

Module: 1-3 Air and Missile Defense (AMD)

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Homework: Students shall review each topic's power point brief as a read ahead before class. Topic briefs are located at: **SIPR L:\N73_Lessons\SWO DH (A-4H-0107)\Module 3-1 – Air Defense**

Additionally students shall closely review the following four critical AMD references,

- 1) Navy-wide OPTASK AMD USFF 291630Z Jun 12
- 2) Your Class Tactical Publication, DDG if unslated, CG if ordered to a MCM, Chapters:
 - Executive Summary
 - Combat System Overview
 - Battle Organization
 - Air Defense
 - Tactics for Multi Threat Environment
 - Role in the Force
 - Air Craft Management (if equipped)
 - Battle Orders
 - Supervisory Checklists
- 3) SWDG TM 3-01.1-07, Single Ship Integrated Hardkill and Softkill Tactics in Anti-ship Missile Defense
- 4) NTTP 3-01.11 Maritime Air and Missile Defense Planning

AMD References: All AMD readings are located in the Maritime Warfare Reference Folder, at **SIPR R:\Maritime Warfare References**

Additionally tactical aides/references

- SPY-1 Slide Rule
- SSDS Slide rule
- Nulka Stationing TACAID

Assessments: Five AMD quizzes and the exam cover assigned lectures and may draw on all previous instruction, to include CSCS Common Core Instruction (for officers who attended CSCS Common Core).

Course Grade Weighting:

Five Quizzes (20 minutes each. Note: quizzes are scheduled for 30 minutes, to allow for instructions/collection and review)	20%
AMD Exam (4 hours)	80%

1-3-1 Air Defense Overview

	Topic:	Time Req'd
	1-3-1-0 Welcome to Air Defense	1 hour
	Homework/Read Ahead Assignments:	0 hours
	None	
	1-3-1-1 AMD Roles and Responsibilities	1.5 hours

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Homework/Read Ahead Assignments:	2.5 hours
Review slides for topic 1-3-1-1 Air Defense Roles and Responsibilities	.5 hours
Navy-wide OPTASK AMD USFF 291630Z Jun 12 (section A1, B2, C2)	1 hour
CBT Lesson: Module 2: Lesson 1 Command and Control Topics: 1. Data Sources 2. Policy and Guidance 3. Roles and Responsibilities	1 hour
Recommended Reading / Viewing:	
Navy-wide OPGEN USFF (240904ZJAN14)	
BF7F OPTASK Identification Supp Part 1, USS ANTIETAM 221010ZMAY14	
NAVAIR 00-80T-105 CV NATOPS Manual (pg 3-1&2)	
NWP 3-56 Composite Warfare Doctrine (Sec 1-10, chpt 2, chpt 3 sect 2, 3, 6, 7, 8, 9, 14, 15, chpt 4 sect 2, 3, chpt 5 sect 2, 3, 4, 5, 8, 9, 15)	
NTRP 3-20.6.XX Your Class Tactical Publication (Chapter 2/Air Defense)	
NTRP 3-20.6.08 DDG 51 Class Tactical Publication (Chapter 2)	
NTTP 3-01.11 Maritime Air and Missile Defense Planning (Chapter 1 & 2)	
Suggested Reading / Viewing:	
DIMS Example	
SPINS Example	
ATO Example	
ACO Example	
JP 1-02 Department of Defense Dictionary of Military and Associated Terms (Glossary)	
1-3-1-2 Air Defense Communications	1.5 hours
Homework/Read Ahead Assignments:	5.0 hours
Review slides for topic 1-3-1-2 Air Defense Communications	.5 hours
CBT Lesson(s): Module 2: Lesson 3 Communications Topics: 1. Internal and External Communications Circuits 2. Communications Procedures	1.5 hours
Navy-wide OPTASK AMD USFF 291630Z Jun 12 (section C20, C23)	1 hour
ACP-125(F) Allied Communications Procedures – Radiotelephone Procedures (Chapter 1, 3, 6)	1 hour
NAVEDTRA 14204 (OS3) (Chapter 3)	1 hour
Recommended Reading / Viewing:	
APP 7 Joint Brevity Words Publication (all)	
NTTP 6-02.1 Multi-service Brevity Codes (all)	
APP 1(C) Allied Maritime Voice Reporting Procedures (Chapter 3)	
Suggested Reading / Viewing:	
CTF 70 OPTASK Comm's, CTF 70 120943ZNOV15	

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	CTF 70 OPTASK Link, CTF 70 100421ZMAR14	
	C5F OPTASK Comm's, C5F 020710ZJUN14	
	JP 1-02 Department of Defense Dictionary of Military and Associated Terms (Glossary)	
	1-3-1-3 Capabilities and Limitations of Air Defense Units	1 hour
	Homework/Read Ahead Assignments:	.5 hours
	Review slides for topic 1-3-1-3 Capabilities and Limitations of Air Defense Units	.5 hours
	Recommended Reading / Viewing:	
	NTRP 3-20.6.XX Your Class Tactical Publication (Executive Summary, Introduction, Combat System Overview, Air Defense Chapters)	Highly Recommended
	TOPGUN Manual http://www.nsawc.navy.smil.mil/i_pages/WeaponsSchools/Topgun/TopgunWS.htm	
	USAF Factsheets, http://www.af.mil/information/factsheets/index.asp	
	Suggested Reading / Viewing:	
	SSDS Cap's and Lim's https://cni.phdswc.navy.smil.mil	
	Aegis Cap's and Lim's https://cni.phdswc.navy.smil.mil	
	US Navy Fact File, http://www.navy.mil/navydata/fact.asp	
	1-3-4-1 Capabilities and Limitations of Air Defense Aircraft	1 hour
	Homework/Read Ahead Assignments:	.5 hours
	Recommended Reading / Viewing:	
	1-3-1-4 Air Defense Battlespace	1.5 hours
	Homework/Read Ahead Assignments:	3.0 hours
	Review slides for topic 1-3-1-4 Air Defense Battlespace	.5 hours
	CBT Lesson(s): Module 2: Lesson 2 Battlespace Management Topics: 1. The Air Defense Areas 2. The Air Defense Sectors	1.5 hours
	Navy-wide OPTASK AMD USFF 291630Z Jun 12 (sec C9, C24)	1 hour
	Recommended Reading / Viewing:	
	NTTP 3-01.11 Maritime Air and Missile Defense Planning (Chapter 1, 4)	
	NWP 3-01.01 Fleet Air Defense (sec 3.5 - 3.7)	
	NWP 1-14M Commanders Handbook on Law of Naval Operations (page 1-2 through 1-3)	
	ATP 1(E) Volume I Allied Maritime Tactical Instructions and Procedures (Chapter 7)	
	NTTP 1-10-1 Force Tactical Action Officer (FTAO) (Chpt 5.5.2, Chpt 10.6.3.1, Chpt 10.8)	
	1-3-1-5 Air Defense Threat Determination	1.5 hours
	Homework/Read Ahead Assignments:	2.5 hours
	Review slides for topic 1-3-1-5 Air Defense Threat Determination	.5 hours
	Navy-wide OPTASK AMD USFF 291630Z Jun 12 (C18, C24)	.5 hours

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	CJCSI 3121.01C Standing Rules of Engagement/Rules for the Use of Force (Encl C & J)	1.5 hours
	Recommended Reading / Viewing:	
	ATP 1(E) Volume 1 Allied Maritime Tactical Instructions and Procedures (sec 1470 and 6747)	
	Navy-wide OPTASK IO Part 2, C2F 151732Z May 06 (sec C4)	
	C5F OPTASK Air Defense, C5F 221200ZJAN15	
	NTTP 1-10.3 Navy Combat ID (Chapters 1-3)	
	BF7F OPTASK Identification Supp, USS ANTIETAM 221010ZMAY14	
	Suggested Reading / Viewing:	
	JP 1-02 Department of Defense Dictionary of Military and Associated Terms (Glossary)	
	ONI Sealink https://www.oni.nmic.navy.smil.mil	
1-3-2 Air Defense Self Defense		
	Topic:	
	1-3-2-1 Air Defense Self Defense	2 hours
	Homework/Read Ahead Assignments:	2 hours
	Review slides for topic 1-3-2-1 Air Defense Self Defense	.5 hours
	CBT Lesson(s): Module 2: Lesson 4 ZIPPO Calls Topics: 1. Zippo Calls	1 hour
	Navy-wide OPTASK AMD USFF 291630Z Jun 12 (C15)	.5 hours
	Recommended Reading / Viewing:	
	NTTP 1-10-1 Force Tactical Action Officer (chpt 5)	
	NTTP 3-01.9 SWY/ACDS Core Tactics (Appendix D)	
	NTTP 3-13.14 Surface EW Guide (Appendix B)	
	TM 3-01.1-07 Single Ship Integrated Hardkill and Softkill Tactics in Antiship Missile Defense (CH 4)	
	Suggested Reading / Viewing:	
	TM 3-51.1-05 Nulka Tactical Employment Guide	
	NTTP 3-13.14 Surface EW Guide (pg 4-1 through 4-6)	
1-3-3 Air Defense Point Defense		
	Topic:	
	1-3-3-1 Air Defense Point Defense	1.5 hours
	Homework/Read Ahead Assignments:	.5 hours
	Review slides for topic 1-3-3-1 Air Defense Point Defense	.5 hours
	Navy-wide OPTASK AMD USFF 291630Z Jun 12 (section C2/E/6)	
	Recommended Reading / Viewing:	
	NTTP 3-01.5 Aegis Core Tactics (app C and pg D-5, D-6, D-7)	
	TM 3-51.1-07 Nulka in the vicinity of High Value Units (all)	
	CSG-1 OPTASK IO SUPP ASMD, CTTG, AND CM ANNEX DTG 271033Z MAY 15	

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1-3-4 Area Air Defense		
Topic:		
1-3-4-2 Air Operations		2 hours
Homework/Read Ahead Assignments:		.5 hours
Review slides for topic 1-3-4-2 Air Operations		.5 hours
Navy-wide OPTASK AMD USFF 291630Z Jun 12 (Sec C2, C4, C24)		
Recommended Reading / Viewing:		
NAVAIR 00-80T-105 CV NATOPS, July 2011 (Chpt 4, 5, 6)		
NTTP 3-01.11 Air Defense Planning Guide (Chpt 7.4.4.3)		
NTTP 1-10-1 Force Tactical Action Officer (FTAO) (Chapter 5)		
NTRP 3-20.6.xx Your Class Tactical Manual (Chpt – Aircraft Management)		
NTTP 3-03.4 NAVAL STRIKE AND AIR WARFARE (CH 2)		
Suggested Reading / Viewing:		
TOPGUN Manual http://www.nsawc.navy.smil.mil/i_pages/WeaponsSchools/Topgun/TopgunWS.htm		
1-3-4-3 Maritime Ballistic Missile Defense		1 hour
Homework/Read Ahead Assignments:		.5 hours
Review slides for topic 1-3-4-3 Maritime Ballistic Missile Defense		.5 hours
Recommended Reading / Viewing:		
Navy-wide OPTASK BMD Homeland Defense CFFC 231500Z APR 14		
Navy-wide OPTASK BMD Regional Defense, CFFC 170901Z Feb11 (sec A1 through B5, B10 through B11, B17)		
TM 3-01.3-09 Aegis BMD Baseline 3.6.1 Core Tactics (Executive Summary, Ch 2)		
TM 3-01.1-13 Aegis Ballistic Missile Defense 4.X Core Tactics (Dec 13)		
Suggested Reading / Viewing:		
TM 3-01.1-12 Aegis Ballistic Missile Operational Employment Guide (OEG III / 4.0) (Feb 13)		
Navy-wide OPTASK BMD Regional Defense, CFFC 170901Z Feb11 (all)		
PHDNSWC BMD Page http://bmd.phdnswc.navy.smil.mil		
1-3-4-4 Area Air Defense		2 hours
Homework/Read Ahead Assignments:		.5 hours
Review slides for topic 1-3-4-4 Area Air Defense		.5 hours
Navy-wide OPTASK AMD USFF 291630Z Jun 12 (sec C24, C4, C5, C9)		.5 hours
Recommended Reading / Viewing:		
NWP 3-01.01 Fleet Air Defense (sec 3.6, 3.7, ch 6,7) – Jun 06		
NTTP 3-01.11 Air and Missile Defense Planning (ch 4) – Apr 15		
NTTP 1-10-1 Force Tactical Action Officer (Ch 5)		
SWDG TM 3-01.1-07, Single Ship Integrated Hardkill and Softkill Tactics in Anti-ship Missile Defense (Chapter 4)		

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	TM 3-51.1-07 Nulka in the vicinity of High Value Units (ch 2)	
	TACBUL IFC 14-01 CSG Employment of Integrated Fire Control	
	TM AD-14-01 A CONOPS for Silent SAM Air Defense Picket in a Contested Environment – Sep 14	
1-3-5 Air and Missile Defense MMTT Scenarios		
	Topic:	
	TAO-ITS Introduction	.5 hour
	Homework/Read Ahead Assignments: None	
	TAO-ITS Scenarios	1.5 hours
	Homework/Read Ahead Assignments: None	
	1-3-5-1 MMTT In-Brief	.5 hour
	Homework/Read Ahead Assignments: None	
	1-3-5-2 MMTT Familiarization/Comms MMTT	2 hours
	Homework/Read Ahead Assignments: None	
	1-3-5-3 AMD MMTT Scenario One	2 hours
	Homework/Read Ahead Assignments:	.5 hours
	Review Air Defense DIMS for AD MMTT Scenario One	.5 hours
	1-3-5-4 AMD MMTT Scenario Two	2 hours
	Homework/Read Ahead Assignments:	.5 hours
	Read Air Defense DIMS for AD MMTT Scenario Two	.5 hours
	1-3-5-5 AMD MMTT Scenario Three	2 hours
	Homework/Read Ahead Assignments:	.5 hours
	Read Air Defense DIMS for AD MMTT Scenario Three	.5 hours
	1-3-5-6 AMD MMTT Scenario Four	2 hours
	Homework/Read Ahead Assignments:	.5 hours
	Read Air Defense DIMS for AD MMTT Scenario Four	.5 hours
	1-3-5-7 AMD MMTT Student Brief	1 hour
	Homework/Read Ahead Assignments: Students provide the brief. Details SEPCOR	2 hours
	1-3-5-8 AMD MMTT Scenario Five	1.5 hours
	Homework/Read Ahead Assignments:	
	Review student generated Air Defense DIMS for AMD MMTT Scenario Five	.5 hours
1-3-6 Air Defense Assessments		
	1-3-6-1 AMD Quiz 1	20 min
	1-3-6-2 AMD Quiz 2	20 min
	1-3-6-3 AMD Quiz 3	20 min
	1-3-6-4 AMD Quiz 4	20 min
	1-3-6-5 AMD Quiz 5	20 min
	1-3-6-6 AMD Exam Review	.5 hour

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	1-3-6-7 AMD Exam	4 hours
-	1-3-6-8 AMD Exam Debrief	.5 hour

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