Airport Management Program and Curriculum Issues at 2- and 4-year Aviation Colleges and Universities

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ABSTRACT

The majority of aviation related education programs at U.S. colleges and universities focus on flight education and training. These flight education programs and curricula have been developed over time and within the regulatory constructs of Title 14 Code of Federal Regulations Parts 61, 141, 145 and others. Not as well developed are curricula and goals for student outcomes related to airport management and operations, or aviation management programs in general. This paper presents and outlines issues as they relate to the development of an airport/aviation management curriculum for 2- and 4- year post secondary education institutions and promotes discussion on these issues in light of practical and accreditation constraints.

INTRODUCTION

Previous journal articles have stated that the skills and knowledge required of individuals for entry into the field of airport operations and management have changed from a decade ago (Prather, 1998; Quilty, 2003). The requirements are becoming more diverse, challenging and technical. Individuals are expected to be knowledgeable of real estate principles, noise issues, wildlife mitigation, emergency response, hazardous materials handling, environmental mitigation, construction management, and security to name a few specific topics.

Not only have the knowledge requirements increased, but the skill and personal ability requirements have become more demanding and specialized as well. Airport management and operations employees must not only have effective team, interpersonal, communication, and decision-making skills, but they must also be able to assess risks and hazards properly, handle emergency crisis situations, have a tolerance for ambiguity, plow snow, enforce security regulations, be drug and criminal activity free, and respond at all hours of the day, as needed, in changing weather conditions.

The increased knowledge and skill requirements pose a problem for academic institutions attempting to prepare students for these new requirements. For 4-year institutions, the goal is to provide a graduate who has a broad educational background coupled with a major field of generalized study. For 2-year institutions, the focus can be more specialized but at the expense of the broader capabilities of a four year institution. For the industry, neither approach may meet the needs of airports for well trained and qualified individuals.

Speaking at the 1995 UAA Fall Education Conference, Kurt Herwald, CEO and President of Stevens Aviation, a general aviation service organization, closed his guest speaker remarks with the following:

> "The long term outlook for the service end of the aviation industry will call for a higher level of education, increased technical complexity, more emphasis on training and retraining and a focus on a team environment. From this we need from you the educator's usable skills, recognition that the employee in his job will undergo constant change and that those who succeed will progress from technical positions to managers and as a result must adapt, be flexible, and work well with others." (UAA Newsletter, 1995, pg. 12-13).

Herwald recommended that educators focus on both theoretical and functional knowledge, and that students be provided a broad versus narrow education base. The use of the word "broad" in this context refers to individuals with flight education backgrounds. At issue is the specialized nature of flight education curricula

that leaves little room for business, management or other airport operations courses.

Since the majority of graduates from university or college programs are from flight education programs, it is reasonable to expect that the majority of applications to an FBO, general aviation or airport facility are those with primarily a flight background. Based on a preliminary review of typical aviation programs, the students would not have the broad business or operations-related courses that would be of value to the organization. This was emphasized when Herwald went on to say that graduates need to have excellent written and verbal communication skills, an understanding of the business--both the economics and marketing aspects--strong leadership and interpersonal skills. Conclusions made by Fuller and Truitt (1977) in a study on essential course requirements for the aviation consulting business also targeted the strong need for oral and written communication skills.

This paper addresses some of the issues facing 2- and 4-year institutions in developing a curriculum that meets the needs of the industry, the requirements for accreditation, and a generally recognized goal of cooperative articulation between different levels of educational institutions. It also presents a basic overview of skills and knowledge requirements for entry level airport operations personnel and opens the debate for further study and clarification of the student learning outcomes in the area of airport operations. The target of this discussion is focused toward entry level airport operations positions at general aviation and air carrier airports to which many of aviation students gravitate to upon graduation.

BACKGROUND

In 1976, the University Aviation Association (UAA) developed through its members recommended standards for aviation curricula by establishing the College Aviation Accreditation Guidelines. In essence, the Guidelines outlined the first curricula standards for associate, baccalaureate, and graduate programs in aviation. With the assistance of the UAA in 1983, the Federal Aviation Administration developed and implemented the FAA Airway Science Program. The Airway Science Program was developed as a means to better prepare individuals for occupational specialty careers with the FAA. Five major specialties were identified: (1) Airway Science Management; (2) Airway Computer Science; (3) Aircraft Systems Management; (4) Airway Electronic Systems; and (5) Aviation Maintenance Management (FAA Brochure, 1989)

The UAA, through its Airway Science Curriculum Committee, helped to review and evaluate various aviation curricula across the country. In response to the identified need by institutional members of UAA for accreditation of non-engineering aviation programs (aviation programs housed in engineering programs were generally accredited under the engineering disciplines), the original UAA guidelines were considered for revision and adoption by a separate accrediting body, the Council on Aviation Accreditation (CAA, 2003, page 1).

The CAA was established in October of 1988 to act as an accrediting body for non-engineering aviation programs in the United States. “Accreditation is a status granted to an educational institution or a program that has been found to meet or exceed stated criteria of educational quality.” (CAA, 2003). The purpose of accreditation, according to the CAA Standards Manual, is to ensure the quality of the institution or program, and to assist in the improvement of the institution or program. Accreditation, which applies to institutions or programs, is to be distinguished from certification and licensure, which apply to individuals.” (CAA, 2003, page 8).

The lack of program standards for individuals seeking specifically designed certificate or licensure programs under CAA guidelines are generally addressed through FAA licensure or industry driven programs such as the National Business Aviation Association’s Certified Aviation Manager (CAM); the American Association of Airport Executives’ Accredited Airport Executive (A.A.E.), Certified Member (C.M.), or Airfield Certified Employee (A.C.E.) programs; or the National Air Transportation Associations Safety 1st® program.

Under Section 2.5 Scope of the CAA Accreditation Standards Manual, the CAA

"...acknowledges the need for broadly educated individuals who are specifically qualified in aviation, requiring the preparation afforded by associate degree programs with a significant general education component or baccalaureate programs." (CAA, 2003).

It is the phrase "broadly educated" and the phrase "specifically qualified" that is perceived to create a problem in aviation management curriculum development. CAA guidelines would consider an institution for accreditation under the context of a broader general education and aviation breadth that may not actually meet the needs of the industry. From an investigation of position descriptions and general industry information, the industry appears to require university or college graduates to have more specialized skills and knowledge, at least at the entry level position. General education is a very important and necessary aspect of the overall development of a student. The problem from an accreditation standpoint is how does one strike the proper balance between "specifically qualified" and "broadly educated" and remain within the acceptable number of course offerings to meet an institution's normal graduation requirements?

Dating back as far as 1995, industry feedback to academia and the FAA has been to place more focus on airport operations. In a summer workshop addressing the FAA's Airway Science program, James Dunlap, director of operations for Denver International Airport, pointed out the need for less administration and more operations focus for those in airport management. "Airport operations could be a class by itself with topics such as weather forecasting, snow removal, FAR's including Part 139, security, planning/construction, commercial vehicles/ parking, and airport emergencies. These are the topics that airport operations specialists deal with on a daily basis (Newsletter, 1995, pg. 11).

At the same symposium, it was brought out that operation individuals need education on how construction activity will affect airport operations and on topics such as runway resurfacing, security system upgrades, facility additions, and contractor administration, rather than just the big picture of a major construction project or new airport construction. It was suggested that other areas to be included in a graduate's repertoire of knowledge would be those related to environmental issues, tenant concessions, airport government and political factors, communications, public relations, computer skills, crisis management, and conflict resolution. (UAA Newsletter, 1995, pg. 11).

But the industry requirements continue to change and CAA or individual institutions may have to address this issue sooner than later. In February of 2004, the FAA issued a revised 14 Code of Federal Regulations (CFR) Part 139. Embodied in revised 14CFR Part 139 regulation is the requirement for specialized instruction of individuals responsible for the safe operation of airports. Specifically, Part 139 requires those individuals at certificated airports having responsibility for carrying out the duties of ensuring airport compliance are to be qualified and trained in areas such as airport self-inspection, airport condition reporting, airport accident and incident reporting, airport fueling and inspection, emergency response, and operation on airport movement and safety areas (FAA, 2004).

The American Association of Airport Executives (AAAE) has been offering a number of educational seminars, conferences, and workshops to airport and other aviation professionals. The major aviation fuel and oil suppliers, such as BP Oil and AvFuel, have requirements for line service and fire hazard training. A review of these training activities would indicate that the products of university aviation management and flight training programs are not adequate to meet the needs of the market and therefore additional transition training is necessary.

ISSUES

The issues outlined in this paper warrant aviation faculty and industry debate and accreditation deliberation. There are five issues addressed:

1. What courses should make up the core of an airport management or operations program?

2. What should be the content or learning outcomes of airport management or operations courses?
3. How will 2-year and 4-year institutions integrate their airport management or operations curriculums or otherwise meet the marketplace demand for graduates?
4. How will transfer courses from 2-year institutions be incorporated into 4-year institutions when the airport management or operations course content or text is the same?
5. Who will teach the airport management or operations courses.

Issue 1: What courses should make up the core of an aviation management program?

The Council on Aviation Accreditation (CAA) Standards Manual identifies the object of an aviation core is to ensure that all students in a collegiate aviation program have a foundation of essential and specialized knowledge of national and international aviation and aerospace systems appropriate to the degree being sought. The students' foundation of knowledge of these systems should include a broad understanding of the components of the systems, insight into how these components function together, and an understanding of how these relate to the physical, economic, political and social environments within which these systems operate (CAA, 2003, pg. 12).

Appendix F of the CAA Standards Manual Form 101 (CAA, 2003) provides a list of subject matter for all program possibilities which could fall under an Aviation Studies option. The topic list is broad in its scope. For instance, airport management, aviation law, aviation business administration, aviation economics, and aviation safety are several of the topics cited. These topics reflect the origins of the UAA Accreditation Guidelines and the subsequent Airway Science program. It also reflects the subject matter topics that previous studies have ascertained. What is missing is the more specific outcomes that the courses should address and the industry actually needs. An analysis or study of specific outcomes may determine that additional courses may be required to adequately cover the knowledge and skills required by the industry.

Issue 2: What should be the content or learning outcomes of airport management or operations courses?

Individuals seeking entry level positions in airport operations will encounter a variety of different position titles. A review of entry level positions in airport operations culled from the American Association of Airport Executives job listings for the period January 1999 to December 2003 identifies the positions listed in Table 1.

A review of the brief position descriptions provided later in this paper along with sample position description in Appendix A, shows several factors are prevalent. Shown in Table 2 are frequently mentioned core requirements determined from all of the position descriptions reviewed. While the knowledge areas may well be covered in today's courses and curriculums, it is unknown what depth of knowledge is necessary. The specialist nature of the entry level position and the depth to which an understanding of the subject matter is required, especially since safety and the lives of others are at stake, makes a study of the learning outcomes of each of the requirements important for determining the structure of a course.

Table 1. *List of entry level airport operations positions titles for the period January 1999 through December 2003.*

Airport operations trainee	Airport operations duty officer
Airport operations aide	Airport operations specialist
Airport operations technician	Airport operations specialist I
Airport operations representative	Airport compliance coordinator
Airport operations coordinator	Airport certification specialist
Airport operations assistant	Airport safety specialist
Airport operations officer	Administrative/operations coordinator
Airport operations agent	Airport manager specialist I
Airport operations/facilities coordinator	Airport duty manager

Table 2. *Knowledge requirements listed in airport operations position descriptions.*

- FAA rules and regulations to include 14 CFR Parts 77, 139, and 150
- TSA rules and regulations to include 49 CFR Part 1542 and 1544
- Advisory Circulars
- Federal, state and local laws applicable to airports
- Airport organization
- Knowledge of airport certification and security
- General airport operations practices
- Airline operations
- Airport security
- Emergency practices and rescue techniques
- Emergency and disaster preparedness
- Groundskeeping repair and maintenance
- CPR/First Aid
- Navigational aids
- Air traffic control
- Airport traffic communications systems
- Basic airport terminology
- Computer based programs and applications including word processing, database management, spreadsheets and other related computer software
- Public relations procedures

Relative to the knowledge requirements of the Federal Aviation Regulations (FAR), several of the job listings used clarifying words such as "demonstrated knowledge", "working knowledge", "thorough knowledge" and even "considerable knowledge" of the FAA requirements, policies and procedures, and regulations. One advertisement required applicants to pass a test pertaining to FAA Regulation Part 139. Recently, AAAE has made available the opportunity for individuals to achieve Certified Member (C.M.) status by successful completion of the AAAE's accreditation exam. However, anecdotal information received by this author from persons interviewing graduates with the C.M stated they were "book smart" but had difficulty applying it to airport situations because of a lack of experience.

From a skill and ability perspective, the position announcements addressed common themes as well. Table 3 lists several of the skills often identified in the announcements. These skills point to the learning outcomes that are necessary for the overall curriculum and help to define the type of activities that should occur within courses.

In contrast to the Table 3 listings, the Standards for CAA accreditation list criteria that are similar but in some respect less specific. It is

assumed that an aviation program would have to identify specific learning skills as part of any accreditation standard. The question is to what degree do they develop those skills? At the associate degree level, institutions that can best focus on specific training do so but at the expense of the more general and broad-based education requirement expected by CAA and other accrediting bodies. Baccalaureate degree granting institutions may have to refine their management programs to better address the needs and requirements of the industry by providing additional specific skill based education.

A few of the abstracted job positions identified the requirement for working rotating or any shift, working in various weather conditions, performing physical work activities, having the ability to lift heavy objects, and meeting the criminal history background check (CHBC) required by the Transportation Security Administration (TSA). These types of requirements, while not considered knowledge or skill requirements, reflect capabilities and behaviors that should be part of a student's development, either as informational course material or as part of a cooperative education or internship program. Appendix A list several job descriptions that best illustrate the type of positions and performance outcomes expected by the industry of a university undergraduate curriculum on airport management.

Table 3. *Knowledge requirements listed in airport operations position descriptions.*

Strong oral, written and interpersonal communication skills
Good radio communication skills
Crisis management skills
Use effective management skills and maintain a team atmosphere
Maintaining safe operations based on sound judgment and experience
Prepares and presents oral and written reports
Generates data and analysis reports and forms
Ability to analyze situations quickly and objectively
Ability to determine a proper course of action during emergencies
Ability to plan and coordinate multiple activities occurring simultaneously
Demonstrate a strong customer service inclination
Computer literacy in Microsoft Word, Excel and Internet
Commercial drivers license
Lighting/safety systems

Table 4. *Fundamental skills and values of aviation graduates (2004 CAA, pg. 55).*

Critical Thinking Skills
Problem analysis; problem solving
Judgment and decision making (including resource identification and management)
Interpersonal Skills
Oral and written communications
Conflict management/conflict resolution
Team building; team maintenance; individual accountability
Values and Attitudes
Ethical standards; integrity
Flexibility; versatility; openness to change
Curiosity, imagination, creativity
Motivation
Passion
Dedication

Table 5. *Education and experience requirements listed in airport operations job announcements.*

"Four year degree in aeronautics, management, engineering or related field, or a two-year degree and at least three years of directly related full-time employment in airport, airline or military operations, or similar type experience."
"Bachelor's in business administration, engineering, public administration, aviation management or aerospace engineering plus six months of work experience related to airport operations."
"Two years of college, four years airport experience."
"High school education or the equivalent work experience."
"Two years' college course work (60-semester/90-quarter hours) in aviation, public/business administration or related field; two years' experience in airport operations at an air carrier airport facility OR related bachelor's degree and six months' experience."
"Bachelor's degree in aviation management, airport administration, or related field, and one year of relevant airport operations experience at a U.S. certificated airport."

<u>Issue 3</u>: How will 2-year and 4-year institutions integrate their airport management or operations curriculums or otherwise meet the marketplace demand for graduates?

Though the basic educational requirements varied for the positions listed in Table 1, the majority of the positions sought a four year degree with some level of previous airport experience, typically one year. Two year degrees generally required additional previous work experience. There were a few listings having a high school graduation as a minimum requirement, though those may reflect local government requirements rather than what the airport would like. The requirements generally varied with the size of airport, with larger airports requiring the four year degree and experience, and smaller airports having less stringent requirements. Table 5 lists a sampling of various education and experience requirements taken from the position announcements.

The experience factor places emphasis on the requirement for an internship or cooperative education work experience as being part of an institution's aviation program. Cooperative education and internship experiences are defined as optional or academic program opportunities that enable a student to obtain work experience in one or more career fields (CAA, 2003, pg. 34). That many entry level positions require previous airport experience supports Prather's statement that "Individuals no longer may be able to enter the field with sufficient education alone" (Prather, 1999, pg. 54). CAA standards support internship and co-op programs, but the programs are required to have documented academic requirements and evaluative controls.

The primary point of this issue is that, just as airports have become more complicated and challenging due to the demands of the industry and market, the demands on higher education to meet the challenges have increased as well. The cost of attendance at a 4-year institution is rising nationally. As a result, enrollment trends at two year institutions have been increasing (Smith, 2004). In trying to meet the demands for workplace skill training, 2-year institutions have been more flexible in that regard and are able to develop courses and instruction that address the industry's specialization needs. But how would that specialized study be accepted into a 4-year curriculum which has a more generalized scope and restricted transfer evaluation? While one can argue it is in the best interest of an individual to have both a educational specialization and a broad perspective, financial and political pressures at the State education levels for a.

Two year programs: Student needs direction
Four year programs: Student is self-directed
Graduate programs: Student gives direction

Figure 1. A model for discussion of student performance outcomes at different aviation educational levels.

seamless articulation policy that graduates a student in four years makes both difficult to achieve. This is an issue for the UAA and CAA to take up in more earnest.

It is suggested and proposed that perhaps the discussion begin with a performance outcome model shown in Figure 1. The model provides a simple analogy for what skill ability the courses taught at the different institutional levels should strive toward as a learning outcome for their aviation graduates. A graduate of an associate program would obtain positions that require supervision and direction, while an undergraduate would be able to function more autonomously, and a graduate program would allow students to move into supervisory positions.

While not a focus of this paper, it is noted that there are master degree programs that exist for individuals with some or no prior aviation education and which, in essence, cover material similar to the lower educational levels. At what level and to what degree should airport operations material be appropriately addressed?

<u>Issue 4</u>: How will transfer courses from 2-year institutions be incorporated into 4-year institutions when the airport management or operations course content or text is the same?

In addressing the specialization needs of the industry, 2-year institutions often offer the same content as at 4-year institutions. In aviation, this has been seen mostly in the area of flight training. It is surmised that with the financial and political pressures identified in Issue 3, more 2-year schools may seek to expand their aviation and airport management curriculums in the future. Also of concern are advance placement courses at the high school level that are appearing to becoming more popular. Is it reasonable to grant university credit to a high school student in a subject matter using the same text as that used at a university and which is taught at 300 or 400 levels? How will academic professionals address these issues, if at all? It would be easier to answer these questions if we can better identify the learning outcomes required of the students and then assess them on those outcomes.

As stated previously, it can be expected that more associate degree programs may seek to offer airport, general aviation or FBO related courses. Currently, of the 46 two-year institutions listed in the *Collegiate Aviation Guide*, fourteen list an aviation management or operations related course on their websites. In offering related courses at either the baccalaureate or associate level, the question of what text to use presents itself. The texts normally available for courses in airport operations or management are listed in Table 6. The text *General Aviation Marketing and Management* and *Essentials of Aviation Management* are generally considered for courses geared toward FBO and small airport operations. The remaining texts are geared for airport operations and management at larger air carrier airports. Yet, one can find any in use at either at 2-year, 4-year or even in a high school because those are the available choices.

A drawback to each textbook is the attempt to be all encompassing and focus more on aspects of overall management rather than the more detailed developmental or operational aspects of entry level positions. Each text may have chapters or sections that do address the some of the specifics requirements of entry level positions, but they generally would not be covered to any great depth. It can be argued that those chapters or courses would better serve students if the topics received focus attention as separate courses. It is rare for an individual to graduate from a university and obtain an immediate position as an airport manager. The career path normally begins with a lower level administrative or operations position where specific skills are necessary. In support of the need for study of the necessary performance

Table 6. *Airport operations and management course texts.*

Text	Author	Publisher
1. General Aviation Marketing and Management	Wells, A.	McGraw-Hill
2. Essentials of Aviation Management	Rodwell, J.	Kendall-Hunt
3. Airport Planning and Management	Wells, A.	McGraw-Hill
4. The Administration of Public Airports	Gesell, L.	Coast Aire Publications
5. Airport Operations	Ashford, N.	McGraw-Hill
6. Planning and Design of Airports	Horonjeff, R.	McGraw-Hill
7. AAAE Accreditation Modules	Quilty, S.	AAAE
8. Airport Engineering	Ashford, N.	John Wiley & Sons

outcomes for airport operation personnel, the development or assembly of a proper text would be a welcome result. The closest material to date may be AAAE's A.C.E.-Operations modules (Quilty, 2004), which are designed specifically for individuals having duties and responsibilities to carry out safety oversight and federal requirements on airports.

Issue 5: Who will teach the airport management or operations courses?

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The last issue, related to the two previous ones, is who will teach the courses? Clearly, someone with operational knowledge of how airports function and comply with federal regulations would be the ideal. Currently, many 2- and 4-year institutions seek out the local airport manager to instruct airport management related courses. But as with any adjunct instructor, they may have the working knowledge but not necessarily the capability to effectively instruct. It is important that these individuals be provided proper support and materials with which to accomplish their tasks. At the collegiate level, there are few permanent faculty (three that this author can identify) who have achieved previous recognition as an Accredited Airport Executive (A.A.E.) through AAAE. This combination of experience and education would appear to be ideal to the type of individual sought by universities. Sometimes, individuals having responsibility for teaching a course in airport management or operations comes from the existing flight faculty who have limited exposure or experience with required learning outcomes for airport operations personnel. The academic institutions need to better prepare future faculty in the area of airport operations.

SUMMARY

The original *College Aviation Accreditation Guidelines* and Airway Science Management program identified core courses for those pursuing a variety of administrative and management positions such as airport management, operations, or general aviation operations. While specifying an additional nine to 12 business or management courses at the upper level, only one course in airport management was necessary as a specialty and that could be taught at the associate degree level (FAA Brochure, 1989).

The Council on Aviation Accreditation was later established to ensure the quality of an aviation institution or program, and to assist in improving aviation institutions or programs. However, a review of the additional training accomplished at airports would indicate that the products of university aviation management and flight training programs are not adequate to meet the needs of the market and therefore additional training has been necessary.

The CAA identifies an aviation professional as "one who employs a common body of knowledge gained by study, experience, and practice, and applies it with imagination, intuition, judgment, competence, reason, ethics, integrity, and responsibility, to the design, management and operation of safe, efficient and comprehensive national and international aviation and aerospace systems." (CAA, 2003, page 10). For such a comprehensive description, the question remains as to whether today's

associate, university, and even master level programs are presenting courses with sufficient detail and with appropriate faculty and texts to prepare such individuals.

This paper presented a look at various position announcements for entry level airport operations employees, along with corresponding experience and education desired and skill requirements. From a knowledge standpoint, an analysis of the position announcements identifies common requirements that illustrate the need for more specialized content within the core subject matter of Airport Operations or Airport Management. A revision to flight education curriculum should be considered as well since flight education graduates often seek and obtain entry level operations positions at airports and fixed base operators.

Five issues are raised in this paper for consideration by the academic community. The issues center on what should be the necessary course content and level at which airport operations or management courses should be offered. Both associate, baccalaureate and graduate degree granting institutions may need to refine their aviation management programs to better address the needs and requirements of the industry. One course in airport management may not be enough for students. Additional specific skill-based education is suggested. A study to better identify the specific skills and learning outcomes necessary for graduates of aviation management and operations programs is suggested.

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APPENDIX

Below are sample position announcements taken from the American Association of Airport Executives' job listings between January 1999 and December 2003. They have been modified to delete airport identification and nonessential information such as pay grade and contact information.

AIRPORT OPERATIONS OFFICER
Under the supervision of the operations manager, monitors airfield and other facilities and personnel to ensure compliance with FAA and Commission regulations; researches and writes manuals and bid specifications; performs snow removal duties; other operations related duties as assigned. Qualifications: Bachelor's degree in aviation management, business administration, public administration or related field; prior work experience in airport operations, maintenance, or as an airport intern, a plus; must be able to meet and maintain FAA security requirements; valid driver's license required, CDL required.

OPERATIONS OFFICER
Under the direction of the operations and facilities manager, assists in planning, organizing and supervising the air and landside activities of the airport. Duties: noise abatement program and procedures, voluntary curfew incidents, violations of rules and regulations by pilots. Liaison between District and FAA and commercial carriers, maintains airport certification manual, issues NOTAMS, responsible for risk management and industrial safety program. Maintains tenant relations in connection with the property management and planning departments. College degree or equivalent plus a minimum of one year experience in airport administration and/or operations. Ability to write reports, correspondence, and written instructions, effectively present information and respond to management, administrations, engineers, media and the general public. Excellent telephone, computer skills including MS Word, Excel, Access, PowerPoint. Valid driver's license.

OPERATIONS OFFICER
Reports to operations supervisor. Basic functions: Respond to all ARFF alerts; Maintain pertinent records including landing fees; Operate snow removal equipment as needed; Monitor and maintain compliance with airport security TSA Part 1542. Skills and qualifications: Must posses a working knowledge of FAR Part 139; All applicants must successfully complete the following training: Operation of crash/fire rescue vehicle and snow removal equipment; Must possess or be able to possess a valid driver's license.

AIRPORT OPERATIONS ASSISTANT
Requirements: One year full-time experience in general airport operations including airport management, airport operational maintenance, or air traffic control; -OR- Possession of a Commercial Pilot's Certificate with an Instrument Rating or Military Aviator Rating; -OR- An Associate of Arts degree in Airport Flight Operations or Aviation Management. A valid Class C Driver's License is required at time of hire.
Duties: Duties include shift work 365 days per year. Airport Operations Assistants maintain airport facilities and equipment; provide information to the public regarding airport operations and FAA and airport regulations; enforce airport rules and regulations; operate radio communications equipment; assist in the administration of a Storm Water Pollution Prevention Program; coordinate resolutions to user concerns; assist in the enforcement of airport noise abatement programs; collect fees and generate invoices; operate airport rescue and firefighting equipment; conduct airport inspections; coordinate special events; assist in the supervision of airport contractors; respond to airport safety hazards and discrepancies; disseminate Notices to Airmen (NOTAMs); prepare written correspondence; perform minor maintenance; and perform other tasks as assigned.

OPERATIONS OFFICER
Duties include, but are not limited to, performing daily operations activities at either of two county-operated airports (a general aviation airport and a non-hub commercial service airport); conducting

airfield inspections; ensuring compliance with requirements of FAR Parts 139 and 107 and airport regulations; responding to aircraft incidents/accidents; operating ARFF truck for aircraft emergencies; coordinating and monitoring various activities of commuter airlines; monitoring airfield security; administering vehicle paid parking lot and parking regulations; promoting good public relations, and performing related duties as assigned. Six months of experience working at a general aviation, military or commercial service airport or an on-airport aviation business, or private pilot license, completion of an airport internship, or one year of college-level coursework (30 units) in airport/aviation administration (or equivalent). Knowledge of FAR required. Possession of state driver license.

AIRPORT OPERATIONS COORDINATOR

Entry level positions available immediately at busy general aviation reliever airport. Responsible for day-to-day airfield operations, security, airport safety and FAR Part 139 requirements, including inspections, wildlife, hazmat and noise abatement programs, snow removal operations, crash, fire and rescue services. Duties also include landing fee collection and customer service. Rotating shift assignments required. A.S or B.S degree preferred. Candidates should have aviation or firefighting experience and hold a valid driver's license.

AIRPORT OPERATIONS OFFICER

Under general supervision of the Operations Supervisor the position has delegated responsibility for daily operation and condition of the airport (small non-hub commercial service airport) and and general aviation airport. Possible assignments include, airside/landside operations, airport security, customer service, use of the airport systems such as FIDS/BID, CCTV, ID Badging and Access Control, etc. Successful candidates must have a working knowledge to enforce and ensure compliance with FAR 77, 139 & TSAR 1542, 1544, as well as other federal, state and local laws and regulations. Requires B.S. degree in aviation or related field, current valid driver’s license, ability to pass FBI criminal background check, good written and verbal communications, and knowledge on computer OS and office applications.

OPERATIONS SPECIALIST

Job Purpose: Under general supervision, performs various functions associated with the day-to-day operation and services of the airport.

Essential Job Functions: Routinely inspects and monitors terminal facilities, airside activities, public and employee parking lots and fixed base operations; reports deficiencies to the appropriate agencies. When necessary implements procedures to ensure airside safety during construction and other abnormal conditions. Implements airport recall list relative to airside, landside, and other facility emergencies. Assists customers and tenants with facilities' and services' needs, such as gate information, service vendors, baggage, and distressed passenger needs. Assists with ground transportation network to include public and employee shuttle buses, taxicabs, limousines, and courtesy vehicles, to include correcting deficiencies. Assists in providing supervisory direction to the Welcome Center, Operations Center, and other customer service functions of the airport. Prepares reports and collects data related to customer services, airside and landside activities. Assists in enforcing operating rules and regulations, provisions of contracts and lease agreements. Performs related work as required.

Education and Knowledge: Any combination of education and experience equivalent to graduation from a four (4) year college curriculum in aviation/airport management. Familiarity with the operation of a modern metropolitan airport, including knowledge of the applicable laws, rules and regulations. Knowledge of the principles and practices of general office management. Must possess a valid Driver's License; must possess and maintain a clear driving record; must maintain SIDA (Security Identification Display Area) and AOA (Airport Operations Area) clearance.

Work Experience: Demonstrated competency in the materials, methods, and equipment used in the operation and improvement of civil airports typically acquired through at least six months experience in airport operations.

Mental Skills: Ability to prepare reports and correspondence; ability to follow written and oral instructions; ability to accurately read maps. Demonstrated ability to direct and coordinate diversified operational activities.
Manual Skills: Ability to operate radio, telephonic and computer equipment; ability to type accurately.
Physical Effort: Requires movement throughout the terminal area and outlying facilities which includes the ability to traverse various airport terrains; ability to operate automobile.
Working Conditions: Good. Conditions could occasionally include working in inclement weather. Must be available to work assigned shifts, holidays, and weekends.
Safety of Others: High level of responsibility.
Public Relations: Ability to establish and maintain effective internal and external relationships. Must demonstrate strong interpersonal skills and high level professionalism.
Supervisory Skills: Ability to oversee the work of others.