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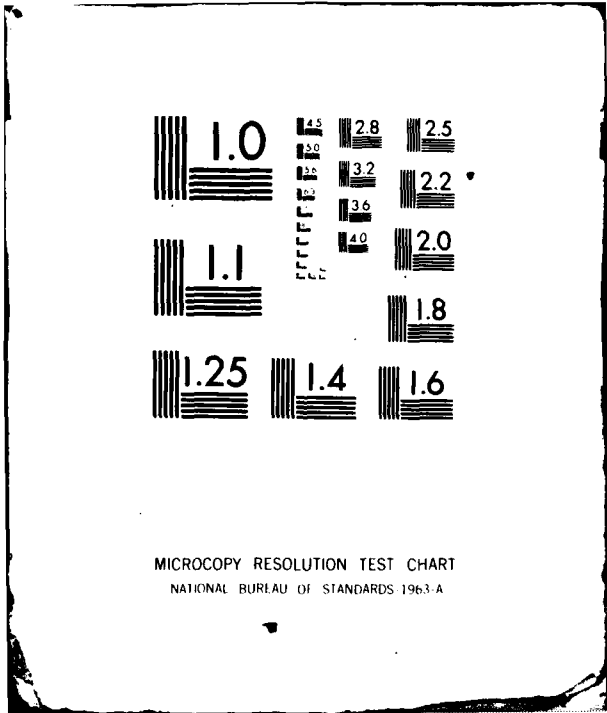
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DANTES REPORT 3-80

**CAPABILITY OF COLLEGES AND UNIVERSITIES
TO OFFER GRADUATE DEGREE PROGRAMS IN
SHORTAGE DISCIPLINES AS PART OF THE
MILITARY VOLUNTARY EDUCATION PROGRAMS**

AD A 093501

This Report is a Portion of the
Graduate Education Needs Assessment for Military Officers

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JUNE 1980

Prepared for the Assistant Secretary of Defense (MRA&L)
by the Director, Defense Activity for Non-Traditional Education Support

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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1.0 Summary	1
2.0 Purpose	2
3.0 Background	2
3.1 DoD policies on graduate education	2
3.2 HAC Report on FY79 DoD budget	3
3.3 ASD(MRA&L) request of 15 March 1979	3
4.0 Methods	4
4.1 Officer survey	4
4.1.1 Questionnaire	4
4.1.2 Population, delimitations, and sample	4
4.1.3 Method of contacting respondents	4
4.2 College and university survey	4
4.2.1 Questionnaires for education officers	4
4.2.2 Determination of respondents (major bases)	5
4.2.3 Method of contacting respondents	5
4.2.4 Confirmations with colleges	5
5.0 Results of college and university survey	5
5.1 Army findings	6
5.2 Navy findings	7
5.3 Marine Corps findings	8
5.4 Air Force Findings	9
6.0 Conclusions and recommendations	11
Appendix A College and university questionnaires	

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1.0 Summary

The Congress, in the House Appropriations Committee (HAC) Report on the FY79 DoD budget, recommended several actions to alleviate the high cost of full-time graduate education for officers. One recommendation was to give priority to tuition assistance funding for voluntary education in shortage disciplines. The question suggested by the HAC was whether officers would shift voluntarily from off-duty study in the administrative and social sciences to study in the shortage disciplines (primarily engineering and physical sciences). A related question was whether colleges and universities would be able to offer on-base or near-base master's degree programs in the shortage disciplines, after hours.

ASD(MRA&L) advised the HAC that a study on this matter would be made, but listed several recognized obstacles to off-campus on-base study in engineering and sciences, namely the lack of laboratories, computer facilities, and academic libraries. In addition, short tours of duty, prerequisites, and mandatory course sequencing make on-base, after-hours master's degree programs in the shortage disciplines less feasible and attractive than study in the administrative and social sciences.

ASD(MRA&L) tasked the Services to conduct a survey of a sample of junior officers to determine their interest in the disciplines in which there were the most extreme shortages of officers with master's degrees.

At the same time, DANTEs was tasked to conduct the college and university survey (the subject of this report) by sending questionnaires to education services officers of major bases to determine, first, what master's degree programs in the shortage disciplines are now offered on or near the bases after hours. Second, education officers were asked to inquire informally into the capability of on-base and nearby institutions to offer degree programs in shortage disciplines which were not marked affirmatively in response to the first question. The assumption was made, for the purpose of this survey, that there would be sufficient students to meet minimum class size requirements (with actual interest to be determined from the surveys of junior officers). DANTEs confirmed or deleted institutional capability to offer new graduate programs by contacting each institution which education services officers had listed.

Each of the four Services listed eleven shortage disciplines for investigation, so there could have been consideration of up to 44 disciplines. As might be expected, there was some commonality of shortage disciplines among the Services, so only 25 separate disciplines were investigated. The potential capability of colleges and universities to offer graduate programs in these disciplines varied from very low (one to six percent of bases), in specialized disciplines such as guided missile engineering and aeronautical engineering, to moderate (33 to 46 percent of bases), in procurement management and computer science. This potential capability should be viewed with caution because of the obstacles listed in the second paragraph above, and because it is anticipated that insufficient students may be interested in any specific degree program to meet minimum class size requirements at any given base.

The detailed findings of the college and university survey are contained in the body of this report, for the Services to compare with the findings of their junior officer surveys. It appears that there may be some opportunities to promote study in the shortage areas where there is a "match" between institutions' capability and officers' interest at any given base. However, such study (if non-traditional) must be of sufficient rigor to support acceptance by regional accrediting commissions and to meet other requirements of DoD Directive 1322.8 of 4 February 1980.

Lack of a match between the institutions' capability and officers' interest, and lack of exportable non-traditional programs, supports continued funding of full-time education in the remaining disciplines surveyed in this study.

2.0 Purpose

The principal purpose of this report is to explain and support the continued appropriation of tuition assistance funds without legislative restrictions beyond those which are now in force. An additional purpose of this report, by inference, is to support continued appropriation of funds for full-time graduate education for officers in required disciplines.

A second purpose of this report is to provide information to the Services for (1) comparison with findings in their junior officer surveys and (2) initiation of new on-base graduate programs where feasible.

3.0 Background

The use of tuition assistance funds for graduate study by officers is discussed in DoD policy, in Congressional reports, and in a recent comprehensive DoD report, as described below.

3.1 DoD policies on graduate education

It is DoD policy that military personnel shall be encouraged to use voluntary education programs to develop educationally and professionally in order to: enhance their military effectiveness; prepare for positions of greater responsibility; and, prepare for productive postservice careers. (DoD Directive 1322.8 of 4 February 1980, Voluntary Educational Programs for Military Personnel, refers.)

Additionally, it is DoD policy to encourage military personnel to develop educationally through voluntary participation in educational programs using educational benefits and Service tuition assistance, because budgetary constraints mandate the expansion of off-duty and work/study programs as less costly alternative sources of graduate educated personnel. Individuals selected for full-time funded graduate education are expected to share a portion of the cost through completion of as much of the course of study as possible through off-duty programs prior to entrance into the related fully funded program, because certain advantages

of in-service graduate education accrue to the students as well as to the DoD. Military departments are to decrease the dependence on fully funded graduate education programs through the expansion of off-duty opportunities wherever possible. Personnel shall be counseled on the specific graduate educational needs of the Military Services. Where possible, tours of duty should be extended to permit completion of off-duty courses of study when, in the opinion of the Service, such extension benefits the Military Service as well as the individual. The Military Departments shall encourage the maximum amount of transferable credit and undergraduate deficits through off-duty and/or correspondence study prior to assignment to full-time study; wherever possible, the Services shall use such completion as a preference factor in personnel selection for educational opportunities. (DoD Directive 1322.10 of 30 July 1974, Policies on Graduate Education for Military Officers, refers.)

3.2 HAC Report on FY79 DoD budget

The House Report of the Committee on Appropriations directed the Department of Defense to submit a report on DoD plans for implementing several recommendations, including: "In conjunction with establishing a system of specific educational objectives for individual officers, implement a system of priorities for the use of tuition assistance funds for education and training in specific shortage areas."

This Congressional interest is not new. In October 1975, the Director of Defense Education in OASD(M&RA) cited a HAC Report which included, "The Department of Defense programs, both full-time and tuition assistance, must directly support the current needs of the Department." The Report contrasted tuition assistance with VA programs which provide "for the personal benefit and satisfaction of the officer." (DANTES Information Bulletin No. 1 of 7 November 1975, refers.)

3.3 ASD(MRA&L) request of 15 March 1979

ASD(MRA&L) prepared a comprehensive report to the HAC on "Graduate Education in the Department of Defense" in March 1979. The report noted that the current rate of inputs to fully funded programs will support less than half of the billet requirements which have been validated at the graduate level, and that approximately 50 percent of the inputs are in engineering and physical sciences. However, OSD saw little potential for making up the shortfall by voluntary education funded by tuition assistance or VA benefits. The problem of generating officers with advanced degrees in hard technical disciplines was foreseen as particularly serious because part-time work in on-base facilities is impractical due to a lack of adequate laboratories, computers, and libraries. Nevertheless, OSD saw some potential in attempting to persuade colleges and universities to offer more degree programs that are job relevant, and advised the HAC that DoD would initiate a study in this area.

The ASD(MRA&L) in his letter of 15 March 1979 directed the Military Departments to, "Conduct a needs analysis at military bases to determine if military personnel would participate in off-duty instruction in academic disciplines needed to meet Service education requirements if these subjects were offered by civilian colleges and universities."

In meetings convened by OSD in April through June 1979, DANTES was requested to develop two standardized questionnaires (one for officers and one for universities) to investigate officers' willingness to take off-duty courses in disciplines where there are shortages of graduate-educated officers. Demographic information was to be obtained in the officer survey, then attitudinal information such as, "If you could be assured of assignment to a base which has graduate-coded engineering positions, would you enroll in off-duty courses in the appropriate discipline?" Additionally, it was necessary to determine a method of surveying specific universities regarding their capability to provide graduate engineering education to on-base off-duty students. Appropriate questionnaires were designed by DANTES and were edited and approved by representatives of the Services and OSD.

4.0 Methods. Separate methods were devised for conducting the officer survey and the college and university survey.

4.1 Officer survey

4.1.1 Questionnaire

The questions used in the officer survey were drafted by DANTES, edited by the Services, and approved by OSD.

4.1.2 Population, delimitations, and sample

The officer population was defined as active duty O-1 through O-4 (that is, those who would have been eligible for full-time fully-funded graduate education), less LDO's, and less medical/dental/veterinary/chaplain/JAG officers. The survey included those who may already hold graduate degrees, either service-required or not. The population excluded those officers who had less than a bachelor's degree. A 10% sample was to be drawn.

4.1.3 Method of contacting respondents

The Services conducted the officer survey through their own Survey Branches. Services were to report their officer survey results directly to OSD by 1 March 1980, pursuant to instruction from DASD(PM). (ASD(MRA&L)/PM letter of 18 September 1979 refers.)

4.2 College and university survey

4.2.1 Questionnaires for education officers

The college and university survey consisted of mailed, closed-form questionnaires. The questionnaires were drafted by DANTES, edited by the Services, and approved by OSD. The questionnaires are essentially the same for each of the four Services, except for the lists of shortage disciplines. Copies of the questionnaires appear as Appendix A.

4.2.2 Determination of respondents (major bases)

The questionnaires were sent to education services officers of "major" bases worldwide, as specifically defined by each Service. These were:

Army: Those bases which had DANTES Testing Sections
Navy: NCFA Education Specialists, not ships
Marine Corps: Marine Corps education centers
Air Force: Bases which are listed in AF PAM 213-2

4.2.3 Method of contacting respondents

Questionnaires were mailed from DANTES using computer-generated address labels. Questionnaires were returned to DANTES by mail, by re-folding the questionnaire sheets to expose the pre-printed return address. Returns were checked-off, counted, and accepted until the number received each day became less than one. There were 240 questionnaires returned out of 450 mailed, or a 53% return. This supports a 95% level of confidence in the response, assuming homogeneous distribution, according to the sampling table in ATC Regulation 52-1.

4.2.4 Confirmations with colleges

Where education services officers' local (unofficial) inquiries indicated that a graduate program could be offered on or near base after-hours, an "X" was placed in Column 3 of the questionnaire and the name of the institution was written next to the "X." It was suggested by OSD that DANTES could increase the validity of the responses to Column 3 by contacting home campuses of institutions so listed to confirm or delete potential capability to offer the degree program(s) in question. Forty-two (42) institutions were contacted for this purpose; contact was by telephone, usually with deans of graduate schools or equivalent officials. This process reduced the number of affirmative replies in Column 3 from 195 to 117. (This reduction demonstrates the value of DANTES making the confirmation inquiries to the institutions.)

5.0 Results of college and university survey

The capability of colleges and universities to offer graduate programs in shortage disciplines on or near bases (including at European and Far Eastern locations), as part of voluntary education programs, is shown by Service in the tables below. The list of institutions, however, includes institutions which responded affirmatively to any base or Service as being able to offer the degree program shown. In each Service listing below, Column A is the percentage of bases where the program is now available on-base or within 25 miles of the base during off-duty time. (Thus, Column A is the sum of Columns (1) and (2) of the questionnaire, with any duplication between the two columns in the questionnaire removed.) Column B below is the additional percentage of bases where the program could be offered if there were sufficient interested students. The institutions are those which indicated that they have the potential to offer the program, subject to formal internal approval. (It is recognized that these lists of institutions may omit those which are also possible participants, for example, those which are located near bases which did not respond to this survey.)

5.1 Army findings

<u>MASTER'S PROGRAM IN:</u>	<u>(A)</u>	<u>(B)</u>	<u>POTENTIAL INSTITUTIONS:</u>
Operations research (eng.)	16%	7%	AMERICAN TECH UNIV, TX FLORIDA INST OF TECH GEORGE WASH UNIV, DC GEORIGIA INST OF TECH TROY STATE UNIV, AL UNIV OF DENVER, CO UNIV OF MISSOURI-ROLLA UNIV OF NEB-LINCOLN UNIV OF NORTH DAKOTA UNIV OF SOUTHERN CALIF UNIV OF UTAH
Area studies	14%	8%	BOSTON UNIV, MA UNIV OF MARYLAND
Comptrollership	7%	3%	EAST CAROLINA UNIV, NC UNIV OF COLO AT DENVER UNIV OF HAWAII
Engineering electronics	11%	3%	TEXAS A&I UNIV UNIV OF COLO AT DENVER UNIV OF HAWAII UNIV OF MISSOURI-ROLLA UNIV OF NEVADA-RENO
Journalism	8%	4%	UNIV OF MARYLAND UNIV OF NEVADA-RENO UNIV OF SOUTHERN CALIF
Aeronautical engineering	4%	2%	GEORGE WASH UNIV, DC UNIV OF MISSOURI-ROLLA
Guided missile eng.	1%	0%	(None reported)
Nuclear physics	2%	1%	FLORIDA ST UNIV NEW MEXICO ST UNIV S DAK SCL MINES/TECH UNIV OF MISSOURI-ROLLA
Engineering ADPS	10%	1%	BOSTON UNIV, MA EAST CAROLINA UNIV, NC GEORGIA INST OF TECH HARTFORD GRAD CTR, CT NEW MEXICO ST UNIV SYRACUSE UNIV, NY TEXAS A&I UNIV UNIV OF HAWAII UNIV OF NORTH DAKOTA UNIV OF OKLAHOMA

Geodetic science	2%	0%	(None reported)
Procurement management	10%	8%	BOSTON UNIV, MA NORTHWESTERN ST U OF LA TROY ST UNIV, AL WEBSTER COLL, MO

5.2 Navy findings

<u>MASTER'S PROGRAM IN:</u>	<u>(A)</u>	<u>(B)</u>	<u>POTENTIAL INSTITUTIONS:</u>
Elec. & mech eng.	41%	5%	NORTH CAROLINA ST UNIV S DAK SCL MINES/TECH TEXAS A&I UNIV UNIV OF HAWAII UNIV OF NEB-LINCOLN UNIV OF OKLAHOMA UNIV OF UTAH
Electronic engineering	18%	5%	TEXAS A&I UNIV UNIV OF COLO AT DENVER UNIV OF HAWAII UNIV OF MISSOURI-ROLLA
Aeronautical engineering	10%	0%	GEORGE WASH UNIV, DC UNIV OF MISSOURI-ROLLA
Computer systems technology	38%	8%	BOSTON UNIV, MA EAST CAROLINA UNIV, NC GEORGIA INST OF TECH HARTFORD GRAD CTR, CT NEW MEXICO ST UNIV SYRACUSE UNIV, NY TEXAS A&I UNIV UNIV OF HAWAII UNIV OF NORTH DAKOTA UNIV OF OKLAHOMA
Civil engineering	28%	5%	TEXAS A&I UNIV UNIV OF HAWAII
Communications engineering	5%	3%	GEORGE WASH UNIV, DC
Naval arch. & marine eng.	5%	0%	(None reported)
Manpower/personnel analysis	33%	10%	CALIF ST UNIV-HAYWARD GEORGE WASH UNIV, DC UNIV OF HAWAII UNIV OF SOUTHERN CALIF

Supply Management	33%	10%	CALIF ST UNIV-HAYWARD GEORGE WASH UNIV, DC TROY ST UNIV, AL
Procurement management	28%	5%	BOSTON UNIV, MA NORTHWESTERN ST U OF LA TROY STATE UNIV, AL WEBSTER COLL, MO
Geophysics	15%	3%	FLORIDA ST UNIV S DAK SCL MINES/TECH UNIV OF HAWAII UNIV OF UTAH

5.3 Marine Corps findings

<u>MASTER'S PROGRAM IN:</u>	<u>(A)</u>	<u>(B)</u>	<u>POTENTIAL INSTITUTIONS:</u>
Electronics engineering	18%	0%	TEXAS A&I UNIV UNIV OF COLO AT DENVER UNIV OF HAWAII UNIV OF MISSOURI-ROLLA UNIV OF NEVADA-RENO
Computer science (or eng.)	18%	9%	BOSTON UNIV, MA EAST CAROLINA UNIV, NC GEORGIA INST OF TECH HARTFORD GRAD CTR, CT NEW MEXICO ST UNIV SYRACUSE UNIV, NY TEXAS A&I UNIV UNIV OF HAWAII UNIV OF NORTH DAKOTA UNIV OF OKLAHOMA
Communications engineering	0%	0%	GEORGE WASH UNIV, DC
Data systems management	9%	9%	UNIV OF HAWAII
Operations analysis	9%	0%	AMERICAN TECH UNIV, TX FLORIDA INST OF TECH GEORGE WASH UNIV, DC GEORGIA INST OF TECH TROY ST UNIV, AL UNIV OF DENVER, CO UNIV OF MISSOURI-ROLLA UNIV OF NEB-LINCOLN UNIV OF NORTH DAKOTA UNIV OF SOUTHERN CALIF UNIV OF UTAH

Aeronautical engineering	0%	0%	GEORGE WASH UNIV, DC UNIV OF MISSOURI-ROLLA
Facilities management	0%	9%	UNIV OF HAWAII
Nuclear engineering	0%	0%	FLORIDA ST UNIV NEW MEXICO ST UNIV S DAK SCL MINES/TECH UNIV OF MISSOURI-ROLLA
Financial management	18%	18%	EAST CAROLINA UNIV, NC UNIV OF COLO AT DENVER UNIV OF HAWAII
Communications management	27%	0%	(None reported)

5.4 Air Force findings

<u>MASTER'S PROGRAM IN:</u>	<u>(A)</u>	<u>(B)</u>	<u>POTENTIAL INSTITUTIONS:</u>
Electrical engineering	35%	5%	NORTH CAROLINA ST UNIV S DAK SCL MINES/TECH TEXAS A&I UNIV UNIV OF HAWAII UNIV OF NEB-LINCOLN UNIV OF OKLAHOMA UNIV OF UTAH
Meteorology	8%	3%	FLORIDA ST UNIV S DAK SCL MINES/TECH UNIV OF HAWAII UNIV OF UTAH
Facilities management	12%	0%	UNIV OF HAWAII
Criminology/police admin.	30%	16%	CHAPMAN COLL, CA GOLDEN GATE UNIV, CA OKLAHOMA CITY UNIV TROY ST UNIV, AL UNIV OF MARYLAND WEBSTER COLL, MO
Transportation management	9%	5%	GOLDEN GATE UNIV, CA UNIV OF SOUTHERN CALIF
Computer technology	30%	7%	BOSTON UNIV, MA EAST CAROLINA UNIV, NC GEORGIA INST OF TECH HARTFORD GRAD CTR, CT

Computer technology (continued)			NEW MEXICO ST UNIV SYRACUSE UNIV, NY TEXAS A&I UNIV UNIV OF HAWAII UNIV OF NORTH DAKOTA (minor only) UNIV OF OKLAHOMA
Engineering management	23%	4%	LOUISIANA ST UNIV S DAK SCL MINES/TECH UNIV OF NEB-LINCOLN UNIV OF NEW HAMPSHIRE
Systems mgt. (quantitative)	26%	9%	AMERICAN TECH UNIV, TX FLORIDA INST OF TECH GEORGE WASH UNIV, DC GEORGIA INST OF TECH TROY ST UNIV, AL UNIV OF DENVER, CO UNIV OF MISSOURI-ROLLA UNIV OF NEB-LINCOLN UNIV OF NORTH DAKOTA UNIV OF SOUTHERN CALIF UNIV OF UTAH
Industrial engineering	23%	5%	AUBURN UNIV, AL LOUISIANA ST UNIV NEW MEXICO ST UNIV NORTH CAROLINA ST UNIV UNIV OF NEB-LINCOLN
Physics	28%	3%	FLORIDA ST UNIV NEW MEXICO ST UNIV S DAK SCL MINES/TECH UNIV OF MISSOURI-ROLLA
Aeronautical engineering	12%	0%	GEORGE WASH UNIV, DC UNIV OF MISSOURI-ROLLA

6.0 Conclusions and recommendations

The potential capability of colleges and universities to offer graduate degree programs in the Services' shortage disciplines varies from very low (one to six percent of bases), in specialized disciplines such as guided missile engineering and aeronautical engineering, to moderate (33 to 46 percent of bases), in procurement management and computer science. This potential capability should be viewed with caution because of the obstacles listed in Section 1.0, and because it is anticipated that insufficient students may be interested in any specific degree program to meet minimum class size requirements at any given base.

There are several recommended actions which each of the four Services can take in order to focus the expenditure of tuition assistance funds for officers to graduate study in shortage disciplines. The recommendations are:

(1) That the directors of the Services' voluntary education programs compare the findings of this report with the findings of their surveys of junior officers, to determine where there is a match between officers' interests and institutions' capabilities. Where there is a match, it is recommended that a circular (notice, bulletin, policy letter) be promulgated, encouraging the initiation of appropriate on-base or near-base degree programs. Attention is invited to DoD Directive 1322.8 of 4 February 1980, particularly with regard to basing education programs on needs assessments and to relying on in-state institutions where possible. Such circulars should be revised when changes in individual Services' shortage area listings occur, approximately annually.

(2) That Services, their major commanders, and base commanders encourage education services officers to use the findings in section 5.0 to initiate contacts with college and university representatives, to arrange degree programs in shortage areas for interested personnel. DANTEs will assist any interested base by providing the names of points-of-contact at institutions who were contacted in connection with this survey. (DANTEs action officer is Head, Higher Education Programs Branch, AUTOVON 922-1085.)

(3) That the Services state in their regulations that completion of prerequisite and preliminary graduate coursework through prior off-duty voluntary education will be a positive selection factor for on-duty post-graduate education. (This is a requirement of DoD Directive 1322.10 of 30 July 1974.)

(4) That the Services implement positive procedures which encourage tours of duty to be extended to permit completion of off-duty courses of study, when such extension benefits the Service as well as the individual. (This is a requirement of DoD Directive 1322.10 of 30 July 1974.) (It is understood that Air Force regulations provide for an educational deferment personnel "hold," code 05, for individuals who certify that they are within one year of degree completion in voluntary education programs.)

DANTES, August 1979

To: ARMY EDUCATION SERVICES OFFICERS

The Army has identified the academic disciplines in which there are validated requirements for officers with graduate education. Certain disciplines have actual or projected shortages of qualified officers, and it appears that the full-time graduate program will not be able to overcome these shortages in the near future. These shortage areas are particularly related to engineering, mathematics, and the physical sciences. The eleven disciplines with the most severe shortages are listed below. This survey is being made to determine if on-base or other in-state accredited colleges and universities, or those cooperating institutions which now serve your base, have the ability to offer master's degree programs in these disciplines. The responses will be used by DA in planning potential voluntary education programs.

Please review your on-base degree programs and catalogs and class schedules of nearby and cooperating institutions. Mark an "X" wherever appropriate in columns (1) and/or (2), to indicate that the program is available now.

Then, contact representatives from on-base and nearby institutions to determine their interest in offering the programs listed below which were not marked in columns (1) or (2). Assume, for the purpose of this survey, that there would be sufficient students to form classes, and that present institution and base facilities are sufficient. Mark an "X" in column (3) by those programs which, in your best judgment, probably could be made available on or near your base during off-duty time. Beside any program marked in column (3), print the name of the institution which indicated interest.

After filling in this questionnaire, re-fold and staple it, and MAIL IT TO DANTES BY 1 OCTOBER 1979.

MASTER'S PROGRAM IN:	(1) AVAILABLE ON-BASE DURING OFF-DUTY TIME	(2) AVAILABLE WITHIN 25 MILES DURING OFF-DUTY TIME	(3) COULD BE MADE AVAILABLE DURING OFF-DUTY TIME	NAME OF UNIVERSITY WHOSE INTEREST IS INDICATED BY "X" IN COLUMN (3):
Ops. Research/Systems Analysis (Engineering)				
Area Studies				
Comptrollership				
Engineering Electronics				
Journalism				
Aeronautical Engineering				
Guided Missile Engineering				
Nuclear Physics				
Engineering ADPS				
Geodetic Science				
Procurement Management				

Print name of person filling in form ... and

... AUTOVON number

Organizational title and rank/grade

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**GRADUATE EDUCATION
NEEDS ASSESSMENT**

To: Army Education Services Officers

The Department of Defense, with the cooperation of each of the military services, is conducting surveys to determine if colleges and universities might be able to offer certain master's degree programs on or near military bases. The programs of interest are those in disciplines (majors) for which the services have validated requirements, but have actual or projected shortages of qualified officers.

Please fill in this questionnaire and mail it to DANTES. The results will be tabulated and forwarded to the appropriate Service Chiefs for further consideration.

Contact Mr. Rose (DANTES, Code 21) at AUTOYON 922-1085 if you need information about this survey.

**COMPLETION BY 1 OCTOBER 1979 IS
REQUESTED.**

(A separate questionnaire is being sent to a sample of officers, to determine their preferences for study in these disciplines.)

DANTES [Code 21]
Pensacola, FL 32509

POSTAGE AND FEES PAID
DEPARTMENT OF THE NAVY
DOD 316



DANTES, August 1979

To: NCFA Education Specialists

The Navy has identified the academic disciplines in which there are validated requirements for officers with graduate education. Certain disciplines have actual or projected shortages of qualified officers, and it appears that the full-time graduate program will not be able to overcome these shortages in the near future. These shortage areas are particularly related to engineering, mathematics, and the physical sciences. The eleven disciplines with the most severe shortages are listed below. This survey is being made to determine if on-base or other in-state accredited colleges and universities, or those cooperating institutions which now serve your base, have the ability to offer master's degree programs in these disciplines. The responses will be used by CNO in planning potential voluntary education programs.

Please review your on-base degree programs and catalogs and class schedules of nearby and cooperating institutions. Mark an "X" wherever appropriate in columns (1) and/or (2), to indicate that the program is available now.

Then, contact representatives from on-base and nearby institutions to determine their interest in offering the programs listed below which were not marked in columns (1) or (2). Assume, for the purpose of this survey, that there would be sufficient students to form classes, and that present institutions and base facilities are sufficient. Mark an "X" in column (3) by those programs which, in your best judgment, probable could be made available on or near your base during off-duty time. Beside any program marked in column (3), print the name of the institution which indicated interest.

After filling in this questionnaire, re-fold and staple it, and MAIL IT TO DANTES BY 1 OCTOBER 1979.

MASTER'S PROGRAM IN:	(1) AVAILABLE ON-BASE DURING OFF-DUTY TIME	(2) AVAILABLE WITHIN 25 MILES DURING OFF-DUTY TIME	(3) COULD BE MADE AVAILABLE DURING OFF-DUTY TIME	NAME OF UNIVERSITY WHOSE INTEREST IS INDICATED BY "X" IN COLUMN [3]:
Electrical & Mechanical Engineering				
Electronic Engineering				
Aeronautical Engineering				
Computer Systems Technology				
Civil Engineering				
Communications Engineering				
Naval Architecture & Marine Engineering				
Manpower/Personnel Analysis				
Supply Management				
Procurement Management				
Geophysics				

Print name of person filling in form ... and

... AUTOVON number

Organizational title and rank/grade

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EDUCATION SUPPORT (DANTES)
PENSACOLA, FL 32509
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$ 300



**GRADUATE EDUCATION
NEEDS ASSESSMENT**

To: NCEA Education Specialists

The Department of Defense, with the cooperation of each of the military services, is conducting surveys to determine if colleges and universities might be able to offer certain master's degree programs on or near military bases. The programs of interest are those in disciplines (majors) for which the services have validated requirements, but have actual or projected shortages of qualified officers.

Please fill in this questionnaire and mail it to DANTES. The results will be tabulated and forwarded to the appropriate Service Chiefs for further consideration.

Contact Mr. Rose (DANTES, Code 21) at AUTOVON 922-1065 if you need information about this survey.

**COMPLETION BY 1 OCTOBER 1979 IS
REQUESTED.**

(A separate questionnaire is being sent to a sample of officers to determine their preferences for study in these disciplines.)

DANTES
(Code 21)
Pensacola, FL 32509

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DOD 316



DANTES, August 1979

To: MARINE CORPS EDUCATION OFFICERS

The Marine Corps has identified the academic disciplines in which there are validated requirements for officers with graduate education. Certain disciplines have actual or projected shortages of qualified officers, and it appears that the full-time graduate program will not be able to overcome these shortages in the near future. These shortage areas are particularly related to engineering, mathematics, and the physical sciences. The eleven disciplines with the most severe shortages are listed below. This survey is being made to determine if on-base or other in-state accredited colleges and universities, or those cooperating institutions which now serve your base, have the ability to offer master's degree programs in these disciplines. The responses will be used by HQMC in planning potential voluntary education programs.

Please review your on-base degree programs and catalogs and class schedules of nearby and cooperating institutions. Mark an "X" wherever appropriate in columns (1) and/or (2), to indicate that the program is available now.

Then, contact representatives from on-base and nearby institutions to determine their interest in offering the programs listed below which were not marked in columns (1) or (2). Assume for the purpose of this survey that there would be sufficient students to form classes, and that present institution and base facilities are sufficient. Mark an "X" in column (3) by those programs which, in your best judgment, probably could be made available on or near your base during off-duty time. Beside any program marked in column (3), print the name of the institution which indicated interest.

After filling in this questionnaire, re-fold and staple it, and MAIL IT TO DANTES BY 1 OCTOBER 1979.

MASTER'S PROGRAM IN:	(1) AVAILABLE ON-BASE DURING OFF-DUTY TIME	(2) AVAILABLE WITHIN 25 MILES DURING OFF-DUTY TIME	(3) COULD BE MADE AVAILABLE DURING OFF-DUTY TIME	NAME OF UNIVERSITY WHOSE INTEREST IS INDICATED BY "X" IN COLUMN (3):
Electronics Engineering				
Computer Engineering				
Communications Engineering				
Computer Science				
Data Systems Management				
Operations Analysis				
Aeronautical Engineering				
Facilities Management				
Nuclear Engineering				
Financial Management				
Communications Management				

Print name of person filling in form ... and

... AUTOVON number

Organizational title and rank/grade

DEFENSE ACTIVITY FOR NON-TRADITIONAL
EDUCATION SUPPORT (DANTES)
PENSACOLA, FL 32509
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300



**GRADUATE EDUCATION
NEEDS ASSESSMENT**

To: Marine Corps Education Officers

The Department of Defense, with the cooperation of each of the military services, is conducting surveys to determine if colleges and universities might be able to offer certain master's degree programs on or near military bases. The programs of interest are those in disciplines (majors) for which the services have validated requirements, but have actual or projected shortages of qualified officers.

Please fill in this questionnaire and mail it to DANTES. The results will be tabulated and forwarded to the appropriate Service chiefs for further consideration.

Contact Mr. Rose (DANTES, Code 21) at AUTOYON 922-1085 if you need information about this survey.

**COMPLETION BY 1 OCTOBER 1979 IS
REQUESTED.**

(A separate questionnaire is being sent to a sample of officers, to determine their preferences for study in these disciplines.)

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PENSACOLA, FL 32509

DANTES, August 1979

To: AIR FORCE EDUCATION SERVICES OFFICERS

The Air Force has identified the academic disciplines in which there are validated requirements for officers with graduate education. Certain disciplines have actual or projected shortages of qualified officers, and it appears that the full-time graduate program will not be able to overcome these shortages in the near future. These shortage areas are particularly related to engineering, mathematics, and the physical sciences. The eleven disciplines with the most severe shortages are listed below. This survey is being made to determine if on-base or other in-state accredited colleges and universities, or those cooperating institutions which now serve your base, have the ability to offer master's degree programs in these disciplines. The responses will be used by HQ USAF in planning potential voluntary education programs.

Please review your on-base degree programs and catalogs and class schedules of nearby and cooperating institutions. Mark an "X" wherever appropriate in columns (1) and/or (2), to indicate that the program is available now.

Then, contact representatives from on-base and nearby institutions to determine their interest in offering the programs listed below which were not marked in columns (1) or (2). Assume for the purpose of this survey that there would be sufficient students to form classes, and that present institution and base facilities are sufficient. Mark an "X" in column (3) by those programs which, in your best judgment, probably could be made available on or near your base during off-duty time. Beside any program marked in column (3), print the name of the institution which indicated interest.

After filling in this questionnaire, re-fold and staple it, and MAIL IT TO DANTES BY 1 OCTOBER 1979.

MASTER'S PROGRAM IN:	(1) AVAILABLE ON-BASE DURING OFF-DUTY TIME	(2) AVAILABLE WITHIN 25 MILES DURING OFF-DUTY TIME	(3) COULD BE MADE AVAILABLE DURING OFF-DUTY TIME	NAME OF UNIVERSITY WHOSE INTEREST IS INDICATED BY "X" IN COLUMN (3):
Electrical Engineering				
Meteorology				
Facilities Management				
Criminology/Police Administration				
Transportation Management				
Computer Technology				
Engineering Management				
Systems Management Quantitative				
Industrial Engineering				
Physics				
Aeronautical Engineering				

Print name of person filling in form ... and

... AUTOVON number

Organizational title and rank/grade

DEFENSE ACTIVITY FOR NON-TRADITIONAL
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**GRADUATE EDUCATION
NEEDS ASSESSMENT**

To: Air Force Education Services Officers

The Department of Defense, with the cooperation of each of the military services, is conducting surveys to determine if colleges and universities might be able to offer certain master's degree programs on or near military bases. The programs of interest are those in disciplines (majors) for which the services have validated requirements, but have actual or projected shortages of qualified officers.

Please fill in this questionnaire and mail it to DANTES. The results will be tabulated and forwarded to the appropriate Service Chiefs for further consideration.

Contact Mr. Rose (DANTES, Code 21) at AUTOYON 922-1065 if you need information about this survey.

**COMPLETION BY 1 OCTOBER 1979 IS
REQUESTED.**

(A separate questionnaire is being sent to a sample of officers to determine their preferences for study in these disciplines.)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) In response to Congressional and OSD inquiries, the Services conducted surveys of junior officers to determine their interest in the disciplines in which there were the most extreme shortages of officers with master's degrees. DANTES conducted the college and university survey (the subject of this report) to determine the capability of offering degree programs in the shortage disciplines on or near bases. There are opportunities for Education Services Officers to promote study in the shortage areas where there is a "match" between officers' interests and institutions' capabilities.		

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