JOINT WARFIGHTING:

“How We Fight”

SYLLABUS

AY 19

JOINT PROFESSIONAL MILITARY EDUCATION
PHASE I INTERMEDIATE LEVEL COURSE

UNITED STATES AIR FORCE
AIR COMMAND AND STAFF COLLEGE
21st Century Leaders for 21st Century Challenges
FOREWORD

This syllabus for the Joint Warfighting course at the Air Command and Staff College, March-May 2019, provides both an overview of the course, course objectives and questions, and a detailed description of each lesson to assist students in their reading and preparation for each course day. Also included herein is information about course methods of evaluation, schedule, and the fulfilment of joint professional military education core goals.

SIGNED

Brent A. Lawniczak
Course Director
Joint Warfighting

APPROVED

James Forsyth, PhD
Dean of Academic Affairs
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>1</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>2</td>
</tr>
<tr>
<td>Course Description and Objectives</td>
<td>3</td>
</tr>
<tr>
<td>Course Questions, Organization, and Narrative</td>
<td>4</td>
</tr>
<tr>
<td>Course Requirements and Methods of Evaluation</td>
<td>5</td>
</tr>
<tr>
<td>Course Administration</td>
<td>6</td>
</tr>
<tr>
<td>Course Snapshot</td>
<td>8</td>
</tr>
<tr>
<td>Course Map</td>
<td>9</td>
</tr>
<tr>
<td>Lesson List</td>
<td>10</td>
</tr>
<tr>
<td>Joint PME Learning Areas and Objectives/Special Areas of Emphasis</td>
<td>11</td>
</tr>
<tr>
<td>Course Faculty</td>
<td>106</td>
</tr>
</tbody>
</table>

## Course Schedule:

<table>
<thead>
<tr>
<th>PHASE 1</th>
<th>Pg.</th>
<th>PHASE 2</th>
<th>Pg.</th>
<th>PHASE 3</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>JW-500</td>
<td>19</td>
<td>JW-516</td>
<td>56</td>
<td>JW-539</td>
<td>101</td>
</tr>
<tr>
<td>JW-501</td>
<td>20</td>
<td>JW-517</td>
<td>58</td>
<td>JW-540</td>
<td>103</td>
</tr>
<tr>
<td>JW-502</td>
<td>22</td>
<td>JW-518</td>
<td>53</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-503</td>
<td>24</td>
<td>JW-518.1</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-504</td>
<td>26</td>
<td>JW-519</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-505</td>
<td>29</td>
<td>JW-520</td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-506</td>
<td>31</td>
<td>JW-521</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-507</td>
<td>33</td>
<td>JW-522</td>
<td>66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-508</td>
<td>36</td>
<td>JW-523</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-509</td>
<td>38</td>
<td>JW-524</td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-510</td>
<td>40</td>
<td>JW-525</td>
<td>72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-511</td>
<td>42</td>
<td>JW-526</td>
<td>74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-512</td>
<td>44</td>
<td>JW-527</td>
<td>76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-513</td>
<td>46</td>
<td>JW-528</td>
<td>78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-514</td>
<td>48</td>
<td>JW-529</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>JW-515</td>
<td>51</td>
<td>JW-530</td>
<td>81</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-531</td>
<td>83</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-532</td>
<td>85</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-533</td>
<td>86</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-534</td>
<td>89</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-535</td>
<td>91</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-536</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-537</td>
<td>97</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>JW-538</td>
<td>99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
JOINT WARFIGHTING
COURSE OVERVIEW

COURSE DESCRIPTION
The Joint Warfighting (JW) course is designed to demonstrate, at the operational level, how the U.S. joint force organizes, deploys, employs, sustains, and redeploys military capabilities in support of national interests. The primary purpose of the JW course is to comprehend and analyze how we, the Joint Force, go to war and prevail.

The course will equip military and interagency professionals with skills to articulate and influence the application of the military instrument of power to provide commanders with options for the use of military force in support of national interests. Understanding operational art and design is essential for the military professional, no matter their specialty. Understanding operational context and strategic goals is necessary to properly plan and execute military operations in the modern operational environment. It is also imperative to understand how the U.S. military operates as part of a joint force in a multinational, interagency, and intergovernmental environment.

The Joint Warfighting course grounds students in joint force organization and capabilities, and the planning processes by which national military strategy is developed and translated into plans for joint and multinational operations across the range of military operations. In this course students will examine several historical operations that provide the context for greater understanding and further application of modern doctrinal concepts. The course will also examine and evaluate national security guidance and strategy in relation to operational level plans. Fundamental to operation planning is a comprehension of the capabilities and limitations of the military services across domains, and the examination of ways a joint force commander may integrate service and functional command support to achieve success at the operational level of war. In order to tie the numerous course concepts together, students will learn and use the Joint Planning Process (JPP) and practice the fundamentals of joint and combined operation planning to include whole of government approaches. Students will apply these fundamentals in planning exercises focused on developing effective military solutions to real-world operation planning problems.

COURSE OBJECTIVES
Through the study and analysis of historical operations, the operational environment, strategic guidance, and joint and service doctrine, the JW course will enable students to:

1. Comprehend operational art, operational design, and the joint planning process and how they enable the employment of the military instrument of power and military decision making in pursuit of national interests.
2. Comprehend U.S. joint force capabilities, limitations, and doctrine through the framework of multi-domain operations, and how forces are organized, deployed, employed and sustained in actions across the range of military operations.
3. Apply course concepts and the Joint Planning Process to develop solutions to operational problems in a volatile, uncertain, complex or ambiguous environment using critical thinking, operational art, and current joint doctrine.
COURSE QUESTIONS
The JW course captures multiple themes related to operational art and design, multi-domain operations, and military planning at the operational level of war. One constant for the course is to examine “how we fight.” This succinctly captures how, at the operational level, plans are derived for the application of the ‘M’ of the ‘DIME’ in pursuit of national interests. The course approaches this larger issue through the following themes:

1. Understanding strategic direction and guidance: What are the objectives and desired end state? (Ends)
2. Understanding the art of military operations: What sequence of actions is most likely to achieve those objectives and end state? (Ways)
3. Understanding military science: What resources are required to accomplish that sequence of actions? (Means)
4. What is the chance of mission failure or other unacceptable results in performing that sequence of actions? (Risk/Issues)

COURSE ORGANIZATION AND NARRATIVE
Joint Warfighting is structured in three phases:

Phase 1: Problem Framing: Understanding the Problem, Strategic Direction, and the Operational Environment. Phase 1 includes the evaluation of national security guidance and strategy in relation to current security issues and threats, analysis of the potential operational environment, and identification of specific problems to be solved. This phase will familiarize students with the methods through which planners analyze and incorporate strategic guidance in the development of the operational approach (operational design methodology) and mission analysis. This phase will focus on the desired ends, and how the military instrument of power may be applied in pursuit of national interests. Upon the completion of this phase, students will be familiar with doctrinal concepts and aspects of operational design, and steps one and two of the Joint Planning Process (JPP) – Initiation and Mission Analysis – which assist the planner in identifying and framing the problem to be solved.

Phase 2: Problem Solving: Developing Solutions through the Application of Military Capabilities. Phase 2 focuses on the ways and means that may be applied in utilizing the military instrument of power toward solving national security problems. This phase will acquaint students with operational art as applied across the five warfighting domains and across the range of military operations as it enables the development of potential solutions (courses of action) - with the military instrument of power as the centerpiece. The necessity to deploy and sustain forces, as the U.S. is and will remain a power projection nation, is a concept that will also be explored as it greatly influences the planning of joint military operations. The emphasis of Phase 2 is on the operational warfighting domains within and through which military capabilities are arranged and applied; and how valid courses of action are derived, analyzed, and compared to provide the maximum chance of success within the parameters of acceptable risk.

Phase 3: Practical Application - Joint Planning Exercise (JPEX). Phase 3 provides the opportunity to apply all of the concepts of the JW course, and to incorporate concepts from across the ACSC curriculum. The JPEX is based on a complex, nuclear-capable near-peer
adversarial scenario. Applying operational art, operational design, and the JPP, students will act as a joint planning group (JPG), and develop courses of action in accordance with national strategic guidance and the commander’s intent for a major combat operation (MCO).

**COURSE REQUIREMENTS AND METHODS OF EVALUATION**

1. **READINGS.** Before lecture and seminar, students are expected to complete all assigned readings for the day. Students are encouraged to read the explanation given in the syllabus before reading the assigned books and articles. The readings will inform seminar discussion and activities. Students should come with pertinent observations and questions from the reading that lead to informed discussion and active participation.

2. **LECTURES.** Students will attend lectures relating to assigned readings and seminar. These presentations compliment the readings and seminar discussion, and therefore enhance knowledge of the course concepts. Lectures in the course take two forms: morning lectures provide historical and theoretical background to stimulate and enhance learning in seminar, while afternoon lectures prepare students for ensuing in-class activities and the application of course concepts. All lectures are not for attribution.

3. **SEMINAR PARTICIPATION.** Due to the “applied art and science” nature of the Joint Warfighting course, student participation in seminar discussions is vital to the success of the course. Students must prepare for each seminar by completing all of the assigned readings. Each member of seminar is expected to contribute meaningfully to the discussion regularly.

4. **WRITTEN ASSIGNMENTS.** There is one graded written assignment in fulfillment of the requirements of the Joint Warfighting course in the form of a ten-page take-home analysis paper which is completed as a group project. All written work must include as the first citation an acknowledgement of colleagues who made an intellectual contribution to the work.

5. **ORAL BRIEFING ASSIGNMENTS.** There are three oral briefings during the course: An Operational Art presentation (JW-518/518.1) and two graded briefings during the final JW planning exercise (JPEX). Specific topics, staff roles, and briefing assignments will be assigned by the course instructor. All students will participate in oral briefings.

6. **PEER REVIEWS.** Based on the collaborative nature of the course, there are two peer reviews that will be completed during the course. The first, covering Phase 1 and Phase 2 will be turned in to the seminar instructor on 7 May. The second review will focus on the JPEX (Phase 3) and will be turned in on the last day of the course. Peer reviews do not constitute student-assigned participation grades, but provide insight into the collaboration efforts in the seminar. The reviews also provide a leadership opportunity as part of the culmination of the ACSC experience. Detailed instructions will be provided by the instructor.

**METHODS OF EVALUATION.** The evaluations for the course consist of an in-class presentation (JW 600E during JW-518), one written essay (JW 601E), individual class contribution (JW 602E), and two group briefings (JPEX Briefings - JW 603E). All JW concepts and the application of the JPP will be assessed during the two JPEX briefings.
<table>
<thead>
<tr>
<th>Assignment</th>
<th>Type</th>
<th>Weight (%)</th>
<th>Date*</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-class presentation (JW 600E)</td>
<td>Group</td>
<td>10%</td>
<td>11 April</td>
</tr>
<tr>
<td>Essay (JW 601E)</td>
<td>Written/Group</td>
<td>20%</td>
<td>30 April (1200)</td>
</tr>
<tr>
<td>Class Contribution (JW 602E)</td>
<td>Daily/Individual</td>
<td>20%</td>
<td>18 March – 7 May</td>
</tr>
<tr>
<td>JPEX Briefings (JW 603E)</td>
<td>Oral/Group**</td>
<td>50%</td>
<td>16 &amp; 23 May</td>
</tr>
</tbody>
</table>

* Refer to the JW course calendar for due dates. The dates listed above are the due date for each assignment. ** JPEX evaluated briefings include a Mission Analysis brief and a Course of Action (COA) Decision brief. The briefs constitute a single graded event. The flight will work as a group during JPEX, but the JPEX grade will be an individual grade.

** COURSE ADMINISTRATION **

The majority of assigned JW readings are provided in the electronic JW coursebook (PDF) and/or Canvas. Readings that are not in the coursebook are either from issued books or at a hyperlink provided in this syllabus and the coursebook. The course calendar in the JW coursebook also links to each lesson day listed in the syllabus. The coursebook provides easy access functions to enable rapid selection of reading and focused study. Students are advised to become familiar with the functions of the coursebook that will optimize their use of valuable study time.

Assigned selections from current Joint Doctrinal Publications (JPs) are available in the JW coursebook. For complete versions of Joint Publications (JP) and other doctrinal resources, it is recommended that students access and download the full versions of applicable doctrinal publications from the Joint Doctrine website: http://www.jcs.mil/Doctrine/Joint-Doctrine-Pubs/. The site is the homepage of the library, while JEL+ (CAC required) provides access to unclassified but restricted publications. It is recommended that students download JP 1, JP 3-0, JP 5-0, and the DOD Dictionary of Military and Associated Terms (http://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/dictionary.pdf?ver=2018-07-25-091749-087) from this website and have them readily available for personal and in-class reference.

ACSC provides students with copies of the following books, which must be returned at the conclusion of the course:


Students will also receive a printed copy of Joint Publication 5-0 which they are welcome to keep.
When available, lecture slides will be posted on the same afternoon as the lecture.

Please refer any questions to your seminar instructor, Mr. Brent Lawniczak (Course Director, brent.lawniczak.1@us.af.mil, Office 181B), or Lt Col Travis Eastbourne (Deputy Course Director, travis.eastbourne@us.af.mil, Office 181A).
Joint Warfighting Phase 1
Problem Framing: Understanding the Problem, Strategic Direction, and the Operational Environment

Familiarizes students with the methods through which planners analyze and incorporate strategic guidance in the development of the operational approach (operational design methodology) and mission analysis. Focuses on desired ends, and how the military instrument of power may be applied in pursuit of national interests.

Structure:
13 course days
5 lectures
1 movie
11 seminars

Cases:
TORCH
OIF
OEF
Somalia
Haiti
Nigeria (scenario)

Major Concepts:
Joint Planning Process (JPP)
Operational Art
Elements of Design
Complexity/Systems analysis/Operational Design Methodology
Strategic guidance documents/National planning systems
JIPOE/PMESII/COG analysis
ROMO
Joint Functions
Command Authorities/Relationships
Multinational influences on the above

Practical Application:
2 day (6 hour) Operational Design Workshop
2 day (6 hour) Mission Analysis Workshop

Joint Warfighting Phase 2
Problem Solving: Developing Solutions through the Application of Military Capabilities

Focuses on the ways and means that may be applied in utilizing the military instrument of power. Operational art as applied across the five warfighting domains and across the range of military operations. Emphasis of Phase 2 is on the domains within and through which military capabilities are arranged and applied; and how valid courses of action are derived, analyzed, and compared to provide the maximum chance of success within the parameters of acceptable risk.

Structure:
15 course days
11 lectures
1 movie
12 seminars

Cases:
JTF-P
MINCEMEAT
Fallujah
ODS
OIF
OEF
French Indochina
Somalia
Nigeria (scenario)

Major Concepts:
Operational Art
COA Development
Multidomain Operations
Information Operations
Joint Force Capabilities/Services
Joint Air C2
Deployment/Sustainment
Total Force
Military Operations in the Homeland
Wargaming/Red cell

Practical Application:
2 day (6 hour) COA Development Workshop
2 day (6 hour) Mission Analysis Workshop

Joint Warfighting Phase 3
Practical Application: Joint Planning Exercise (JPEX)

Structure:
10 course days
1 lecture
8 seminars

Case:
WestPac

Major Concepts:
Applying concepts across the ACSC curriculum

Evaluations:
Research/Presentation
Group paper
Contribution

Practical Application:
7 day (6 hour) student planning
1 day (2.5 hour) Final briefing and debrief
| Day 0: JW-500 (L) Introduction to the Joint Warfighting Course |
| Day 1: JW-501 (L) Joint Planning: How We Fight |
| Day 1: JW-502 (S) Joint Military Operations and the Joint Planning Process |
| Day 2: JW-503 (S) Introduction to Operational Design: Complexity and Problem Solving |
| Day 3: JW-504 (S) Understanding Strategic Direction |
| Day 4: JW-505 (L) Understanding the Operational Environment |
| Day 4: JW-506 (S) Center of Gravity Analysis |
| Day 5: JW-507 (S) Defining the Problem & Developing the Operational Approach |
| Day 5: JW-508 (L) Nigeria Background Brief |
| Day 6: JW Directed Study |
| Day 7: JW-509 (S) Operational Design Workshop Day 1 |
| Day 8: JW-510 (S) Operational Design Workshop Day 2 |
| Day 9: JW-511 (L) Linking Conceptual Planning to Detailed Planning and Multi-Domain Operations |
| Day 9: JW-512 (S) Introduction to Mission Analysis |
| Day 10: JW-513 (Movie) Mission Analysis Case Study: Black Hawk Down |
| Day 10: JW-514 (S) Mission Analysis Case Study: Somalia |
| Day 11: JW Directed Study |
| Day 12: JW-515 (S) Mission Analysis Workshop Day 1 |
| Day 13: JW-515 (S) Mission Analysis Workshop Day 2 |
| Day 14: JW-518 (S) COA Development: The Operational Art (Student Presentation) |
| Day 15: JW-516 (L) JTF Perspective on Problem Solving |
| Day 15: JW-517 (S) Operational Art and Problem Solving: Course of Action Development |
| Day 16: JW-519 (L) Joint Cyberspace Operations |
| Day 16: JW-520 (Movie) Information Operations: The Man Who Never Was |
| Day 17: JW-521 (L) Joint Space Operations |
| Day 17: JW-522 (S) Space, Cyber, and Information Operations |
| Day 18: JW-523 (L) USMC |
| Day 18: JW-524 (L) USA |
| Day 18: JW-525 (S) Joint Operations in the Land Domain |
| Day 19: JW-526 (L) USN |
| Day 19: JW-527 (S) Joint Operations in the Maritime Domain |
| Day 20: JW-528 (L) USAF |
| Day 20: JW-529 (L) TACS/TAGS |
| Day 20: JW-530 (L) CFACC, AOC, and Joint Air Tasking |
| Day 21: JW-531 (S) Joint Operations in the Air Domain |
| Day 22: JW-533 (S) Deploying and Sustaining the Joint Force |
| Day 23: JW-534 (L) The Total Force |
| Day 24: JW Directed Study (JW Paper/JW-601E due, NLT 1200) |
| Day 25: JW-536 (S) COA Development Workshop Day 1 |
| Day 26: JW-536 (S) COA Development Workshop Day 2 |
| Day 27: JW-537 (S) COA Analysis and Wargaming Workshop |
| Day 28: JW-538 (S) COA Comparison and Approval Workshop |
| Day 28: JW-539 (L) JPEX Road to War |
| Day 29: JW Directed Study |
| Day 30-37: JW-540 (S) Joint Planning Exercise (JPEX) |
JOINT LEARNING AREAS AND OBJECTIVES (JPME-I)

Joint Warfighting addresses Intermediate-Level College Joint Learning Areas and Objectives for Joint Professional Military Education (JPME-I), established by the Chairman of the Joint Chiefs of Staff via the Officer Professional Military Education Policy (OPMEP), CJCSI 1800.01E, signed 29 May 2015. The course supports the following Joint Learning Areas and Objectives, listed below with points of explanation:

Learning Area 1 – National Military Capabilities Strategy

a. Comprehend the capabilities and limitations of US military forces to conduct the full range of military operations in pursuit of national interests.
   - Lesson JW-505 and 516 discuss the capabilities and limitations of U.S. forces from both theoretical and historical contexts through the examination of the JOE 2035, Somalia case study, and JTF operations in the Philippines.
   - Lessons JW-519, 521, 522, 523, 524, 525, 526, 527, 528, 531, 532, 533, 534, 535 provide opportunities to examine current Joint and Service capabilities, including organization, force presentation, space, cyber, and logistical support.
   - Lessons JW-536, 537, and 540 each provide the opportunity for the analysis and practical application of US military forces in a modern, realistic scenario.
   - The written evaluation, JW-601E, will require students to identify and discuss US military capabilities and limitations in multidomain operations.

b. Comprehend the purpose, roles, authorities, responsibilities, functions, and relationships of the President, the Secretary of Defense, National Security Council, Homeland Security Council, Chairman of the Joint Chiefs of Staff, Joint Chiefs of Staff, Combatant Commanders, Joint Force Commanders, Service component commanders, and combat support agencies.
   - Lessons JW-502 introduces the roles of the President, SECDEF, NSC, HSC, CJCS, JCS, CCDRs/JFCs, Service Component Commanders and CSAs in military operations.
   - Lessons JW-519, 521, 525, 527, 531, 532, 533, 534, 535 examine the roles, functions, and missions of the US military services, service chiefs, Functional Combatant Commanders and others in support of joint force commanders at the operational level in a multidomain approach.
   - Lesson JW-540 allows for the analysis and application of solutions to a complex problem set, and evaluation of student comprehension of the roles, authorities, and relationships of all components involved in US joint military operations.

c. Comprehend how the U.S. military is organized to plan, execute, sustain, and train for joint, interagency, intergovernmental, and multinational operations.
   - Lessons JW-502, 519, 521, 523, 524, 525, 526, 527, 528, 530, 531, 532, and 533 discuss the organization of forces, capabilities, sustainment, and the necessity for and considerations of operating in JIIM operations.
   - JW-534 and 535 specifically address the Total Force and considerations for domestic operations and the interagency.
   - JW-537 and 540 are opportunities to apply knowledge of force organization and synchronization for JIIM operations.
d. Comprehend strategic guidance contained in documents such as the National Security Strategy, the Quadrennial Defense Review, National Military Strategy, Global Force Management Implementation Guide (GFMIG), and Guidance for Employment of the Force.

- Lessons JW-504, 509, 510, 512, 515, 537, 538, and 540 each provide ample opportunity to examine the purpose, content and impact of strategic guidance documents and their place in military operation planning, and to apply knowledge of strategic guidance in realistic planning scenarios.

Learning Area 2 – Foundation of Joint Warfare and the Profession of Arms

a. Comprehend current joint doctrine.

- JW-500, 501, 502, 503, 504, 505, 506, 507, 509, 510, 511, 512, 513, 514, 515, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 533, 534, 535, 536, 537, 538, and 540 examine the origins, purpose, content, or application of current joint doctrine in JIIM and multidomain operations.

b. Comprehend the interrelationship between Service doctrine and joint doctrine.

- Lessons 523, 524, 525, 526, 527, 528, 529, 530, and 531 provide the opportunity to examine the interrelationship between service doctrine and joint doctrine across operating domains and Services.

c. Apply solutions to operational problems in a volatile, uncertain, complex or ambiguous environment using critical thinking, operational art, and current joint doctrine.

- All JW lessons were formulated to prepare students to think critically and develop problem solving skills using operational art and design, the planning process, and joint doctrine.

- Lessons JW-509, 510, 515, 516, 536, 537, 538, and 540 provide specific opportunities to examine, formulate, and apply such solutions.

Learning Area 3 – Joint and Multinational Forces at the Operational Level of War

a. Comprehend the security environment within which Joint Forces are created, employed, and sustained in support of JFCs and component commanders.

- Lessons JW-504, 505, 506, 507, 508, 511, 512, 513, 514, 516 and 519 examine the contemporary security environment and joint force operations therein.

- Lessons JW-509, 510, 515, 537, 539, and 540 use realistic scenarios involving the contemporary security environment to aid in the application of military solutions to complex problem sets.

- JW builds upon the introduction to aspects involved with the contemporary and future security environment in War Theory (WT) lessons 514, 521, 522, 524, and 526 in which factors driving the changing character of conflict and the security environment are introduced in a theoretical framework. The JW also builds upon the theories and concepts of international security from the IS1 and IS2 courses which aid in explaining the global security environment and national strategies.
b. Comprehend Joint Force command relationships.
   • JW-502, 512, 514, 515, 519, 521, 522, 523, 524, 525, 526, 527, 530, 531, 532, 533, 534, 535, 536, and 540 provide ample opportunity to discuss and apply doctrinal Joint Force command relationships in seminar discussion, case studies, and practical application exercises.

c. Comprehend the interrelationships among strategic, operational, and tactical levels of war.
   • All JW lessons are framed around the synchronization of the tactics and strategy through the lens of operational level warfare.
   • JW-501, 502, 503, 504, 506, 507, 509, 510, 513, 514, 515, 516, 521, 529, and 540 specifically address or draw upon this comprehension through case studies or practical application.

d. Comprehend how theory and principles of joint operations pertain to the operational level of war across the range of military operations to include traditional and irregular warfare that impact the strategic environment.
   • The JW course is built upon a foundation of doctrine, theory, and principles of joint operations and case studies which examine such across multidomain operations, the ROMO, and military mission sets. The JW course builds upon the foundation of War Theory (WT) lessons WT-504, 506, 507, 514, and 516 in which students are first introduced to classic military theorists and the principles of war in several operating domains.
   • JW-501, 503, 506, 507, 509, 510, 511, 514, 515, 516, 517, 518, 520, 522, 525, 527, 531, 533, 536, 537, 538, and 540 all provide opportunities to discuss, examine, or apply such theory and principles.
   • The JW course Workshops (lessons 509, 510, 515, 536, 537, and 538) are based on an irregular warfare scenario.

e. Comprehend the relationships between all elements of national power and the importance of comprehensive approaches, the whole of government response, multinational cooperation, and building partnership capacity in support of security interests.
   • JW-502, 503, 504, 505, 507, 512, 513, 516, and 517 examine the necessity of synchronizing the elements of national power, multinational relationships, multinational and interagency considerations in the OE, and whole of government response.
   • JW-509, 510, 515, 536, and 540 are opportunities to apply knowledge of these relationships toward solutions in a volatile, uncertain, complex, and ambiguous (VUCA) environment.

f. Analyze a plan critically for employment of joint and multinational forces at the operational level of war.
   • Lessons JW-504, 506, 507, 512, 513, 514, and 518 specifically examine several cases of historical military operations across the ROMO.
   • JW-533, 536, 537, 538, and 540 require students to analyze their own planning activities and courses of action.
g. Comprehend the relationships between national security objectives, military objectives, conflict termination, and post conflict transition to enabling civil authorities.

- The JW course is framed by the joint planning process and how military planning and execution is guided by an ends, ways, means, and risk analysis linking national strategy to military tasks.
- Lesson JW-501, 502, 503, 504, 507, 509, 510, 514, 515, 517, 536, and 540 specifically address these concepts through case studies or practical application in realistic planning scenarios.

**Learning Area 4 – Joint and Multinational Forces at the Operational Level of War**

a. Comprehend the relationship among national objectives and means available through the framework provided by the national levels systems.

- The JW course is framed by the joint planning process and how military planning and execution is guided by an ends, ways, means, and risk analysis linking national strategy to military tasks. War Theory (WT) lessons 506 and 507 provide the theoretical foundation for contemporary examination and application of available means to achieve desired national objectives.
- JW-504, 515, 522, 532, and 533 foster comprehension of national planning systems and frameworks (NSC, APEX, JPEC), and available means via discussion of military capabilities (means) across multidomain operations.
- Lessons JW-534 and 535 specifically address the National Response Framework and Defense Support of Civil Authorities.
- Lessons JW-536 and 540 are practical application of student comprehension of national systems and frameworks, and the ends, ways, means, and risk analysis.

b. Comprehend the fundamentals of Joint Planning across all the phases of a joint operation.

- The JW course is framed by operational art and design and the doctrinal planning process and provides continuous exposure to such fundamentals.
- Lessons JW-501, 502, 503, 504, 505, 506, 507, 511, 512, 513, 514, 517, 520, 521, 522, and 533 provide doctrinal and historical context to comprehend the fundamentals of joint operational planning across all phases of a joint operation.
- JW-509, 510, 515, 536, 537, 538, and 540 are dedicated to application of the fundamentals of Joint Planning.

c. Comprehend the integration of joint functions (command and control, intelligence, fires, movement and maneuver, protection and sustainment) to operational planning problems across the range of military operations.

- Lessons JW-502, 507, 512, 513, 514, 517, 519, 521, 525, 527, 529, 530, 531, 532, and 533 discuss the principles of joint operations and functions across the range of military operations in both a theoretical and historical context.
- JW-515, 536, 537, and 540 are practical application of the integration of the joint functions in realistic planning scenarios.
- JW-522 focuses on the recently added seventh joint function – Information.

d. Comprehend how planning for OCS across the joint functions supports managing the effects contracting and contracted support have on the operational environment.
Lesson JW-533 discusses OCS and associated issues involved with OCS during the planning, execution, and sustainment of joint operations. JW-540 provides the opportunity to incorporate knowledge of OCS into solutions in a realistic planning scenario.

e. Comprehend the integration of IO and cyberspace operations with other lines of operations at the operational level of war.
   - Lessons JW-507, 510, 511, 512, and 516 discuss how IO and cyber operations have been or may have been utilized in the examination of several case studies.
   - Lesson JW-519 examines current and future joint force cyber capabilities.
   - JW-520 focuses specifically on IO (MILDEC) and how it fosters access, facilitates maneuver, and achieves effects in the OE.
   - JW-522, 525, 527, 531 examine the incorporation of IO and cyberspace operations into multidomain operations.
   - JW-536 and 540 require the incorporation of IO and cyber capabilities into developing military solutions in a realistic scenario.
   - Joint Warfighting capitalizes on the foundations of cyber power set in Airpower 2 (AP2) lesson 603, 617, and 619 which address the broader cyber domain and threats.

f. Comprehend the roles that factors such as geopolitics, geostrategy, society, region, culture/diversity, and religion play in shaping planning and execution of joint force operations across the range of military operations.
   - Lessons JW-501, 503, 504, 505, 506, 507, 508, 513, 514, 516, 517, and 520 discuss how these several factors impact planning/operations, and how the planner may influence and capitalize on such for greater influence in the OE.
   - JW-509, 510, 515, and 540 require students to incorporate this comprehension into practical military solutions in a complex, realistic scenario.

g. Comprehend the role and perspective of the Combatant Commander and staff in developing various theater policies, strategies and plans.
   - The JW course effectively places students in the role of the staff (and to some extent commander) in analyzing or developing theater plans.
   - Lessons JW-501, 502, 503, 504, 505, 507, and 517 discuss these roles and perspectives across various stages and activities of planning.
   - JW-509, 510, 515, 538, and 540 provide the opportunity for students to apply this knowledge in a realistic planning scenario.

h. Comprehend the requirements across the joint force, Services, interorganizational partners and the host nation in the planning and execution of joint operations across the range of military operations.
   - Lessons JW-501, 502, 503, 504, 505, 507, 509, 510, 513, 514, 515, 516, 517, 523, 524, 525, 526, 527, 528, 530, 531, 532, 533, 535, 536, 537, 538, and 540 discuss these requirements across the ROMO using cases studies, doctrinal concepts, the planning process, and realistic planning scenarios.
Learning Area 5 – Joint Command and Control
a. Comprehend the organizational options, structures and requirements available to joint force commanders.
   - JW-502, 512, 514, 516, 523, 524, 525, 526, 527, 528, 529, 530, and 531 discuss the organizational options, structures, or requirements.
   - JW-515, 536, 537, and 540 are all opportunities for students to apply this knowledge to develop sound C2 structures and force organizations in a planning scenario.

b. Comprehend the factors of intent through trust, empowerment and understanding (Mission Command), mission objectives, forces, and capabilities that support the selection of a specific C2 option.
   - JW-517, 525, 527, and 531 examine the concepts and utility of mission command and the development of specific C2 options suitable for JIIM operations.
   - JW-515, 536, and 540 require students to utilize the concepts of mission command in developing C2 solutions in realistic planning scenarios.

c. Comprehend the effects of networks and cyberspace on the ability to conduct Joint Operational Command and Control.
   - JW-519, 521, 522, and 530 discuss the effects of networks and cyberspace on the ability to conduct Joint Operational Command and Control.
   - JW-540 requires students to develop solutions to complex C2 problems in a realistic planning scenario, and to leverage cyberspace and space capabilities to conduct operations.

Learning Area 6 – Joint Operational Leadership and the Profession of Arms
a. Comprehend the role of the Profession of Arms in the contemporary environment.
   - JW-500 and 511 enable a better comprehension of the role of the Profession of Arms in the contemporary environment through the examination of historical military operations and the conceptual and detailed planning of realistic scenarios.
   - JW-516 and 540 specifically challenge students to comprehend the various roles the military may have in any specific geostrategic setting or challenge.

b. Comprehend critical thinking and decision-making skills needed to anticipate and recognize change, lead transitions, and anticipate/adapt to surprise and uncertainty.
   - All JW lessons are designed to foster greater levels of critical thinking and decision-making skills in JIIM operations.
   - Lessons JW-501, 503, 505, 506, 507, 509, 510, 515, 516, 518, 536, 537, 538, and 540 provide case studies and scenarios through which to increase critical thinking skills either through analysis of case studies or synthesis planning activities.

d. Analyze the application of Mission Command (intent through trust, empowerment, and understanding) in a Joint, Interagency, Intergovernmental and Multinational (JIIM) environment.
   - JW-513, 514, 516, 518, and 540 discuss mission command, associated concepts, and its necessity in the modern JIIM operating environment. These JW lessons
also build upon the foundation of Mission Command concepts introduced in Leadership (LD) lessons 518 and 519.

e. Communicate with clarity and precision.
   - All seminars provide the chance for students to become skilled in thinking and communicating clearly about military theory, strategy, operations, and policy.
   - JW-515, 518, 536, 537, 538, and 540 require students to communicate clearly and precisely by providing oral briefings within a planning scenario.
   - The written assignment, JW-601E, requires clear and precise written communication.

f. Analyze the importance of adaptation and innovation on military planning and operations.
   - Lessons JW-501, 503, 505, 507, 509, 510, 511, 513, 514, 515, 516, 517, 518, 532, 536, 537, 538, and 540 analyze the importance of adaptation and innovation on military planning and operations in military theory, doctrine, and contemporary and historical cases.

The Joint Warfighting course also accomplishes several of the current AY17-18 JPME Special Areas of Emphasis (SAE) including the following:

SAE 1 – Transregional, Multi-Function, Multi-Domain Joint Warfighting.
   a. An understanding of what characteristics define the current strategic landscape and the modern battlefield.
      - JW-505, 509, 510, 511, 539, and 540 provide opportunities to examine the strategic and operational environment as important factors in developing an operational approach, including operation against transregional terrorist groups, and near-peer, nuclear capable adversaries.

   c. The ability to understand and address warfare in the seams, to include economic, information, and gray zone competition.
      - JW-514, 516, 522, 539, and 540 address planning for military operations across the ROMO, including information operations, information as a joint function, economic considerations, and gray zone/hybrid warfare. These lessons build upon knowledge gained in War Theory (WT) lessons 508, 509, 521, 522, and 523 in which students are introduced to various theories of economic, information, and gray zone competition.

   d. Consideration of how current organizational and command and control constructs are (or are not) optimized for the current fight and for future challenges.
      - JW-512, 522, 525, 527, and 531 examine doctrinal joint force organization and command relationships and the suitability of such constructs for current and future operations with emphasis on command and control of cyber, space, land, maritime, and air operations.
e. A foundation for renewed thinking and how the joint force engages across the spectrum of warfare.
   - JW-511 introduces the concepts associated with multi-domain operations, including new models for how the military might think about operations in and through historical and new domains, and new models of the conflict spectrum.
   - JW-540 provides an opportunity to apply the concepts to a realistic scenario.

SAE 2: Strategic Deterrence in the 21st Century/Deterrence and Escalation Dynamics.
 d. Deterrence in the 21st century: Trans-regional and cross-domain deterrence (both deterring threats from cross-domain capabilities and applying non-nuclear capabilities and methods, to include deterrence by denial and forward presence, to deter nuclear threats), reducing reliance on nuclear weapons, and proliferation implications.
   - JW-540, the Joint Planning Exercise, examines and plans for deterrence against a near-peer, nuclear capable adversary with specific strategic guidance to deter by forward presence and means that reduce escalation to nuclear exchange.

SAE 3: Non-Traditional Threats to Security and Stability.
 c. An understanding of how to assess the resilience or capacity for a region to adapt to environmental changes.
   - The Joint Warfighting course planning workshops (JW-509, 510, 515, 536, 537, 538) address a real-world scenario in which students are challenged to examine multiple factors of regional resilience and adaptability in terms of environmental, social, and economic factors leading to potential state collapse and military intervention.

d. An understanding of options for managing emerging vulnerabilities/non-traditional security threats caused (directly or indirectly) by environmental factors.
   - JW-509, 510, 515, 536, 537, 538 challenge students to derive response options to a potential increase in terrorist/insurgent activities due to complex factors, including environmental challenges.

SAE 4: Information as the 7th Joint Function.
 b. At the intermediate level, leaders should comprehend and apply information and the deliberate integration with other joint functions at the operational level across the conflict continuum.
   - JW-509, 510, 511, 516, 520, 522, 536, and 540 provide opportunities to integrate Information with other joint functions in the derivation of courses of action, within the context of multi-domain operations, and in competition with near-peer adversaries.

SAE 5: The need to enhance Countering Weapons of Mass Destruction (CWMD) awareness.
 a. Officers at the intermediate level should comprehend and apply joint service CWMD capabilities and contributions at the operational level of war.
   - JW-540, the Joint Planning Exercise, provide the opportunity to apply CWMD capabilities against a near-peer, nuclear adversary.
JOINT WARFIGHTING COURSE SCHEDULE

Day 0: JW-500
Introduction to the Joint Warfighting Course

LESSON OBJECTIVES
1. Comprehend the objectives, organization, and methods of evaluation for the Joint Warfighting course, and its linkages to the overall ACSC curriculum.
2. Comprehend the linkage between the science of doctrine and the operational art, and the role of the Profession of Arms in conjunction with other instruments of power in achieving national interests.
   [LAO: 2a, 6a]

LESSON OVERVIEW
JW-500 (L): Introduction to the Joint Warfighting Course

Overview: The JW course is the capstone of joint professional military education at ACSC. The course is designed to introduce students to how we fight as a joint military force, and includes multiple concepts that provide the framework for understanding and solving complex, operational-level military problems. While driven by joint and service doctrine – the science - the study of history and current events will be crucial to the course outcomes, as this study provides the context through which doctrinal elements have been derived, and how those elements are and will be applied across the range of military operations. To that end, this lecture will provide students with an overview of the course objectives, themes, structure and calendar, and evaluation instruments.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
1. Course Syllabus and Course Calendar.

   [A careful review of the course's syllabus and calendar will provide the student with overarching course objectives and expectations along with key deliverables and their respective weightings toward computation of a final course grade. Students should spend some time navigating through the hyperlink-rich coursebook to become familiar with its layout and functionality and to understand the flow of the course and general material that will be covered throughout the term.]

SUGGESTED ADDITIONAL MATERIAL
1. None.

LESSON INTEGRATION AND RATIONALE
This lesson provides an overview of the Joint Warfighting course. It presents the students with a roadmap of the course to include course methodology, course objectives, evaluations, and desired outcomes. The lecture will also describe the broad themes of the course and how the material integrates with the broader ACSC curriculum.

STUDENTS MEET WITH INSTRUCTOR FOLLOWING LECTURE
Discuss class policies, expectations, materials, and assignments

CONTACT HOURS: 1.0-hour seminar
LESSON OBJECTIVES

1. Comprehend the context for JW course concepts, joint and service doctrine, and the requirements and considerations that a power projection nation has for deploying, employing, and sustaining a joint force.
   [LAO: 2a, 3c, 3d, 6b, 6f]

2. Comprehend the relationship between the formulation of national security objectives and the development of military objectives, and the ends-ways-means-risk analysis required for operations in a complex operational environment (OE) across all levels of warfare.
   [LAO: 2a, 3c, 3g, 4b, 4g, 4h, 6b, 6f]

3. Comprehend how the military planning process is guided by national strategic interests and guidance, and how geopolitics and geostrategy and other joint, interagency, intergovernmental and multinational (JIIM) considerations may impact the planning and execution of military operations.
   [LAO: 4b, 4f, 4h, 6b, 6f]

4. Comprehend the fundamentals of theory and principles of joint operations that enable operational art and design through the analysis of an historical operation for the planning and employment of joint and multinational forces as the operational level of war.
   [LAO: 2a, 3d, 3g, 4b, 4f, 6b, 6f]

LESSON OVERVIEW

JW-501 (L): Joint Planning: How We Fight

Overview: Operation TORCH was the first major Allied operation in the European theater involving U.S. forces during WWII. As an example of the final “product” of military operation planning activities, this particular operation is valuable as it presents several timeless military planning and operational considerations and concepts that remain relevant and significant in current joint and service doctrine. Through an analysis of the plan for operation TORCH, this lecture demonstrates how planners today use a similar construct for analyzing problems and developing military solutions in a complex operational environment, and will aid students in gaining familiarity with planning concepts and JW course themes. Operation TORCH also highlights many of the difficulties regarding long-distance power projection, multinational military operations and command relationships, and the necessity for adaptation and innovation in all military operations. TORCH also reveals several elements of operational design found in current service and joint doctrine, particularly JP 5-0 Joint Planning – the U.S. Joint Force’s current guide to planning military operations. A solid understanding of these concepts, their connection to one another, and the ends-ways-means-risk analysis is important for any military professional to understand and apply in order to solve complex problems facing the military professional.

CONTACT HOURS: 1.0-hour lecture
REQUIRED READINGS

[An Army at Dawn provides an overview of the strategic guidance, national interests, and impact of various actors on military decision making, and the strategic and operational objectives of a military campaign. With this historical perspective, students will have the background knowledge that will enable their comprehension of connections between Joint Planning concepts and a completely developed (and executed) operation plan (Operation TORCH). Atkinson’s book also reminds the reader that the seemingly clinical doctrinal approach to operation planning eventually translates to the human dimension of warfare, and that the risk and cost of military operations, while having important political and military strategic consequences, ultimately falls upon those who execute the plan. Through this study of historical military operations, students are provided an overview of multiple JW course concepts, JW course objectives, and the Joint Planning concepts and activities that will be instrumental throughout the course.]

SUGGESTED ADDITIONAL MATERIAL
2. Joint Publication 1, *Doctrine for the Armed Forces of the United States*, 25 March 2013 Incorporating Change 1, 12 July 2017, I-1 to I-21; VI-3 to VI-4; B-1 to B-3.

LESSON INTEGRATION AND RATIONALE
This lecture, using an historical case study, familiarizes students with multiple course concepts by incorporating the larger geopolitical concepts from the ACSC Fall semester, and narrowing the scope to the operational level of war. The lecture also introduces several operation planning concepts regarding the use of the military instrument of power in pursuit of national interests. The lecture provides an overview of a joint and combined operation plan, and helps frame the entire JW course by providing an example of how doctrinal concepts and tenets aid in the analysis of complex problems and the development of military plans to address them.
LESSON OBJECTIVES

1. Comprehend how elements of operational art, operational design, and the joint functions are integrated throughout the planning process and how they apply across the levels of warfare and the range of military operations (ROMO).
   [LAO: 2a, 3c, 3g, 4b, 4c, 4h]

2. Comprehend how the Joint Planning Process (JPP) is utilized to translate strategic guidance, from written directives to policy statements, into executable military options which are incorporated and aligned with other instruments of power for comprehensive whole of government response.
   [LAO: 2a, 3e, 3g, 4b, 4c, 4h]

3. Comprehend the roles, missions and functions of Joint Force Commanders (JFC) as outlined in the Unified Command Plan (UCP) and how they differ from the roles, missions and functions of the military services.
   [LAO: 1b, 1c, 2a, 3b, 4g, 4h]

4. Comprehend the options a JFC has for organizing the joint force for operations (service or functional components).
   [LAO: 1c, 2a, 3b, 5a]

LESSON OVERVIEW

JW-502 (S): Joint Military Operations and the Joint Planning Process

Overview: The Joint Planning Process is a tested and proven method of arranging problem solving activities in a complex environment. Along with operational art and operational design, the JPP enables the derivation of actionable tasks from broad strategy (strategy-to-task). The JPP allows the planner to successfully integrate military options into ends-ways-means-risk calculations at the national level in pursuit of national interests. This seminar will set a baseline for concepts recurring throughout the JW course, including the levels of warfare, the range of military operations (ROMO), the roles of various actors – including the President, SECDEF, CJCS, CCDRs, and JFCs – in the national security system, and the process which guides the planning for military operations at all levels and across the ROMO.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS


   [The JP 5-0 Executive Summary provides a brief and broad overview of operation planning, the basis for the framework the JW course will use to identify and solve problems. This selection also introduces information about theater campaign plans, the APEX enterprise, JPEC, operational assessment, and other broad planning systems and constructs that will be further examined during JW-504.]

[The JP 1 selections outline the organization of the DoD and roles and responsibilities of the Joint Chiefs of Staff, military services and combatant commanders, and a short introduction to the seven joint functions.]


[Provides an overview of the range of military operations fundamental to the JW course.]

**SUGGESTED ADDITIONAL MATERIAL**

1. Joint Publication 5-0, *Joint Planning*, 16 June 2017, Ch. I-III, IV-1 to IV-19; Ch. V; Appendix A.

**LESSON INTEGRATION AND RATIONALE**

This lesson is an opportunity to introduce several doctrinal planning concepts foundational to the course in order to provide students with an example of how U.S. Forces plan and operate in joint, interagency, intergovernmental and multinational environments in the pursuit of national interests. This lesson incorporates the larger geopolitical concepts from the ACSC Fall semester, and narrows the scope to the operational level of war and the study of joint military operations. The lesson also introduces several operation planning concepts for the use of the military instrument of power in pursuit of national interests, and will provide the background and framework necessary for the study of selected concepts associated with military operational art and design in future lessons.

**ASSIGNMENT**

JW-518 (JW600E) group/operation assignments made
LESSON OBJECTIVES

1. Comprehend the concepts associated with complexity as they pertain to military operations and operation planning across the ROMO and the tactical, operational, and strategic levels of warfare.
   [LAO: 2a, 3c, 3d, 3e, 4b, 4f, 4g, 4h, 6b, 6f]

2. Comprehend operational art and operational design and their relationship in joint doctrine to military operations and operation planning across the levels of war and the ROMO.
   [LAO: 2a, 3c, 3d, 3g, 4b, 4g, 4h, 6b]

3. Comprehend the doctrinal elements of operational design, and the interrelation of those elements in framing complex problems, and their utility in outlining comprehensive, whole of government approaches for applying potential military solutions across the levels of war through the commander’s operational approach.
   [LAO: 2a, 3c, 3d, 3e, 3g, 4b, 4f, 4g, 4h, 6f]

4. Comprehend the purpose and content of the commander’s operational approach, commander’s planning guidance, and commander’s intent.
   [LAO: 2a, 3d, 4b, 4g, 6f]

LESSON OVERVIEW

**JW-503 (S): Introduction to Operational Design: Complexity and Problem Solving**

**Overview:** Operational art is the thought process commanders use to visualize how to efficiently and effectively employ military capabilities to accomplish their mission. Together operational art and operational design synthesize the intuition and creativity of the commander with the analytical and logical process of design. General James Mattis once stated, “Design does not replace planning, but planning is incomplete without design. The balance between the two varies from operation to operation as well as within each operation.” Modern military operations must take into account many sources of complexity including cultural, religious, and multinational considerations, among others. Operational design helps the commander provide enough structure to an ill-structured problem so that planning can lead to effective action linking military objectives to strategic national security objectives. The iterative dialogue that is central to operational design allows for the commander and staff to gain better understanding of complex problem sets, and to frame the problems in such a way that potential solutions may be sought by providing clarity and focus for operations with full consideration of the complexity of the modern operational environment, while also providing the environment that enables adaptation and innovation to address complexity during operations.

**CONTACT HOURS:** 3.0-hour seminar

REQUIRED READINGS


   [The selection from Reilly provides an excellent overview of the purpose and theory of operational design. Dr. Reilly also provides an excellent schema for the incorporation of the various elements of operational design into the planning process.]
2. US Army, TRADOC Pamphlet 525-5-500, Commander’s Appreciation and Campaign Design, (Fort Monroe, VA, 2008), 4-18.

[This selection provides an introduction to types of complexity and the characteristics of complex problem sets that military planners may encounter. Understanding different forms of complexity, and the characteristics of “wicked problems” is essential in military operations.]

3. Joint Publication 5-0, Joint Planning, 16 June 2017, IV-1 to IV-42.

[JP 5-0 chapter IV is central to gaining an understanding of joint doctrine, the joint explanation of operational art and design, and the elements of operational design. This reading equips students with both the necessary context for why operational design is useful for planning and conducting military operations, and with a common framework in the doctrinal methodology and elements that guide the development of the commander’s operational approach. This reading is central to understanding the “science” that will underlie and enable the application of the operational art.]


[This selection from Plan of Attack provides a short example of an initial operational approach derived by General Frank’s, considered to be an early precursor to the current doctrinal approach to operational design. These readings also provide students with an introduction to the complexity of the joint, interagency, intergovernmental, and multinational (JIIM) environment.]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

Understanding the complexity of operational problem sets and their impact on military operations is critical. This lesson provides essential background on the concepts of complex problems, and operational art and operational design that will be used throughout the JW course. In ensuing JW lessons, the methodology for devising the operational approach will be discussed, analyzed, and applied to complex national security problems.
LESSON OBJECTIVES

1. Comprehend what is contained in the Adaptive Planning and Execution System (APEX) and how APEX and the Joint Planning and Execution Community (JPEC) support the application of military capabilities in support of national security interests across the levels of war. [LAO: 3c, 3e, 3g, 4a, 4b, 4g, 4h]

2. Using the ends, ways, means, risk model and joint doctrine, comprehend where and how desired national strategic end states and military end states are developed and how they influence conceptual and detailed military planning efforts across the ROMO. [LAO: 2a, 3c, 3e, 3g, 4b, 4f, 4g, 4h]

3. Comprehend how the military instrument of power can contribute to the attainment of the national strategic end state, and the necessity for close coordination and synchronization across the joint, interagency, intergovernmental, and multinational (JIIM) community. [LAO: 2a, 3a, 3e, 4b, 4f, 4g, 4h]

4. Comprehend the various sources of guidance and their impact on planning to include, but not limited to: the National Security Strategy (NSS), National Defense Strategy (NDS), National Military Strategy (NMS), Unified Command Plan (UCP), Joint Strategic Capabilities Plan (JSCP), Guidance for the Employment of the Force (GEF), and the Global Force Management Implementation Guidance (GFMIG). [LAO: 1d, 2a, 3a, 3e, 3g, 4a, 4b, 4g, 4h]

5. Comprehend how military analysis and other external factors in the modern security environment may shape the discussion on desired ends by identifying the limitations on ways, means, and risk. [LAO: 2a, 3a, 3e, 3f, 3g, 4b, 4f, 4h]

LESSON OVERVIEW

JW-504 (S): Understanding Strategic Direction

Overview: Beginning with the first major component of the joint doctrine methodology for developing an operational approach, the seminar will discuss sources that will aid in answering the questions: “what are the strategic goals to be achieved and the military objectives that support their attainment?” which fosters the proper linking of military objectives and conflict termination to national security objectives. This seminar will include discussion of the forms and sources of strategic guidance and direction and how they influence (and are influenced by) operation planning; and how geopolitics, culture, and other factors can shape strategic guidance. The systems and processes available to military operation planners consist of a number of orders, plans, and directives that allow for the transformation of national strategic guidance into executable military operations. These include the APEX, UCP, JPP and various strategic guidance and planning directives essential to successfully integrate military options into ends-ways-means-risk calculations at the national level in pursuit of national interests. The seminar will review several sources of guidance, and examine the type of guidance derived from those various sources that enable military planners to answer ends-ways-means-risk questions and derive military solutions by analyzing historical examples of guidance and resultant planning efforts and written plans or orders.

CONTACT HOURS: 3.0-hour seminar
REQUIRED READINGS

[The first part of *Plan of Attack* tells the real-world story of how the APEX came about and the functioning of the joint planning community and the iterative dialogue that occurs between the military and civilian leadership. *Plan of Attack* points to the various forms of strategic and operational guidance outside of formal documents. Guidance is informed by political decisions, and includes joint, interagency, intergovernmental, and multinational considerations.]


[This unclassified summary of SECDEF guidance provides an overview of the strategic environment that shapes policy and guidance to the DoD, DoD objectives, and a broad approach for achieving those objectives. The NDS, along with the Guidance for the Employment of the Force (GEF), provides guidance that informs the Chairman’s NMS.]


[Though dated (the most current NMS is classified), a review of an NMS is essential for understanding how military strategic guidance informs planning efforts through the lens of ends, ways, means, and risk and how several sources of strategic guidance and direction are nested. Being able to transform broad guidance to actionable and measurable tasks is an essential skill for any military professional.]


[This Primer provides an excellent overview of the content and purpose of important formal strategic guidance documents and processes.]

SUGGESTED ADDITIONAL MATERIAL
1. (Review) Joint Publication 5-0, *Joint Planning*, 16 June 2017, Ch. I, Ch. II, and Ch. III.

LESSON INTEGRATION AND RATIONALE
In the process of problem framing and the application of military power, it is critical to ensure the correct problem(s) is (are) identified. Beginning the planning process with the end in mind provides a level of clarity and direction that may otherwise be absent. Understanding the sources and implications of strategic guidance on military problem solving lays the groundwork for the
remainder of the operational design methodology, and the detailed planning conducted during the JPP. Students will continue to analyze this guidance and determine how it shapes planning activities during the remainder of the JW course.
LESSON OBJECTIVES

1. Comprehend the tools and processes used to analyze the current and potential joint operational environment (OE) and the implications of the OE on the training, equipping, and employment (capabilities and limitations) of the joint force.
   [LAO: 1a, 2a, 3a, 4f, 4h, 6b; SAE: 1a]

2. Comprehend doctrinal methods of conducting operational assessments, the necessity of incorporating multiple aspects of the OE and all elements of national power, and how this contributes to a staff’s understanding of the operational environment, problems sets, and potential solutions.
   [LAO: 2a, 3a, 4b, 4f, 4g, 4h, 6b]

3. Comprehend how incomplete information regarding the OE drives doctrinal concepts such as assumptions, commander’s critical information requirements (CCIRs), and risk analysis during operation planning.
   [LAO: 2a, 3a, 4b, 4f, 4g, 6b, 6f]

4. Comprehend the relationship between the “observed system” and the “desired system” as it relates to planning and operational design and the pitfalls of “mirror imaging” when operating in complex multinational environments.
   [LAO: 3a, 3e, 4b, 4f, 4g, 4h, 6f]

LESSON OVERVIEW

JW-505 (L): Understanding the Operational Environment

Overview: Military planners operate in unpredictable and uncertain environments. Having an understanding of the environment and being able to relate that understanding to senior decision makers is a critical component of military art. This understanding of the environment is developed over long periods of time and is a continuous process. However, a staff officer may be expected, on short notice, to provide detailed assessments of their assigned operational areas and/or operational domains. These assessments assist in framing the (correct) problem, giving due consideration to multiple unknowns or gaps in intelligence. This process assists in eliminating as many unknowns as possible or recommending hedges against remaining risk due to the presence of unknowns. This lecture uses the second doctrinal aspect of developing the operational approach to explore in a larger sense the current and potential future operational environment (OE). The lecture will discuss perspectives on the current and future OE, the doctrinal prerequisite to describe the current and the desired OE/conditions when developing an operational approach, and the pitfalls of trend analysis and planning assumptions that may require branch plans or acceptance of elevated risk in an operation. The lecture will provide context for the concepts of understanding the current and desired environment during planning. Frameworks such as PMESII and SOSA will also be discussed by examining previous planning efforts and planning assumptions in order to comprehend the complexity involved with intelligence collection, and the insight required to make logical ties within a complex system.

CONTACT HOURS: 1.5-hour lecture
REQUIRED READINGS

   [This section of JP 5-0 provides the doctrinal underpinning for the processes and products contributing to gaining an understanding of the operational environment as a major component of the operational design process.]

2. Joint Publication 2-0, Joint Intelligence, 22 October 2013, ix-xvi.

   [JP 2-0 provides a short overview of the nature, roles and responsibilities of intelligence, the joint intelligence process, principles of joint intelligence, and intelligence support to operations.]

3. Joint Publication 2-01.3, Joint Intelligence Preparation of the Operational Environment, 21 May 2014, xi-xviii; Appendix B, Appendix D, Appendix E.

   [JP 2-01.3 is instructive as it demonstrates the many facets addressed in understanding the OE. The Somalia JIPOE Case Study (Appendix B) is an excellent description of JIPOE in support of stability and irregular warfare operations, and will also be useful in preparing for future JW seminars. Appendix D and Appendix E provide excellent examples of analysis (PMESII) and visual depictions/products of analysis that are useful in JW exercises.]

SUGGESTED ADDITIONAL MATERIAL
1. Joint Publication 2-01.3, Joint Intelligence Preparation of the Operational Environment, 16 June 2009, Ch. I, Ch. II, Ch. III (covers operating domains), and Ch. IV.


3. (Review) Joint Publication 5-0, Joint Planning, 16 June 2017, Ch. IV.

4. Joint Publication 3-16, Multinational Operations, 16 July 2013, Ch. III.

5. (Review from IS1) Joint Operating Environment (JOE) 2035, 14 July 2016, i-iii; 1-52.

LESSON INTEGRATION AND RATIONALE
The goal of this lecture is to facilitate for the planner the ability to focus appropriately on the most meaningful portions of a system without undue distraction by the extraneous, yet still understanding the system as a whole. As multinational operations (MNO) have been and will likely continue as the norm for the joint force, MNO concepts will also be integrated as they greatly influence the operational environment. This lesson sets up the follow-on lesson of Center of Gravity Analysis (JW-506) which will focus on the purpose and approaches for addressing a specific portion of the JIPOE in order to enable focused planning and employment of military capabilities.
LESSON OBJECTIVES
1. Comprehend the joint doctrinal concepts of center of gravity (COG) and critical factors and how these concepts are utilized in the operational design process and understanding the OE. [LAO: 2a, 3a, 3d, 3f, 4b, 4f, 6b]
2. Comprehend how the linkages between end states, centers of gravity, objectives, effects, decisive points, and lines of operation contribute to the development of the commander’s operational approach, and provide focus for subsequent/subordinate planning. [LAO: 2a, 3a, 3c, 3d, 4b, 4f, 6b]
3. Comprehend how center of gravity analysis is continually refined during the JPP, and how this refinement impacts the planning and execution of military operations across the range of military operations. [LAO: 2a, 3d, 4b, 4f]
4. Comprehend how centers of gravity, and the associated critical factors analysis are influenced by the levels of war, and how nesting of COGs and objectives assist in providing clarity in complex operational environments. [LAO: 2a, 3a, 3c, 3d, 4b, 4f, 6b]

LESSON OVERVIEW
JW-506 (S): Center of Gravity Analysis
Overview: Center of gravity analysis has long been argued as the most important aspect of joint planning. It aids the combatant commander and staffs in their understanding of the security environment and provides a detailed examination of the capabilities and vulnerabilities of friendly and adversary actors. However, the COG concept has also come under some heavy criticism. Regardless of the context and criticism, COG analysis remains an integral component for both developing an understanding of the operational environment within the operational design framework, and aiding the staff and commander in focusing planning efforts and the application of combat power during execution. The seminar will provide a basic understanding of joint doctrinal concepts and their application during the JPP, and will also require the thoughtful analysis of an historical operation in terms of identifying and analyzing centers of gravity.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

[The selections from Vego’s Joint Operational Warfare provide an excellent synopsis of the concept of center of gravity and its significance in military operations, and some important misconceptions regarding COG of which military professionals should be aware. Though the concept of COG and critical factors has fostered many heated discussions in the joint community over the last few decades, this reading provides a superb baseline from which to continue the discussion in this course and allow reasonable application of current doctrinal concepts during JW Workshops and the JPEX.]

[The VAM Pocket Guide provides a concise process for the identification and analysis of a COG, helping the military operation planner to focus planning efforts as well as apply valuable and limited military resources toward mission accomplishment. The reading also addresses the COG analysis in terms of competing objectives, and an ends, ways, means analysis in keeping with JW course themes.]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

The COG construct is useful as an analytical tool to help JFCs and staffs analyze friendly and adversary sources of strength as well as weaknesses and vulnerabilities. It is an integral component of both operational design and operational art, and ultimately allows the commander to apply combat power with more precision and focus. The critical factor analysis helps provide some structure to the otherwise ill-structured problems as discussed in lesson JW-503. COG identification and analysis is one tool among many in that aids in linking national security objectives to military objectives and termination, and provides insight into the ends-ways-means-risk calculus.
Day 5: JW-507

Defining the Problem and Developing the Operational Approach

LESSON OBJECTIVES

1. Comprehend the doctrinal methodology for defining the problem during operational design, and how a correctly defined problem leads to the identification of potential defeat and/or stability mechanisms, and moving from current conditions to desired conditions within the OE and ultimately the national security environment.
   [LAO: 2a, 3a, 3c, 3e, 3g, 4b, 4f, 4g, 4h, 6b, 6f]

2. Comprehend the three distinct but interrelated aspects of the operational design methodology (understand the strategic direction, understand the operational environment, and define the problem) that when combined assist in the development of an operational approach.
   [LAO: 2a, 3a, 3e, 3g, 4b, 6b, 6f]

3. Comprehend how conceptual planning during the development of an initial operational approach assists in determining the arrangement and phasing of operations.
   [LAO: 2a, 3c, 3d, 4b, 4c, 4e, 6f]

4. Analyze an operational approach and its utility in the planning and execution of joint military operations.
   [LAO: 2a, 3c, 3e, 3f, 4b, 4c, 4f, 4g, 4h, 6f]

LESSON OVERVIEW

JW-507 (S): Developing the Operational Approach

Overview: Understanding the problem or problem set the joint force faces is pivotal to developing the most appropriate solutions and the focused application of military capabilities, and properly linking tactical actions to strategic goals. Only after the problem set is identified and framed may the staff and commander begin to develop the approach that may be taken to solve it. The operational approach is a commander’s description of the broad actions the force must take to achieve the desired military end state. It is the commander’s visualization of how the operation should transform current conditions into the desired conditions at end state – the way the commander wants the operational environment to look at the conclusion of operations. The operational approach is based largely on an understanding of the operational environment and the problem facing the JFC; however – as always – the approach must take into account whole of government (DIME) and multinational considerations. Once the JFC approves the approach, it provides the basis for beginning, continuing, or completing detailed planning. The JFC and staff should continually review, update, and modify the approach as guidance, the operational environment, end states, or the problem change. Though laying the framework for detailed planning, the operational approach is iterative and should allow for adaptation and innovation throughout planning and execution of military operations.

CONTACT HOURS: 3.0-hour seminar

REQUIRED READINGS

[Eikmeier takes the elements in JP 5-0 and tries to make them understandable for “Everyman”. He focuses on the “how” and provides some of his own suggestions for developing an operational approach.]


[Chapter 3 in Reilly’s book goes in to detail on the methodology of design and the use of the “cognitive map” (operational approach). He walks through the critical steps providing some historical basis for the methodology.]


[The short selection from the J-7 Handbook provides some further insight into considerations for framing complex problems and developing a problem statement.]


[Simpson discusses the requirement to fit the operational approach into the overarching strategy. Focusing on COIN, his argument may be applied across the ROMO.]


[The JWFC Pamphlet provides several historical examples of problem framing and the use of the operational approach in military operations across the ROMO.]


[A review of design introduced in lessons JW 502-506, with an emphasis on what is referred to in JP 5-0 as “Defining the Problem.” Readings 1-4 add the context of military operations to those elements discussed here in JP 5-0.]

**SUGGESTED ADDITIONAL MATERIAL**


2. (Review) Joint Publication 5-0, *Joint Planning*, 16 June 2017, IV-6 to IV-19 (Design Methodology) and IV-19 to IV-40 (Elements of Operational Design).

**LESSON INTEGRATION AND RATIONALE**

This lesson provides the framework upon which students can take the doctrinal elements of design and begin to more clearly understand the practical relationships between those elements.
The visual depiction of the operational approach (the cognitive map) is a comprehensive starting point from which to begin applying operational art. Now that the elements of operational design are better understood we can begin to analyze previous operations in more detail. This is foundational to the JW planning workshops and JPEX.
LESSON OBJECTIVES

1. Comprehend the historical background, current actors, and events involved with a realistic planning scenario in a joint, interagency, intergovernmental and multinational environment. [LAO: 3a]

2. Comprehend factors in the the strategic environment and operational environment, including geopolitics, culture, region, religion, and culture which potentially inform operational design and detailed joint planning. [LAO: 3a, 4f]

LESSON OVERVIEW

JW-508 (L): Nigeria Background Brief

Overview: The history of potential and actual ethnic, religious, cultural, economic, and political faultlines in Nigeria all play an important role in any contingency planning effort. Nigeria has the largest economy and largest military of all African nations. Understanding the background, current situation, and underlying tensions and issues will be essential for successful execution of the JW planning workshops.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS

1. None.

SUGGESTED ADDITIONAL MATERIAL

1. None.

LESSON INTEGRATION AND RATIONALE

This lecture will provide the starting point for student directed study in preparation for the first two days of JW course planning workshops. Students will be expected to arrive in all ensuing workshop seminars with the appropriate level of knowledge, insight, and analysis of information that pertains to the problem set in Nigeria and the surrounding region. This will enable the planning group to apply operational art, operational design, and the planning process to propose potential military solutions to the commander.
Day 6: JW Directed Study
LESSON OBJECTIVES

1. Demonstrate the use of operational art and design in Joint Planning, and how military planning considers all elements of national power and a whole of government approach to achieve national strategic goals.
   [LAO: 2a, 2c, 3d, 3e, 4b, 4f, 4g, 4h, 6b, 6f]

2. Apply elements of operational art and design (per joint doctrine) in order to understand the current and desired operational environment and develop potential solutions to a complex military planning problem.
   [LAO: 2a, 2c, 3a, 3d, 3e, 4b, 4f, 4g, 4h, 6f; SAE: 3c, 3d]

3. Analyze strategic guidance documents, the commander’s initial planning guidance, and the operational environment in order to develop military end states, objectives, and desired effects for the application of the military instrument of power.
   [LAO: 1d, 2a, 2c, 3c, 3d, 3e, 3g, 4b, 4h, 6f; SAE: 1a]

4. Analyze appropriate centers of gravity to aid in the identification of decisive points that will be used in the development of the operational approach.
   [LAO: 2a, 2c, 3a, 3d, 3e, 4b, 6b, 6f; SAE: 4b]

LESSON OVERVIEW

JW-509 (S): Operational Design Workshop Day 1

Overview: The Operational Design Workshop (2 days) will focus on the elements of operational design and the development of an initial operational approach. The first day of the Workshop will concentrate on “understanding strategic direction” and “understanding the operational environment” that will allow planners to answer the questions: “what are the strategic goals to be achieved and the military objectives that support their attainment?” and “what is the larger context that will help me determine our problem?” The seminar practical application will include concepts such as Joint Intelligence Preparation of the Operational Environment (JIPOE), center of gravity analysis, SOSA/PMESII constructs, and a review of national strategic guidance documents. The result of Day 1 will be well-crafted strategic and operational end states, military operational objectives and effects, and thorough enemy and friendly center of gravity analysis. This workshop is the first in a series of eight during the JW course that will enhance student ability to derive solutions to complex problems in potentially volatile, uncertain, and ambiguous environments.

This lesson underscores the importance of staff support to the commander in developing an operational approach so that planners can subsequently continue with focused mission analysis and COA development in JPP Steps 2 and 3. Prior to conducting Mission Analysis, the JFC will typically provide initial planning guidance based upon current understanding of the operational environment, the problem, and the initial operational approach for the campaign or operation. ACSC suggests that the operational approach be captured in a cognitive map, which will support the remainder of the planning activities, including decision analysis.

CONTACT HOURS: 3.0-hour seminar
REQUIRED READINGS

1. JW Nigeria scenario planning guidance, research materials, and other open source research materials as required. (Canvas)

   [Students must read the scenario guide prior to the start of the workshop. Students will not have the time to “spin-up” on the scenario during this seminar. This seminar marks the first of several experiential learning days that provide an opportunity to synthesize and apply JW course concepts through instructor led practical application. In addition to the materials provided, students will be required to conduct their own research in order to gain information that will facilitate the analysis and application of elements of operational design during the seminar. The purpose of student research for scenario information, in addition to aiding the practical application of doctrinal concepts, is to build analytical skills for knowing what types of questions to ask, as well as what specific questions to ask, and seek appropriate information to enable military planning activities.]

2. JW Planning Study Guide. (Canvas)

   [This guide is provided to enable coherent research and note taking on scenario materials. Students should use the guide and prepare notes for in-class use per their instructor’s directions.]

SUGGESTED ADDITIONAL MATERIAL

1. Joint Publication 5-0, Joint Planning, 16 June 2017, Ch. IV.
2. Jeffrey M. Reilly, Operational Design: Distilling Clarity from Complexity for Decisive Action (Air University Press, 2012), 1-14; 21-29; 31-38 (stop at first full paragraph); 40-58.

LESSON INTEGRATION AND RATIONALE

This seminar is the first of eight instructor-led workshops in which students will “walk” through Operational Design and the JPP utilizing a scenario as a tool to enhance learning. This seminar will directly enable the analysis and application of concepts in the Mission Analysis, COA Development, COA Analysis and COA Comparison Workshops later in the JW course. In these seminars the planning groups will continue to analyze and apply operational art and design concepts by continuing detailed planning through the use of the JPP. The experience gained during this seminar will increase analytical and critical thinking abilities, and aid in preparing students to conduct student-led planning during the Joint Planning Exercise (JPEX) to address a more complex contingency scenario.
LESSON OBJECTIVES
1. Demonstrate the use of operational art and design in Joint Planning, and how military planning considers all elements of national power and a whole of government approach to achieve national strategic goals.
   [LAO: 2a, 2c, 3d, 3e, 3g, 4b, 4f, 4g, 4h, 6b, 6f]
2. Apply elements of operational art and design (per joint doctrine) in order to understand the current and desired operational environment and develop potential solutions to a complex military planning problem.
   [LAO: 2a, 2c, 3a, 3d, 3e, 4b, 4f, 4g, 4h, 6f; SAE: 3c, 3d]
3. Analyze the operational environment and the multiple actors and relationships in that environment in order to understand and isolate root causes of the issues at hand, define the problem, and determine how these operational variables may inhibit or facilitate the preferred change toward the desired operational end state.
   [LAO: 1d, 2a, 2c, 3a, 3c, 3g, 4b, 4f; SAE: 1a]
4. Apply appropriate doctrinal elements of operational design, to include, but not limited to: lines of operation/lines of effort, decisive points, end state, objective, effects, and arranging operations in order to analyze a complex security issue and develop an initial operational approach, commander’s planning guidance, and commander’s intent.
   [LAO: 1d, 2a, 2c, 3a, 3c, 3d, 3g, 4b, 4e, 4h, 6b; SAE: 4b]

LESSON OVERVIEW
JW-510 (S): Operational Design Workshop Day 2
Overview: The second day of the Operational Design Workshop (2 days) will continue the analysis previously conducted for the development of end states, objectives, effects and the analysis of centers of gravity that will enable the development of an operational approach. In this session, the planning group will continue to apply doctrinal concepts and methodology for developing the operational approach. Specifically, the group will use previous analysis of enemy and friendly objectives and centers of gravity to determine potential decisive points that aid in the development of lines of operation and/or lines of effort which are foundational to an operational approach. During this seminar the questions: “what problem is the design intended to solve?” and “how will the problem be solved?” will guide the formulation of an initial operational approach.

The lesson underscores the importance of staff support to the commander in developing an operational approach so that planners can subsequently continue with focused mission analysis and COA development in JPP Steps 2 and 3. Prior to conducting Mission Analysis, the JFC will typically provide initial planning guidance based upon current understanding of the operational environment, the problem, and the initial operational approach for the campaign or operation. ACSC suggests that the operational approach should be captured in a cognitive map, which will support the remainder of the planning activities, including decision analysis.
The result of Day 2 will be a “cognitive map” that captures the broad actions the force will take and to convey the staff and commander’s overall understanding of the situation prior to the start of detailed planning. The elements of design on this “map” include, but are not limited to: end state, objectives, effects, COGs, decisive points, lines of operation/effort, and arranging operations.

CONTACT HOURS: 3.0-hour seminar

REQUIRED READINGS
1. JW Nigeria scenario planning guidance, research materials, and other open source research materials as required. (Canvas)

[Students must read the scenario guide prior to the start of the workshop. Students will not have the time to “spin-up” on the scenario during this seminar. This seminar continues with the analysis conducted in the previous Operational Design Workshop. In addition to the materials provided, students will be required to conduct their own research in order to gain information that will facilitate the analysis and application of elements of operational design during the seminar. The purpose of student research for scenario information, in addition to aiding the practical application of doctrinal concepts, is to build analytical skills for knowing what types of questions to ask, as well as what specific questions to ask, and seek suitable information to enable military planning activities.]

2. JW Planning Study Guide. (Canvas)

[This guide is provided to enable coherent research and note taking on scenario materials. Students should use the guide and prepare notes for in-class use per their instructor’s directions.]

SUGGESTED ADDITIONAL MATERIAL
1. Joint Publication 5-0, Joint Planning, 16 June 2017, Ch. IV.
2. Jeffrey M. Reilly, Operational Design: Distilling Clarity from Complexity for Decisive Action (Air University Press, 2012), 1-14; 21-29; 31-38 (stop at first full paragraph); 40-58.

LESSON INTEGRATION AND RATIONALE
This seminar is the second of eight instructor-led workshops in which students will “walk” through Operational Design and the JPP utilizing a scenario as a tool to enhance learning. This seminar will directly enable the analysis and application of concepts in the Mission Analysis, COA Development, COA Analysis and COA Comparison Workshops. In these seminars the planning groups will continue to analyze and apply operational art and design concepts by continuing detailed planning through the use of the JPP. The experience gained during this seminar will increase analytical and critical thinking abilities, and aid in preparing students to conduct student-led planning during the Joint Planning Exercise (JPEX) to address a more complex contingency scenario.
Day 9: JW-511
Linking Conceptual Planning to Detailed Planning and Multi-Domain Operations

LESSON OBJECTIVES
1. Comprehend how conceptual level planning (accomplished during operational design), theory, and principles of joint operations drive detailed planning during the JPP.
   [LAO: 2a, 3d, 4b]
2. Comprehend how detailed planning informs conceptual planning through the continuous and iterative planning process.
   [LAO: 2a, 4b]
3. Comprehend the changes in the operating environment that have led to the current thinking about multi-domain operations and how thinking about operations in and through domains aids in making strategy-to-task decisions.
   [LAO: 3a, 4e, 6a, 6f; SAE: 1a, 1e, 4b]

LESSON OVERVIEW
JW-511 (L): Linking Conceptual Planning to Detailed Planning and Multi-Domain Operations

Overview: Operational Design can be considered as part of the conceptual level of planning. Operational Design helps the commander and staff begin to distill clarity from complexity and frame the problem set they are facing. The derivation of military end states, objectives, lines of effort, and other elements from national strategic guidance is merely the beginning of an iterative process that continues even during execution. During Step 2 of the JPP the planning staff considers the broad operational approach and begins, through the doctrinal activities of mission analysis, to develop the tasks that must be accomplished to achieve the desired effects and accomplish the stated objectives. This analysis aids in the continued refinement of the problem frame. With changes in the anticipated global operating environment, military thinkers have proposed that analyzing mission requirements through consideration of domains rather than joint services is essential for success against future adversaries. Conducting planning activities, including mission analysis, within the context of multi-domain operations may assist the planner in applying existing doctrine to a new concept of warfighting.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS

   [This essay gives some insight into the differences between strategic thinking and planning, and the necessary conjunction of the two, and offers insight into the necessity and difficulty of linking strategic thinking to detailed planning.]

SUGGESTED ADDITIONAL MATERIAL
1. Joint Publication 5-0, Joint Planning, 16 June 2017, Ch. II and Ch. V.
LESSON INTEGRATION AND RATIONALE
This lecture provides a bridge from operational design to mission analysis in Phase 1 of the JW course which focuses on problem framing. Having examined complexity and the use of operational design to aid in establishing a problem frame, this framing process continues during the beginning of detailed planning in Step 2 of the JPP – mission analysis. Though doctrine lists several activities that take place during mission analysis, it is the continued analytical thinking that is most important as more detail is considered and added to the plan. Multi-domain operations (MDO) provides a framework for thinking about how the military will operate against potential future adversaries. MDO is still in the conceptual stage of development. Today’s professionals will be challenged to develop the detailed methods to complete the strategy-to-task calculus in order to better address the changing characteristics of the OE and near peer threats.
LESSON OBJECTIVES

1. Comprehend the purpose, activities, and desired outputs of JPP step 2, Mission Analysis, including how operational art, operational design, and the commander’s initial operational approach, along with the joint functions, inform the JPP through Mission Analysis activities.
   [LAO: 1d, 2a, 3a, 3e, 3f, 4b, 4c, 4e]

2. Comprehend the process for developing a clear mission statement, and the purpose, construct, and content of a mission statement per current joint doctrine through the critical analysis of a joint operation.
   [LAO: 1d, 2a, 3a, 3e, 4b]

3. Comprehend the significance of planning assumptions, commander’s critical information requirements (CCIRs), and risk assessment during the planning and execution of military operations.
   [LAO: 2a, 3a, 4b]

4. Comprehend the options available to the joint force commander for the organization of a joint force, and the doctrinal command relationships (COCOM, OPCON, TACON, and support) that define the authority a commander has over assigned or attached forces, and how that leads to unity of command and unity of effort.
   [LAO: 2a, 3b, 5a; SAE: 1d]

LESSON OVERVIEW

JW-512 (S): Introduction to Mission Analysis

Overview: The military portion of the plan for Haiti earthquake relief was one part of a whole of government and multinational effort, with the U.S. State Department as the lead federal agency. A thorough Mission Analysis is critical to correctly framing the problem (and framing the correct problem) which enables the derivation of appropriate solutions during the rest of the JPP. Through the activities of Mission Analysis, planners are able to determine the tasks required to accomplish the mission, the purpose of the mission, limitations on freedom of action (constraints and restraints), and the forces and organization that will support the operation. The outputs of the Mission Analysis step directly influence the remainder of detailed planning, particularly course of action development during which planners develop solutions to the problems as outlined during Mission Analysis. Factors such as planning assumptions and CCIRs also impact intelligence collection and ends-ways-means-risk assessment throughout planning and execution. The seminar will include the critical analysis of the plan and subsequent execution of intergovernmental and multinational relief operations in Haiti.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS


[The readings from the U.S. joint military response to the 2010 Haiti Earthquake provide an excellent example of the outcome of the activities of Mission Analysis produced by an actual joint staff during a crisis. The reading helps link the conceptual thinking accomplished]
through the development of an operational approach to the doctrinal activities of mission analysis.]

2. CDRUSSOUTHCOM, USSOUTHCOM OPORD 1-10: Support to Haiti Earthquake Relief Efforts (2010), Read 3-18 (up to “tasks to units”); Skim 18-60.

[This real-world unclassified Operation Order (OPORD) is useful to demonstrate the format and content of a planning order. The order is useful in analyzing how the operational approach informs detailed planning, and particularly mission analysis activities at the JTF headquarters and component levels.]


[Introduces the doctrinal activities associated with the Mission Analysis step of the joint planning process.]


[The JP 1 reading describes the types of U.S. joint organizations and the organizational options available to a joint force commander for the conduct of military operations, and command relationships (authorities) that facilitate unity of command and unity of effort.]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

The Mission Analysis seminar continues the JW Phase 1 theme of problem framing, specifically through the doctrinal activities of Mission Analysis. The seminar follows the JW-511 lecture that bridges the JW lessons on operational design to mission analysis. This seminar will facilitate the discussion of an historical operation during JW-513 and JW-514 in which students will apply their knowledge of the Mission Analysis step and associated inputs, outputs and activities to analyze previous mission planning conducted for joint and interagency response to an actual crisis, and to JW-515 during which students will conduct Mission Analysis using a scenario. The lesson also revisits operational design, national planning systems, and sources of national guidance that drive detailed planning during the JPP.
**LESSON OBJECTIVES**

1. Comprehend how the Mission Analysis step of the JPP is integrated with the elements of operational design, the commander’s initial operational approach, and joint functions.
   [LAO: 2a, 3e, 4b, 4c, 4h]

2. Comprehend the relationship between the doctrinal levels of war, and analyze how activities and effects at one level may impact the other levels in positive or negative ways.
   [LAO: 2a, 3e, 4b]

3. Comprehend the concepts of Mission Command and mission creep, and identify its causes and effects, as well as ways to mitigate or avoid the associated risks of expanding operational goals beyond initial guidance or the planning and analysis conducted during the Mission Analysis step of the JPP.
   [LAO: 2a, 3e, 4b, 4f, 6d, 6f]

4. Analyze the planning of an historical operation for the doctrinal activities of mission analysis, and identify planning activities and operational design elements that lead to success or failure in military operations in a complex operational environment.
   [LAO: 2a, 3a, 3c, 3e, 3f, 4b, 4f, 4h, 6d, 6f]

**LESSON OVERVIEW**

**JW-513 (L): Mission Analysis Case Study: Black Hawk Down**

**Overview:** The “Battle of Mogadishu” – a single mission conducted as part of Operation GOTHIC SERPENT, was the result of a single tactical mission in which U.S. forces attempted to capture Somali warlord Mohamed Farrah Aidid. Operation GOTHIC SERPENT was a specific portion of the ongoing U.S. operations in Somalia from August to October 1993 designed to capture Aidid and his top lieutenants in order to aid in restoring order to Mogadishu. These tactical operations took place under the cognizance of larger efforts which the U.S. had code-named Operation RESTORE HOPE (the follow-on to Operation PROVIDE RELIEF) – which was part of ongoing international efforts to bring humanitarian aid and to conduct peace operations in Somalia as it suffered from ongoing civil war and widespread famine. A careful examination of operations in Somalia from 1992 through 1994 (including UN Operations in Somalia I (UNOSOM I), Unified Task Force (UNITAF), and UNOSOM II) provides an opportunity to analyze the planning efforts and mission analysis conducted for multi-faceted Foreign Humanitarian Assistance (FHA) and Peace Operations (PO), examine the complexity of coalition operations, and to study the ambiguity that may exist in the operational environment in military operations even on the “lower end” of the ROMO.

**CONTACT HOURS:** 1.5-hour movie

**REQUIRED READINGS**


   [The overview reading for U.S. and UN military operations in Somalia provides important background information and insight regarding the UN mandates for coalition engagement in Somalia, and specifically the strategic guidance and military planning for U.S. military operations during this era.]
involvement in foreign humanitarian assistance (FHA) and peace operations (PO) in Somalia. This background is essential for the analysis, at the operational level, of elements of operational art and design, planning concepts and to draw conclusions regarding appropriate operation planning concepts and processes in the subsequent seminar.]


[The Beech monograph points out several excellent lessons learned and adeptly explains the concept of mission creep and its effects on operations.]

3. (Review) Joint Publication 2-01.3, Joint Intelligence Preparation of the Operational Environment, 21 May 2014, B-1 to B-32.

[This is a review of the OE (JIPOE) for Somalia. It is important to complete the assigned reading prior to the scheduled presentation. This will allow students to view the events of the tactical actions depicted with the appropriate “operational lens.”]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

The opportunity to analyze a complex operation, from a tactical perspective and through film, provides a unique perspective for linking actions and effects across the levels of war and across the ROMO. Learning through film also reinforces the objectives of the course which strive to foster habits of mind and patterns of inquiry – providing the planner not merely with examples of previous operations, but building analytical tools for future operation planning and problem solving.
LESSON OBJECTIVES

1. Analyze the planning of an historical operation for the doctrinal activities of mission analysis, and identify planning activities and operational design elements that lead to success or failure in military operations in a complex operational environment.
   [LAO: 2a, 3a, 3c, 3e, 3f, 4b, 4f, 4h, 6d, 6f; SAE: 1c]

2. Comprehend how the Mission Analysis step of the JPP is integrated with the elements of operational design, the commander’s initial operational approach, and the joint functions.
   [LAO: 2a, 3e, 4b, 4c, 4h]

3. Comprehend the relationship between the doctrinal levels of war, and analyze how activities and effects at one level may impact the other levels in positive or negative ways.
   [LAO: 2a, 3e, 3g, 4b; SAE: 1c]

4. Comprehend the concept of mission creep, and identify its causes and effects, as well as ways to mitigate or avoid the associated risks of expanding operational goals beyond initial guidance or the planning and analysis conducted during the Mission Analysis step of the JPP.
   [LAO: 2a, 3e, 3g, 4b, 4f, 6d, 6f]

5. Analyze the joint doctrinal command relationships and joint force organizational structures, and their significance in operations, and connection with the principle of unity of command.
   [LAO: 2a, 3b, 3d, 5a]

LESSON OVERVIEW

JW-514 (S): Mission Analysis Case Study: Somalia

Overview: Students have previously attended a lecture and seminar on JPP step 2, Mission Analysis and are equipped with the requisite knowledge of the purpose and activities of Mission Analysis to enable an analysis of an historical operation. The Somalia case study provides an opportunity to analyze a specific mission, and the logic and analysis behind a mission statement and other outputs of Mission Analysis. “Mission creep” is also an important concept that should be understood in relation to mission analysis and the iterative dialogue that should take place between commanders and planners throughout mission planning and execution. (Having gained fairly common usage in military circles, the term “mission creep” finds its origins in the U.S operations in Somalia in 1993). Command relationships (joint force and multinational) and their direct and indirect effects on military operations are also a key area deserving critical analysis.

CONTACT HOURS: 1.5-hour seminar

REQUIRED READINGS

1. See JW-513.

SUGGESTED ADDITIONAL MATERIAL

1. See JW-513.

LESSON INTEGRATION AND RATIONALE

This seminar reinforces previous learning (JW-511, JW-512, and JW-513) moving from comprehension of JPP step 2 and associated activities of Mission Analysis to the analysis of an historical operation through the specific lens of Mission Analysis activities as outlined in current
doctrine. Through the historical case study, students will be further empowered with the skills to conduct their own mission analysis as applied to a complex planning scenario during the Mission Analysis Workshop (JW-515) and the Joint Planning Exercise (JPEX).
Day 11: JW Directed Study
# LESSON OBJECTIVES

1. Integrate operational art and operational design with Joint Planning, and assess how military planning considers all elements of national power and a whole of government approach to achieving national strategic goals.
   [LAO: 2a, 3a, 3c, 3g, 4b, 4f, 4h]

2. Comprehend the purpose and process for activities of JPP step 2, Mission Analysis, and how operational art, operational design, and the JPP are iterative in nature.
   [LAO: 2a, 3c, 3d, 3g, 4b, 4f]

3. Analyze how strategic guidance documents, commander’s intent and planning guidance, and the initial operational approach guide and inform the Mission Analysis step of the JPP.
   [LAO: 1d, 2a, 3g, 4b, 4f, 4g]

4. Apply joint planning concepts across the joint functions while conducting Joint Planning activities as described in JP 5-0 for JPP Step 2, Mission Analysis, in order to develop a mission statement and create a Mission Analysis brief for the Joint Force Commander (CJ).
   [LAO: 1d, 2a, 2c, 3a, 3b, 3c, 3d, 3e, 3g, 4a, 4b, 4c, 4f, 4h, 5a, 5b, 6b, 6e, 6f; SAE: 3c, 3d]

# LESSON OVERVIEW

**JW-515 (S): Mission Analysis Workshop Day 1 and Day 2**

**Overview:** Mission Analysis is an important part of the JPP which, according to JP 5-0, “is used to study the assigned tasks and to identify all other tasks necessary to accomplish the mission” (V-4). This step provides direction to the commander and allows the staff to properly focus on the problem at hand. This workshop will address the activities of Mission Analysis, and will expand upon and link to the analysis conducted during JW-509 and JW-510 (Operational Design). The results will include a refined Operational Approach and delivery of a Mission Analysis Brief. The outputs of Mission Analysis will prepare the students to develop Courses of Action later in the JW course during the application of JPP Step 3.

The Mission Analysis brief is a tool through which the staff briefs the commander on the operational design and planning activities through JPP Step 2. Though the seminar has been led by the instructor through operational design, Step 1 (Initiation), and Step 2 (Mission Analysis) it is useful for students to develop and present the brief in order to gain an appreciation for how all of the thought, discussion, and doctrinal terms and tools come together to inform and shape the commanders planning guidance and future steps in the problem solving process. According to JP 5-0, the brief “[provides] the commander with the results of the staff’s analysis of the mission, offers a forum to discuss issues that have been identified, and ensures the commander and staff share a common understanding of the mission” (V-17).

**CONTACT HOURS:** 2x3.0-hour seminars

# REQUIRED READINGS

1. Joint Publication 5-0, *Joint Planning*, 16 June 2017, Ch. VI (Operation Assessment).
[The plan for assessing the achievement of operational goals should be built into the overall plan. This chapter provides guidance on how to ensure assessment is built into all plans.]

2. JW Nigeria scenario planning guidance, research materials, and other open source research materials as required. (Canvas)

[Students should continue research and build upon their work during the JW-509 and JW-510 Operational Design Workshop prior to the start of the Mission Analysis Workshop. Students will not have the time to “spin-up” on the scenario during this seminar. This seminar continues with the analysis conducted in the previous Operational Design Workshop. In addition to the materials provided, students will be required to conduct their own research in order to gain information that will facilitate the analysis and application of elements of operational design during the seminar. The purpose of student research for scenario information, in addition to aiding the practical application of doctrinal concepts, is to build analytical skills for knowing what types of questions to ask, as well as what specific questions to ask, and seek suitable information to enable military planning activities.]

3. JW Planning Study Guide. (Canvas)

[This guide is provided to enable coherent research and note taking on scenario materials. Students should use the guide and prepare notes for in-class use per their instructor’s directions.]

SUGGESTED ADDITIONAL MATERIAL

LESSON INTEGRATION AND RATIONALE
The Mission Analysis Workshop provides an opportunity to synthesize all JW concepts to this point in the course. This workshop will allow the CI to “walk” the seminar through the activities of Mission Analysis. The products of this seminar, including the development of assumptions, limitations, tasks, initial risk assessment, CCIRs and a mission statement, will support the COA Development Workshop wherein students will develop distinct COAs to address the scenario contingency planning problem. The analysis and synthesis conducted during these two days provide another opportunity to hone critical thinking and analytical skills. The experience gained during this seminar will also prepare the students to conduct student-led planning during the Joint Planning Exercise (JPEX) to address a more complex contingency scenario.
LESSON OBJECTIVES

1. Analyze the fundamentals of operational art and design, specifically as they may be applied to the development of potential military solutions to complex security problems the joint force may face.
   [LAO: 2a, 3d, 6b, 6f]
2. Analyze a military operation for the commander’s vision, decision making, and use of doctrinal concepts (operational art and operational design) and principles of joint operations which led to successful accomplishment of the mission.
   [LAO: 2a, 3d, 3f, 6b, 6d, 6e, 6f]
3. Analyze the factors or characteristics of commander’s that may lead to success in combat operations, and how those factors relate to modern doctrinal concepts.
   [LAO: 2a, 6b, 6d, 6f]

LESSON OVERVIEW

JW-518 (S): COA Development: The Operational Art (Student Presentation – JW-600E)

Overview: Martin Van Creveld, in his seminal work Command in War (1987) posits, “Studying the past may be a matter of marginal utility only, but the past is us and it is on the past alone that all decision making is inevitably based. If systematic study of the past is taken away, only personal experience, hearsay, and intuition remain” (p. 15). The opportunity to study and present a short presentation on a selected commander and battle will provide insight into the methods of analysis, and critical and creative thinking required of the military professional to devise appropriate courses of action to solve complex security problems. As the second day of the JW “problem solving” phase (Phase 2), this will be an opportunity to gain appreciation for command decisions, and how planners and commanders elect to adhere to or reject certain principles or doctrinal concepts in order to successfully accomplish missions. This seminar, coupled with a solid understanding of the “tools” used in accomplishing military missions (introduced in upcoming lessons), will enable students to analyze a situation, and determine appropriate ways and means for achieving the desired ends – known in U.S. joint doctrine as developing courses of action. The student presentation constitutes 10% of the Joint Warfighting course grade (JW-600E)

CONTACT HOURS: 2.5-hour seminar

REQUIRED READINGS

[“Ingredients of Military Genius” provides the reader with a brief overview of the characteristics identified by Clausewitz as being necessary or evident in the most effective combat commanders. This provides additional examples of military genius that Clausewitz wrote about which students read during the Leadership course in the fall term.]


[Vego points out several aspects of military creativity, and the necessity for the military professional’s “…ability to find workable, novel solutions to problems—to be innovative and adaptable in fast moving, potentially confusing situations,” a primary goal of ACSC and the JW course.]

3. JW 518.1 Student Research and Presentation Guidance (in this syllabus).

[Provides detailed guidance on the timing and content requirements of the in-class presentation. It is important that students follow the guidance for this graded presentation.]

4. Research as required for assigned in-class presentation.

SUGGESTED ADDITIONAL MATERIAL
1. None.

LESSON INTEGRATION AND RATIONALE
This lesson allows for a brief look at a few historical case studies of commanders and battles that stand out as significant for many reasons. The ability to research and critically analyze historical operations in terms of application of capabilities and the use of doctrine and other accepted principles will lay the groundwork for student application of creative thinking to develop valid courses of action for solving complex problems through application of military capabilities. This lesson is an early part of a building block approach to problem solving in this course, and future lessons will add service capabilities, domain operations, and doctrinal activities of course of action development. The JW COA Development Workshops will leverage this analysis, and the JW course will culminate with the application of this knowledge during the JPEX.

WRITTEN ASSIGNMENT
Group paper (JW601E) assigned at the conclusion of the JW-518 seminar.
Refer to JW-518 in the JW Syllabus for lesson objectives, required readings, and other rationale. This assignment constitutes 10% of the Joint Warfighting course grade (JW-600E).

On 18 March (JW Day 1) seminar CIs will assign students to research groups. There will be 4 groups created, each of 3 students (one group of 4 if a 13 person flight). Each group will be assigned a specific commander and related battle/operation from the list below to research and present to the seminar during JW-518. The presentation will adhere to the following guidance:

- **The presentation will be no longer than 20 minutes.** Use of PowerPoint slides is at the discretion of the CI.
- **3-5 minutes:** Overview of the operation.
- **5-10 minutes:** Identify **no fewer than 3 and no more than 5** elements of operational design that the commander utilized or did not utilize, and the impact they had on the operation, particularly in the commander’s decision making.
  - How did these elements inform the commander’s decision making process?
  - Did the commander appreciate certain elements, or discount them? Why?
- **5-10 minutes:** Identify **no fewer than 3 and no more than 5** principles of joint operations (formerly known as principles of war) to which the commander adhered, or were disregarded/violated, and how they impacted the commander’s decisions.
  - Why were these principles/concepts significant to the outcome of the battle/operation and the decisions made?
  - Was the “violation” of certain principles a direct contributor to military success (or failure), or was success achieved in spite of flawed use of doctrine/principles?
  - How do the principles connect to the elements of operational design that you identified?

Each student presentation will be followed by a 10-15 minute question/answer/discussion period led by the CI. Alternately, the CI may opt to conduct all of the presentations first and use the remainder of the seminar time for discussion.

**The commander/battle assignments are as follows (CI/seminar will select 4):**

- General Ulysses S. Grant at Vicksburg
- General Robert E. Lee at Chancellorsville
- General Douglas F. MacArthur at Inchon
- Air Chief-Marshal Hugh Dowding at the Battle of Britain
- *Reichsmarshall Hermann Goering at the Battle of Britain
- Admiral Chester Nimitz at the Battle of Midway
- *Generaloberst Helmuth von Moltke (the younger) at the Battle of the Marne
- Viscount General William Slim at the Battles of Kohima/Imphal
- Napoléon Bonaparte at Austerlitz

* At least one of these two will be selected in the list of four.
LESSON OBJECTIVES
1. Comprehend political, military, economic, social, infrastructure and informational (PMESII) factors that inform operational art, elements of operational design, and mission analysis in Joint Task Force (JTF) planning for irregular warfare.
   [LAO: 2c, 3a, 3e, 4f, 4h, 6f; SAE: 1c, 4b]
2. Understand how commanders and staffs leverage operational art and design to link tactical actions to strategic objectives, answering ends-ways-means-risk questions to develop military strategy for irregular warfare.
   [LAO: 2c, 3c, 3e, 4f, 4h, 5a, 6a, 6b, 6f]
3. Comprehend a JTF commander’s perspective and use of operational art, operational design, and unique special operations forces (SOF) capabilities to develop courses of action in a multinational operation in irregular warfare.
   [LAO: 1a, 2c, 3d, 3e, 4e, 4f, 4h, 6b, 6d, 6f]

LESSON OVERVIEW
JW-516 (L): JTF Perspective on Problem Solving
Overview: In 2002 Joint Task Force (JTF) 510 executed OEF Philippines (OEF-P), a population-centered counterinsurgency effort designed to support the Government of the Philippines as they battled the Abu Sayyaf Group, radical Islamic separatists operating on Zamboanga and Basilan Island. Originally conceived as a hostage rescue operation, OEF-P evolved into a multi-pronged effort designed to re-establish the Philippine government’s legitimacy in the eyes of the population in those regions. The planning and execution of this operation highlight the essential interconnectedness of national and military level objectives, multinational considerations and context, and building partner capacity in developing an appropriate concept of operations. In addition, the operation showcases the critical nature of information operations, and the need for flexibility and adaptability when executing a plan.

CONTACT HOURS: 1.5-hour lecture

REQUIRED READINGS

   [The RAND Study provides a summary of the operations conducted by Special Forces Joint Task Force 510 in the Philippines. The reading provides an understanding of Operation Enduring Freedom-Philippines mission for security assistance and security cooperation at the tactical and operational level to disrupt and degrade a terrorist network. The reading directly links to the JW-516 lecture which highlights how a JTF CDR views mission analysis and problem solving.]

SUGGESTED ADDITIONAL MATERIAL
1. None.

LESSON INTEGRATION AND RATIONALE
This presentation incorporates many of the JW course concepts previously discussed, including but not limited to operational design and mission analysis. While focused primarily on a limited
COIN operation (JTF-Philippines), the concepts presented are broadly applicable to all planning efforts, and are a good introduction to the art of military analysis. This lecture serves as a transition as the course moves from “problem framing” into “problem solving” – taking the analytical “science” of design and problem framing toward developing the artful arrangement of capabilities (means) into viable military solutions (ways) as framed by strategic guidance and limitations. The presentation also revisits and reinforces concepts such as COGs, objectives and effects, and how these concepts play a pivotal role in course of action development. The need for COAs with inherent flexibility, clear command relationships, integrated IO, and force structure are also presented in the case of JTF-P operations.
LESSON OBJECTIVES

1. Comprehend how operational art, operational design, the initial operational approach and mission analysis guide and inform the doctrinal development of potential solutions and the application of military capabilities.
   [LAO: 2a, 3g, 4b, 4f, 5b]

2. Comprehend the doctrinal purpose and process for activities of JPP step 3, Course of Action Development, including several considerations for developing COAs, and what constitutes a valid and complete course of action.
   [LAO: 2a, 4b, 4c]

3. Comprehend operational art and design, joint functions, and the principles of joint operations and their relationship to Joint Planning, and how military planning considers all elements of national power and a whole of government approach to achieving national strategic goals.
   [LAO: 2a, 3d, 3e, 4b, 4c, 4f, 4g, 4h, 6f]

LESSON OVERVIEW

JW-517 (S): Operational Art and Problem Solving: Course of Action Development

Overview: One of the most critical steps in military planning is conceiving of and deciding upon COAs. Among the paths an operation can take, the commander must decide on a particular course of action. During JPP step 3, the staff develops unique courses of action to achieve the commander’s military end state. These COAs adhere to the commander’s guidance and intent, build on the results of mission analysis, and introduce additional elements of operational design. Ideal COAs consider all participants, culture, religion, geopolitics and other factors to achieve the desired end state within the commander’s guidance, while maintaining flexibility to react to unforeseen challenges (i.e. Mission Command). It is essential to balance the requisite detail in the proposed courses of action with the flexibility for those who will execute the plan to be able to adapt to situations on the ground and to exploit opportunities in real time.

The COA sketch is one tool available to assist the commander in visualizing the entire operation (i.e. the course of action). This seminar will describe how to develop a valid COA that accomplishes the mission within the commander’s guidance and positions the joint force for future operations.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Joint Publication 5-0, Joint Planning, 16 June 2017, V-20 to V-31 (Course of Action Development); VII-4 paragraph 4(a)(b)(c)(d) and Appendix F (FDOs/FROs); (Review) IV-31 to IV-33 (Defeat & Stability Mechanisms).

[The selected reading from Joint Publication 5-0 provides the joint doctrinal guidance in regards to COA development, including methods and criteria for validating a COA. It also provides an introduction and examples of flexible deterrent options (FDOs) and flexible response options (FROs) that are central to flexibility in military operations.]

*Plan of Attack* provides an excellent example of the iterative nature of COA development and strategic guidance, assumptions, end state, objective, and effects. This helps the student tie the actions and activities of detailed COA development during the JPP back to operational design concepts that inform how COAs are developed, and why; and how the chosen COA was selected, and why.]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

This seminar will incorporate the previous JW lessons of operational design and mission analysis to link how a commander’s operational approach, guidance, and intent impact COA development. The seminar will include an introduction to doctrinal defeat and stability mechanisms with examples, leveraging previous case studies that will build the foundation for the comprehension of service capabilities and operations in the domains which follow later in the course. The preceding lecture will offer discussion points on defeat and stability mechanisms, and reading on OIF planning will provide information to foster discussion on the iterative nature of COA development and COA validity leading into COA Analysis and Wargaming in a future seminar. The concept of COA development taught during this seminar is essential to understanding how commanders and their staffs visualize options to solving complex problems.
LESSON OBJECTIVES
1. Comprehend the capabilities of joint forces (including appropriate CSAs) and their contribution to joint warfighting in cyberspace to achieve effects at the operational level of war, and across the range of military operations (ROMO).
   [LAO: 1a, 1b, 1c, 2a, 3b, 4e]
2. Comprehend how joint forces operate in and through cyberspace to gain access to and generate effects in the OE (including effective command and control) and contribute to the overall success of a joint operation.
   [LAO: 1a, 1c, 2a, 3b, 4c, 4e, 5c]
3. Comprehend the considerations and challenges of integrating cyberspace operations into Joint Planning, including the relationship of cyberspace operations and the joint functions.
   [LAO: 2a, 3a, 4c, 5c]

LESSON OVERVIEW
JW-519 (L): Joint Cyberspace Operations
   Overview: Operations in and through cyberspace will have significant impacts on how the Joint Force operates in and across all other operating domains. In many ways, modern joint and multinational operations in the land, sea, and air domains are dependent on operations in and through cyberspace. Cyberspace has been shown to be a contested domain, and a domain that continues to change at a sometimes alarming pace. Joint cyberspace operations will be discussed in terms of how the U.S. gains access to, maneuvers in, and provides effects in the cyber domain as both an enabler of joint capabilities and functions and an area of offensive and defensive operations.
   CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
1. Joint Publication 3-12, Cyberspace Operations, 8 June 2018, vii-vxii, Ch. II, Ch. IV.
   [The JP 3-12 reading provides foundational doctrine for how the Joint Force operates in and through the cyberspace domain, including core activities, effects, joint functions, and the planning and execution of cyberspace operations.]

SUGGESTED ADDITIONAL MATERIAL
3. Cyber Command Website (organization, mission, components, news):
   https://www.cybercom.mil
LESSON INTEGRATION AND RATIONALE

This lesson introduces the course emphasis on the need to integrate multi-domain capabilities to achieve operational success and leverages previous course work from the Airpower 2 course. The examination of operating domains and service capabilities, and how forces gain access to and operate within these domains is a key facet of operational art and operational design. It is important for planners to also understand the capabilities provided to the joint force commander through USCYBERCOM and other DoD and non-DoD organizations. This lecture sets the foundation for later discussion during JW regarding how to properly integrate these capabilities during operation planning. Comprehension of domain characteristics and service capabilities enables planners to analyze missions and derive suitable courses of action to provide options to commanders and national decision makers in the application of military forces toward achieving national interests. This lesson, along with the other JW joint operations lessons, will provide tools for students to use as planners during the JW COA Development, Analysis, and Comparison Workshops, and for the Joint Planning Exercise (JPEX).
LESSON OBJECTIVES

1. Comprehend how the Information joint function and information operations (IO) are incorporated with operational art, operational design, and the planning process to gain entry to and produce effects within the information environment and across traditional operating domains.
   [LAO: 3d, 4b, 4f; SAE: 4b]

2. Comprehend the necessity for building IO plans as an inherent part of operation planning/lines of operation, and the lead time, detailed planning, and synchronization necessary for successful integration of information related capabilities (IRCs).
   [LAO: 2a, 4b, 4e]

3. Comprehend the Information Environment and associated dimensions (physical, informational, and cognitive), how they interact, and are essential in joint military operations across the domains.
   [LAO: 2a, 3d, 4f]

4. Comprehend how Information as a joint function and IO contribute to operational art through the principles of joint operations, and how understanding the actors within an OE is essential to effective IO.
   [LAO: 2a, 3d, 4b, 4e, 4f]

LESSON OVERVIEW

JW-520 (L): Information Operations: The Man Who Never Was (Movie)

Overview: As stated in JP 3-13 “the Secretary of Defense now characterizes IO as the integrated employment, during military operations, of IRCs in concert with other lines of operation to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting our own” [emphasis added]. The movie “The Man Who Never Was” is a theatrical account of the true story of Operation MINCEMEAT – the successful military deception plan to throw off the Axis high command as to the location and timing of the Allied invasion of Sicily from North Africa. As one of many information related capabilities (IRC) currently found in joint doctrine, this example of military deception (MILDEC) is useful toward gaining an appreciation for the broader issues regarding the proper planning and integration of IO into military plans. Moreover, one may also recognize that the process for IO planning and integration may be similar to operations in the traditional warfighting domains (land, maritime, air, space, and cyber). Reverse planning regarding the intended target (in the case of IO, the target audience), the desired effects, and how to gain access to the audience (or domain) and achieve those effects (and avoid undesired effects) is similar to the approach taken in all military planning efforts. It is part of the operational ends-means-risk analysis. In the domains, we seek first to gain access, then to maneuver in such a manner that we achieve the desired effects on any broad selection of “targets” in order to accomplish a mission and reach a desired end state.

CONTACT HOURS: 2.0-hour movie

REQUIRED READINGS

1. Joint Publication 3-13, Information Operations, (Incorporating Change 1), 20 November 2014, I-1 to I-5; II-5 to II-13; IV-1 to IV-12.
The reading selection from JP 3-13, Information Operations, provides background regarding the modern doctrinal concepts associated with Information Operations, including the Information Environment (IE) and associated dimensions of the IE. Additionally, a brief overview of information related capabilities (IRCs, chapter II) and the incorporation of IO into operation planning is covered. This background reading provides a lens through which students may view the movie “The Man Who Never Was” and relate the events depicted in the film to modern military concepts useful for the planning and integration of IO into joint military operations.


[The executive summary and Appendix A of JP 3-13.4 summarize key details regarding military deception planning and execution, and useful “maxims” that guide the incorporation of MILDEC into plans.]


[The electromagnetic spectrum (EMS) is a crucial element of any modern operation. More than an enabler, Electronic Warfare (EW) and the management and control of the EMS is the potential linchpin of success across domains and joint functions. This summary provides an introduction to EW activities.]


[This selection provides a brief introduction to the purpose and scope of MISO and its incorporation into joint operations, and some of the MISO capabilities of the joint force.]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

This movie screening is another opportunity to analyze a complex operation through film, and provides a unique perspective for linking actions and effects across the levels of war and across the ROMO. This movie depicts events related directly to the planning and integration of Information Operations, though, as noted, may be expanded to broaden understanding of operational art and multi-domain operations. Students will be expected to incorporate IO/IRCs during the JW Workshops (particularly the COA Development Workshop), and the JPEX.

Learning through film also reinforces the objectives of the course which strive to foster habits of mind and patterns of inquiry – providing the planners not merely with examples of previous operations, but building analytical tools for future operation planning and problem solving.
LESSON OBJECTIVES

1. Comprehend the capabilities of joint forces (and applicable CSAs) and their contribution to joint warfighting in the space domain to achieve effects at the operational level of war, and across the range of military operations (ROMO).
   [LAO: 1a, 1b, 1c, 2a, 3b, 4b]
2. Comprehend how joint forces operate in and through space to gain access, facilitate maneuver, and generate effects contributing to the overall success of a joint operation.
   [LAO: 1a, 1c, 2a, 3c, 4b, 4c, 5c]
3. Comprehend the considerations and challenges when integrating space operations into joint military operations.
   [LAO: 2a, 3c, 5c]

LESSON OVERVIEW

JW-521 (L): Joint Space Operations

Overview: Operations in the space domain will have significant impacts on how the Joint Force operates in and across all domains. In many ways, operations in the land, sea, and air domains are dependent on operations in the space and cyber domains, but the relative sanctuary the U.S. has enjoyed in space has eroded. Space is congested and contested, and the Joint Force is increasingly reliant on potentially exposed systems, and vulnerable to effects associated with proliferating access. This lesson will provide an introduction to some of the capabilities, limitations, force organization and command relationships, and unique features of the space domain and U.S. space capabilities.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS


   [The JP 3-14 reading provides foundational doctrine for how the Joint Force operates in and through the space domain, including space mission areas, planning and assessment of space operations, and support to space operations to the DoD from other agencies.]


   [The Hlad article provides insights into current issues facing the Joint Force in the space domain and potential changes in military operations in space.]


   [This selection provides insight into the current organization for the incorporation of space capabilities in joint operations. The article was written by a participant of Operation IRAQI FREEDOM and provides linkages with concepts contained in Joint Doctrine and in *Plan of Attack* related to actual space employment in an operation.]

   [Another selection by a participant of Operation IRAQI FREEDOM which provides linkages with concepts contained in Joint Doctrine and in *Plan of Attack* related to actual space employment in an operation.]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

This lesson continues to emphasize the need to integrate multi-domain capabilities to achieve operational success. The examination of operating domains and service capabilities, and how forces gain access to and operate within these domains is a key facet of operational art and operational design. It is important for planners to also understand the space access and capabilities provided to the joint force commander through STRATCOM and other DoD organizations. This lecture sets the foundation for later discussion during JW of how to properly integrate these capabilities during operation planning. Comprehension of domain characteristics and service capabilities enables planners to analyze missions and derive suitable courses of action to provide options to commanders and national decision makers in the application of military forces toward achieving national interests. This lesson will provide tools for students to use as planners during the JW COA Development, Analysis, and Comparison Workshops, and for the Joint Planning Exercise (JPEX).
LESSON OBJECTIVES

1. Comprehend joint force capabilities in space, cyber and IO and their contributions to joint warfighting to achieve effects at the operational level of war across the range of military operations (ROMO), and how they are integrated into other lines of operation or lines of effort.
   [LAO: 1a, 2a, 3d, 4a, 4b, 4e, 5c]

2. Comprehend how the joint force operates in and through the space and cyber domains, including how the force gains access, maneuvers, and achieves effects in the space and cyber domains, and the information environment (IE).
   [LAO: 1a, 3b, 3d, 4b]

3. Comprehend the interdependencies, risk, synergies, limitations, and unique capabilities/effects of the joint force that enable space, cyber and information operations and provide joint force commanders with the means and ways to achieve the desired end state.
   [LAO: 1a, 3b, 4b; SAE: 1c]

4. Comprehend how the joint functions enable the commander and staff in the planning and execution of joint military space, cyber, and information operations across all domains.
   [LAO: 1a, 3b, 4b, 4c, 5c; SAE 1d, 4b]

LESSON OVERVIEW

JW-522 (S): Space, Cyber, and Information Operations

Overview: Space, Cyber and Information Operations are critical to all modern joint military operations. Operations in the Space and Cyber domains will have significant impacts on how the Joint Force operates in and across all domains. In many ways operations in the land, sea, and air domains are dependent on operations in the space and cyber domains, but the relative sanctuary enjoyed in space and cyber has eroded. Space and cyber are now contested domains in which the Joint Force must be prepared to fight. This lesson will focus on how the Joint Force provides access to, maneuvers in, and provides effects in the space and cyber domains as both an enabler of joint capabilities and functions and an area of offensive and defensive operations. Information Operations and related IRCs should be incorporated into operations at the outset of planning activities. Often, IO will be the centerpiece of an operation with other joint functions effectively serving a supporting role. It is essential to understand how to seamlessly integrate Space, Cyber, and IO effects into the operational approach and detailed planning of any operation. Seminar discussion will emphasize what is unique and the relative strengths and limitations of the joint force in these areas.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS


SUGGESTED ADDITIONAL MATERIAL

LESSON INTEGRATION AND RATIONALE

This lesson continues to emphasize the need to integrate multi-domain capabilities to achieve operational success. The examination of operating domains and service capabilities, and how forces gain access to and operate within these domains is a key facet of operational art and operational design. Comprehension of domain characteristics and service capabilities enables planners to analyze missions and derive suitable courses of action to provide options to commanders and national decision makers in the application of military forces toward achieving national interests. Additionally, understanding how Functional Combatant Commanders (such as STRATCOM and CYBERCOM) and combat support agencies are integrated into operation planning is essential. This lesson will provide tools for students to use as planners during the JW COA Development, Analysis, and Comparison Workshops, and for the Joint Planning Exercise (JPEX).
LESSON OBJECTIVES

1. Comprehend the roles and functions of the U. S. Marine Corps as prescribed by Title 10, United States Code and other relevant directives, including the contribution of the Marine Corps Reserve to the Total Force.
   [LAO: 1a, 1c]

2. Comprehend Marine Corps warfighting doctrine, force organization, perspective on warfighting, and unique contributions to the Joint Force.
   [LAO: 1a, 2b]

3. Comprehend how the Marine Corps presents forces and capabilities to the Joint Force Commander for operations, the capabilities and limitations of those forces, and their relationship to the Joint Force Land Component.
   [LAO: 1a, 1c, 2a, 3b, 4h, 5a]

LESSON OVERVIEW

JW-523 (L): The United States Marines Corps

Overview: The Marine Corps is capable of rapidly conducting missions across the range of military operations anywhere in the world. Operational level planners must understand how Marine Corps forces are organized, how they accomplish their missions and how they execute their roles as part of joint and combined teams in campaigns and major operations. While fighting and winning the Nation’s battles will ever be the focus of the Marine Corps, commanders must be able to conduct a wide variety of missions successfully against diverse and ever-changing threats while under a myriad of political constraints and restraints and while operating under joint or multinational command. The Marine Corps provides flexible, ready forces to fulfill its statutory role as the nation’s “force in readiness.”

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS

1. U.S. Marine Corps HQ, Marine Corps Doctrinal Publication 1-0: Marine Corps Operations, (Washington, DC., 2011), 1-1 to 1-5 (stop at instruments of National Power); 1-13 (Roles and Functions) to 1-17; 2-6 to 2-20.

   [The MCDP 1-0 reading outlines the Marine Corps Title 10 roles and functions, discusses how Marine forces are organized and presented to a JFC, and discusses how Marine Corps forces would be employed to achieve JFC objectives to include addressing the capabilities and limitations that these forces bring to the fight.]

2. Department of Joint Warfighting, Joint Warfighting Capabilities Primer (JWCP) AY19, Ch. IX, United States Marine Corps.

   [The JWCP provides a brief overview of service capabilities, force presentation, and major assets to enhance understanding of the services’ unique contributions to the joint force.]

[This short article outlines some of the challenges to amphibious operations in a modern A2AD environment. Amphibious assault is merely one type of amphibious operation. Projecting a land force such as the U.S. Marine Corps provides from the sea offers many advantages. The debate over the future of amphibious operations continues.]

**SUGGESTED ADDITIONAL MATERIAL**
1. ACSC Distance Learning Interactive Learning Module: USMC Capabilities. (Canvas).
2. United States Marine Corps, *Concepts and Programs*,
3. Video (4.5 min): “Marine Expeditionary Brigade,”
   https://www.youtube.com/watch?v=uEQEtmRphM
4. Video (11 min): “Marine Expeditionary Unit,”
   https://www.youtube.com/watch?v=RsPNG8DE0-A

**LESSON INTEGRATION AND RATIONALE**
Comprehension of the US Marine Corps’ current doctrine, operating concepts, and the capabilities and limitations of US Marine Corps forces is foundational for being able to properly integrate and employ Marine Corps forces during joint operations. This lecture provides a foundation for understanding the concepts presented during Phase 2 of the Joint Warfighting Course.
Day 18: JW-524
The United States Army

LESSON OBJECTIVES
1. Comprehend the roles and functions of the U.S. Army as prescribed by Title 10, United States Code and other relevant directives, including the contribution of the Army Reserve and Army National Guard to the Total Force. [LAO: 1a, 1c]
2. Comprehend Army warfighting doctrine, force organization, perspective on warfighting, and unique contributions to the Joint Force. [LAO: 1a, 2b]
3. Comprehend how the Army presents forces and capabilities to the Joint Force Commander for operations, the capabilities and limitations of those forces, and their relationship to the Joint Force Land Component. [LAO: 1a, 1c, 2a, 3b, 4h, 5a]

LESSON OVERVIEW
JW-524 (L): The United States Army
Overview: The goal of the Army’s unified land operations is applying landpower as part of unified action to defeat the enemy on land and establish conditions that achieve the JFC’s end state. The Army contributes decisive capability to a JFC in the form of Brigade Combat Teams (BCTs). BCTs are modular and tailororable, providing greater flexibility to respond in both the contiguous and noncontiguous operating environment. However, there are limitations to US Army capabilities, some of which are overcome through joint interdependent operations with the other service components. A clear understanding of US Army capabilities and limitations, and how Army forces are presented to a JFC, will contribute to a better understanding of how to employ Army forces during joint operations.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
   [This reading provide foundational doctrine upon which the Army bases it organization and conduct of operations and discusses the Army’s operational concept and how the Army fights.]

2. Department of Joint Warfighting, Joint Warfighting Capabilities Primer (JWCP) AY19, Ch. VII, United States Army.
   [The JWCP provides a brief overview of service capabilities, force presentation, and major assets to enhance understanding of the services’ unique contributions to the joint force.]

SUGGESTED ADDITIONAL MATERIAL
1. ACSC Distance Learning Interactive Learning Module: Army Capabilities. (Canvas).
LESSON INTEGRATION AND RATIONALE

Comprehension of US Army current doctrine, operating concepts, and the capabilities and limitations of US Army forces is foundational for being able to properly plan for and employ Army forces during joint operations. This lecture provides a foundation for understanding the concepts presented during Phase 2 of the Joint Warfighting Course.


   https://armypubs.army.mil/epubs/DR_pubs/DR_a/pdf/web/fm3_96.pdf


5. Video (11 min, depicting the scale of force movement for a single BCT):  
   https://www.youtube.com/watch?v=nwwjMDIckEE
Day 18: JW-525
Joint Operations in the Land Domain

LESSON OBJECTIVES

1. Comprehend the capabilities of joint forces and their contribution to joint warfighting in the land domain to achieve effects at the operational level of war, and across the range of military operations (ROMO).
   [LAO: 1a, 1b, 1c, 2b, 3b, 4h]

2. Comprehend how the joint force operates in and through the land domain, including how the force gains access, maneuvers, and achieves effects on the land (including command and control of land operations and command relationships).
   [LAO: 1a, 1b, 1c, 2a, 3d, 4h, 5a, 5b; SAE: 1d]

3. Comprehend the interdependencies, risk, synergies, limitations, and unique capabilities/effects of the joint force that enable operations in the land domain and provide joint force commanders with the means and ways to achieve the desired end state.
   [LAO: 1a, 3b]

4. Comprehend how the joint functions enable the commander and staff in the planning and execution of joint military operations in the land domain and how a commander may leverage IO/information related capabilities, space, and cyber effects to enhance those functions, potentially reduce risk, and accomplish the mission.
   [LAO: 2a, 2b, 4c, 4e]

LESSON OVERVIEW

JW-525 (S): Joint Operations in the Land Domain

Overview: The ultimate outcome of any future joint operation will depend on success across all domains. However, it is the combined effects in the land domain that have historically been the decisive effort at the operational level of war. While war on land is heavily influenced and enabled through actions and effects in other domains - such as air, maritime, cyber, and space - it is land warfare that ultimately exploits control over land, resources, and people. Discussing the land domain and those joint military capabilities that gain access and operate within that domain is an essential part of practicing operational art and problem solving as it describes ways and means that may be artfully arranged to achieve specific desired effects. Such a discussion will include capabilities of major land components and general schemes of maneuver within the land domain.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

   [The reading from JP 3-31 introduces the concept and responsibilities of a possible functional component command within a Joint Force - the Joint Force Land Component Commander, or JFLCC. Understanding which forces enable unified land operations and the capabilities they bring to the JFC are as important as the capabilities of fielded forces]

SUGGESTED ADDITIONAL MATERIAL


LESSON INTEGRATION AND RATIONALE

The examination of operating domains and service capabilities, and how forces gain access and operate within these domains is a key facet of operational art and operational design. Comprehension of operations in and through operating domains, and U.S. service capabilities enables planners to analyze missions and derive suitable courses of action to provide options to commanders and national decision makers in the application of military forces toward achieving national interests. Additionally, understanding the roles, functions, and responsibilities of services, joint force commanders, and functional component commanders is essential. This lesson will provide tools for students to use as planners during the JW COA Development, Analysis, and Comparison Workshops, and for the Joint Planning Exercise (JPEX).
LESSON OBJECTIVES
1. Comprehend the roles and functions of the U.S. Navy as prescribed by Title 10, United States Code and other relevant directives, including the contribution of the Navy Reserve to the Total Force.
   [LAO: 1a, 1c]
2. Comprehend Navy warfighting doctrine, force organization, perspective on warfighting, and unique contributions to the Joint Force.
   [LAO: 1a, 2b]
3. Comprehend how the Navy presents forces and capabilities to the Joint Force Commander for operations, the capabilities and limitations of those forces, and their relationship to the Joint Force Maritime Component.
   [LAO: 1a, 1c, 2a, 3b, 4h, 5a]

LESSON OVERVIEW
JW-526 (L): The United States Navy
Overview: The Navy provides decisive naval capabilities to a JFC in the form of task-organized, tailorable, and forward deployed expeditionary force packages through flexible organizational and command and control structures. Unique service traits such as access, persistent presence, and small footprint augment these capabilities. Comprehending the capabilities of US naval forces, as well as understanding their unique force limitations and operating environment challenges, is critical to maximize naval contributions with other joint or combined forces.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS

   [This U.S. Navy Service doctrine overview of the maritime domain, and the purpose, functions, and activities of the U.S. Naval forces.]

2. Navy Warfare Publication 3-56, *Composite Warfare: Maritime Operations at the Tactical Level of War*, December 2015, Read 1-1 to 1-5, 3-1 to 3-8; Skim 4-1 to 5-6; Read 7-1 to 7-8, 8-1 to 8-5.

   [Provides an explanation of naval warfare areas, force organization, U.S. Navy command and control of maneuver forces, and Naval force roles in joint operations.]

3. Department of Joint Warfighting, *Joint Warfighting Capabilities Primer (JWCP) AY19*, Ch. VIII, United States Navy.

   [The JWCP provides a brief overview of service capabilities, force presentation, and major assets to enhance understanding of the services’ unique contributions to the joint force.]

[These short selections provide examples of the doctrinal naval warfare areas in action during the Gulf War. It is an excellent overview of the multifaceted nature of naval capabilities contributing to a joint campaign. Issue 892 of All Hands is provided in its entirety for continuity.]

**SUGGESTED ADDITIONAL MATERIAL**

1. ACSC Distance Learning Interactive Learning Module: U.S. Navy Operational Capabilities. *(Canvas)*


**LESSON INTEGRATION AND RATIONALE**

Comprehension of US Navy current doctrine, operating concepts, and the capabilities and limitations of US Navy forces is foundational for being able to properly plan for and employ Navy forces during joint operations. This lecture provides a foundation for understanding the concepts presented during Phase 2 of the Joint Warfighting Course.
LESSON OBJECTIVES

1. Comprehend the capabilities of joint forces and their contribution to joint warfighting in the maritime domain to achieve effects at the operational level of war, and across the range of military operations (ROMO).
   [LAO: 1a, 1b, 1c, 2b, 3b, 4h]

2. Comprehend the unique characteristics of the maritime domain and how joint forces gain access to and maneuver in the domain to generate effects contributing to the overall success of a joint operation (including command and control of maritime operations and command relationships).
   [LAO: 1a, 1b, 1c, 2a, 3d, 4h, 5a, 5b; SAE: 1d]

3. Comprehend the interdependencies, risk, achieving synergy, limitations, and unique capabilities/effects of the joint force that enable operations in the maritime domain providing joint force commanders with the means to achieve the desired end state.
   [LAO: 1a, 3b]

4. Comprehend how the joint functions enable the commander and staff in the planning and execution of joint military operations in the maritime domain and how a commander may leverage other capabilities (such as IO, space, and cyber) to enhance those functions, potentially reduce risk, and accomplish the mission.
   [LAO: 2a, 2b, 4c, 4e]

LESSON OVERVIEW

JW-527 (S): Joint Operations in the Maritime Domain

Overview: The ultimate outcome of any future joint operation depends on successes across all domains, but as a power projection nation we must dominate the maritime domain when and where we need to as it will continue to be the primary method of deploying and sustaining relatively large warfighting formations, in addition to being one of the primary methods through which the U.S. achieves forward presence and conducts power projection. While operations in the maritime domain are heavily influenced by other domains; such as air, space and cyber, it is the maritime domain that ultimately connects vast resources, and people across the globe. Understanding the maritime domain and those joint force capabilities that enable access to operate within and create effects in that domain are an essential part of understanding operational art.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS


   [Provides on overview not only of basic carrier capabilities, but doctrinal insight into the evolution of the doctrinal roles and purpose of aircraft carriers in addition to “floating airbases” and considerations for the future of carriers in the modern operational environment.]

[Dr. Vego discusses the theoretical constructs of the nature and character of war, and the corresponding evolution of and objectives in naval warfare, providing the context for the roles, missions, and functions of the modern U.S. maritime services.]

**SUGGESTED ADDITIONAL MATERIAL**

**LESSON INTEGRATION AND RATIONALE**
The examination of operating domains and service capabilities, and how forces gain access and operate within these domains is a key facet of operational art and operational design. Comprehension of domain operations and service capabilities enables planners to analyze missions and derive suitable courses of action to provide options to commanders and national decision makers in the application of military forces toward achieving national interests. Additionally, understanding the roles, functions, and responsibilities of services, joint force commanders, and functional component commanders is essential. This lesson will provide tools for students to use as planners during the JW COA Development, Analysis, and Comparison Workshops, and for the Joint Planning Exercise (JPEX).
Day 20: JW-528
The United States Air Force

LESsON OBJECTIVES
1. Comprehend the roles and functions of the U.S. Air Force as prescribed by Title 10, United States Code and other relevant directives, including the contribution of the Air Force Reserve and Air National Guard to the Total Force. [LAO: 1a, 1c]
2. Comprehend Air Force warfighting doctrine, force organization, perspective on warfighting, and unique contributions to the Joint Force. [LAO: 1a, 2b]
3. Comprehend how the Air Force presents forces and capabilities to the Joint Force Commander for operations, the capabilities and limitations of those forces, and their relationship to the Joint Force Air Component. [LAO: 1a, 1c, 2a, 3b, 4h, 5a]

LESSON OVERVIEW
JW-528 (L): The United States Air Force
Overview: The USAF contributes decisive air, space, and cyberspace capabilities to a Joint Force Commander (JFC) in the form of Air and Space Expeditionary Task Forces (AETFs). Because of its organizational structure, the AETF provides flexible, yet potent capability. There are limitations to USAF capabilities, however, some of which are mitigated through joint interdependencies with the other armed services. A clear understanding of Air Force capabilities and limitations as well as how the Air Force presents its forces to a JFC will contribute to a better understanding of how to employ those forces.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
1. Department of Joint Warfighting, Joint Warfighting Capabilities Primer (JWCP) AY19, Ch. IV, United States Air Force. [The JWCP provides a brief overview of service capabilities, force presentation, and major assets to enhance understanding of the services’ unique contributions to the joint force.]
2. U.S. Air Force, “Global Vigilance, Global Reach, Global Power for America, USAF Core Missions,” (Washington, D.C., 2013), 1-12. [Provides the foundational “lens” in which to view how the USAF contributes to the joint force through its enduring five core missions.]

SUGGESTED ADDITIONAL MATERIAL
1. Air Command and Staff Distance Learning, Interactive Learning Module: U.S. Air Force Operational Capabilities. (Canvas)
2. U.S. Air Force, Air Force Doctrine, Volume 1, Ch. 5: The Tenets of Air Power. (LeMay Center, Air University, 2015), 65-75.
LESSON INTEGRATION AND RATIONALE
Comprehension of US Air Force current doctrine, operating concepts, and the capabilities and limitations of US Air Force forces is foundational for being able to properly plan for and employ Air Force forces during joint operations. This lecture provides a foundation for understanding the concepts presented during Phase 2 of the Joint Warfighting Course.
Day 20: JW-529
The Theater Air Control System (TACS) – Theater Air Ground System (TAGS)

LESSON OBJECTIVES
1. Comprehend the basic elements of the Theater Air Control System.
   [LAO: 1c, 2a, 2b]
2. Comprehend how the command and control of airpower is integrated through the Theater Air Ground System, and how the TACS-TAGS facilitates the application of airpower at all levels of war and across the ROMO.
   [LAO: 1c, 2a, 3c]
3. Identify the basic elements of the Theater Air Ground System and describe how service command and control (C2) elements integrate to ensure effective joint C2 of airpower in support of joint operations.
   [LAO: 1c, 2a, 4c, 5a]

LESSON OVERVIEW
JW-529 (L): TACS-TAGS
Overview: Command and Control of joint air and space operations is a function of the Theater Air Ground System (TAGS). The TAGS is not a formal system in itself, but rather the sum of the component air-ground systems operating in the theater. It is applicable to all theater operations to include, air, ground, maritime, and amphibious operations. The keys to an effective TAGS is a clear understanding of component air-ground systems relationships and how they can be synchronized to achieve maximum effectiveness. As the senior air control agency within the air component’s Theater Air Control System (TACS), the Joint Air Operations Center (JAOC) is a critical node for command and control of joint air and space operations.
CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS

SUGGESTED ADDITIONAL MATERIAL
1. Air Land Sea Application Center, TAGS Multiservice Tactics, Techniques, and Procedures for the Theater Air-Ground System, 30 June 2014. DOD and DOD Contractor only (CAC Required):

LESSON INTEGRATION AND RATIONALE
In conjunction with other lectures and seminars, this lecture provides insight and knowledge about the command and control of joint airpower. In addition to service lectures, this lecture begins to address airpower as a “joint air enterprise.” This lecture provides a foundation for understanding the concepts presented during Phase 2 of the Joint Warfighting Course.
LESSON OBJECTIVES
1. Comprehend the CFACC’s roles, responsibilities, and authorities for the planning and execution of joint/combined military air operations, to include networks and cyberspace, to achieve objectives at the operational level of war.
   [LAO: 2a, 3b, 4h, 5a]
2. Comprehend the purpose, functions, and organization of the Air Operations Center (AOC) and the processes and products that support the CFACC and JFC in the planning and execution of joint/combined air operations.
   [LAO: 1c, 2a, 2b, 3b, 5c]
3. Comprehend joint and service doctrine for the command and control of joint and coalition air operations, and how it incorporates the joint functions to facilitate air operations.
   [LAO: 2a, 2b, 3b, 4c, 4h, 5a]

LESSON OVERVIEW
JW-530 (L): The CFACC, AOC, and Joint Air Tasking
Overview: The CFACC provides coherence, guidance, and organization to the air effort and maintains the ability to focus the impact of air capabilities wherever needed within the operational environment using the tenant of centralized control, decentralized execution. The CFACC deals with a wide range of issues including air apportionment, air-ground integration, command relationships, battle rhythm, and operational friction. This lecture discusses the CFACC’s roles and responsibilities in carrying out these functions, and the associated organization (the AOC) and processes that enable effective airpower in modern operations.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
1. Joint Publication 3-30, Command and Control for Joint Air Operations, 10 Feb 2014, I-1 to II-26, Appendices E, F, and G.
   [Joint doctrine provides an overview of the command and control of joint and coalition air operations, and the roles and responsibilities of the CFACC.]

   [This USAF instruction provides an overview of the systems that foster command and control of joint and coalition air operations, and the structure, functions and products of the AOC. It provides greater detail about the divisions of the AOC and associated products.]

SUGGESTED ADDITIONAL MATERIAL
1. None.

LESSON INTEGRATION AND RATIONALE
This lecture provides a senior leader perspective on the roles and responsibilities of the CFACC, and the organization and processes available for the effective command and control and
integration of air power capabilities in support of a joint campaign plan. As the senior commander concerned with joint air power application, the CFACC perspective orients the ACSC student to the operational level of war.
LESSON OBJECTIVES

1. Comprehend the capabilities of joint forces and their contribution to joint warfighting in the air domain to achieve effects at the operational level of war, and across the range of military operations (ROMO).
   [LAO: 1a, 1b, 1c, 2b, 3b, 4h]

2. Comprehend how the Joint Force Commander, COMMAFFOR, and JFACC leverage capabilities, organize for and operate in and through the air domain, including how the force gains access, maneuvers, and achieves effects.
   [LAO: 1a, 1b, 1c, 2a, 3d, 4h, 5a, 5b; SAE: 1d]

3. Comprehend the interdependencies, risk, synergies, limitations, and unique capabilities/effects of the joint force that enable operations in the air domain and provide joint force commanders with the means and ways to achieve the desired end state.
   [LAO: 1a, 3b]

4. Comprehend how the joint functions enable the commander and staff in the planning and execution of joint military operations in the air domain and how a commander may leverage IO/information related capabilities, space, and cyberspace to enhance those functions, potentially reduce risk, and accomplish the mission.
   [LAO: 2a, 2b, 4c, 4e]

LESSON OVERVIEW

JW-531 (S): Joint Operations in the Air Domain

Overview: This seminar will continue the discussion of the fundamentals of joint operations in the air domain and will focus primarily on the command and control of joint and multinational air operations. The goal is to introduce the fundamentals of joint operations in the air domain and how the joint force gains access, maneuvers, and creates effects through the use of airpower. This seminar introduces the air domain and the roles, missions, functions and force presentation of not just the USAF, but the airpower presented by the joint force. Key concepts to discuss focus on how the joint force utilizes airpower capabilities and conducts operations to gain access and superiority within the air domain, and how access influences and is influenced by maneuver and effects across domains and in synchronization with all of the instruments of national power.

CONTACT HOURS: 3.0-hour seminar

REQUIRED READINGS


   [Lambeth’s book provides a recent example of the complexity to deploy airpower, first to gain access and then to create effects in and through the air domain in support of coalition operations. Students should be able to note specific examples of the force gaining access, maneuvering, and achieving effects.]

[Vego’s readings provide a description and analysis of theory and practice of operational warfare in and through the air domain, and includes discussion of major air operations, characteristics of air operations, methods, and multiple historical examples.]


[Hinote proposes a clarification of the master tenet of airpower – centralized command and decentralized execution (CC/DE). Through several historical and contemporary examples, the author explores the utility of the CC/DE concept and the need to better understand it in order to appropriately apply command and control of joint airpower.]

**SUGGESTED ADDITIONAL MATERIAL**


**LESSON INTEGRATION AND RATIONALE**

The examination of operating domains and service capabilities, and how forces gain access, maneuver, and create effects within these domains is a key facet of operational art and operational design. Comprehension of domain operations and service capabilities enables planners to analyze missions and derive suitable courses of action to provide options to commanders and national decision makers in the application of military forces toward achieving national interests. Additionally, understanding the roles, functions, and responsibilities of services, joint force commanders, and functional component commanders is essential. This lesson will provide tools for students to use as planners during the JW COA Development, Analysis, and Comparison Workshops, and for the Joint Planning Exercise (JPEX). Theoretical and historical knowledge gained in the AP1 and AP2 courses will be added to and applied at the operational level of modern military operations.
LESSON OBJECTIVES
1. Comprehend the significance and complexity of deploying and sustaining a joint force for global operations across the ROMO in support of national interests, including how the force and DOD are organized to fulfill this role.
   [LAO: 1a, 1b, 1c, 3b, 4a, 4h]
2. Comprehend how sustainment concepts and capabilities affect joint operations and provide commanders and staffs with options to plan and execute campaign plans.
   [LAO: 3b, 4c]

LESSON OVERVIEW
JW-532 (L): Sustainment for Global Power Projection
Overview: The deployment and sustainment concepts of a course of action will have significant impact on the feasibility of that course of action, and those concepts should be developed concurrently during COA Development. While operational concerns will largely drive logistical requirements, the viability of any plan is only as good as the plan to gain access and sustain military activities. This lecture will introduce students to the importance of deployment and sustainment planning and its impact on operational objectives and the timing and arrangement of operations.
CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
1. Joint Publication 4-0, Joint Logistics, 16 October 2013, ix-xvi, I-9 to I-11.
[The JP 4-0 readings provide foundational doctrine upon which the joint force conducts joint logistics. Particular focus should be placed upon the principles of logistics and the planning of sustainment to support joint operations.]

SUGGESTED ADDITIONAL MATERIAL
1. None.

LESSON INTEGRATION AND RATIONALE
This lesson places an emphasis on integrating various aspects of logistics and operational planning in order to provide insight into the challenges of developing a complete and valid course of action. Additionally, this lecture sets the stage for the JW-533 seminar in which students will delve into deploying and sustaining the joint force. Together, the lecture and seminar will introduce students to the vast implications of sustainment concepts on joint campaign planning and convey how logistics provides the Joint Force Commander with the operational reach, endurance, and flexibility necessary for successful military operations. This information will further enable concept application during the JW Course of Action Development Workshop and the Joint Planning Exercise (JPEX).
LESSON OBJECTIVES
1. Comprehend the significance and complexity of deploying and sustaining a joint force for global operations across the ROMO in support of national interests. [LAO: 3d, 4c, 4h]
2. Comprehend how doctrinal principles of logistics and sustainment capabilities may affect joint operations and campaign outcomes. [LAO: 2a, 3f, 4b, 4c]
3. Comprehend operational contract support (OCS) concepts, the importance of incorporating OCS in the design and execution of campaign and contingency plans, and potential pitfalls of OCS in military operations in a JIIM environment. [LAO: 2a, 4b, 4d]
4. Comprehend how a functional combatant command (USTRANSCOM), Services, and combat support agencies contribute to the Joint Force’s ability to deploy and sustain military operations in a complex integrated environment across all domains. [LAO: 1a, 1b, 1c, 3b, 4a, 4h]

LESSON OVERVIEW
JW-533 (S): Deploying and Sustaining the Joint Force

Overview: While matters of logistics will almost certainly levy limitations upon the deployment and employment of the Joint Force, an integrated logistics and operational concept promotes operational reach, endurance, and flexibility. Even though logistics plans are primarily driven by operational goals, neither can claim primacy as each is integral for successful joint operations. Comprehending joint logistics fundamentals is necessary for successful deployment and sustainment of the Joint Force across all phases of an operation, and across the ROMO. OCS is critical to enabling the Total Force concept and will continue to be prevalent across all levels of service and joint operations. When properly integrated, logistics and OCS are critical enablers and force multipliers that aide Commanders and their staffs in developing solutions and options to problems across the joint spectrum. To this end, analysis and discussion of historical sustainment concepts are useful in demonstrating the impact logistics may have on courses of action development and execution. This lesson will also provide the opportunity to analyze an historical case for the application of doctrinal sustainment concepts.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS
   [Provides an overview of the roles, responsibilities, and capabilities of TRANSCOM as a functional combatant command.]
2. Operational Contracting Support (OCS) Overview (video). (Canvas)
   [Provides a short overview of OCS and its purpose in joint military operations.]

[JP 4-10 provides a brief overview of OCS and implications for military operations.]


[After nearly ten years of savage combat, the western world was stunned when Viet Minh forces decisively defeated the French Union army at the battle of Dien Bien Phu in May 1954. Logistics dominated every aspect of the First Indochina War, dictating the objectives, the organization of forces, the timing and duration of the operations, and even the final outcome.]


[Identifies planning considerations and challenges associated with deploying a joint force in support of humanitarian assistance missions in Somalia. This reading also provides another thread of continuity between lessons within the JW course.]


[The chapter on the first Gulf War emphasizes the integration, capabilities, and limitations of air forces in the deployment and sustainment of the Joint Force.]

**SUGGESTED ADDITIONAL MATERIAL**

4. Video - Defense Logistics Agency [https://www.youtube.com/watch?v=Sx1uojDaeKU]

**LESSON INTEGRATION AND RATIONALE**

Together, this seminar and the preceding lecture will prepare students to apply, at the introductory level, the principles of logistics and concepts of OCS into their own planning of joint operations to ensure complete and valid COAs during the Course of Action Development Workshop and during the course evaluation in the JPEX. Further, this lesson will enable the application of operational art and design to complex military problem sets and solutions,
ultimately facilitating the operational reach, endurance, and flexibility for successful military operations. Seminars will be expected to apply these tenets and concepts during the COA Development Workshop and the JPEX.
LESSON OBJECTIVES
1. Understand the role of the Chief, National Guard Bureau in coordination among DoD, DHS, US Northern Command, and the state and territorial Adjutants General for planning and execution of domestic military support operations.
   [LAO: 1a, 1b, 1c, 3b, 4a]
2. Comprehend the various types of operations for which Title 10 military forces may be called upon to assist local and state governments in conjunction with the National Guard, and how the National Response Framework governs those operations.
   [LAO: 1a, 1b, 4a]
3. Understand the complexities of planning for domestic military operations, including the requirements for interagency coordination, the leading role of civilian organizations and institutions, the sovereignties of local and state governments and how they relate to Federal authorities and organizations.
   [LAO: 1c, 3b]

LESSON OVERVIEW
JW-534 (L): The Total Force
Overview: The National Guard is the primary military “first responder” for operations in the Homeland. The Chief, National Guard Bureau (NGB) is a member of the Joint Chiefs of Staff and has a joint staff in the Pentagon which is responsible for, among other things, the coordination of emergency response and National Special Security Event (NSSE) planning and execution for Defense Support of Civil Authorities (DSCA) between the state and territorial National Guard Joint Force Headquarters (JFHQ), US Northern Command (USNORTHCOM) and the Department of Homeland Security (DHS). The considerations involved in this kind of planning are complex and are in many cases very different from those involved in conventional military operations overseas.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
   [This short selection provides an overview of the purpose, organization, mission, roles, and capabilities of the National Guard as part of the US Total Force construct.]

SUGGESTED ADDITIONAL MATERIAL

LESSON INTEGRATION AND RATIONALE
This lecture, providing a RC perspective on planning, coordinating and leading military forces in a response to a complex Homeland operations, familiarizes students with multiple course
concepts. The lecture also highlights some of the concepts concerning intergovernmental and interorganizational planning and execution which students learned in IS2. The lecture will reinforce for students the need for careful consideration of applicable laws, authorities, policies and the various roles and capabilities of all elements of the Joint Force when planning complex military operations.
Day 23: JW-535
The Reserve Component in Joint Operations and Planning for Domestic Operations

LESSON OBJECTIVES

1. Understand the basic structures, types of organizations, and capabilities residing in the Reserve Components (RC) of the Joint Force, the legal and operational distinctions between the RC and Active Component, and various authorities which govern the use of the RC domestically and overseas.
   [LAO: 1a, 1b, 1c, 3b, 4a]

2. Comprehend the distinctions between Homeland Defense and Homeland Security, the various types of operations for which Title 10 military forces may be called upon to assist local and state governments in conjunction with the National Guard, and how the National Response Framework governs those operations.
   [LAO: 1a, 2a, 3b, 4a]

3. Understand the complexities of planning for domestic military operations, including the requirements for interagency coordination, the leading role of civilian organizations and institutions, the sovereignties of local and state governments and how they relate to Federal authorities and organizations in a whole of government response to national interests.
   [LAO: 2a, 3b, 4a, 4h]

LESSON OVERVIEW

JW-535 (S): The Reserve Component in Joint Operations and Planning for Domestic Operations

Overview: Over half of the strength of the US military resides in the various services’ Title 10 Reserves and the National Guard. The Joint Force cannot fully operate without the units, service members, and capabilities these organizations provide. As future senior leaders and planners, it is imperative that students are fully aware of the capabilities of the National Guard and Reserves, and how the Combatant Commanders gain access to these capabilities. Additionally, given that the top priority of the Department of Defense is the defense and security of the Homeland, students must become familiar with the processes, laws and structures to be used when military forces are deployed inside the United States in support of civil authorities. The planning factors and considerations for these kinds of missions are complex and very different from traditional planning factors the Joint Force uses for operations overseas. Interagency coordination, understanding state and local sovereignties, laws governing the military in a law enforcement role, and the use of military capabilities in competition with private businesses, all are among the important areas military planners need to be concerned with in a domestic situation.

CONTACT HOURS: 2.0-hour seminar

REQUIRED READINGS

1. Joint Publication 3-08, Interorganizational Cooperation, 12 Oct 2016, ix-xviii.

   [The JP 3-08 Executive Summary provides an overview of concepts and considerations associated with interorganizational cooperation necessary to understand how the military contributes to unified effort within the U.S. Government.]

[This selection provides an overview of the distinctions between HD, DSCA, and Homeland Security, and considerations and planning for Homeland Defense.]


[This Executive Summary describes again the distinction of DSCA from HD, and outlines the Reserve and Active Component role in DSCA, and how they contribute within the interorganizational framework to unified effort in domestic operations requiring military capabilities.]


[This is an After Action Review (AAR) of the military response to Hurricane Sandy in 2012, and how the federal and state military forces (Title 10 Active Duty and Title 32 National Guard) interacted during this event using the Dual Status Commander construct. This reading will familiarize students with the formal structures of domestic military response, as well as many of the planning requirements, challenges and coordination activities needed for these kinds of operations to be successful.]


[The complex and overlapping nature of homeland defense and homeland security scenarios creates several challenges for the government and specifically the military. This article outlines some of the reasons for complexity in homeland operations and the challenges that arise therefrom.]


[The seminal document which outlines the specific manner in which all domestic emergency response actions take place. Understanding the NRF is key to being able to comprehend how military forces provide support to civil authorities within the United States, and how all response agencies from the local, municipal, county, state and federal levels interact and perform their functions during emergencies.]

**SUGGESTED ADDITIONAL MATERIAL**
1. Joint Publication 3-08, *Interorganizational Cooperation*, 12 Oct 2016, Chapter I, II-12 to II-18, II-19 to II-20, and Chapter III.

**LESSON INTEGRATION AND RATIONALE**
This lesson continues from previous lessons the detailed discussion and analysis of the uses, capabilities and limitations of the military, across domains in varied circumstances, and across
the Range of Military Operations (ROMO). Coupled with the JW-534 lecture, students will leave this lesson with a fuller understanding of the broad range of capabilities residing in all components of the Joint Force, along with knowledge of the considerations involved in planning and organizing forces for domestic operations.
Day 24: JW Directed Study

JW-601E Paper Due (NLT 1200)
LESSON OBJECTIVES

1. Integrate operational art and operational design with Joint Planning, and assess how military planning considers all elements of national power and a whole of government approach to achieving national strategic goals.
   [LAO: 2a, 3d, 3e, 3g, 4b, 4h; SAE: 3c, 4b]

2. Comprehend the purpose and process for activities of JPP step 3, Course of Action Development, including several considerations for developing COAs, and what constitutes a valid and complete course of action.
   [LAO: 2a, 3b, 3g, 4b, 4c, 5a]

3. Analyze how operational art and design, the initial operational approach, and mission analysis guide and inform the development of potential solutions and the application of military capabilities.
   [LAO: 1a, 2a, 3d, 3g, 4b; SAE: 3d]

4. Apply joint planning concepts while conducting Joint Planning activities as described in JP 5-0 for JPP Step 3, Course of Action Development; and develop two valid courses of action for the Joint Force Commander (CJ) that provide options for solving the given scenario problem(s) as identified in previous JW planning workshops.
   [LAO: 1a, 2a, 2c, 3b, 3d, 3e, 3f, 3g, 4a, 4b, 4c, 4d, 4e, 4h, 5a, 5b, 6b, 6e, 6f]

LESSON OVERVIEW

JW-536 (S): COA Development Workshop Day 1 & Day 2

**Overview:** Equipped with an understanding of Operational Design and Mission Analysis (Problem Framing), the JW course has now moved well into the Problem Solving phase. Though the derivation of any solution begins with understanding the problem and all actors involved, the joint planning framework for developing potential solutions begins in earnest with Course of Action Development (JPP step 3). Through the study of several historical examples of the innovation and insight required to develop valid COAs to address complex problems; and comprehension of the tools and domains through which the joint force may address these problems, students are now equipped to apply that knowledge toward the development of two original COAs within the given JW scenario.

One of the most critical steps in campaign planning is conceiving of, and deciding upon, COAs. Among the myriad paths an operation can take, the commander must decide on a particular course of action. During JPP step 3, the staff develops unique courses of action to achieve the commander’s military end state. These COAs adhere to the commander’s guidance and build on the results of mission analysis, and introduce additional elements of Operational Design. Ideal COAs consider all participants and achieve the desired end state within the commander’s guidance, while maintaining flexibility to react to unforeseen challenges. A key facet for achieving this balance is the concept of “mission command.” It is essential to balance the requisite detail in the proposed courses of action with the flexibility for those who will execute the plan to be able to adapt to situations on the ground and to exploit opportunities in real time.

*CONTACT HOURS: 2 x 3.0-hour seminar*
REQUIRED READINGS
1. JW Nigeria scenario planning guidance, research materials, and other open source research materials as required. (Canvas)

[Students must review previous planning products from the Operational Design and Mission Analysis Workshops prior to the start of the workshop. Students will not have the time to “spin-up” on the scenario during this seminar. This seminar continues the experiential learning that provides an opportunity to synthesize and apply JW course concepts through instructor-led practical application. In addition to the materials provided, students will be required to conduct their own research in order to gain information that will facilitate the analysis and application of elements of operational design during the seminar. The purpose of student research for scenario information, in addition to aiding the practical application of doctrinal concepts, is to build analytical skills for knowing what types of questions to ask, as well as what specific questions to ask, and seek appropriate information to enable military planning activities.]

2. JW Planning Study Guide. (Canvas)

[This guide is provided to enable coherent research and note taking on scenario materials. Students should use the guide and prepare notes for in-class use per their instructor’s directions.]

SUGGESTED ADDITIONAL MATERIAL

LESSON INTEGRATION AND RATIONALE
This two day COA Development Workshop builds on the previous Operational Design and Mission Analysis workshops that were focused on incorporating elements of operational design, framing the problem, and developing the operational approach, as well as defining the mission and refining guidance. In this session, students will have the opportunity to practice and apply the COA development step of the Joint Planning Process within the ongoing JW scenario. This lesson will also allow students to synthesize many of the JW course concepts introduced to this point in the course, including: elements of operational design, operational art, multi-domain operations, joint force capabilities, command relationships, and joint force structures. The concepts taught during this practicum are also essential for the successful completion of the Joint Planning Exercise (JPEX).
Day 27: JW-537
COA Analysis and Wargaming Workshop

LESSON OBJECTIVES
1. Integrate operational art and operational design with Joint Planning, and assess how military planning considers all elements of national power and a whole of government approach to achieving national strategic goals.
   [LAO: 1d, 2a, 3d, 4b, 4h; SAE: 3c]
2. Comprehend the purposes and process for conducting COA Analysis, including the methodology of wargaming that enables the testing and improvement of COAs.
   [LAO: 1a, 2a, 3a, 4b, 6b]
3. Apply joint planning concepts while conducting Course of Action (COA) Analysis and Wargaming (JPP Step 4), and develop planning tools to capture results of COA Analysis (including but not limited to: a synchronization matrix, decision support matrix, and decision support template).
   [LAO: 1a, 1d, 2a, 2c, 3a, 3d, 3f, 4b, 4c, 4h, 5a, 6b, 6e, 6f; SAE: 3d]

LESSON OVERVIEW
JW-537 (S): COA Analysis and Wargaming Workshop

Overview: COA Analysis and Wargaming enable critical examination and further refinement of COAs. This seminar and workshop will provide the opportunity to analyze and wargame the courses of action developed in previous workshop sessions in order to gain insight into the operation, improve COAs, and enhance operational decision making. COA analysis is the process of closely examining potential COAs to reveal details that will allow the commander and staff to tentatively identify COAs that are valid, and then compare these COAs to evaluation criteria in step 5 of the JPP (COA Comparison).

CONTACT HOURS: 3.0-hour seminar

REQUIRED READINGS
1. Joint Publication 5-0, Joint Planning, 16 June 2017, V-31 to V-42.

   [Outlines the doctrinal approach, purpose, and methods of COA analysis through wargaming.]


   [Provides a detailed methodology for the conduct of a wargame and outlines several products that may result from wargaming that inform the commander’s decision making.]

3. JW scenario planning guidance, research materials, and other open source research sources as required. (Canvas)

   [Students must review products from previous JW planning Workshops and refine them per instructor direction in preparation for this Workshop. Students will not have the time to “spin-up” on the scenario or refine products during this seminar. This seminar continues the experiential learning that provides an opportunity to synthesize and apply JW course]
concepts through instructor led practical application. In addition to the materials provided, students will be required to conduct their own research in order to gain information that will facilitate the analysis and application of elements of operational design during the seminar. The purpose of student research for scenario information, in addition to aiding the practical application of doctrinal concepts, is to build analytical skills for knowing what types of questions to ask, as well as what specific questions to ask, and seek appropriate information to enable military planning activities.

4. JW Planning Study Guide. (Canvas)

[This guide is provided to enable coherent research and note taking on scenario materials. Students should use the guide and prepare notes for in-class use per their instructor’s directions.]

SUGGESTED ADDITIONAL MATERIAL

1. None.

LESSON INTEGRATION AND RATIONALE

This practicum constitutes the seventh of eight sessions of instructor-led JW workshops in which students are guided through the planning process utilizing a scenario-driven planning exercise. This practicum continues to build upon the previous lessons and steps of the JPP and establishes the foundation for JPP step 5, COA Comparison. Through the process of analyzing their own planning efforts (developed COAs), students are provided another opportunity to improve critical and creative thinking skills. This seminar will also facilitate student success in the JPEX evaluations.
Day 28: JW-538
COA Comparison and Approval Workshop

LESSON OBJECTIVES
1. Integrate operational art and operational design with Joint Planning, and assess how military planning considers all elements of national power and a whole of government approach to achieving national strategic goals.
   [LAO: 1d, 2a, 3d, 4b, 4h; SAE: 3c]
2. Comprehend the purposes and process for conducting COA Comparison, and the several methodologies for conducting and presenting the staff’s COA comparison that are found in joint doctrine.
   [LAO: 2a, 4b]
3. Apply joint planning concepts while conducting Course of Action (COA) Comparison (JPP step 5) in order to analyze a plan critically for the deployment, employment, sustainment of joint military forces at the operational level of war and recommend to the JFC the COA that best accomplishes the mission.
   [LAO: 2a, 2c, 3d, 3f, 4b, 4g, 4h, 6b, 6e, 6f; SAE: 3d]
4. Comprehend the actions a commander may take upon receiving the planning staff’s COA recommendation in JPP step 6, COA Approval.
   [LAO: 2a, 4b]

LESSON OVERVIEW
JW-538 (S): COA Comparison and Approval Workshop

Overview: This seminar will cover JPP steps 5 and 6. During COA Comparison (JPP step 5) the comparison activity will include discussion of the techniques and potential pitfalls of COA comparison as the seminar continues the application of the JPP in an instructor-led, scenario-driven learning environment. Performed properly, COA Comparison enables the planning staff to provide their recommendation (and associated rationale) for the COA that will be most effective in achieving the desired ends sought by the commander. As the commander relies heavily on staff input to this point in the process, it is imperative that the planning group understand the COA Comparison tools and process and how to use the various comparison options to best inform the commander. Critical to this process is the careful selection and thorough definition of evaluation criteria against which the COAs will be assessed. The COA Comparison facilitates the commander’s decision making process through careful staff evaluation of the means, ways, and risk of each COA.

Upon receiving the staff’s recommended COA during COA Approval (JPP step 6), the commander makes a decision regarding the COA which then enables the formulation of the commander’s estimate. Once reviewed by the appropriate authority, the commander’s estimate becomes the concept of operation (CONOPS) for the plan, and allows detailed Plan or Order Development (JPP step 7).

CONTACT HOURS: 3.0-hour seminar

REQUIRED READINGS
1. Joint Publication 5-0, Joint Planning, 16 June 2017, V-42 to V-45, Appendix G, and (Review) Ch. VI.
[This reading provides the doctrinal guidance for how to conduct COA Comparison, and provides useful methodologies and matrices for presenting staff rationale. Chapter VI reviews the necessity for operation assessment.]

2. JW scenario planning guidance, research materials, and other open source research sources as required. (Canvas)

[Students must review products from previous JW planning Workshops and refine them per instructor direction in preparation for this Workshop. In addition to the materials provided, students will be required to conduct their own research in order to gain information that will facilitate the analysis and application of elements of operational design during the seminar. The purpose of student research for scenario information, in addition to aiding the practical application of doctrinal concepts, is to build analytical skills for knowing what types of questions to ask, as well as what specific questions to ask, and seek appropriate information to enable military planning activities.]

3. JW Planning Study Guide. (Canvas)

[This guide is provided to enable coherent research and note taking on scenario materials. Students should use the guide and prepare notes for in-class use per their instructor’s directions.]

SUGGESTED ADDITIONAL MATERIAL

1. None.

LESSON INTEGRATION AND RATIONALE

This seminar introduces the fifth and sixth steps of the JPP, COA Comparison and COA Approval. It builds upon the preceding scenario-driven planning sessions. As the students continue application of the JPP through a real-world scenario, this practicum introduces the concepts related to COA Comparison by providing an overview of the process, as well as addressing the significance and appropriate application of the various results. This seminar provides another opportunity to hone critical thinking skills through the activities of selecting and defining evaluation criteria, and conducting a comprehensive comparison of the COAs that have been developed by the seminar. Students will later revisit these concepts as they participate in the Joint Planning Exercise (JPEX).
Phase 3: PRACTICAL APPLICATION

Joint Planning Exercise (JPEX)

Day 28: JW-539
JPEX Road to War

LESSON OBJECTIVES
1. Comprehend the historical and strategic setting for the Joint Planning Exercise Scenario in preparation for the JW directed study day dedicated to prepare students for participation and evaluation during the JW culminating planning exercise.
   [LAO: 3a; SAE: 1a, 1c]

LESSON OVERVIEW
JW-539 (L): JPEX Road to War

Overview: This lecture, in the form of a joint staff overview of the strategic setting in the Western Pacific, will provide the basis for student directed study and preparation for the Joint Planning Exercise (JPEX). This brief serves only as an overview of historical and ongoing events, international relationships, and other considerations that will provide a framework for detailed study and planning. Students will be expected to study open-source materials related to the JPEX scenario that will enable the student-led planning and briefing activities.

CONTACT HOURS: 1.0-hour lecture

REQUIRED READINGS
1. None.

SUGGESTED ADDITIONAL MATERIAL
1. None.

LESSON INTEGRATION AND RATIONALE
This lecture sets up the student directed study day for JPEX, during which students and/or seminars will be expected to thoroughly analyze scenario products and other relevant open source information to enable detailed discussion and planning throughout the JPEX.
Day 29: JW Directed Study
### LESSON OBJECTIVES

1. Apply Joint Planning concepts to develop an initial operational approach based on planning directives and guidance provided, and conduct appropriate activities involved in the Joint Planning Process (JPP) to develop solutions to operational problems in a volatile, uncertain, complex, and ambiguous environment.
   [LAO: 1d, 2a, 2c, 3a, 3c, 3d, 3g, 4b, 4h, 6a, 6b, 6f; SAE: 1a, 4b]

2. Construct a plan that demonstrates how the military instrument of power may be utilized to further national interests, taking into account the necessity for integrating of information operations, a whole of government approach, and multinational cooperation, against a near-peer, nuclear capable adversary.
   [LAO: 1a, 1b, 1c, 1d, 2a, 2c, 3a, 3b, 3c, 3e, 3g, 4a, 4b, 4c, 4e, 4f, 4g, 4h, 5a, 5b, 5c; SAE: 1c, 1e, 2d, 5a]

3. Analyze U.S. military force capabilities and limitations and appropriately organize and plan for the employment of forces in conducting operations across the range of military operations and across operational domains (including space and cyber) in pursuit of national interests.
   [LAO: 1a, 1b, 1c, 1d, 2a, 2c, 3a, 3b, 3e, 3g, 4b, 4e, 4f, 4h, 5a, 5b, 5c, 6e, 6f]

4. Analyze the plan as developed by the student planning group for validity and efficacy, and comprehend the fundamentals of Joint Planning, and joint and service doctrine.
   [LAO: 2a, 2c, 3d, 3f, 3g, 4b, 4h, 6b, 6d, 6e, 6f]

### LESSON OVERVIEW

**JW-540 (S): Joint Planning Exercise**

**Overview:** JPEX is the capstone event of the Joint Warfighting (JW) course - the application of concepts. As potential future members of a unified command or component planning staff, officers may be required to develop multiple military courses of action (COA) based on: changes in the strategic environment; the Joint Strategic Capabilities Plan (JSCP); a POTUS/SECDEF tasking; or as tasked by the combatant commander. While the JPEX is a deliberate planning scenario, this 8-day exercise requires the completion of JFC tasking on a specific timeline. JPEX requires seminar members to apply concepts and topics previously discussed, including (but not limited to): multi-domain operations, service capabilities, geographic and functional combatant commands, command organizations and relationships, interagency and multinational considerations, strategic guidance documents, and planning concepts. This knowledge will be synthesized during the conduct of the JPEX as students analyze the operational environment and strategic guidance; develop two courses of action (COAs); and present a Mission Analysis Briefing and a Course of Action Decision Briefing to the Commander (Course Instructor).

Student performance will be evaluated on the development and presentation of two briefs. The first will be the Mission Analysis Brief conducted on JPEX Day 4. The second brief is the Course of Action Decision Brief on JPEX Day 8. Together the two JPEX briefings constitute JW 603E, a graded evaluation that will total 50% of the JW course grade. The following is a general breakdown of JPEX daily activities. Student planning groups should
devise their own detailed itinerary. Evaluated briefings should be considered in-class examinations and will occur only at the scheduled times per the official ACSC calendar.

Day 1 (6 hours):
JPEX Introduction, 0.5-hour Planning Initiation
Develop Initial Operational Approach

Day 2 (6 hours):
Develop Initial Operational Approach (cont.) Begin Mission Analysis

Day 3 (6 hours):
Continue Mission Analysis Revise Initial Operational Approach as required

Day 4 (6 hours):
Deliver Mission Analysis Brief (JW 603E part one) Begin COA Development

Day 5 (6 hours):
COA Development

Day 6 (6 hours):
COA Development

Day 7 (6 hours):
COA Analysis and Wargaming COA Comparison
Develop Course of Action Decision Brief (homework)

Day 8 (2.5 hours):
Deliver Course of Action Decision Brief (JW 603E part two)

CONTACT HOURS: 44.5-hour seminar

REQUIRED READINGS
1. JPEX scenario planning guidance, research materials, and other open source research sources as required. (Canvas)

[Students must read the scenario guide and conduct appropriate research prior to the start of the JPEX during the scheduled directed study time. Students will not have the time to “spin-up” on the scenario during this seminar. In addition to the materials provided, students will be required to conduct their own research in order to gain information that will facilitate the analysis and application of elements of operational design. The purpose of student research for scenario information, in addition to aiding the practical application of doctrinal concepts, is to build analytical skills for knowing what types of questions to ask, as well as what]
specific questions to ask, and seek appropriate information to enable military planning activities.]

2. JW Planning Study Guide. (Canvas)

[This guide is provided to enable coherent research and note taking on scenario materials. Students should use the guide and prepare notes for in-class use per their instructor’s directions.]

3. JW Coursebook.

[As the final JW event, all of the course readings and applicable service and joint doctrine are appropriate resources to be used in the planning exercise. This exercise requires students to integrate the concepts and doctrinal principles presented during all of the previous Joint Warfighting (JW) course lessons. Students are also expected to incorporate the concepts and knowledge gained in other ACSC courses. Students should bring appropriate reference materials to seminar to facilitate joint planning and student hands-on practical learning.]

SUGGESTED ADDITIONAL MATERIAL
1. None.

LESSON INTEGRATION AND RATIONALE
The JPEX is the capstone of the JW course. It will test your ability to assimilate many of the concepts you've learned up to this point in ACSC and apply them to a complex operational problem in a time-compressed environment. The goal is for the seminar to emerge from the JPEX with a better understanding of the relationship between strategic events and the role of joint doctrine in guiding the planning process, the application of operational art and design, and the application of military capabilities to support national interests.