Aeronautical Studies

Overview
TTC's Division of Aeronautical Studies is designed to satisfy the need for trained aerospace workers in the fields of aircraft maintenance, aircraft avionics and aircraft manufacturing.

Classes for the Aircraft Maintenance and Avionics Maintenance programs are offered only at Berkeley Campus. The Aircraft Maintenance program is designed to lead toward Federal Aviation Administration (FAA) licensing or certification for airframe and powerplant while the Avionics Maintenance program is designed to lead toward Federal Communications Commission (FCC) and National Center for Aerospace and Transportation Technologies (NCATT) certification. Both programs offer either an associate degree or certificates that will lead toward certification by their respective certifying agencies. Classes for the Aircraft Assembly program are offered at Main Campus as a two-semester certificate program. Students may enter any program at the start of any semester upon approval of an academic advisor.

General Information
As with all TTC programs, students interested in Aeronautical Studies programs should consult with a faculty advisor to discuss program requirements, class times and frequency of offerings. For more information, call 843.574.6796.

Cancellation Policy
TTC reserves the right to cancel courses due to inadequate enrollment.

Programs of Study
Associate Degree Programs
Aircraft Maintenance Technology
General Technology
Avionics Maintenance Technology

Certificate Programs
Aircraft Assembly Technology
Aircraft Maintenance Airframe
Aircraft Maintenance General
Aircraft Maintenance Powerplant
Avionics Maintenance Technology

Aircraft Maintenance Technology

Associate in Applied Science Credit Requirements: 92 Semester Credit Hours Day
The Aircraft Maintenance Technology program prepares students to sit for the certification exam of the Federal Aviation Administration as airframe and/or powerplant technicians. Students also are prepared for employment repairing aircraft, engines and related systems with airlines, government agencies, aircraft manufacturers and aircraft service companies. Opportunities for career advancement include lead technician, authorized inspector, shop supervisor, maintenance director or business owner. The program is licensed by the Federal Aviation Administration.

For entry into this program the student must be a high school graduate or possess a GED and take TTC’s placement test or meet the college’s SAT or ACT requirements.

Recommended Sequence of Courses
First Semester – Fall
ACM 101 General Regulations  2
ACM 102 Aviation Sciences  3
ACM 105 Basic Aircraft Electricity  4
ACM 110 Aircraft Drawings  1
ACM 115 Ground Handling and Servicing  3
ACM 120 Materials and Corrosion Control  4
Total 17

Second Semester – Spring
ACM 114 Fluid Lines and Fittings  1
ACM 125 Wood Structures, Coverings and Finishes  2
ACM 135 Sheet Metal and Non-metallic Structures  4
ACM 145 Aircraft Welding  2
ACM 165 Hydraulic and Pneumatic Systems  3
REQ SSC Select one course from Behavioral/Social Sciences listing on page B-3  3
Total 15

Third Semester – Summer
ACM 150 Assembly and Rigging  3
ACM 155 Aircraft Environmental Systems  3
ACM 160 Utility and Warning Systems  3
ACM 167 Landing Gear Systems  3
REQ HUM Select one course from Humanities listing on page B-3  3
Total 15
Fourth Semester – Fall
ACM 170  Aircraft Electrical Systems  4
ACM 172  Aircraft Fuel Systems  1
ACM 174  Airframe Inspection  1
ACM 201  Lubricating Systems  2
ACM 205  Ignition and Starting Systems  3
ACM 245  Powerplant Fuel Systems  4
Total 15

Fifth Semester – Spring
ACM 220  Turbine Engines  3
ACM 234  Propellers and Components  4
ACM 240  Engine Electrical Instrumentation and Fire Protection  3
ACM 250  Induction Cooling and Exhaust  3
REQ MAT  Select one math course from Mathematics/Natural Sciences listing on page B-4  3
Total 16

Sixth Semester – Summer
ACM 210  Reciprocating Engine Overhaul  4
ACM 212  Engine Installation  3
ACM 226  Engine Inspection  1
CPT 101  Introduction to Computers  3
ENG 101  English Composition I  3
Total 14

General Technology

Associate in Applied Science
Credit Requirements: 68 Semester Credit Hours

This program allows students to select course work necessary to become multi-skilled technicians in the field of avionics maintenance. All students develop skills that include installation and maintenance of aviation electrical and electronic systems needed to keep aircraft flying safely. In addition, students choose a secondary specialty focused either on aircraft assembly or aircraft maintenance.

Avionics Maintenance Technology
Course Display

Core Curriculum Requirements
CPT 101  Introduction to Computers  3
ENG 101  English Composition I  3
REQ HUM  Select one course from Humanities listing on page B-3  3
REQ MAT  Select one math course from Mathematics/Natural Sciences listing on page B-4  3
REQ SSC  Select one course from Behavioral/Social Sciences listing on page B-3  3

Primary Path
AVT 101  Basic Electricity for Avionics  4
AVT 105  Aircraft Electricity for Avionics  4
AVT 110  Aircraft Electronic Circuits  4
AVT 115  Aircraft Digital Circuits  3
AVT 120  Aviation Electronic Communications  4
AVT 125  Aviation Data Communications  3
AVT 140  Avionics Standard Practices  3
AVT 145  Avionics Circuit Repair  3
AVT 150  Aircraft Navigation Systems  3
AVT 155  Aircraft Pulse Systems  3
AVT 160  Aircraft Radar Systems  3
AVT 165  Avionics General Regulations  2
AVT 170  Avionics Program and Test Review  1

Secondary Path
(These are suggested courses. Other courses may be substituted from other primary technical programs. See your program advisor.)
ACM 101  General Regulations  2
ACM 102  Aviation Sciences  3
ACM 110  Aircraft Drawings  1
ACM 115  Ground Handling and Servicing  3
ACM 120  Materials and Corrosion Control  4

or
Secondary Technical Specialty – Aircraft Assembly
13 credit hours
AMF 109  Aircraft Materials and Hand Tools  3
AMF 110  Corrosion Control and Sealing Applications  2
AMF 132  Aircraft Sheet Metal Assembly  3
AMF 137  Aircraft Composite Structures  3
AMF 142  Airframe Auxiliary Systems  2