

# The Sault College Aviation (Flight) Program

Updated 2012

## **Introduction**

The Sault College Aviation Program is a challenging 3-year college program that provides you with flight training as well as a three-year college diploma. The purpose of this outline is to provide you with information about the program so that you may make an informed decision about attending.

## **General Overview of the Aviation Program**

Upon graduation from the Sault College Aviation (Flight) Program, you will receive an Advanced Technology Diploma, and a Commercial Licence with a Group1 (Multi-Engine) Instrument Rating. The program consists of seven semesters, sixteen weeks in duration, six of which include flight training. You will have completed the requirements for the Transport Canada Integrated Commercial (IR). The approximate number of flight hours received for someone without a private pilot licence is just under 200 hours and approximately 170 hours for someone with a private pilot licence.



For a complete listing of the courses you will take, refer to the college calendar or our website.

Semester 1 (September) of first year consists of academic courses only, and does not include flight training. The Private Pilot ground school subjects are a part of this semester. To be admitted into the second semester, students must pass all courses and achieve a minimum grade point average (GPA) of 3.1. This is approximately a B average. There is no quota, so all students that meet these requirements continue in the program.

Semester 2 (January) is the beginning of the flight training. The semester also includes academic and ground school classes. The Transport Canada Private Pilot exam is written at the end of the semester.

Semester 3 starts in May and ends Labour Day weekend. It consists of flight training up to the Private Pilot licence and cross country flight. If you already have a Private Pilot licence your training is accelerated and consists of flight training to upgrade your skills, as well as learning to fly the Zlin 242. The academics for this semester involve preparatory ground instruction. **It is important to note that semester 3 takes up most of the summer, with no time off for a summer job. Budget accordingly.**

The second year starts after Labour Day weekend. Semesters 4 and 5 involve flight training in preparation for the Commercial flight test in April. You will have classes 2½ days of the week, and fly during the others. You will also fly evenings and on one day of the weekend as well. There is no minimum grade point average for these semesters; however a passing grade in every subject is necessary in order to stay in the program. At the completion of the fifth semester, you have a 4 month summer break.



Semesters 6 and 7 of third year starts after the summer break. You will fly 2½ days then attend classes during the remainder of the week. Your schedule will include weekend and night flying. The main focus of third year is the Instrument Rating, and multi-engine flying. You start by learning the instrument procedures in our single engine aircraft. Next, you will learn how to fly our multi-engine aircraft, and work towards the Multi-Engine Class rating. Finally, you put it all together by learning to fly the instrument procedures using the more advanced systems on board the

Seminole. Your flight training at Sault College concludes with your successful completion of the flight test for the Group 1 Instrument Rating. You will have approximately 200 hours of flight training, with 100 hours of pilot-in-command time. You will have earned a Commercial Licence endorsed with a Group 1 Instrument rating (multi-IFR rating).

## Why You Should Come To Sault College

If you want to become a Professional Pilot, then Sault College is the best place to train. Our curriculum not only teaches students how to fly at high level of proficiency, but also stresses important workplace characteristics such as time management, self-discipline and reliability.

Our graduates are employed by Air Canada, First Air, Air Canada Express (Jazz), Bearskin Airlines, Voyageur Airlines, Georgian Airlines, Air Canada Express (ACE), Porter Airlines, West Jet, Atikokan Air Service, and at many other charter operations and flying schools all across the country. Others are employed abroad by Cathay Pacific, Air Dubai, and with operators in Africa.

Sault College is a true Aviation Program. Our focus is the development of the professional pilot, harmonizing all aspects of academics, ground school, human factors, self-discipline and flight training towards that goal. You will learn in an atmosphere devoted to flying, with classmates that are devoted to flying. Your professors are Class 1 or 2 Flying Instructors with Airline Transport Pilot licences, and are continuously evaluating and modifying the curriculum in order to keep Sault College graduates at the forefront of the industry. Our equipment is second to none, and always kept safe and serviceable by a dedicated team of Aircraft Maintenance Engineers. Each aircraft is equipped with excellent avionics, including IFR-certified moving map GPS, that help students develop excellent piloting skills. Students have unlimited access to the flight training devices (simulators), and can book them for practice on their own time.

## Things to consider

The Sault College Aviation program differs from other college programs in some important ways. You should be aware of these differences before accepting a seat in our program.



### ***There is a limit to the subsidized flying hours.***

If you are not able to meet Transport Canada standards after the prescribed lesson plans are completed, the amount of remedial training available is limited.

### ***The academics are challenging.***

The Sault College Aviation Technology program provides a tremendous opportunity to earn an Advanced Diploma. The material you learn in class will be applied in the aircraft, so it is important that you retain this knowledge. To be successful you can expect to study and review for several hours per day.

The Chair will have discretion to grant approval to failing students for re-entry into a course based on program operations and seat availability. Other policies and/or procedures stated in course outlines or program guides/operating procedures may impact this.

Where a student has received an "X" grade in a prerequisite course, entry to the next course will be determined by the chair or her/his designate responsible for the course.

### ***Attendance***

Attendance for all classes is mandatory.

### ***Dress Code***

Professionals are expected to look the part, so we have established a dress code for students and staff. The mandatory dress code is described below:

#### **Male:**

- Dress shirt and tie worn anytime flying or at school between 0800hrs and 1700hrs
- No jeans
- Clean shaven
- Hair not touching the shirt collar and not held up by elastic bands, pins, etc or by tucking behind the ears
- Hair style must be in a way that does not draw undue attention. Radical hair styles or



- colouring are not allowed
- Sideburns not below the lower earlobe and trimmed horizontally
- No beards
- Moustaches in moderation, if neatly trimmed
- Dress shoes shall be worn in class – no running shoes
- No earrings or other visible body piercing
- No dangling wrist jewellery which could catch on switches

## **Female**

- While flying, hair must be neatly pulled back so as not to obstruct peripheral vision.
- Hair style must be in a way that does not draw undue attention. Radical hair styles or colouring are not allowed
- Dress shirt and tie worn anytime flying or at school between 0800hrs and 1700hrs
- No jeans. Skirts or dresses not allowed in aircraft
- Make-up to be conservative.
- Fingernails shall not be unreasonably long.
- Dress shoes shall be worn in class – no running shoes.
- High heel shoes not allowed in the aircraft.
- No more than one earring per ear. No excessively large earrings, and no other type of visible body piercing
- No wrist jewellery which could catch on switches

Since you will be flying throughout the winter and over uninhabited areas, there is an additional need for warm winter clothing for flight:

- a parka or coat suitable for the conditions expected during the flight, and in case of an emergency landing, overnight at temperatures as low as  $-25^{\circ}\text{C}$  (and sometimes colder)
- you must have on board the aircraft in winter proper snow boots, hat, gloves, and should be wearing winter underwear

## ***Acceptance of the Canadian Air Regulations (CARs)***

The rules that govern our Flight Training Unit are set out by the Federal government in the Canadian Air Regulations. All Pilots and Pilots-in-training must follow them.

## **General Overview of the Aviation Industry**

Flying for a living is a very rewarding and exciting career. You can find work anywhere in Canada. You could be flying to Europe or Asia. Before you can fly for the major operators, though, you must gain experience.



Opportunities for employment at major airline carriers, such as Air Canada, require additional flight time and work experience. You should not expect to gain full-time, high paying employment immediately following graduation. Most graduates begin their career as a flight instructor. Other starting jobs include flying cargo, bush flying or sight-seeing charters. The experience gained in this work leads to jobs flying charter and MEDEVAC (medical evacuation) with companies such as Flight Exec, Voyager Airways or Thunder

Air. This additional experience leads to work with third tier airlines such as Bearskin Airlines, and Air Georgian with better pay and working conditions. Occasionally, the Air Force allows graduates from Sault College to enlist without a university degree, allowing you to obtain this degree during your enlistment.

It will usually take several years, but once you get established with a good air carrier, your pay is impressive. Top pay at major airlines could eventually be as high as \$200,000 or more per year. You can expect to be flying the most advanced airliners in the world to anywhere in the world.

Getting started in aviation can be tough, but if your dream is to become an airline or corporate pilot and you are willing to work to get it, you will succeed.

## **Additional Requirements**

You must be fluent in the English language. Transport Canada has a requirement for an Aviation Language Proficiency (English) certificate. This certificate is a requirement for admission.

A Transport Canada Category 1 aviation medical is required for a Commercial Pilot licence. A photocopy of your Category 1 medical is a requirement for admission. An approved Civil Aviation Medical Examiner must complete this medical. The doctor's fee for this medical is not covered by OHIP, and ranges from \$75.00 to \$150.00. Transport Canada charges an administration fee (see Costs in the appendix).

A list of qualified Doctors and Aviation Language Examiners can be found on Transport Canada's web site at [www.tc.gc.ca](http://www.tc.gc.ca).

You must also provide proof of age and citizenship to be able to process your Student Pilot permit. A valid passport, birth certificate or immigration card is acceptable. A driver's licence is not sufficient. Because of a limitation imposed by the manufacturer of our single engine aircraft, you must not weigh more than 250 lbs.

## **Our Aircraft**

See the appendix for the specifications.

Our single engine trainer is the Zlin 242L, which is manufactured by Moravan in the Czech Republic. It is fully aerobatic (although aerobatics are not taught at Sault College), and yet stable enough for a new student to handle. It has a 200 hp Lycoming engine with a constant speed propeller, a control stick instead of a control wheel, and the avionics includes a Primary Flight Display (PFD) and an IFR certified WAAS enabled GPS with a colour moving map display.



Our multi engine trainer is the Piper Seminole. The Seminole has been the mainstay of multi training for decades. Our Seminoles were built in 1995 and include a flight director/autopilot, HSI and RMI.

## **History of our program**

The program started in 1974 as a three-year technology diploma program consisting of twenty months of training condensed into two years. The flight-training component of the program was designed to provide the successful student with a Commercial Pilot Licence, and a Group 1 (multi-engine) Instrument Rating. In 1989, the program was expanded to the present three-

year/seven semester format. In 1994, the College purchased the hangar facilities that it presently uses.

The aircraft provided initially were Cessna 150's and a Piper Apache. The fleet was gradually modernized and increased in size and consisted of six C152's, three C172's and three Piper Twin Comanches. In 1995, the decision was made for the College to become a flight training unit and purchase new aircraft. Our training fleet now consists of ten Zlin 242L's and two Piper Seminoles. In April of 1997, the college started its own Approved Maintenance Organization to handle the maintenance of the fleet.

Flight simulation has been an ever-increasing component of the program. Early on, the college acquired a Frasca 102G multi-engine flight-training device (FTD) and a 101G single engine. Although these simulators were built in the pre-electronic computer days and utilized all sorts of mechanical gizmos (motors, springs, gears, fishing line etc.) to provide the proper instrument indication and control feel, the flight simulation was realistic and effective. In 1990 a Frasca 242 two seat convertible - single/multi-engine FTD with a basic visual system replaced the F102. The F101 was retired in 1998.

In 2002, the college took delivery of two new Mechtronix Ascent Flight Training devices. These FTDs incorporate the latest technology, which includes the avionics that the aircraft use. The visual system provides a 180° external view. These are convertible between multi engine and single engine aircraft. To accommodate the new flight training devices, a new simulator room facility was built. In 2003, the Frasca 242 was modified with a cockpit from a Zlin, and the resulting flight training device was certified by Transport Canada. This "new" FTD provides type-specific training for pilots working on their Instrument Rating as well as for new students learning to fly the Zlin for the first time.

## **Costs**

See the appendix for the table outlining the fees.

## **Check out Our Web Site**

For more information and pictures check our web site at

<http://www.saultcollege.ca/Programs/Programs.asp?progcode=4061&cat=overview&groupcode=AVI#bd-header>

# Appendix

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## Tuition Fees

(Includes ancillary fees 2011/2012. Please see the web site for up-to-date fee schedule)

Fall Fees: \$2,602.25

Winter Fees: \$2,513.25

Summer Fees: \$2,513.25

Total first year: \$7,682.75

**Second Year - Fall and winter: \$4,953.89**

**Third Year – Fall and winter: \$4,832.26**

Note: The basic cost of the flight training, **including the cost of operating the aircraft**, which starts in semester 2, is included in the college tuition. Additional costs are shown below.

## Residence 2011-2012 Room Rates

Room	Your Meal Plan Choice	Total Fees
Super Single \$6085	Standard Meal Plan \$2700	<b>\$8785</b>
	Enhanced Meal Plan \$3000	<b>\$9085</b>
Single \$5285	Standard Meal Plan \$2700	<b>\$7985</b>
	Enhanced Meal Plan \$3000	<b>\$8285</b>
Double \$4485	Standard Meal Plan \$2700	<b>\$7185</b>
	Enhanced Meal Plan \$3000	<b>\$7485</b>

## Off campus Housing (Monthly - approximate)

Room and Board: \$400 to \$500

Light House Keeping: \$300 to \$400

Apartments: \$400 to \$500

Houses: \$325 per person, \$900 per house

## Estimated Transport Canada and other Fees

Semester	Description	Fee or cost
Semester 1	Category 1 Aviation Medical – Physician Fee	\$85 to \$180
	Transport Canada Aviation Language Proficiency Test (English)	\$50 to \$75
	Headset and winter clothing in preparation for flying in semester 2	\$300 to \$1000 depending on what you already have
Semester 2	Transport Canada Private Pilot Written Exam Fee	\$105
	Subscription for the Canada Flight Supplement (C.F.S.)	\$99 per year plus tax
Semester 3	Private Pilot Flight Test	\$300
	Transport Canada Fee for issuance of Private Pilot Licence	\$55
Semester 4	Renewal of Cat 1 medical – Physician and Transport Canada Fee	\$140 to \$235
	Transport Canada Fee for endorsement of Night Rating	\$30
Semester 5	Renewal of C.F.S. subscription	\$99 plus tax
	Commercial Pilot Flight Test	\$300
	Transport Canada Commercial Written Exam Fee	\$105
Semester 6	Renewal of Cat. 1 medical – Physician and Transport Canada Fee	\$140 to \$235
	Subscription to the Canada Air Pilot and IFR charts	\$69 plus tax
	Multi Class Flight Test	\$300
	Transport Canada Fee for endorsement of Multi-Class Rating	\$30

	Transport Canada Instrument Rating Written Exam Fee	\$35
Semester 7	Group 1 Instrument Rating Flight Test	\$300
	Transport Canada Fee for endorsement of Group 1 Instrument Rating	\$30
	Transport Canada Fee for issuance of Commercial Licence	\$80

Note: Fees are set by Transport Canada, individual Authorized Pilot Examiners, Medical Professionals and other vendors and are subject to change. The table above is intended as a guide.

# The Moravan Zlin 242L



# The Piper Pa44 Seminole



## Aircraft Specifications

<b>Zlin 242</b>	<b>PA 44 Seminole</b>
<b>General</b> <ul style="list-style-type: none"> <li>• 2 seat trainer, fully aerobatic</li> <li>• certified for VFR, Night, IFR</li> </ul>	<b>General</b> <ul style="list-style-type: none"> <li>• 4 seat multi-engine trainer</li> <li>• certified for VFR, Night, IFR</li> </ul>
<b>Manufacturer</b> <ul style="list-style-type: none"> <li>• Moravan, Czech Republic</li> <li>• built in 1995 and 2001</li> </ul>	<b>Manufacturer</b> <ul style="list-style-type: none"> <li>• Piper Aircraft, Vero Beach, Florida</li> <li>• Built in 1995</li> </ul>
<b>Dimensions:</b> <ul style="list-style-type: none"> <li>• Wing span: 30.64 ft</li> <li>• length: 22.7 ft</li> <li>• Gross Weight: 2400 lbs.</li> </ul>	<b>Dimensions:</b> <ul style="list-style-type: none"> <li>• Wing span: 38.5 ft</li> <li>• Length: 27.6</li> <li>• Gross Weight: 3800 lbs.</li> </ul>
<b>Limitations:</b> <ul style="list-style-type: none"> <li>• stressed to +6 g and -3.5 g</li> <li>• Stall speed: 50 kts</li> <li>• Cruise @ 65% power: 105 kts (192 km/hr)</li> <li>• Vne: 172 kts</li> </ul>	<b>Limitations:</b> <ul style="list-style-type: none"> <li>• Stall speed 55 kts</li> <li>• Cruise @ 65% power: 155 kts (290 km/h)</li> <li>• Vne: 202 kts</li> <li>• Vmc: 56kts</li> </ul>
<b>Engine:</b> <ul style="list-style-type: none"> <li>• Lycoming AEIO-360</li> <li>• 200 hp, Fuel injected</li> <li>• Constant speed 3-bladed MT aerobatic propeller</li> <li>• Christan Inverted oil system</li> </ul>	<b>Engines:</b> <ul style="list-style-type: none"> <li>• Lycoming O-360 and LO-360</li> <li>• 180 hp each</li> <li>• 2 bladed Hartzell constant speed, full feathering propellers</li> <li>• Counter-rotating engines</li> </ul>
<b>Avionics:</b> <ul style="list-style-type: none"> <li>• Aspen Evolution 1000 pro PFD</li> <li>• 1 – Garmin GTN 650 GPS/nav/com</li> <li>• 1 – KX 155 Nav/com</li> <li>• 1 – KT 76A Mode C transponder</li> <li>• 1 – KR 87 ADF</li> </ul>	<b>Avionics:</b> <ul style="list-style-type: none"> <li>• 2 – KX 165 Nav/coms</li> <li>• 1 – KT 70 Mode C transponder</li> <li>• 1 – KN 62A DME</li> <li>• KI 227 RMI, K 525 HSI</li> <li>• KR 87 ADF</li> <li>• KC 192 Flight Director/autopilot</li> <li>• KLN 94 GPS</li> <li>• Insight Avionics Strikefinder</li> </ul>