



UNITED STATES MILITARY ACADEMY West Point, New York

The United States Military Academy
welcomes

- Bard College
- Clarkson University
- George Mason University
- United States Air Force Academy
- University of Arkansas
as participants in Projects Day 2010



PROJECTS DAY

29 April 2010

Projects Day promotes academic excellence by providing cadets with a public forum in which to present their senior 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

LTC James Merlo, BS&L	Dr. Thomas Spudich, C&LS	MAJ Mark DeRocchi, C&ME
LTC Joe Hanus, C&ME	Dr. Brock Barry, C&ME	Dr. Gunnar Tamm, C&ME
Dr. Bill Brechue, DPE	MAJ Alexander Mentis, EE&CS	Dr. Patrick Query, Eng. & Phil.
Col Dave DiMeo, FL	MAJ Dave Roux, G&EnE	Prof. Steve Waddell, History
Prof. Tim Bakken, Law	LTC Darryl Ahner, MATH	Dr. Amanda Beecher, Math
MAJ John DeLong, Phys. & Nuc.	MAJ JC Mikits, SOSH	MAJ Mark Crow, SOSH
MAJ Faith Chamberlain, SOSH	MAJ Will Hemphill, SOSH	MAJ John Hiltz, Sys. Eng.
MAJ Shannon Whiteman, Sys. Eng.	MAJ Ryan Keating USCC	Ms. Michelle Gerdes, AAD



Statistical Analysis and Stochastic Processes (Jefferson Hall 423)

Time	Project Title	Cadets/Students
8:30 am	Designing an Ideal MEPS	Preston Pham, Peter Chung, June Yi,
	Chad	Thayer
9:15 am	Drug Enforcement Administration (DEA): Prescription Drug Diversion Investigation—Monitoring Capabilities, Limitations and Possible Improvements	Lindsey Briggs, Jane Evans, Gil Valdes, (USAFA)
10:00 am	Drug Enforcement Administration (DEA): Aerial Reconnaissance Optimization	Sean Quintana, Ryan Fortney, Ross Gioiosa, Nathan Jolls (USAFA)
10:45 am	Survey Analysis Using Fuzzy Logic	Michael Masiello, Lewis Dummermuth-Boss, Michael Langley, Alec Schwartz (USAFA)

Project Management (Jefferson Hall 501)

Time	Project Title	Cadets/Students
8:30 am	The Mini Baja Competition—A Project Management Case Study	Zachary Fox

Welcome to Projects Day 2010!

9:15 am	Human Cooling Team	Chas Kabanuck, Tyler McBride, Ivando Arroyo, Nick Batey, Jacque Harrier (USAFA)
---------	--------------------	---

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.

Re-engineering Systems (Jefferson Hall 401)

Time	Project Title	Cadets/Students
8:30 am	Transforming Projectile System	N. Chafaengemasong, K. Howell, J. Sexton, C. Williams

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.

9:15 am	MEB/PEB USAR & ARNG Pre-Processing at Keller ACH	Ryan Kim, Jeffrey Lee, Erick Olsen, Sorin Portase
---------	--	---

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.

10:00 am	USMA SGS Tasker System	Jonathan Brege, Caitlyn Gallagher, Kelsey Hassin, David Jacobson
----------	------------------------	--

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, Clarkson University, George Mason University, United States Air Force Academy, and the University of Arkansas.

10:45 am	Stadium Evacuation System	Keith Hannah, John Landsberg, Bryan Tauzer, Michelle Cuellar, Benjamin White
----------	---------------------------	--

Cadets will be competing for the second 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.

1:00 pm	Designing a Vertical-Axis Wind Turbine	Adam Angerami, Paul Dwyer, Katharine Wurzbach, Andrew Maisano, Matthew Paulos
---------	--	---

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. We also welcome guests from the Department of the Army Senior Professional Meeting.

1:45 pm	Integrating ground-based sensors and avoid capability into UAS operator controls	James Buensuceso, Phil, Draper, Steve Galbreath, Bob O'Neill
---------	--	--

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.

2:30 pm	Small Wind Turbine to Supplement Deployed Vehicle Energy Requirements	Carrie Moore (USAFA)
---------	---	----------------------

We hope you enjoy the day!

3:15 pm	Army Enlisted Personnel Friction	D. Elmlblad, D. Lisante, E. McCann, S. Prasnicki
---------	----------------------------------	--

10:45 am	Swarming UAS II	Allan Castro-paz, Jeremy May, Charles Smith, William Smith, Michael Watson
1:00 pm	Use Battlespace Terrain Reasoning and Awareness (BTRA) system	Justin Smith, Matt Jenkins, Ryan Griffin, Tyler Seymour
1:45 pm	Use Battlespace Terrain Reasoning and Awareness (BTRA) system	CJ Ancheta, Bryan Connolly, Jon McCann, David Sprague
2:30 pm	A Multi-Factor Approach to Identifying BOG/Dwell Intervals	Poga Ahn, Arthur Middlebrooks, Sam Harrison, James Wasson, Brian Maddox

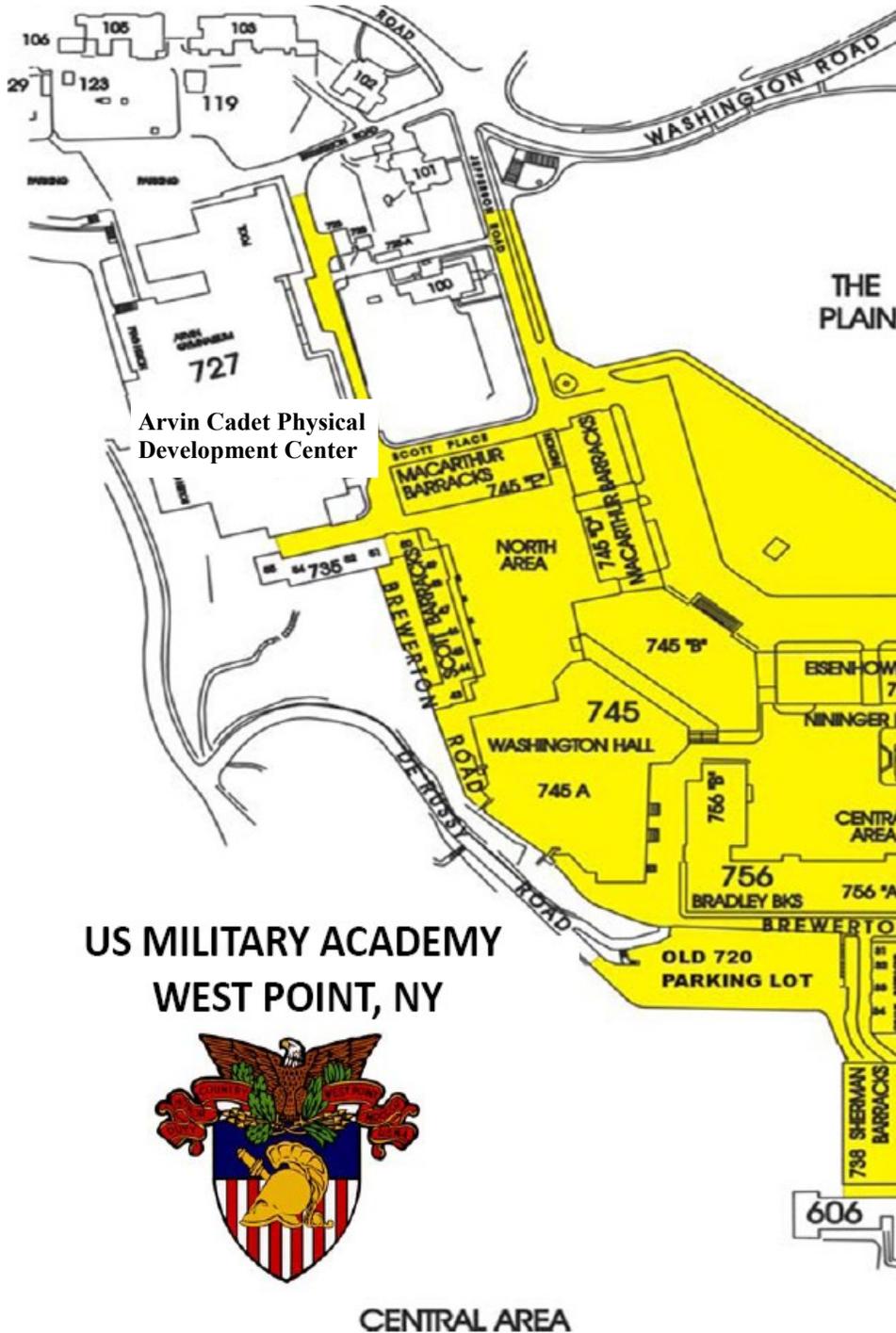
Modeling and Simulation (Jefferson Hall 414)

Time	Project Title	Cadets/Students
8:30 am	Information Overload	Christopher Basquill, Timothy Flynn, Andrew Gill, Brandon Potts, Christopher Steward-Blakely
9:15 am	Job Choice and Attrition: U.S. Army Officer Service Modeling	Jacen Lancelos, Joseph Langella, Evan Seale, Chris Simpkins, Bryant Watrous
10:00 am	ULTRAVis	Lindsey Adao, William Archbold, Scott Moeller, Jacob Smith
11:00 am	Veterans Benefits Administration Compensation Claims Processing	Kurt Bujewski, Matt McClary, Joe Vandusen, Ray Vetter
1:00 pm	XM25: Basis of Issue Study	Walter Arevalo, Michael Kim, Peter Lee, Patrick Saxby, Ebony Thomas
1:45 pm	Joint High-Powered Solid State Laser in the FOB Defense Role	Matt Krause

Problem Solving in Systems Engineering (Jefferson Hall 145—CEP Classroom)

Time	Project Title	Cadets/Students
8:30 am	SM: Analysis Toward a New USMA Accountability System	Chris Lauren, Nicholas Sabellico, William Sack, Daniel Webb





**US MILITARY ACADEMY
WEST POINT, NY**



CENTRAL AREA

3:00-4:30 am Bard College- The Peaceful Warrior: The Changing Role of the Military and the Evolving Norm of Humanitarian Intervention Danielle Schwab LHB101 A

3:00-4:30 pm Picking up the Pieces: A Tribal Approach to Political Stability in Afghanistan Jim McLaughlin LHB201

Systems Engineering

Decision Analysis (Jefferson Hall 301)

Time	Project Title	Cadets/Students
8:30 am	Communications On The Move— Assessing the IA Architecture	William Small, Matthew VanHorn, Christopher Albornoz, Zachary Fenn
9:15 am	WholeOfficer Performance	Jonathan Bunz, Cole Morrison, Jaewoo Park, Terrance Shields
10:00 am	WholeOfficer Performance	Steve Cummings, Ryan Lemoine, Riley Merrigan, Rob Swan
1:00 pm	Moving the West Point Prep School to West Point	Steve Brightman, Chris Griggs, Zach March, Matthew Rohe, Ali Villanueva
1:45 pm	Colorado Springs Police Department (CSPD): Equalization of Workload through Reallocation of Divisional Boundaries	Will Adorno, Arthur Grijalva, Cary Reeves, Zech Roloff (USFA)

Modeling and Simulation for Military Applications (Jefferson Hall 121—CTE Classroom)

Time	Project Title	Cadets/Students
8:30 am	Analysis of Conventional Prompt Global Strike Alternatives	Ryan Hopkins, Nicole Raymond, Stuart White
9:15 am	Terrain Based Decision Aids for the Dismounted Soldier	John Adams, Sean Eskew, Rick Miller, Rob Perry, Brendan Wright
10:00 am	Swarming Unmanned Aircraft Systems for Small Unit Operations	Michael Pratt, Jennae Tomlinson, Colin Skowronski, Thomas Harris

High Energy Laser as an Army Defense against Rockets, Artillery, and/or Mortars (RAM)

Joshua Maurmeier
Lisa Taylor

Finite Element Thermal Model for a Mortar Targeted by a High Energy Laser

Stephen Wathen

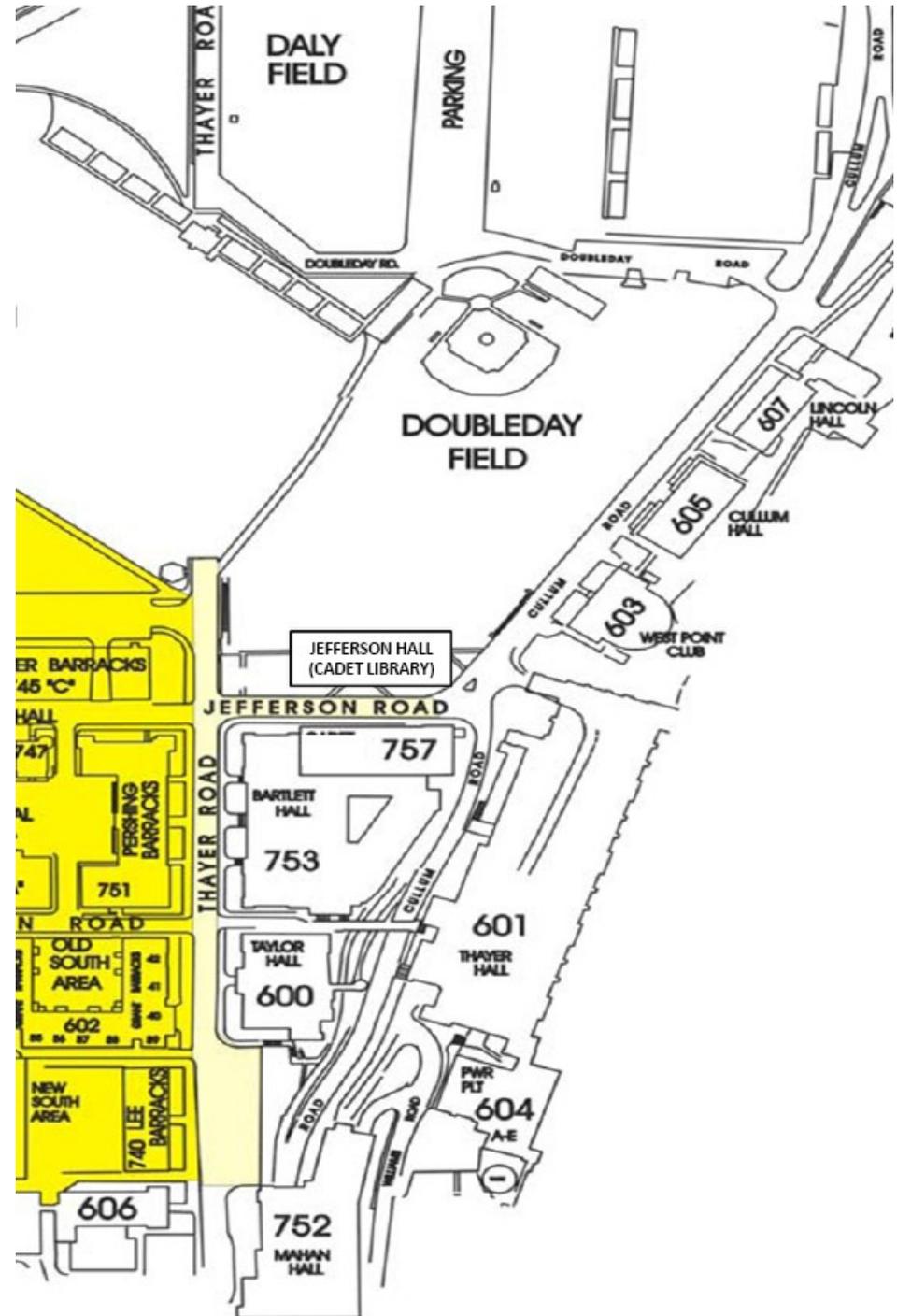
Social Sciences

American Politics

Time	Thesis Title	Cadets
8:00-9:30 am LHB202	American Idol or American Idle: Assessing Candidate Quality and Its Influence on Congressional Elections	Tyler Mathews

Comparative Politics and International Relations

Time	Thesis Title	Cadets/Students
8:00-9:30 am LHB101A	Hezbollah's Unique Identity: A Political Party and Paramilitary Organization	Chad Moran
8:00-9:30 am LHB101B	Preventing the Clash: Integration Strategies in Europe	Richard Thomas
10:00-11:30 am LHB101 A	Bard College- Panel Discussion: Different Faces of Islam in World Politics	Chamberlain and McLean
10:00-11:30 pm LHB101 B	Muslim Diaspora Communities and the London Nuclear Terrorism Threat	Stephen Griffiths
10:00-11:30 am LHB 202	Evaluating Afghanistan's electoral system through comparative analysis	James McKinney
10:00-11:30 pm LHB203	Great Powers: When to War for Influence	Chance McCraw
1:00-2:30 pm LHB101 A	Bard College- Panel Discussion: The Chinese Challenge: Internal and External Factors	Schwartz and Severson
1:00-2:30 pm LHB101 B	The Other Golden Triangle	Nickolaus Fuhrman
1:00-2:30 pm LHB201	Hezbollah Goes Political: Analyzing the Radical Transformation of Hezbollah from 1985 to the Present	Jacob Haag
1:00-2:30 pm LHB202	Strategic Dissociation: Dividing the Al Qaeda Network in Afghanistan and Pakistan	Michael Fontichiaro
1:00-2:30 pm LHB203	The Raptor and the Aggie: An Analysis of the F-22 Within the Military-Industrial-Congressional Complex	Porter Smith



<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
7:30 AM - 11:00 PM (Cadets available to explain their work)	Arvin Cadet Physical Dev. Center, Center for Physical Development Excellence	Phys. Ed./Kinesiology	Various Projects on Display	32
8:00 AM	Mahan, 223	Civil Eng.	Bojorquez, et al.	20
8:00 AM	Washington Hall 4303	Foreign Language: Arabic	Bauleke, et al.	25
8:00 AM	Washington Hall 4304	Foreign Language: Chinese	Bernau, et al.	26
8:00 AM	WH6004	Geography and Envir. Eng. (Env. Geo)	Rowe	28
8:00 AM	WH5402	Geography and Envir. Eng. (GIS)	Wiley	29
8:00 AM	606, 4th floor	Law	Choate	29
8:00 AM	Mahan Hall B5	Mechanical Engineering	Batcho, et al.	21
8:00 AM	Mahan Hall E-Level	Mechanical Engineering	Black, et al.	21
8:00 AM	Mahan Hall 205	Mechanical Engineering	Gillett, et al.	21
8:00 AM	WP Club Ballroom	Mechanical Engineering	Lamb	21
8:00-9:30 AM	LHB101B	Social Sciences	Thomas	34
8:00-9:30 AM	LHB202	Social Sciences	Mathews	34
8:00-9:30 AM	LHB101A	Social Sciences	Moran	34
8:00 AM - 12:00 PM (Cadets available to explain their work)	West Point Club Ballroom	EE&CS	Various Projects on Display	23
8:00 AM - 4:30 PM	Lincoln Hall Basement 200 and Art Studio	English and Philosophy	Presentation from various cadets	25
8:30 AM	Mahan, 223	Civil Eng.	Moore, et al.	20
8:30 AM	WH6004	Geography and Envir. Eng. (Env. Geo)	Gaulin	28
8:30 AM	Jefferson Hall 414	Systems Engineering	Basquill, et al.	36
8:30 AM	Jefferson Hall 401	Systems Engineering	Chafacngemasong, et al.	38
8:30 AM	Jefferson Hall 501	Systems Engineering	Fox	38

Physics and Nuclear Engineering

The following are all presented in Bartlett Hall 302

<u>Time</u>	<u>Project Title</u>	<u>Cadets</u>
9:00 am	Systems Analysis of Joint High Powered Solid State Laser	Matthew Krause
9:30 am	High Energy Laser as an Army Defense against Rockets, Artillery, and/or Mortars (RAM)	Joshua Maurmeier, Lisa Taylor
10:00 am	Finite Element Thermal Model for a Mortar Targeted by a High Energy Laser	Stephen Wathen
10:30 am	Federated Simulation Modeling	Matthew Krause, Joshua Maurmeier, Lisa Taylor, Stephen Wathen

Poster Session (Located in Thayer Award Room– Taylor Hall 1:00 –3:00 pm):

<u>Project Title</u>	<u>Cadets</u>
Monte Carlo Validation of a CZT Detector for Maritime Boarded Search Operations	Chris Anderson, Sean Fitzgerald, Steve Tennison
Target Discrimination with Laser Interrogation	Dhruvkumar Desai
Photo-dissociation of Supercritical Fluid Carbon Dioxide for Potential Use in the Production of Breathable Oxygen	Brandon Dotson
Calculation of Building Protection Factors	Josh Herrera, David Matoi
Positron Emission Tomography Modeling with I-124	Matt Kitchell, Joe Vanderlip
Effect of Polarization on Light Transmission Through Media	Andrew Knisely, Samuel Stedman
Systems Analysis of Joint High Powered Solid State Laser	Matthew Krause
Federated Simulation Modeling	Matthew Krause, Joshua Maurmeier, Lisa Taylor, Stephen Wathen
Improving the Capability of the Integrated Weapons of Mass Destruction Toolkit (IWMDT)	David Lee, Alexander Vichinsky

Physical Education

		<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
Arvin Cadet Physical Development Center, DPE 3rd Floor Projection Room		8:30 AM	Jefferson Hall 121	Systems Engineering	Hopkins, et al.	35
		8:30 AM	Jefferson Hall 514	Systems Engineering	Jacob, et al.	37
		8:30 AM	Jefferson Hall 145	Systems Engineering	Lauren, et al.	36
		8:30 AM	Jefferson Hall 423	Systems Engineering	Pham, et al.	38
		8:30 AM	Jefferson Hall 301	Systems Engineering	Small, et al.	35
		9:00 AM	Washington Hall 4303	Foreign Language: Arabic	Glenn, et al.	25
Arvin Cadet Physical Development Center, Center for Physical Development Excellence (Located in the Basement)		9:00 AM	Washington Hall 4304	Foreign Language: Chinese	Cheng, et al.	26
All projects will be displayed from 7:30 am until 3:00 pm. Cadets will be present from 7:30 am until 11:00 am to explain/demonstrate their projects.		9:00 AM	Washington Hall 4309	Foreign Language: French	Beckett, et al.	26
		9:00 AM	Washington Hall: Red Reeder Room (4th Floor)	Foreign Language: German	Considine, et al.	27
Title	Cadets	9:00 AM	Washington Hall: 4307	Foreign Language: Russian	Engelhardt, et al.	27
Upper-body work capacity and neuromuscular fatigue	Justin Marburger	9:00 AM	Washington Hall: 4305	Foreign Language: Spanish	Cook, et al.	28
Energy expenditure, physical activity, and body composition of USMA cadets	Artem Boyev , Michelle Kane	9:00 AM	Washington Hall: 4308	Foreign Language: Spanish	McElroy, et al.	28
Ground reaction force variability during load carriage	Alexander Purdy	9:00 AM	WH6004	Geography and Envir. Eng. (Human)	Norris	28
Evolution of the Army Physical Fitness Program	Margaret Bolen , Zack Wagner	9:00 AM	Thayer Hall 158	History	Vancura	29
Army Fitness Education-Certification Program; KN 480 Capstone Project	Matthew Brown, Erin McClain, Michael McGee	9:00 AM	606, 4th floor	Law	Conley	29
Army Physical Fitness and Outreach to the Nation; KN 480 Capstone Project	Jason Borchik, Christopher Grill, Jennifer Nixon	9:00 AM	Mahan Hall 223	Mechanical Engineering	Bazier, et al.	22
Assessment of Physical Competency; KN 480 Capstone Project	Jordan Allison, Benjamin Bellet	9:00 AM	Mahan Hall B5	Mechanical Engineering	Little	22
Army Physical Development Planning and Programming; KN 480 Capstone Project	Bryan Kantner, Justin Marburger, Tiernan Still	9:00 AM	Mahan Hall 205	Mechanical Engineering	Sauceda, et al.	22
Army Physical Training Website: KN 480 Capstone Project	Alan Fischer	9:00 AM	Mahan Hall, Arnold Auditorium	Mechanical Engineering	Skinner, et al.	22
Exercise Compliance and Stress Management Modules: KN 480 Capstone Project	Krysta Cass, Nicole Talarczyk	9:00 - 10:30 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Krause	33
AIAD: South Africa High Performance Physiology Project	Justin Marburger	9:00 - 12:00 PM (Cadets available for discussion)	Thayer 144	English and Philosophy	Presentations from various cadets	25
AIAD: Directorate of Basic Combat Training Fort Jackson, SC	Jordan Allison	9:15 AM	Cullum Hall	Chemistry And Life Science	Various Projects on Display	19
		9:15 AM	Mahan, E-Level	Civil Eng.	Davis, et al.	20
		9:15 AM	Jefferson Hall 121	Systems Engineering	Adams, et al.	35
		9:15 AM	Jefferson Hall 514	Systems Engineering	Benson, et al.	37
		9:15 AM	Jefferson Hall 423	Systems Engineering	Briggs, et al. (USAFA)	39
		9:15 AM	Jefferson Hall 301	Systems Engineering	Bunz, et al.	35

<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
9:15 AM	Jefferson Hall 401	Systems Engineering	Kim, et al.	38
9:15 AM	Jefferson Hall 501	Systems Engineering	Kubanuck, et al. (USAFA)	38
9:15 AM	Jefferson Hall 414	Systems Engineering	Lanclos, et al.	36
9:15 AM	Jefferson Hall 145	Systems Engineering	Roberts, et al.	37
9:30 AM	WH6004	Geography and Envir. Eng. (Human)	Corner	28
9:30 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Maurmeier, et al.	33
9:30 - 11:30 AM	WH5326 Foyer	Geography and Envir. Eng.	Environmental Engineering and Science project displays	29
9:45 AM	Mahan, F-Level	Civil Eng.	Cojocar, et al.	21
10:00 AM	Washington Hall 4303	Foreign Language: Arabic	Cherry, et al.	25
10:00 AM	Washington Hall 4304	Foreign Language: Chinese	Cavallo, et al.	26
10:00 AM	Washington Hall 4309	Foreign Language: French	Goodwin, et al.	26
10:00 AM	Washington Hall: Red Reeder Room (4th Floor)	Foreign Language: German	Fretheim, et al.	27
10:00 AM	Washington Hall: 5006	Foreign Language: Portuguese	Chandler, et al.	27
10:00 AM	Washington Hall: 4308	Foreign Language: Spanish	Almy, et al.	28
10:00 AM	WH6004	Geography and Envir. Eng. (Human)	Medellin	28
10:00 AM	Thayer Hall 160	History	Cohn	29
10:00 AM	606, 4th floor	Law	Ehasz	29
10:00 AM	Mahan Hall, Arnold Auditorium	Mechanical Engineering	Betterbed, et al.	22
10:00 AM	Mahan Hall 223	Mechanical Engineering	Digangi, et al.	22
10:00 AM	Mahan Hall 205	Mechanical Engineering	Volle	22
10:00 AM	Bartlett Hall 302	Mechanical Engineering	Wathen	22
10:00 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Wathen	33
10:00 AM	Jefferson Hall 414	Systems Engineering	Adao, et al.	36
10:00 AM	Jefferson Hall 514	Systems Engineering	Bandy, et al. (Clarkson)	37
10:00 AM	Jefferson Hall 401	Systems Engineering	Brege, et al.	38
10:00 AM	Jefferson Hall 301	Systems Engineering	Cummings, et al.	35
10:00 AM	Jefferson Hall 121	Systems Engineering	Pratt, et al.	35

Exploration of Diffusion and Infection Models: Sensitivity to Topology and Initial Conditions	Steven Kinney
PTSD Statistical Analysis	Jeremy May
Expanding STEM: Expanding HUNCH	Jonathan McCann
Exponential Smoothing Models Applied to IED Attack Trend Analysis	Natalia Mendoza
Finding the shape of the Earth	Robert Perez-Aleman
An Insight into Joint Publications at West Point	Kendall Poling
The Second Battle of Fallujah: Using an Entropy Measure for Sensor Allocation on the Battlefield	Stephen Prasnicky
Estimation of the Effect of Correlation Pricing on Geometric Brownian Motion	Alex Spiegel
Optimization of Logistical Operations in the Atlantic	Jonathan Stafford
Generalized Form of the Airy's Equation with Solutions	Richard Starks
Out in Left Field: Statistical Analysis of the Greatest Baseball Players to Play Left Field Using the Concepts from Sabermetrics	Jennae Tomlinson
Ballistic Missile Survivability in the Terminal Phase	Stuart White
In Vitro, RNA Degradation in Post Mortem Blood	Savannah Willson
Optimization of Defenses in the Madden Football Video Game Series	Dexter Wise
Exploring a Mathematical Model of Counterinsurgency	Devon Zillmer

			<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
11:00 am	Filling the Cultural Gap: The US, Iran and the Torture Taboo	Luke King	10:00 AM	Jefferson Hall 423	Systems Engineering	Quintana, et al. (USAFA)	39
2:00 pm	Invoking the First Amendment: A Legal Analysis of West Point's Religious Practices	Kevin Koppe	10:00-11:30 AM	LHB101A	Social Sciences	Bard: Islam	34
			10:00-11:30 AM	LHB101B	Social Sciences	Griffiths	34
3:00 pm	A Permanent Terror Tribunal: The Solution to the Question of International Justice for Terrorism	Benjamin Salvito	10:00-11:30 AM	LHB203	Social Sciences	McCraw	34
			10:00-11:30 AM	LHB202	Social Sciences	McKinney	34
			10:15 AM	Mahan, F-Level	Civil Eng.	Reisweber, et al.	21
4:00 pm	Self-Defense and the Use of Force against Non-State Actors in International Law	James White	10:15 AM	Mahan Hall E-Level	Mechanical Engineering	Boonprasert, et al.	22
			10:30 AM	Mahan Hall 205	Mechanical Engineering	Baxter	22
			10:30 AM	Bartlett Hall 302	Physics and Nuc. Eng.	Krause, et al.	33
			10:30 AM - 1:00 PM	WARCEN Room (2nd Floor - Cullum Hall)	Behavioral Sciences and Leadership	Frechette, et al.	18
			10:30 AM - 1:00 PM	Central Guard Room	Behavioral Sciences and Leadership	Kiernan, et al. & Jacobson, et al.	18
			10:30 AM - 1:00 PM	Thayer Hall - 2nd Floor	Behavioral Sciences and Leadership	Poster Display of Various Projects	16
			10:30 AM - 1:00 PM	Thayer Hall - 2nd Floor	Mathematical Sciences	Poster Display of Various Projects	30
			10:45 AM	Jefferson Hall 121	Systems Engineering	Castro-paz, et al.	36
			10:45 AM	Jefferson Hall 401	Systems Engineering	Hannah, et al.	38
			10:45 AM	Jefferson Hall 423	Systems Engineering	Masiello, et al. (USAFA)	39
			11:00 AM	Thayer Hall 272	Behavioral Sciences and Leadership	De Rosa and Amenyro	18
			11:00 AM	Mahan, B-5	Civil Eng.	Alexander, et al.	21
			11:00 AM	Washington Hall 4303	Foreign Language: Arabic	Jansen, et al.	25
			11:00 AM	Washington Hall 4309	Foreign Language: French	Pride, et al.	26
			11:00 AM	Washington Hall: 5006	Foreign Language: Portuguese	Beehler, et al.	27
			11:00 AM	Washington Hall: 4307	Foreign Language: Russian	Dominiak, et al.	27
			11:00 AM	Washington Hall: 4305	Foreign Language: Spanish	Altobelli, et al.	28
			11:00 AM	Thayer Hall 160	History	Saul	29
			11:00 AM	606, 4th floor	Law	King	30
			11:00 AM	WP Club Ballroom	Mechanical Engineering	Abrams	22
			11:00 AM	Mahan Hall 223	Mechanical Engineering	Flett, et al.	22

Mathematical Sciences

(Poster Session: All projects will be on display from 10:30 am- 1:00pm on the 2nd Floor of Thayer Hall)

Project Title	Cadets						
Stochastic Modeling of Heat Diffusion in a 120 mm Cannon	Mark Adams		10:30 AM - 1:00 PM	Thayer Hall - 2nd Floor	Behavioral Sciences and Leadership	Poster Display of Various Projects	16
Preventing and Deterring Piracy in the Gulf of Aden	Stephen Brightman, Sorin Portase		10:30 AM - 1:00 PM	Thayer Hall - 2nd Floor	Mathematical Sciences	Poster Display of Various Projects	30
The Application of Game Theory to Determine the Effects of Troop Allocation and Humanitarian Assistance in Counter Insurgency	James Buensuceso		10:45 AM	Jefferson Hall 121	Systems Engineering	Castro-paz, et al.	36
			10:45 AM	Jefferson Hall 401	Systems Engineering	Hannah, et al.	38
			10:45 AM	Jefferson Hall 423	Systems Engineering	Masiello, et al. (USAFA)	39
Developing Educational Materials for Space Camps	Bryan Connolly		11:00 AM	Thayer Hall 272	Behavioral Sciences and Leadership	De Rosa and Amenyro	18
Terrorism and Economics: A Study in Trade and its Effects on International Terrorism	Iain Cruickshank		11:00 AM	Mahan, B-5	Civil Eng.	Alexander, et al.	21
Predicting the Perfect Matchup: The Use of Collaborative Filtering in Baseball	Daniel Elmlblad, Tyler Seymour		11:00 AM	Washington Hall 4303	Foreign Language: Arabic	Jansen, et al.	25
The Process and Consequences of Defining Implication in Symbolic Logic	Lucas Enloe		11:00 AM	Washington Hall 4309	Foreign Language: French	Pride, et al.	26
Matrix Derivatives and Trace Diagrams	Paul Falcone		11:00 AM	Washington Hall: 5006	Foreign Language: Portuguese	Beehler, et al.	27
Infinite Bootstrapping of Reliability Block Diagrams with Empirical Component Lifetimes	James Fritz		11:00 AM	Washington Hall: 4307	Foreign Language: Russian	Dominiak, et al.	27
Randomness Properties Found in DeBruijn Sequences	Elliot Gardner		11:00 AM	Washington Hall: 4305	Foreign Language: Spanish	Altobelli, et al.	28
Improving New Methods for Using Dynamic Medical Imaging Data to Measure Blood Flow to Tumors	Catherine Gibbs		11:00 AM	Thayer Hall 160	History	Saul	29
			11:00 AM	606, 4th floor	Law	King	30
			11:00 AM	WP Club Ballroom	Mechanical Engineering	Abrams	22
Weapons Target Assignment Using Dynamic Programming	Chris Griggs		11:00 AM	Mahan Hall 223	Mechanical Engineering	Flett, et al.	22
Classification of Classic Differential Equations with the Extended Operator Method	Nate Horswill						

<u>Time</u>	<u>Location</u>	<u>Sponsor</u>	<u>Cadets/Students</u>	<u>Page</u>
11:00 AM	Mahan Hall, Arnold Auditorium	Mechanical Engineering	Gordon, et al.	22
11:00 AM	Mahan Hall 205	Mechanical Engineering	Lamb	22
11:00 AM	Jefferson Hall 414	Systems Engineering	Bujewski, et al.	36
11:00AM-12:30PM	Arvin Cadet Physical Dev. Center, 3rd Floor DPE Projection Room	Phys. Ed./Kinesiology	Capstone Brief	32
12:00 - 2:30 PM	Thayer Hall - Robinson Auditorium	English and Philosophy	Academy Idol (Finalists)	25
1:00 PM	Mahan, Arnold Aud.	Civil Eng.	Marx, et al.	21
1:00 PM	Washington Hall 4303	Foreign Language: Arabic	Allen, et al.	26
1:00 PM	Washington Hall 4303	Foreign Language: Chinese	Perkins, et al.	26
1:00 PM	Washington Hall: 4307	Foreign Language: Russian	Barnhill, et al.	27
1:00 PM	Washington Hall: 4308	Foreign Language: Spanish	Dean, et al.	28
1:00 PM	Thayer Hall 158	History	Faugstad	29
1:00 PM	Mahan Hall E-Level	Mechanical Engineering	Barcelon, et al.	22
1:00 PM	Mahan Hall 223	Mechanical Engineering	Dean et al.	23
1:00 PM	Mahan Hall 205	Mechanical Engineering	Rauk	23
1:00 PM	Mahan Hall B5	Mechanical Engineering	Walker, et al.	23
1:00 PM	Thayer Award Room- Taylor Hall	Physics and Nuc. Eng.	Poster Display of Various Projects	33
1:00 PM	Jefferson Hall 401	Systems Engineering	Angerami, et al.	38
1:00 PM	Jefferson Hall 414	Systems Engineering	Arevalo, et al.	36
1:00 PM	Jefferson Hall 145	Systems Engineering	Baker, et al.	37
1:00 PM	Jefferson Hall 301	Systems Engineering	Brightman, et al.	35
1:00 PM	Jefferson Hall 121	Systems Engineering	Smith, et al.	36
1:00-2:30 PM	LHB101A	Social Sciences	Bard: China	21
1:00-2:30 PM	LH101B	Social Sciences	Fuhriman	35
1:00-2:30 PM	LHB201	Social Sciences	Haag	36
1:00-2:30 PM	LHB203	Social Sciences	Smith	38
1:00-2:30 PM	LHB202	Social Sciences	Fontichiaro	37

The following projects will be displayed from 9:30 am—11:30 am in the foyer outside of Washington Hall 5326:

<u>Prog.-Major</u>	<u>Project Title</u>	<u>Cadets</u>
Env Eng	Mitigation of Lead Particulate Contamination in the Tronsrue Marksmanship Center at the US Military Academy	Richard Niedbala Andrew Ng
Env Eng	Ineffective Drinking Water Disinfection in Developing Countries	Tim Jeffcoach
Env Sci	A Water Budget Developed to Optimize Irrigation of the Cadet Plain at West Point, New York	Andrew Zapcic

The following is presented in Washington Hall 5402:

8:00 am GIS	GIS Network Analysis for Homeland Security	Josh Wiley
----------------	--	------------

History (Thayer Hall):

<u>Time/Location</u>	<u>Project Title</u>	<u>Cadets</u>
9:00 am TH158	With Their Assistance: A Study of French Resistance in World War II	Edward Van Cura
10:00 am TH160	David's Warriors: Religion, Myth, and Culture In the Development of the Israel Defense Forces, 1948-1973	Bradley Cohn
11:00 am TH160	No Pain, No Gain: An Evaluation of the 1973 Arab-Israel War	Alexander Saul
1:00 pm TH158	The Symposium on the History of Irregular Warfare Conference Experience	Jesse Faugstad
2:00 pm TH158	The English East India Company in Bombay and Surat: A Commercial Comparison	Samuel Van Kopp

Law

(All presentations held in the Law Library—4th Floor, Building 606)

<u>Time</u>	<u>Project Title</u>	<u>Cadets</u>
8:00 am	All Men Were Created Equal? The Inequity Created by Criminalizing Hate	Amanda Choate
9:00 am	Private Security Companies and United Nations Peacekeeping Missions: A feasible Option	Aaron Conley
10:00 am	The Domestic War Crime Trial: An Impossible Path to Justice	Ashley Ehasz

Spanish (Located in WH 4305):

Time	Project Title	Cadets	Time	Location	Sponsor	Cadets/Students	Page
			1:30 PM	Mahan Hall, Arnold Auditorium	Civil Eng.	Drago, et al.	36
9:00 am	Terrorism in the Tri-Border Region Of South America	Jonathan Cook, Christen Holcombe, Sean Park, Tara Somersal	1:45 PM	Jefferson Hall 301	Systems Engineering	Adorno, et al. (USAFA)	21
11:00 am	Cross-Border Concerns and US-Mexican Relations	Megan Altobelli, Luis Arauz, Stewart Haka	1:45 PM	Jefferson Hall 121	Systems Engineering	Ancheta, et al.	26
			1:45 PM	Jefferson Hall 401	Systems Engineering	Buensuceso, et al.	26
			1:45 PM	Jefferson Hall 145	Systems Engineering	Clark, et al.	27
			1:45 PM	Jefferson Hall 414	Systems Engineering	Krause	29
			2:00 PM	Mahan Hall, Arnold Auditorium	Civil Eng.	Jimenez	30

Spanish (Located in WH4308):

Time	Project Title	Cadets	Time	Location	Sponsor	Cadets/Students	Page
9:00 am	How the US Can Help Stabilize Colombia	Andrew McElroy, Andres Pazmin, Nicole Mayoras, Keith Mullinger	2:00 PM	Washington Hall 4303	Foreign Language: Arabic	Foster, et al.	23
10:00 am	Blood and Dreams in the Desert: US-Mexico Border Issues	Debra Almy, Jeffrey Nielsen, Stephen Skinner, Jonathan King	2:00 PM	Washington Hall 4304	Foreign Language: Chinese	Borden, et al.	23
			2:00 PM	Washington Hall: 4307	Foreign Language: Russian	Cote, et al.	23
1:00 pm	The Role of US Foreign Policy in the Stabilization of the Andean Region of South America	Dave Dean, Annie Odom, Daniel Parten, Marissa Readinger	2:00 PM	Thayer Hall 158	History	Vankopp	23
			2:00 PM	606, 4th floor	Law	Koppe	36
			2:00 PM	Mahan Hall, Arnold Auditorium	Mechanical Engineering	Fobar, et al.	37
			2:00 PM	Mahan Hall B5	Mechanical Engineering	Hilland, et al.	37
			2:00 PM	Mahan Hall E-Level	Mechanical Engineering	Humbert, et al.	38

Geography & Environmental Engineering

The following are presented in Washington Hall 6004:

Time	Project Title	Cadets	Time	Location	Sponsor	Cadets/Students	Page
Prog.-Major			2:00 PM	Mahan Hall 223	Mechanical Engineering	Maddy, et al.	30
8:00 am	Relief Centers of Cape Cod, Massachusetts	Ken Rowe	2:30 PM	Jefferson Hall 121	Systems Engineering	Ahn, et al.	38
Env Geo			2:30 PM	Jefferson Hall 145	Systems Engineering	Farley, et al.	37
			2:30 PM	Jefferson Hall 514	Systems Engineering	Gilmore, et al.	30
8:30 am	Climate Change and Environmental Security in Pakistan	Christopher Lee Gaulin	2:30 PM	Jefferson Hall 401	Systems Engineering	Moore (USAFA)	34
			3:00 PM	606, 4th floor	Law	Salvito	34
9:00 am	Congolese Cobalt and the Struggle for its Control	Adam Norris	3:00-4:30 PM	LHB101B	Behavioral Sciences and Leadership	Callejas	17
			3:00-4:30 PM	LHB201	Social Sciences	McLaughlin	35
9:30 am	Jewish Americans and Israeli Defense Forces Service: Motivations and Identities	Thomas Louis Corner	3:00-4:30 PM	LHB101A	Social Sciences	Schwab (Bard)	35
			3:15 PM	Jefferson Hall 401	Systems Engineering	Elmblad, et al.	34
10:00 am	Migration and West Point: An Ethnographic Study of Immigrants	Marco A. Medellin, Jr.	3:15 PM	Jefferson Hall 145	Systems Engineering	Fischer, et al.	34
			4:00 PM	606, 4th floor	Law	White	34

German (Located in Red Reeder Room, 4th Floor Washington Hall):

Time	Project Title	Cadets
9:00 am	Comparison of U.S. and German Exit Strategies for Afghanistan	Daniel Considine, Lant Fogarty, Ben Hicks
10:00 am	Comparison of U.S. and German Environmental Policies	Emil Fretheim, David Modlin, Patrick Ryan, Joshua Summer

Portuguese (Located in WH5006):

Time	Project Title	Cadets
10:00 am	Combating AIDS in Brazil and Portuguese Speaking Africa	Matt Chandler, Josh Cook, Cory Hanson, Tyler Magerkurth, Kyle Mayfield, Drew Mayville, Juan Trevino
11:00 am	Improving Women's Rights and Ending Human Trafficking in Brazil, Portugal and Africa	Kristin Beehler, Andrew Branch, Diana Bunjovac, Alexandra Scott, Alexandra Stamatiou, Taneshina Wright

Russian (Located in WH4307):

Time	Project Title	Cadets
9:00 am	Soviet and Russian Influence on Modern-day Afghanistan	Joanna Engelhardt, Mike Larocque, Will Lopez, Jessica Muckelroy
11:00 am	The Russia Effect: Russian Influence in Present Day Ukraine	Artur Dominiak, Elizabeth Leire, Sarah Levy, Casey Nugent, Clinton Roberts
1:00 pm	Russian Attitudes toward Limiting Proliferation of Light Weapons	Joseph Barnhill, Matthew Jardnak, Jocelyn Lewis, John Traver, Henryk Zaleski
2:00 pm	The Impact of Existing and Future Russian Oil Pipelines on Relations with the US and its Allies	Joshua Cote, James Flanagan, Dean Garretson, Robert Mandel, Joshua Pernelli

This page left intentionally blank.

1:00 pm	Preventing a Failed State: Achieving Stability in Yemen	Travis Allen, Andrew Dill, Kristopher Kilgroe, Ryan Nye
2:00 pm	Egyptian Society and Government : Meeting the Challenges of the 21 st Century	Riley Foster, Nargis Kabiri, Brennan Roorda, Zach Willey

Chinese (Located in WH 4304):

Time	Project Title	Cadets
8:00 am	Why China Will Never Be Number One	Eric Bernau, Miriam Bottrell, William Chaskes, Robert Dougherty, Eugene Park
9:00 am	Modern Terrorism in China	Joseph Cheng, Josh Knight, Josh Mauldin, Duncan Moore
10:00 pm	“Greening” China	Mark Cavallo, Nathan Taylor, Blaine Williams, Michael Zhou
1:00 pm	People’s Republic of China’s Effects on South-East Asia	Thomas Perkins, Jacqlyn Tsao, Benjamin Westman, Christopher Villerot
2:00 pm	China’s Political, Military, and Economic Relationships and Interests in the Middle East	Stefan Borden, Jack May, Ginger Recinos

French (Located in WH4309):

Time	Project Title	Cadets
9:00 am	AFRICOM – Envoy to Peace	Samuel Beckett, Wesleigh Cochrane, Mary Erdman, Paige Ford
10:00 am	AFRICOM’s Challenge	John Goodwin, Daniel Hall, Marc Hodel, Connor O’Brien
11:00am	AFRICOM: “Combatant” Command, not like the others	John Pride, Charles Ridge, Andrew Shields, Brandon Wright

This page left intentionally blank.

[Projects are listed chronologically in order by time under each department]

Behavioral Sciences and Leadership

(Poster Session: All projects will be on display from 10:30 am– 1:00pm on the 2nd Floor of Thayer Hall)

Engineering Psychology Program

Project Title Bionic Foot	Cadets Charles Baldinger, Elizabeth Betterbed, Robert Bucknam, Sangwook Han, Bryan Lagasse, Thomas Mangan, Justin Marburger, Kevin McFerrin, Kirsten Rauk, William Schuh, Tiffany Taylor, Tiernan Still, Zack Wagner
Evaluating the Army's Hearing Protection Program Strategy for the 21st Century	Zach Radwick, Joseph Shevchik, Leon Onofre
Dynavision D2: Enhancing Visuomotor Skills	Adam Lary, William Schuh, Matt Nulk
Improving Land Navigation Skills Using GEO-Tracking Technology and Immersive Visualization of Terrain	John Puryear, Justin Smith, Andrew Gill, William Archbold, John Adams
Medical Error Analysis: An Evaluation of a Proposed Improved Prescription Drug Label in the United States Corps of Cadets	Joseph Shevchik
The Orientation of Visual Attention with Directional Tactile Cueing	Chris Brown, Brian Clayton
Modeling Transfer of Training and Training Effectiveness in Simulated Marksmanship Training	Jacob Frechette, Alexander Shoaf, Brian Chung
Visual Perception: Differences between 3-Dimensional and 2-Dimensional Map Reading and Distance Perception	Jarryl Jenkins, Kyle Tuttle, John Manzano, John Landsberg
Interface Design Recommendations for the Spartan Unmanned Surface Vehicle (USV)	John Pitonyak, William Myers, Misa Yarmie
Improving the Academy Management System (AMS) by Providing an Integrative and Informative Visual Display	Scott Wright, Landon Cheben, Cassandra Ellington, Jeremy Huggins

English and Philosophy

Project Title: *Voices of Double Consciousness: American Literature Installations*—Lincoln Hall Basement 200 and Art Studio 8:00 am—4:30 pm

**Cadets: Loc Bao, James Beebe, Jymette Meyer, Joy Turner, Trent Weekes, Tony Hatcher, Hannah Rosenthal, Spencer Gray, Cody Newsome, Karyn Powell, Paul Duda, Patrick Northam, Christopher Post, Peter Rome
Instructor: Dr. Tony McGowan**

**Project title: *Indie Film Festival on the Hudson: Cadet Short Films*
Thayer 144 9:00—10:30 am**

Cadets: Bao, L., Beebe, J., Bishop, A., Bradshaw, A., Browne, C., Castelli, T., Cook, C., Coon, M., Decastro, J., Elliot, G. , Gray, S. , Harris, J., Hatcher, A., Henao-escobar, S. , Jurgensen, R., Lynch, J., Meloro, D., Meyer, J. Newsome, C., Oestmann, T. , Park, P., Powell, K., Rome, P., Rowell, A., Sherstad, C., Shively, T., Turner, J.

**Project Title: *Academy Idol Finals: Speeches from Shakespeare*
Thayer Hall/Robinson Auditorium 12:00—2:30 pm**

Cadets: Thomas Mack, Waverly Washington, Tim Chen, Michael Thury, Jeff Kim

Foreign Languages

Arabic (Located in WH4303):

Time	Project Title	Cadets
8:00 am	Globalization of Terror: Exporting the al-Qa'eda Brand Name	Peter Bauleke, Michael Mason, Michael Mellman, Alexander Pappas
9:00 am	Further from Peace: The Stagnation of the Israeli-Palestinian Peace Initiative	Nicholas Glenn, Ryan Herring, Alexander Jansen, Nadi Kassim
10:00 am	Which Way Forward?: Paths to Democratization in Iraq	Matthew Cherry, William Groves, Alex Koss, Nolan Love
11:00 am	Palestinian Human Rights: the Impact of Media and International Relations	Alexander Jansen, Charles Reed, Rebekah Sheppard

Brigade Personnel Management and Training Database	Jesse Castillo, Nathan Lynch	The Utility of Gesture Recognition Software in Battlefield Situations	Chris Brown, Jeff Crosbie, Will Small
CheapBot II	Jeremie Regnier	Situation Awareness Measures in Game-Based Training	Jon Lanier, Michael Sheehan, Justin Turner
CLDS ePortfolio	Mark Armstrong, William Huang	Ecological Interface Design of the NYFD Electronic Command Board (ECB)	David Johnson, Brian Clayton, Brian Chung
Commandant's WFC Web	Joseph Brown, Joseph Grimm	<u>Sociology Program</u>	
Demon Eye (Target Location Module)	John Eischer, George Hopkins, Derek Wales	Project Title	Cadets
Encryption Profiler	Morgan Minton, Michael Steele, Samuel Thode, Thomas Zastoupil	Accessions, Casualties, and Social Class Bias in the Military	Joseph Callejas
		(This project will also be presented in Lincoln Hall 101B from 3:00—4:30 pm)	
FTASB (hyper-optimized code)	James Erkes, Reyn Mossman, Kristopher Webber	<u>Management Program</u>	
		Project Title	Cadets
honeyM	David Brasefield, Nathan Grunzweig, Joseph Spracklen	Managing Perceptions in Conflict Resolution Negotiations	Joseph Gallo
		Advanced Network Analysis and Targeting	Kelly Eyre, Ben Johnson, Jana Binker, Brian Meese
Information Dissemination Over Low-Bandwidth Links	Thomas Dean		
Integrating Robots into Networks	Thomas Barton, Ali Ihusaan	Chess	Ben Johnson, Kelly Eyre
		Ethics	Kelly Eyre, Ben Johnson
Intelligent Load Management System	Rowland Kaliisa, Daniel Rupprecht, Simratpal Singh	Victor Constant Ski Slope	Alex Hayes, Owen Meyer, Christine O'Leary, Eric Sefchik
iPhone App Development	Adam Royal, Chinnawoot Thongpila	The Plan for Red Bull: Giving them the "Wings" to take off at West Point	Jev Valles, Joseph Carothers, Blake Fitzgerald, Ashley Wilson
Leapfrog	Monte Hoover, Joseph Schafer		
Sentinel Bot	Deonte Dawson, John Kimtis, Joshua Miles, Jonathan Neidig, Jeremie Regnier, Harry Stine	Enlisted Soldiers and West Point: Bridging the Gap to Attract Underrepresented Potential	Matthew Mitchell, Brian McSween, Mikel Weich, Ross Trampler
Soldier Tactical Aerial Reconnaissance System	Mike Weigand	Relay for Life	Todd Miller, Todria Tornike, Patrick Mealy, Jonathan Bulls
Team Knight Rider Bots	Daniel McGee, Alois Renggli, Hunter Williams	Marketing of Pine Lake: A Diamond in the Rough	Nolan Martin, Robert Wolfe, Sylvia Thomas, Griffin Strader, Andrew Ziebarth
X-Bot	Patrick Hickey, Eric Lamb, Richard Norris, Lance Penhale, Kyle Sullivan	The Cow Club Marketing Plan.	Kirk Van Everen, Kelsey Hassin, Matthew Palange, Charles Smith, William Sack

Project Red: Marketing for a Cause	Paul Erickson, Joseph Vandeusen, Louis Griffith, Garrett Anderson	1:00 pm MH 205	ME489 Advanced Biomedical Material	Kristen Rauk
		1:00 pm MH B5	ME489 Unmanned Ground Vehicles	Daniel Walker, Timothy Woodard
Developing A Marketing Plan to Promote the Library Coffee Shop	Kenneth Howell, Matthew Jenkins, Desmond Lamb, Tony Moore, Matthew Simeone	1:00 pm MH 223	Service Academy Design Challenge	Zachariah Dean, Jordan Farrar, Andrew Mellon, Benjamin Ritzema, Omar Shaikh
Grant Hall Café: All right for the Corps	R. Tyler Hufstetler, Sean Joyce, Brian Johnson, Richard King	2:00 pm MH E-Level	SDC Weapon Mount	Nathan Humbert, Steven Lafave, Bradley Mirkovich, Jordan Morris
		2:00 pm MH B5	Biomechanical Energy Harvester	Donald Hilland, Aleksandrs Naumovs, Daniel Sequeira, Steven Sollee
The Legend of the clean Machine: Improved Laundry Service To The Corps	Jennifer Dunten, Jacob Economy, Casey Thome, Alexander Knight	2:00 pm MH 223	Human Body Thermoregulation	Craig Maddy, Thomas Roberts, Mark Wilson
		2:00 pm MH Arnold Auditorium	Mini-Baja	David Fobar, Tyler Hess, Geoffrey Hewitt, Jacob Maciorkoski, Jonathan Miller, Matthew Powell, Joel Rickenbach, Alexander Shelby, Lucas Wilcox, Jeremy Wisniewski
<u>The following will be displayed at or near the Central Guard Room from 10:30 am to 1:00 pm:</u>				
Use of Automated Processes to Employ and Track Trips within USMA	Laura Kiernan, Tyrell Thompson, Domeca Henderson, David Johnson			
Application of Tactile Displays to Mounted Maneuvers	Jeremiah Jacobson, Paul Tennison			

The following will be located on the 2nd Floor of Cullum Hall (WARCEN room) from 10:30 am to 1:00 pm:

Modeling Transfer of Training and Training Effectiveness in Simulated Marksmanship Training	Jacob Frechette, Alexander Shoaf, Brian Chung
---	---

Virtusphere: A Collaborative effort between BS&L, EE&CS and DMI to bring physiological impact to virtual media

Honors Thesis Defense—Psychology—Thayer 272- 10:00 am-12:00 pm

Title Don't be a Cynic: The Effect of Character Strengths and Virtues on Cynicism Levels	Cadet Alex De Rosa
The Impact of Combat Upon the U.S. Army: The Probability of PTSD Given Combat Exposure	David Ameneyro

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 ANGiE (Gaming Environment)	Cadets Alan Lewis, Daniel Ruiz, Justin Sappington, David Scheys
BalloonSat	Thomas Dean
Bionic Foot	Charles Baldinger, Elizabeth Betterbed, Robert Bucknam, Sangwook Han, Bryan Lagasse, Thomas Mangan, Justin Marburger, Kevin McFerrin, Kirsten Rauk, William Schuh, Tiffany Taylor, Tiernan Still, Zack Wagner
Black Knight Satellite	Zachary Abrams, Garrett Fridline, David Niblick, Nicholas Terech, Matthew Wilson

9:00 am MH Arnold Auditorium	Junk to Juice—Vertical Axis Wind Turbine	Brandon Skinner, Forrest Wallace, Benjamin Wise, John Zornick
9:00 am MH B5	PEO Soldier Flash Flame Protection	Benjamin Little
9:00 am MH 205	EM Rail Gun Launcher	Andrew Saucedo, Timothy Woodard
9:00 am MH 223	Design, Build, Fly	Gerren Bazier, Matthew Gillett, Lewis Hudson, Katrina Kamel, Jared Lewis, Dan Riggs
10:00 am MH Arnold	Bionic Foot	Elizabeth Betterbed, Bucknam, Thomas Mangan, Kristen Rauk
10:00 am BH 302	ME489 Laser Defense Against Incoming Mortar	Stephen Wathen
10:00 am MH 205	ME489 Military Shelter Design	Kyle Volle
10:00 am MH 223	Black Dart VII (Team 1)	Steven Digangi, Andrew Laughna, Jeffrey Mainwaring, Gabrielle Quatse, Robert Wolf
10:15 am MH E-Level	Statue of Liberty Evacuation System	Thanat Boonprasert, Gregory Griffith, Alexander Mumford, Spurgeon Petty, Rick Storm, David Watts
10:30 am MH 205	ME489 Wing Design	Robert Baxter
11:00 am MH Arnold Auditorium	Junk to Juice—Horizontal Axis Wind Turbine	John Gordon, Daniel Moulton, Gibson Sale, Stephen Wathen
11:00 am WPC Ballroom	Black Knight I Satellite	Zachary Abrams
11:00 am MH 205	ME489 Microprocessor Control	Eric Lamb
11:00 am MH 223	Black Dart VII (Team 2)	Kevin Flett, Phillip Rangitsch, Daniel Walker, Erik Wilburn, Jonathan Wrieden
1:00 pm MH E-Level	FAA Wind Turbine	Lawrence Barcelon, William Kirschenman, Arthur Murphy, Alex Reiter

Chemistry and Life Sciences

(Posters and Projects will be displayed in Cullum Hall. Cadets will be available from 9:00 am to 12:00 pm to discuss and demonstrate them.)

Project Title	Cadets
The biodegradation of sulfonic acids	Robert Atchison
The inactivation of anthrax spores by short-chain fatty acids	Alfred Pisano
Breast Impedance Scanning	Sarah Messier, Elyse Fiore
The Effects of Explosive Residues on Soil Inhabiting Dictyostelid Cellular Slime Molds	Adam Kowalski, Corbin Helis, Michael Dolan
The effects of explosive residues on <i>Danio rerio</i> , the Zebrafish	Alexander Ericksen
Characterization of a Bio-inspired Metal-polymer Matrix Synthesized Through the Bulk Polymerization of Poly (vinyl-imidazole)	Lauren Beckler, Matthew Howard
The study of structural response of RNA aptamers to magnesium ion concentration	Jeremy Smith
Using Hyperspectral Imagery Analysis to Characterize the Adaptive Coloration Ability of the Cuttlefish, <i>Sepia officinalis</i>	Samuel Galima
The Presence of <i>Palmaris longus</i> tendons in the forearm	Barret Halgas, Ilya Ryaboy
Usefulness of chromogenic agar for detection of Environmental methicilin-resistant <i>Staphylococcus aureus</i>	Patrick Walker
Identification of bacterial isolates that inhabit fresh water sponges	Ann Brakefield
Modeling the effects of a high energy laser on a mortar Round	Dana Parker
Electrochemical Detection of Munitions Constituents in Ground Water	Jeffrey Chin

Sensitivity Tests for Mortar Cartridges	Alexander Madden	9:45 am MH F-level	PCI Big Beam Competition	Razvan Cojocaru, Mark Garrison, Ross Hartmann
A Peptide Based Separator for 2,4,6- Trinitro-toluene	Seth Johnson			
Microbial Fuel Cells (MFC): Testing the effects of certain mediators on electron transfer using fuel cells, electrochemical, and staining techniques	Caspar Yi, Ethan Heckmann, Patrick Bowers	10:15 am MH E-level	Statue of Liberty Evacuation System	Nicholas Reisweber, Diana Worth
KCl aggregation for reproducible SERS response for saxitoxin Detection	Brandon Harris	11:00 am MH B-5	Highland Falls Water Expansion Feasibility Study	R. Joshua Alexander, Soo Ho Park
Reproducible sample preparation for explosive samples for analysis via Raman spectroscopy	Archie Overmann	1:00 pm MH Arnold Auditorium	American Society of Civil Engineers – Steel Bridge	Toby Marx, Tom Malejko, Markus Makowski, Kyle Miner, Stephen Marthy, Cameron Rohrer
Characterization of automated solid phase microextraction (SPME) With GC-toroidal ion trap mass spectrometry for detection of CWA simulants	Michael Swayze, Mary Ann Thomas			
Measuring the speed of sound in liquids using the diffraction and Refraction of laser light	Charles Law	1:30 pm MH Arnold Auditorium	American Society of Civil Engineers – Concrete Canoe	Alfred Drago, William Caffery, Gregory Lombardo, Erica Triebenbach, Kathryn Rivera
The Continued Characterization and Modifications of a Mid/Longwave IR Emitter	Kyle Johnson			Issa Moussa, James Henshaw, Matthew Scrivner
Characterization of Supercritical Fluid Carbon Dioxide for Use in the Production of Breathable Oxygen	Brandon Dotson			

Civil & Mechanical Engineering

Civil Engineering

(Posters will be displayed from 7:30 am-3:00 pm in Mahan Hall, Room 125)

Time/Place	Project Title	Cadets
8:00 am MH 223	Ultra High Performance Concrete Modulus of Elasticity Study	Mainor Bojorquez, Dave Carlson, Alex Vanhout
8:30 am MH 223	Ultra High Performance Concrete Ballistic Penetration Study	Dan Moore, Dustin Pope, Jorge Gonzalez
9:15 am MH E-level	National Timber Bridge Design Competition	Brad Davis, Braden Maughan, Adam Schwartz

2:00 pm
MH Arnold Auditorium

Wind Challenge

Edwin Jimenez

Mechanical Engineering

(Posters will be displayed from 8:00am-3:00pm in Mahan Hall 325)

Time/Place	Project Title	Cadets
8:00 am MH E-Level	Kiowa Warrior Maintenance Test Stand	Brett Black, Timothy Olson, Jessica Stephenson
8:00 am WPC Ballroom	X-Bot	Eric Lamb
8:00 am MH 205	ME489 USMA Energy Security	Matthew Gillett, Gregory Griffith, Lewis Hudson
8:00 am MH B5	Soldier Fitness Pod	Zachary Batcho