ANNUAL REPORT
OF THE
ACADEMIC CENTER
UNITED STATES NAVAL ACADEMY

ACADEMIC YEAR 2002 - 2003

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BACKGROUND INFORMATION

USNA Mission:

"To develop midshipmen morally, mentally, and physically and to imbue them with the highest ideals of duty, honor and loyalty in order to provide graduates who are dedicated to a career of naval service and have the potential for future development in mind and character to assume the highest responsibilities of command, citizenship and government."

Academic Center Mission:

The Academic Center exists to support the mission of the Naval Academy by providing the highest quality academic support programs for the entire Brigade of Midshipmen.

Goals of the Academic Center:

- Provide excellent academic support services for all midshipmen so that they are able to work to their highest potential in a rigorous educational environment.
- Teach basic learning skills necessary for effective academic performance.
- Encourage active, independent learning.

Introduction:

This annual report records a very active and exciting year for the Academic Center. Ongoing support from the J. W. Marriott family has allowed the Academic Center to continue providing a wide range of academic enhancement services to the entire brigade of midshipmen.

The Academic Center's on going programs continue to provide highly professional academic support to midshipmen. Plebe Programs (consisting of Plebe Intervention and Plebe Advising), Academic Counseling, and the Learning Skills Program are solidly established. Both Plebe Intervention and Learning Skills continue to increase the number of midshipmen contacts. For the last two years, Tutorial Programs has shown remarkable growth in the amount of service provided to midshipmen and has added several disciplines to those departments already offering MGSP.

History:

The Academic Center was established in 1989 as a result of the Minority Midshipmen Study Group report highlighting the need for a proactive academic support program to be established for academically at-risk midshipmen. The Center is responsible for identifying academically at-risk midshipmen and developing a strong support system for them as well as providing a broad-based, learning skills program available to all midshipmen. During the past several academic years, increased emphasis has been placed on offering more outreach services to the entire Brigade of Midshipmen.

Organizational Structure:

The Academic Center staff for AY 02-03 consisted of a director, four program directors, one full-time Reading and Learning Instructor, one full-time tutor, six departmental liaisons, and one educational technician. Additionally, Tutorial Programs has seven hourly tutors and 85 midshipman group leaders. The Learning Skills Program is assisted by one retired officer who teaches study skills instruction to midshipmen. Plebe Programs has benefited from two volunteer officers. The Academic Center Director oversees the entire Academic Center and reports to the Academic Dean and Provost via the Associate Dean for Academic Affairs. The four major programs housed within the Academic Center; Plebe Programs, Academic Counseling, Learning Skills and Tutoring, are discussed in detail in separate sections of this report.

PLEBE PROGRAMS

Mr. Donald Carlson, (CDR, USN Ret.) is the program director of this unit that consists of two independent programs: the Plebe Intervention Program and the Plebe Advising Program. Both of these important programs are described below.

Plebe Intervention Program

Participation:

During the summer of 2002, 69 plebes were selected to participate in the Plebe Intervention Program. Attrition reduced the size of the group to 65. During the year, 30 plebes were added to the program. Tables one through nine are applicable.

Statistics:

Table 1 depicts the background characteristics for the plebes who comprised the original Intervention Group, the plebes who were added to the program after the six week point of the fall semester and the plebes who were added to the program in January.

Table 1: Background Characteristics

	Original Program	October 2002 Add-on Group	January 2003 Add-on Group
Total Mids	69	11	19
Female	14%	18%	26%
NAPS	31%	36%	42%
Fleet	23%	09%	11%
NAAA	54%	45%	37%
Minority	33%	45%	42%
African-American	18%	09%	21%
Verbal SAT	575	595	593
Math SAT	583	598	606

Table 2 displays the academic performance of the original group for the fall and spring semesters.

	1st Semester SQPR[2]	2nd Semester SQPR	CQPR[3]
Number of Plebes	N=67	N=65	N=65
Grades above 2.0	42 (62%)	36 (55%)	44 (68%)
Grades 1.5 – 1.99	22 (32%)	18 (38%)	18 (28%)
Grades below 1.5	03 (96%)	11 (17%)	03 (04%)
QPR[1] Average	2.12	1.98	2.11

[1]QPR = Quality Point Rating
[2]SQPR = Semester Quality Point Rating,
[3]CQPR = Cumulative Quality Point Rating

Table 3 shows the CQPR's for all the Intervention Groups.

Intervention Group	CQPR
1992 Comparison Group	1.97
1993 Intervention Group	2.01
1994 Intervention Group	2.09
1995 Intervention Group	2.19
1996 Intervention Group	2.07
1997 Intervention Group	2.15
1998 Intervention Group	2.10
1999 Intervention Group	2.24
2000 Intervention Group	2.22
2001 Intervention Group	2.22
2002 Intervention Group	2.24
2003 Intervention Group	2.14
2004 Intervention Group	2.23
2005 Intervention Group	2.14
2006 Intervention Group	2.11

The following tables display the academic performance of several of the subgroups within the original Intervention Program. For the first time the top performing group is the football group. Also encouraging is that the African American group reversed a downward trend that was noted for '03 and '04.

Table 4: Grade Analysis of African Americans

	1st Semester SQPR	2nd Semester SQPR	CQPR
Number of Plebes	N=12	N=11	N=11
Grades above 2.0	6 (50%)	4 (36%)	5 (45%)
Grades 1.5 – 1.99	3 (25%)	5 (45%)	5 (45%)
Grades below 1.5	3 (25%)	2 (19%)	1 (10%)
QPR Average	1.85	1.95	2.07

Table 5: Grade Analysis of NAPS students

	1st Semester SQPR	2nd Semester SQPR	CQPR
Number of Plebes	N=22	N=21	N=21
Grades above 2.0	11 (50%)	8 (38%)	12 (57%)
Grades 1.5 – 1.99	11 (50%)	8 (38%)	7 (33%)
Grades below 1.5	00 (00%)	5 (24%)	2 (10%)
QPR Average	2.05	1.94	2.13

Table 6: Grade Analysis of Female students

	1st Semester SQPR	2nd Semester SQPR	CQPR
Number of Plebes	N=12	N=12	N=12
Grades above 2.0	07 (58%)	04 (33%)	06 (50%)
Grades 1.5 – 1.99	04 (33%)	07 (58%)	06 (50%)
Grades below 1.5	01 (09%)	01 (09%)	0 (00%)
QPR Average	2.01	1.86	2.01

Table 7: Grade Analysis of Varsity Athletes

	1st Semester SQPR	2nd Semester SQPR	CQPR
Number of Plebes	N=30	N=29	N=329
Grades above 2.0	20 (66%)	17 (59%)	20 (69%)
Grades 1.5 – 1.99	9 (30%)	8 (28%)	9 (31%)
Grades below 1.5	1 (04%)	04 (13%)	0 (00%)
QPR Average	2.23	2.08	2.18

Table 8: Grade Analysis of Football Players

	1st Semester SQPR	2nd Semester SQPR	CQPR
Number of Plebes	N=9	N=8	N=8
Grades above 2.0	7 (78%)	7 (88%)	7 (88%)
Grades 1.5 – 1.99	2 (22%)	00 (00%)	00 (00%)
Grades below 1.5	00 (00%)	1 (12%)	1 (12%)
QPR Average	1.73	2.09	2.11

Table 9 displays the attrition rate and reasons for separations for the Plebe Intervention Program students. The 12% attrition rate equals the average attrition rate of all the Intervention Groups to date.

Table 9: 2006 Plebe Intervention Program Separations

	Original Program	Add – On Mids
Number of Plebes		
Total Separations	8 (12%)	3 (10%)
Reasons for Separation		
Voluntary	1	1
Academic Board	7	2
Medical	0	0
Class of '06 Attrition	102	(8.0%)

Table 10: End of Plebe Year Attrition Rates for all Intervention Groups

	Average Intervention Attrition Rate	African American Attrition Rate
1992 Comparison Group	27.2 %	
1993 Intervention Group	16.3%	19.0%
1994 Intervention Group	4.7%	12.0%
1995 Intervention Group	5.7%	0.0%
1996 Intervention Group	15.4%	12.0%
1997 Intervention Group	7.8%	6.0%
1998 Intervention Group	16.9%	20.0%
1999 Intervention Group	11.5%	6.0%
2000 Intervention Group	10.0%	5.0%
2001 Intervention Group	13.0%	11.0%
2002 Intervention Group	11.0%	0.0%
2003 Intervention Group	12.0%	18.0%
2004 Intervention Group	10.0%	14.0%
2005 Intervention Group	9.0%	17.0%
2006 Intervention Group	12.0%	07.0%

Forty-six students were placed into the pre-calculus course (SM005) for the fall semester. The grade breakdown for these midshipmen for the fall semester SM005 course and for the spring semester calculus course (SM121A) is shown in Table 11. One student failed SM005 and two students failed SM121A.

Table 11: Math Performance of Pre-Calculus (SM005) Calculus I (SM121A) Students

	SM005	SM121A
A's	16	2
B's	15	9
C's	11	16
D's	3	14
F's	1	2

Prior to the start of the spring semester, 30 plebes were added to the Intervention Program. Selection criteria were based on fall semester academic performance and students' background information. The next two tables depict the academic performance of theses plebes.

Table 12: Academic Performance of Plebes Added to the Program in October 2002

	Fall 6wks	Fall SQPR	Spring SQPR	Spring CQPR
Number of Mids	11	11	9	9
Grades above 2.0	0 (00%)	3 (28%)	4 (44%)	4 (44%)
Grades 1.5 – 1.99	4 (36%)	5 (45%)	3 (34%)	4 (44%)
Grades below 1.5	7 (64%)	3 (27%)	2 (22%)	1 (12%)
Average QPR	1.36	1.71	1.85	1.89

Table 13: Academic Performance of Plebes Added to the Program in January 2003

	Fall 6wks	Fall SQPR	Spring SQPR	Spring CQPR
Number of Mids	19	19	19	19
Grades above 2.0	07 (37%)	0 (00%)	13 (69%)	12 (63%)
Grades 1.5 – 1.99	09 (47%)	12 (63%)	5 (26%)	7 (37%)
Grades below 1.5	3 (16%)	7 (37%)	1 (05%)	00 (00%)
Average QPR	1.84	1.42	2.27	2.17

During the spring semester, ten midshipmen decided to repeat the Calculus I course that they received a grade of D in during the fall semester. The average fall semester QPR of this group was 1.41. During the spring, these midshipmen earned 1 A, 4 B's, 4 C's and 1 D in Calculus I and their average end of year CQPR raised to a 2.10. The practice of repeating the Calculus I course where D's were earned in the fall semester continues to be very advantageous.

The improved performance of the 11 students who volunteered to participate in the Plebe Intervention Program after fall semester six week grades were released was noteworthy. Sixty-four percent of this group had QPR's below a 1.5 at six weeks and their average QPR was a 1.36. At the end of the fall semester the percentage of students whose

QPR was below 1.5 was reduced to 27%. More impressively was that at the end of the year only one student's CQPR was below 1.5 and the group's average CQPR increased to 1.89.

The performance of the 19 Midshipmen who comprised the January Add-On group was even more impressive. The fall semester performance of this group (prior to joining the Intervention Program) at six weeks only 16% had QPR's below 1.5 with an average 1.84 while at the end of the semester 37% had QPR's below 1.5 with an average of 1.42. After joining the Intervention Program a remarkable turnaround occurred. Only one student completed the semester with a QPR below 1.5 and their average was 2.27. For the end of year CQPR no student's CQPR was below 1.50 while the average CQPR was 2.17.

Plebe Advising Program

The Plebe Advising Orientation session for 2003/2004 took place on 28 May 2003. The turnout for this session and the involvement of the advisers was excellent. For the class of 2007 44 Plebe Advisers volunteered to perform these important advising duties again. This high percentage of experienced advisers is considered to be beneficial to the program's success. There is almost an exact 50/50 split between military and civilian faculty among the 63 plebe advisers.

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The Plebe Advising Handbook has been updated for use by the Plebe Advisers this year. This handbook will be posted on the Web. The Academic Handbook for 2007 has also been updated and will be distributed to all the plebes at the Academic Counseling and Registration sessions.

A summary of the Plebe Survey that was conducted in April 2003 is shown below. The major data from the Class of 2006 is compared to the data collected from the 2005, 2004 and 2003 surveys. Additionally, a survey was administered to a random sample of the plebes who participated in the 2002/2003 Intervention Program. The results of this survey are impressive. For instance, for the question asking the students if they feel comfortable seeing their adviser with a concern 74% of the non-intervention respondents indicated that they were either somewhat or very satisfied while 94% of the Intervention students indicated they were very satisfied. Furthermore, 10 percent of the non-intervention students indicated that they never met with their adviser while no Intervention students replied in the same fashion.

Background

- The survey was conducted during the first two weeks of April 2003.
- Twelve plebes per company were randomly selected to participate.
- The Naval Academy's Office of Institutional Research placed posted the survey on the Naval Academy's webpage and provided statistical analysis.

- Eighty-five percent of the selected plebes responded to the survey and a high percentage of them completed all the questions
- The 2006 survey data is compared to the 2005, 2004 and 2003 survey data below.

Table 14: Class of 2006 Plebe Advising Survey

	Percent Indicating Satisfied			
Question	2006	2005	2004	2003
Rate your satisfaction with the advising you received	69	67	66	60
Rate your satisfaction with pre-registration	70	63	68	63
Rate your satisfaction with the advice to select a major	52	54	55	46
Rate your satisfaction with advice about USNA curriculum/programs	63	65	67	56
Rate satisfaction with advice about USNA resources	58	62	64	53
Rate satisfaction with your adviser's accessibility	63	62	64	57
Rate satisfaction with the overall Plebe Advising Program	71	66	70	63
Did you feel comfortable seeing your adviser with a concern	74	81	81	71
Percent of plebes indicating not meeting at all with adviser	10	11	15	24

Conclusions:

- The 2006 survey data is fairly consistent with 2005 but significantly better than 2003.
- The 2006 survey data is acceptable but still not good enough. All plebes should meet at least three times with their adviser per the Plebe Advising Handbook

ACADEMIC COUNSELING PROGRAM

Associate Professor Jane Good has been the Academic Counseling Program (ACP) director of this unit since 1993. It is her dedication has enabled the program to maintain the solid level of professional support available to upper-class midshipmen.

Staffing:

For the past several years, the ACP has flourished because of the dedicated service of five faculty members who served as liaison:

- Engineering (Professor Tom Dawson)
- Math/General Science (Professor Mike Chamberlain)
- Oceanography (Associate Professor Todd Sikora)
- Economics (Professor Eric Fredland)
- Political Science (Retired Professor John Fitzgerald)

Three issues related to staffing this past year include:

- **Political Science (FPS) Representative** - When he retired in January 2002, Professor John Fitzgerald generously volunteered to continue advising his FPS clients because no other professor from the department stepped forward to replace him. In spite of the fact that no funds were available to provide an honorarium to cover Professor Fitzgerald's commuting expenses during AY 2003, but he continued to donate time to advising his already-assigned midshipmen. He will continue in this capacity during AY 2004 (to advise his remaining midshipmen in the Class of 2004). Professors Eric Fredland and Jane Good have adopted FPS majors in the classes of 2005 and 2006 as they have entered the program. Professor Arthur Rachwald has volunteered to take over the duties in AY2005 (he completed his duties as FPS department chair in AY2003 and will be on sabbatical for AY2004).

- **New Group II Liaisons** – Professor Richard Maruszewski resigned as the head Group II liaison at the end of AY2002. Professor Mike Chamberlain of the Math department stepped forward to assume this crucial liaison position. He was able to secure the services of Professor Todd Sikora to help with SOC and other selected Group II majors. Both of these members of the USNA faculty deserve special praise for their enthusiastic support of the program.

- **Group I** – Professor Tom Dawson continues to provide service to midshipmen in the various engineering majors having difficulty.

ACP Director's Work Reassignment:

During the 2002-2003 academic year, the Program Director of the ACP was granted a one-year work reassignment for AY2003 during which she was relieved from teaching duties in the History Department but continued academic counseling of ACP clients, service on the Admissions Board when minority and athlete records were briefed and Faculty Representative Duties for the Women's Varsity Basketball team. The ACP Director used this time off to complete a manuscript on the history of Annapolis High School (1896-2003) that will be published in the spring of 2004 by Heritage Press.

Statistics on ACP Clients:

The ACP monitors all academically at-risk midshipmen at the Naval Academy (roughly 100 midshipmen per class). A more active role is assumed vis-à-vis those midshipmen in the most need, which generally means CQPR's below 2.00 at end of plebe year and/or at least two courses behind their matrices. For these midshipmen one of the ACP staff serves as the official academic advisor. Table 15 summarizes the number of ACP advisees to and their overall retention in Classes 2003 through 2006:

Table 15: ACP Advisees

Class Year	Initial # Advisees	Current # Advisees*	Percent Retention
2003	90	62	68.9%
2004	84	60	73.5%
2005	57	53	93.0%
2006	n/a	n/a	n/a

*Reflects midshipmen who graduated or who are still members of the brigade

Table 16 shows retention of ACP advisees sorted by Group One (Engineering), Group Two (Math/Science) and Group Three (Humanities/Social Science) majors.

Table 16: ACP Advisees by Major Group

Group	Class of 2003		Class of 2004		Class of 2005		Class of 2006	
	Initial	Current	Initial	Current	Initial	Current	Initial	Current
One*	11	11 (100%)	8	7 (88%)	3	3 (100%)	n/a	n/a
Two	16	11 (69%)	17	13 (77%)	9	8 (88%)	n/a	n/a
Three**	63	40 (63%)	59	40 (68%)	36	32 (89%)	n/a	n/a

*The success of Group One majors in the ACP reflects the fact that almost all are picked up at the Advisory Board after they have switched from an ABET major to EGE

**The lower success of Group Three majors reflects the fact that many have extremely low CQPR's at end of 4/C year due to problems with plebe core technical curriculum. If a Group Three major is retained through fall of 3/C year, their success rates are similar to other ACP clients.

Conclusion:

Although at the end of AY 2002 it appeared that the ACP had many difficulties and challenges to continue as an effective program, it is clear the program not only survived, but excelled during AY 2003 and now is prepared to continue its record of excellence for AY2004.

LEARNING SKILLS PROGRAM

Mission:

The mission of the Learning Skills Program is to be available to and to provide assistance to all midshipmen who desire to improve their academic performance by developing or refining their learning skills, regardless of their grade point average or academic standing.

Staffing:

During the 2002-2003 Academic Year (AY), the Learning Skills Program's staff included CDR Delores Duncan-White (Program Director), Mrs. Althea Hojnacki, a

Learning Skills/Reading Instructor and CDR Bruce Duncan, USN, Retired and USNA graduate as a part-time civilian Learning Skills volunteer.

Identification:

The Learning Skills Program offers classes and individual assistance to midshipmen who are deficient in academics and to any midshipmen interested in improving their overall academic performance. Each semester, more than 200 midshipmen receive nearly 900 hours of reading and learning skills assistance. The Learning Skills Program offers learning skills courses and learning skills/reading strategy courses as well as individual sessions and training workshops.

Curriculum:

Learning Skills Course - The Learning Skills Course is a non-credit course offered twice a semester either in a group or as individual sessions throughout the academic year. The course meets one period a week for five weeks and is designed to help midshipmen become more successful students by developing or refining their learning/study skills. The main goals of the course are to help the midshipmen:

- Learn and understand basic academic skills
- Learn and apply the principles of time management, goal setting, classroom study habits, stress management, and other strategies leading to academic success
- Understand strategies and apply techniques that can improve note-taking, test-taking, reading.
- Develop a personal plan for succeeding at the Naval Academy

Specific topics covered in the five weeks include: time management, note-taking skills, test-taking strategies, classroom study habits, and stress management.

Most learning skills instruction is offered through multiple sections of a structured study skills course. Classes are limited to 12 or fewer students to encourage active participation and involvement, as well as more effective learning by students. Students are asked to complete a student study assessment evaluation prior to class convening and at the end of the five weeks course. The results of the pre/post study assessment are used to determine changes (if any) in student's study habits to ensure that the content remains as a valuable resource for the student, and that the method of instruction is effective.

Learning Skills/Reading Strategy Course – This course combines the Learning Skills curriculum with a reading component that is designed to strengthen reading comprehension and build reading strategies. Midshipmen enrolled in this course are concurrently enrolled in reading intensive courses.

Training Workshops – The 50-Minute Workshop provides training and instruction, upon request, on any of the topics taught in the Learning Skills course. These workshops are designed to assist study clubs, battalion & company officers, company academic officers, the Brigade of Midshipmen leadership, etc., to provide midshipmen tools for academic success.

Learning Skills Course Utilization:

Table 17 indicates the midshipmen utilization of the structured Learning Skills course by

Table #17
Midshipmen Utilization by Gender

	Fall 2002				Spring 2003		
Class	Male	Female	Midshipmen Served	Class	Male	Female	Midshipmen Served
2003	04	0	04	2003	02	01	03
2004	10	0	10	2004	09	01	10
2005	17	09	26	2005	23	07	30
2006	87	27	114	2006	69	18	87
Midshipmen Served	**118**	36	154	**Midshipmen Served**	103	27	130

Table 18 indicates midshipmen utilization of the structured Learning Skills course by ethnicity.

Table #18
Midshipmen Utilization
Recruited Athlete vs. Non-Recruited Athlete

	Fall 2002				Spring 2003		
Class	Recruited Athlete	Non-Recruited Athlete	Midshipmen Served	Class	Recruited Athlete	Non-Recruited Athlete	Midshipmen Served
2003	0	4	4	2003	1	2	3
2004	2	8	10	2004	1	9	10
2005	11	15	26	2005	8	22	30
2006	25	89	114	2006	33	54	87
Midshipmen Served	38	116	154	**Midshipmen Served**	43	87	130

Table 19 indicates the number of athletes versus non-athlete who utilized the Learning

Table #19 Individual Midshipmen Appointments							
	Fall 2002				Spring 2003		
Class	Male	Female	Midshipmen Served	Class	Male	Female	Midshipmen Served
2003	1	1	2	2003	1		1
2004	5	2	7	2004	3	1	4
2005	7	6	13	2005	9	3	12
2006	40	13	53	2006	27	12	39
Midshipmen Served	53	22	75	**Midshipmen Served**	40	16	56

Skills course.

Table #20 Midshipmen Utilization by Ethnicity			
Fall 2002		Spring 2003	
Ethnic Origin	Midshipmen Served	Ethnic Origin	Midshipmen Served
African American	30	African American	26
Asian American	03	Asian American	06
Caucasian	102	Caucasian	78
Hispanic	15	Hispanic	15
Native American	03	Native American	02
Native Hawaiian Pacific Islander	01	Native Hawaiian Pacific Islander	03
Midshipmen Served	154	**Midshipmen Served**	130

Table 20 shows the number of midshipmen who were seen on an individual basis.

Reading Effectiveness Course:

History: The Academic Center has hired outside contractors to provide an intensive reading course for up to 200 midshipmen per year. The course was offered the first month of fall and spring semesters beginning with the 1998 fall semester.

In 2001, the Reading Effectiveness course was developed in conjunction with the

History Department and Political Science Department. The course is taught by the Learning Skills/Reading Instructor, Mrs. Althea Hojnacki. The course meets once a week for five weeks in a formal class setting. Individual appointments are also available to midshipmen throughout the academic year.

Objective: This non-credit course is a reading strategy support class utilizing material used in the courses.

Course Frequency: The course is offered twice a semester by the Academic Center.

Overall Learning Skills Program Highlights:

- Developed and offered Learning Skills/Reading Strategy Class
- Continue to offer workshops to midshipmen ECAs and athletic teams
- Provide training to the Company Academic Officers and other midshipmen leaders
- Continue to offer information briefing to academic departments
- In conjunction with the History Department and Political Science Department developed a reading strategy support class utilizing material used in courses
- Developed pre/post questionnaire to track self reported change in study behavior and course evaluation
- Updated AcCenter Learning Skills website on continuous basis
- Assisting with Academic Center development and transition of students from NAPS to USNA

Conclusions:

There was a significant increase in the number of midshipmen utilizing the Learning Skills Program this Academic Year. The students utilizing the services continue to be very satisfied with the benefits of the program. A pre/post survey questionnaire was very positive and midshipmen indicated that the Learning Skills courses and sessions have played a key role in helping them become more successful students. The new marketing initiatives, continued advertisement of programs and refining of programs to meet midshipmen needs should all have a very positive impact on midshipmen utilization of these programs.

TUTORIAL PROGRAMS

Purpose:

The Tutorial Programs provide a range of assistance for those midshipmen who are trying to improve their academic performance in course content. Three separate tutorial programs are available; Midshipmen Group Study (MGSP), Hourly Tutoring and X-Class Tutoring.

Staff:

During the AY03, the staff of the Tutorial Programs consisted of the Program Director, 1 full-time Professional Tutor/Mathematics Instructor, 7 hourly tutors, and 86 group study leaders.

Midshipman Group Study Program

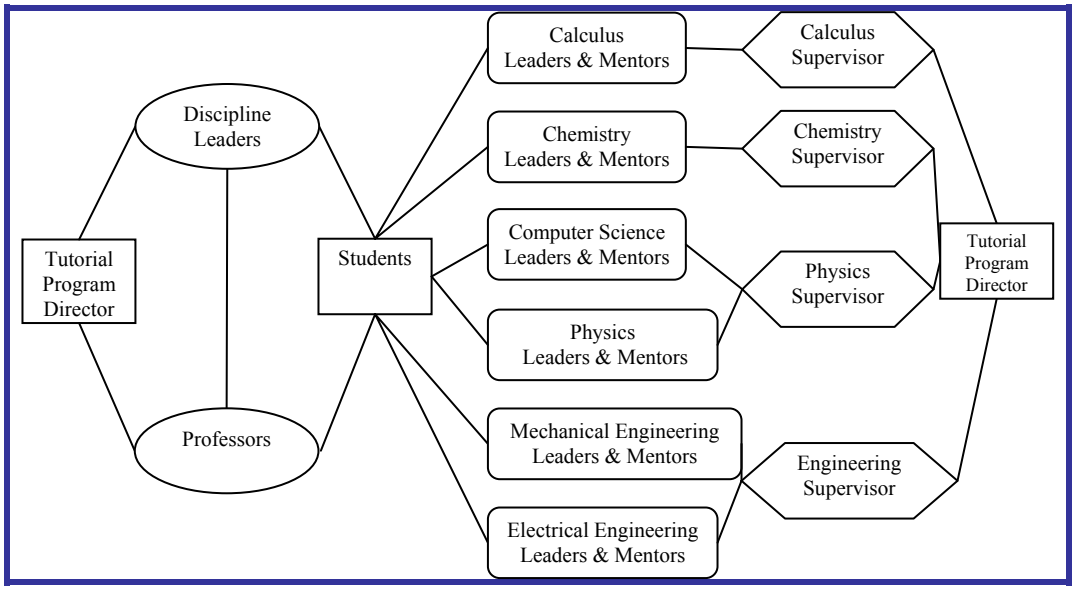
Purpose:

The purpose of MGSP is to support the mission of the United States Naval Academy by providing a productive study environment for students enrolled in traditionally difficult courses. The MGSP Leaders gain leadership experience by facilitating group study sessions.

Staff:

During the 2002-2003 academic year, seven academic departments were involved in MGSP. Departments represented in the program include Electrical Engineering (EE301, EE302), Naval Architecture and Ocean Engineering (EN200), and Computer Science (SI204, SI221), new to the program this year, as well as Chemistry (SC111, 112), Mathematics (SM005, 121, 221, 223), Physics (SP211, 212), Mechanical Engineering (EM211, 232. The following organizational diagram of MGSP shows that students, student leaders, faculty, and the program director are all actively involved in the program.

Chart 1 – MGSP Organizational Structure



Midshipmen Leaders – Over 70 individual midshipmen leaders per semester, including 6 supervising leaders provided weekly study sessions for students enrolled in any of the above mentioned courses. Approximately ten new leader positions were added to the program this academic year. Leaders were required to lead one 1-hour study session a week. Training was provided for the leaders in both the fall and spring semester totaling 11 hours of pedagogical instruction. Leaders who were also paired with a faculty member met with the instructor once a week to receive information concerning course content. A total of 47 faculty members paired with the MGSP leaders during the academic year. The following chart illustrates the number of midshipmen who participated as MGSP leaders during the academic year per department.

Table 21 -- MGSP Leaders

	Fall 2002	Spring 2003
Chemistry	25	26
Mathematics	24	24
Engineering	12	9
Physics	7	8
Computer Science	6	7
TOTAL LEADERS	**74**	**74**

Involvement:

During sessions, a student leader will facilitate group activities such as practicing homework problems, comparing lecture notes, summarizing assigned readings, discussing lab reports, practicing problem solving, and test preparation. This year approximately 1000 individual midshipmen participated in the group study sessions accumulating over 5000 contact hours. Participation in the program was voluntary and open to anyone enrolled in the courses. The following tables show the number of student participants by department, Table 22, and student usage, Table 23.

Table 22 -- Student Participants

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	Fall 2002	Spring 2003
Chemistry	443	322
Mathematics	304	159
Mechanical Engineering	58	21
Physics	119	67
Electrical Engineering	20	9
Computer Science	46	7
Naval Architecture	2	--*
TOTAL	**992**	**585**

**The Naval Architecture course, EN200, was discontinued in the spring because of the low attendance numbers in the fall*

semester

Table 23 – Student Contact Hours

	Fall 2002	Spring 2003
Chemistry	1647	1188
Mathematics	1001	414
Mechanical Engineering	199	47
Physics	308	173
Electrical Engineering	29	12
Computer Science	113	9
Naval Architecture	2	--
TOTAL	**3299**	**1843**

Academic Performance:

Chemistry

To determine if significant difference existed for MGSP attenders and MGSP non-attenders, comparisons were first conducted to determine grade changes between six weeks and final course grade using a paired samples T-test. Significant differences existed for non-attenders in the fall semester '02 SC111 course (mean grade decrease .31) and spring semester '03 SC111 course (mean grade decrease .43). A significant positive difference existed for attenders in the spring semester '03 SC112 course (mean grade increase .12). These results indicate that a significant negative change occurred for students who did not attend MGSP from the six weeks point to the final course grade as these students saw significant grade decreases. The results also indicate that attendance at MGSP can improve grades as indicated by the spring semester '03 SC112 course. The results of these within group comparisons are illustrated in Table 24.

A comparison was also conducted *between* the groups based upon grade changes from the six weeks to final course grade. Significant differences were found between MGSP attenders and non-attenders in the F02 SC111 course and the S03 SC112 course. This comparison suggests that a significant difference existed between MGSP attenders and non-attenders, and the differences between the groups are a result of MGSP. Since attenders outperformed non-attenders, MGSP made a significant difference improving student's grades in the two courses. The results of these between group comparisons are illustrated in Table 25.

Table 24: Chemistry Grade Changes from Six Weeks to Final Course by MGSP group.

Paired Samples Test

Semester	Course	MGSP Group			Paired Differences					t	df	Sig. (2-tailed)
					Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
F03	SC111	non-attender	Pair 1	Six - Final	.31	.769	.021	.26	.35	14.455*	1321	.000
		attender	Pair 1	Six - Final	-.02	.882	.031	-.08	.04	-.638	807	.524
S03	SC111	non-attender	Pair 1	Six - Final	.43	.655	.097	.24	.63	4.502*	45	.000
		attender	Pair 1	Six - Final	.30	.657	.147	-.01	.61	2.042	19	.055
	SC112	non-attender	Pair 1	Six - Final	-.01	.636	.017	-.04	.03	-.331	1443	.741
		attender	Pair 1	Six - Final	-.12	.596	.021	-.16	-.07	-5.386*	768	.000

*$_p$=.05

Table 25: Chemistry, Comparison of Grade Change between MGSP Groups

Independent Samples Test

Semester	Course			Levene's Test for Equality of Variances		t-test for Equality of Means						
				F	Sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
F03	SC111	Difference 6-F	Equal variances assumed	4.016	.045	-8.958*	2128	.000	-.33	.036	-.397	-.254
			Equal variances not assumed			-8.667	1528.997	.000	-.33	.038	-.399	-.252
S03	SC111	Difference 6-F	Equal variances assumed	.052	.820	-.768	64	.446	-.13	.176	-.486	.216
			Equal variances not assumed			-.767	36.123	.448	-.13	.176	-.491	.222
	SC112	Difference 6-F	Equal variances assumed	2.363	.124	-3.966	2211	.000	-.11	.028	-.165	-.056
			Equal variances not assumed			-4.045*	1658.096	.000	-.11	.027	-.164	-.057

*$_p$=.05

Mathematics

In four courses (fall semester '03 SM121, SM121C, S03 SM122, SM212S), non-attenders experienced a significant grade decrease. In two courses, non attenders experienced a positive grade change (fall semester '03 SM122, F03 SM223); however, attenders also experienced a positive grade change in these courses with a mean difference of a letter grade over non-attenders (.60,.35). In addition, attenders experienced a significantly positive grade change in the F03 SM221 course. The results indicate that MGSP may have influenced positive grade changes in courses where both MGSP attenders and non-attenders experienced positive grade changes as attenders showed an improvement gain greater than non-attenders. Table 26 illustrates these results.

When the two groups were compared based upon their change in grade from six weeks to final course grade, a significant difference was found in the fall semester '03 SM221 course. MGSP attenders experienced a positive mean grade change of almost a letter grade over non-attenders. In addition, although the results did not meet the set significance levels (p=.05), grade changes for the fall semester '03 SM223 class approached significance

(.083) with MGSP accounting for 92% of the difference between the groups. The results of these between group comparisons are illustrated in Table 27.

Table 26 – Mathematics, Grade change from six weeks to final course by MGSP group.

Independent Samples Test[a]

				Levene's Test for Equality of Variances		t-test for Equality of Means						
											95% Confidence Interval of the Difference	
Semester	Course			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
F03	SM005	Difference 6-F	Equal variances assumed	.	.	-1.275	46	.209	-1.13	.884	-2.908	.653
			Equal variances not assumed			.	.	.	-1.13	.	.	.
	SM121	Difference 6-F	Equal variances assumed	.044	.833	-.817	407	.414	-.09	.116	-.322	.133
			Equal variances not assumed			-.827	68.964	.411	-.09	.114	-.323	.134
	SM121A	Difference 6-F	Equal variances assumed	.612	.435	-1.033	234	.303	-.10	.102	-.305	.095
			Equal variances not assumed			-1.015	138.679	.312	-.10	.103	-.309	.099
	SM121C	Difference 6-F	Equal variances assumed	.844	.361	-.591	76	.556	-.15	.262	-.677	.367
			Equal variances not assumed			-.667	7.680	.524	-.15	.232	-.694	.384
	SM122	Difference 6-F	Equal variances assumed	10.656	.001	-1.760	181	.080	-.38	.218	-.814	.046
			Equal variances not assumed			-1.431	42.480	.160	-.38	.268	-.925	.157
	SM122S	Difference 6-F	Equal variances assumed	.392	.535	-.883	38	.383	-.39	.441	-1.281	.503
			Equal variances not assumed			-.750	3.464	.501	-.39	.518	-1.920	1.143
	SM221	Difference 6-F	Equal variances assumed	8.782	.003	-2.236*	391	.026	-.30	.135	-.569	-.036
			Equal variances not assumed			-1.868	42.219	.069	-.30	.162	-.630	.024
	SM223	Difference 6-F	Equal variances assumed	.027	.870	-1.673	497	.095	-.19	.114	-.413	.033
			Equal variances not assumed			-1.755	81.951	.083	-.19	.108	-.406	.025
S03	SM121A	Difference 6-F	Equal variances assumed	2.407	.125	.356	67	.723	.09	.251	-.412	.590
			Equal variances not assumed			.453	25.993	.654	.09	.197	-.316	.494
	SM122	Difference 6-F	Equal variances assumed	.056	.813	.566	473	.572	.07	.121	-.170	.307
			Equal variances not assumed			.629	55.022	.532	.07	.109	-.150	.287
	SM221	Difference 6-F	Equal variances assumed	.051	.822	-1.321	181	.188	-.19	.145	-.478	.095
			Equal variances not assumed			-1.421	44.352	.162	-.19	.135	-.463	.080
	SM122A	Difference 6-F	Equal variances assumed	2.917	.089	-1.736	222	.084	-.20	.113	-.419	.027
			Equal variances not assumed			-1.598	82.883	.114	-.20	.123	-.441	.048
	SM221S	Difference 6-F	Equal variances assumed	.	.	-2.016	33	.052	-1.26	.627	-2.541	.012
			Equal variances not assumed			.	.	.	-1.26	.	.	.

a. No statistics are computed for one or more split files

*$_p$=.05

Table 27 – Mathematics, Comparison of grade change between MGSP groups

Independent Samples Test[a]

Semester	Course			Levene's Test for Equality of Variances		t-test for Equality of Means						
											95% Confidence Interval of the Difference	
				F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
F03	SM005	Difference 6-F	Equal variances assumed	.	.	-1.275	46	.209	-1.13	.884	-2.908	.653
			Equal variances not assumed			.	.	.	-1.13	.	.	.
	SM121	Difference 6-F	Equal variances assumed	.044	.833	-.817	407	.414	-.09	.116	-.322	.133
			Equal variances not assumed			-.827	68.964	.411	-.09	.114	-.323	.134
	SM121A	Difference 6-F	Equal variances assumed	.612	.435	-1.033	234	.303	-.10	.102	-.305	.095
			Equal variances not assumed			-1.015	138.679	.312	-.10	.103	-.309	.099
	SM121C	Difference 6-F	Equal variances assumed	.844	.361	-.591	76	.556	-.15	.262	-.677	.367
			Equal variances not assumed			-.667	7.680	.524	-.15	.232	-.694	.384
	SM122	Difference 6-F	Equal variances assumed	10.656	.001	-1.760	181	.080	-.38	.218	-.814	.046
			Equal variances not assumed			-1.431	42.480	.160	-.38	.268	-.925	.157
	SM122S	Difference 6-F	Equal variances assumed	.392	.535	-.883	38	.383	-.39	.441	-1.281	.503
			Equal variances not assumed			-.750	3.464	.501	-.39	.518	-1.920	1.143
	SM221	Difference 6-F	Equal variances assumed	8.782	.003	-2.236*	391	.026	-.30	.135	-.569	-.036
			Equal variances not assumed			-1.868	42.219	.069	-.30	.162	-.630	.024
	SM223	Difference 6-F	Equal variances assumed	.027	.870	-1.673	497	.095	-.19	.114	-.413	.033
			Equal variances not assumed			-1.755	81.951	.083	-.19	.108	-.406	.025
S03	SM121A	Difference 6-F	Equal variances assumed	2.407	.125	.356	67	.723	.09	.251	-.412	.590
			Equal variances not assumed			.453	25.993	.654	.09	.197	-.316	.494
	SM122	Difference 6-F	Equal variances assumed	.056	.813	.566	473	.572	.07	.121	-.170	.307
			Equal variances not assumed			.629	55.022	.532	.07	.109	-.150	.287
	SM221	Difference 6-F	Equal variances assumed	.051	.822	-1.321	181	.188	-.19	.145	-.478	.095
			Equal variances not assumed			-1.421	44.352	.162	-.19	.135	-.463	.080
	SM122A	Difference 6-F	Equal variances assumed	2.917	.089	-1.736	222	.084	-.20	.113	-.419	.027
			Equal variances not assumed			-1.598	82.883	.114	-.20	.123	-.441	.048
	SM221S	Difference 6-F	Equal variances assumed	.	.	-2.016	33	.052	-1.26	.627	-2.541	.012
			Equal variances not assumed			.	.	.	-1.26	.	.	.

a. No statistics are computed for one or more split files

*$_p$=.05

Mechanical Engineering

Similar procedures were conducted for mechanical engineering courses. Comparisons were conducted to determine if grade changes existed between six weeks and final course grade using a paired samples T-test. No significant differences were noted for either MGSP attenders or non-attenders from six weeks to final course grade. It should be noted, however, that MGSP attenders did experience greater positive changes than non-attenders. Results of the analysis are found in table 28.

Table 28 – Mechanical Engineering, Grade change from six weeks to final course by

MGSP group.

Paired Samples Test

Semester	Course	MGSP Group			Paired Differences					t	df	Sig. (2-tailed)
					Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
F03	EM211	non-attender	Pair 1	Six - Final	.04	.762	.050	-.06	.13	.696	227	.487
		attender	Pair 1	Six - Final	-.20	.939	.148	-.50	.10	-1.347	39	.186
	EM211A	non-attender	Pair 1	Six - Final	.16	.960	.127	-.10	.41	1.242	56	.219
		attender	Pair 1	Six - Final	.00	.535	.189	-.45	.45	.000	7	1.000
S03	EM232	non-attender	Pair 1	Six - Final	-.05	.874	.052	-.15	.05	-.944	287	.346
		attender	Pair 1	Six - Final	-.15	.988	.221	-.61	.31	-.679	19	.505

Therefore, a comparison was also conducted *between* the groups based upon grade changes from the six weeks to final course grade. Significant differences were found between MGSP attenders and non-attenders in favor of MGSP attenders in the F03 EM211 course. Since MGSP attenders experienced a greater positive grade change, MGSP significantly affected students in EM211 resulting in greater positive grade changes (.38) for attenders. The results of these between group comparisons are illustrated in Table 29.

Table 29 – Mechanical Engineering, Comparison of grade change between MGSP groups

Independent Samples Test

Semester	Course			Levene's Test for Equality of Variances		t-test for Equality of Means						
				F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower	Upper
F03	EM211	Difference 6-F	Equal variances assumed	4.876	.028	-1.917*	266	.056	-.26	.136	-.527	.007
			Equal variances not assumed			-1.646	48.250	.106	-.26	.158	-.578	.058
	EM211A	Difference 6-F	Equal variances assumed	4.733	.033	-.453	63	.652	-.16	.348	-.854	.538
			Equal variances not assumed			-.693	14.399	.499	-.16	.228	-.645	.329
S03	EM232	Difference 6-F	Equal variances assumed	1.302	.255	-.497	306	.619	-.10	.204	-.503	.300
			Equal variances not assumed			-.447	21.118	.659	-.10	.227	-.573	.370

*$_p$=.05

Physics

Comparisons were also conducted to determine if grade changes existed for physics courses between six weeks and final course grade using a paired samples T-test. In two courses (fall semester '03 SP211, F03 SP211X) non-attenders experienced significant mean grade decreases (-.22, -.51). In three courses (spring semester '03 SP211, SP212 & SP212E) non-attenders experienced significant mean grade increases. MGSP attenders did not have significant changes in any of the courses. While the grade change was the same as non-attenders in a few courses (spring semester '03 SP212 & SP212E), the smaller sample size influenced the results. The results of the within group comparisons are illustrated in table 30.

Table 30– Physics, Grade change from six weeks to final course by MGSP group.

Paired Samples Test

Semester	Course	MGSP Group			Paired Differences					t	df	Sig. (2-tailed)
					Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
F03	SP211	non-attender	Pair 1	Six - Final	.22	.755	.028	.17	.28	7.890*	702	.000
		attender	Pair 1	Six - Final	.10	.799	.083	-.07	.26	1.174	91	.243
	SP211E	non-attender	Pair 1	Six - Final	-.06	.656	.048	-.16	.03	-1.345	184	.180
		attender	Pair 1	Six - Final	-.18	.751	.226	-.69	.32	-.803	10	.441
	SP211X	non-attender	Pair 1	Six - Final	.51	.607	.100	.31	.72	5.150*	36	.000
		attender	Pair 1	Six - Final	.50	.577	.289	-.42	1.42	1.732	3	.182
S03	SP211	non-attender	Pair 1	Six - Final	-.67	.488	.126	-.94	-.40	-5.292*	14	.000
	SP211R	non-attender	Pair 1	Six - Final	.25	.965	.279	-.36	.86	.897	11	.389
	SP212	non-attender	Pair 1	Six - Final	-.10	.725	.027	-.15	-.05	-3.808*	737	.000
		attender	Pair 1	Six - Final	-.10	.735	.104	-.31	.11	-.962	49	.341
	SP212E	non-attender	Pair 1	Six - Final	-.20	.797	.060	-.32	-.08	-3.328*	173	.001
		attender	Pair 1	Six - Final	-.20	.676	.175	-.57	.17	-1.146	14	.271

*$_p$=.05

When comparisons were conducted between attenders and non-attenders, no significant differences were noted between the groups. It should be noted, however, that physics experienced over a 50% decrease in attendance over the previous year when significant differences were established between the groups.

Three new departments were added to MGSP this year: Naval Architecture and Ocean Engineering, Electrical Engineering, and Computer Science. Because of low attendance rates in the fall (only two students attended), Naval Architecture and Ocean Engineering was dropped in the spring semester. The results from the two new departments are below.

Electrical Engineering

A paired-samples T-test was conducted to determine if either attenders or non-attenders experienced significant grade changes from six weeks to final course grade. Non-attenders had a significant decrease in grade in the fall semester (.-07) and a significant increase in the spring (.05). While attenders experienced better mean grade changes than non-attenders in the fall semester, their changes were not significant. This is in part to the relatively small sample of attenders. Results are illustrated in table 31.

Table 12 – Electrical Engineering, Grade change from six weeks to final course by MGSP group.

Paired Samples Test

Semester	Course	MGSP Group			Paired Differences					t	df	Sig. (2-tailed)
					Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
F03	EE301	non-attender	Pair 1	Six - Final	.07	.716	.028	.01	.12	2.336*	659	.020
		attender	Pair 1	Six - Final	-.26	.733	.168	-.62	.09	-1.564	18	.135
S03	EE302	non-attender	Pair 1	Six - Final	-.05	.681	.026	-.10	.00	-1.996*	662	.046
		attender	Pair 1	Six - Final	.00	.707	.236	-.54	.54	.000	8	1.000

*$_p$=.05

To determine if the groups differed from one another significantly, an independent T-test

was conducted on grade changes. While the results did not meet the established significance levels, the fall semester '03 EE301 course approached significance (.069). Results are illustrated in table 32.

Table 32 – Electrical Engineering, Comparison of grade change between MGSP groups

Independent Samples Test

				Levene's Test for Equality of Variances		t-test for Equality of Means						
											95% Confidence Interval of the Difference	
Semester	Course			F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
F03	EE301	Difference 6-F	Equal variances assumed	.616	.433	-1.968	677	.049	-.33	.167	-.656	-.001
			Equal variances not assumed			-1.925	19.002	.069	-.33	.171	-.685	.029
S03	EE302	Difference 6-F	Equal variances assumed	.000	.985	.231	670	.818	.05	.229	-.396	.502
			Equal variances not assumed			.223	8.203	.829	.05	.237	-.492	.597

*$_p$=.05

Computer Science

The same tests were performed in computer science. Non-attenders in the fall SI204 course experienced a significant negative grade change. The other groups did not have significant differences in grades. Results are illustrated in table 33.

Table 33 – Computer Science, Grade change from six weeks to final course by MGSP group.

Paired Samples Test

					Paired Differences							
								95% Confidence Interval of the Difference				
Semester	Course	MGSP Group			Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
F03	SI204	non-attender	Pair 1	Six - Final	.18	.715	.063	.05	.30	2.845*	127	.005
		attender	Pair 1	Six - Final	.16	.767	.114	-.07	.39	1.360	44	.181
S03	SI221	non-attender	Pair 1	Six - Final	-.11	.614	.059	-.23	.01	-1.873	108	.064
		attender	Pair 1	Six - Final	-.67	.816	.333	-1.52	.19	-2.000	5	.102

*$_p$=.05

When the groups were compared, significant differences were noted between attenders and non-attenders in the S03 SI221 course. MGSP attenders experienced significant improvements in their grades over non-attenders. The results of these comparisons are illustrated in table 34.

Table 34 – Computer Science, Comparison of grade change between MGSP groups

Independent Samples Test

Semester	Course			Levene's Test for Equality of Variances		t-test for Equality of Means						
											95% Confidence Interval of the Difference	
				F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
F03	SI204	Difference 6-F	Equal variances assumed	.347	.557	-.191	171	.849	-.02	.126	-.273	.225
			Equal variances not assumed			-.185	72.586	.854	-.02	.131	-.285	.236
S03	SI221	Difference 6-F	Equal variances assumed	1.736	.190	-2.127*	113	.036	-.56	.262	-1.075	-.038
			Equal variances not assumed			-1.644	5.316	.158	-.56	.338	-1.411	.298

*$_p$=.05

Hourly Tutoring

Purpose:

The purpose of the hourly tutoring program is to provide academic tutoring to students who are in severe academic difficulty and have exhausted other means of assistance. The goal of the tutoring encounter is to address the specific content, study, and problem-solving skills that the individual student is struggling.

Staff:

Four part-time tutors and one full-time tutor provided individualized assistance to approved midshipmen in the fall semester. Two tutors were available for calculus, one for chemistry, two for physics. Seven part-time tutors and one-full time tutor provided individualized assistance to approved midshipmen in the spring semester. Three tutors were available for calculus, two for chemistry, two for physics, and one for various engineering courses.

Staffing was an issue for the academic year. In August of the fall semester, several prospective tutors, who had previously tutored for the Academic Center, had been disqualified for the position by new administrative procedures. These procedures left several vacancies unfilled during the fall semester and into the spring semester. In addition, because of the new administrative and budgetary issues, the tutors were not able to begin tutoring in the fall until October, several weeks after the projected start date.

Involvement:

Students request a tutor by completing an on-line application. An appointment is then scheduled with the Director of Tutorial Programs to conduct a holistic assessment of the student needs. Instructors are also contacted for concurrence before the student is assigned a tutor.

For the academic year 2003, 75 students received support from the hourly tutoring program for a total of 494 contact hours. In the fall semester a total of 60 students applied for a tutor. Thirty-seven students were approved to meet with tutor: twelve chemistry, thirteen mathematics and twelve physics. Twenty requests for tutors had to be denied because all available tutoring positions were filled, and three students were denied a tutor at the instructor's request. In addition, because of the staffing issues, many students had to

wait for a tutor to become available before they received assistance. In the spring semester a total of 57 students applied for a tutor. Forty-six students were approved to meet with a tutor: 21 chemistry, 13 mathematics, 8 physics, 4 engineering. Two students were denied a tutor because all available tutoring positions were filled, two because tutoring was not offered for the course, four at the instructors request, and three because the student missed the initial appointment and never rescheduled.

The chart below illustrates student usage in the hourly tutoring program. Number (N) refers to the number of students approved for tutoring per discipline area with the additional data referring to appointments per student.

Table 35 – Approved Students and Program Usage in the Tutoring Program by Discipline

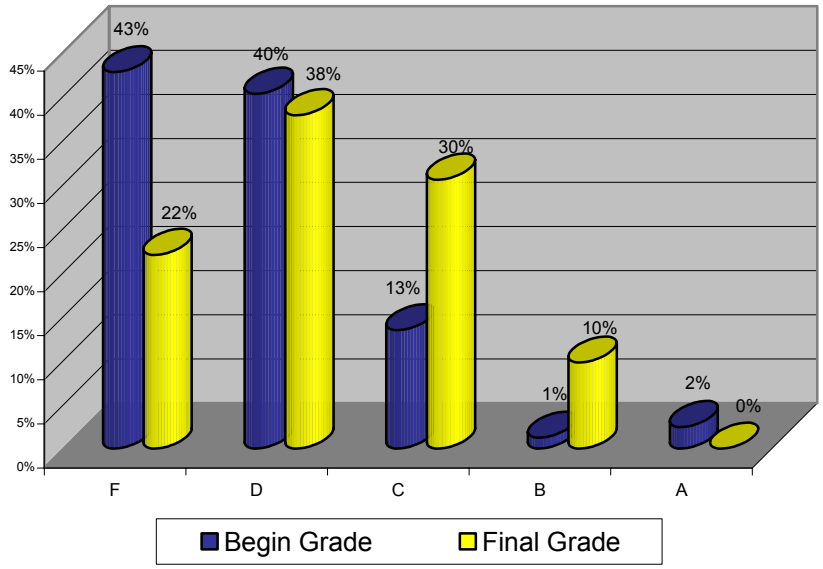
Descriptive Statistics

Semester	Discipline		N	Contact Hours	Mean Contact Hours
Fall AY03	Chemistry	Number of Contacts	12	95	7.92
	Mathematics	Number of Contacts	13	71	5.46
	Physics	Number of Contacts	12	61	5.08
Spring AY03	Chemistry	Number of Contacts	21	139	6.62
	Mathematics	Number of Contacts	13	59	4.54
	Physics	Number of Contacts	8	54	6.75
	Engineering	Number of Contacts	4	15	3.75

Academic Performance

Students in the tutoring program experienced positive grade changes from entry in the program (.8) to final course grade (1.2). Forty-three percent of the students accepted into the program, 35 students, were receiving a failing grade in the course when they requested tutoring. By the end of the semester that number had reduced in half to 22 percent, 18 students. Similarly, only 16 percent of those who received tutoring had a C or better at the time of request. By the end of the semester, 40 percent were receiving a C or better in the course. Chart 2 illustrates the changes in grade from the entry into the program to final course grade.

Chart 2 – Grade Changes as a Result of Tutoring



A statistical analysis was performed to compare student's grade upon acceptance into the tutoring program and final course grade. A paired samples T-test showed significant differences between entry and final course grade, indicating that the tutoring intervention played a significant role in student grade changes. Table 36 details the results.

Table 36 – Paired Samples T-Test for Students who received Tutoring

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Beginning Grade - End Grade	-.46	.880	.085	-.63	-.30	-5.468*	107	.000

*$_p$=.05

Evaluation and Feedback

Students, who were approved to receive a tutor, were asked to complete an evaluation of the tutoring program. Students responded to twenty questions concerning the application process, tutor effectiveness, and program effectiveness. Forty students or approximately 50% of the students completed the evaluation. On a 4 point scale, the program received an average of 3 or better in all areas. For questions concerning the tutor's effectiveness, the average score was not less than 3.6 on any one question. The lowest score, 3.1, on the evaluation was that information about the tutoring program was easy to obtain.

Student comments included praise for their tutors:

> *"Mr. _____ help has been greatly appreciated. I have raised my calculus grad significantly."*
>
> *"I went from 30's to 90's. Thank you so much. Ms. _____ is a great tutor, very helpful and understanding."*
>
> *"I'm glad this program exists. I really like my major and I would hate to drop it because of one class. I needed a little extra help. Ms. _____ is a really good tutor."*
>
> "Dr. _____ was an excellent tutor. She made sure meeting times were convenient with me and was very receptive to questions I had. She explained concepts well and was willing to discuss any topic."

Comments also included frustration from the change in hiring procedures:

> *"I requested a tutor at the beginning of the semester and did not receive any notice until a little past 6-weeks. I expected to be assigned the same tutor as last semester but did not."*
>
> *"I wish I could have started sooner."*

Comments and Conclusions:

The problems associated with the appointment of tutors in the fall semester affected the progress of the tutoring program. Because previously appointed tutors were no longer eligible for the position, approval had to be received to advertise and hire to fill the vacant positions. Once approval was received, new tutors were hired but the process extended through the spring semester. Because of this, over 1/3 of all applicants in the fall were denied a tutor because one was not available. In addition, students, who applied early being proactive, often waited several weeks for a tutor to be assigned while the hiring and appointment process was being completed. While academic performance and grade changes were positive this academic year, they were not as significant as the 2002 academic year. This can be attributed, in part, to the problems associated with the appointment of tutors and the late assignments that resulted.

Students indicated in the 2002 academic year that information about the program needed to be more easily assessable. In the 2003 academic year, the application for tutoring was placed on the Brigade MISLO. This change could have resulted in the increase in the number of tutor requests for the academic year. However, the evaluation indicated that this is still an area that needs to be improved. For the 2004 academic year, efforts will be made to educate the faculty, Brigade Staff, faculty and officer

representatives for sports teams, and coaches concerning the program so that the information is made available to students in the courses served.

X-Classes

Purpose:

The purpose of X-Classes is to provide early intervention for students who have been identified as having a high likelihood of difficulty by providing a structured bi-weekly scheduled tutorial assistance. This program works in conjunction with the Plebe Intervention Program and Academic Departments.

Staff:

One full-time tutor, Leroy Rowe, held regularly scheduled X-classes in Mathematics for students who self-selected into the program. In addition to his X-Class responsibilities, Mr. Rowe also taught a section of Calculus every semester (fall, spring, summer).

Involvement:

Students in the Plebe Intervention Program, those selected as high-risk, were enrolled in a non-credit X-class to accompany their calculus course. X-classes were offered in Calculus I and Calculus III in the fall semester and Calculus I and Calculus II in the spring semester. The X-classes are limited to a few students in each section. The largest class in the fall had 14 students enrolled and the largest class in the spring had 11 students enrolled. The X-Class is added to the midshipman's schedule, so a regularly scheduled time is available for the midshipmen to practice and review under the guidance of a professional tutor. Table 37 illustrates student involvement in the X-Classes for AY02 by semester:

Table 37 -- X-Class Participation

	FALL			SPRING			
	Enrolled	Non-Enrolled	fall TOTAL	Enrolled	Non-Enrolled	spring TOTAL	**AY03 TOTAL**
N	14	13	27	25	21	46	**73**
Attendees	14	13	27	23	21	43	**70**
Contact Hours	294	282	576	292	59	351	**927**
Average Visits (N)	21	22	21	13	3	8	**13**

REPORT SUMMARY

Over the last two years, the overall organizational structure of the Academic Center has stabilized to include four very active service programs: Plebe Programs, Academic Counseling, Learning Skills, and Tutorial Program. The number of midshipmen seeking academic assistance from the Academic Center has continued to increase and our outreach programming continues to grow.

Due to the on-going and active support of the Superintendent, the Academic Dean & Provost, and the Naval Academy Foundation, the Academic Center has been the recipient of multiple generous gifts from the J. W. Marriott Foundation. These gifts have enabled the Center to increase our staff and provide a wider range of support services to many more midshipmen. Additionally, the Class of 1963 has chosen the Academic Center as the recipient of their 40-year reunion gift. This funding has enabled the Academic Center to hire an additional staff member and continue our service offerings to the entire brigade of midshipmen. The financial support received from the many generous donors will enable the Center to expand our services to include the Naval Academy Preparatory School while offering programs to more midshipmen.

As is the case each year, the 2003-2004 academic year will be exciting and gratifying as the Academic Center staff assist midshipmen achieve their academic and professional goals.