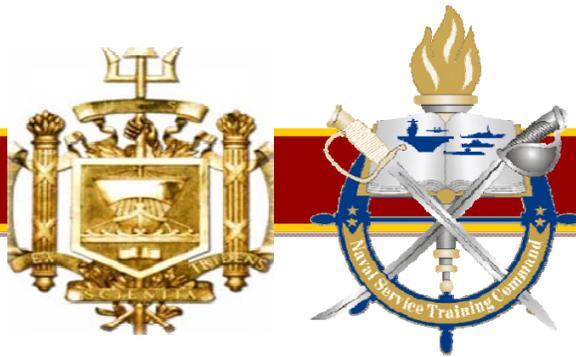


UNITED STATES NAVAL ACADEMY
NAVAL SERVICE TRAINING COMMAND

SEPTEMBER 2011



OFFICER PROFESSIONAL CORE COMPETENCIES MANUAL



Published by
United States Naval Academy
Commander, Naval Service Training Command

This page intentionally left blank

This page intentionally left blank

TABLE OF CONTENTS

Table of Contents		i
Letter of Promulgation		ikk
Definition of Measurement Terms		v
Executive Summary		vi
Section I	Academic Standards	I-1
Section II	Leadership and Management	II-1
Section III	Programs and Policies	III-1
Section IV	Military Customs, Traditions and Regulations	IV-1
Section V	Naval History	V-1
Section VI	Technical Foundations	VI-1
Section VII	Naval Warfare	VII-1
Section VIII	Maritime Proficiency	VIII-1
Section IX	Fitness and Wellness Programs	IX-1
Appendix A	United States Naval Academy	A-1
Appendix B	Reserve Officers Training Corps (Navy Option)	B-1
Appendix C	Reserve Officers Training Corps (Marine Option)	C-1
Appendix D	Strategic Sealift Officer	D-1
Appendix E	Officer Candidate School	E-1
Appendix F	Officer Development School	F-1
Appendix G	Direct Commission Officer Indoctrination Course	G-1

Appendix H	LDO/CWO Indoctrination School	H-1
Appendix I	Feedback Procedures	I-1

LETTER OF PROMULGATION

All Naval officer accession programs are designed to produce officers with a basic knowledge of the Naval profession and to enhance moral, mental, and physical development. Their goals are to instill in graduates the highest ideals of honor, courage, and commitment and prepare them to assume the highest responsibilities of military service and command.

This manual delineates the professional core competencies required of basically trained officers from the following officer accession programs:

- United States Naval Academy
- Naval Reserve Officers Training Corps
- Officer Candidate School
- Officer Development School
- Direct Commission Officer Indoctrination Course
- LDO/CWO Indoctrination School
- Seaman to Admiral (STA-21)

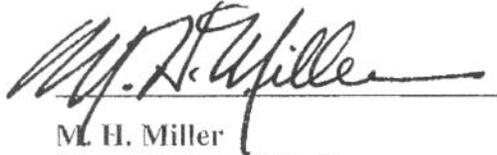
These competencies are the approved professional training requirements for officer accession programs and shall be used to develop appropriate curricula. These competencies are divided into two groups: 1) a core group of competencies necessary for basically trained officers regardless of training program and 2) a list of competencies for accession programs with extended training periods. This manual does not limit the depth or breadth to which these competencies are covered.

The composite of all classroom and practical instruction provides the basis for the sense of dedication and commitment to the Naval service and established personal standards of excellence which will remain with the graduate throughout the individual's professional career. Program emphasis is directed toward providing a foundation for future training, education and professional growth.

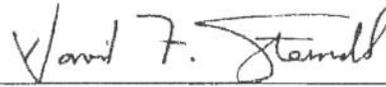
Recommendations for changes to this manual should be submitted using the Feedback Procedures in Appendix I.

This manual is approved for implementation upon receipt. Professional Core Competencies (PCC) Manual (April 2001) is hereby cancelled and superseded.

REVIEWED AND APPROVED:



M. H. Miller
Vice Admiral, U.S. Navy
Superintendent, USNA



David F. Steindl
Rear Admiral, U.S. Navy
Commander, NSTC

DEFINITION OF MEASUREMENT TERMS

I. Know: Recall facts, bring to mind and recognize the appropriate material.

Examples:

- Know the major missions of the U.S. Army, U.S. Air Force, and U.S. Coast Guard.
- Know basic flag etiquette and proper display of basic Navy flags and pennants.

II. Comprehend: Interpret principles and concepts and relate them to new situations.

Examples:

- Comprehend shipboard safety and preparedness.
- Comprehend the moral and ethical responsibilities of the military leader.

III. Apply: Utilize knowledge and comprehension of specific facts in new relationships with other facts, theories and principles.

Examples:

- Apply the fundamentals of Operational Risk Management and Time Critical Risk Management.
- Apply leadership skills to achieve objectives.

IV. Demonstrate: Show evidence of ability in performing a task.

Examples:

- Demonstrate the skills required for a Skipper 'B' Qualification.
- Demonstrate personal physical fitness by conforming to Navy or Marine Corps physical fitness testing standards.

EXECUTIVE SUMMARY

This Professional Core Competencies (PCCs) Manual is designed to delineate the knowledge, skills and abilities basically trained Naval officers must possess upon graduation from an accession program. These requirements fall into the following major competency areas:

- I. ACADEMIC STANDARDS
- II. LEADERSHIP AND MANAGEMENT
- III. PROGRAMS AND POLICIES
- IV. MILITARY CUSTOMS, TRADITIONS, AND REGULATIONS
- V. NAVAL HISTORY
- VI. TECHNICAL FOUNDATIONS
- VII. NAVAL WARFARE
- VIII. MARITIME PROFICIENCY
- IX. FITNESS AND WELLNESS PROGRAMS

The material contained therein is organized to provide details on the above areas for all officers, regardless of accession source. However, the authors acknowledge that the spectrum of accession programs provides a wide variety of training opportunities, assets and course lengths. For programs designed to span longer training periods, this document also provides guidance for additional requirements. The following training programs and their additional competencies are outlined in the appendices:

Appendix A	United States Naval Academy
Appendix B	Naval Reserve Officers Training Corps (Navy Option)
Appendix C	Naval Reserve Officers Training Corps (Marine Option)
Appendix D	Strategic Sealift Officer
Appendix E	Officer Candidate School
Appendix F	Officer Development School
Appendix G	Direct Commission Officer Indoctrination Course
Appendix H	LDO/CWO Indoctrination School

I. ACADEMIC STANDARDS

These standards describe the fundamental scholastic requirements basically trained officers must possess in addition to completing the academic and professional certification/licensing requirements dictated by the commissioning source and community's governing instructions.

- A. Demonstrate a proficiency of the English language through usage, both spoken and written.
- B. Know the major developments in the United States and world history with comprehension of the political, military, diplomatic and Naval history of the United States.
- C. Demonstrate the ability to solve quantitative problems in a logical manner.
- D. Demonstrate basic computer skills.

II. LEADERSHIP AND MANAGEMENT

These requirements describe the leadership and management principles a basically trained officer must understand and be prepared to apply. Naval officers must be thoroughly prepared to inspire and effectively utilize those the people in their charge, their most valuable assets.

A. Comprehend the relationship of the Naval Services' Core Values to the roles and responsibilities of a Naval leader.

B. Comprehend the following personal qualities and be able to relate them to a leader's effectiveness:

1. Honor
2. Judgment
3. Justice
4. Dedication
5. Initiative
6. Decisiveness
7. Tact
8. Integrity
9. Endurance
10. Bearing
11. Unselfishness
12. Courage (moral and physical)
13. Knowledge
14. Loyalty
15. Enthusiasm

C. Comprehend the major principle of the Code of Conduct and be able to apply it to a leader's role in a prisoner of war situation.

D. Comprehend the relationship between authority, responsibility, and accountability within a task-oriented organization.

E. Apply leadership and management skills to prioritize among competing demands.

1. Demonstrate the ability to establish meaningful goals and objectives.
2. Apply techniques of prioritization and time management to resources and personnel.

F. Apply leadership skills to achieve objectives.

1. Comprehend different leadership styles and how they apply to different situations and groups.
2. Comprehend basic principles of human behavior and group dynamics.
3. Comprehend the difference between informal and formal groups.
4. Comprehend the contribution of the formal group organization and standard procedures to mission accomplishment.
5. Apply leadership and management skills to design work groups based on task requirements, group capability, and available resources.
6. Apply techniques and skills to measure organizational effectiveness by establishing qualitative and quantitative performance standards.

G. Comprehend the importance of planning and supervision to mission accomplishment.

1. Comprehend the importance of planning and forecasting.
2. Comprehend the relationship between goal setting and feedback and apply this understanding to establishment of control systems.
3. Know the important reasons for development of and constant re-evaluation of alternatives in decision making.
4. Comprehend major reasons why change is resisted in organizations.
5. Comprehend specific change management techniques.

H. Demonstrate an understanding of the influence of the following on a leader's ability to achieve organizational goals:

1. Use of authority.
 - (a) Definition of a legal order

(b) Process for challenging illegal orders

2. Prioritization of Constitution, mission, service, command, shipmate and self.
3. Conveyance of clear, concise Commander's Intent
4. Degree of delegation and decentralization
5. Officer-enlisted professional relationship
6. Chain of command, including ship/squadron organization
7. Morale and esprit de corps
8. Supervision and follow-up

I. Comprehend the moral and ethical responsibilities of the military leader.

1. Comprehend the leader's moral and ethical responsibilities to the organization and society.

2. Comprehend the relationship of integrity, moral courage, and ethical behavior to authority, responsibility, and accountability.

3. Comprehend the importance of the Navy Ethos, Sailor's Creed, and Chief Petty Officer's Creed in reinforcing the moral and ethical responsibilities of the military leader, which defines attributes and behavior of a Naval Professional.

4. Demonstrate, through personal example, the attributes and behaviors of a Naval Professional.

J. Demonstrate characteristics of effective oral and written communication.

1. Comprehend the communications process.

2. Comprehend the major causes of communication breakdown and effective means to create healthy communication.

K. Demonstrate an understanding of basic counseling skills.

1. Comprehend the importance of feedback to mission effectiveness.
2. Comprehend various motivational techniques which may be useful in leadership situations.
3. Apply counseling skills to performance evaluation debriefings, discipline infractions, career guidance, and personal problems.

III. PROGRAMS AND POLICIES

A basically trained Naval Officer must possess knowledge of and the ability to apply programs and policies central to core values and ethos.

- A. Comprehend and demonstrate adherence to the standards of conduct for military personnel.
- B. Comprehend and apply current equal opportunity policies and programs.
- C. Comprehend and apply the official policies on prevention of sexual harassment, fraternization and hazing.
- D. Know the policies regarding family planning.
- E. Apply the fundamentals of Operational Risk Management and Time Critical Risk Management.
- F. Know Navy safety and environmental programs.
- G. Know financial, medical, and other benefits available to military personnel.
- H. Know the basic elements of personal financial management.
- I. Know current policies and programs relative to educational opportunities.
- J. Comprehend current Navy and Marine Corps commissioning sources as they relate to both peers and subordinates.
- K. Know current AT/FP procedures and requirements.
- L. Know basic administrative responsibilities of an officer including:
 - 1. Personnel administrative actions with regard to officer and enlisted service records, performance evaluations, advancement recommendations, and selection board procedures.
 - 2. Requirements and procedures for proper handling and disclosure of classified material, consequences for inadvertent disclosure, and consequences for violation of the espionage laws, including:

(a) maintenance of classified material security, including techniques for avoiding technology transfer.

(b) disclosure (clearance and need to know).

(c) basic security classifications and their corresponding handling requirements.

3. Know importance of documenting and evaluating training.
4. Know governing documents for Naval correspondence.
5. Know how directives are organized and revised.

IV. MILITARY CUSTOMS, TRADITIONS, AND REGULATIONS

A basically trained officer must demonstrate customs, traditions and regulations central to Naval culture.

A. Know the origins and current usage of Naval customs and traditions.

1. Demonstrate proper uniform wear.
2. Correctly demonstrate military courtesies.
3. Demonstrate proper protocol with respect to quarterdeck procedures, wardroom etiquette, and small boat/vehicle etiquette.
4. Know basic flag etiquette and proper display of basic Navy flags and pennants.
5. Know military ceremonial functions including parade formations and funerals.
6. Demonstrate close order drill.
7. Demonstrate personnel inspection procedures.
8. Know the Navy and Marine Corps officer and enlisted rank/paygrade structures and insignia. Know the officer ranks in the Army, Air Force, and Coast Guard.
9. Know relevant Navy and Marine Corps unrestricted and restricted line communities and applicable warfare insignias.
10. Know command relationships and organization for both operational and administrative environments as prescribed by the SORM.
11. Know the requirements for, and be able to demonstrate a proper watch relief and the requirements, procedures, and format for keeping logs.
12. Comprehend the role of commissioned officers as members of the U.S. Armed Forces and know the obligations and responsibilities assumed by taking the oath of office and accepting a commission including the Constitutional requirement for civilian control.

B. Comprehend the UCMJ, practice of military law, and applications of regulations as they may involve a junior officer in the performance of duties.

1. Comprehend the purpose, scope, and constitutional basis of Navy Regulations and the Uniform Code of Military Justice and relate these regulations to personal conduct in the military service.

2. Comprehend junior officer responsibilities relative to the military justice system including familiarization with:
 - (a) essential publications relating to military justice
 - (b) search and seizure
 - (c) apprehension and restraint
 - (d) non-judicial punishment
 - (e) investigations
 - (f) courts martial
 - (g) administrative discharges
 - (h) extra military instruction

3. Know the International Law of Armed Conflict including Rules of Engagement (ROE), conduct of hostilities, rights of individuals, obligations of engaged parties, and the Code of Conduct for members of the U.S. Armed Forces.

V. NAVAL HISTORY

Through a study of history, a basically trained officer must comprehend the role Naval forces play in the current national policies and diplomatic and military strategies of the United States.

A. Know the significant events in U.S. Naval history.

1. Know the significant milestones in the history of the evolution of the U.S. Navy and Marine Corps including the prominent leaders and their contributions.
2. Know the role U.S. Naval forces played in the national strategies and policies of the United States in both peacetime and war through the present day.
3. Know the historical successes and failures of Joint Warfare.

B. Comprehend the historical evolution of sea power and its effects on world history.

1. Comprehend the importance of power projection by seaborne forces and be able to cite historical examples.
2. Know the significant historical developments of Naval weapons systems, platforms, tactics, techniques, and procedures.

C. Know the effect of significant legislative changes related to Department of Defense structuring.

D. Know the effect developing states and terrorist movements have had on the interests, policies, and strategies of the United States.

E. Comprehend the relationship between technological progress and the evolution of military strategies, policies, doctrines and tactics.

This page intentionally left blank

VI. TECHNICAL FOUNDATIONS

A basically trained officer must be able to apply fundamental technical concepts in basic Navy material situations.

Due to the time constraints present within multiple officer accession programs TECHNICAL FOUNDATIONS are constrained to those programs with extended training periods. Specific requirements can be found within the following appendices:

Appendix A. United States Naval Academy

Appendix B. Naval Reserve Officers Training Corps (Navy Option)

Appendix C. Naval Reserve Officers Training Corps (Marine Option)

Appendix D. Strategic Sealift Officer

Appendix E. Officer Candidate School

This page intentionally left blank

VII. NAVAL WARFARE

A basically trained officer must understand the basics of Naval warfare and comprehend how to apply them in a dynamic environment.

A. Know the missions and basic organization of the major components of all the U.S. Armed Forces:

1. Know the current organization of the Department of the Navy and the relationship of this organization to the National Security Council, the Department of Defense, Joint Chiefs of Staff, and the unified and specified commands.

2. Comprehend the missions of the United States Navy and Marine Corps, including the current Maritime Strategy.

3. Comprehend current maritime strategies of potential and current adversaries.

4. Know the major missions of the U.S. Army, U.S. Air Force, and U.S. Coast Guard.

5. Know the basic concepts and philosophies of Joint Warfare.

6. Know the operational and administrative chains of command within the Department of the Navy.

7. Know how each of the following components of Naval warfare contributes to the basic sea control and power projection missions of the Naval service:

(a) air warfare

(b) undersea warfare (including mine warfare and antisubmarine warfare)

(c) surface warfare

(d) strike warfare

(e) amphibious warfare

(f) electronic warfare

(g) mobile logistics support

(h) special warfare

(i) expeditionary warfare

(j) C5I warfare (command, control, communications, computers, combat systems, intelligence)

(k) Cyber warfare

8. Comprehend the roles and responsibilities, history and organization of the Reserve Component.

B. Know the basic characteristics and capabilities of the major weapons systems and platforms of the U.S. Naval forces. Know the designations, characteristics, capabilities, and missions of ships, aircraft, and weapon systems of the U.S. Navy, Marine Corps, and Strategic Sealift Officer (SSO).

C. Know the basic threats potential adversaries can employ against U.S. Naval platforms.

D. Know how chemical/biological/radiological attacks affect the combat environment.

E. Know the concepts and publications that govern Naval command and control, doctrine, and tactics.

F. Comprehend the requirement for operations security for military forces including the following elements:

1. Comprehend the OPSEC process.

(a) Understand the need for OPSEC, including recognition of the OPSEC threat.

(b) Know the protective measures used in OPSEC.

2. Comprehend information system vulnerabilities, threats and policies protecting information and information resources.

G. Know the significance of intelligence in the application of Naval warfare.

H. Comprehend the spectrum of warfare.

I. Comprehend the national interests and policies of the United States and how they are carried out by the military.

VIII. MARITIME PROFICIENCY

The basically trained officer must have knowledge of requirements unique to organizational leadership, management and task accomplishment in a maritime environment.

Due to the time constraints present within multiple officer accession programs Maritime Proficiency is constrained to those programs with extended training periods. These requirements can be found within the following appendices:

Appendix A. United States Naval Academy

Appendix B. Naval Reserve Officers Training Corps (Navy Option)

Appendix D. Strategic Sealift Officer

Appendix E. Officer Candidate School

This page intentionally left blank

IX. FITNESS AND WELLNESS PROGRAMS

A basically trained officer must demonstrate a high level of personal physical fitness and be able to apply leadership skills in the implementation of Navy and Marine Corps personal excellence and wellness programs.

- A. Demonstrate personal physical fitness by conforming to Navy or Marine Corps physical fitness testing standards.
- B. Demonstrate a fit military appearance by conforming to applicable Navy or Marine Corps percent body fat and/or height-weight standards.
- C. Demonstrate fundamental swimming skills through successful completion of Class 3 swimmer qualifications.
- D. Comprehend current Navy or Marine Corps regulations, policies, and programs relative to the following wellness issues:
 - 1. Substance and alcohol abuse prevention and detection, including urinalysis testing programs, treatment, and consequences.
 - 2. Physical fitness, nutrition and weight control.
 - 3. Operational Stress Control.
 - 4. Suicide awareness.
 - 5. Athletics, recreational and off-duty safety.

This page intentionally left blank

APPENDIX A UNITED STATES NAVAL ACADEMY

As the undergraduate college of our country's Naval Service, the Naval Academy prepares young men and women to become professional officers of competence, character, and compassion in the U.S. Navy and Marine Corps. Naval Academy students are midshipmen on active duty in the U.S. Navy. They attend the Academy for four years, graduating with Bachelor of Science degrees and commissions as ensigns in the Navy or second lieutenants in the Marine Corps. Due to the high expectations and level of training each Naval Academy midshipmen receives, they are required to complete the following requirements in addition to those listed within Parts I through IX in order to receive a commission:

I. ACADEMIC STANDARDS Satisfactorily complete the following scholastic requirements:

1. Two semesters, or equivalent, of English, grammar and composition, as part of the bachelor's degree program.
2. One semester, or equivalent, in the area of modern United States or European political/military history, national security policy, modern western diplomatic history or equivalent, as part of the degree program.
3. One semester, or equivalent, covering the US Constitution and government.
4. Four semesters, or equivalent, of mathematics at the level calculus, or higher level mathematics.
5. Two semesters, or equivalent, of calculus-based physics courses and two semesters, or equivalent, of college level chemistry courses.
6. Complete all requirements as delineated within SECNAV instruction(s).

II. LEADERSHIP AND MANAGEMENT. Comprehend the general procedures for officer MOS selection, assignments, promotions and professional military education.

III. PROGRAMS AND POLICIES. Know the purpose of the Navy Maintenance Material Management (3-M) System and its PMS and MDS subsystems including the duties of division officer and work center supervisor.

IV. MILITARY CUSTOMS, TRADITIONS, AND REGULATIONS. Demonstrate proper execution of the officer's sword manual.

VI. TECHNICAL FOUNDATIONS

A. Demonstrate proper handling and firing of U.S. service small arms using current safety procedures.

B. Know the use of computers, electronic, and space-based communications.

1. Demonstrate proper radio-telephone communication.

2. Demonstrate communication security procedures.

C. Know the concepts of work, power and efficiency and their application to propulsion systems.

D. Know the basic operation, key components and safety considerations of propulsion systems.

E. Know the basic principles of auxiliary systems.

F. Know the basic principles of electrical power generation, distribution, and electrical safety.

G. Comprehend the factors and criteria for structural integrity and operational employment in platform design.

H. Know the operating principles and common uses of platform weapon systems.

I. Comprehend the basic theory and use of radar, sonar, and fire-control systems.

J. Comprehend the basic theory of electronic warfare systems.

K. Comprehend basic principles of fluid dynamics.

L. Comprehend the concepts of conservation of linear momentum, conservation of angular momentum, ballistics, corrosion and chemical corrosion control, and characteristics of air.

VII. NAVAL WARFARE. Know major aspects of the U.S. position on International Law of the Sea regarding territorial seas, contiguous zones, high seas and rights of innocent passage.

VIII. MARITIME PROFICIENCY

- A. Know terms, nomenclature and use of shipboard deck equipment and fittings.
- B. Comprehend shipboard safety and preparedness.
- C. Demonstrate shipboard damage control.
 - 1. Know the typical shipboard damage control organization and responsibilities of key personnel assigned.
 - 2. Know how shipboard watertight integrity is obtained through installed shipboard features to increase material conditions of readiness.
 - 3. Know the procedures, objectives and priorities in combating progressive deterioration from fire and underwater hull damage.
 - (a) Know classes of fire and agents, equipment, and procedures used to extinguish them.
 - (b) Know the use of equipment, materials and procedures for countering progressive flooding and structural deterioration.
 - 4. Know the procedures for donning and doffing damage control breathing equipment.
- D. Know the basic terms and procedures associated with replenishment at sea.
- E. Comprehend the theory and practice of navigation at sea.
 - 1. Comprehend the longitude/time relationship
 - 2. Demonstrate time conversion and time zone determination
 - 3. Know the correct procedures to determine the time of sunrise and sunset.
 - 4. Know the theory and use of electronic navigation systems.
 - (a) Know basic principles of radar navigation.
 - (b) Comprehend operating principles of GPS and navigation chart datum.

5. Comprehend the uses of navigational datums and the various chart projections.
6. Know chart symbology particularly those symbols pertaining to hazards and dangers.
7. Know how to select the proper charts (both paper and electronic) and how to determine chart accuracy and reliability.
8. Apply correct plotting procedures when navigating in pilot water.
 - (a) Apply the six rules of dead reckoning in keeping a plot of ship movements.
 - (b) Comprehend the definitions of the terms: track, speed of advance, speed over ground, PIM, EP, LOP, and relative bearing.
 - (c) Know turn and danger bearings.
 - (d) Demonstrate the ability to plot and interpret fixes and running fixes.
9. Know the advantages, disadvantages, and applications of gyro and magnetic compasses.
 - (a) Apply terrestrial navigation methods to determine compass error.
 - (b) Apply magnetic variation to a given location.
 - (c) Know the concept of deviation and the use of the digital flux gate magnetic compass.
10. Know the capabilities and limitations of various instruments used in piloting to determine direction, speed, distance, and depth of water.
11. Know the essential publications and records used in navigation and comprehend their value.
12. Know the characteristics and application of various aids to navigation in piloting and comprehend their importance in safe navigation, including:
 - (a) buoyage systems – IALA
 - (b) lights/daymarkers

(c) radar beacons/markers

13. Apply correct procedures in planning and plotting approaches to harbors and anchorages.

14. Comprehend tidal action and know tide classifications and reference planes.

15. Demonstrate the ability to use the Current Triangle to find course made good, speed made good, set, drift and compensating course and speed to negate set and drift.

16. Know terms associated with the Terrestrial Coordinate System; equator, prime meridian, great circles, small circles, parallels, meridians, latitude, longitude, and rhumb lines.

F. Know environmental weather factors affecting Naval operations.

G. Know the sources of environmental products/predictions/ forecasts available to Naval units underway.

H. Know the impact of hazardous weather conditions on surface and flight operations at sea.

I. Know controllable and non-controllable forces in shiphandling.

1. Know the effects of controllable forces in shiphandling such as engines, rudders, propellers, lines, anchors and tugs.

2. Know the effects of non-controllable forces in shiphandling such as wind, current, depth of water, etc.

3. Demonstrate the ability to issue standard commands for engines, rudder, and line handling.

J. Comprehend relative motion and demonstrate capability to solve problems associated with relative motion.

1. Comprehend the theory of relative motion as graphically displayed by the geographic and relative plot.

2. Comprehend the significance of bearing drift and apply bearing drift to determine relative motion.

3. Demonstrate the ability to compute target angle.
4. Comprehend the speed triangle and the relative plot associated with maneuvering board.
5. Demonstrate the use of the maneuvering board to accurately:
 - (a) Determine the closet point of approach (CPA) and time of CPA of an approaching vessel.
 - (b) Determine the true course and true speed of a maneuvering ship.
 - (c) Determine course, speed, and time for proceeding to a new station or to intercept another vessel.
 - (d) Determine true wind direction and velocity.
 - (e) Determine course and speed to produce desired wind.
 - (f) Determine an avoidance course of a given target.
- K. Know the Rules of the Road preventing collisions at sea.
- L. Know the use of ATP-I Volume II and the International Code of Signals (HO-102).
- M. Know various systems for internal shipboard communications and demonstrate proper sound-powered phone procedures.
- N. Demonstrate the skills required for a Skipper 'B' Qualification.

APPENDIX B
NAVAL RESERVE OFFICERS TRAINING CORPS (NAVY OPTION)

NROTC is a multi-year program that runs concurrently with a student's normal college or university educational course of study. In addition to a normal academic workload leading to a baccalaureate degree, NROTC students attend classes in Naval Science, participate in the NROTC unit for drill, physical training, and other activities, and are taught the leadership principles and high ideals of a military officer. Due to the high expectations and level of training each NROTC midshipman receives, they are required to complete the following requirements in addition to those listed within Parts I through IX in order to receive a commission:

I. ACADEMIC STANDARDS Satisfactorily complete the following scholastic requirements:

A. One semester, or equivalent, covering World Culture and Regional Studies or a foreign language.

B. Two semesters, or equivalent, of calculus for Scholarship Midshipmen or college algebra or higher for level mathematics for College Program Midshipmen and nurses.

C. Two semesters, or equivalent, of calculus-based physics for Scholarship Midshipmen or two semesters, or equivalent of physical science for College Program Midshipmen.

D. Complete all requirements as delineated within other pertinent instruction(s).

VI. TECHNICAL FOUNDATIONS

A. Demonstrate proper handling and firing of U.S. service small arms using current safety procedures.

B. Know the use of computers, electronic, and space-based communications.

1. Demonstrate proper radio-telephone communication.

2. Demonstrate communication security procedures.

C. Know the concepts of work, power and efficiency and their application to propulsion systems.

D. Know the basic operation, key components and safety considerations of propulsion systems.

E. Know the basic principles of auxiliary systems.

F. Know the basic principles of electrical power generation, distribution, and electrical safety.

G. Comprehend the factors and criteria for structural integrity and operational employment in platform design.

H. Know the operating principles and common uses of platform weapon systems.

I. Comprehend the basic theory and use of radar, sonar, and fire-control systems.

J. Comprehend the basic theory of electronic warfare systems.

K. Comprehend basic principles of fluid dynamics.

VII. NAVAL WARFARE. Know the major aspects of the U.S. position on International Law of the Sea regarding territorial seas, contiguous zones, high seas and rights of innocent passage.

VIII. MARITIME PROFICIENCY

A. Know terms, nomenclature and use of shipboard deck equipment and fittings.

B. Comprehend shipboard safety and preparedness.

C. Demonstrate shipboard damage control.

1. Know the typical shipboard damage control organization and responsibilities of key personnel assigned.

2. Know how shipboard watertight integrity is obtained through installed shipboard features to increase material conditions of readiness.

3. Know the procedures, objectives and priorities in combating progressive deterioration from fire and underwater hull damage.

(a) Know classes of fire and agents, equipment, and procedures used to extinguish them.

(b) Know the use of equipment, materials and procedures for countering progressive flooding and structural deterioration.

4. Know the procedures for donning and doffing damage control breathing equipment.

D. Know the basic terms and procedures associated with replenishment at sea.

E. Comprehend the theory and practice of navigation at sea.

1. Comprehend the longitude/time relationship

2. Demonstrate time conversion and time zone determination

3. Know the correct procedures to determine the time of sunrise and sunset.

4. Know the theory and use of electronic navigation systems.

(a) Know basic principles of radar navigation.

(b) Comprehend operating principles of GPS and navigation chart datum.

5. Comprehend the uses of navigational datums and the various chart projections.

6. Know chart symbology particularly those symbols pertaining to hazards and dangers.

7. Know how to select the proper charts (both paper and electronic) and how to determine chart accuracy and reliability.

8. Apply correct plotting procedures when navigating in pilot water.

(a) Apply the six rules of dead reckoning in keeping a plot of ship movements.

(b) Comprehend the definitions of the terms: track, speed of advance, speed over ground, PIM, EP, LOP, and relative bearing.

(c) Know turn and danger bearings.

(d) Demonstrate the ability to plot and interpret fixes and running fixes.

9. Know the advantages, disadvantages, and applications of gyro and magnetic compasses.

(a) Apply terrestrial navigation methods to determine compass error.

(b) Apply magnetic variation to a given location.

(c) Know the concept of deviation and the use of the digital flux gate magnetic compass.

10. Know the capabilities and limitations of various instruments used in piloting to determine direction, speed, distance, and depth of water.

11. Know the essential publications and records used in navigation and comprehend their value.

12. Know the characteristics and application of various aids to navigation in piloting and comprehend their importance in safe navigation, including:

(a) buoyage systems – IALA

(b) lights/daymarkers

(c) radar beacons/markers

13. Apply correct procedures in planning and plotting approaches to harbors and anchorages.

14. Comprehend tidal action and know tide classifications and reference planes.

15. Demonstrate the ability to use the Current Triangle to find course made good, speed made good, set, drift and compensating course and speed to negate set and drift.

F. Know environmental weather factors affecting Naval operations.

G. Know the sources of environmental products/predictions/ forecasts available to Naval units underway.

H. Know the impact of hazardous weather conditions on surface and flight operations at sea.

I. Know controllable and non-controllable forces in shiphandling.

1. Know the effects of controllable forces in shiphandling such as engines, rudders, propellers, lines, anchors and tugs.
2. Know the effects of non-controllable forces in shiphandling such as wind, current, depth of water, etc.
3. Demonstrate the ability to issue standard commands for engines, rudder, and line handling.

J. Comprehend relative motion and demonstrate capability to solve problems associated with relative motion.

1. Comprehend the theory of relative motion as graphically displayed by the geographic and relative plot.
2. Comprehend the significance of bearing drift and apply bearing drift to determine relative motion.
3. Demonstrate the ability to compute target angle.
4. Comprehend the speed triangle and the relative plot associated with maneuvering board.
5. Demonstrate the use of the maneuvering board to accurately:
 - (a) Determine the closet point of approach (CPA) and time of CPA of an approaching vessel.
 - (b) Determine the true course and true speed of a maneuvering ship.
 - (c) Determine course, speed, and time for proceeding to a new station or to intercept another vessel.
 - (d) Determine true wind direction and velocity.
 - (e) Determine course and speed to produce desired wind.
 - (f) Determine an avoidance course of a given target.

K. Know the Rules of the Road preventing collisions at sea.

L. Know the use of ATP-I Volume II and the International Code of Signals (HO-102).

M. Know various systems for internal shipboard communications and demonstrate proper sound-powered phone procedures.

N. Demonstrate the skills required for a Skipper 'B' Qualification.

APPENDIX C

NAVAL RESERVE OFFICERS TRAINING CORPS (MARINE OPTION)

NROTC is a multi-year program that runs concurrently with a student's normal college or university educational course of study. In addition to a normal academic workload leading to a baccalaureate degree, NROTC students attend classes in Naval Science, participate in the NROTC unit for drill and physical training, attend a six week Marine Officer Candidates School in Quantico, Virginia, and are generally taught the leadership principles and high ideals of a military officer. Due to the high expectations and level of training each NROTC midshipman receives, they are required to complete the following requirements in addition to those listed within Parts I through IX in order to receive a commission.

I. ACADEMIC STANDARDS. Complete all requirements as delineated within other pertinent instruction(s).

II. LEADERSHIP AND MANAGEMENT. Comprehend the general procedures for officer MOS selection, assignment, promotions and professional military education.

V. NAVAL HISTORY

A. Know the missions, status, and development of the Marine Corps as a separate service as outlined in the current edition of the Marine Corps Officer's Guide.

B. Know the Marine Corps history, interior guard and basic general military subjects in accordance with MCO 1510.89 w/Change 1 and MCO 1510.90.

VI. TECHNICAL FOUNDATIONS

A. Demonstrate proper handling and firing of U.S. service small arms using current safety procedures.

B. Know the essential subjects contained in the Marine Battle Skills Training Handbook series (based on MCO 1510.89 and MCO 1510.90).

C. Preparation for Officer Candidate School:

1. Demonstrate the ability to command a platoon sized unit in the basic movements of close order drill to include the manual of arms with the M16A2 service rifle as outlined in the Marine Battle Skills Training Handbook series (based on MCO 1510.90 and MCO 1510.97).

2. Know the operation of, and demonstrate the ability to, assemble, disassemble, care for, and clean the M16A2 service rifle in accordance with MCO 1510.89 w/ Ch 1.

3. Demonstrate the ability to control the movement of a fire team sized unit as outlined in MCO 1510.90, in accordance with task CPLX.14.8.

4. Demonstrate the ability to control the movement of a squad sized unit as outlined in MCO 1510.90, in accordance with task SGTX.14.4.

5. Demonstrate and apply the correct procedures in the use of the Marine Corps issue lensatic compass during day and night land navigation in accordance with MCO 1510.89 w/Change 1 and MCO 1510.90.

6. Know and comprehend the individual parts of a 1/25,000 military map and be able to apply that knowledge during actual land navigation exercises in accordance with MCO 1510.89 w/Change 1 and MCO 1510.90.

D. Successfully complete Marine Option 1/C cruise.

E. Apply all the skills outlined in this appendix through the conduct of field training. This training should be in preparation for OCS attendance.

VII. NAVAL WARFARE. Know the Marine Corps organization and structure as outlined in the current edition of the Marine Officer's Guide.

IX. FITNESS AND WELLNESS PROGRAMS

A. Know the requirements for and demonstrate the requisite level of physical conditioning necessary for Marine officers in order to lead a platoon of Marines under any circumstances.

B. Prepare for Officer Candidate School by demonstrating a level of physical conditioning that emphasizes total body fitness to include but not limited to the following:

1. Demonstrate the ability to force march at a 3 mph pace over a 5 mile cross country course with a load of 35 lbs.

2. Demonstrate the ability to run a 3-mile cross-country course wearing combat boots, utility trousers, a load-bearing vest or equivalent, and two full canteens.

3. Demonstrate the ability to climb a 25-foot vertical rope using the wrap around

technique after exerting the aerobic equivalent of negotiating a standard Marine Corps obstacle course.

4. Demonstrate the ability to score at least 225 on the Marine Corps PFT.

This page intentionally left blank

APPENDIX D STRATEGIC SEALIFT OFFICER

Department of Naval Science (DNS) is a multi-year program that runs concurrently with a student's normal college or university educational course of study. In addition to a normal academic workload, DNS students attend classes in Naval science, participate in the DNS unit for drill, physical training, and other activities, and are generally taught the leadership principles and high ideals of a military officer. Due to the high expectations and level of training each DNS student receives, they are required to complete the following requirements in addition to those listed within Parts I through IX in order to receive a commission:

I. ACADEMIC STANDARDS. Complete all requirements as delineated within other pertinent instruction(s).

VI. TECHNICAL FOUNDATIONS

A. Demonstrate proper handling and firing of U.S. service small arms using current safety procedures.

B. Know the use of computers, electronic, and space-based communications.

1. Demonstrate proper radio-telephone communication.

2. Demonstrate communication security procedures.

C. Know the concepts of work, power and efficiency and their application to propulsion systems.

D. Know the basic operation, key components and safety considerations of propulsion systems.

E. Know the basic principles of auxiliary systems.

F. Know the basic principles of electrical power generation, distribution, and electrical safety.

G. Comprehend the factors and criteria for structural integrity and operational employment in platform design.

H. Comprehend the basic theory and use of radar and sonar.

I. Comprehend basic principles of fluid dynamics.

VII. NAVAL WARFARE. Know major aspects of the U.S. position on International Law of the Sea regarding territorial seas, contiguous zones, high seas and rights of innocent passage.

VIII. MARITIME PROFICIENCY

A. Know terms, nomenclature and use of shipboard deck equipment and fittings.

B. Comprehend shipboard safety and preparedness.

C. Demonstrate shipboard damage control.

1. Know the typical shipboard damage control organization and responsibilities of key personnel assigned.

2. Know how shipboard watertight integrity is obtained through installed shipboard features to increase material conditions of readiness.

3. Know the procedures, objectives and priorities in combating progressive deterioration from fire and underwater hull damage.

(a) Know classes of fire and agents, equipment, and procedures used to extinguish them.

(b) Know the use of equipment, materials and procedures for countering progressive flooding and structural deterioration.

4. Know the procedures for donning and doffing damage control breathing equipment.

D. Know the basic terms and procedures associated with replenishment at sea.

E. Comprehend the theory and practice of navigation at sea.

1. Comprehend the longitude/time relationship

2. Demonstrate time conversion and time zone determination
3. Know the correct procedures to determine the time of sunrise and sunset.
4. Know the theory and use of electronic navigation systems.
 - (a) Know basic principles of radar navigation.
 - (b) Comprehend operating principles of GPS and navigation chart datum.
5. Comprehend the uses of navigational datums and the various chart projections.
6. Know chart symbology particularly those symbols pertaining to hazards and dangers.
7. Know how to select the proper charts (both paper and electronic) and how to determine chart accuracy and reliability.
8. Apply correct plotting procedures when navigating in pilot water.
 - (a) Apply the six rules of dead reckoning in keeping a plot of ship movements.
 - (b) Comprehend the definitions of the terms: track, speed of advance, speed over ground, PIM, EP, LOP, and relative bearing.
 - (c) Know turn and danger bearings.
 - (d) Demonstrate the ability to plot and interpret fixes and running fixes.
9. Know the advantages, disadvantages, and applications of gyro and magnetic compasses.
 - (a) Apply terrestrial navigation methods to determine compass error.
 - (b) Apply magnetic variation to a given location.
 - (c) Know the concept of deviation and the use of the digital flux gate magnetic compass.

10. Know the capabilities and limitations of various instruments used in piloting to determine direction, speed, distance, and depth of water.

11. Know the essential publications and records used in navigation and comprehend their value.

12. Know the characteristics and application of various aids to navigation in piloting and comprehend their importance in safe navigation, including:

(a) buoyage systems – IALA

(b) lights/daymarkers

(c) radar beacons/markers

13. Apply correct procedures in planning and plotting approaches to harbors and anchorages.

14. Comprehend tidal action and know tide classifications and reference planes.

15. Demonstrate the ability to use the Current Triangle to find course made good, speed made good, set, drift and compensating course and speed to negate set and drift.

F. Know environmental weather factors affecting Naval operations.

G. Know the sources of environmental products/predictions/ forecasts available to Naval units underway.

H. Know the impact of hazardous weather conditions on surface and flight operations at sea.

I. Know controllable and non-controllable forces in ship handling.

1. Know the effects of controllable forces in ship handling such as engines, rudders, propellers, lines, anchors and tugs.

2. Know the effects of non-controllable forces in ship handling such as wind, current, depth of water, etc.

3. Demonstrate the ability to issue standard commands for engines, rudder, and line handling.

J. Comprehend relative motion and demonstrate capability to solve problems associated with relative motion.

1. Comprehend the theory of relative motion as graphically displayed by the geographic and relative plot.

2. Comprehend the significance of bearing drift and apply bearing drift to determine relative motion.

3. Demonstrate the ability to compute target angle.

4. Comprehend the speed triangle and the relative plot associated with maneuvering board.

5. Demonstrate the use of the maneuvering board to accurately:

(a) Determine the closet point of approach (CPA) and time of CPA of an approaching vessel.

(b) Determine the true course and true speed of a maneuvering ship.

(c) Determine course, speed, and time for proceeding to a new station or to intercept another vessel.

(d) Determine true wind direction and velocity.

(e) Determine course and speed to produce desired wind.

(f) Determine an avoidance course of a given target.

K. Know the Rules of the Road preventing collisions at sea.

L. Know the use of ATP-I Volume II and the International Code of Signals (HO-102).

M. Know various systems for internal shipboard communications and demonstrate proper sound-powered phone procedures.

IX. FITNESS AND WELLNESS PROGRAMS

A. DNS MIDN not participating in an organized sport will attend PT 3x per week.

B. All DNS MIDN will be within physical readiness standards at commissioning or their commissions will be delayed.

APPENDIX E OFFICER CANDIDATE SCHOOL

OCS takes men and women from civilian and prior enlisted status and trains them to be competent, confident, disciplined Navy officers. Officer Candidates are on active duty in the U.S. Navy. They attend OCS for 12 weeks and receive specialized follow-on training to further prepare them for initial fleet assignment. Due to the mentally and physically demanding nature of OCS, Officer Candidates are required to complete the following requirements in addition to those listed within Parts I through IX in order to receive a commission:

IV. MILITARY CUSTOMS, TRADITIONS, AND REGULATIONS. Demonstrate proper execution of the officer's sword manual.

VI. TECHNICAL FOUNDATIONS

A. Demonstrate proper handling and firing of U.S. service small arms using current safety procedures.

B. Know the use of computers, electronic, and space-based communications.

1. Demonstrate proper radio-telephone communication.

2. Demonstrate communication security procedures.

C. Know the concepts of work, power and efficiency and their application to propulsion systems.

D. Know the basic operation, key components and safety considerations of propulsion systems.

E. Know the basic principles of auxiliary systems.

F. Know the basic principles of electrical power generation, distribution, and electrical safety.

G. Comprehend the factors and criteria for structural integrity and operational employment in platform design.

H. Know the operating principles and common uses of platform weapon systems.

I. Comprehend the basic theory and use of radar, sonar, and fire-control systems.

J. Comprehend the basic theory of electronic warfare systems.

K. Comprehend basic principles of fluid dynamics.

VII. NAVAL WARFARE. Know major aspects of the U.S. position on International Law of the Sea regarding territorial seas, contiguous zones, high seas and rights of innocent passage.

VIII. MARITIME PROFICIENCY

A. Know terms, nomenclature and use of shipboard deck equipment and fittings.

B. Comprehend shipboard safety and preparedness.

C. Demonstrate shipboard damage control.

1. Know the typical shipboard damage control organization and responsibilities of key personnel assigned.

2. Know how shipboard watertight integrity is obtained through installed shipboard features to increase material conditions of readiness.

3. Know the procedures, objectives and priorities in combating progressive deterioration from fire and underwater hull damage.

(a) Know classes of fire and agents, equipment, and procedures used to extinguish them.

(b) Know the use of equipment, materials and procedures for countering progressive flooding and structural deterioration.

4. Know the procedures for donning and doffing damage control breathing equipment.

D. Know the basic terms and procedures associated with replenishment at sea.

E. Comprehend the theory and practice of navigation at sea.

1. Comprehend the longitude/time relationship.
2. Demonstrate time conversion and time zone determination.
3. Know the correct procedures to determine the time of sunrise and sunset.
4. Know the theory and use of electronic navigation systems.
 - (a) Know basic principles of radar navigation.
 - (b) Comprehend operating principles of GPS and navigation chart datum.
5. Comprehend the uses of navigational datums and the various chart projections.
6. Know chart symbology particularly those symbols pertaining to hazards and dangers.
7. Know how to select the proper charts (both paper and electronic) and how to determine chart accuracy and reliability.
8. Apply correct plotting procedures when navigating in pilot water.
 - (a) Apply the six rules of dead reckoning in keeping a plot of ship movements.
 - (b) Comprehend the definitions of the terms: track, speed of advance, speed over ground, PIM, EP, LOP, and relative bearing.
 - (c) Know turn and danger bearings.
 - (d) Demonstrate the ability to plot and interpret fixes and running fixes.
9. Know the advantages, disadvantages, and applications of gyro and magnetic compasses.
 - (a) Apply terrestrial navigation methods to determine compass error.
 - (b) Apply magnetic variation to a given location.
 - (c) Know the concept of deviation and the use of the digital flux gate magnetic compass.

10. Know the capabilities and limitations of various instruments used in piloting to determine direction, speed, distance, and depth of water.

11. Know the essential publications and records used in navigation and comprehend their value.

12. Know the characteristics and application of various aids to navigation in piloting and comprehend their importance in safe navigation, including:

(a) buoyage systems – IALA

(b) lights/daymarkers

(c) radar beacons/markers

13. Apply correct procedures in planning and plotting approaches to harbors and anchorages.

14. Comprehend tidal action and know tide classifications and reference planes.

15. Demonstrate the ability to use the Current Triangle to find course made good, speed made good, set, drift and compensating course and speed to negate set and drift.

F. Know environmental weather factors affecting Naval operations.

G. Know the sources of environmental products/predictions/ forecasts available to Naval units underway.

H. Know the impact of hazardous weather conditions on surface and flight operations at sea.

I. Know controllable and non-controllable forces in shiphandling.

1. Know the effects of controllable forces in shiphandling such as engines, rudders, propellers, lines, anchors and tugs.

2. Know the effects of non-controllable forces in shiphandling such as wind, current, depth of water, etc.

3. Demonstrate the ability to issue standard commands for engines, rudder, and line handling.

J. Comprehend relative motion and demonstrate capability to solve problems associated with relative motion.

1. Comprehend the theory of relative motion as graphically displayed by the geographic and relative plot.

2. Comprehend the significance of bearing drift and apply bearing drift to determine relative motion.

3. Demonstrate the ability to compute target angle.

4. Comprehend the speed triangle and the relative plot associated with maneuvering board.

5. Demonstrate the use of the maneuvering board to accurately:

(a) Determine the closest point of approach (CPA) and time of CPA of an approaching vessel.

(b) Determine the true course and true speed of a maneuvering ship.

(c) Determine course, speed, and time for proceeding to a new station or to intercept another vessel.

(d) Determine an avoidance course of a given target.

K. Know the Rules of the Road preventing collisions at sea.

L. Know the use of ATP-I Volume II and the International Code of Signals (HO-102).

M. Know various systems for internal shipboard communications.

This page intentionally left blank

APPENDIX F OFFICER DEVELOPMENT SCHOOL

ODS provides Staff Corps Officers and Nuclear Power Instructors/Engineers with training necessary to prepare them to function in their role as newly commissioned Naval Officers. It provides a basic introduction into fundamental aspects of leadership while providing a working knowledge of available references. ODS participants attend a five week course and receive specialized follow-on training to further prepare them for initial fleet assignment. ODS is the foundation for success as a member of the Naval Officer Corps and as such participants are required to complete the following requirements in addition to those listed within Parts I through IX in order to receive a commission:

I. ACADEMIC STANDARDS. Officers attending Officer Development School must have obtained both academic degrees and professional licensure (as appropriate), before commencing training.

This page intentionally left blank

APPENDIX G
DIRECT COMMISSION OFFICER INDOCTRINATION COURSE

DCOIC provides Direct Commissioned Reserve Officers Military Indoctrination Training necessary to prepare DCOs to function in their role as newly commissioned Naval Officers. It provides a basic introduction into fundamental aspects of leadership while providing a working knowledge of available references. DCOIC participants attend a two week course and receive specialized follow-on training to further prepare them for initial fleet assignment.

This page intentionally left blank

APPENDIX H
LIMITED DUTY OFFICER/CHIEF WARRANT OFFICER INDOCTRINATION
SCHOOL

The LDO/CWO program provides an opportunity for senior enlisted personnel who possessed outstanding qualifications and motivation for further responsibility to obtain a commission. LDO/CWOs are highly respected technical managers and specialists, essential to the successful operation of modern Naval forces. The LDO/CWO Indoctrination School is designed to facilitate a newly selected LDO/CWO's introduction to the responsibilities of a Naval Officer and is the foundation for success as a member of the Naval Officer Corps and as such participants are required to complete the following requirements in addition to those listed within Parts I through IX in order to receive a commission:

III. **PROGRAMS AND POLICIES.** Know the policies and basic procedures required to develop, review, approve, implement and update Total Force manpower requirements and authorizations for all naval activities.

V. **NAVAL HISTORY.** Know the history and heritage of the LDO/CWO program.

OFFICER PROFESSIONAL
CORE COMPETENCIES
MANUAL – SEPTEMBER 2011

This page intentionally left blank

APPENDIX I FEEDBACK PROCEDURES

A. This appendix provides for a Professional Core Competencies Manual feedback/response system whereby individual units, ISICs, CLASSRONs, training commands and enterprises may routinely communicate in a forthright and constructive dialogue.

B. Feedback:

1. Any unit may initiate a query about any aspect of the Professional Core Competencies Manual or make a recommendation for its improvement. These inputs should be sent directly to NSTC and USNA for consolidation and analysis. The following standard message format is provided:

FM (Submitting Command)
TO USNA ANNAPOLIS
NSTC GREAT LAKES IL
INFO (Chain of Command)
(Classification)
MSGID/GENADMIN/(Originator)//
SUBJ/PROFESSIONAL CORE COMPETENCIES FEEDBACK REPORT
REF/A/DOC/USNA/NSTC/MAY 2011
REF/B/(As Necessary)
NARR/PROFESSIONAL CORE COMPETENCIES MANUAL. (Other
references).//
POC/(Point of Contact)
RMKS/1. Briefly state problem or query (ensure remarks include area of PCC
affected).
2. Recommend corrective action.//
BT

This page intentionally left blank