



ROYAL CANADIAN AIR CADETS
PROFICIENCY LEVEL FOUR
INSTRUCTIONAL GUIDE



SECTION 1

EO C460.01 – DESCRIBE AERODROME OPERATIONS CAREER OPPORTUNITIES

Total Time:	30 min
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PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-804/PG-001, *Proficiency Level Four Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Nil.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to provoke thought and stimulate interest among cadets.

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings on aerodrome operations career opportunities.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to describe aerodrome operations career opportunities.

IMPORTANCE

It is important for cadets to describe aerodrome operations career opportunities as there are a wide variety of careers available in this field. An ability to describe these career opportunities is an important step in the process of preparing cadets for aviation-related careers.

Teaching Point 1

Have the cadets brainstorm aerodrome operations career opportunities.

Time: 10 min

Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets brainstorm a list of aerodrome operations career opportunities.

RESOURCES

- Flip chart paper, and
- Markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of no more than three.
2. Distribute a piece of flip chart paper and a marker to each group.
3. Have each group brainstorm a list of aerodrome operations career opportunities.
4. Have each group present their list to the class.



Encourage the cadets to consider career opportunities at various types of airports (eg, private, municipal, regional, national, international).

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2**Conduct a group discussion on aerodrome operations career opportunities.**

Time: 15 min

Method: Group Discussion

BACKGROUND KNOWLEDGE

The purpose of the group discussion is to draw the following information from the group using the tips for answering / facilitating discussion and the suggested questions provided.

AERODROME OPERATIONS CAREER OPPORTUNITIES**Aerodrome Operations Careers**

The career opportunities at aerodromes vary widely, depending on the type of aerodrome. At a small aerodrome, there are fewer positions available, but these positions require an extensive set of skills. Typical positions at a small aerodrome might include:

- aerodrome manager,
- equipment operator, and
- ramp attendant.

It is not uncommon at a small aerodrome for one person to be required to fulfill multiple roles (eg, the manager may also have to operate the equipment and refuel aircraft).

At a large aerodrome, there are more positions available and these positions are more specialized. Additionally, very large aerodromes can be compared to a small city. Typical positions at a large aerodrome might include:

- manager of airside operations,
- manager of groundside operations,
- personnel manager,
- cargo handler,
- refuelling specialist,
- various accounting and administrative positions,
- safety inspectors,
- terminal concession operators,
- building maintenance personnel,
- vehicle maintenance personnel, and
- electrical / mechanical maintenance personnel.

Skills and Training Required

The skills and training required for a career in aerodrome operations will vary depending on the specific career desired and the type of aerodrome. Some of the skills and training that might be required include:

- aviation knowledge, such as:
 - principles of flight,
 - meteorology,
 - air law,
 - navigation, and
 - airmanship;
- radio communications procedures,
- equipment operation (eg, tractors, mowers, trucks, specialty vehicles),
- safety training, such as:
 - first aid,
 - hazardous material handling, and
 - safety reporting and auditing;
- knowledge of management / leadership principles,
- knowledge of marketing concepts,
- knowledge of accounting principles,
- mechanical / technical skills,
- customer service skills,
- aircraft recognition skills, and
- communication (written and verbal) skills.

Training Institutions

There are several well-known post-secondary programs in Canada that specialize in aerodrome operations.

The British Columbia Institute of Technology (BCIT) School of Transportation offers a diploma of Technical Studies in Airport Operations at its Aerospace Technology Campus in Kelowna, B.C.

Georgian College in Barrie, Ont., offers a three-year diploma in Aviation Management that includes co-operative work experience.

The University of Western Ontario, in London, Ont., offers a Bachelor of Administrative and Commercial Studies, Commercial Aviation Management Degree that combines a Commercial Pilot Licence with extensive study in business administration and aviation subjects.

GROUP DISCUSSION



TIPS FOR ANSWERING / FACILITATING DISCUSSION:

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions.
- Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

SUGGESTED QUESTIONS:

- Q1. What type of skills would the manager of a small aerodrome need?
- Q2. What type of skills would the manager of a large aerodrome need?
- Q3. What type of skills and training would be common to any career at any size aerodrome?
- Q4. What aviation-specific knowledge would be needed to work at an aerodrome?
- Q5. Why would knowledge of meteorology be important for someone working at an aerodrome?
- Q6. Why would knowledge of radio communication procedures be important for someone working at an aerodrome?
- Q7. Which employees at an aerodrome would need to understand accounting? Why?
- Q8. Why would an airport manager need to be able to communicate using written methods of communication?
- Q9. Which post-secondary training institutions offer specialized aerodrome operations programs?
- Q10. Which type of university degrees would be helpful to someone looking for a career in aerodrome operations?



Other questions and answers will develop throughout the group discussion. The group discussion should not be limited to only those suggested.



Reinforce those answers given and comments made during the group discussion, ensuring the teaching points have been covered.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the group discussion will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the group discussion on aerodrome operations career opportunities will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

A wide variety of career opportunities exist in the aerodrome operations field. Part of the process of preparing for a career in this field is to describe the career opportunities. By describing the opportunities and discussing the skills, required training, and training institutes you may be able to decide if one of these careers is the one for you.

INSTRUCTOR NOTES / REMARKS

If available, a guest speaker from the field of aerodrome operations may be used for this lesson.

REFERENCES

C3-309 Avjobs.com. (2009). *Aviation career overviews*. Retrieved February 9, 2009, from <http://www.avjobs.com/careers/index.asp>

C3-313 Canadian Airports Council. (2009). *Post secondary programs*. Retrieved February 9, 2009, from http://www.cacairports.ca/english/careers/post_secondary_programs.php



ROYAL CANADIAN AIR CADETS
PROFICIENCY LEVEL FOUR
INSTRUCTIONAL GUIDE



SECTION 2

EO C460.02 – DESCRIBE AIR TRAFFIC CONTROL (ATC) CAREER OPPORTUNITIES

Total Time:

30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-804/PG-001, *Proficiency Level Four Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Have the cadets visit the NAV CANADA ATC careers web site (<http://takecharge.navcanada.ca>) or provide handouts of the content on the web site at least one week prior to the lesson.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to provoke thought and stimulate interest in ATC career opportunities among cadets.

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge, opinions and feelings about ATC career opportunities.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to describe ATC career opportunities.

IMPORTANCE

It is important for cadets to describe ATC career opportunities as ATC is responsible for the safe and efficient flow of air traffic. An ability to describe these career opportunities is an important step in the process of preparing cadets for aviation-related careers.

Teaching Point 1

Have the cadets brainstorm ATC career opportunities.

Time: 10 min

Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets brainstorm a list of ATC career opportunities.

RESOURCES

- Flip chart paper, and
- Markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of no more than three.
2. Distribute a piece of flip chart paper and a marker to each group.
3. Have each group brainstorm a list of ATC career opportunities.
4. Have each group present their list to the class.



Encourage the cadets to consider ATC career opportunities at various types of airports (eg, private, municipal, regional, national, international).

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2**Conduct a group discussion on ATC career opportunities.**

Time: 15 min

Method: Group Discussion

BACKGROUND KNOWLEDGE



The purpose of the group discussion is to draw the following information from the group using the tips for answering / facilitating discussion and the suggested questions provided.

ATC CAREER OPPORTUNITIES

ATC in Canada is provided by a private, not for profit company called NAV CANADA. NAV CANADA is responsible for the selection and training processes. Transport Canada is responsible for setting the prerequisites for candidates and the ensuring that the candidates meet the required standards prior to issuing an ATC license.

ATC Careers

There are three main career opportunities in the ATC field:

- flight service specialist,
- instrument flight rules (IFR) air traffic controller, and
- visual flight rules (VFR) air traffic controller.

As a person gains experience in their chosen option, additional opportunities become available (eg, supervisory and management opportunities).



Additional career opportunities exist outside of ATC within NAV CANADA. A list of current opportunities can be view at the NAV CANADA web site (<http://www.navcanada.ca>) in the Careers section.

Selection Requirements

Previous aviation-related experience and knowledge is not required to be selected for ATC training. The aviation knowledge required is part of the training. In order to be selected for ATC training, all candidates must be:

- at least 18 years old,
- a Canadian citizen (or permanent resident),
- a high school graduate,
- available for training within the next 18 months,
- willing to relocate,
- willing to undergo a medical exam,
- prepared to undergo a security check (secret level),

- willing to train intensively, and
- English-speaking or fluently bilingual (English and French).

Selection Process

The selection process is designed to select the best applicants who have:

- sharp judgment,
- strong motivation,
- excellent problem-solving abilities,
- a clear voice, and
- a good memory.

There are six steps in the selection process. The first step is to apply online (<http://takecharge.navcanada.ca>). After completing the application process, there are two online tests that must be taken. If the results from the online tests are favourable, the applicant will be contacted by NAV CANADA and invited to participate in an in-person assessment session. A \$200 assessment fee is charged for the in-person session. The testing during this session is more extensive and includes a variety of tests that measure:

- thinking and reasoning,
- communication,
- multi-tasking,
- attention,
- information processing,
- memory,
- motor ability,
- agreeableness,
- conscientiousness,
- emotional stability, and
- knowledge.

The most successful candidates from the in-person assessment sessions are invited to participate in a two-stage interview process. The first interview is conducted during a teleconference, and the second interview is conducted in person. Successful candidates from the interview process are placed on a roster for training. Candidates placed on the roster for training must undergo a medical exam and a security check. Following the medical exam and security check, candidates must then complete a 30–50 hour Introduction to Aviation online course prior to commencing the formal training process.

Training Process

The initial classroom training process for all three specialties is conducted at seven area control centres (ACCs). Candidates will be trained initially in the same area of the country that their on-the-job training (OJT) phase will be conducted.

Flight service specialists receive initial training of up to six months. The tuition for this phase is \$1 000. Upon completion of initial training, candidates move to the OJT phase and begin earning a training salary (approximately \$30 000 per year). OJT may last up to six months.

VFR air traffic controllers receive initial training of four to six months in duration. The tuition for this phase is \$2 500. Upon completion of initial training, candidates move to the OJT phase and begin earning a training salary (approximately \$33 000 per year). OJT will last for four to six months.

IFR air traffic controllers receive initial training of 7–14 months in duration. The tuition for this phase is \$3 500. Upon completion of initial training, candidates move to the OJT phase and begin earning a training salary (approximately \$33 000 per year). OJT will last for 6–12 months.



The assessment fee, tuition costs and training salaries are current as of April 2009.

GROUP DISCUSSION



TIPS FOR ANSWERING / FACILITATING DISCUSSION:

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions.
- Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

SUGGESTED QUESTIONS:

- Q1. What type of skills would a flight service specialist need?
- Q2. What type of skills would a VFR air traffic controller need?
- Q3. What type of skills would a IFR air traffic controller need?
- Q4. What aviation-specific knowledge would be needed for a career in ATC?

- Q5. Why would knowledge of meteorology be important for someone in a career in ATC?
- Q6. Why would knowledge of radio communication procedures be important for a career in ATC?
- Q7. What are the prerequisites for a career in ATC?
- Q8. What is the selection process for a career in ATC?
- Q9. What is the training process for a career in ATC?
- Q10. What type of post-secondary training would be helpful to someone looking for a career in ATC?



Other questions and answers will develop throughout the group discussion. The group discussion should not be limited to only those suggested.



Reinforce those answers given and comments made during the group discussion, ensuring the teaching points have been covered.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the group discussion will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the group discussion on ATC career opportunities will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

A variety of career opportunities exist in the ATC field. Part of the process of preparing for a career in this field is to describe the career opportunities. By describing the opportunities and discussing the skills, required training, and training institutes you may be able to decide if one of these careers is the one for you.

INSTRUCTOR NOTES / REMARKS

If available, a guest speaker from the field of air traffic control may be used for this lesson.

REFERENCES

C3-332 NAV CANADA. (2009). *Take charge of your career*. Retrieved February 23, 2009, from <http://takecharge.navcanda.ca>

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ROYAL CANADIAN AIR CADETS
PROFICIENCY LEVEL FOUR
INSTRUCTIONAL GUIDE



SECTION 3

EO C460.03 – DESCRIBE AIRPORT SECURITY CAREER OPPORTUNITIES

Total Time: 30 min

PREPARATION

PRE-LESSON INSTRUCTIONS

Resources needed for the delivery of this lesson are listed in the lesson specification located in A-CR-CCP-804/PG-001, *Proficiency Level Four Qualification Standard and Plan*, Chapter 4. Specific uses for said resources are identified throughout the instructional guide within the TP for which they are required.

Review the lesson content and become familiar with the material prior to delivering the lesson.

PRE-LESSON ASSIGNMENT

Have the cadets visit the Canadian Air Transport Security Authority (CATSA) web site (<http://www.catsa-acsta.gc.ca>) or provide handouts of the roles and responsibilities, and career opportunities sections of the web site at least one week prior to the lesson.

APPROACH

An in-class activity was chosen for TP 1 as it is an interactive way to provoke thought and stimulate interest among cadets.

A group discussion was chosen for TP 2 as it allows the cadets to interact with their peers and share their knowledge, experiences, opinions, and feelings on airport security career opportunities.

INTRODUCTION

REVIEW

Nil.

OBJECTIVES

By the end of this lesson the cadet shall be expected to describe airport security career opportunities.

IMPORTANCE

It is important for cadets to describe airport security career opportunities as airport security is an important and growing responsibility at airports. An ability to describe these career opportunities is an important step in the process of preparing cadets for aviation-related careers.

Teaching Point 1

Have the cadets brainstorm airport security career opportunities.

Time: 10 min

Method: In-Class Activity

ACTIVITY

OBJECTIVE

The objective of this activity is to have the cadets brainstorm a list of airport security career opportunities.

RESOURCES

- Flip chart paper, and
- Markers.

ACTIVITY LAYOUT

Nil.

ACTIVITY INSTRUCTIONS

1. Divide the cadets into groups of no more than three.
2. Distribute a piece of flip chart paper and a marker to each group.
3. Have each group brainstorm a list of airport security career opportunities.
4. Have each group present their list to the class.



Encourage the cadets to consider airport security career opportunities at various types of airports (eg, private, municipal, regional, national, international).

SAFETY

Nil.

CONFIRMATION OF TEACHING POINT 1

The cadets' participation in the activity will serve as the confirmation of this TP.

Teaching Point 2**Conduct a group discussion on airport security career opportunities.**

Time: 15 min

Method: Group Discussion

BACKGROUND KNOWLEDGE

The purpose of the group discussion is to draw the following information from the group using the tips for answering / facilitating discussion and the suggested questions provided.

AIRPORT SECURITY CAREER OPPORTUNITIES

Security at an airport is provided by a number of different agencies, each with specific areas of responsibilities and unique career opportunities within their areas of responsibilities.

Canadian Air Transport Security Authority (CATSA)

CATSA is responsible for the following areas:

- ensuring screening of passengers and non-passengers is conducted IAW regulations at major airports;
- acquiring, deploying, operating, inspecting, and maintaining explosive detection systems at designated airports;
- implementing a restricted area identification card system at major airports; and
- developing, implementing, and evaluating a training and certification program for screening officers.

Screening Contractors

Pre-board screening personnel are provided by security firms contracted by CATSA. A variety of firms across the country provide these services.

Screening Equipment Maintenance Contractors

These contractors are responsible for maintaining the screening and security equipment IAW applicable contracts and regulations. This includes calibration of equipment and documentation of maintenance and outages.

Air Carriers

Air carriers (eg, airlines) are responsible for the security of their operations, the security of baggage after it has been screened, and ensuring that dangerous goods are transported IAW applicable regulations.

Airport Operators

Airport operators are responsible for providing physical security measures for the airport facility, providing space for screening operations, and maintaining the restricted area identification card system.

Jurisdictional Police

The jurisdictional police force is responsible for responding to emergency and security-related incidents at the airport.

Transport Canada

Transport Canada is responsible for developing regulations and standards for airport security, granting security clearances as part of the restricted area identification card system, and auditing / inspecting the security operations at airports.

SKILLS AND TRAINING REQUIRED

The required skills and training vary widely depending on the specific career in airport security. The requirements common to most of the available careers in airport security are:

- being a Canadian resident for at least the last five years,
- being able to obtain a Transport Canada security clearance,
- being at least 18 years old,
- being a high school graduate,
- having excellent customer service skills,
- being able to handle stress, and
- being able to function autonomously.

TRAINING INSTITUTIONS

Career-specific training is usually handled directly by the employer, but any security-related post-secondary program is generally considered helpful to those looking for employment in the field of airport security. Many aviation programs (eg, aviation management and commercial pilot) also include a component on airport security.

GROUP DISCUSSION



TIPS FOR ANSWERING / FACILITATING DISCUSSION:

- Establish ground rules for discussion, eg, everyone should listen respectfully; don't interrupt; only one person speaks at a time; no one's ideas should be made fun of; you can disagree with ideas but not with the person; try to understand others as much as you hope they understand you; etc.
- Sit the group in a circle, making sure all cadets can be seen by everyone else.
- Ask questions that will provoke thought; in other words avoid questions with yes or no answers.
- Manage time by ensuring the cadets stay on topic.
- Listen and respond in a way that indicates you have heard and understood the cadet. This can be done by paraphrasing their ideas.
- Give the cadets time to respond to your questions.

- Ensure every cadet has an opportunity to participate. One option is to go around the group and have each cadet answer the question with a short answer. Cadets must also have the option to pass if they wish.
- Additional questions should be prepared ahead of time.

SUGGESTED QUESTIONS:

- Q1. What types of skills would a pre-board screening officer need?
- Q2. What types of skills and training would be common to any career in airport security?
- Q3. What aviation-specific knowledge would be needed to work in airport security?
- Q4. Why would knowledge of radio communication procedures be important for someone working in airport security?
- Q5. Which type of post-secondary training would be helpful to someone looking for a career in airport security?



Other questions and answers will develop throughout the group discussion. The group discussion should not be limited to only those suggested.



Reinforce those answers given and comments made during the group discussion, ensuring the teaching points have been covered.

CONFIRMATION OF TEACHING POINT 2

The cadets' participation in the group discussion will serve as the confirmation of this TP.

END OF LESSON CONFIRMATION

The cadets' participation in the group discussion on airport security career opportunities will serve as the confirmation of this lesson.

CONCLUSION

HOMEWORK / READING / PRACTICE

Nil.

METHOD OF EVALUATION

Nil.

CLOSING STATEMENT

A wide variety of career opportunities exist in the airport security field. Part of the process of preparing for a career in this field is to describe the career opportunities. By describing the opportunities and discussing the skills, required training, and training institutes you may be able to decide if one of these careers is the one for you.

INSTRUCTOR NOTES / REMARKS

If available, a guest speaker from the field of airport security may be used for this lesson.

REFERENCES

C3-309 Avjobs.com. (2009). *Aviation career overviews*. Retrieved February 9, 2009, from <http://www.avjobs.com/careers/index.asp>

C3-316 Canadian Air Transport Security Authority. (2008). *Screening officers – Roles and responsibilities*. Retrieved February 10, 2009, from <http://www.catsa-acsta.gc.ca/so-ac/english/roles/>

C3-317 Canadian Air Transport Security Authority. (2009). *Employment opportunities*. Retrieved February 10, 2009, from http://www.catsa-acsta.gc.ca/english/about_propos/opp/index.cfm