AERONAUTICS

DIVISION	Applied Technology & Transportation
DIVISION DEAN	Gary Kelly, M.S.
FACULTY CHAIR	Allen Moore, A.A. (909) 384-8270
OTHER FACULTY	Kevin Kammer, B.A.
DIVISION OFFICE	Technical 108 (909) 384-4451

The aeronautics industry is presently experiencing a shortage of personnel in all aspects of aviation until 2010. Jobs are available locally, throughout the U.S. and globally.

The Aeronautics Department curriculum offers students several ways to qualify for employment in the aviation industry. Students may pursue either Associate of Science degrees or certificates in Flight Operations and Management or Airframe and Powerplant Technology. Students desiring specific ratings or licenses should consult with faculty in the Aeronautics Department and/or the Federal Aviation Administration.

Core competencies emphasized by courses in this department:

- Read and retain information
- Write clearly
- Employ vocabulary of the subject studied
- Find and interpret information
- Locate, evaluate and select evidence to support or discredit an argument
- Exhibit personal, professional and academic honesty
- Display behavior consistent with ethical standards within a discipline

AERONAUTIC ASSOCIATE OF SCIENCE DEGREE

The Aeronautics Department offers these areas of specialization for the Associate of Science Degree: Aviation Maintenance and Flight Operations and Management. To graduate with a specialization in these areas students must complete all requirements plus the general breadth requirements for the Associate Degree (minimum total = 60 units).

AVIATION MAINTENANCE TECHNICIAN

REQUIRED COURSES		UNITS
AERO 101.1	Airframe and Powerplant General Curriculum Calculations	2.5
AERO 100.2	Airframe and Powerplant General Curriculum Publications	2.5
AERO 101.1	Airframe and Powerplant General Curriculum Materials	2.5
AERO 101.2	Airframe and Powerplant General Curriculum Servicing	2.5
AERO 102	Airframe Maintenance Lecture-Structures	6
AERO 103	Airframe Maintenance Lecture-Systems and Components	6
AERO 104	Powerplant Maintenance Lecture Reciprocating Engine Overhaul	6
AERO 105	Powerplant Maintenance Lecture Accessory Overhaul	6
AERO 106.1	Airframe and Powerplant General Laboratory - Calculations	1
AERO 106.2	Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1	Airframe and Powerplant General Laboratory-Materials	1
AERO 107.2	Airframe and Powerplant General Laboratory-Servicing	1
AERO 108	Airframe Maintenance Laboratory-Materials	5
AERO 109	Airframe Maintenance Laboratory-Systems and Components	1
AERO 110	Powerplant Maintenance Laboratory-Reciprocating Engine Overhaul	5
AERO 111	Powerplant Maintenance Laboratory-Accessory Overhaul	5
TOTAL UNITS		**58**

FLIGHT OPERATIONS AND MANAGEMENT

The college offers a two-year program in Flight Operations Management for students who are interested in a career as a commercial pilot either in general aviation or the airlines, or in the area of aviation management. This certificate prepares students for immediate employment or for transfer to other colleges, and includes Federal Aviation Administration approved curricula in Private Pilot Ground School and Instrument Ground School.

REQUIRED COURSES		UNITS
AERO 121	Aviation Fundamentals	3
*AERO 122D	FAA Private Pilot Ground School	6
AERO 124	Aircraft Powerplant	3
AERO 125	Flight Safey	2
AERO 126	Aircraft Structures	3
AERO 134	Civil Aviation Management and Laws	3
AERO 140D	Instrument Ground School and Flight Simulators	4
AERO 144	Aviation Weather	3
BUSAD 100	Introduction to Business	3
PHYSIC 101	Basic Physics	4
TOTAL UNITS		**34**

***Will be waived if students have taken equivalent course.

AERONAUTICS CERTIFICATES

AVIATION MAINTENANCE TECHNICIAN

This certificate is designed to prepare students to qualify for the airframe and powerplant certificate issued by the Federal Aviation Administration, which enables the holder to perform 100 hour and annual inspections on aircraft ranging from small aircraft used in general aviation through jets utilized by commercial airlines. The written examinations are administered by the Federal Aviation Administration through computer testing centers. The practical

portion of the certificate is administered here at San Bernardino Valley College. The total program requires 1,900 hours of lecture and laboratory. Students working for certificates must have a basic knowledge of arithmetic, reading, and writing in order to learn and work in the occupations they select.

REQUIRED COURSES		UNITS
AERO 101.1	Airframe and Powerplant General Curriculum Calculations	2.5
AERO 100.2	Airframe and Powerplant General Curriculum Publications	2.5
AERO 101.1	Airframe and Powerplant General Curriculum Materials	2.5
AERO 101.2	Airframe and Powerplant General Curriculum Servicing	2.5
AERO 102	Airframe Maintenance Lecture-Structures	6
AERO 103	Airframe Maintenance Lecture-Systems and Compoments	6
AERO 104	Powerplant Maintenance Lecture Reciprocating Engine Overhaul	6
AERO 105	Powerplant Maintenance Lecture Accessory Overhaul	6
AERO 106.1	Airframe and Powerplant General Laboratory - Calculations	1
AERO 106.2	Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1	Airframe and Powerplant General Laboratory-Materials	1
AERO 107.2	Airframe and Powerplant General Laboratory - Servicing	1
AERO 108	Airframe Maintenance Laboratory-Structures	5
AERO 109	Airframe Maintenance Laboratory-Systems and Compoments	5
AERO 110	Powerplant Maintenance Laboratory Reciprocating Engine Overhaul	5
AERO 111	Powerplant Maintenance Laboratory Accessory Overhaul	5
TOTAL UNITS		**58**

FLIGHT OPERATIONS AND MANAGEMENT

The certificate program in Flight Operations is designed for students who are interested in careers as a pilot either in general aviation, commercial aviation, or military aviation. This certificate prepares students for immediate employment or for transfer to other colleges, and includes Federal Aviation Administration approved curricula in basic ground school, advanced ground school, and instrument ground school. Through the San Bernardino Valley College Flying Club, students have the opportunity to gain additional flight experience at a nominal cost as they prepare for the private pilot, commercial pilot, or instrument pilot ratings.

REQUIRED COURSES		UNITS
AERO 121	Aviation Fundamentals	3
*AERO 122D	FAA Private Pilot Ground School	6
AERO 124	Aircraft Power Plants	3
AERO 125	Flight Safety	2
AERO 126	Aircraft Structures	3
AERO 134	Civil Aviation Management and Laws	3
AERO 140D	Instrument Ground School and Flight Simulators	4
AERO 144	Aviation Weather	3
BUSAD 100	Introduction to Business	3
Physic 101	Basic Physics	4
TOTAL UNITS		**34**

*Will be waived if students have taken equivalent course.

POWERPLANT MAINTENANCE TECHNICIAN

This certificate is designed to prepare students to qualify for the Powerplant Certificate issued by the Federal Aviation Administration, which enables the holder to perform 100-hour inspections on aircraft ranging from small aircraft used in general aviation through jets utilized by commercial airlines. The written examinations are administered by the Federal Aviation Administration through computer testing centers. The practical portion of the certificate is administered here at San Bernardino Valley College. The total program requires 1,150 hours of lecture and laboratory.

REQUIRED COURSES		UNITS
AERO 101.1	Airframe and Powerplant General Curriculum Calculations	2.5
AERO 100.2	Airframe and Powerplant General Curriculum Publications	2.5
AERO 101.1	Airframe and Powerplant General Curriculum Materials	2.5
AERO 101.2	Airframe and Powerplant General Curriculum Servicing	2.5
AERO 104	Powerplant Maintenance Lecture Reciprocating Engine Overhaul	6
AERO 105	Powerplant Maintenance Lecture Accessory Overhaul	6
AERO 106.1	Airframe and Powerplant General Laboratory - Calculations	1
AERO 106.2	Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1	Airframe and Powerplant General Laboratory - Materials	1
AERO 107.2	Airframe and Powerplant General	
AERO 110	Powerplant Maintenance Laboratory Reciprocating Engine Overhaul	5
AERO 111	Powerplant Maintenance Laboratory Accessory Overhaul	5
TOTAL UNITS		**36**

AIRFRAME MAINTENANCE TECHNICIAN

This certificate is designed to prepare students to qualify for the Airframe Maintenance Certificate issued by the Federal Aviation Administration, which enables the holder to perform 100-hour inspections on aircrafts ranging from small aircrafts used in general aviation through jets utilized by commercial airlines. The written examinations are administered by the Federal Aviation Administration through computer testing centers. The practical portion of the certificate is administered here at San Bernardino Valley College. The total program requires 1,150 hours of lecture and laboratory.

REQUIRED COURSES		UNITS
AERO 101.1	Airframe and Powerplant General Curriculum Calculations	2.5
AERO 100.2	Airframe and Powerplant General Curriculum Publications	2.5
AERO 101.1	Airframe and Powerplant General Curriculum Materials	2.5
AERO 101.2	Airframe and Powerplant General Curriculum Servicing	2.5
AERO 102	Airframe Maintenance Lecture-Structures	6
AERO 103	Airframe Maintenance Lecture-Systems and Components	6
AERO 106.1	Airframe and Powerplant General Laboratory - Calculations	1
AERO 106.2	Airframe and Powerplant General Laboratory-Publications	1
AERO 107.1	Airframe and Powerplant General Laboratory-Materials	1
AERO 107.2	Airframe and Powerplant General	1
AERO 108	Airframe Maintenance Laboratory-Structures	5
AERO 109	Airframe Maintenance Laboratory-Systems and Components	5
TOTAL UNITS		**36**

AVIONICS TECHNOLOGY

Complete the CORE REQUIRED COURSES for the ELECTRONICS TECHNOLOGY CERTIFICATE, plus:

REQUIRED COURSES		UNITS
AERO 121*	Aviation Fundamentals	3
AERO 140C*	Instrument Ground School & Flight Simulator	4
ELECTR 220A	FCC Rules and Regulations	3
ELECTR 250A	Radio Transmitters, Receivers and Antennas	4
ELECTR 257A	Navigation & Communication Systems	4
TOTAL UNITS		**52**

*AERO 102 & 103 can be substituted for AERO 121 & 140