James R. Gibson, PhD, PMP

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Education

Graduate Certificate – Business Analytics, East Carolina University, May 2019 (anticipated)
SAS joint certificate program

Doctor of Philosophy – Systems and Engineering Management, Texas Tech University, August 2015
Dissertation: *Operationalizing the opportunity cost of US energy policies on the electric utility sector using the mean-variance portfolio theory*

United States Naval Test Pilot School, Rotary Wing curriculum, December 2011 (Class 140)

Master of Engineering – Industrial and Systems Engineering, North Carolina State University, May 2009
Phi Kappa Phi

Master of Aeronautical Science – Safety Systems, Embry-Riddle Aeronautical University, May 2006
Thesis: *The Impact of Training Environment and Training Syllabi on Military Student Aviator Performance*

Bachelor of Science – Biochemistry, Virginia Polytechnic Institute & State University, May 1997

Academic Experience

Teaching Assistant Professor, East Carolina University Department of Engineering, August 2015 to May 2017

- Courses: Undergraduate Systems Optimization (ISYS 3060) and Engineering Economics (ENGR 3420)
  - Developed and pioneered teaching these courses in a hybrid setting (DE and F2F) integrating flipped classroom principles

Professional Experience (chronological)

Experimental Test Pilot, Bell Helicopter Textron, November 2017

Commanding Officer of VMMT-204, April 2015 to June 2017
Leader of the largest advanced tilt-rotor training squadron in the USMC; annually provided 4,500+ hours of flight instruction, 9,000+ hours of simulator instruction, 20,000+ hours of academic instruction to meet US military and Foreign military demand for pilots and aircrew; efficiently managed $2.5 billion in squadron assets; Led a diverse team consisting of 400 military, government, and civilian personnel, encouraged high levels of engagement, morale, and transparency.

- Initiated continuous process improvement programs to increase aircraft mission capable rates and improve student learning outcomes through scheduling policies and technology integration; the programs contributed to a 12% increase in student production the first year and 27% increase the second year.
- Established, disseminated, and monitored compliance with aircraft operating procedures, training program management, and crew resource management principles for a 15-squadron fleet.
- Increased aircraft readiness through integrating a civilian-military workforce, streamlining parts ordering and tracking, and building supplier relationships outside the existing enterprise.
- **Security clearance (active): TS-SCI**

Performed program management leadership activities in support of planning, execution, monitoring, and management of the following programs:

- *Analysis of V-22 Reduced Visibility Landing procedures* – Taskforce requested by Executive Leadership to analyze the effectiveness of and make recommendations for improving technologies and procedures employed during reduced visibility landings. Collaborated with adjacent organizations to develop analysis module compatible with existing simulation architecture. Analysis identified technical and procedural root causes. Provided Executive Leadership with

a time series implementation of procedural, training, and technological risk mitigation strategies to decrease risk exposure and increase accuracy of reduced visibility landings.

- *V-22 curriculum for Japanese Ground Self Defense Force and United States Navy* – Primary customer contact for the development and implementation of pilot and aircrew training programs for foreign militaries. Developed, implemented, and managed a curriculum that seamlessly integrated a new weapon system into operational service. The curriculum was structured to ensure non-native English speaking students could successfully complete the syllabus. Managed a partnership with the Japanese Ground Self Defense Force senior leadership and civilian officials to provide for host-country training after completion of the syllabus.
- *Developed new V-22 copilot curriculum for current mission requirements* – Initiated an internal analysis to identify areas to improve technical knowledge and improve quality standards in pilot training. Solicited stakeholder and subject matter expert input to identify additional tasks to incorporate in the training program while maintaining a neutral demand on training resources. Designed and implemented a syllabus that provided additional qualifications to the customer, improved technical proficiency of pilots, and reduced expenditures on low density assets.

Prospective Commanding Officer, September 2014 to March 2015

MV-22 Government Flight Test Director, HX-21, December 2011 to August 2014
Leader of a multi-disciplinary integrated flight test team consisting of 200 military, government, Bell Helicopter, Boeing, DynCorp, to include experimental test pilots, engineers, and contract service support personnel; annually provided 500+ hours of experimental flight test; managed a $60 mil annual operating budget and $400 mil in one of a kind test assets; established milestones and managed adherence to master plans and schedules; provided the strategic guidance, mission, and organizational cultural development to facilitate long range planning and process improvement for the V-22 engineering flight test effort; developed performance metrics to monitor progress of key performance parameters and contract compliance; oversaw the development of flight test planning, inter-agency support, the safe and efficient execution of experimental flight test events, and the timely and accurate reporting of test results.

Performed program management leadership activities in support of planning, execution, monitoring, and management of the following programs:

- *Shipboard Dynamic Interface for CVN and LPD class ships*: expanded LPD class wind envelopes, conducted first flight tests aboard CVN class during which wind envelopes were developed for vertical launch/recovery and roll-on/roll-off launch/recovery.
- *Variable Speed Drogue for Airborne Aerial Refueling*: conducted first flight tests of V-22 – variable speed drogue interface leading to the development and expansion of airspeed, altitude, and gross weight envelopes for air-to-air refueling.
- *Additional programs:* aerodynamic & engine performance, flight controls & handling qualities, attitude mode, navigation systems, and software integration for systems and man-machine interface.

United States Naval Test Pilot School, Rotary wing curriculum, December 2010 to December 2011

Operational Test Director and Assistant Aviation Maintenance Officer, VMX-22, December 2008 to December 2010
Managed aviation maintenance work centers to ensure aircraft availability to meet assigned missions; supervised the quality assurance department and verified maintenance tasks and records were in compliance with applicable directives; led the Enterprise AIRSpeed performance metrics, planning, and leadership program, including researching the application of cross-functional work teams to USMC Organizational and Intermediate Maintenance Operations.

Detachment Executive Officer, VMGR-252, October 2004 to November 2008
Developed and executed operational plans for a 300+ person unit in an international arena while operating from diverse geographic locations; maintained flexibility to accommodate highly dynamic situational contingencies. Communicated with adjacent, senior, and multi-national organizations to facilitate training programs and operational missions. Managed the training and development of new personnel and evaluated the standardization of the unit's instructor cadre.

- Deployed in support of Operation Enduring Freedom (Afghanistan): Feb 2008 – Nov 2008
- Prior to becoming XO:
    - Assistant Operations Officer: Coordinated mission requirements versus available resources while ensuring appropriate personnel were informed and had the opportunity to provide input to decisions
    - Director of Safety and Standardization: Standardized NATOPS publications, flight evaluations and Standard Operating Procedures; managed the squadron safety programs and ensured compliance with applicable OSHA and Navy regulations; provided advanced weapons and tactics instruction for aircrew proficiency and currency
- Deployed in support of Operation Iraqi Freedom: Aug 2005 – Feb 2006; July 2006 – Oct 2006
    - Airlift Tasking and Control Officer: Scheduled KC-130 support missions for Multi-National Forces-West (Iraq) to include Fixed-wing Aerial Refueling, Logistics Support, VIP movement, Battlefield Illumination, Aerial Delivery and Airborne Command and Control. Provided daily briefings to 2D MAW (FWD) Commanding General on operational status and capabilities of KC-130 Detachment

Assistant Air Officer, 22D Marine Expeditionary Unit (Special Operations Capable), August 2002 to September 2004
Scheduled and coordinated the movement of personnel and cargo via aviation assets for a 4500+ man unit conducting combat operations. Planned and conducted training exercises with U.S. and International military services in Egypt, Djibouti, Albania, Israel and Jordan. Acted as a Liaison Officer to Coalition Command and Control units

- Deployed in support of Operation Enduring Freedom (Afghanistan): Feb 2004 – Aug 2004
    - Forward Air Controller, Maritime Special Purpose Force (2D Force Reconnaissance Company): Ensured the proper training and certification of MEU and Battalion Forward Air Controllers and coordinated foreign clearances for personnel and over-flight/landing requests for all Marine Expeditionary Unit aircraft

Logistics Department Head, VMGRT-253, August 2000 to August 2002
Served as a contracting officer for the renovation of unit spaces (contract value $7.62 million); ensured engineering change requests submitted to the contractor complied with military specifications and coordinated two squadron relocations to support operational needs during renovation. Acted as the Responsible Officer for Marine Corps Property, Table of Basic Allowance and Station Property accounts; total assets - $1 million. Anti-Terrorism / Force Protection Officer: Established and managed unit response to increased security requirements. Supervised the installation of a new LAN and communication system to support operational needs during deployments.

Assistant Student Control Officer, VT-35, January 2000 to July 2000
Coordinated training of student aviators attending the Joint Advanced Multi-Engine Flight Training including scheduling and monitoring student progression through the ground school, simulator, and flight phases of the program. Established a turbine-engine training program for student aviators.

- Assisted in validation test flights of the introductory TC-12B flight simulator

Professional Military Training, January 1998 to January 2000

- USN Joint Multi-Engine Maritime Flight Training, VT-35, NAS Corpus Christi, TX
- USAF Joint Specialized Undergraduate Pilot Training, 8th FTS, Vance AFB, OK
- Basic Officer Course, The Basic School, MCB Quantico
- USMC Officer Candidate Course, MCB Quantico

Research Scientist, Virginia-Maryland Regional College of Veterinary Medicine, September 1997 to January 1998

- Conducted pathological specimen analysis in support of the college's Veterinary hospital and academic research
- Developed a technique for rapidly identifying pollutants in silage

Research Intern, United States Army Medical Research Institute for Chemical Defense, Ft Detrick, May 1995 to September 1997

- Supported chemical defense research protocols with microbiological, hematological and parasitological testing of samples from animal trials

- Analyzed samples from Topical Skin Protectant trials utilizing Rhesus monkeys
- Conducted necropsies on rodents, swine and Rhesus monkeys to assay cardiac damage following exposure to agent

Certifications

DAWIA certification: Level III Test and Evaluation
PMI: Project Management Professional - #2102064

Memberships

Society of Experimental Test Pilots – "Member"
Decision Sciences Institute
Institute for Operations Research and the Management Sciences
Military Operations Research Society
Institute of Industrial and Systems Engineers

Awards

2015 – 3rd Place – Poster competition 2015 INFORMS Annual Meeting
2013 - Leroy Grumman Award – Best Technical Paper, East Coast SETP Symposium
2012 - Marine Corps Aviation Association "John Glenn" Test Pilot of the Year
2012 - 12th Annual Naval Air Warfare Center Aircraft Division Commander's Award – MV-22 Ship Suitability Test Team

Personal Military Decorations
Meritorious Service Medal
Aerial Achievement Medal with 12 Strike Awards
Navy Commendation Medal with Three Gold Stars in lieu of Fourth Award
Navy Achievement Medal with Combat Distinguishing Device and Two Gold Stars in lieu of Third Award
Combat Action Ribbon

Scholarship

- Gibson, J. & Cross, J. (in progress). The opportunity costs of federal subsidies for electricity generation in the U.S. Intended outlet: *Energy Policy.*
- Gibson, J. & Mitchell, V. (in progress). MV-22B Osprey short takeoff and minimum run-on landing tests aboard CVN class ships. Intended outlet: *IEEE Transactions on Aerospace and Electronic Systems.*
- Gibson, S. & Gibson, J. (2005). Completion of naval flight training: Do gender or race matter? *Equal Opportunities International, 24*(1), 35-43.
- Anderson, M.R., Dorn, H.C., Stevenson, S., Burbank, P.B. & Gibson, J.R. (1997). The Voltammetry of $Sc_3@C_{82}$. *Journal of the American Chemical Society, 119*, 437-438.
- Anderson, M.R., Dorn, H.C., Burbank, P.B. & Gibson, J.R. (1997). Voltammetric Studies of $M_n@C_{82}$. *Journal of the American Chemical Society.*
- Burbank, P.B., Gibson, J.R., Dorn, H.C., & Anderson, M.R. (1996) Electrochemistry of C_{82}: relationship to metallofullerene electrochemistry. *Journal of Electroanalytical Chemistry, 417*, 1-4.

Technical Reports

- Gibson, J. & Dagenhart, R. (2013). MV-22B Technical Evaluation for OT-IIIJ, Report No: NAWCADPAX/DTOT-2013/137, Naval Air Warfare Center Aircraft Division, Patuxent River, MD.
- Gibson, J. & Mitchell, V. (2013). Interim Test Results for V-22 Ship Suitability Tests aboard NIMITZ Class Ships, Report No: NAWCADPAX/ISR-2012/295, Naval Air Warfare Center Aircraft Division, Patuxent River, MD.
- Gibson, J. & Mitchell, V. (2013). Interim Test Results for V-22 Spot 9 Inboard Vertical Launch/Recovery Envelope Expansion Tests aboard NIMITZ Class Ships, Report No: NAWCADPAX/ISR-2013/143, Naval Air Warfare Center Aircraft Division, Patuxent River, MD.

Presentations

- Gibson, J. (2016). Managing aircraft maintenance resource allocations using DEA: *2016 Southeast Decision Sciences Institute*, Williamsburg, VA.
- Gibson, J. (2015). The opportunity cost of federal subsidies for U.S. electricity generation: *2015 INFORMS Annual Meeting*, Philadelphia, PA.
- Gibson, J. (2013). An application of the Person-Situation Interactionist Model of Ethical Decision Making to NASA Decision Making. *2013 Annual Meeting of the Decision Sciences Institute*, Baltimore, MD.
- Gibson, J. & Mitchell, V. (2013). MV-22B Osprey Short Takeoff & Minimum Run-on Landing Tests Aboard CVN Class Ships. *East Coast Society of Experimental Test Pilots Annual Symposium 2013*, Patuxent River, MD.
- Gibson, J.R. (1997) Electrochemical and Spectroscopic Characterization of Metallofullerenes. *The 13th Annual Research Symposium of Virginia Tech*, 1997.
- Gibson, J.R. (1997) Electrochemical and Spectroscopic Characterization of Fullerenes. *The 17th Annual Undergraduate Research Symposium of Virginia Tech*, 1997.

Service

- Text book reviewer, 2017, *Engineering Economic Analysis, 13th edition*
- Track Chair, Sustainability Management, *2017 South East INFORMS*, Myrtle Beach, SC
- Track Chair, Public Sector, Not for Profit, & Health Care Management track, *2017 Southeast Decision Sciences Institute*, Charleston, SC.
- Conference Reviewer, Multiple tracks, *2017 Southeast Decision Sciences Institute*
- Session Chair, *East Coast Society of Experimental Test Pilots Annual Symposium 2014*, Patuxent River, MD.
- Session Chair, *2013 Annual Meeting of the Decision Sciences Institute*, Baltimore, MD.

Professional Military Education

- Defense Acquisition Workforce Improvement Act Level III certified (Test and Evaluation)
- United States Marine Corps Command and Staff College
- Weapons and Tactics Instructor Course
- Amphibious Warfare School
- Joint Aerospace Command and Control Course
- Tactical Air Control Party School
- Anti-Terrorism / Force Protection Officer School
- Warfighting Course

Aeronautical Qualifications Summary

FAA Certifications and Ratings:

CFI - AMEL
CFI - Instrument

Commercial
Multi-Engine - Instrument
Helicopter - Instrument
Powered-Lift – Instrument
Glider

Type ratings: BE200, L382, S70

Military Designations:

Experimental Test Pilot
MV-22 Tilt-rotor Aircraft Commander
KC-130 Aircraft Commander
Weapons and Tactics Instructor
Night Systems Instructor
Assistance NATOPS Instructor
Instrument Evaluator
FRS Instructor
Special Instrument Rating
Functional Check Pilot

Flight Hour Synopsis:

Total time:	2585
Pilot-in-command:	1790
Experimental Test:	386
Operational Test:	8
Instrument (Act/Total):	195/355
Instructor:	352
Powered lift:	459
Airplane multi-engine:	1927
Airplane single-engine	35
Rotorcraft:	164
Night/NVD:	573/369
Combat time:	844
Combat sorties:	205

- Current NATOPS and Instrument rating in the V-22
- Current Naval Aviation Water Survival Physiology training
- FAA 1st-class medical certificate