

# CONSTRUCTION TECHNOLOGY - FACILITIES MAINTENANCE, CERTIFICATE OF ACHIEVEMENT (LEVEL II)

NMC Code 063

Performing facilities maintenance requires knowledge in several areas. This level II certificate covers reading blueprints, general carpentry, tools of the trade, electrical wiring and schematics, and thermodynamics of refrigeration. Also required will be 14 technical elective credits that can range from drafting to alternative energy integration into a facility. The curriculum is designed by the industry and aligned with national competency standards. Students receive hands-on training in our state-of-the-art facilities. Information: (231) 995-2777.

## Requirements

### Certificate Requirements

Course	Title	Credits
CAR 101	Introduction to Carpentry	3
CAR 105	Foundations and Framing	3
ELE 101	Introduction to Electrical	3
ELE 105	Beg Residential Electrical	3
HVA 101	Introduction to HVAC/R	3
HVA 106	Fundamentals of Heating	3
MTH 111	Intermediate Algebra	3-4
or MTH 120	Mathematical Explorations	
PLU 101	Introduction to Plumbing	3
PLU 105	Plumbing Components	3
Construction Technology Electives (see list)		6
<b>Total Credits</b>		<b>33-34</b>

### Approved Electives

Course	Title	Credits
AVF 141	Remote Pilot Flight	3
AVF 211	Commercial Drone Operations <sup>1</sup>	4
AVF 241	Advanced Drone Operations <sup>1</sup>	3
CAR 101	Introduction to Carpentry	3
CAR 102	Intro to Woodworking	3
CAR 103	Construction Blueprint Reading	3
CAR 105	Foundations and Framing	3
CAR 121	Exterior Construction	3
CAR 125	Interior Construction <sup>1</sup>	3
CMT 107	Construction Supervision	4
CMT 207	Construction Cost Estimating <sup>1</sup>	3
EET 103	Electrical Studies I <sup>1</sup>	3
EET 204	Electrical Studies II <sup>1</sup>	3
EET 221	Industrial Controls <sup>1</sup>	3
EET 232	Programmable Logic Controllers <sup>1</sup>	3
EET 233	PLC Applications I <sup>1</sup>	3
EET 234	PLC Applications II <sup>1</sup>	3

EGY 101	Principles of Renewable Energy <sup>1</sup>	3
EGY 105	Sustainable Building Design	3
EGY 115	Residential Energy Efficiency	3
EGY 141	Solar Photovoltaic Tech I <sup>1</sup>	3
EGY 143	Solar Thermal Technology I <sup>1</sup>	3
EGY 145	Geothermal Technology <sup>1</sup>	3
ELE 101	Introduction to Electrical	3
ELE 105	Beg Residential Electrical <sup>1</sup>	3
ELE 110	Electrical Code Studies I <sup>1</sup>	3
ELE 111	Electrical Code Studies II <sup>1</sup>	3
ELE 121	Adv Residential Electrical <sup>1</sup>	3
ELE 125	Pre-Commercial Electrical <sup>1</sup>	3
ELE 131	Commercial Electrical <sup>1</sup>	3
ELE 135	Adv Commercial Electrical <sup>1</sup>	3
ELE 142	Industrial Electrical <sup>1</sup>	3
ELE 146	Adv. Industrial Electrical <sup>1</sup>	3
HVA 101	Introduction to HVAC/R	3
HVA 106	Fundamentals of Heating <sup>1</sup>	3
HVA 122	Refrigeration Fundamentals <sup>1</sup>	3
HVA 126	Residential and Commercial A/C <sup>1</sup>	3
HVA 132	Commercial A/C & Refrigeration <sup>1</sup>	3
HVA 136	EPA Certification <sup>1</sup>	3
PLU 101	Introduction to Plumbing	3
PLU 105	Plumbing Components <sup>1</sup>	3
PLU 121	Commercial Plumbing <sup>1</sup>	3
PLU 125	Plumbing Installation <sup>1</sup>	3

<sup>1</sup> Denotes courses with required prerequisites.

## Course Sequence Guide

Course	Title	Credits
<b>Year 1</b>		
<b>Fall</b>		
ELE 101	Introduction to Electrical	3
CAR 101	Introduction to Carpentry (Fall only)	3
CAR 105	Foundations and Framing (Fall only)	3
PLU 101	Introduction to Plumbing (Fall only)	3
<b>Credits</b>		<b>12</b>
<b>Spring</b>		
MTH 111	Intermediate Algebra	3-4
or MTH 120	or Mathematical Explorations	
ELE 105	Beg Residential Electrical	3
HVA 101	Introduction to HVAC/R	3
PLU 105	Plumbing Components (Spring only)	3
<b>Credits</b>		<b>12-13</b>
<b>Year 2</b>		
<b>Fall</b>		
HVA 106	Fundamentals of Heating	3
Approved Electives		6
<b>Credits</b>		<b>9</b>
<b>Total Credits</b>		<b>33-34</b>

The responsibility for determining the transferability of this degree and courses to another institution is the sole responsibility of the student.