

# **Bachelor of Science**

## **Air Traffic Management Option**

### **PROGRAM OBJECTIVES (EDUCATIONAL GOALS)**

The various advisory boards—Faculty/Instructor Advisory Board, External Aviation Advisory Board, Aviation Student Advisory Board—all play an important role in providing input for the educational goals of all aviation programs. These goals are established by the School and are reviewed at least annually by these groups during the Provost's Assessment of Student Learning Outcomes.

ATC1. Graduates will be knowledgeable in all of the FAA air traffic basic learning objectives

ATC2. Foster ethical and responsible behavior within government, industry, and society

ATC3. Provide exposure to practical application in all options of air traffic control

ATC4. Instill an appreciation for diversity and teamwork in the aviation workplace

ATC5. Stimulate the appreciation and importance of lifelong learning

ATC5a. Promote the practice of reading for life

### **PROGRAM ASSESSMENT MEASURES EMPLOYED**

#### **Measurements**

Outcomes for the Air Traffic Management Track are measured at the end of each of the air traffic control specific courses by results of pop quizzes, written essays, mid-term and final exams. The fifth and six ATC specific courses also measure student performance in both medium and high fidelity simulation exercises in both radar and non-radar separation and procedural scenarios.

#### **Measurements**

Each of the air traffic control specific courses are prerequisite for the succeeding course. The student progress is measured by a comprehensive final exam. The student must obtain a passing grade in each course before he/she is allowed to progress to the next level. These exams are based on the FAA requirements for successful completion of the Air Traffic College Training Initiative program thereby insuring candidacy for an FAA career as an Air Traffic Control Specialist.

#### **Measurements**

The Senior Capstone is the culminating course in the Aviation core curriculum for all Aviation Department degree programs. The course outcomes which are measured via written and oral products include: 1) Reinforces, integrates, extends, and applies the knowledge and skills covered in the University of Oklahoma Aviation, Business and General Education curriculums 2) Develops the additional project management and problem-solving skills needed to complete a project for an Aviation client, and 3) Delivers a useful solution to the Aviation client. Every phase of the course is designed to enable the students to demonstrate a high level of professional performance, appearance, demeanor and courtesy in an actual working Aviation environment. Students receive feedback on their work from the course faculty, faculty appointed team manager, client and also receives peer assessment of written

deliverables, oral presentation and ability to function successfully on multi-disciplinary and diverse teams. The course curriculum is able to assess numerous other general and Aviation outcomes.

Additionally, during their senior year, the students' cognitive skills and knowledge is measured by the FAA via their Air Traffic Screening and Training (ATSAT) exam. All Air Traffic Management majors are required to complete the ATC Capstone assessment in two parts: 1) They must complete the FAA Air Traffic Basics written exam with a score of 80%. This exam is a proctored, random selected, scrambled 200 question exam taken from the FAA AT Basics 671 question library. 2) The students must participate in a graded ATC Capstone simulation scenario replicating "A Day in Air Traffic Control". In this environment, the student is allowed to play the role of Enroute controller, Terminal radar controller, Traffic Management specialist, Supervisor, Coordinator, etc.

### **Student Learning Outcomes Measured (SLO Paired with Individual Courses)**

A. Apply mathematics, science, and applied sciences to aviation-related disciplines

1013, 1111, 1213, 2603, 2613, 3213, 4004, 4013, 4023, 4663, 4713 Ability to apply simple math equations to solve problems; Ability to use computer programs to create solutions to problems; Ability to apply science knowledge to better understand issues and dilemmas in aerospace; Ability to create business plans and financial spreadsheets for Capstone projects; **Standard of Excellence Score >85%**

B. Analyze and interpret data

1013, 1111, 1213, 2603, 2613, 3213, 4004, 4013, 4023, 4663, 4713 Ability to create legal case briefs by reading and interpreting legal explanations and court rulings; Ability to read and understand weather charts; Ability to determine how to avoid unethical behavior; Ability to create a research project, devise a method, collect data, and interpret data by use of statistical analysis and critical thinking skills ; **Standard of Excellence Score >85%**

C. Work effectively on multi-disciplinary and diverse teams

1013, 1111, 1213, 2613, 3213, 4004, 4013, 4023, 4663, 4713 Ability to lead a group of diverse individuals

D. Make professional and ethical decisions

1013, 1111, 1213, 2613, 3013, 3213, 4004, 4013, 4023, 4663, 4713 Ability to use diplomacy when confronting unethical behavior in the workplace; Ability to protect oneself from wandering into unethical practice

E. Communicate effectively, using both written and oral communication skills

1013, 1111, 1213, 2613, 3013, 3213, 4004, 4013, 4023, 4663, 4713 Ability to clearly present case briefs or give oral reports on complex subjects; Ability to manage projects effectively by use of oral and written communication; Ability to write procedures and rules for business; **Standard of Excellence Score >85%**

F. Engage in and recognize the need for life-long learning, **Reading for Life**

1013, 1111, 1213, 2613, 3213, 4004, 4013, 4023, 4663, 4713 Ability to determine how life experiences can make life easier over time; Ability to understand that bad behavior is as present in life as good

behavior, and some people don't know the difference; Ability to build competencies in the field of choice

G. Assess contemporary issues

1013, 1111, 1213, 2613, 3013, 3213, 4004, 4013, 4023, 4663, 4713 Ability to properly understand the benefits of studying contemporary issues to help develop better ways of doing business; Ability to use lessons learned from contemporary issues to affect change in business practices

H. Use the techniques, skills and modern technology necessary for professional practice

1013, 1111, 1213, 2613, 3213, 4004, 4013, 4023, 4663, 4713 Ability to use technology to more clearly explain complex ideas; Ability to communicate by use of cutting-edge communication devices; **Standard of Excellence Score >85%**

I. Assess the national and international aviation environment

1013, 1111, 1213, 2613, 3213, 4004, 4013, 4023, 4663, 4713 Ability to understand good and bad practices as used by other cultures

J. Apply pertinent knowledge in identifying and solving problems

1013, 1111, 1213, 2613, 3013, 3213, 4004, 4013, 4023, 4663, 4713 Ability to create a purpose that solves problems in business; Ability to apply legal principles to real life situations; **Standard of Excellence Score >85%**

K. Apply knowledge of business sustainability to aviation issues

1013, 1111, 1213, 2613, 3013, 3213, 4004, 4013, 4023, 4663, 4713 Ability to develop business competencies that will enhance business sustainability; Ability to overcome challenges to sustainability in worldwide markets

**Aviation Core Outcomes**

- 1 Attributes of an aviation professional, career planning and certification
- 2 Aircraft design, performance, operating characteristics, and maintenance
- 3 Aviation safety & Human factors
- 4 National & International aviation law, regulations and labor issues
- 5 Airports, airspace and ATC
- 6 Meteorology & environmental issues

**GRADUATION RATES**

**COHORT**

**4 YEARS/% GRADUATING**

**6 YEARS/% GRADUATING**

2009	2013 (20%)	2015 (20%)
2010	2014 (50%)	2016 (75%)
2011	2015 (50%)	2017 (50%)
2012	2016 (50%)	2018 (83.3%)

## **RATES AND TYPES OF EMPLOYMENT OF GRADUATES (2013-2018)**

Air Traffic Control 7  
 Military 1  
 Corporate Aviation 16  
 Other Aviation Employment 6  
 Non-Aviation Field 12  
 Graduate School/Additional Undergraduate 7  
 Aviation Maintenance 0  
 Unknown 20

Average annual salary for graduates	\$35,705.67
Average hourly salary	\$14.62