

Doctorate in Aviation (PDAV)

PDAV 701 Residency Seminar I 2 Credits (2,0)

Critical thinking, scholarly writing, ethics, time management, cohort community. Research goals and foundations; statistical techniques; academic policies and practices; online environment; ERAU support and library services.

Course Offered at: Daytona Beach

PDAV 702 Residency Seminar II 2 Credits (2,0)

Strategies for completing the prospectus, qualifying exam, and dissertation. Presentation and evaluation of dissertation research ideas.

Course Offered at: Daytona Beach

PDAV 703 Residency Seminar III 2 Credits (2,0)

Academic policies, procedures, and scholarship requirements for doctoral candidacy. Discussion of dissertation process and expectations. Presentation and evaluation of dissertation research ideas.

Course Offered at: Daytona Beach

PDAV 704 Residency Seminar IV 0 Credits (0,0)

Mentorship of students enrolled in PDAV 701, PDAV 702, and PDAV 703.

Course Offered at: Daytona Beach

PDAV 712 Aviation Safety Management Systems 3 Credits (3,0)

Importance, benefits, and evolution of safety management systems (SMS). SMS principles, components, practices, tools, and methods in aviation.

Course Offered at: Daytona Beach

PDAV 715 Human Factors in Aviation 3 Credits (3,0)

Application of human factors theories, principles, and practices in aviation-related scholarly papers and projects. Focus on human performance and operator-machine tasks.

Course Offered at: Daytona Beach

PDAV 716 Management of Systems Engineering in Aviation 3 Credits (3,0)

Principles of engineering management in aviation. Development planning, scheduling, and assessment of technical progress through scholarly research and systems engineering management plan development.

Course Offered at: Daytona Beach

PDAV 717 Instructional Design in Aviation 3 Credits (3,0)

Development, planning, and implementation of education/training for aviation-related education and occupations. Utilization of instructional design theory, research, and best practices.

Course Offered at: Daytona Beach

PDAV 718 Foundations of Aviation Education 3 Credits (3,0)

Classical and philosophical foundation of education with an emphasis on aviation. Influence of world conflicts like World War I on aviation education. Roles of regulators, accrediting bodies, and U.S. Congress in aviation education.

Course Offered at: Daytona Beach

PDAV 719 Regulatory Environment of Aviation Safety 3 Credits (3,0)

Research and evaluation of the regulatory environment of aviation safety; synthesis knowledge to produce scholarly works and develop safety policy briefs. Problem-solving and collaboration will be emphasized in aviation safety research and the regulatory process.

Course Offered at: Daytona Beach

PDAV 720 Faculty Development 3 Credits (3,0)

Hands-on faculty experiences, including participation in promotion and tenure committees, Title IX case analysis, grant writing, course proposal development, faculty search committees, and shared governance exercises.

Course Offered at: Daytona Beach

PDAV 721 Quantitative Research Methods in Aviation 3 Credits (3,0)

Drafting research proposals. Descriptive statistics, correlation, linear regression, t-tests, ANOVA. Application of advanced research designs.

Course Offered at: Daytona Beach

PDAV 724 Advanced Quantitative Data Analysis - Data Mining and Modeling 3 Credits (3,0)

Application of data mining and structural equation modeling techniques. Use of statistical modeling software to develop predictive models and test theory-driven models in aviation research.

Prerequisites: PDAV 721 and PDAV 725 and PDAV 726

Course Offered at: Daytona Beach

PDAV 725 Research Methods in Aviation 3 Credits (3,0)

Preparation of research proposals. Qualitative, quantitative, and mixed methods. Experimental, quasi-experimental, and nonexperimental designs. Method selection, sampling, data collection, instrumentation, reliability, and ethics.

Prerequisites: PDAV 721

Course Offered at: Daytona Beach

PDAV 726 Quantitative and Qualitative Data Analysis 3 Credits (3,0)

Exploration of qualitative data analysis and multivariate statistical methods. Use of software for qualitative and statistical analysis. Conduct and report aviation research.

Prerequisites: PDAV 721 and PDAV 725

Course Offered at: Daytona Beach

PDAV 731 The National Air Traffic System - Research Trends and Issues 3 Credits (3,0)

Political, economic, social, technical, and environmental issues in the air traffic control system. Federal Aviation Administration (FAA), air traffic safety management, quality control, and facility management.

Course Offered at: Daytona Beach

PDAV 732 Aviation Organizational Dynamics 3 Credits (3,0)

Application of organizational dynamics to optimize aviation organization performance and longevity. Theories, design, culture, ethics, leadership, collaboration, challenges, environments, innovation, and high-performance organizations.

Course Offered at: Daytona Beach

PDAV 733 Multicultural Team Operations in Aviation 3 Credits (3,0)

Development of intercultural competence through independent scholarship and group projects. Focus on theoretical and practical applications in global aviation team operations.

Course Offered at: Daytona Beach

PDAV 734 Operations Research and Decision-Making 3 Credits (3,0)

Operations research and decision-making through modeling, optimization, and simulation applications. Linear programming, sensitivity analysis, multicriteria programming, Markov processes, and dynamic programming.

Course Offered at: Daytona Beach

PDAV 735 Current Practices and Future Trends in Aviation 3 Credits (3,0)

Research and appraisal of advancements in policies, training, and technologies for modernizing and sustaining the global aerospace system.

Course Offered at: Daytona Beach

PDAV 736 Human-Centered Design in Aviation 3 Credits (3,0)

Application of human factors theories, principles, and practices to aviation technology design. Focus on human-centered design methods addressing human performance and human-technology interaction in aviation.

Prerequisites: PDAV 715

Course Offered at: Daytona Beach

PDAV 737 Topics in Safety Management Systems 3 Credits (3,0)

Evaluation of safety management systems required by national and international aviation regulators. Preparation of research articles for publication.

Prerequisites: PDAV 712

Course Offered at: Daytona Beach

PDAV 738 Fundamentals of Aviation Education and Training 3 Credits (3,0)

Educational underpinnings for implementing and assessing basic educational theories and practices in aviation settings. Creation, implementation, and assessment of education/training modules in aviation safety, human factors, operations.

Course Offered at: Daytona Beach

PDAV 799 Special Topics in Aviation 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in aviation.

Course Offered at: Daytona Beach, Prescott

PDAV 800 Research Prospectus in Aviation 3 Credits (3,0)

Production of a significant, original research topic proposal. Grounded in seminal literature with valid methodology and data analysis process. Approved by the qualifying exam committee. Advances aviation.

Course Offered at: Daytona Beach

PDAV 801 Qualifying Examination 0 Credits (0,0)

Mastery of core and specialization subject matter of the program. Exam conducted over two days, with questions prepared and graded by program faculty. Grading criteria include response organization, clarity, understanding, and writing quality.

Course Offered at: Daytona Beach

PDAV 899 Special Topics in Aviation 1-6 Credit (1-6,0)

Individual, independent, or directed studies of selected topics in aviation.

Course Offered at: Daytona Beach, Prescott

PDAV 900 Dissertation Proposal 3 Credits (3,0)

Production of a significant, original research prospectus. Grounded in seminal literature with valid methodology and data analysis process. Approved by the qualifying exam committee. Advances aviation.

Course Offered at: Daytona Beach

PDAV 901 Dissertation Research 1 1-3 Credit (1-3,0)

Significant, original, independent research. Grounded in seminal literature with valid methodology and data analysis process. Approved by dissertation committee. Defendable by oral examination. Advances aviation.

Course Offered at: Daytona Beach

PDAV 902 Dissertation Research 2 1-3 Credit (1-3,0)

Continuation of significant, original, independent research. Grounded in seminal literature with valid methodology and data analysis process. Approved by dissertation committee. Defendable by oral examination.

Course Offered at: Daytona Beach

PDAV 903 Dissertation Research 3 1-3 Credit (1-3,0)

Continuation of significant, original, independent research. Grounded in seminal literature with valid methodology and data analysis process. Approved by dissertation committee. Defendable by oral examination.

Course Offered at: Daytona Beach

PDAV 904 Dissertation Research 4 1-3 Credit (1-3,0)

Continuation of significant, original, independent research. Grounded in seminal literature with valid methodology and data analysis process. Approved by dissertation committee. Defendable by oral examination.

Course Offered at: Daytona Beach

PDAV 905 Dissertation Research 5 1-3 Credit (1-3,0)

Continuation of significant, original, independent research. Grounded in seminal literature with valid methodology and data analysis process. Approved by dissertation committee. Defendable by oral examination.

Course Offered at: Daytona Beach

PDAV 906 Dissertation Research 6 1-3 Credit (1-3,0)

Continuation of significant, original, independent research. Grounded in seminal literature with valid methodology and data analysis process. Approved by dissertation committee. Defendable by oral examination.

Course Offered at: Daytona Beach

PDAV 907 Dissertation Research 7 1-3 Credit (1-3,0)

Continuation of significant, original, independent research. Grounded in seminal literature with valid methodology and data analysis process. Approved by dissertation committee. Defendable by oral examination.

Course Offered at: Daytona Beach

