



# UNITED STATES MILITARY ACADEMY West Point, New York

The United States Military Academy  
welcomes

- Bard College
- George Mason University
- Royal Military College
- United States Air Force Academy
- Virginia Polytechnic and State University

to Projects Day 2011



## PROJECTS DAY

28 April 2011

Projects Day promotes academic excellence by providing cadets with a public forum in which to present their theses or design projects. The Dean encourages all cadets to attend Projects Day events.

### Presentations will be held in the following locations:

WPC = West Point Club, Ballroom	LH = Lincoln Hall
MH = Mahan Hall	TH = Thayer Hall
BH = Bartlett Hall	WH = Washington Hall
H = Jefferson Hall	CH = Cullum Hall
TAY = Taylor Hall	LAW = Building 606
ACPDC = Arvin Cadet Physical Development Center	

### Thanks to the following staff & faculty for Projects Day

MAJ Dan Hall, BS&L	MAJ Bart Wilkison, BS&L	LTC William Pearman, C&LS
Dr. Tom Spudich, C&LS	Dr. Brock Barry, C&ME	LTC Bruce Floersheim, C&ME
Dr. Bill Brechue, DPE	COL Tom Cook, EE&CS	Dr. Patrick Query, Eng. & Phil.
LTC(P) John Basekerville, FL	LTC Curtis Edson, G&EnE	Prof. Steve Waddell, History
Prof. Tim Bakken, Law	Dr. Brian MacDonald, MATH	MAJ Rob Grimming, Ph. & NE
MAJ Faith Chamberlain, SOSH	MAJ Brandon Thompson, Sys. Eng.	
MAJ Justin Shell USCC	Ms. Michelle Gerdes, AAD	

### **Systems Design (Jefferson Hall 401)**

<b>Time</b>	<b>Project Title</b>	<b>Cadets/Students</b>
8:30 am	Airline Fleet Maintenance: Trade-off Analysis of Alternative Aircraft Maintenance	Cody Jenkins, Daniel Wesely (George Mason)
9:15 am	West Point Cadet Uniform Factory Improvement	Sahm Cho, Devin Dornbush, Sam Yoo, Jihye Lee
10:00 am	Laundry Facility Capstone	Ross Chesaniuk, Michael Smith, Gary Leicht, Phil Ortiz

### **Systems Design for Defense Applications (Jefferson Hall 514)**

<b>Time</b>	<b>Project Title</b>	<b>Cadets/Students</b>
8:30 am	LT Utilization while awaiting BOLC-B	Joseph Adams, Angela Deger, Cody Shorter, Shane Smith
9:15 am	Payload Configuration for the Gray Eagle Unmanned Aircraft System	Eric Shirley, Gregory Dempsey, Joel Payne, Joshua Sandhaus
10:00 am	Technomics Cost Data Digital Library Redesign	Dave Yolitz, Brett Anderson, Paul Kalajainen, Mike Stylianos (Virginia Tech)
10:45 am	Micro UAS	Robert Cariccilo, Courtney Clement, Richard Grue, Jermaine Wright
1:00 pm	Crewstation of the Future (2035)	Casey Tuggle, Matthew Vane (Interdisciplinary)
1:45 pm	Officer Retention Analysis	Michael Eoute, John Haynes, Sean Kim, Nicholas LaPlante, Michael Vint
2:30 pm	Improving Nett Warrior Technology	Jeremy Boltus, Derek George, Chris Moon, Josh Young
3:15 pm	Standard Individual Reporting System	Jason Pak, Chris Rojewski, Phillip Schmedeman, Josh Storm

**Problem Solving in Systems Engineering  
(Jefferson Hall 121—CTE Classroom—First Floor)**

Time	Project Title	Cadets/Students
8:30 am	Crowded Airspace / Airspace Deconfliction	Andrew Ziebarth, Stewart Glenister, Patricia Vollmer, Kathryn McKinley, Kenneth Wigboldy
9:15 am	USMA Garrison Command Cost Modeling	Jedd Ferris, Rickey Royal, Savannah Schue, Robie Verano
10:00 am	Afghanistan Fuel Problem	Eddie Pitts, Joseph Simon, Joshua Scott, JB Economy
10:45 am	Redesign of the Systems Management	Jeremy Hence, Kevin Dolan, Marcus Hilton
1:00 pm	Development of a Value Model for a Regional EMS Common Operational Picture Technology	Jameson Carter, Travis Corker, Kirk Porter, John Wasniewski
1:45 pm	Conflict Indicators for Sudan	Shaun Wixted, Uiki Leatigaga, David Marcus, Donavan Travis

**Project Management (Jefferson Hall 301)**

Time	Project Title	Cadets/Students
8:30 am	Colorado Springs Police Department Impound Lot Analysis	Shane Ruether, Nicholas Smith (US Air Force Academy)
9:15 am	Information Assurance for GPS IIIA	Octavio Acosta, Nathan Hedgecock, Adam Moore, Virgil Smith
10:00 am	Custom Mustangs Case Study	You Li
10:45 am	Army Reachback Portal	Ron Feher, Emeline Hood, Matthew Kuwamoto, Emmett Tischmak, Daniel Yu
1:00 pm	USMA Mini-Baja	Brendan Regan
1:45 pm	Project AMA	Andrew MacKenzie

**Welcome to Projects Day 2011!**

Projects Day began in 2000 and has grown each year. With fourteen USMA departments and students from three other colleges participating in over 250 presentations, we are excited about this display of intellectual capital at this year's event.

Senior class members present their senior thesis, capstone projects, or research activities in either an individual or collective capacity. Students present to fellow cadets, faculty, clients, and, in some instances, to a group of guest evaluators. Highlights include the capstone design projects, competition projects, poster displays, an English department presentation of Academy Idol, and presentations on various topics relevant to the Army and our social world.

The public is invited to attend any and all of the presentations, which are scheduled from 7:30 am to 4:00 pm in various academic buildings throughout the post, including the Arvin Cadet Physical Development Center, Taylor Hall, West Point Club Ballroom, Mahan Hall, Washington Hall, Thayer Hall, Cullum Hall, Jefferson Hall, Bartlett Hall, Building 606 (Law) and Lincoln Hall.

Although students from the United States Military Academy comprise the largest group of presenters, students from visiting schools have become more pronounced in the event during recent years. Presently, students hail from a variety of schools, including Bard College, George Mason University, United States Air Force Academy, and Virginia Polytechnic and State University.

Cadets will be competing for the third annual Scott R. Clark (USMA 1985) Innovation for Soldiers Award. The award is presented to a cadet project that will demonstrate an innovative approach to solving a problem of direct application to the Army.

We welcome all guests who will be attending Projects Day, especially the guest evaluators and judges, students, and faculty from visiting schools. Additionally, we welcome special guests of the Academy and the West Point Association of Graduates. They have all made significant gifts to West Point and the Long Gray Line.

Students' presentations are identified in the program by time of day and affiliated department. A map of West Point and a map of the central area buildings where the presentations will be held is also provided in the program.

We hope you enjoy the day!



# Systems Engineering

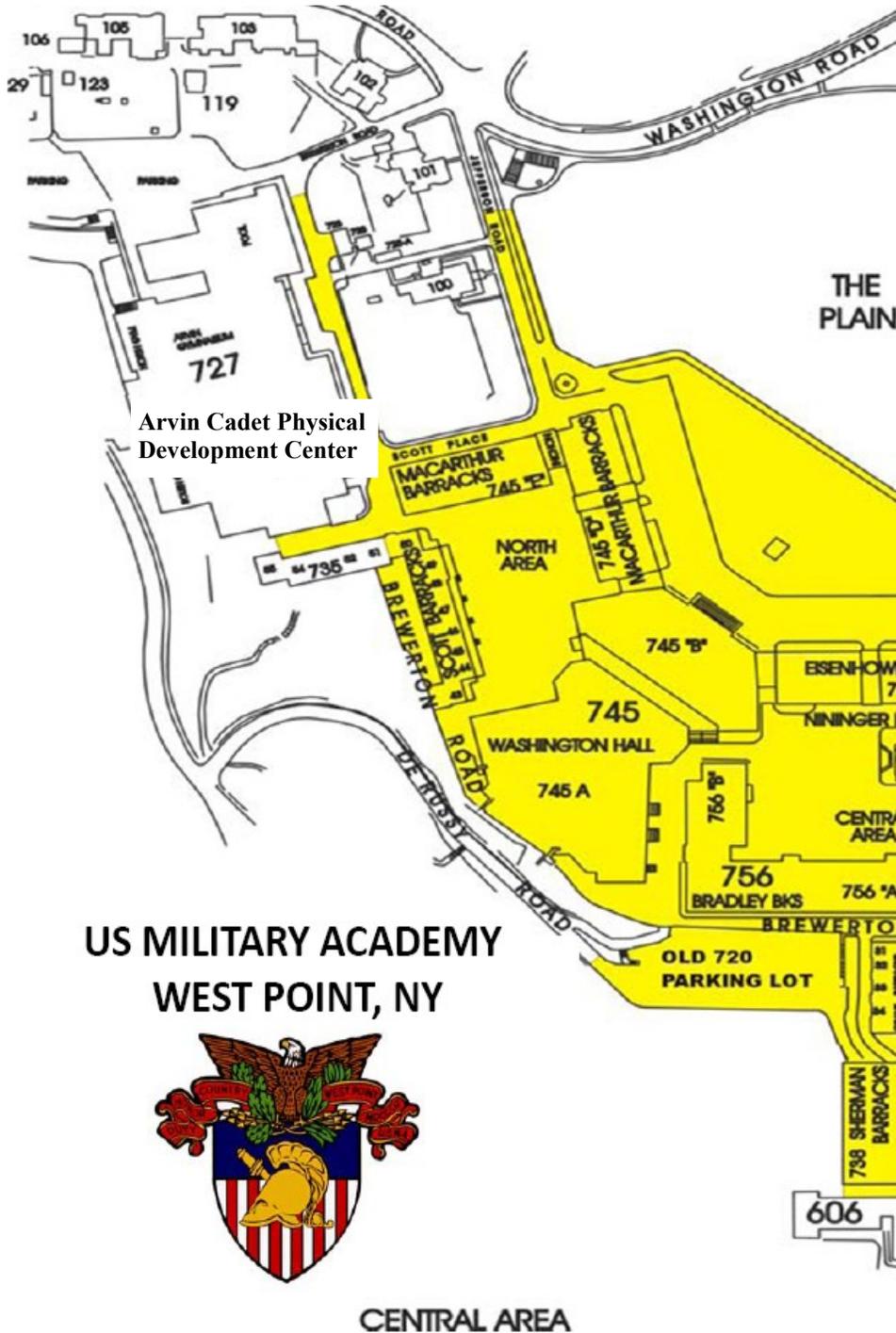
## Decision Analysis (Jefferson Hall CEP Reading Lab—Basement)

Time	Project Title	Cadets/Students
8:30 am	Developing Alternative Joint Theater Patient Evacuation Routes	Lauren Bullis, Wesley Carver, David Linder, Cliff Lutz
9:15 am	Man-in-the-loop DSS for a Mixed System Engagement Coordination	Kyle Ditinto, Kirk Landon, James Olwell, Joshua Kornmann
10:00 am	Deployable Force Protection	Edmund Yoon, Chris Cagle, Darrin Bliler, Jonathan Lee
10:45 am	Solar Energy Lab	Matthew Coates, John Rolling, Trevor Vranicar (US Air Force Academy)
1:00 pm	Decision Support in Time Sensitive Operation	Chris Paik (George Mason)
1:45 pm	SE Support for Transforming Projectiles Development	Tyrus House, Josh McNary, Richard Nasser, Tim Underwood

## Modeling and Simulation (Jefferson Hall 414)

Time	Project Title	Cadets/Students
8:30 am	BCT Network Simulation Model	Brian Asman, Ryan Moschitto, Michael Kim, James Stauffer
9:15 am	West and Rhode River Turbidity Reduction	Jerrit Askvig, Nathan Cushing (George Mason)
10:00 am	UCSF Fresno OB/GYN Medical Residency Program Scheduling	Zachary Peters, Jamie LaRivee, John Kessler (US Air Force Academy)
10:45 am	Developing Decision Support Tool for Optimizing Army-level Depot Maintenance	Patrick Carrillo, Katy Tartala, Bradley Mizell, Mitch Hastings





**US MILITARY ACADEMY  
WEST POINT, NY**



**CENTRAL AREA**

10:00-11:30 am LH122	Arab-Israeli Conflict	Kristin Griest
10:00-11:30 am LHB101B	Nuclear Weapons Discourse in the Cold War: A Feminist Perspective	Deanna Licata (Bard College)
10:00-11:30 am LHB202	Chinese Great Power Status	Nickolas Smith
1:00-2:30 pm LH203	Indigenization of Jihadi Movements in India	Timothy Buzzelli
1:00-2:30 pm LH122	Crime-Terror Nexus	Christopher Cummings
3:00-4:30 pm LHB201	China's Strategic Engagement of Southeast Asia: The Impact of Identity And Perception on Influence	George Lemeur
3:00-4:30 pm LHB101A	Iranian Nuclear Program	Sal Minopoli
3:00-4:30 pm LH101A	A Violent Blueprint: Understanding and Combating Politically Successful Terror	Peter Knoetgen
<b><u>Economics</u></b>		
Time	Thesis Title	Cadets/Students
8:00-9:30 am LHB201	Follow the Leader? Mentor Effects on Career Path Selection in the United States Army	Carson Homme
10:00-11:30 am LHB201	SS460 Presentation: An Empirical Investigation into the Economic Dimension of African Instability	Cadets: Thomas Allman, Merlin Boone, Cory Erlich, Andrew Frank, Daniel Garcia, Lacy Hughlett, Samuel Kazmer, Bennett Long, Hemanth Nalamothu, Nathaniel Pendleton, Paul Severni, and Andrew Webster
1:00-2:30 pm LHB201	The Cost of Serving: The Impact of College Availability on Army Recruitment	Nathaniel Pendleton
3:00-4:30 pm LH100	Estimating the Effects of Deployment on West Point Officers' Marriage Probabilities	Martin Harris

## Social Sciences

### American Politics, Policy, and Strategy

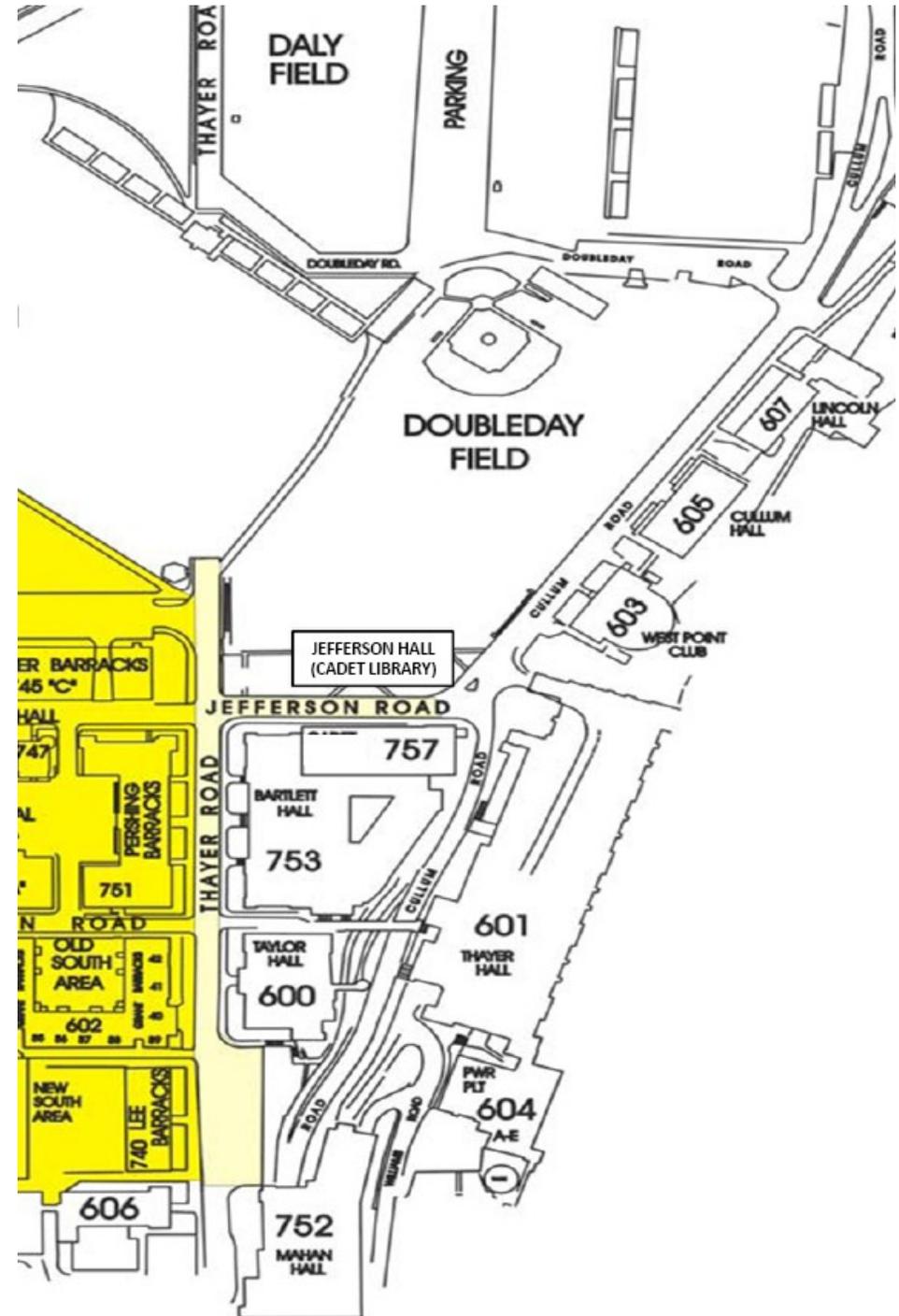
Time	Thesis Title	Cadets/Students
8:00-9:30 am LHB202	A Government of, by, or just for the People: Public Opinion Polling and Government Responsiveness	Andrew Swick
10:00-11:30 am LHB101A	From Pragmatic Realism to Wilsonian Idealism: The Intellectual Odyssey of George W. Bush	Matthew Orchant (Bard College)
1:00-2:30 pm LH100	The State, the Soldier, and the Social Network: Military Officers' Political Expression in the Age of Social Media	Charles Nadd
1:00-2:30 pm LHB101B	Thy People Shall Be My People: Roosevelt, Churchill, and the Atlantic Charter	Joshua Fjelsted (Bard College)
3:00-4:30 pm LHB202	Marathon: Candidate Emergence During the Invisible Primary	Shinwon Moon

### Comparative Politics

Time	Thesis Title	Cadets/Students
10:00-11:30 am LH100	Pakistan - A Way Forward through Education and Media	Shari Smith
1:00-2:30 pm LHB101A	The Normative Development of the "Responsibility to Protect": The Cases of Democratic Republic of the Congo and Iran	Marissa Papatola (Bard College)
3:00-4:30 pm LHB203	Organized Crime in Mexico	Matthew Bolian

### International Relations

Time	Thesis Title	Cadets/Students
8:00-9:30 am LHB122	Pakistan's Influence in the FATA	Robert Weir
8:00-9:30 am LHB203	US-China Diplomatic Personal Relationships	Samuel Goodgame
8:00-9:30 am LHB101B	MNC Effect on State Sovereignty	Alex Panosian
10:00-11:30 am LHB203	Rwanda Genocide Resolution	Michelle Shin



<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
7:30 AM	Mahan Hall 205	Civil Eng.	Barber, et al.	20
7:30 AM - 3:00 PM (Cadets available to explain their work from 7:30 AM to 12:00 PM)	Arvin Cadet Physical Dev. Center, Ctr. for Physical Dev. Excel. (located in the basement)	Phys. Ed./Kinesiology	Various Projects on Display	31
8:00 AM	Washington Hall 4303	Foreign Language: Arabic	Gipson and Yankauskas	24
8:00 AM	Washington Hall 4303	Foreign Language: Chinese	Brown, et al.	24
8:00 AM	Law Library - Bldg. 606, 4th floor	Law	Bendict	29
8:00 AM	Mahan Hall 223	Mechanical Engineering	Brown, et al.	21
8:00 AM	Mahan Hall B5	Mechanical Engineering	Babcock, et al.	21
8:00 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Demoss	32
8:00 - 9:30 AM	Lincoln Hall 100	Social Sciences	Fant	34
8:00 - 9:30 AM	Lincoln Hall Basement 101B	Social Sciences	Panosian	35
8:00 - 9:30 AM	Lincoln Hall Basement 201	Social Sciences	Homme	35
8:00 - 9:30 AM	Lincoln Hall Basement 202	Social Sciences	Swick	34
8:00 - 9:30 AM	Lincoln Hall Basement 203	Social Sciences	Goodgame	34
8:00-9:30 AM	Lincoln Hall Basement 122	Social Sciences	Weir	34
8:00 AM - 12:00 PM (Cadets available to explain their work)	West Point Club Ballroom	Elect. Eng. & Comp. Sci.	Various Projects on Display	22
8:10 AM	Mahan Hall, 205	Civil Eng.	Neumann, et al.	20
8:20 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Troxell and Houdeshell	32
8:30 AM	Mahan Hall 415	Mechanical Engineering	Angrisano, et al.	21
8:30 AM	Jefferson Hall 501	Systems Engineering	Bambrick, et al.	37
8:30 AM	Jefferson Hall 423	Systems Engineering	Thompson	37
8:30 AM	Jefferson Hall - Basement - Reading Lab	Systems Engineering	Bullis, et al.	36
8:30 AM	Jefferson Hall 121 - CTE classroom	Systems Engineering	Ziebarth, et al.	38
8:30 AM	Jefferson Hall 301	Systems Engineering	Ruether and Smith (USAFA)	38
8:30 AM	Jefferson Hall 401	Systems Engineering	Jenkins and Wesely (George Mason)	39
8:30 AM	Jefferson Hall 414	Systems Engineering	Asman, et al.	36
8:30 AM	Jefferson Hall 514	Systems Engineering	Adams, et al.	39

## Nuclear Engineering Individual Study Projects

<u>Project Title</u>	<u>Cadets</u>
<b>Feasibility Study of Deploying a Bistatic Detection Array on an Unmanned Surface Vehicle</b>	<b>James Bailey</b>
<b>Characterization of a D-D Pyroelectric Fusion System Neutron Field Using an EJ301 Detector and Pulse Shape Discrimination</b>	<b>Colin Famer</b>
<b>Analyzing the Effects of a Nuclear Weapon at High Altitudes Using NORSE With Varying Blackbody Temperatures</b>	<b>Nicole Veltri</b>
<b>Construction and Optimization of a Portable Pyroelectric D-D Fusion Accelerator</b>	<b>Thomas Anderson RJ Edwards</b>
<b><u>Physics Individual Study Projects</u></b>	
<b>Multi-beam Output Coupling from a Femtosecond KGW laser</b>	<b>Virginia Albany</b>
<b>Automated Autocorrelator for Femtosecond Pulse Characterization</b>	<b>Tom Wagner Chris Ruis</b>
<b>High Energy Laser Effects for Counter Rocket, Artillery, and Mortar Engagements</b>	<b>Ben Troxell Bethany Houdeshell</b>

## Physics and Nuclear Engineering

The following presentations will be located in Bartlett Hall 302:

<b>Time</b>	<b>Title</b>	<b>Cadets</b>	<b>Time</b>	<b>Location</b>	<b>Sponsor</b>	<b>Cadets/Students</b>	<b>Page</b>
			8:45 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Peterson	32
			8:50 AM	Mahan Hall, 205	Civil Eng.	Hirschey, et al.	20
			9:00 AM	Washington Hall 4303	Foreign Language: Arabic	Lloyd, et al.	24
<b>8:00 AM</b>	<b>Interdisciplinary Feasibility Study of a Directed Energy Weapon for C-RAM Missions</b>	<b>Andrew Demoss</b>	9:00 AM	Washington Hall 4304	Foreign Language: Chinese	Li, et al.	24
			9:00 AM	Washington Hall 4309	Foreign Language: French	Webster, et a.	25
<b>8:20 AM</b>	<b>Computational Thermal Model for Destroying a Mortar with a High Energy Laser</b>	<b>Paul Peterson</b>	9:00 AM	Washington Hall 4003	Foreign Language: German	Kurber, et al.	25
			9:00 AM	Washington Hall: 4307	Foreign Language: Portuguese	Bradshaw, et al.	25
<b>8:45 AM</b>	<b>Directed Energy Engagement Model for an 81mm Mortar</b>	<b>Benjamin Troxell Bethany Houdeshell</b>	9:00 AM	Washington Hall: 4308	Foreign Language: Russian	Coffee, et al.	26
<b>9:10 AM</b>	<b>Quantifying Future Qualities of the Laser System</b>	<b>Theodore Yang</b>	9:00 AM	Washington Hall: 5006	Foreign Language: Spanish	Roling, et al.	26
			9:00 AM	Thayer Hall 158	History	Calhoun	28
<b>9:35 AM</b>	<b>Legality of a High Energy Laser Weapon System</b>	<b>Benjamin Koenigsfeld</b>	9:00 AM	Thayer Hall 160	History	Lujan	28
			9:00 AM	Law Conference Room- Bldg. 606, 4th Floor	Law	Witkowski	29
			9:00 AM	Law Library - Bldg. 606, 4th floor	Law	Cannone	29

The following will be displayed on the first floor of Bartlett Hall From 10:00 AM to 12:00 PM

### Nuclear Engineering Capstone Projects

<b>Project Title</b>	<b>Cadets</b>	<b>Time</b>	<b>Location</b>	<b>Sponsor</b>	<b>Cadets/Students</b>	<b>Page</b>
<b>Predicting the Response of the Ortec Detective-EX Characterization of the IeX Identifinder</b>	<b>Adam Amor, Kevin Bright Colin Farmer, Victoria Schuele, Caroline Spencer</b>	9:00 AM	Mahan Hall 223	Mechanical Engineering	Atwell, et al.	21
		9:00 AM	Mahan Hall B5	Mechanical Engineering	Christe, et al.	21
		9:00 - 11:30 AM	WH5300	Geography and Envir. Eng.	various posters on display	27
		9:00 - 11:40 AM (Cadets available for discussion)	Cullum Hall	Chemistry And Life Science	Various Projects on Display	18
<b>Improvised Nuclear Device</b>	<b>Michael Arcangelo, Emerson Follett, Cody Vandenraadt</b>	9:10 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Yang	32
		9:15 AM	Jefferson Hall - Basement - Reading	Systems Engineering	Ditinto, et al.	36
<b>Fissile Material Cutoff Treaty: Verification Methods for the Reprocessing of Spent Fuel Rods</b>	<b>James Bailey, Thomas Fowler, Alexander Thew</b>	9:15 AM	Jefferson Hall 501	Systems Engineering	Brennan, et al.	37
		9:15 AM	Jefferson Hall 121 - CTE classroom	Systems Engineering	Ferris, et al.	38
		9:15 AM	Jefferson Hall 301	Systems Engineering	Acosta, et al.	38
		9:15 AM	Jefferson Hall 401	Systems Engineering	Cho, et al.	39
		9:15 AM	Jefferson Hall 414	Systems Engineering	Askvig and Cushing (George Mason)	36
		9:15 AM	Jefferson Hall 423	Systems Engineering	Dean, et al.	37
		9:15 AM	Jefferson Hall 514	Systems Engineering	Shirley, et al.	39

<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
9:30 AM	Thayer Hall 158	History	Reilly	28
9:30 - 10:30 AM	Thayer Hall 144	English and Philosophy	Academy Idol (Finalists)	23
9:35 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Koenigsfeld	32
10:00 AM	Washington Hall 4303	Foreign Language: Arabic	Nilsen and Myers	24
10:00 AM	Washington Hall 4304	Foreign Language: Chinese	Greer, et al.	24
10:00 AM	Washington Hall 4309	Foreign Language: French	Rodriguez, et al.	25
10:00 AM	Washington Hall 4003	Foreign Language: German	Paddock, et al.	25
10:00 AM	Washington Hall: 4307	Foreign Language: Portuguese	Berkoff, et al.	25
10:00 AM	Washington Hall: 5006	Foreign Language: Spanish	Diaz, et al.	26
10:00 AM	Thayer Hall 158	History	Homme	28
10:00 AM	Thayer Hall 160	History	Leimbach	28
10:00 AM	Law Library - Bldg. 606, 4th floor	Law	Galloway	29
10:00 AM	Mahan Hall - Arnold Auditorium	Mechanical Engineering	Bales, et al.	21
10:00 AM	Mahan Hall 223	Mechanical Engineering	Lewis, et al.	21
10:00 AM	Mahan Hall B5	Mechanical Engineering	Agni, et al.	21
10:00 AM	Jefferson Hall 501	Systems Engineering	Lee, et al.	37
10:00 AM	Jefferson Hall - Basement - Reading Lab	Systems Engineering	Yoon, et al.	36
10:00 AM	Jefferson Hall 121 - CTE classroom	Systems Engineering	Pitts, et al.	38
10:00 AM	Jefferson Hall 301	Systems Engineering	Li	38
10:00 AM	Jefferson Hall 401	Systems Engineering	Chesaniuk, et al.	39
10:00 AM	Jefferson Hall 423	Systems Engineering	Ferrier and Leese (George Mason)	37
10:00 AM	Jefferson Hall 414	Systems Engineering	Peters, et al. (USAFA)	36
10:00 AM	Jefferson Hall 514	Systems Engineering	Yolitz, et al. (Virginia Tech)	39
10:00 - 10:30 AM	Thayer 265	Behavioral Sciences and Leadership	Landsberg, et al.	17
10:00 - 10:30 AM	Thayer 277	Behavioral Sciences and Leadership	Mitchell and Kendall	17
10:00 - 10:45 AM	Thayer 268	Behavioral Sciences and Leadership	Snook	17
10:00-11:30 AM	Lincoln Hall Basement 202	Social Sciences	Smith	35

## Data Analytics in Support of Strategic and Tactical Decision Making

Anthony Ruizcalderon,  
N. Lamar Simmons

## Quantum Computing and Its Implications for Cryptology

Justin Sappington

## Rating the Men's Lacrosse Patriot League Teams Based Upon an Additive Model

Elizabeth Small

## Physical Education

### Arvin Cadet Physical Development Center, Center for Physical Development Excellence (Room AO120-Located in the Basement)

All projects will be displayed from 7:30 am until 3:00 pm. Cadets will be present from 7:30 am until 12:00 pm to explain/demonstrate their projects.

#### Title

#### Cadets

#### Impact of boot inserts on comfort and function

Laura Chachula,  
Yvette Huston,  
Janet Noreen,  
Nicole Palazzo

#### Sensory function and walk-run gait transitions

Brendan Georgas and  
Sophia Hollenbeck

#### Rethinking the speed-accuracy tradeoff and Fitts Law

Zachary Blevins

#### Disordered Eating

Charles Baldinger and  
Matthew Bowman

#### Physiological stress of IBCT gun crews

Artem Boyev and  
Kareem Dockery

#### Definition and evaluation of physical competency

Laura Baranek,  
Brandon Butler, and  
Michelle Kane

#### AIAD: Oregon Neurosport Physical Therapy Center

Sophia Hollenbeck

## Mathematical Sciences

**(Poster Session: All projects will be on display from 10:00 am– 12:30pm on the 2nd Floor of Thayer Hall)**

<b>Project Title</b>	<b>Cadets</b>	<b>Time</b>	<b>Location</b>	<b>Sponsor</b>	<b>Cadets/Students</b>	<b>Page</b>
		10:00 - 11:30 AM	Lincoln Hall 100	Social Sciences	Smith	34
		10:00 - 11:30 AM	Lincoln Hall 122	Social Sciences	Griest	35
		10:00 - 11:30 AM	Lincoln Hall Basement 101A	Social Sciences	Orchant (Bard)	34
		10:00 - 11:30 AM	Lincoln Hall Basement 101B	Social Sciences	Licata (Bard)	35
<b>Zeros of Random Dirichlet Series</b>	<b>Daniel Alvey</b>	10:00 - 11:30 AM	Lincoln Hall Basement 201	Social Sciences	Allman, et al.	35
<b>Cryptography on Graphs</b>	<b>Mark Benson</b>	10:00 - 11:30 AM	Lincoln Hall Basement 203	Social Sciences	Shin	35
<b>A Statistical Approach to the World of Medicine</b>	<b>Jordan Berry</b>	10:00 AM - 12:00 PM	Bartlett Hall - First Floor	Physics and Nuc. Eng.	Poster Display of Various Projects	32
<b>How the Haqqani Operate and Create New Leaders: A Social Network Analysis of the Haqqani Network in Northern Waziristan</b>	<b>Ryan Brod</b>	10:00 AM - 12:30 PM	Thayer Hall - 2nd Floor	Mathematical Sciences	Poster Display of Various Projects	30
<b>Markov chain models of microtubules</b>	<b>Sonja Butler</b>	10:00 AM - 1:00 PM	Thayer Hall - 2nd Floor	Behavioral Sciences and Leadership	Poster Display of Various Projects	14
<b>Sabermetrics</b>	<b>Angela Deger</b>	10:10 AM	Mahan Hall 205	Civil Eng.	Griffith	20
<b>Analysis of a Trading Algorithm</b>	<b>Steven Dexter, and Christopher Oblak</b>	10:30 AM	Thayer Hall 158	History	Lujan	28
		10:30 - 11:00 AM	Thayer 265	Behavioral Sciences and Leadership	Turner and Heaps	17
<b>Extending the Capital Asset Pricing Model</b>	<b>Vinh Khang Do</b>	10:30 - 11:00 AM	Thayer 277	Behavioral Sciences and Leadership	Dwyer	17
<b>Infinite Infinities and the Paradoxes That Ensur</b>	<b>Marcus Fowler</b>	10:45 AM	Jefferson Hall - Basement - Reading Lab	Systems Engineering	Coates, et al. (USAF)	36
<b>Predicting Containment Arrival Times in Groundwater Using the Complex Variable Boundary Element Method and Nodal Location Optimization</b>	<b>Stanley Gorzelnik</b>	10:45 AM	Jefferson Hall 423	Systems Engineering	Dean, et al.	37
<b>The Myth of Normalcy</b>	<b>James Hall</b>	10:45 AM	Jefferson Hall 301	Systems Engineering	Feher, et al.	38
		10:45 AM	Jefferson Hall 121 - CTE classroom	Systems Engineering	Hence, et al.	38
<b>Solving for Ground Water Flow Using Optimal Nodal Point Locations for the CVBEM</b>	<b>Thomas Kendall</b>	10:45 AM	Jefferson Hall 414	Systems Engineering	Carrillo, et al.	36
<b>Value of Information in Simple Competitive Games</b>	<b>Peter Kerkhof</b>	10:45 AM	Jefferson Hall 514	Systems Engineering	Caricillo, et al.	39
<b>Celestial Dynamics: An Exploration of the N-Body Problem</b>	<b>Samuel Korom</b>	10:45 - 11:30 AM	Thayer 268	Behavioral Sciences and Leadership	McAleney	17
<b>Non-Probabilistic Entropy of a Social Network</b>	<b>Joshua Krieter</b>	10:50 AM	Mahan Hall 205	Civil Eng.	Sioson and Reisweber	20
<b>Cosmic Crystallography</b>	<b>Joshua Menges</b>	11:00 AM	Washington Hall 4303	Foreign Language: Arabic	Fraser, et al.	24
<b>Analyzing the Impact of Monetary Aid While Waging Counterinsurgency</b>	<b>Chris Moon</b>	11:00 AM	Washington Hall 4309	Foreign Language: French	Lovo, et al.	25
<b>An Exploration of TMDs</b>	<b>Thomas Mussmann</b>	11:00 AM	Washington Hall: 4307	Foreign Language: Portuguese	April, et al.	25
<b>Designing an Arithmetic Processor for Elliptic Curve Cryptography</b>	<b>John Rollinson</b>	11:00 AM	Washington Hall: 4308	Foreign Language: Russian	Smith, et al.	26
		11:00 AM	Washington Hall: 5006	Foreign Language: Spanish	Holshouser, et al.	26
		11:00 AM	Thayer Hall 158	History	Khan	29

<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
1:00 PM	Law Library - Bldg. 606, 4th floor	Law	Gittleman	29
11:00 AM	Mahan Hall - Arnold Auditorium	Mechanical Engineering	Alens, et al.	21
11:00 AM	Mahan Hall B5	Mechanical Engineering	Hankemeier, et al.	21
11:00 - 11:30 AM	Thayer 277	Behavioral Sciences and Leadership	White	17
11:30 AM	Mahan Hall 205	Civil Eng.	Kalik and Grohowski	20
11:30 AM - 12:00 PM	Thayer 277	Behavioral Sciences and Leadership	Gallo	17
11:30 AM - 12:15 PM	Thayer 268	Behavioral Sciences and Leadership	Miller	17
12:45 PM	Mahan Hall 205	Civil Eng.	Anthony, et al.	20
1:00 PM	Washington Hall 4303	Foreign Language: Arabic	Beal, et al.	24
1:00 PM	Washington Hall: 4308	Foreign Language: Russian	Kennedy, et al.	26
1:00 PM	Washington Hall: 5006	Foreign Language: Spanish	Clasby, et al.	26
1:00 PM	Thayer Hall 158	History	Schmedeman	29
1:00 PM	Mahan Hall B5	Mechanical Engineering	Faulconbridge, et al.	21
1:00 PM	Mahan Hall 417	Systems Engineering	Clark, et al.	36
1:00 PM	Jefferson Hall - Basement - Reading Lab	Systems Engineering	Paik (George Mason)	36
1:00 PM	Jefferson Hall 121 - CTE classroom	Systems Engineering	Carter, et al.	38
1:00 PM	Jefferson Hall 301	Systems Engineering	Regan	38
1:00 PM	Mahan Hall 417	Systems Engineering	Onofre, et al.	37
1:00 PM	Jefferson Hall 514	Systems Engineering	Tuggle and Vane	39
1:00 - 2:00 PM	Thayer 277	Behavioral Sciences and Leadership	various cadets	17
1:00 - 2:30 PM	Lincoln Hall 100	Social Sciences	Nadd	34
1:00 - 2:30 PM	Lincoln Hall 122	Social Sciences	Cummings	35
1:00 - 2:30 PM	Lincoln Hall 203	Social Sciences	Buzzelli	35
1:00 - 2:30 PM	Lincoln Hall Basement 101A	Social Sciences	Papatola (Bard)	34
1:00 - 2:30 PM	Lincoln Hall Basement 101B	Social Sciences	Fjelsted (Bard)	34
1:00 - 2:30 PM	Lincoln Hall Basement 202	Social Sciences	Oh	34
1:00-2:30 PM	Lincoln Hall Basement 201	Social Sciences	Pendleton	35
1:25 PM	Mahan Hall, E-Level	Civil Eng.	Ovalee, et al.	20

<b>1: 00 pm</b>	<b>D. H. Hill's Division at the Battle of Antietam. Winner of the Company of Military Historians Writing Award</b>	<b>Phillip Schmedeman</b>
<b>1:30 pm</b>	<b>Sources for Success: Comparison of the King's African Rifles' in World War II and the Mau Mau Rebellion</b>	<b>Sean Plotner</b>
<b>2:00 pm</b>	<b>Assessing Biosensors for Potential Military, Security, and Humanitarian Applications. "The Rat Test"</b>	<b>Kayla Kahn</b>

## Law

**The following presentations will be held in the Law Library—4th Floor, Building 606:**

<u>Time</u>	<u>Project Title</u>	<u>Cadets</u>
<b>8:00 am</b>	<b>The Liberian Police Force</b>	<b>Chris Benedict</b>
<b>9:00 am</b>	<b>Reforming, Refining, and Reintegrating Customary Law in Liberia: How to Grow Adherence to the Rule of Law</b>	<b>Charles Cannone</b>
<b>10:00 am</b>	<b>Eliminating the Threat: Presidential authority to target an American citizen</b>	<b>Jillian Galloway</b>
<b>1:00 pm</b>	<b>Article 51: The Right to Self Defense against Somali Piracy</b>	<b>Adam Gittleman</b>
<b>2:00 pm</b>	<b>The Use of High Energy Laser Weapons against Mortars</b>	<b>Ben Koenigsfeld</b>
<b>3:00 pm</b>	<b>Pure International Ad Hoc Tribunals versus Hybrid: a rule of law analysis</b>	<b>Sithyka Meach</b>
<b>4:00 pm</b>	<b>Perfidy in Operation Jaque</b>	<b>Manuel Ortiz</b>

**The following presentations will be held in the Law Conference Room—4th Floor, Building 606:**

<b>9:00 am</b>	<b>The Application of Strict Liability to the Doctrine of Command – An Intrinsic Motivation</b>	<b>Tom Witkowski</b>
<b>10:00 am</b>	<b>Arizona's Regulation of Immigration: Preemption and Federalism</b>	<b>Sam Roddy</b>

		<b>Aryn Davis</b>	<b>Time</b>	<b>Location</b>	<b>Sponsor</b>	<b>Cadets/Students</b>	<b>Page</b>
<b>Women's Crops, More Than A Plant? Gender Crops and Social Status in Northern Ghana</b>			1:30 PM	Thayer Hall 158	History	Plotner	29
<b>The Globalization of the Islamic Jihad Union</b>		<b>Joseph Callaway</b>	1:45 PM	Mahan Hall 417	Systems Engineering	Bonaface, et al.	37
<b>Population growth in a lahar hazard zone and the ensuing effects on evacuation and shelter for Orting, WA</b>		<b>Pat Copeland</b>	1:45 PM	Jefferson Hall 121 - CTE classroom	Systems Engineering	Wixted, et al.	39
<b>Martyr or Murderer: Representations of Che in U.S. Printed News</b>		<b>Chuck Houk</b>	1:45 PM	Jefferson Hall 301	Systems Engineering	MacKenzie	38
<b>Pakistan: The Impact of Irrigation Systems in Water Scarce Country</b>		<b>Josephine Kim</b>	1:45 PM	Jefferson Hall - Basement - Reading Lab	Systems Engineering	House, et al.	36
<b><u>Geospatial Information Science</u></b>			1:45 PM	Jefferson Hall 514	Systems Engineering	Eoute, et al.	39
<b>Creation of International Sprint Standard Orienteering Map, ISSOM, Using High Resolution Orthophotos and LiDAR Base Data.</b>		<b>Jordan Laughlin</b>	2:00 PM	Washington Hall 4303	Foreign Language: Arabic	Baki, et al.	24
<b>Derived Speed Calculations from GPS Data Loggers during Land Navigation</b>		<b>Augustin Paulo</b>	2:00 PM	Washington Hall: 5006	Foreign Language: Spanish	Anderson, et al.	26
			2:00 PM	Thayer Hall 158	History	Khan	29
			2:00 PM	Law Conference Room- Bldg. 606, 4th Floor	Law	Roddy	29
<b><u>History (Thayer Hall):</u></b>			2:00 PM	Law Library - Bldg. 606, 4th floor	Law	Koenigsfeld	29
<b><u>(Located in TH158 or TH160):</u></b>			2:00 - 3:30 PM	Thayer Hall/Robinson Auditorium	English and Philosophy	Presentations from various cadets	23
<b>Time</b>	<b>Project Title</b>	<b>Cadets</b>					
<b>9:00 am (TH160)</b>	<b>The Greatest Show on Earth: General JEB Stuart and the Seven Days Battle for the Hearts and Spirit of the Confederate Cavalry (Thesis Defense)</b>	<b>Ryan Karohl</b>	2:30 PM	Washington Hall: 4308	Foreign Language: Russian	Prohoda, et al.	26
			2:30 PM	Mahan Hall 417	Systems Engineering	Caddigan, et al.	37
<b>9:00 am</b>	<b>Pioneering Strategy: The Evolution of the Reagan Administration's Counterterrorism Policy, 1981-1989.</b>	<b>Brigid Calhoun</b>	2:30 PM	Jefferson Hall 514	Systems Engineering	Boltus, et al.	39
			3:00 PM	Law Library - Bldg. 606, 4th floor	Law	Meach	29
<b>9:30 am</b>	<b>Let's Go to War! A Look at how American leaders wanted to stop the Soviets after WWII.</b>	<b>Caleb Reilly</b>	3:00 - 4:30 PM	Lincoln Hall Basement 101A	Social Sciences	Minopoli	35
			3:00 - 4:30 PM	Lincoln Hall Basement 202	Social Sciences	Moon	34
<b>10:00 am (TH160)</b>	<b>Failure to Free an Enemy: How the Dynamics of World War II Prevented the Success of OSS Operations in Hungary (Thesis Defense)</b>	<b>Diane Leimbach</b>	3:00 - 4:30 PM	Lincoln Hall Basement 203	Social Sciences	Bolian	34
			3:00-4:30 PM	Lincoln Hall 101A	Social Sciences	Knoetgen	35
<b>10:00 am</b>	<b>The Power of Freedom: American Strength in Reagan Foreign Policy.</b>	<b>Carson Homme</b>	3:00-4:30 PM	Lincoln Hall Basement 100	Social Sciences	Harris	35
			3:00-4:30 PM	Lincoln Hall Basement 201	Social Sciences	Lemur	35
<b>10:30 am</b>	<b>The Interview Experience and the Writing of Texas-Sized Takeover: How the GOP Two-Stepped Their Way atop Texas</b>	<b>Max Lujan</b>	3:15 PM	Jefferson Hall 514	Systems Engineering	Pak, et al.	39
			4:00 PM	Law Library - Bldg. 606, 4th floor	Law	Ortiz	29
<b>11:00 am (Th160)</b>	<b>General Lothar von Trotha's Counterinsurgency: An Interpretation of the Herero Genocide through International Perceptions of Terrorism in 1904 (Thesis Defense)</b>	<b>Kayla Kahn</b>					

[Projects are listed chronologically in order by time under each department—times and locations can change—please check at the venue when arriving to confirm)

## Behavioral Sciences and Leadership

**(Poster Session: All projects will be on display from 10:00 am- 1:00pm on the 2nd Floor of Thayer Hall)**

### Engineering Psychology Program

Project Title	Cadets
Supporting Warfighter Attention with Tactile Cueing	Weston Boose, Kevin Keating
Haptic Simulators: An evaluation of physiological effects in the Virtusphere Locomotion Immersive Simulator	Colby Brunette, Britt Dunn
An Empirical Comparison of Sleep Actigraph Systems and Proposed Redesign	John Manzano, Alexander Stodala, Zachary Radwick
Wearable GPS System Comparison	Audrey Moten, Kirk Landon, Josh Sanhous
The Redesign of Global Positioning Devices: Improving User Friendliness.	Corrine Payne, Christina Tamayo, Brooke Withers
Physiological and Psychological Study of the Bionic Foot: Subjective and Objective Analysis of Amputee Energy Consumption Utilizing the Bionic Foot.	Jarryl Jenkins, Cort Mukina, Joseph Shevchik
Increasing the Safety of our Soldiers with Camouflage: Horizontal versus No Bias Flowing Pattern.	Rachel Cabigting, Mitchell McDonald
Interface Designs of Electric Vehicles	Kimberly Shine, Sara Lee, Candice Bryan
Design and Evaluation of a Portable Fighting Position	Robert Caraccilo, Phillip Ortiz
Evaluation of Digital Microscope Systems	John Landsberg, Kyle Tuttle
<u>West Point Negotiation Project</u>	
Project Title	Cadets
Comparisons in Teaching Negotiation	Duncan Aylor
ESPN: Negotiating Affiliate Contracts	Jev Valles

## Geography & Environmental Engineering

Location for the entire department: Washington Hall 5300

Format: Poster Session

Time: 09:00-11:30

### Environmental Science/Environmental Engineering

Title	Cadets
Polonite as a Viable Solution to Removing Lead and Phosphate in Firing Range Soils	Mark Lennox Taylor Pearce
Solar Cookers from Junk Cars	Dan Thueneman
Optimizing yield on a North Carolina farm	Corey Saunders
Optimization of Demonstration Scale Water Treatment Plant	Evan Nelson
Determining Specific Groundwater Discharge in a Porous Media Aquifer Using a Passive Flux Meter (PFM)	Taylor Hirschey Megan Liesenfelt
Electrocoagulation of Wastewater using a Ferric Sacrificial Anode	Charlie Sauter Rowe Lennon Paul Park Hannah McCarty
Electrocoagulation of Wastewater using a Aluminum Sacrificial Anode	Christina Rath Ryan Kelton Sam Calvert Rudy Chelednik
Farm Based Waste to Energy: Creating Electricity from Poultry Manure	Ian McAlister
Evaluating Site Remediation Options for a Massive Petroleum Spill in Greenpoint, NY	Juan Mendez Guice Moore Ryan Moravec Mike Rissberger
Predicting Contaminant Arrival Times Using the CVBEM with Optimal Nodal Location	Stan Gorzelnik
<u>Geography</u>	
The Origins and Development of the Rhode Island Accent	Peter Belden
Globalization of Soccer	Alexander Pytlar
Putting Your Best Face Forth: A Look at Cosmetic Procedures in Korea	Annie Nagy
Volcanic Landscapes and Military Operations	James D Whitler
Afghanistan: A Spatial analysis of the conflict Livelihood and conflict: Linking the Impacts of oil spillage to violence in the Niger Delta	Shane P Smith Jace Pennington

**Russian (Located in WH4308):**

Time	Project Title	Cadets		
			LAPD SWAT Crisis Negotiation Team	Emily McCarthy, Wayne Pak
9:00 am	Economics, Technology, Terrorism, and Narcotics: Their Effects on Russian-American Relations in Central Asia	Stewart Coffee Spencer Feliciano-Lyons, Andrew Majewski, Josiah McCoy	FBI Crisis Negotiation Unit	Duncan Aylor, Luke Hutchison
			Negotiating at Boston Scientific	Daniel White
11:00 am	U.S. and Russian Involvement in Kazakhstan: Past, Present, and Predictions for the Future	Taylor Smith Brendan Fox Nathan Shaffner Nicole Singer	<u>Management Program</u>	
			Project Title	Cadets
1:00 pm	Georgia as a Crossroads: Past, Present, and Future	Olin Kennedy Manuel Ledezma-Vera Kyle Mahder Zachary Spear	Using business marketing concepts to develop a non-lethal fires plan to support Coalition objectives in Afghanistan	Approx 20 different cadet groups enrolled in MG380: Marketing
			<u>Psychology Program</u>	
2:30 pm	The Russian Perspective of the Conflict in the former Yugoslavia	Victoria Prohoda Mark Anderson Richard Hood Logan Wyszynski	Project Title	Cadets
			The Effects of Personality on Attitudes Toward Men and Women in the Military	Lisa Maginot, Danielle Norman

**Spanish (Located in Superintendent's conference room—Taylor Hall):**

Time	Project Title	Cadets		
			The Effectiveness of Simulation Training Versus Traditional Operations Order Training on Mission Success	Brad Mejean, Blaine O'Reilly
9:00 am	Identifying the Insurgency: The Example of Colombia and Peru	Joshua Roling Alexis Torre-Santiago Christopher Torres Carlos Velez	Mere Exposure Effect: Perception of Female Leadership at the United States Military Academy	Lindsey Kozuch, Elaine Plato, Megan Snook
			Resilience Under Stress: Traits of Cadets Successful in Elite Military Schools	Woo Do, Andrew Parker
10:00 am	Plan Colombia: The Unexpected Effects	Antonio Diaz Michael Niemiec Travis Prendergast	Attitudes Towards Men and Women's Roles in Sexual Behavior	Kristin Lemieux, Kelley Robbins
			<u>Sociology Program</u>	
11:00 am	The Effectiveness of the Merida Initiative	Diana Holshouser Matthew Hughes Amber Skye Robertson	Project Title	Cadets
1:00 pm	SB1070: Arizona's Controversy	Luis Clasby Cidny Menjivar Janis Shannon	The Effects of Promotion Policies on Failure Tolerance	Avi Bakshani
			Affects of Chain of Command on PTSD	Candice Bryan, Kim Shine, Sara Lee, Rachel Cabigting
2:00 pm	The Elements That Contribute to U.S. Immigration from Mexico	Eric Anderson Brian Caston Anne Danczyk Danilo Garcia	The Effects of Separation on the Military Family	Manuel Chavez
			The Military-Academic-Consumer Complex: The Military's Adoption of Civilian Technology	George Chewning
			Sibling Relations: Are Sibling Relationships Correlated with Individual Success	Irene Colonna

<b>Military Generation: An investigation of Generational Adaptation to Change</b>	<b>Irene Colonna</b>
<b>Drugs and the Military</b>	<b>Joshua Covey</b>
<b>Children with Disabilities Pulling Families Apart</b>	<b>Cortney Heaps</b>
<b>Taboo Relationships and the Internet</b>	<b>Nicole Hilaire</b>
<b>How personality and behavioral factors affect placement and performance in social networks</b>	<b>Jarryl Jenkins, John Manzano, Alex Stodola</b>
<b>The Effects of Self-Confidence and Innovativity on Leadership</b>	<b>John Landsberg, Kyle Tuttle, Corrine Payne</b>
<b>Are the Higher Socioeconomic Groups in America Adequately Represented in the Military and to What Effect?</b>	<b>LeWayne Martin</b>
<b>Black and White Parenting Within Lower Class Families</b>	<b>LeWayne Martin</b>
<b>Why Does America Struggle with Unconventional Wars ?</b>	<b>Michael Nilsen</b>
<b>How Birth Order Affects Intellectual Development</b>	<b>Christina Quimby</b>
<b>The Influences of Social Networks on Phishing Vulnerability</b>	<b>Joseph Shevchik, Cort Mukina, Zachary Radwick</b>
<b>Do Toddlers Need Tiaras? A Look into Beauty Pageant Families</b>	<b>Jennifer Smith</b>
<b>The Sociology of Hair</b>	<b>Jennifer Smith</b>
<b>The Effect of Chain of Command and Friendship Pessimism at West Point</b>	<b>Evan Szabrowski, Mitch McDonald, George Chewning, Madelyne Serrano</b>
<b>Chain of Command Influence in PTSD and Depression Symptoms</b>	<b>Christina Tamayo, Brooke Withers</b>
<b>Media Influence on Popular Opinion of the Military</b>	<b>Haleigh Taylor</b>
<b>Homeschooling in the Military</b>	<b>Christopher Torres</b>
<b>Social Acceptance of Interracial Marriage and Dating</b>	<b>Justin Turner</b>
<b>Network centrality protective against PTSD</b>	<b>Justin Turner, Cortney Heaps</b>

**French (Located in WH4305):**

<b>Time</b>	<b>Project Title</b>	<b>Cadets</b>
<b>9:00 am</b>	<b>French and American Policies in Africa: The Potential for Collaboration or Conflict</b>	<b>Nate Webster Ken Michael Woods Zachary Taylor</b>
<b>10:00 am</b>	<b>Senegal: A Case Study</b>	<b>Arturo Rodriguez Samuel Robertson Benjamin Snider Joseph Swain</b>
<b>11:00am</b>	<b>Renovations du Quartier Militaire: An Overview of the Evolution of Weapons, Robotics, Infrastructure, and Private Military Corporations in France</b>	<b>Alexander Lovo Michael Ibanez Adam Lawrence Joshua Marlatt</b>

**German (Located in Red Reeder Room, WH4003):**

<b>Time</b>	<b>Project Title</b>	<b>Cadets</b>
<b>9:00 am</b>	<b>Comparison of U.S. and German Pre-deployment Preparation (Personal and Family Preparation)</b>	<b>Daniel Kurber, Theodore Hoham, Lenora Earley, Jessica Nelson</b>
<b>10:00 am</b>	<b>Comparison of U.S. and German Pre-deployment Training (Cultural, ROE and CMTTC Training)</b>	<b>Charles Paddock, Joshua Young, Samantha Schram, David Choi, Zachary West</b>

**Portuguese (Located in WH4307):**

<b>Time</b>	<b>Project Title</b>	<b>Cadets</b>
<b>9:00 am</b>	<b>Drugs: How They Affect Brazil on the National and International Stage</b>	<b>Trey Bradshaw, Jonathan Hange, Brendan Kasony, Thomas Mulligan, Sean O'Donnell, Matthew Passmore</b>
<b>10:00 am</b>	<b>Strengthening Ties: Improving the Partnership Between Brazil and the United States</b>	<b>Rachel Berkoff James Foggo, Paul Riojas, John Goodson, Sung Chung, Lisa Biancalana</b>
<b>11:00 am</b>	<b>Brazil as a World Power</b>	<b>Ashley April, Marc Fryt, Courtney Green, Tjolanda Sullivan, Mary Tooke, Jose Torres</b>

## Foreign Languages

### Arabic (Located in WH4303):

Time	Project Title	Cadets
8:00 am	Post-Revolution US Engagement with Tunisia: a PMESII-based Analysis	Robert Gipson, William Yankauskas
9:00 am	Containing Hezbollah: Wielding US Instruments of Power to Mitigate A Regional Threat	Andrea Lloyd, Ryan Schubert, Robert Walcott
10:00 am	Towards Enduring Stability in Yemen: Regional Partnerships for Real Progress	Michael Nilsen, James Myers
11:00 am	The Evolution of Hezbollah's Propaganda and Media Strategies	Brittany Fraser, Peter Knoetgen, Anees Merzi
1:00 pm	The Politics of Religion in Lebanon, Syria, Morocco and Iraq	Caitlin Beal, Ryan Brod, Donald Dixon
2:00 pm	Obstacles to Democratization in the Middle East: The Cases of Egypt, Saudi Arabia, Palestine and Jordan	Philip Baki, Zach Daker, Stefan Griffith, Victoria Oropeza

### Chinese (Located in WH 4304):

Time	Project Title	Cadets
8:00 am	Implications of a Rising China	Katrina Brown James Han Kyle Hyneman Ron Medina
9:00 am	China and Energy Security	Judith Li Joey Gonzales Casey Clemons Ian Lenny
10:00 am	The Future of China	Aaron Greer Ehren Gruber Eric Holly Brian Podhajsky

How Multiple Deployments Affect Military Children  
Where's Daddy: The Impact of Absent Fathers in Black Families  
Melvin Walker  
Lisa Ward

The Military Family: Social Adjustments During Combat Deployments  
Kathleen Woodhams

Families and the Military: A Historical Overview of a Developing Relationship  
Kathleen Woodhams

### The following will be presented in Thayer 268 at the listed times:

Time	Project Title	Cadets
10:00-10:45	Leading and Parenting: The Relationship Between Leadership Style and Child Rearing	Megan Snook
10:45-11:30	Emotion Detection Training and Counseling Effectiveness	Morghan McAleney

### The following will be presented in Thayer 277 at the listed times:

Time	Project Title	Cadets
10:00-10:30	How Nonverbal Communication Affects Negotiation	Timothy Dwyer
10:30-11:00	A study of humor's impact on resilience in extreme contexts	Matt Mitchell, Thomas Kendall
11:00-11:30	Show Me the Money: What Soldiers can learn about Negotiation from Sports Agents	Daniel White
11:30-12:00	Salerno Gas Station: A Teaching Note for a Negotiation Case involving managing relationships and partisan perceptions	Joseph Gallo
1:00-2:00pm	The West Point Negotiation Project	various cadets

### The following will be presented in Thayer 265 at the listed times:

Time	Project Title	Cadets
10:00—10:30	How personality and behavioral factors affect placement and performance in social networks	Jarryl Jenkins, John Manzano, Alex Stodola
10:30 – 11:00	Network centrality protective against PTSD	Justin Turner, Cortney Heaps

## Chemistry and Life Science

(Posters and Projects will be displayed in Cullum Hall. Cadets will be available from 9:00 am to 11:40 am to discuss them.)

Project Title	Cadets
3-D Virus-Templated Electrodes for Conformable and Micro-Batteries	Joseph Boland, Michael Theising, Galen Mandes
Anatomy Question Book for Medical Students	Ilya Ryaboy, Nicholas Dockery
Bioinspired Hierarchical Polymeric Composite for Energy Absorption: Effect of Composition on Mechanical Properties and Crystallinity in a Thiol-ene System	Patrick Singley, Laura Ruiz, Zach Robinson, Rebecca Kratz, Cody Koffman
Modified Sand-filled Barriers (Clark Award Finalist)	Gerrit Van Ommering
Chemical Warfare Agent (CWA) Surrogate Detection by Metal-Organic Frameworks (MOF) as Solid-Phase Microextraction (SPME) Material	Michael Swayze, Aaron Demro
Determining the Sex of Chickens While in the Egg	Anna Stein, Tyler Wright, Theodore Wynne
Developing an siRNA Therapeutic to Address Heterotopic Ossification Resulting from a Combat-Related Amputation	Woo Do, Diana Kim, Raymond Gonzales, Luis Rivas
Electrochemical Detection of 2,4,6-Trinitro-toluene	Patrick Bowers, Branko Kovacevic
The Generation of Magnesium-Independent DNA and RNA Aptamers Capable of Binding Cellulose with High Affinity and High Specificity	Matthew Porter
The Inactivation of Anthrax Spores by Short-Chain Fatty Acids	Vanessa Rivera, Amanda Swartz
Isolation and Characterization of Tetracycline Resistant <i>E. coli</i> Isolated from Antibiotic-Free Poultry Feces	Sabrina Szabo
Minimum Inhibitory Concentrations of Short Chain Fatty Acids for Avian <i>E. coli</i> Strains	Jillian Piaggione
Microbial Fuel Cells: Determining and Improving Current Output	Caspar Yi, Ethan Heckmann

NSA/CYBERCMD - Critical Infrastructure

Kevin Culberg, Michael  
Fink, Roger Kang,  
Priscilla Ro

NTS/AMI

Justin Lanahan, Alan  
Latty, Rodravian Murray  
Stepladder Peter  
Hudelson, Brett Bartlett,  
Nicholas Palesky, Marcus  
Alexander

STITCH  
(Clark Award Finalist)

Anthony Rodriguez,  
John Rollinson  
Michael Weigand,  
James Raub

SYNC Room

James Tesky,  
Colin Gilligan,  
Maria Kong

## English and Philosophy

**Project Title: Academy Idol Finals: Speeches from Shakespeare**  
Thayer Hall 144 9:30-10:30 am

Cadets: Braden Schoenlein, Jarvis Coburn, Peter Noreen, Matthew Mayeaux,  
Noah McCorkle, Harrison Heath

**Project title: This Can't Be Love, A Shakespearean Revue**  
Thayer Hall/Robinson Auditorium 2:00-3:30 pm

Cadets: Alexandra Bradshaw, Sally Chang, Connie Chen, Deanna Clegg, Mark Coon, Kelley Duke, Michael Gorman, Elliot Hughes, Tanya McCorkle, Cody Newsome, Patrick Northam, Christopher Post, Karyn Powell, Amanda Rowell, Elizabeth Schmitt, Caleb Sherstad, Stephen Sittnick, Trent Weekes, Katherine Wilson, Tianyi Xin (EP394)

## Electrical Engineering & Computer Science

(All Projects will be displayed in the West Point Club Ballroom from 8:00am-12:00pm—Cadets will be on hand to explain their work)

Project Title	Cadets
Augmented Reality	Easton Ring Timothy Wagner
AVID (Video Integration)	Thomas Dean Adam Lim
Bionic Foot	Martinez Genao Stephen Semmelroth Adam Schinder
Black Knight Satellite	Agustin Banda Sajmir Cujka Matthew Southwell Kenneth Hettler Ikechukwu Ehie Francis Park Paul DeMeo
Boeing Crew System 2035	Brendan Filer Robert Thompson Nicholas Bundy Thomas Deavila
Insider Threat	Duncan Michel James Correnti Jonathan Hendricks Hunter Hutcheson Peter Yoon
JCUSI	Bradley Campbell Bryce Martens, Robert Ryan, Kamal Wheeler, David Burkhardt Rafael Garcia-Menocal James Taylor, Andrew Wei, Myea Rice
Malware Investigation	Aram Hatfield, Christopher Perry, Stephen Roy, Samuel Preston
MISER	Paul Baker, Christina West, Robert Frost, James McColl, Grant Durham, Andrew, MacKenzie

Molecular Extraction Techniques and Growth Response of a Model Organism: *Dictyostelium discoideum*

Michael Dolan,  
Frederick  
Heitjan, Corbin  
Helis,  
Kelly MacDonald

Preventing Facial Injuries in Boxing:  
Designing Headgear for Fighters

Laura Chachula,  
Marie Timm

Quantitative Analysis of Quinine Using an Inexpensive,  
Self-Designed Fluorometer

Jeffrey Jang

Research on Oxidative Stress and the Effects of RDX in  
*Escherichia coli* and *Bacillus subtilis*

Barret Halgas

Using Hyperspectral Imagery Analysis to Assess Biological Samples

Avinash  
Chaurasia,  
Kerry Mian,  
Christopher  
Wagner

### Inter-Academy Chemistry Symposium Presentations

Project Title	Cadets
High Surface Area Carbon Aerogels: Modifying Preparation to Optimize Structure and Porosity (USAFA)	Jennie Wood
Production of CIGS Thin Films by Electrodeposition For Use In Solar Cells (USAFA)	Katie Schuler
Synthesis and Characterization of Aluminum Perfluoropolyether Blended Materials (USAFA)	Scott Pierson Jr.
Synthesis and Characterization of Perfluoropolyether Segmented Poly(urethane)s (USAFA)	Casey Hawkins
Validation of Tissue-Specific Enhancers in <i>Xenopus laevis</i> (USAFA)	Robert Lystrup
Effect of Solvents on the Degradation of the Sulfur Mustard Analog 2-chloroethyl Ethyl Sulfide (USCGA)	Jasmine Elliott, Sarah Colmenero
Glucose Enhances Menadione Toxicity in Beta Cells (USCGA)	Trayce Womack, Meridith Palo
Multivariate Selection of Mass Ions for Prediction of Weathering Endpoint of a 30 Year Old Oil Spill (USCGA)	Tiffany Vegter
Development of Novel Protein Crystallization Precipitants (USNA)	Patrick Wiedorn
Extracytoplasmic Cellular Stress Responses Induced by Cationic Polyethylenimines (USNA)	Blaine Lander

## Civil & Mechanical Engineering

### *Civil Engineering*

(all Civil Engineering project posters will be displayed on the 3rd Floor (north end) of Mahan Hall )

Time/Place	Project Title	Cadets
7:30am MH205	Ultra High Performance Concrete	Wes Barber John Perrine Isaac Freel Thomas Meyer
8:10am MG205	Stairway Construction Project	Phillip Neumann Marc Orozco Luke Rennebaum James Vidal
8:50am MH205	Aquifer Testing	Taylor Hirschey Megan Liesenfelt
10:10am MH205	Remote Hydrologic Analysis	Lawrence Griffith
10:50am MH205	Afghanistan Alternative Energy	Pat Sioson Nick Reisweber
11:30 am MH205	Mountain Lodge Park & Glenwood Hills Road Design	Mike Kalik Josef Grohoski
12:45 pm MH205	Culvert Emplaced IED Risk Mitigation	Erin Anthony Hudson Dunn Lara Senteno
1:25pm MH, E-Level	Timber Bridge Construction Project	Alexis Ovalee Zack Balant Andy Moon

Note: The following two Civil Engineering project teams are traveling to a competition during Projects Day and will make their presentations subsequently.

American Society of Civil Engineers – Steel Bridge	Josh Biering, Pat Herold, Eric Berce, Tyler McGuire
American Society of Civil Engineers – Concrete Canoe	David Karwick, Ben Speckhart, Chuck Payne, Erin Anthony, Kyle Verash, Leeann Johnson

## *Mechanical Engineering*

(Posters will be displayed from 8:00am-3:00pm in Mahan Hall 125 A/B)

Time/Place	Project Title	Cadets
8:00 am MH 223	Adaptive Hearing Protective System (Clark Award Finalist)	Brown, Fernandez, Fong, Terrazas
8:00 am MH B5	SAE Design, Build, Fly	Babcock, Bostick, Helm, Hundelt, Kopowski, Smith,
8:30 am MH 415	Boeing Fighter Cockpit of the Future	Angrisano, Baca, Bader, Chapman, Chavez, Conrow, Cook, Davis, Fenley, Flanick, Gomber, Keyes, Lesage, McDaniel, Park, Pope, Taylor, Westphal
9:00 am MH223	SAE Mini-Baja	Atwell, Burak, Chaput, Darville, Davis, Dean, Dieterich, Hunninghake, Landis, Lauer, Sullivan, White
9:00 am MH B5	Virtusphere	Christe, James, Ogundipe, Olatunde
9:00 am MH Arnold Auditorium	Wind Power Challenge (Clark Award Finalist)	Belanger, Boroff, Cline (CE), Kobor, Manuel, Peterson, Reddington
10:00 am MH 223	Collapsible Fighting Position	Lewis, Lewis, Volle
10:00 am MH B5	PEO Soldier Flash Flame Protection	Agni, Gambill, Hansche, Hull
10:00 am MH Arnold Auditorium	West Point Bionic Foot	Bales, Guinther, Hershey, Kenny, Whitaker
11:00 am MH B5	SDC Distraction Device	Hankemeier, Hewins, Williams
11:00 am MH Arnold Auditorium	Exo-Skeleton	Alens, Huntoon, Sandlin, Tomczak, Vandal, Whitaker, Wood, Wynia, Zordell
1:00 pm MH B5	NISH (National Industries for the Severely Handicapped)	Faulconbridge, Lightfield, Robles