

The Department of Geography and Environmental Engineering 2012 IAD(A) Opportunities



The following pages list the IAD opportunities within D/GEEnE that are currently planned for the coming summer (2012). Most of these have been coordinated with the sponsoring agency and will go as advertised. However, realize that overseas (foreign) IADs are always subject to travel restrictions or other factors that may require the trip to be canceled. If you are interested in any particular IAD, contact the OIC as soon as possible to notify them of your interest and find out if there are any steps you must take to be considered. Once you have contacted the OIC, follow their guidance to complete any requirements. Also, you must enter your IAD preferences in CIS; the window to enter your preferences in CIS starts on 23 January and closes on 30 January.



GENE IADs: Environmental Program



IAD #: 11406

Title: Renewable Energy in Uganda

Location: Kampala, Uganda

Sponsoring Agency: Environmental Engineering Program, D/GENE, USMA

Dates: 12 June to 1 July 2012.

Duration: Approximately 21 days (3 weeks)

This IAD is a collaborative research project to implement and test waste-to-energy projects; specifically biogas systems in Uganda. Biogas systems utilize microbial processes under anaerobic conditions to produce a methane rich gas that is directly combusted to as a fuel to meet basic needs such as indoor lighting or cooking. Together with researchers from the University of Wisconsin as well as governmental, educational (university-level), non-profit, and commercial/private energy sectors in the US and Uganda, this research experience will include a 2 week survey and data collection experience to further evaluate the role of biogas in Uganda and the potential for integration of low technology solutions to meet energy needs from human waste streams in austere conditions. As part of this educational experience, Cadets will travel to Uganda to test and evaluate these systems firsthand. The Cadets will meet with both policymakers as well as local communities to understand the role of biogas as part of the national strategy. Cadets will also investigate the technological components associated with biogas systems by working with a Ugandan engineer to construct these systems. The department intends to select a multi-disciplinary team comprised of Cadets with an expressed interest in community-driven projects to help meet basic needs in the developing world. For information, contact LTC Starke, WH5312, 938-4625, E-mail: Jeffrey.Starke@usma.edu.

IAD #: 11455

Title: Aberdeen Proving Ground, Natural Resources Branch

Location: Aberdeen Proving Ground, Maryland

Sponsoring Agency: U.S. Army Corps of Engineers

Dates: Flexible

Duration: Approximately 21 days (3 weeks)



Aberdeen Proving Ground, Natural Resources Branch, Maryland is seeking two cadets: one cadet an opportunity to be involved in a landscape level forestry inventory to develop a sustainable forest management plan, and another cadet an opportunity to develop a program to comply with recent Total Maximum Daily Load (TMDL) requirements for the Chesapeake Bay. The forestry inventory would afford a cadet an opportunity to work with a licensed forester in field data collection and interpretation of field data for the development of landscape level forestry inventories. The TMDL study would provide a cadet an opportunity to work with the Chesapeake Bay Program Manager in the inventory and subsequent calculations of Aberdeen Proving Ground's 'pollution load' from both point and non-point sources to the Chesapeake Bay." The dates for each AIAD are flexible. For more information, contact LTC Mark Smith, WH5324, 938-3136, E-mail: Mark.Smith@usma.edu



GENE IADs: Environmental Program



IAD #: 11363

Title: Federal Emergency Management Agency (FEMA)

Location: Various locations in the U.S., specific locations to be determined.

Sponsoring Agency: Federal Emergency Management Agency (FEMA)

Dates: Flexible

Duration: Approximately 21 days (3 weeks)



The Federal Emergency Management Agency (FEMA) is the central point of contact within the Federal Government for a wide range of emergency management activities in both peace and war. FEMA's mission is to support America's citizens and first responders to ensure that as a nation we work together to build, sustain, and improve our capability to prepare for, protect against, respond to, recover from, and mitigate all hazards. Cadets will conduct an internship with FEMA by supporting one of the 10 regional offices in their emergency management role. The internship will vary based on academic background, but may include hazard mitigation activities, operational-level exercises, or conducting reviews of standard operating procedures covering anticipated emergencies in the nation. It may also include working with public or private organizations involved with life- and property-threatening emergencies. The prerequisite for this AIAD is EV203. The dates for this AIAD are flexible. For information, contact MAJ Christian Dietz, WH5400, 938-4400, E-mail: Christian.Dietz@usma.edu

IAD #: 11364

Title: U.S. Army Public Health Command

Location: Aberdeen Proving Ground, MD

Sponsoring Agency: U.S. Army Public Health Command

Dates: Flexible

Duration: Approximately 21 days (3 weeks)



Cadets will perform an internship hosted by the U.S. Army Public Health Command at Aberdeen Proving Ground, MD. Cadets will participate in environmental engineering studies in the subjects of drinking water, hazardous waste management, air pollution, or wastewater treatment. TDY travel from Aberdeen Proving Ground is likely for hands-on work. The prerequisites for this AIAD are successful completion of EV385B or EV350, Introduction to Environmental Engineering. It is also preferred to have EV401 (Physical and Chemical Treatment). The dates for this AIAD are flexible. For information, contact CPT Steve Lewandowski, E-mail: Stephen.Lewandowski@usma.edu.



GENE IADs: Environmental Program



IAD #: 11366

Title: U.S. Army Environmental Command

Location: Fort Sam Houston, TX

Sponsoring Agency: U.S. Army Environmental Command

Dates: Flexible

Duration: Approximately 21 days (3 weeks)



The US Army Environmental Command's (USAEC) mission is to lead and execute environmental programs and provide environmental expertise that enables Army training, operations, acquisition and sustainable military communities. The selected cadets will participate in an environmental research activity important to USAEC: sustainable installations, communities and military operations; environmental performance assessments; active sites cleanup; environmental planning for Base Realignment and Closure (BRAC), modularity, global defense posture, re-stationing and growth of the Army; environmental reporting and information management; weapons system acquisition support; environmental technology transfer; environmental legislative and regulatory analysis. Prerequisites for this AIAD are to be a rising Cow or Firstie, an environmental engineering or science major (or taking the environmental engineering sequence), with a strong interest in the environment. The dates for this AIAD are flexible. For more information, contact LTC Smith, WH5320, 938-3136, E-mail: mark.smith@usma.edu

IAD #: 11368

Title: Field Sampling at the Artillery Range.

Location: West Point, NY

Sponsoring Agency: Environmental Engineering Program, D/GEnE, USMA

Dates: Flexible

Duration: Approximately 21 days (3 weeks)

The U.S. military operates munitions test and training ranges covering tens of millions of acres of land and waters throughout the United States. Many active and formerly used Defense sites have soil, sediment, surface water, and groundwater environments contaminated with explosives as a result of munitions fired, dropped, and disposed of on those ranges. Assessing watershed-scale impacts of contaminated sites on water quality is a major component towards determining long-term military installation sustainability. Correspondingly, it is necessary to estimate those quantities and attempt to determine how they move. Cadets and faculty will collect field data that will be used to calibrate and validate a contaminant transport model, which has been developed by the U.S. Army Engineer Research and Development Center (ERDC). Cadets will take readings and use automated sampling devices to collect samples in the watershed adjacent to the artillery impact area. POC: Prof. Michael Butkus, WH5317, 938-2820, Michael.Butkus@usma.edu



GENE IADs: Environmental Program



IAD #: TBD

Title: U.S. Army Corps of Engineers

Location: Various districts in the U.S.

Sponsoring Agency: U.S. Army Corps of Engineers

Dates: Flexible

Duration: Approximately 21 days (3 weeks)



Cadets will participate in one of several ongoing projects within Corps of Engineers districts or laboratories across the country. IADs with USACE are primarily coordinated through the Department of Civil and Mechanical Engineering, yet specific projects focusing on environmental engineering opportunities are available. Locations in past years included Boston, MA; Detroit, MI; Minneapolis-St. Paul, MN; New York City, NY; Vicksburg, MS, Baltimore, MD. The dates for this AIAD are flexible and can occur in any one of the training blocks this summer. For more information, contact MAJ Christian Dietz, WH5400, 938-4400, E-mail: Christian.Dietz@usma.edu

IAD #: 11407

Title: Engineers Without Borders (EWB)

Location: El Salvador

Sponsoring Agency: EWB

Dates: 25 June – 16 July 2012

Duration: Approximately 21 days (3 weeks)

Cadets will participate in an Engineers Without Borders project in a village in El Salvador. The project will be focused on assessing, improving, and implementing basic water and sanitation practices and infrastructure to assist the local community. This IAD is designed to immerse Cadets into a local community in El Salvador, gain an appreciation for their needs, and put their educational background into practice to improve the quality of life for the local population. For more information, contact MAJ Dennis Sugrue, WH5315, 938-3093, E-mail: Dennis.Sugrue@usma.edu



GENE IADs: Geography Program



IAD #: 11360 and 11367

Title: JINSA Service Academy Trip to Israel

Location: Israel, including Jerusalem, Haifa, Golan, Eilat, Negev Desert

Sponsoring Agency: Jewish Institute for National Security Affairs (JINSA)

Dates: First iteration: 30 May to 17 June 2012 (IAD # 11360); Second Iteration: 23 June to 10 July (IAD # 11367)

Duration: 19 days



Sponsored by the Jewish Institute for National Security Affairs (JINSA), Cadets will travel to Israel with Cadets and Midshipmen from the U.S. Air Force and Naval Academies for 19 days. The group will tour and study historical, cultural, economic, and religious sites as well as travel to various military bases to observe training exercises and participate in staff rides. The first week consists of exploring Jerusalem and the surrounding area. The second week is spent touring military and biblical sites in the coastal and Sea of Galilee, the Negev Desert and Dead Sea Valley. The final week is spent working with Israeli Defense Force (IDF) and touring various IDF installations. Cadets will complete special readings and attend lectures/briefings given by members of the Hebrew University, Israeli Defense Force and the U.S. Embassy in order to gain a better insight to relevant social, economic, cultural and political issues of the region. Each cadet is required to produce a 2-3 page paper on an approved topic to forward to JINSA upon return. Prerequisites for this IAD are an interview and country clearance. There are two opportunities for this IAD this summer: the first goes from 30 May to 17 June 2011, OIC MAJ John Morrow (John.morrow@usma.edu), the second will depart 23 June and return 10 July, OIC COL Wiley Thompson (Wiley.Thompson@usma.edu). Interested Cadets should contact the OIC and schedule an office call.

IAD #: 11361

Title: Center for Strategic Leadership

Location: U.S. Army War College, Carlisle Barracks, PA

Sponsored by: U.S. Army War College

Dates: Flexible

Duration: approximately 21 days (3 weeks)



One or more cadets will intern in the National Security Group of the Center for Strategic Leadership (CSL) at the U.S. Army War College (AWC). The AWC is a graduate-producing institution for LTC/COL level International and U.S. Military and U.S. Interagency students. CSL serves as a consultant to senior leaders working on national security policy issues involving the military element of power. The cadet(s) will assist in ongoing projects to support the Combatant Commands in the area of applied geography and environmental security. Current projects include: Interagency Water and Security Conference; an environmental assessment of the Democratic Republic of the Congo; a book chapter on environmental security and combating terrorism; and a CENTCOM U.S. Engagement with the Central Asian States workshop. The cadet(s) will perform meaningful work, coordinating with the Department of State and other USG agencies and the staffs of the Combatant Commands, building products to teach, present, or market AWC products to high level customers. In addition we will ensure the cadet(s) travels to Washington DC and the Pentagon, participating in coordination and negotiation meetings to address important senior level Army issues. The cadet(s) will also participate in the Gettysburg Staff Ride program, analyzing the battlefield from a leadership perspective with senior leaders from the private sector. Our vision is that the cadet(s) will balance good work that teaches networking and senior U.S. military goals and objectives, and the national security strategy and interagency process, with participation in AWC activities such as war games, AWC student lectures, and the Army Strategist course. Carlisle Barracks is located in the beautiful Susquehanna River Valley bounded by the Appalachian Mountains 15 minutes from the State Capital of Harrisburg. A POV will make the stay much more enjoyable. For more information, contact the OIC MAJ Tom Hanlon, Email: thomas.hanlon@usma.edu



GENE IADs: Geography Program



IAD #: 11362

Title: NOAA Research Project at Woods Hole

Location: Woods Hole, MA

Sponsored Agency: Ecosystems Survey Branch, NOAA

Dates: Flexible

Duration: approximately 21 days



This IAD is an opportunity for one or more cadets to travel to Woods Hole, Massachusetts in order to participate in off-shore research with the Ecosystems Survey Branch of NOAA. For more information about the program follow this link: <http://www.nefsc.noaa.gov/femad/ecosurvey/mainpage/>. The selected cadet(s) will participate in a research project on one of the many research vessels operated by the division. The cadet(s) will also participate in a shore based project prior to heading out to sea to understand the overall mission. The cadet(s) will participate as a member of a scientific research team collecting data on environmental conditions off the coast of Massachusetts. For more information, contact the OIC: MAJ Chevelle Malone, Email: chevelle.malone@usma.edu

IAD #: 11365

Title: ECSP Internship at the Woodrow Wilson Center for Scholars

Location: Woodrow Wilson Center, Washington, DC

Sponsored by: The Environmental Change and Security Program (ECSP)

Dates: Flexible

Duration: approximately 21 days (3 weeks)



An opportunity for two cadets to intern at The [Environmental Change and Security Program \(ECSP\) within the Woodrow Wilson Center for Scholars](#) which explores the connections among environmental, health, and population dynamics and their links to conflict, human insecurity, and foreign policy. The selected cadets will work alongside ECSP personnel to foster a broader, nonpartisan debate when it comes to the environment and its implications to policy and conflict. The goal of the center is to shatter the boundaries separating environment, population, and security, and reveal the links that connect our natural resources—air, water, land, forests—to conflict and cooperation. They look behind the headlines to ask, what are the underlying causes of war? Can we preserve peace by working together to protect the environment? For more information, contact LTC Andrew Lohman, WH5320, 938-2930, E-mail: andrew.lohman@usma.edu



GENE IADs: GIS Program



IAD#: 11369

Title: Army Geospatial Center

Location: Fort Belvoir, VA

Sponsoring Agency: Army Geospatial Center (AGC)

Dates: Flexible

Duration: Approximately 4 weeks



Army Geospatial Center (AGC) is the Army's research and support center for geospatial technology. It is a research and development lab whose role is to test, field, and support geospatial equipment and concepts for the Army. They work with state-of-the-art technologies and equipment related to mapping, surveying, GIS, GPS, and remote sensing. AGC is located just 20 minutes south of Washington, D.C. at Fort Belvoir, VA. Prerequisites for this AIAD is that the cadet must have successfully completed Remote Sensing, GIS, and Cartography. For more information, contact COL Hendricks, WH5303B, (845) 938-2472, E-mail: michael.hendricks@usma.edu.

IAD #: 11370

Title: The School of Geospatial Intelligence (TSG)

Location: Fort Belvoir, VA

Sponsoring Agency: National Geospatial Intelligence Agency (NGA)

Dates: Flexible

Duration: Approximately 3 weeks



The School of Geospatial Intelligence (TSG) is a subordinate element of the National Geospatial-Intelligence Agency (NGA). The school is responsible for training all branches of the military services in geospatial-related topics along with the large workforce of NGA. Normally, all officers with a topographic engineer unit assignment will attend TSG. All enlisted personnel in the topographic field attend this school for producing their MOS. All warrant officers also attend this school for their professional development. TSG is located 20 minutes south of Washington, D.C. at Fort Belvoir, VA. Cadet could attend this AIAD at any time during the summer. Prerequisites : None For more information, contact COL Hendricks, WH5303B, (845) 938-2472, E-mail: michael.hendricks@usma.edu.



GENE IADs: GIS Program



IAD #: 11371

Title: Simulations and Training Technology

Location: Orlando, FL

Sponsoring Agency: RDECOM's Simulation –Training-Instrumentation (STRI) Branch

Dates: TBD

Duration: Approximately 3 weeks



Cadets will use GIS applications and other geospatial data investigation tools in support of the RDECOM's Simulation –Training-Instrumentation (STRI) Branch while they assist in building a modeled database of West Point. They will work with other cadets from other departments, scientists and students from the University of Central Florida. Study will occur in June or July. Exact dates are flexible based on cadet availability. Prerequisite for this IAD is that the cadet has successfully completed EV203. Remote Sensing, GIS, Surveying and/or Photogrammetry would be useful for this IAD. For more information, contact LTC Brian Bailey, E-mail: brian.bailey@usma.edu .

IAD #: 11372

Title: i-Cubed

Location: Fort Collins, CO

Sponsoring Agency: i-Cubed

Dates: TBD

Duration: Approximately 3 weeks



Internship with I-Cubed Inc. in Ft. Collins, Colorado. Cadets will be working with company engineers on the evaluation and refinement of the DataDoors software package. I-Cubed is the industry leader in the development of software utilized to manage and display remotely sensed image databases. DataDoors is used throughout the DoD community and is available for use at the USMA. Two positions are available for this AIAD; timing for this AIAD is flexible. To be eligible for this AIAD cadets must have completed either EV377-Remote Sensing, EV378-Computer Cartography or EV398-Geographic Information Systems. For more information, contact Dr. Brockhaus, WH5302, (845) 938-2063, E-mail: john.brockhaus@usma.edu.



GENE IADs: GIS Program



IAD #: 11373

Title: Characterization of Soils and Landforms

Location: Camp Pendleton, California

Sponsoring Agency: Desert Research Institute (DRI)

Dates: TBD

Duration: Approximately 3 weeks



Cadets will continue previous research to characterize temperate landforms and biomes in support of military Technical Operating Procedures (TOP). The results will be used to develop and test military equipment and Soldier systems. Specific data collection supports IED detection and safe inactivation. This project is designed to collect important physical soil information at selected sites across Ft. A.P. Hill. Sites selected at Ft. A.P. Hill are soils and landforms that are analogs to soils found in strategic areas of Iraq, Afghanistan, and other potential deployment zones. Cadets and Faculty will participate in the following activities: (1) Field-based training focused on key field identification and properties of soil and terrain features (2 days). (2) Training in all required data and sample collection equipment to be used in project (2 days). (3) Data and sample collection across APG and potentially adjacent federal lands (9 days). (4) Cadets will help prepare a report documenting sample collection, site characteristics (USCS soil type, landform type, summary of soil properties). (5) As time permits, cadets exercise their planning skills to execute an excursion to a nearby location (adjacent to Richmond and Washington, D.C.).

For more information, contact COL Fleming, WH6006, 938-2326, E-mail: steven.fleming@usma.edu.

IAD #: 11374

Title: Independent Study, GIS

Location: West Point, NY

Sponsoring Agency: GIS Program, D/GenE, USMA

Dates: Flexible

Duration: Approximately 3 weeks



The cadet will participate in a individually supervised research and study program designed to provide the opportunity to pursue advanced study of topics in the mapping, charting, and geodesy realm. The cadet and/or instructor will set forth the objectives, scope and anticipated accomplishments from AIAD work performed at USMA or at an outside agency location. Depending on the final program design and requirements, a paper and oral presentation may be required. This AIAD is not for credit; however, there are unlimited slots available. Prerequisite for this AIAD is to be a GIS Major. For more information, contact COLHendricks, WH5303B, (845) 938-2472, E-mail: michael.hendricks@usma.edu.