

St. Cloud State University

Department of Aviation Student Handbook



August 2010 Please Read Carefully.

The information in this booklet is provided for planning purposes only. Students should consult with their adviser on a regular basis. Students are responsible for planning and completing all requirements for graduation. Most current version is posted on our web site: **www.stcloudstate.edu/aviation**

**B.S. Aviation degrees are accredited by the
Aviation Accreditation Board International (AABI)**

*SCSU is an equal opportunity educator and employer and is a part of the
Minnesota State Colleges and Universities System (MnSCU)*

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SCSU Admissions Office:

720 Fourth Ave South , Admin. Serv. 115
St. Cloud, MN 56301-4498
(320) 308-2244 or toll free 1-877-654-7278
Internet: www.stcloudstate.edu

SCSU Aviation Department:

720 Fourth Ave South, Headley Hall 216
St. Cloud, MN 56301-4498
(320) 308-2107
Internet: www.stcloudstate.edu/aviation

St. Cloud State University is a member of the:

Air Traffic Control Association
American Association of Airport Executives
Aviation Accreditation Board International
Minnesota Aviation Trades Association
Minnesota Business Aviation Association
National Air Transportation Association
National Business Aircraft Association
National Intercollegiate Flying Association
University Aviation Association
Women in Aviation International

General Information

St Cloud State University

St. Cloud State University pursues a tradition of excellence and opportunity in all aspects of higher education within its mission. It offers an environment which challenges students to develop talents, extend intellectual abilities, and acquire a lifelong respect and enthusiasm for learning. Students are given the opportunity to develop the knowledge, skills, and attitudes required to enter a variety of careers. Students are assisted in developing greater self understanding and a respect and concern for individual worth and human dignity. They are encouraged to be more sensitive to the values held by others; to understand and assume their responsibilities to individuals and to society.

The Aviation Department offers a Bachelor of Science degree in Aviation and Bachelor of Applied Science degree in Aviation Maintenance Management. The Bachelor of Science (B.S.) in Aviation allows a choice of study in one of three areas to prepare students for professional careers in the aviation industry: *Professional Flight, Management, or Operations* (see pages 15-17 for course details). Aviation Minors are also offered for optional study in *Flight, Operations, or Management* when combined with another university major (see page 18 for details).

Department Mission

The Aviation Department is committed to providing the highest quality affordable aviation education for all students it serves with faculty actively involved in advancing the aviation community.

Department Vision

The Aviation Department will be a leader in offering degree programs that prepare graduates to enter into and advance in rewarding and responsible professional careers in the global and dynamic aviation industry providing lifelong positive contributions to the aviation community.

Department Values

In carrying out its mission and vision the Aviation Department values the following:

- The highest quality and dynamic aviation curriculum
- Faculty involvement in the aviation community.
- A supportive environment for students, faculty, and staff that models respect for diversity.
- Student involvement in aviation student organizations and the aviation community.
- Active involvement with industry.
- Facilities conducive to quality learning.

Aviation Department History

St. Cloud State University has been involved in aviation since the late 1930s when it participated in the Federal Civilian Pilot Training program. In 1949, the SCSU Aero Club, inc. was established on campus by a small group of students, faculty, and staff. As student interest grew, SCSU began offering aviation classes on campus. SCSU responded to increasing student interest in aviation education by offering aviation classes on campus; and in 1978, added an aviation emphasis in the technology major that was so well received that more classes were added and the B.S. in Aviation was developed and approved in 1987. Departmental status was granted in 1996. SCSU aviation graduates are currently enjoying rewarding careers in air traffic control, airline and corporate flight departments, airport operations and management, aircraft dispatch, aircraft scheduling, aviation education, and many other areas.

Internships

Aviation internships give students the opportunity to gain practical experience. Leaders of the Minnesota Aviation Trades Association, Minnesota Division of Aeronautics, Metropolitan Airports Commission, airport operators, corporate operators, and airlines work with aviation department faculty to develop internship programs. Companies that have established internships with the Aviation Department have developed job duties that provide interns with significant learning experiences. Although most employers prefer to communicate with the department internship coordinator about establishing potential internship opportunities, students can sometimes help create their own internships through personal contacts or their current employer. In these cases, the department internship coordinator needs to be consulted and the following conditions must be met. The student must be employed or will be employed (paid or unpaid) in an aviation-related company; the student and his/her supervisor must show how the internship period job duties will be significantly different than normal duties, i.e., how is this a learning experience? In other words, the student cannot just do the same job as before and have it count as internship credit. All documents pertaining to internship credits must be completed and given to the SCSU Aviation Internship Coordinator before the student signs up for AVIT 444. Credit cannot be granted after the fact. Any exceptions to the above will require the approval of the department faculty.

Aviation Resources and Educational Support

Aviation videos, computer programs, and other reference materials are available for student use from the Aviation Education Resource Center in Headley Hall and the SCSU Learning Resource Center. A computer lab for Aviation students is located in Headley Hall 112. Access to a personal computer is recommended, as most assignments are completed using the computer. In addition, flight, management, and air traffic control simulation equipment and software is used in conjunction with many program courses. Educational tours and speakers are also an integral part of the program. While we try to coordinate a driver/rider carpooling schedule for flight students, it may be helpful to bring a personal vehicle for transportation purposes to and from the St. Cloud Airport.

Student Organizations

The SCSU Aero Club, Inc. was formed in 1949 as a nonprofit corporation to provide students, faculty, and staff with reasonable aircraft rates for training and transportation. Aero Club members own nine aircraft and a hangar. The SCSU Aero Club generates a Flight Team from its membership that competes annually in regional and national SAFECONS (flying competitions).

The Sigma Chi Upsilon (SCU) chapter of Alpha Eta Rho (AHP) was rechartered in January, 1989. Today, the SCSU chapter of the international fraternity for men and women in collegiate aviation seeks to foster AHP's goals of academic excellence and community involvement.

The student chapter of the American Association of Airport Executives (AAAE) is aviation management oriented. Its regular monthly meetings and activities make it an excellent resource for education, current events in aviation, and in making business contacts. Membership is the first step in becoming an Accredited Airport Executive (AAE) or Certified Member (CM).

The Aviation Ambassadors, formed in the Fall of 1995, assist the faculty in departmental marketing efforts. Members represent the SCSU Aviation Department at Oshkosh EAA AirVenture, Minnesota and Wisconsin aviation symposiums, and other events. They also provide tours and information programs to the general public.

Statement of Admission and Transfer Policy

Prospective Student Information

Information packets are mailed or emailed each year to those persons who express interest in our program as well as to high school guidance counselors across the Upper Midwest. The Minnesota Office of Aeronautics provides information to high school groups which describe post-secondary aviation education opportunities available in Minnesota.

High School Students

St. Cloud State University (SCSU) will grant provisional admission to eligible seniors in accredited high schools. The application materials, containing all of the available information on the student to date, should be submitted directly to the SCSU Admissions Office by the student and high school during the student's senior year. Graduates of accredited high schools must submit the Minnesota College Admission Form, an official transcript of high school credits, their ACT, PSAT, or SAT scores and the application fee (not refundable).

Transfer Students

Transfer students with a "C" average in previous college work are eligible for admission; other applicants will be considered on an individual basis. The university and/or department faculty reserve the right to deny credits in transfer which are: (1) not consistent with the mission and charter of the granting institution; (2) not approved for transfer based on the evaluation of this university; or 3) not accredited by a regional accreditation association, e.g., North Central Association. Credit will be considered for transfer only from the institution actually granting the credit. Transfer credit will not be granted for remedial work. Classes (100/200 level) taken at two-year institutions which are offered at the 300/400 level at SCSU may be accepted, but will not count as upper division course work to meet the SCSU 45 credits requirement.

A transfer student who has earned an Associate of Arts (A.A.) degree from an approved college will have met the general education requirements at St. Cloud State University. Persons who have not earned an A.A. degree must meet all requirements of the SCSU general education program or the Minnesota

General Education Transfer Curriculum. Courses completed at a Minnesota technical college will not automatically transfer to St. Cloud State University. Students may request credit-by-exam for competency in areas taught at SCSU. If the department conducting the testing judges the student's knowledge to be equal to that expected in SCSU courses, the appropriate number of credits may be allowed.

Ground School/Flight Rating Policy - Credits in Transfer

Students with pilot certificates and ratings earned without college credit through training at private flight schools, fixed base operations, or other schools not accredited by a regional educational accrediting agency and who wish to receive college credit for these ratings must register for credit-by-examination. The student must arrange with aviation faculty for the appropriate ground/flight proficiency examination(s) by the end of the second week of their second semester. Credit-by-exam is valid only for flight ratings earned *prior* to enrolling at SCSU.

Students with pilot certificates and ratings earned with college credit through another regionally accredited college or university may transfer those credits to satisfy aviation curriculum requirements without demonstration of proficiency. The college or university which grants credit for flight training under this provision affirms that the resident aviation faculty directly supervises and/or provides oversight of the flight training process.

In either case, students desiring to major or minor in Professional Flight must complete AVIT 354 and two of the following classes AVIT 102, 204, 210, 356, 362, 364, 366 at SCSU. Contact the Director of Flight Education if you have questions.

Credit-by-Exam and/or Credit for Experience

Credit for **prior** aviation or other program-related experience is available through the Credit-by-Examination procedure. A written and/or flight test will be given by the department to determine that the student meets the requirements and standards of the course. A student may earn a maximum of 30 semester hours of credit-by-exam. Entering freshmen are eligible to take examinations for credit if they have a “B” average in high school in the area to be examined as well as all high school work. Requests for exceptions will be considered when test scores or other evidence suggests greater ability than the high school record indicates. Students who meet the qualifications listed on the next page may apply to take credit examinations:

1. The student must have a “B” average for all university work taken in the subject area of the examination.
2. A student should have a “C” average for all university work taken at St. Cloud State University. If a transfer student has taken less than two full semesters at St. Cloud State University, he/she must have a “B” average for all university work taken.
3. Students may not take examinations at a level below that of courses already taken in an area. For example, a student who has completed a 200 level course in a specific subject area may not take an examination for credit in a 100 level course in the same area without the specific approval of the Dean, College of Science and Engineering. Exceptions may be made in the case of transfer students who, in the judgment of the Assistant Director of Records and Registration and the chairperson of the department involved, have not had previous opportunity to cover the material at the 100 level course.
4. Students having completed 70 or more semester hours may not receive credit by examination in courses at the 100 or 200 level. Departments may recommend exceptions to this policy. A student may not take an examination in a course more than once. Examinations are graded on a Satisfactory/Unsatisfactory basis. Only “Satisfactory” grades are entered on the student's

permanent record. Examinations for credit may be requested in any course. The final authority for determining whether a student may take a course by exam rests with the department faculty involved. Students are not required to take the examination in the same semester which they apply. For example, students are encouraged to apply in the spring semester for examinations to be taken in the fall; thus permitting the use of summer for reading and preparation. Application forms are available in the Office of Records and Registration, Administrative Services Building Room 117.

5. Students intending to major in Aviation must demonstrate proficient use of computer systems and applications to the satisfaction of their Aviation adviser. Students not having computer proficiency should enroll in ETS 157, CSCI 169 or CNA169 Computers in Society their first academic term.

Transportation Security Administration Rules Impacting Flight Students

In September 2004, the Transportation Security Administration (TSA), a branch of the U.S. Federal government, issued rules that apply to all flight training in the United States.

U.S. Citizens are required to show proof of citizenship to the flight school (Wright Aero, Inc. – SCSU's contracted flight school) prior to starting private, instrument, and multi-engine training. The three main forms of citizenship proof are a valid U.S. passport, an original birth certificate (with raised seal) and a government issued picture ID, or an original U.S. naturalization certificate (with raised seal) and a government issued picture ID.

Non-U.S. citizens need to have a background check performed by the TSA before starting private, instrument, or multi-engine flight training. This background check is coordinated with the flight school where the training will take place. Non-U.S. citizens should also check with the Bureau of Citizenship and Immigration Services at 800/375-5283 or www.uscis.gov to ensure correct visa status for flight training.

For more information contact Dr. Steve Anderson, the SCSU Director of Flight Education, the Wright Aero Chief Flight Instructor, and/or the check the following websites:

http://www.tsa.gov/what_we_do/layers/afsp/editorial_multi_image_with_table_0215.shtm and http://www.aopa.org/tsa_rule/#citizens

College of Science and Engineering

Wick Science Building 145
Dr. David DeGroot, Dean

(320) 308-2192
Dr. Kurt Helgeson, Assoc. Dean

Department of Aviation

Office Manager	Ms. Sandra Osterholt	308-2107	HH 216
Chairperson:	Dr. Tara Harl	308-4167	HH 107

Aviation Academic and Career Advisors (Area Code 320)

<i>Flight & Operations</i>	Dr. Steve Anderson	308-2978	HH 103
	Dr. Tara Harl	308-4167	HH 107
	Dr. Jeffrey Johnson	308-6588	HH 105
	Ms. Angie Olson	308-2108	HH 108

<i>Management</i>	Dr. Tara Harl	308-4167	HH 103
	Mr. Michael Ferguson	308-3121	HH 104
	Dr. Steve Anderson	308-2978	HH 103

<i>Maintenance Management</i>	Dr. Jeffrey Johnson	308-6588	HH 105
	Dr. Steve Anderson	308-2978	HH 103

Aviation information resources :

Air Jobs Digest: Published monthly; lists current openings in aviation and engineering fields. Available at the SCSU Career Services Office.

Aviation Scholarships: Flight Time Publishing www.avscholars.com/index.phtml

AirApps Pilot Employment System www.recruitenetwork.com/

FAA Career Series: www.tc.faa.gov/ZDV/anf.html

Internet: SCSU Aviation Department's WWW site provides an excellent starting point for information: www.stcloudstate.edu/aviation

Career Information

Most aviation employment requires FAA certification in addition to schooling; the college degree is a door opener. A bachelor's degree combined with specific experience allows an individual to move into the jobs which pay the higher salaries and include management openings. This list gives a *sample* of career areas that a graduate would look for if he/she had that specific degree; several areas could be pursued if they had the correct ratings/certifications. SCSU Aviation program graduates are currently employed in most of the job areas listed below. The internet World Wide Web also provides a wealth of career-related information.

Typical Average Salaries

Entry: \$20,000-40,000 Midrange: \$35,000-100,000 Maximum: \$200,000+

Degree	Job Area	Companies
<i>Professional Flight</i>	Pilot: (Airline, Corporate, military) Flight Instructor ATC, Flight Dispatch	Airlines, FBOs, charter, major businesses FBOs FAA, Airlines
<i>Operations</i>	ATC, Flight Dispatch Operations Airport Management	FAA, Airlines Airports, Airlines, FBOs Airports
<i>Management</i>	ATC, Flight Dispatch Airport Management Airline Management Operations	FAA, Airlines, FBOs, Airports Airlines Airports, Airlines, FBOs

Abbreviations

FBO	Fixed Base Operator
FAA	Federal Aviation Administration
ATC	Air Traffic Control

Aviation Career Preparation

I. Select a Career Area (Include an Alternative)

- | | |
|------------------------|------------------------|
| 1. Airline Pilot | 5. Aviation Management |
| 2. Air Traffic Control | 6. Aircraft Dispatcher |
| 3. General Aviation | 7. Education |
| 4. Air Taxi Pilot | 8. Other |

II. Research Area (Check Entry Requirements)

- | | |
|-----------------|---------------------|
| 1. Age | 4. Medical Exams |
| 2. Certificates | 5. Experience |
| 3. Education | 6. Special Training |

III. While in School

- A. Use electives to broaden yourself to alternate careers.
- B. Join aviation student organization(s).
- C. Participate in internship programs.
- D. Engage in part-time aviation-related work.
- E. Develop professional affiliations.
- F. Add another major or minor.
- G. Maintain good GPA.
- H. Start seeking positions at least one year prior to graduation.
- I. Develop a professional resume and cover letter.
- J. Make extensive use of online/internet resources.
- K. Develop your leadership/organizational skills.
- L. Participate in research projects outside of the normal classroom.
- M. Acquire aviation experience.

Aviation careers and employment highlights

- U.S. airlines hiring forecasts thousands of new pilot jobs through 2015
- Some airlines will retire up to 50% of their pilots in the next 15 years
- Thousands of FAA Air Traffic Controllers needed due to increasing retirements
- Entry-level airport jobs have increased 50% over the past 5 years.
- Paid internships have increased dramatically since 1997.

St. Cloud State University



Aviation Department, HH 216
720 Fourth Avenue South
St. Cloud, MN 56301-4498

Sample

Phone: (320) 308-2107
FAX (320) 308-5122
Email: aviation@stcloudstate.edu
Internet: www.stcloudstate.edu/aviation

Supplemental Financial Aid Data Form

Print or type information requested; form will not be processed with missing data. Allow 2 weeks for processing.

Name: _____ SSN #: _____

Local Address: _____

Permanent Address: _____

Local Phone: (____) _____ Permanent Phone: (____) _____

Current FAA Certificates & Ratings:

Current Flight Time: (list logbook hours)

_____ Student	_____ Total Time	_____ Instrument A/C
_____ Private	_____ PIC/Solo	_____ Instrument(Sim)
_____ Instrument	_____ Dual	_____ Complex
_____ Commercial	_____ SEL	_____ Cross Country
_____ MEL	_____ MEL	_____ Night
_____ CFI		
_____ None		

Flight training planned August 15, _____ to August 14, _____.

Check rating(s) to be completed in above time period: *(Rating can be used only one time)*

- | | |
|------------------------------------|---------------------------------------|
| _____ Private | _____ Commercial SE |
| _____ Complex/C172 | _____ Commercial ME (_ VFR or _ IFR) |
| _____ Private ME (_ VFR or _ IFR) | _____ CFI |
| _____ Instrument SE | _____ CFII |
| _____ Instrument ME | _____ MEI |
| _____ CRM/LOFT | |

Flight or Ground School courses completed in major or minor program:

I certify that the above information is accurate and that I am using this training as a part of an aviation major or minor program and am enrolled in the appropriate flight course(s). I understand that if I receive financial aid for flight training that this training must be conducted at a flight school or facility approved by the SCSU aviation faculty.

Signature _____ Date _____

Have you filed for aid for flight training before? ___Yes ___No

If yes, indicate school year(s): _____

FOR OFFICE USE ONLY - DO NOT WRITE BELOW THIS LINE

I certify that the approximate flight costs associated with the rating(s) listed above will be \$ _____.

Signed _____ Date _____

Comments: _____ Files checked: ___Yes ___No

Send Financial Aid copy to AS-106; do not let student hand carry. Year: _____ Revised 09/12/05

Aviation & Aerospace Scholarship Information

The following scholarship information was gathered from various sources; many have strict application timelines and criteria. A “Y” listed after the \$ amount indicates open only to selected groups. **This a sample list only.**

Airline Pilot’s Association

President’s Department
1625 Massachusetts Ave.
Washington, DC 20036
\$ Y

Air Traffic Control Association

Scholarship Fund, Inc.
2020 N 14th St. Suite 410
Arlington, VA 22201
\$2,500 N

Ken Raiber Aviation Scholarship

Department of Aviation / SCSU
Aviation Majors
Jrs & Srs
\$500 Y

N.B.A.A.

NBAA Educational Programs
1200 18th St NW
Washington, DC 20036
\$1000 N

Robert Ryan Memorial Scholarship

Department of Aviation
SCSU 720 S 4th Ave S.
St. Cloud, MN 56301
\$ SCSU Aviation Jrs & Srs

Aero Club

SCSU Flight Awards
SCSU Headley Hall
St. Cloud, MN 56301-4498
\$ Current Aero Club Members

Sean Paul Gonia Aviation Scholarship

Department of Aviation / SCSU
SCSU aviation majors
Jrs & Srs
\$500 Y

A.A.A.E. Foundation

AAAE Scholarship Program
4212 King Street
Alexandria, VA 22302
\$1000 N

Kimberly Ritsche Memorial Scholarship

Department of Aviation
SCSU 720 S 4th Ave S.
St. Cloud, MN 56301
\$ SCSU Female Aviation Jrs & Srs

Airports Council Int’l - NA

1775 K Street NW
Suite 500
Washington, DC, 20006
\$ Y (airport)

Pioneers of Flight Scholarship

Air Transportation Foundation
1505 Riverview Road
P.O. Box 297
St. Peter, MN 56082

Assoc of Women Airline Pilots

ISA+21 2250 E Tropicana Ave
Suite 19-395
Las Vegas, NV 89119-6594
\$4000 Y

Org. of Black Airline Pilots

<http://www.obapseast.com/scholarships.htm>

Women in Aviation International

www.wai.org/education/scholarships.cfm

Applying for a Major or Minor

1. B.S. Aviation Professional Flight and Operations Emphases complete AVIT 100 (starting Fall 2010), 101, 103 (complete in first two semesters); MATH 112, 113; CMST 192, and ENGL 191; Management Emphasis completes AVIT 100 (starting Fall 2010), 101, 103 (complete in first two semesters); MATH 196; ECON 195 or 201; CMST 192, and ENGL 191. Transfer students who have completed the pre-major courses at another regionally accredited college or university will have alternative pre-major courses assigned by the aviation faculty.
2. Attain a minimum GPA of 2.50 both in the pre-major core (C- or better required in each pre-major course) and all SCSU course work.
3. Obtain an Application for Major from the dean's office and complete it with the assistance of the major adviser.
4. All major/minor program elective credits must be approved by an aviation adviser. Internship and cooperative education opportunities are available for Junior/Senior students.
5. New students holding flight ratings must consult with an aviation adviser for procedures to obtain credit for AVIT flight courses. Once a student enrolls at SCSU, flight classes must be completed through the approved contractor in St. Cloud.
6. Application does not insure admission to major program. Acceptance may depend upon the number of majors currently enrolled. Admission to major program will be complete when the form is on file in the dean's office and on record in the Office of Records and Registration.

In order to earn the B.S. aviation degree, the student must complete the General Education program, the Major program, and University Electives. It is the student's responsibility to make sure that he/she takes the courses needed to graduate. Students must be admitted to a university major in order to register for all aviation classes AVIT 361 and above. A 2.50 GPA for all course work completed at SCSU is required for graduation. Check the bulletin, semester schedules, and with the aviation faculty for current information. Requests for waivers to policies are on a case-by-case basis.

All incoming students will take a Math Placement Test to determine their appropriate level - see www.stcloudstate.edu/~mathpl/index.htm for information. Aviation students do not have to take MATH/STAT 193 if they take MATH 112, 113, or 196. Those students who desire to minor in aviation need to consult with an aviation department adviser. *Aviation Management students must include PHYS 103 or 231 and ECON 195 or 201.* Students desiring to major in Aviation must complete major prerequisites during their first two years at SCSU. All students must complete course prerequisites before attempting next course. Any exceptions must be approved by the Aviation Department.

Once a student enrolls at SCSU, all flight training for college credit must be accomplished through the approved contractor. Flight training for college credit can only be done in aircraft from approved contractors. Students entering SCSU with any type of non-credit pilot certification (see page 4) must contact one of the Aviation flight faculty to discuss their situation. Normally, these students will be able to take a comprehensive exam to receive credit for their flight experience. The cost of this procedure is one-third of the normal cost per course credit plus aircraft rental rate if applicable.

Suggested Electives for the B.S. Aviation Major or Minor

CSCI, EAS, GEOG, ETS, CSCI/CNA, MGMT, MKGB, AVIT, CMST, and/or other classes that interest you. Always check with your adviser if you are not sure; major and/or minor program elective credits must be approved by an Aviation adviser. All students must complete at least 45 upper division credits.

Suggested Classes for Freshmen Students

AVIT 101*+	Aeronautics I
MATH 112*	Math I (Requires knowledge of Advanced Algebra)
MATH 211*	Calculus (Prereq - MATH 112)
AVIT 103*+	Air Transportation
AVIT 107+	Women in Aviation (MGM)
ENGL 191*+	Intro to Rhetorical and Analytical Writing
CMST 192*+	Intro to Communication Studies
CSCI/CNA 169+	Computers in Society (Management majors only)

You are advised to complete the prerequisites() to major during your freshman year or as early as possible. (+) General Education (GE).*

MGM Credit Requirements for Transfer students

Transfer in _____ Gen Ed credits	MGM credits needed to take
0-19	9
20-29	6
30-39	3
40+	0

Estimated Undergraduate Costs (2008-09) Does not include Flight Costs.

	Resident (per Year)	Nonresident (per Year)
Tuition/Fees	\$5,954	\$12,098
Books & Supplies	900	900
Room & Board*	<u>5,642</u>	<u>5,642</u>
Total Estimated Costs	\$12,496	\$18,640

Based on 15 credits per semester, cost of books may be lower depending on new or used and source; *21 basic meal plan. Reciprocity is available for ND, SD & WI residents. SCSU participates in the Midwest Student Exchange with Kansas, Michigan, Missouri, and Nebraska. The cost listed above is an estimate subject to change without notice. NOTE: Allowances do not include clothing, travel, personal and recreational expenses since they vary widely with each person.

Special Costs for Professional Flight option: See page 20 for flight costs for ratings in the Professional Flight option; check with the aviation faculty for specific flight cost information.

B.S. in Aviation Management

(73 major credits plus general education credits and university electives = 120 Credits)

Courses in italics are prerequisites. Underlined courses are prerequisites or corequisites.

Freshman (30 cr)

Prerequisites/Corequisites

- | | | | |
|---|--------------------------|--|-------------------|
| 1 | AVIT 100* | Intro to Aviation (Starting Fall 2010) | |
| 3 | AVIT 101* | Private Pilot Ground School | |
| 3 | AVIT 103* | Air Transportation | |
| 3 | MATH 196* | Finite Mathematics | <i>HS algebra</i> |
| 3 | ECON 195* OR 201* | | |

General Education Credits (Incl. *ENGL 191 & *CMST 192)

Include **PHYS 103** in General Ed Area B. *Indicates Major prerequisite courses to apply for major.

Sophomore (30 cr)

- | | | | |
|--|------------------------|-----------------------------------|----------------------|
| 3 | AVIT 215 | Intro to Air Traffic Control | <i>AVIT 101</i> |
| 3 | AVIT 325 | Aviation Safety and Human Factors | <i>AVIT 101, 103</i> |
| 3 | BLAW 235 | Legal Environment of Business | |
| 3 | ACCT 291 | Accounting I | |
| 3 | ACCT 292 | Accounting II | <i>ACCT 291</i> |
| 3 | PHYS 103 OR 231 | | <i>H.S. algebra</i> |
| Elective Credits & General Education Credits | | | |

Junior (30 cr)

- | | | | |
|--|----------|----------------------------------|--------------------------|
| 3 | AVIT 307 | Aviation Law | <i>AVIT 101, 103</i> |
| 3 | AVIT 317 | Ethics in Aviation | <i>AVIT 307</i> |
| 3 | STAT 229 | Statistics for Physical Sciences | <i>Math 112</i> |
| 3 | AVIT 345 | Intro to Occupational Safety | |
| 3 | MGMT 301 | Intro to Management | <i>Admitted to Major</i> |
| 3 | MGMT 352 | HR Management | <i>MGMT 301</i> |
| 3 | CMST 341 | Workplace Communication | <i>CMST 192</i> |
| Elective Credits & General Education Credits | | | |

Senior (30 cr)

Select 3 of 5 (9 credits, 409/411/413/423/429)**

- | | | | |
|---|--------------------|---------------------------|----------------------------------|
| 3 | AVIT 409 | Airport Management | <i>MGMT 301</i> |
| 3 | AVIT 411 | Airline Management | <i>MGMT 301</i> |
| 3 | AVIT 413 | GA & Corporate Operations | <i>MGMT 301</i> |
| 3 | AVIT 423 | Air Carrier Operations | <i>MGMT 301</i> |
| 3 | AVIT 429 | Airport Planning/Design | <i>MGMT 301</i> |
| 3 | MGMT 365 | Organizational Behavior | |
| 3 | AVIT 497 | Aviation Capstone | <i>Admitted to Major, Senior</i> |
| | OR AVIT 444 | Internship | |

5-6 Major Elective credits approved by advisor.

Balance of University Elective Credits & General Education Credits

***Students focusing on Airport Management need to complete AVIT 409, 413, and 429. Students focusing on Airline Management need to complete AVIT 411, 413, and 423.*

***AVIT 497 (capstone course choice) needs to relate to management focus area.*

B.S. in Aviation Operations

(74 major credits plus general education and university elective credits = 120 Credits)

Courses in italics are prerequisites. Underlined courses are prerequisites or corequisites.

Freshman (30 cr)

Prerequisites/Corequisites

1	AVIT 100*	Intro to Aviation (Starting Fall 2010)	
3	AVIT 101*	Private Pilot Ground School	
3	AVIT 103*	Air Transportation	
3	MATH 112*	College Algebra	<i>HS algebra</i>
3	MATH113*	Trigonometry	<i>MATH 112</i>
3	EAS 104	Intro to Atmospheric Science	
	General Education Credits (Incl. *ENGL 191 & *CMST 192)		

(*) Indicates Major prerequisite courses to apply for major.

Sophomore (30 cr)

3	AVIT 203	Instrument Pilot Ground School	<i>AVIT 101</i>
OR	AVIT 345	Intro to Occupational Safety	
4	PHYS 231	Physics I	<i>MATH 072 or H.S. algebra</i>
3	AVIT 307	Aviation Law	<i>AVIT 101, 103</i>
3	AVIT 215	Intro to Air Traffic Control	<i>AVIT 101</i>
	Elective Credits & General Education Credits		

Junior (30 cr)

3	AVIT 317	Ethics in Aviation	<i>AVIT 307</i>
3	AVIT 325	Aviation Safety and Human Factors	<i>AVIT 101, 103</i>
3	AVIT 379	Advanced Aerodynamics	<i>AVIT 203, 351, PHYS 231</i>
OR		ATC Course (309, 311, or 313)	<i>AVIT 101, 103, 215</i>
4	EAS 360	Aviation Meteorology	<i>EAS 104, PHYS 231</i>
3	MGMT 301	Intro to Management	<i>Admitted to Major</i>
	Elective Credits & General Education Credits		

Senior (30 cr)

3	AVIT 409 OR AVIT 411 OR AVIT 413 OR 429		<i>MGMT 301</i>
3	AVIT 423	Air Carrier Operations	<i>MGMT 301</i>
3	CMST 341	Workplace Communications	<i>CMST 192</i>
3	MGMT 365	Organizational Behavior	<i>MGMT 301</i>
3	AVIT 497	Aviation Capstone	<i>Admitted to major, senior</i>
OR	AVIT 444	Internship	

15 *Major Elective Credits, in a focus area, approved by advisor

Balance of University Elective Credits & General Education Credits

B.S. in Aviation Operations

Air Traffic – Collegiate Training Initiative (AT-CTI) Track

(74 major credits plus general education and university elective credits = 120 Credits)

Courses in italics are prerequisites. Underlined courses are prerequisites or corequisites.

St. Cloud State University (SCSU) was approved by the Federal Aviation Administration (FAA) in October 2008 as an Air Traffic - Collegiate Training Initiative (AT-CTI) program. The B.S. in Aviation Operations Air Traffic Control Track is designed to meet the needs of individuals desiring a quality education that will prepare them for professional careers in air traffic control.

Freshman (30 cr)

		<u>Prerequisites/Corequisites</u>
1	AVIT 100*	Intro to Aviation (Starting Fall 2010)
3	AVIT 101*	Private Pilot Ground School
3	AVIT 103*	Air Transportation
3	MATH 112*	College Algebra <i>HS algebra</i>
3	MATH 113*	Trigonometry <i>MATH 112</i>
3	EAS 104	Intro to Atmospheric Science
	General Education Credits (Incl. *ENGL 191 & *CMST 192)	

(*) Indicates Major prerequisite courses to apply for major.

Sophomore (30 cr)

3	AVIT 203	Instrument Pilot Ground School	<i>AVIT 101</i>
4	PHYS 231	Physics I	<i>MATH 072 or H.S. algebra</i>
3	AVIT 215	Intro to Air Traffic Control	<i>AVIT 101</i>
3	AVIT 307	Aviation Law	<i>AVIT 101, 103</i>
3	AVIT 309	ATC Tower Procedures	<i>AVIT 101, 103, 215</i>
	Elective Credits & General Education Credits		

Junior (30 cr)

3	AVIT 317	Ethics in Aviation	<i>AVIT 307</i>
3	AVIT 325	Aviation Safety and Human Factors	<i>AVIT 101, 103</i>
3	AVIT 311	ATC Tracon Procedures	<i>AVIT 101, 103, 215</i>
3	AVIT 313	ATC Enroute Procedures	<i>AVIT 101, 103, 215</i>
4	EAS 360	Aviation Meteorology	<i>EAS 104, PHYS 231</i>
3	MGMT 301	Intro to Management	<i>Admitted to Major</i>
	Elective Credits & General Education Credits		

Senior (30 cr)

3	AVIT 409	Airport Management	<i>MGMT 301</i>
3	AVIT 423	Air Carrier Operations	<i>MGMT 301</i>
3	CMST 341	Workplace Communications	<i>CMST 192</i>
3	MGMT 365	Organizational Behavior	<i>MGMT 301</i>
3	AVIT 497	Aviation Capstone	<i>Admitted to major, senior</i>
OR	AVIT 444	Internship	

9 *Major Elective Credits, in a focus area, approved by advisor

Balance of University Elective Credits & General Education Credits

B.S. in Aviation Professional Flight

(77 major credits plus general education and university elective credits = 120 Credits)

Courses in italics are prerequisites. Underlined courses are prerequisites or corequisites.

Freshman (30 cr) Prerequisites/Corequisites

1	AVIT 100*	Intro to Aviation (Starting Fall 2010)	
3	AVIT 101*	Private Pilot Ground School	
2	AVIT 102	Private Pilot Flight	<i>AVIT <u>101</u></i>
3	AVIT 103*	Air Transportation	
3	MATH 112*	College Algebra	<i>HS algebra</i>
3	MATH 113*	Trigonometry	<i>MATH 112</i>
3	EAS 104	Intro to Atmospheric Science	
	General Education Credits (Incl. *ENG 191 & *CMST 192)		
	(*) Indicates Major prerequisite courses to apply for major.		

Sophomore (30 cr)

3	AVIT 205	Aircraft Electronic Systems	<i>AVIT 101</i>
3	AVIT 203	Instru Pilot Ground School	<i>AVIT 101</i>
2	AVIT 204	Instru Pilot Flight	<i>AVIT 101, 102, <u>203</u></i>
1	AVIT 210	Multi-Engine Rating	<i>AVIT 101</i>
3	AVIT 353	Turboprop Systems/Operations	<i>AVIT 204, <u>351</u></i>
3	AVIT 355	Commercial Pilot Ground School	<i>AVIT 101</i>
4	PHYS 231	Elements of Physics I	<i>MATH 072 or H.S. algebra</i>
	Elective Credits & General Education Credits		

Junior (30 cr)

3	AVIT 307	Aviation Law	<i>AVIT 101, 103</i>
3	AVIT 215	Intro to Air Traffic Cont	<i>AVIT 101</i>
3	AVIT 317	Ethics in Aviation	<i>AVIT 307</i>
3	AVIT 325	Aviation Safety and Human Factors	<i>AVIT 101, 103</i>
1	AVIT 354	CRM/LOFT	<i>AVIT 204, <u>353</u></i>
2	AVIT 356	Commercial Pilot Flight	<i>AVIT 102, 203, <u>351</u></i>
4	EAS 360	Aviation Meteorology	<i>EAS 104, PHYS 231</i>
3	MGMT 301	Intro to Management	<i>Admitted to Major</i>
	Elective Credits & General Education Credits		

Senior (30 cr)

3	AVIT 461	CFI Airplane Ground School	<i>AVIT 203, 351</i>
1	AVIT 462	CFI Airplane Flight	<i>AVIT 354, 356, <u>461</u></i>
3	AVIT 379	Advanced Aerodynamics	<i>AVIT 203, 351, PHYS 231</i>
3	AVIT 413	GA and Corporate Operations	<i>MGMT 301</i>
3	AVIT 421	Advanced Aircraft Systems	<i>AVIT 353</i>
3	AVIT 423	Air Carrier Operations	<i>MGMT 301</i>
3	AVIT 497	Contemporary Issues	<i>Admitted to major, senior</i>
OR	AVIT 444	Internship	

Balance of University Elective Credits & General Education Credits

Adding a Minor or Double Major

Students wishing to add the Aviation major or minor are required to discuss their plans with an Aviation adviser. **Students majoring in Aviation will not be able to add another major or a minor in Aviation.** The only exception to this policy is that an Aviation Management major may add a Flight minor with adviser approval. A **B.E.S. minor** is also available - check with an Aviation faculty adviser for details. *Courses in italics are prerequisites. Underlined courses are prerequisites or corequisites.*

Flight (25 credits)

			<u><i>Prerequisites/Corequisites</i></u>
3	AVIT 101	Private Pilot Ground School	
2	AVIT 102	Private Pilot Flight	<i>AVIT 101</i>
3	AVIT 103	Air Transportation	
3	AVIT 203	Instrument Pilot Ground School	<i>AVIT 101</i>
2	AVIT 204	Instrument Pilot Flight	<i>AVIT 102, 203</i>
3	AVIT 325	Aviation Safety and Human Factors	<i>AVIT 101, 103</i>
3	AVIT 353	Turboprop Systems and Operations	<i>AVIT 204, 351</i>
1	AVIT 354	Com Pilot Flight I-CRM/LOFT	<i>AVIT 204, 353</i>
3	AVIT 355	Comm Pilot Ground School	<i>AVIT 101</i>
2	AVIT 356	Com Pilot Flight II	<i>AVIT 102, 203, 351</i>

Operations (24 credits)

3	AVIT 101	Private Pilot Ground School	
3	AVIT 103	Air Transportation	
3	AVIT 203	Instrument Pilot Ground School	<i>AVIT 101</i>
OR	AVIT 215	Introduction to Air Traffic Control	<i>AVIT 101</i>
3	AVIT 325	Aviation Safety and Human Factors	<i>AVIT 101, 103</i>
12	Elective Credits		

Management (24 credits)

3	AVIT 101	Private Pilot Ground School	
3	AVIT 103	Air Transportation	
3	ACCT 291	Financial Accounting	
3	AVIT 307	Aviation Law	<i>AVIT 101, 103</i>
3	MGMT 301	Intro to Management	<i>Admitted to Major</i>
3	AVIT 317	Ethics in Aviation	<i>AVIT 307</i>
3	AVIT 409 or 411 or 413		<i>MGMT 301</i>
3	Elective Credits		

Class Listing Schedule

Listed below is the normal schedule for Aviation classes; however this can change depending on faculty availability and enrollments. This list is for planning only. Check **official** bulletins for current information.

FALL & SPRING		FALL	SPRING
AVIT 100	MGMT 301	AVIT 203	AVIT 309
AVIT 101	MGMT 352	AVIT 311	AVIT 313
AVIT 103	MGMT 365	AVIT 353	AVIT 345
AVIT 107	PHYS 231	AVIT 411	AVIT 355
AVIT 205	CMST 341	AVIT 413	AVIT 379
AVIT 215	ACCT 291	AVIT 421	AVIT 409
AVIT 307	ACCT 292	AVIT 429	EAS 360
AVIT 317	EAS 104	AVIT 461	
AVIT 325	MATH 112		
AVIT 423	MATH 113	SUMMER	
AVIT 444	MATH 196	ALL Flight Courses	
AVIT 497	STAT 229	AVIT 444	BLAW 235
	BLAW 235	MGMT 301	MATH 112
ALL Flight Courses		MGMT 352	MATH 211
		MGMT 365	ACCT 291
		PHYS 231	ACCT 292
		PHYS 232	

Notes:

Students should enroll in the appropriate flight course when they will actually start training for that rating. For instance, if you are working on a Private Pilot rating in late spring or summer, sign up during the summer session for the flight course. Flight courses are offered every semester and summer session.

Flight training for university credit must be completed through the SCSU approved flight training provider(s). Students are required to obtain the appropriate FAA pilot certificate or rating for the following flight courses/labs: AVIT 102, 204, 210, 356, 362, 363, 364, 365, 366. Students are free to take FAA Practical Tests for pilot certifications or ratings from any FAA Designated Pilot Examiner. All flight training for university credit must be done in aircraft provided by a vendor under contract with the university. All flight training and certification-related fees are to be paid by the student.

Students are advised to complete high school advanced algebra or higher math courses prior to enrolling in the aviation degree. All students must take the Math Placement exam before attempting any MATH course at SCSU.

B.S. Aviation Professional Flight and Operations Emphases complete AVIT 100 (starting Fall 2010), 101, 103 (complete in first two semesters); MATH 112, 113; CMST 192, and ENGL 191; Management Emphasis completes AVIT 100 (starting Fall 2010), 101, 103 (complete in first two semesters); MATH 196; ECON 195 or 201; CMST 192, and ENGL 191. Transfer students who have completed the pre- major courses at another regionally accredited college or university will have alternative pre-major courses assigned by the aviation faculty. All students must complete course prerequisites before attempting next course.

Aviation Classes

<u>Number</u>	<u>Course</u>	<u>Credits</u>
AVIT 100	Introduction to Aviation	1
AVIT 101	Private Pilot Ground School	3
AVIT 102	Private Pilot - Flight	2
AVIT 103	Global Issues in Air Transportation	3
AVIT 107	Minorities in Aviation (MGM)	3
AVIT 203	Instrument Pilot Ground School	3
AVIT 204	Instrument Pilot Flight	2
AVIT 205	Aircraft Electronic Systems	3
AVIT 210	Multi-Engine Rating	1
AVIT 215	Introduction to Air Traffic Control	3
AVIT 307	Aviation Law	3
AVIT 309	Air Traffic Control Tower Procedures	3
AVIT 311	Air Traffic Control TRACON Procedures	3
AVIT 313	Air Traffic Control Enroute Procedures	3
AVIT 317	Ethics in Aviation	3
AVIT 325	Aviation Safety and Human Factors	3
AVIT 327	Current State of the Aviation Industry	3
AVIT 345	Introduction to Occupational Safety	3
AVIT 353	Turboprop Systems and Operations	3
AVIT 354	CRM/LOFT	1
AVIT 355	Commercial Pilot Ground School	3
AVIT 356	Commercial Pilot Flight	2
AVIT 379	Advanced Aerodynamics	3
AVIT 409	Airport Management	3
AVIT 411	Airline Management	3
AVIT 413	General Aviation and Corporate Operations	3
AVIT 415	Advanced Air Traffic Control	3
AVIT 421	Advanced Aircraft Systems	3
AVIT 423	Air Carrier Operations	3
AVIT 429	Airport Planning and Design	3
AVIT 461	Flight Instructor Airplane - Ground School	3
AVIT 462	Flight Instructor Airplane - Flight	1
AVIT 463	Advanced Ground Instructor	1
AVIT 464	Flight Instructor Instrument – Flight	1
AVIT 465	Instrument Ground Instructor	1
AVIT 466	Flight Instructor Multi-Engine	1
AVIT 444	Internship (Varies)	3-6-9-12
AVIT 496	Seminar: Topical	1-3
AVIT 497	Aviation Capstone (U/D writing)	3

Flight Training Information (effective 9/1/09)

Wright Aero is the contracted flight training provider for the SCSU Aviation Department.

Aircraft	\$ Rate per Hour
2-Cessna 152s.....	\$ 79.00
*2-Cessna 152s.....	\$ 70.00
*1-Cessna 172.....	\$ 85.00
1-Cessna 172R.....	\$106.00
*1-Cessna 172R.....	\$ 96.00
1-Cessna 182RG Complex IFR Equipped.....	\$140.00
*1-Piper Arrow Complex IFR Equipped.....	\$112.00
2-Beech Dutchess Multi-Engine.....	\$198.00

*These aircraft are available to SCSU Aero Club members, see page 2 for more information on the Aero Club.

Flight Instructor Dual Rate per hour

Pre-Private.....	\$ 38.00	Advanced.....	\$ 40.00
Initial CFI.....	\$ 43.00	CFII, MEI.....	\$ 43.00
Simulator.....	\$ 40.00		

Ground Training Devices (simulator) \$ Rate per hour with instructor

Frasca 141 (C172 visual).....	\$ 76.00
ATC 810 (ME Piston).....	\$ 64.00
Frasca 242T Dual only (BE-1900 ME Turbo visual).....	\$140.00

Frasca 141 & ATC 810 are located at the airport; Frasca 242T is at Headley Hall. Hours in the simulator must be done with a Flight Instructor; rates reflect that cost.

The total *estimated* costs of the SCSU Aviation Department’s flight program (Student Pilot through CFI and Multi Engine Rating) is approximately:

<u>Final Certificates</u>	<u>Cost</u>
Commercial Single and Multi-Engine and CFI.....	\$34,561

Typical cost from an FBO for a similar program is likely to be \$5,000 to 8,000 higher. Flight training for university credit must be completed through the SCSU approved flight training provider(s). Students are required to obtain the appropriate FAA pilot certificate or rating for the following flight courses/labs: AVIT 102, 204, 210, 356, 362, 363, 364, 365, 366. Students are free to take FAA Practical Tests for pilot certifications or ratings from any FAA Designated Pilot Examiner. All flight training and certification-related fees are to be paid by the student.

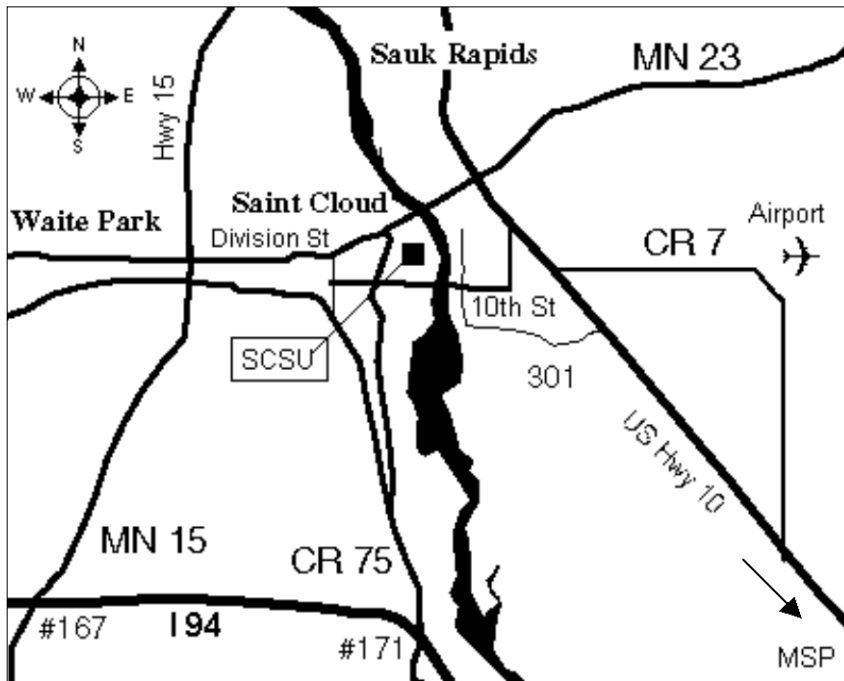
Flight Training Department

Wright Aero

The flight department at Wright Aero contracts with the SCSU Aviation Department to provide high quality flight training at economical prices. Each student is offered personalized flight instruction, as every student learns at a different pace. He or she is not forced to complete a flight rating in an allotted amount of time. The flight instructors have been trained to take each student through flight training at a comfortable learning pace. However, students are advised to schedule flight lessons on a regular basis in order to not prolong their training and subsequently increase the cost. Many of the present pilots at Wright Aero have graduated from St. Cloud State and are now flying single-engine, multi-engine, and jet aircraft.

Once a student enrolls at SCSU, all flight training for college credit or in Aero Club aircraft must be accomplished through Wright Aero, Inc., the approved FBO under contract with the St. Cloud State University Department of Aviation, at the St. Cloud Airport. The flight training program follows detailed syllabi and contains 30 hours of LOFT (Line Oriented Flight Training) in the Turboprop Flight Simulator.

<u>Rating</u>	<u>Minimum Flight Hours(FAA)</u>
Private Pilot	40
Commercial Pilot	250
Certified Flight Instructor	250+
Charter Pilot - VFR	500
Charter Pilot – IFR	1200
ATP - Airline Transport Pilot	1500



Hwy 10 from St. Cloud connects to MN 24 which connects to I-94.

SCSU Campus address: 720 4th Avenue South, St. Cloud, MN 56301-4498

To reach the campus from

Interstate 94 Exit 171, take County Road 75 into city & follow the signs.

Highway 10 Exit at Hwy. 23, cross river, turn left at Fourth Ave South and follow the signs.

SW (Hwys. 15 & 23; & Cty 75) to Division St (Hwy. 23); right at Fifth Ave & follow the signs.

East (Highway 23) Cross the river, turn left at Fourth Ave South & follow the signs.

The St. Cloud, MN Regional Airport (www.stcloudairport.com/) is located about 5 miles from campus off Highway 10, exit Deltone Road 1 mile southeast of Hwy. 10 & 23 intersection. Flight Training: (320) 252-5858; Mesaba NWA Airlink (320) 251-8574; Airport Manager (320) 529-6533.

This issue supersedes all previous handbooks. Information contained in this booklet was gathered from a variety of sources and was correct at the time of publication; however, like aviation itself, the data is subject to change. If you have any ideas for changes or corrections to this booklet contact us at:

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 FAX (320) 308-5122
 Email: aviation@stcloudstate.edu

Aviation Student Planner Adviser _____ Office _____

Fall 1st year _____ AVIT 100 AVIT 101 AVIT 102 (Flight students) AVIT 103 MATH 070/072 or 112 or 196 ENGL 191 or CMST 192	Spring 1st year _____ MATH 196 or 113 or STAT 229 ENGL 191 or CMST 192	Summer
Fall 2nd year _____ MATH 113 or STAT 229	Spring 2nd year _____	Summer
Fall 3rd year _____	Spring 3rd year _____	Summer
Fall 4th year _____	Spring 4th year _____	Summer
Fall 5th year _____	Spring 5th year _____	Summer