George Mason University
Department of Geography and Geoinformation Science
Spring Semester 2017

Military Geography
GGS 399-001
Course Syllabus

Instructor: Mr. F. H. Dillon, III
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Office Hours: Monday, 7:15-8:15 p.m. or by appointment
Email: fdillon@gmu.edu
Class Location: Nguyen Engineering Building, Rm 1109
Meeting Time: Monday, 4:30-7:10 p.m.
Blackboard Page: https://mymasonportal.gmu.edu/

Course Overview:

Warfare is inherently geographical in nature. The fundamental military problem is a space-time problem, "getting there firstest with the mostest." In addition, the geographic factors shaping military operations vary by the scale of the operation. The nature of military geography changes in response to the level of war – strategic, operational, or tactical – under consideration. The result is a nested set of geographic concepts and maps that describe the influence of physical and cultural features on military operations.

The purpose of this course is to give the student an understanding of the effects of various geographic features, both physical and cultural, on the conduct and outcome of military operations. The student will also learn to assess these effects in terms of the three levels of war. Finally, the student will apply this understanding to an on-the-ground analysis of a selected military operation in a Staff Ride format.

Course Objectives:

Based upon assigned reading, class discussion, individual research, and field observations, the student will be able to:

1) identify and assess the effect of physical and cultural geographic features on the conduct of military operations;
2) describe and compare the changing nature of geographic considerations based upon the three levels of war, including geographic aspects of
   a) the principles of war, and
   b) the spatial organization of the battlefield;
3) evaluate the conduct of a specific military operation in terms of the effects of the environment on the Battlefield Operating Systems, with particular emphasis on
   a) movement,
   b) weapons employment,
   c) command and control, and
   d) combat service support;
4) conduct an analysis in the field of a selected battlefield, utilizing a Staff Ride format, in order to understand how the battlefield environment affected the conduct and outcome of the battle.

Required Text:

1. Harold A. Winters, et al, ***Battling the Elements***, Johns Hopkins University Press, 2001.
2. Jay Luvaas and Harold W. Nelson, ed. ***Guide to the Battle of Antietam***, University of Kansas, 1996

Additional and Recommended Readings:

1. Eugene J. Palka and Francis A. Galgano, ed., ***Modern Military Geography***, Routledge, 2011. (On Reserve in Johnson Center Library)
2. Field Manual 3-0, ***Operations***, HQ, Department of Army (available online).
3. Field Manual 3-90, ***Tactics***, HQ, Department of Army (available online).
4. Patrick O'Sullivan, ***Terrain and Tactics***, Greenwod Press, 1991
5. Michael Howard and Peter Paret, ed., ***Carl von Clausewitz: On War***, Princeton University Press, 1984.
6. Louis C. Peltier and G. Etzel Pearcy, ***Military Geography***, Van Nostrand, Princeton, N.J., 1966. (On Reserve in Johnson Center Library)
7. The Infantry Journal, ***Infantry in Battle***, Garrett & Massie, Richmond, VA, 1939. (available on course Blackboard page)
8. E. D. Swinton, ***The Defence of Duffer's Drift***, Infantry Journal, April 1905. (available on course Blackboard page)
9. John Keegan, ***Six Armies in Normandy***, Viking Penguin, 1994. (On Reserve in Johnson Center Library)
10. Charles E. Heller and William A. Stofft, ed., ***America's First Battles, 1776-1965***, University of Kansas Press, 1987. (On Reserve in Johnson Center Library)
11. Stephen W. Sears, ***Landscape Turned Red: The Battle of Antietam***, Warner Books, 1983. (On Reserve in Johnson Center Library)
12. Harold G. Moore and Joseph L. Galloway, ***We were soldiers once -and young***, Random House, 1992. (On Reserve in Johnson Center Library)
13. Roger J. Spiller, ed., **Combined Arms in Battle Since 1939**, US Army Command and General Staff College Press, 1992. (available on course Blackboard page)

Student Requirements:

As an upper level course students are expected to read and write critically, and to conduct significant research outside the classroom. Students are responsible for all assigned reading and lecture material.

Examinations and Examination Policies:

1. There will be a quiz in week 5 and a midterm exam in week 9.
2. Makeup exams will **NOT** be given except under the most extraordinary circumstances (e.g. hospitalization). Makeup arrangements must be requested <u>in writing</u> in advance of the exam. A physician must document medical absences; this is available for all students through the University Health Clinic.

Staff Ride:

Each student must participate in a Staff Ride to Antietam Battlefield. Annex B provides an outline for the Staff Ride. Detailed assignments and instructions will be published separately.

Research and Analysis:
Each student will prepare an analysis of a selected battlefield in terms of the geographic factors influencing the conduct of operations at each level of war. Annex C provides detailed instructions for this case study. The results of the analysis will be reported orally and in writing, see below.

Written Work:

- Each student will submit the results of their battlefield analysis as a case study paper. See Annex C for instructions.
- Each student will prepare a précis of a selected reading for the lessons in weeks 6, 7, and 8. See Annex D for instructions.
- Each student will prepare a four page briefing paper to be included in the class Staff Ride guide. See Annex B for instructions.

Oral Presentation:
In lieu of a final exam, each student will prepare a poster presentation of their case study highlighting the lessons related to the geographical factors identified by the battlefield analysis. Annex E provides detailed instructions for format and layout.

Academic Integrity:
Academic integrity is essential. Each individual is expected to do his or her own work. Violations of the University Honor Code will not be tolerated and will result in course failure.

Grading Scheme and Policy:
Letter grades of A, A-, B+, B, B-, C+, C, D, and F will be assigned for completion of this course based on the cumulative score of all evaluated work. Rather than assign letter grades for the individual projects listed below, projects will be evaluated on a percent basis from which the final, total, score will be determined. In this upper level course the following grading scale will be employed: A = 100-95, A- = 94-93, B+ = 92-91, B = 90-85, B- = 84-83, C+ = 82-81, C = 80-70, D = 69-60, F = below 60. A grade of Incomplete must be requested in writing in advance, no later than 4/24, and can only be approved with a passing grade average.

Midterm Exam – 25% Battlefield Analysis – 25% Staff Ride – 20%
BOS Quiz – 5% Chapter Précis – 15% Poster Presentation – 10%

Annex A: Course Calendar
Annex B: Staff Ride
Annex C: Battlefield Analysis
Annex D: Chapter Précis
Annex E: Poster Presentation
Annex F: Glossary (distributed in class)

Annex A: Tentative Class Schedule (As of 22 January 2017)

Key Dates:

1/23	Class begins	3/27	Midterm Exam
1/30	"Add" Day – must be enrolled to receive a grade	5/6	Antietam Staff Ride
		5/15	Poster Session (in lieu of Final Exam)
3/13-17	Spring Break – No Class		

Week	Date	Topic	Assignment	Reading
1	1/23	Course Introduction - The Nature and Scope of Military Geography		• Murray, "Some Thoughts on Geography and War" • Winters, Introduction • David G. Hansen, "The Immutable Importance of Geography"(online)[1] • Hanson, "Why Study War" • Gray, "War – Change in Continuity and Continuity in Change"
2	1/30	Doctrinal Considerations and geography – The Principles of War Three Levels of War – Strategic, Operational, and Tactical		• FM 3-0, Chap 4 (para 4-33 – 4-49) online[2] • FM 3-0, Chap 2 (para 2-3 – 2-14) online
3	2/6	Spatial and Functional Organization of the Battlefield (Battlefield Operating Systems)		• FM 3-90, Chap 2 (para 2-10) online[3] • FM 3-0, Chap 4 (para 4-69 – 4-99) online
4	2/13	Geographic considerations at the strategic level of war		• FM 3-0, Chap 5 (para 5-23 – 5-56)
5	2/20	Geographic considerations at the operational level of war	BOS Quiz	• FM 3-0, Chap 5 (para 5-23 – 5-56) • ***Combined Arms in Battle Since 1939***, Chap 8 "Deception" (Blackboard)[4]

[1] From *Parameters*, Spring 1997, pp. 55-64. http://carlisle-www.army.mil/usawc/Parameters/97spring/hansen.htm

[2] FM 3-0 http://www.dtic.mil/doctrine/service_publications_usarmy_pubs.htm link available on course web page.

[3] FM 3-90 http://www.dtic.mil/doctrine/service_publications_usarmy_pubs.htm link available on course web page.

[4] *Combined Arms in Battle Since 1939* available on course Blackboard page.

Week	Date	Topic	Assignment	Reading
6	2/27	Geographic considerations at the tactical level of war: the Military Operating Environment – OCOKA and the military aspects of terrain	Paper proposal due; Chap précis due	• Winters, Chap 2, 7, 10, 12 (select one) • ***Combined Arms in Battle Since 1939***, Chap 28, "River Crossings" and 32, "Terrain" (Blackboard) • ***Infantry in Battle***, Chap V, (recommended - online) • Swinton, ***Duffer's Drift*** (recommended-Blackboard)[5]
7	3/6	Geographic considerations at the tactical level of war: The Military Operating Environment – the military aspects of weather	Chap précis due	• Winters, Chap 1, 3, 4, 11 (select one) • Swinton, ***Duffer's Drift*** (recommended-Blackboard)[6]
		Spring Break – No Class		•
8	3/20	Geographic considerations at the tactical level of war: The Military Operating Environment and the military aspects of built-up environments and urban operations	Chap précis due	• ***Combined Arms in Battle Since 1939***, Chap 21, "Military operations on urbanized terrain" (Blackboard) • Timothy L. Thomas, "The Battle of Grozny: Deadly Classroom for Urban Combat" (online)[7] • ***Block by Block: The Challenges of Urban Operations***, Chap 1, "Attacking the Heart and Guts: Urban Operations Through the Ages"
9	3/27	Midterm Exam (4:30-6:00 PM) Staff Ride preparation – Antietam	Take-home Glossary due	• Exam Review Sheet • Winters, Chap 6 • Luvaas and Nelson, Antietam Battlefield Guide
10	4/3	Case study – Assault on Omaha Beach, Operation Overlord, Normandy, France, 6 June 1944		• Winters, Chap 1 • *Normandy* - U.S. Army Campaigns in World War II (online) • Review Encyclopedia Britannica Normandy website • Keegan, ***Six Armies in Normandy*** (recommended – on reserve)

[5] *Duffer's Drift* available on course Blackboard page.
[6] *Duffer's Drift* available on course Blackboard page.
[7] Thomas, "The Battle of Grozny: Deadly Classroom for Urban Combat" http://www.army.mil/usawc/parameters/99summer/thomas.htm link available on course Blackboard page.

Week	Date	Topic	Assignment	Reading
11	4/10	Case study – Assault on Omaha Beach, Operation Overlord, Normandy, France, 6 June 1944		• Winters, Chap 1 • *Normandy* - U.S. Army Campaigns in World War II (online) • Review Encyclopedia Britannica Normandy website • Keegan, ***Six Armies in Normandy*** (recommended – on reserve)
12	4/17	Case study – Destruction of Task Force Faith, Chosin Reservoir, North Korea, November 1950		• Winters, Chap 4 • ***Combat Actions in Korea***, Chap 6 “Chosin Reservoir” (online)[8] • ***Combined Arms in Battle Since 1939***, Chap 36, "Weather"
13	4/24	Case study – Destruction of Task Force Faith, Chosin Reservoir, North Korea, November 1950	Staff Ride Paper due	• Winters, Chap 4 • ***Combat Actions in Korea***, Chap 6 “Chosin Reservoir” (online)[9] ***Combined Arms in Battle Since 1939***, Chap 36, "Weather"
14	5/1	Case study – First Battle of the Ia Drang Valley, South Vietnam, November 1965 (Antietam Staff Ride – Saturday, 6 May)	Paper Part 1 due	• Winters, Chap 5 • Heller, ***America’s First Battles***, Chap 10, (on reserve) • ***Combined Arms in Battle Since 1939***, Chap 2, "Airmobile Operations" (Blackboard) • Review ***LZ X-Ray*** website[10] • Moore and Galloway, ***We were soldiers once and young***, (on reserve)
Final	5/15	Battlefield Analysis Poster Session 4:30-6:30 (location TBA)	Paper Part 2 due	• Winters, “Conclusion”

Note: All web links can be accessed from the course Blackboard site.

[8] *Combat Actions in Korea*, www.army.mil/cmh-pg/books/korea/30-2/30-2_6.htm link available on course web page.
[9] *Combat Actions in Korea*, www.army.mil/cmh-pg/books/korea/30-2/30-2_6.htm link available on course web page.
[10] *LZ X-Ray*, www.lzxray.com link available on course web page.

Annex B: Staff Ride
Saturday, 6 May 2017

A Staff Ride is an organized and methodical study of a particular historical battle conducted on foot over the battleground. The study begins with detailed preparation in terms of background reading and discussion of the battle. Each participant is responsible for studying and leading discussions during the Staff Ride concerning the actions during one phase of the battle as a way to understand the flow of the overall battle. In the field, participants must be prepared to orient the class to the circumstances on the ground and describe the actions of the opposing forces during the phase of the battle for which they are responsible, highlighting the geographical influences.

Each student must participate in the Staff Ride to Antietam Battlefield. Each student will be designated to study and report on one phase of the battle (see the list of phases for the battle at appendix 1 to this annex), including explaining the movements of major formations and key decisions of principal commanders during your assigned phase of the battle. In addition some participants will also present the strategic and operational setting of the battle. Keep in mind that the focus of the staff ride is on identifying and understanding how the geographical factors discussed in class influenced the conduct and outcome of the battle.

All students will read (as a minimum) the ***Guide to the Battle of Antietam*** (see Required Text above) and consult the NPS web site for the Antietam National Battlefield Park. Students are also encouraged to make a good map reconnaissance prior to the staff ride. Additionally, I have placed on reserve a number of books, listed in the recommended readings, for your use in preparing for the staff ride. Separate instructions for each staff ride, issued later, will specify where briefings are required and by whom.

Each student will prepare and submit a **four-page handout** synopsizing their phase of the battle as indicated in the course schedule. The handouts will be combined to form a discussion book for distribution to the class for use during the Staff Ride. This handout will be evaluated in terms of how well the phase of the battle is presented. Particular attention should be paid to the following:

- How did the terrain influence planning and command and control?
- How did the terrain influence the movement of troops?
- How did the terrain affect the employment of weapons and the effects of fires?

Students will also be evaluated on how effectively they present their briefings and orient the rest of the class to their phase of the battle. The Staff Ride grade is 20% of the total course grade.

The Staff Ride paper is due in class, Monday, 24 April.

Appendix 1 to Annex B

Selected Battle Phases for the Staff Ride

Antietam:

- Phase 1: Lee's Preparation for battle
- Phase 2: McClellan's preparation for battle
- Phase 3: Hooker's (I Corps) initial attack and Mansfield's (XII Corps) advance; Jackson's defense of the Cornfield and Hood's counterattack
- Phase 4: Greene's Division (XII Corps) attack and the Dunker Church; Sedgwick's Division (II Corps) attack into The West Woods
- Phase 5: D. H. Hill's defense of the Sunken Road; Attack of French's Division and Richardson's Division (II Corps) at the Sunken Road
- Phase 6: Toomb's (GA BDE) defense and Burnside's (IX Corps) attack of the Lower Bridge and Snavely Ford; Burnside's (IX Corps) advance toward Sharpsburg and A.P. Hill's Division counterattack

Annex C: Battlefield Analysis

Each student will demonstrate their understanding of the geographical factors discussed in class by applying them to an analysis of a selected battlefield. This analysis will be the major research project of the course. The analysis will address the effects of one of the following battlefield environments on the Battlefield Operating Systems in terms of the conduct and outcome of a particular military operation.

- Dry climate (desert) environments
- Hot, humid environments
- Cold, snowy climates
- Mountain environments
- Forest or heavy vegetation environments
- Grassland, open plains environment
- Surface hydrology (river crossings, defense of a river line, or swamps)
- Island or amphibious operations
- Urban or built up environments (including fortified zones)

I suggest you begin by selecting a particular tactical operation, conducted by a formation no larger than a division (preferably at brigade/regimental or battalion level), and then work backward to consider the larger operational and strategic settings. A list of suggested topics is at Appendix 1 to this annex; you are not limited to this list, it is only a guide. ROTC students **are** limited to a study of American operations during the 20th century or later (but that still leaves a lot of ground and a wide variety of operations from which to choose). You will be asked to submit a study proposal early in the course. The case studies presented in class are designed to demonstrate how such an analysis should be conducted. However, you may not choose as your topic any of the case studies presented in class or the Staff Rides.

The results of your research and study will be submitted as a written battlefield analysis in a narrative form. Your analysis will be organized and submitted in two parts due at intervals during the second half of the semester (see course calendar for exact dates).

Paper Proposal (2-3 pages): Briefly describe the battle you intend to study in terms of identifying the participants, when and where the battle was fought, the type of battle, and speculate on the major geographical factor (climate, terrain, or cultural features) influencing this particular battle. You must include an initial list of a minimum of four references.

Part 1 – The Strategic and Operational Context (6 pages): This part will describe the general setting of the battle in terms of the strategic and operational levels of war. It should answer the following questions –

- **Strategic Context**:
  - What was the strategic setting (where, when, for what purpose) of the battle?
  - Describe the relationship of the battle to other political/military conditions at the time of the battle.
  - What strategic objective was served by the battle?
  - Provide a short timeline of events leading up to the battle.

- What geographical considerations influenced the selection of strategic objectives and/or the resources allocated to the mission?

- **Operational Context**:
  - Describe the type of operation being analyzed.
  - How did this battle fit into the larger campaign plan?
  - How did the campaign plan support the larger strategic objectives?
  - What geographical considerations influenced operational planning?
  - Describe the "lines of operation" for both sides in the battle.
- **Order of Battle**:
  - Using the Battlefield Operating Systems as a guide, describe the organization of the opposing forces.
  - What types of forces (infantry, mounted, air units, naval units, etc) were engaged?
  - What type and how many major weapon systems (artillery, armor, aviation, etc) were employed?

Part 2a – Define the Battlefield Environment (6-8 pages): Using maps and narrative, describe the significant characteristics of the environment that shaped the conduct and outcome of the battle including:

- Physical features
  - What were the **dimensions** of the battlefield?
  - Describe the **topography** (slope and elevation) of the battlefield.
  - Describe the **vegetation** present (type and density) on the battlefield.
  - Describe the **surface hydrology** (streams and rivers) in terms of depth, water velocity, banks, and streambed.
  - Describe the **surface materials** (soils and trafficability) present on the battlefield.
  - Describe the **weather** on the day of the battle in terms of temperature, precipitation, and winds.
  - Describe the **visibility** in terms of day versus night, including sunrise, sunset, hours of daylight and darkness, and moon phase.
- Cultural features
  - Describe the **settlement patterns** (spatial organization, street patterns, and building construction) found on the battlefield.
  - Describe the **land use patterns** (agricultural and industrial) found on the battlefield.
  - Describe the non-combatant **population** (size, distribution) found on the battlefield.
  - Describe the transportation and communications **infrastructure** found on the battlefield.

You must use a map or series of maps to describe the spatial distribution of these features. You will be evaluated on how many of the features listed above you can identify. Each characteristic must be documented by source.

Part 2b – Analyze the Battlefield Environment (6-8 pages): Using maps and narrative, make a determination of how the battlefield environment, as described in Part 2a above, affected the conduct of the battle. This determination will be based upon an assessment of the performance of the Battlefield Operating Systems through:

- An analysis of the military aspects of terrain including all of the following:
    - Observation and fields of fire
        - How was observation affected by vegetation, topography, and weather?
        - How were fields of fire affected by vegetation, topography, and weather?
    - Cover and concealment
        - Show how terrain features afforded cover.
        - Show how terrain features afforded concealment.
    - Obstacles
        - Identify specific examples of where terrain features were obstacles for movement.
        - How did these obstacles affect the flow of the battle?
        - What manmade (emplaced) obstacles were employed to supplement natural obstacles?
    - Key terrain
        - What was the key terrain? Explain what made it key.
        - Show how key terrain was designated as attack objectives or defensive positions.
    - Avenues of approach
        - What were the avenues of approach?
        - Were maneuver forces constrained by the size of avenues of approach?
        - Explain how terrain features affected the types of avenues of approach available (mounted versus dismounted).
- Describe the effects of the military aspects of weather including all of the following:
    - Visibility as it affected security, concealment, engagement range and fields of fire.
    - Winds as it affected weapons performance, air operations, or visibility.
    - Precipitation as it affected visibility, trafficability, weapons, or logistics.
    - Cloud cover as it affected visibility, air operations, or fields of fire.
    - Temperature and humidity as it affected human or material performance.
- Describe the effects of cultural features including some or all of the following:
    - Settlement patterns
    - Land use patterns
    - Transportation and communications infrastructure
    - Presence and characteristics of non-combatant population

Your evaluation in Part 2b must assess how these battlefield characteristics represented a significant advantage or disadvantage to either opponent. You must use a map of the battlefield to identify, locate, and describe the nature and effect of specific physical and cultural features on the course and outcome of the battle. Each element in your analysis must be documented with the source.

You will also provide an annotated bibliography of a minimum of **six** references to support your research; if you can't find six sources find another topic. You are limited to

only two Internet sources and these must be “quality” sites from an academic or professional source. Internet sites must be properly referenced and I must be able to find them. The annotation of your bibliography must describe the information you found and used from each source and how it contributed to your findings.

Keep in mind this is a GEOGRAPHY paper and the focus must be geographical and not historical. The chapters in *Battling the Elements* provide a good example of the type of analysis you want to emulate. The following maps are **REQUIRED** in Part 2: (a) a regional map depicting the operational context of the battle in relation to major physical features (rivers, mountain ranges, coastlines, forested areas) and major cultural features (major cities, transportation networks and features); (b) a detailed map depicting the dimensions of the battlefield and major terrain features and battlefield characteristics described in Part 2a; (c) a detailed map depicting the disposition and significant movement or actions of forces during the battle (may require more than one map) as described in Part 2b.

The format of the paper will be double-spaced, with one-inch margins, and a 10 or 12 pitch font. The length of the paper will not exceed the page count for each section (a maximum total of 22 pages), not counting maps, illustrations, end-notes, and bibliography. A few well-written pages are much more effective than reams of vacuous rubbish. A separate cover page (with the paper title, your name, student ID number, course title and number) and the annotated bibliography will not count against the page total. References in the body of the text will be cited using the following format (author’s last name/s, year of publication). Direct quotations will be indented one and one half inches from the margin, single-spaced, and referenced in an endnote including page number from the original text. Each part of the paper will be submitted individually on the dates indicated in the calendar. Final papers submitted late will result in an initial course grade of incomplete.

Appendix 1 to Annex C

Suggested Research Topics for the Battle Analysis

- Dry climate (desert) environments
  - Battle of the Chinese Farm (Yom Kippur War, 1973)
  - Battle of 73 Easting (Desert Storm, 1991)
  - North African Campaigns / Battle of Kasserine Pass / Battle of El Alamein / Tobruk (World War II, 1941-1942)
  - Sinai Campaign / Battle of Mitla Pass (1956, 1967 Arab-Israeli Wars)
- Hot, humid (tropical) environments
  - Buna (New Guinea, 1942)
  - Dien Bien Phu (Indochina, 1954)
  - Khe Sanh (Viet Nam, 1968)
- Cold, snowy climates
  - Russo-Finnish War (1939-1940)
  - Aleutian Islands Campaign (1942-1943)
  - Korean War (1950-1953)
- Mountain environments
  - Battle of Ap Bia Mountain “Hamburger Hill” (Viet Nam, 1969)
  - 8th Army/X Corps Operations – Withdrawal from the Yalu (Korea Nov-Dec 1950)
  - Golan Heights (Yom Kippur War, 1973)
- Forest or restricted environments
  - The Wilderness (1864)
  - Ardennes (1940 & 1944)
  - Battle of the Hürtgen Forest (Germany, 1944)
  - Normandy Breakout – Bocage (France, 1944)
- Grassland, open plains environment
  - Battle of France (1940)
  - Russian Campaign (1941-1944)
- Surface hydrology
  - Rapido River Crossing (Italy, 1944)
  - Defense of the Naktong River (Korea, 1950)
  - Battle of Fredericksburg (1862)
  - Operation Market-Garden (Netherlands,1944)
- Island or amphibious operations
  - Gallipoli (Turkey, 1915-1916)
  - Sicily (1943)
  - Normandy and Operation Overlord (with the exception of Omaha Beach)
  - Inchon Landing (Korea, 1950)
  - Anzio (Italy, 1944)
  - Tarawa (Central Pacific Campaign 1942-1945)
  - Southwest Pacific Campaign (1942-45)
- Urban or built up environments (including fortified zones)
  - Verdun, Somme, Vimy Ridge (Western Front, 1916-1918)
  - Tet Offensive / Battle of Hue (Viet Nam, 1968)
  - Battle of Manila (1945)
  - Kursk (Russia 1943)
  - Battle of Aachen (Germany, 1944)
  - Battle of Okinawa (1945)
  - Petersburg (1865)

Annex D: Chapter Précis

For the lessons in weeks 6, 7, and 8, you will prepare a précis of **one** selected chapter from the assigned readings for each lesson listed below. A hard-copy of the précis will be due in class for that lesson.

Week 6 – (The military aspects of terrain)

- Winters, Chap 2, 7, 10, or 12
- ***Combined Arms in Battle Since 1939***, Chap 28, "River Crossings" or Chap 32, "Terrain"

Week 7 – (The military aspects of weather)

- Winters, Chap 1, 3, 4, or 11

Week 8 – (The military aspects of built-up environments and urban operations)

- ***Combined Arms in Battle Since 1939***, Chap 21, "Military operations on urbanized terrain"
- Timothy L. Thomas, “The Battle of Grozny: Deadly Classroom for Urban Combat”
- ***Block by Block: The Challenges of Urban Operations***, Chap 1, "Attacking the Heart and Guts: Urban Operations Through the Ages"

What is a précis? A précis is a cogent reduction of a text. A précis should include all of the important ideas in the original text, using your own words instead of the words of the original author. Nothing of primary importance is excluded, and nothing of secondary importance is included. A précis **does not** involve commentary on or analysis of the text. In fact, the writer of a précis expresses no opinion at all about the passage. Your ability to read exactly, to notice distinctions, and to state clearly another person's ideas in your own words - these are what will count.

- Do not follow closely the actual wording of the original in a reduced form. The use of a few key words and occasionally key expressions may be unavoidable.
- Follow the design of the original argument.
- Do not present merely the conclusions, or the general idea.
- Do not use such expressions as, "This passage says …," "according to the author," and the like.

An excellent précis rephrases in as brief a form as possible the argument and conclusions of an original. Your précis should be about $1/6^{th}$ the length of the original reading (one page for every six pages of text). The purpose of this assignment is to:

a) test your comprehension
b) test your ability to synthesize the information
c) test your communication skills.

It must be written in proper English, without slang. The format will be double spaced in 12 pitch font with one inch margins.

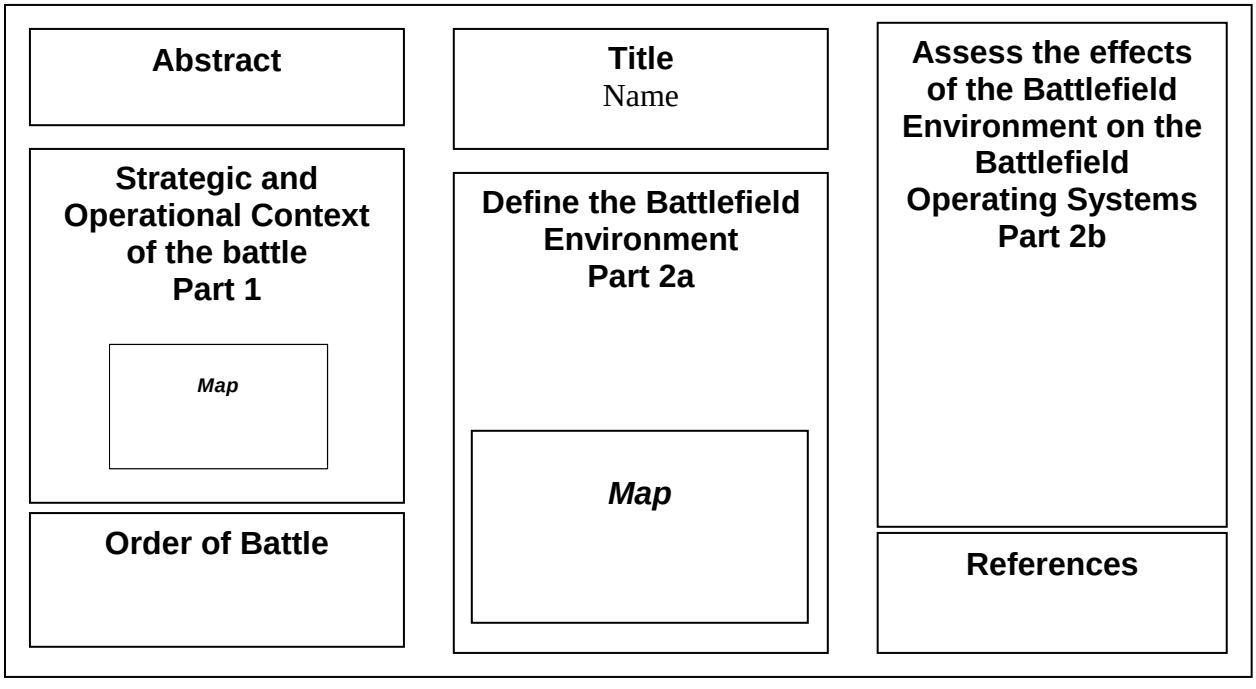
Annex E: Poster Session
Monday, 15 May 2016, 4:30-6:30 pm
(location TBA)

In addition to the paper submission, each student will prepare a poster presentation that will identify the major geographical influences at each level of war and how these affected the conduct and outcome of the battle. This poster presentation is in lieu of a final examination and will provide the opportunity for you to share the results of your research with the class. Each student will be asked to comment on the posters presented.

See the following web site by the Writing Center on how to put together an effective poster session (http://writingcenter.gmu.edu/resources-template.php?id=52). The most useful part of the Writing Center guidelines begins with slide 15 of the website.

The poster **must** include the following elements:

- Title
- Abstract
- Strategic context (with map/s)
- Operational context (with map/s)
- Order of Battle
- Define the battlefield environment (with map/s)
- Describe the effects of the battlefield environment on the BOS
- References

Additional guidance:

- Use graphics (including pictures and diagrams) to illustrate your poster.
- Use the standard three-panel poster board and keep in mind you want the elements readable from 4 feet (check them!).
- Summarize your main points; avoid a lot of dense text.
- Use a large font, nothing smaller than 28.
- Use the following layout guide.