design (CADD) software that develops computer skills and electronic skills and applications within the field of drafting within manufacturing. Topics covered are advanced computer operations, introduction to manufacturing drafting, CAD application software, bill of materials for drawings, manufacturing treatments of materials in drawings, shop processes, precision measuring equipment, revision drawings and notes, fasteners, tolerances and fits, geometric dimensioning and tolerancing, working, assembly, and development drawings, spur, bevel, and worm gear drawings, cam drawings, weldment drawings, casting drawings, forging drawings, spring drawings, jig and fixture drawings, tool and die drawings, assembly drawings of bearings and seals, mechanical power transmission drawings, application software for mechanical drafting, revolution drawings, sheet metal assembly drawings, bend allowances, and preparation of geometry for exporting/translation for manufacturing processes.

**Metal Characteristics and Properties 30 hours**
This course is an introduction to physical characteristics, mechanical properties, composition and classification of common ferrous and nonferrous metals. The course covers visual inspection and x-ray fluorescent spectrometry methods used to identify metals.

**Metal Preparation and Heat Treatments 30 hours**
This course provides information on how to clean and prepare all types of base metal for cutting and welding. The course explains preheating, inter-pass temperature control, and post-heating procedures that sometimes need to be done to preserve weldment ductility and weld quality. It introduces students to the equipment used for heating treatments of metals.

**Open-Root Pipe Welds-SMAW 120 hours**
This course is an introduction to open-root welds and how to set up welding equipment for making open-root welds. It provides the procedures for making 1G, 2G, 5G, and 6G open-root pipe welds. Prerequisite: Completion of Structural Welder course sequence

**Oxyfuel Cutting 30 hours**
This course is an introduction to oxyfuel cutting requirements for oxyfuel cutting. It identifies oxyfuel cutting equipment and setup procedures, and how to light, adjust and turn off equipment. Instruction on cutting techniques, straight line piercing, bevels, washing and gouging is also given.

**Plasma Arc Cutting 15 hours**
This course is an introduction to plasma arc cutting equipment and procedures. This course covers safe amerage, gas pressure, and flow rate, plasma arc cutting methods for piercing, slotting, squaring, and beveling metals. Prerequisite: Completion of SMAW Structural Welder course sequence
SMAW Electrodes  15 hours
This course is an introduction to electrode characteristics and different types of filler metals. It describes the role of the American Welding Society (AWS) and the American Society of Mechanical Engineers (ASME). The course covers safety storage and control of filler metals and identifies the use of codes.

SMAW Equipment and Setup  15 hrs
This course is an introduction to SMAW and welding safety and how to connect welding current and set up arc welding equipment. The course covers the importance of tools used to clean welds.

Groove Welds with Backing-SMAW  70 hours
This course is an introduction to groove welds and how to start up welding equipment for making groove welds, how to make groove welds with backing, performing flat, horizontal, vertical and overhead groove welds.

SMAW Open V-Groove Welds  120 hrs
This course is an introduction to open V-groove welds and how to set up welding equipment for making an open V-groove weld. Procedures for making flat, vertical, horizontal, and overhead open V-groove welds are covered.

Weld Quality  15 hours
This course is an introduction to codes that govern welding. The course identifies and explains weld imperfections and causes, examination practices, qualification tests and the importance of quality welds.

Welding Blueprints  15 hours
This course is an introduction to basic blueprint terms, components and symbols, types of blueprint drawings (civil, architectural, structural, mechanical, plumbing/piping and electrical), and interpretation of drawing dimensions and specifications.

Welding Detail Drawings  30 hours
This course is an introduction to identifying and understanding welding detail drawings. It includes fills, object views, dimensioning on drawings, use of notes and the bill of materials. Also given is an introduction to the different welding symbols, different types of fillet welds, groove welds, non-destructive examination symbols, how to read welding symbols on drawings and specifications and welding procedures.

Welding Joint Fit-up and Adjustment  15 hours
This course is an introduction to identifying and explaining job code specifications, use of fit-up gauges and measuring devices to check fit-up and alignment, the use of plate and pipe fit-up and alignment tools to properly prepare joints. The course introduces steps to check for joint misalignment of poor fit.

Workforce Staging  30 hours
This course is designed to be delivered as an integrated component within the courses taken by the individual student. Course is designed for the development of leadership, personal development and employability skills attainment.