

Academic SUCCESS Handbook

Chapter One

The idea for a text of this nature began when I first started teaching at the Naval Academy in 1984. I knew that the Naval Academy actively recruited some of the best students that the United States has to offer. All candidates are highly screened for competitive appointments and must show high levels of leadership ability and academic success before they are selected. Discussions with students in my classes confirmed that midshipmen were very bright and that most had never experienced academic difficulties. I soon discovered that most of the midshipmen were bright enough to have achieved very good grades in high school without having to really study. Likewise, most midshipmen are bright enough and motivated enough to do quite well at almost any civilian college. However, the Naval Academy certainly is not a civilian college, and life for the midshipmen is nothing like life on a civilian campus.

To begin with, most midshipmen take between 17 and 20 credit hours per semester. On top of that, all plebes must learn what amounts to at least one full course of professional topics. Midshipmen are additionally required to spend at least three hours per day in athletic participation or drill. Being the “best and the brightest” is not enough. In order to succeed at the Naval Academy, midshipmen must learn to be effective and efficient learners.

This text is designed to be used as a self help reference. In this respect, it is a first line of defense against academic difficulties. Although the skills necessary for academic success are all interrelated, it is possible to focus on specific areas. This manual is written so that midshipmen are able to select those areas upon which they wish to focus. It is my goal that this text will be of value to all students who want to improve their academic effectiveness regardless of their specific academic standing. This text is also being used as the main text for the learning skills courses that are available through the Academic Center.

Whether you are a plebe or an upper class, if you have been receiving high grades or low grades, the information in this book can be helpful. Even the best students can improve their study skills. Improved study skills just might allow you to have a little extra free time. Almost everyone can become more efficient learners. This is especially true at the Naval Academy, where midshipmen are expected to be top-notch students, athletes and officers-in training simultaneously.

Chapter 2

Time Management

I frequently ask the beginning students in my classes to describe the biggest obstacle to their academic performance. By far, the most common response I hear is “time”. Most midshipmen believe that if there was just more time, everything could be accomplished. There is little likelihood that you will ever get more time. Similarly, there is little likelihood that everything can be accomplished. In truth, there probably is not enough time to do everything you want. However, there is usually enough time to do those things that you are required to do, and most of what you are allowed to do.

There are 168 hours in a week. That will not change. You cannot find more hours in the week to do all you want or need to do. But you can learn to use your time more effectively. You can learn to work more efficiently. The purpose of this chapter is to offer some suggestions for more effective time use. These techniques have been shown to be very helpful to many people here at the Naval Academy as well as in military, educational and business settings throughout the world.

There are three levels of time management upon which this chapter will focus: semester, weekly and daily. In order to be most effective in your use of time, it is important that you learn to take control of each level. The first focus will be on the semester schedule.

SEMESTER SCHEDULE

In order to get the most out of the short amount of time in a semester, it is important to consider an overview of your semester requirements. Use the semester calendar provided at the end of this section to map out all your major academic assignments. It might help to use color-coding to mark off academic reserve periods, holidays and leave time. Use your course syllabuses to help you fill in all your major assignments. Be sure to use pencil so that you can change the schedule if the assignment dates change. This should give you a broad view of what you can expect for the semester. It is important to note that all schedules must allow for flexibility. Many assignments change as the semester evolves. You may find that a particular assignment takes less time than you had predicted, or that you may change the topic for a term paper and need to spend more time than you had originally thought.

Whatever your particular situation, be ready to make adjustments in your schedules. Make copies of your semester schedule to keep with all your class notebooks. This will enable you to manage your assignments and chart your progress throughout the semester.

WEEKLY SCHEDULE

The next level of time management is the weekly schedule. An important move toward more effective use of your time is to see that there really is time available to you. Begin to manage your time by filling in a blank

weekly schedules provided at the end of this section. Several steps are listed below which should facilitate this process.

Creating Your Own Time Management System

1. Fill in all your classes and labs. This is inflexible time that is already dedicated to your academics.
2. Block off the 0630-0755 time Monday-Friday. This is time spent getting ready for the day. For plebes, the time is usually devoted to studying plebe rates.
3. Block off the time usually devoted to varsity or brigade athletics or drill practice. This is usually 1530-1830, Monday-Friday.
4. Count up all unaccounted time. Include the open hours during the day, as well as on weekends. The total time should amount to at least 35 or 40 hours, depending on the number of courses you are taking.
5. Decide how many hours you need to study per week for each course. If you don't think you can estimate the necessary study time, a common guideline is to plan for two hours of study for each credit hour. For example, if you are taking a four hours course, you can expect to have to study at least eight hours per week for that course.

At the Naval Academy, semester credit hours usually range between 17 and 21. That means that the ideal number of study hours per week will be somewhere between 34 and 42. Remember, this is an estimate. You will need to make changes as the course demands change. Each of you will have to determine how many hours of study are necessary for your own requirements.

Use the table on the next page to tabulate your weekly study hours. Record weekly study requirements on one of the blank weekly schedules provided at the end of this chapter.

6. Read the following scheduling suggestions and then decide when you are going to study for what subject.
 - a. Don't allow yourself 10-15 minutes to "warm up" before studying. Get right down to business and stay at it for at least 30 minutes and for not more than one and one half hours at a time. Research has shown that alertness is likely to decline dramatically after 30 minutes or so of hard mental work.
 - b. Take breaks of five to 10 minutes after every 60-minute study session. Reward yourself for doing a good job with a stretch, a bite to eat, some pleasure reading, etc., during these breaks. Make sure to keep the breaks short. Break at meaningful places, such as at the end of a chapter rather than at an arbitrary time period.

- c. Some of the best times to study are immediately after a lecture class and immediately before a discussion class. Use the time between classes to study as much as you can.
- d. If possible, try to arrange your schedule so that you study the same subject at the same time each day. It is much better to study a subject every day at the same time than to have occasional long sessions. This daily routine develops habits that facilitate harder concentration.
7. Now it is time to fill in the blanks. Use one of the blank weekly schedules provided at the end of this chapter to plan in your weekly study hours.
8. To be most useful, your schedule should be flexible. Revise it as needed.

DAILY SCHEDULE

The next level of time management pertains to your daily schedule. Most successful business executives and military leaders spend a few minutes at the end of each day getting organized for the next day. You should find that the few minutes spent in this manner is a very small investment with a very high return. The investment of five to 10 minutes at the end of each day can save you hours, even days, of wasted time trying to figure out what you should be doing.

First use your weekly schedule to find out what you had originally planned for the day. Then review the semester schedule to see if you need to work on any long-term assignments or study for any tests. You can now prepare a to-do list for the following day. Use a 3x5 card to list your classes on one side and your to-do list on the other. This daily schedule is something you can carry with you throughout the day as a reminder of what you have planned to do or of necessary study time. This information is critical for self-diagnosis. You should be able to pinpoint your own study problems as they arise.

This section has covered three levels of time management: semester schedules, weekly schedules and daily schedules. Now the hard part begins. In order for the schedules to work, they must be used. You will find that if you follow a realistic, flexible schedule you will be able to do all of what you are required to do and most of what you are allowed to do.

The next section “Note-Taking,” will teach you several techniques for improving your effectiveness in classroom situations.

Chapter 3

Note Taking

A major portion of each midshipman's weekday is spent in the classroom. It seems logical that most students would know how to use classroom time effectively. Unfortunately, such is not the case. Many students at the Naval Academy spend much of their classroom time either drifting off or attempting to take verbatim notes. Neither behavior shows the most effective use of class time. This chapter will provide you with several techniques proven to be valuable for recording and retaining lecture material. This is a critical step toward becoming a more successful student.

Lecture note taking can be divided into three main time units: the time before class, during class and after class. What you do in each of these time units can make a critical difference in how well you retain and recall important material from the lecture. The ability to retain and recall is directly related to your academic performance.



BEFORE THE LECTURE

If you have been able to find the thread of information that usually connects most lectures, the material will make more sense to you. When the material makes sense to you, it is often easier to be retained and recalled at a later date.

The best way to try to be prepared for the present is to review the past. What was the professor talking about at the last lecture? What were the unanswered questions that need to be clarified in the present lecture? It only takes a few minutes to skim the previous class notes in an attempt to predict what is going to be covered in the present lecture. Spend the few minutes before each class going over the notes from the last lecture. Note any unfinished explanations. Be able to respond accurately when the professor says, "Let's see, where did we end last time?"

Skimming your notes before class is valuable for several reasons. First, it refreshes your memory. It is one more time of going over the material. For most people, learning takes place primarily through repetition. Skimming lecture notes before class also allows you to respond in class with understanding. Equally important, quickly reviewing your notes can prepare your mind for what is coming next. By going over previous lecture notes just before class, you are establishing anchor points for new information. Each lecture is then linked to the preceding lecture, and it becomes easier for you to discern the threads that tie the class together.

Once you have a proper mind-set, you are ready for the period during the lecture.

DURING THE LECTURE

In high school, most students take minimal class notes. Most of the time listening in class is enough to do well. However, the Naval Academy is not high school. You need to do more than just show up for class. You need to take notes in order to perform as well as possible.

Research has shown that adults will routinely forget approximately 50% of the material presented in a lecture when they are tested immediately after the lecture (Pauk, 1989).

The rate of forgetting continues to increase as time goes on. It is interesting to note that there is evidence to suggest that students who take notes in class tend to do worse when tested immediately after class than students who actively listened. That may be why many students decide not to take class notes. They often claim that taking notes interferes with their ability to understand what the lecture is about. Depending on the type of note-taking and the type of material being covered, taking notes can interfere with understanding the material. Attempting to take verbatim notes often does interfere with understanding. In some courses it is more important to actively listen instead of attempting to take everything down.

However, in most college level courses, it would be highly unusual for a professor to test students immediately after the lecture. It is more likely that testing will occur days, weeks and even months after the material has been presented. It then becomes very important that students have some form of notes for study. Deep learning takes place after the lecture.

AFTER THE LECTURE

As soon as possible after the lecture is over, spend a few minutes going over the new material. Not only is this another opportunity to cover the material, it is also a way to check the legibility of your notes and mark any point that needs to be clarified at the next lecture. You can additionally use the time to straighten up any disorganized notes, or correct any errors.

Now that we have discussed the time before, during and after the lecture, it is important to have an organized system of note taking that will enable you to perform most effectively in these three units of time. It is fortunate that there is already an established system available for you. While Professor William Pauk was the Director of the Reading Research Center at Cornell University, he developed one of the most used note-taking techniques. The technique, known as the "Cornell Note Taking System" is described below.

This note taking system consists of a specific format and five steps. The format consists of 8 x 11 loose-leaf notebook papers with a vertical line drawn 2 to 2 ½ inches from the left. The right-hand column is reserved for classroom notes, while the left column is for recall. Classroom notes are taken in the right hand column, and the smaller column on the left is for recall. Once the note sheet is partitioned, you are ready to start taking notes. Use the five steps listed below to take more accurate lecture notes.

THE CORNELL NOTE TAKING SYSTEM

1. RECORD. During the lecture, record in the main column as many meaningful facts and ideas as you can. Write legibly. Use a simple form and your own words. A modified outline is often helpful here. Try to use the instructor's exact words only for definitions and technical terms. Use abbreviations whenever possible, but be sure to include a key to your abbreviations to help you translate later.
2. REDUCE. As soon after the lecture as possible, reduce or summarize the main ideas and facts concisely in the recall column. Summarizing clarifies meanings and relationships, reinforces continuity and strengthens memory. It is also a way of preparing for examinations gradually and well ahead of time.
3. RECALL. Now cover the main column. Using only your notes in the recall column as cues, state the facts and ideas of the lecture as fully as you can. Do this in your own words. Then uncover the notes to verify what you have said. This helps transfer the facts and ideas into your long-term memory.
4. REFLECT. Reflection is thinking. Merely learning the facts is not enough to do well in a rigorous academic environment. Advanced students must take a deeper step into learning by thinking about and trying to apply course material. Reflective students ask questions about the material in an attempt to acquire a deeper understanding.
5. REVIEW. Every day provides new information. Each new bit of information can interfere with previously learned material. The best way to ensure that you do not forget the material is to review it on a regular basis. If you spend 10 minutes every week in a quick review of your notes, you will retain most of what you have learned, and you will be able to use your knowledge more effectively.

(Adapted from material presented in *How to Study in College* by Walter Pauk, 1988.)

Actually, good notes depend on two entirely different factors: (1) selection and (2) organization. Your first task is to select critically from the statements made by the lecturer those that are most essential to your understanding of the topic being discussed. Your second task is to organize these facts or statements in some meaningful fashion that you will be able to use at a later date.

Many students are under the false impression that the closer their notes are to the actual words used by the lecturer, the better they are. To them, quantity of notes and exact wording are all-important.

An essential element of any effective note taking system is listening. The Air Force Academy has developed a list of important listening skills that apply equally well at the Naval Academy. A sincere thank you goes to our colleagues at the Air Force Academy for sharing the following information.

LISTENING AND NOTE TAKING SKILLS

Good listening is an active process. Listening, like reading, involves active concentration and continuous evaluation. Listening is an active continuous connecting of what is said, with what you have heard and believed. Listening requires organization for future use. To improve your listening skills and note-taking ability, try the following suggestions.

1. Prepare for Listening
 - Read your notes from previous lectures.
 - Read the assignment on which the lecture will be given.
 - Arrive early, sit where you can see and hear, and be seen and be heard.
 - Have your notebook, pencils, and other materials at hand.
 - Formulate questions you want answered.
 - Write the questions down!
2. Listen and Write
 - Attend critically to all that is said. Sort out the main ideas.
 - Know your professors, their values and their thought processes.
 - Write neatly, abbreviate freely, symbolize quickly.
 - Create your own list or key to abbreviations and symbols.
 - Outline, indent, and leave space.
 - Question continuously.
3. Review
 - Immediately after class, review your notes and fill in what you missed during the lecture.
 - If necessary, reorganize your notes.
 - Try to predict from the lecture what questions will be on the test, on what you need to concentrate.
4. Use Notes Effectively
 - Review before lecture, before reading assignment, before tests.
 - Let your mind be free to visualize concepts and relationships.

In brief, learning requires action: active listening and active thinking.

This section has focused on the time before, during and after class. What is most important to remember from this chapter is that it is critical that you take notes in class. The notes need to be thorough and legible. Any note-taking system is worthless if it cannot be used for later review.

Throughout the last few years, several students have asked if there are study techniques that are specifically valuable in mathematics or technical courses. Professor Richard Maruszewski, a mathematics professor at the Naval Academy, provided the following information.

HOW TO STUDY MATHEMATICS

The principles given elsewhere in this manual are pertinent to math courses as well, but there are several study techniques that are especially important for ideas more specific to your math courses. Let's begin by giving some general rules for success.

RULE 1: Always do your class assignments.
RULE 2: Be an active participant during class.

WHEN ALL ELSE FAILS: SEE RULE 1.

Math teachers often wear a pin that states, "Math is not a spectator sport." This pin and the rules above underscore the same idea. The best way to learn mathematics is to do it yourself. You cannot expect to learn to play the piano or basketball by only watching concerts or basketball games. Likewise, you cannot expect to learn mathematics by going to class but never actually working the problems. You must become an active participant in order to succeed in your math courses.

Learning how to do math begins with the class itself. Always come to class prepared to take notes. Although the level of detail and the quantity of the notes will differ from student to student, it is always a good practice to begin by taking extensive, detailed notes and reduce the amount as needed.

Most instructors will present material in a way that is different than the textbook. Record at least the main ideas for future reference. Always take notes about problems the instructor works out. There is a good chance that you will see that problem type again. An additional benefit to taking good class notes is that it automatically makes you more active. The more active you are the more alert you will be.

Ask questions when you are confused. If you have a question, many of your fellow students will probably have the same question. You will be helping them as well as yourself. Asking questions will also help you to be more alert and more active. In a similar vein, do not get too comfortable. If you are getting drowsy, stand up and go to the back of the room. But remember take your notes with you. You can take notes and ask questions from the back of the room, as well. Finally, make sure that you can see the board clearly from your seat. If you can't see clearly, change seats.

Most instructors understand that you won't completely finish every assignment every night. Instructors know that you are taking other courses that also put demands on your time. However, never skip an assignment completely. Give math at least some time each night. It will be much harder to fill in the gaps later when you do not remember the class as well. Begin your assignment by reviewing your notes. Fill in whatever you did not completely finish in class. If necessary, rewrite them. Your notes will make much better sense to you later that day than they will a month later, on the night before the test.

Pay special attention to the examples the instructor worked in class. These examples were chosen because they illustrate important concepts.

Now work as much of the assignment as time allows. If you cannot finish the assignment, don't just work the first group of problems. The assignment covers more than one type of problem, so working only the first few might result in serious gaps in your learning.

Work every second or every third problem. But remember, your goal is to complete the assignment. If you do better by participating in a study group, try to find one that suits you. Some instructors will collect and correct homework. Some will never look at the assignments. Don't let grading policies deter you. Prepare each night with the assumption that the next class will start with a quiz.

When in doubt, consult RULE 1.

Finally, if you identify weak points as you work on your assignment, try to clear them up by asking questions in the next class or going to your instructor as soon as possible for help outside of class.

If for some reason you miss a class, remember that it is your responsibility to recover the lost material. You cannot expect your instructor to teach the entire class to you. Find a classmate who takes good notes. (Your instructor may be able to recommend one.) Rewrite these notes in your own style so that they will blend well with the ones that you took in other classes. Read the section covered in this book. Do the homework as previously suggested. If problems arise, go see your instructor and ask precise, well thought-out questions. Don't be surprised to find out that it takes much more time to make up a class than it does to go to one.

When it comes time for the test, your daily work will pay off. You will have a good set of notes that include examples. You will also have plenty of example problems that you have worked yourself. You will not have to pull an all-nighter, and you will have more time to see the bigger picture. When you do review problems for the test, mix them up rather than doing one section at a time. Some students do very well working problems in a single section because they know what approach that section calls for, but when problems are mixed as on a test, they have difficulty selecting the correct approach.

Math tests are usually a cross between objective and essay tests. You will seldom be given a true/false or multiple-choice question, and essay questions are also rather rare. You will be asked to come up with "the one correct solution" along with your supporting work. Also be ready to explain and answer questions about your solution in good English. Write all of your work as legibly as possible. Do not try to conserve paper. The easier it is for your instructor to read your work, the more likely it is that you will receive fullest possible credit.

When you review for the final exam, use your notes, assignments and hourly tests as your base. Try to see major areas covered by the course. There will be lots of trees. Look for the forest. The main ideas are what you will take with you to your future work. The details can be relearned later as appropriate. Again, in practice sessions, mix problems. There will be many different concepts to mix. The author of the final may be someone other than your instructor, so be ready to see a slightly different form of the test. Otherwise, prepare for your final as for an hourly exam.

Chapter 4

Reading

A large part of all students' time is taken up by reading. This section focuses on this most critical aspect of the learning process.



Because of the extensive screening that takes place before an individual is admitted to the Naval Academy, all midshipmen have acquired at least a basic reading competency. However, one of the most common complaints from midshipmen is that they are not able to keep up with all the reading assignments. They often report difficulty with reading speed, concentration, comprehension, or retention. What appears to be a contradiction is explained by the fact that although all midshipmen have learned to read, few have learned to read effectively.

When midshipmen come to the Academic Center asking for help because of reading problems, they often describe situations where they have read several pages of an assignment before realizing that their thoughts were on something other than the assignment at hand. Their eyes have covered the words but very little remains in their memory. Not only do they read slowly, they also have problems with concentration. They report that they do not understand the material, and they have difficulty remembering what they cannot understand.

Usually the problem is related to passive versus active reading. If students can learn to read more actively, if they learn to push themselves more, they will find that concentration increases. They begin to pay more attention to what they are reading. As they pay more attention, they understand more, and consequently they retain more. In learning, everything is connected.

This section discusses problem areas that many midshipmen report. First I discuss increasing reading speed, one of the main causes of concentration problems.

Then I cover reading technique that has been thoroughly researched. The technique, called the SQ3R Method, has been shown to increase comprehension and retention. With practice the SQ3R Method will also help increase reading speed.

INCREASING READING SPEED

An important first question to ask is, "Should I try to increase my reading speed?" It depends. It depends on how fast you are presently reading, how fast you want to read, and what material you are reading for what purpose.

The average high school graduate reads about 225 words per minute (wpm), while the average college graduate reads about 300 wpm. You can test your own reading speed by

setting a timer for one minute and start reading at your natural speed. Count the number of words you have covered at the end of one minute. If you are reading considerably below 300 wpm, you may want to begin to push yourself while you read so that you begin to read phrases instead of individual words.

With practice you can learn to read faster and improve your concentration. But do not expect miraculous changes. Although there have been reports of people being taught to read thousands of words per minute, there is no scientific evidence that people can actually read that much material and retain the information. However, there is solid research behind the reading method described in the following section. The SQ3R Method is one of the most effective reading systems developed.

SQ3R READING METHOD

SQ3R stands for Survey--Question -Read -Recite Review.

These steps promote an active attitude toward learning. When you clear your mind for the task of studying, you need to be alert and centered. You should be ready to learn and remember what you have covered. With practice, the following five steps will do much to improve concentration, comprehension, retention and speed.



1. SURVEY

As you begin to read a new textbook, state your purpose for reading the material. Try to come up with an answer better than "because it is required." As you glance over the title and table of contents, look for relationships. Read the forward to identify the author's point of view, and the conclusion/summary to see where the book leads. Pause and ask yourself, "What do I already know about this topic?" Skim through the index for the largest entries (major indentations of page references). These are the main topics. Be aware of them; take notes on them; and relate them to each other when you read.

As you begin each chapter, look for a summary, usually at the beginning or end, and pick out the main points. Move on to read the section headings and, if necessary, the topic sentences in the main paragraphs. Look over the questions, problems, at the end of the chapter to see what you should be able to do when you have finished studying. Skim over graphs, tables and illustrations to see how they support and explain the text. Check over the central ideas and relate them to your purpose for studying the material. The entire survey of a chapter should only take a few minutes and will give you an overall framework within which to study.

2. QUESTION

Create a Question, perhaps a variation of the subheading for each reading segment. This will guide and motivate your reading in the next step. For example, a section heading

such as "Appointive Naval Leadership" can be turned into the question: "What is Appointive Leadership?" This can then guide your reading in the next step.

3. READ

Read actively to answer the question you have created. Remember your original purpose for reading the material. Try using your hand or a pen to pull your eyes down the page as rapidly as you can and still understand what is being presented.

4. RECITE

Look away from the book and attempt to answer the question from step two. What else do you remember about what you have read? If you cannot answer the question, read the section again.

You may find it adds to your learning process to write brief phrases in outline form during the recite step. These can be used for later review. Repeat the cycle of survey, question, read, recite for each section of the assignment.

5. REVIEW

When you have completed the chapter, review any notes you have taken. Then look away and attempt to recite the important points of the chapter. Continue this process until you understand and know the material.

As is the case with all of the skills that are discussed in this text, the SQ3R Method must be used in order to be valuable. You will find that it can be applied more easily to some textbooks than others. It is your task to discover what adaptations must be made for your particular situation. However, do try it out for several weeks before you attempt to evaluate its effectiveness.

The topic of this section has been reading. With practice, the techniques covered will help you read faster, understand better and retain more. But like all behavior, active reading must be practiced. You must actively work toward improvement in your reading. Test yourself frequently.

Chapter 5

Stress Management

The second section of this text began by mentioning that many midshipmen consider time to be the biggest obstacle to their academic performance. Getting organized is often the first step toward developing more effective study habits. However, many midshipmen are very organized, study very effectively, but still do poorly.

Some students report knowing the material before the exams, but "losing it" when they sit down to take the test. This section will discuss this common concern and provide some practical suggestions for overcoming what has become known as test anxiety.

We know from research that when humans are faced with a stressful situation, they often forget the most recently learned material and revert back to earlier learning. However, this earlier learning is frequently inadequate. This translates into poor performance and lowered test scores, and is known as performance anxiety.



One way to deal with performance anxiety is to prepare more in advance and "over study". That means preparing for exams well in advance and preparing for more than could possibly be on any one exam so that the earlier learning is adequate enough to enable you to do well on the test. An earlier section provided information that should get you started on the right path for advanced preparation. The rest of this section will discuss how to cope when the stress of the situation seems overwhelming.

What is stress? We use the word regularly to describe our feelings as well as the situation that seems to be causing the problem. "I am stressed out" and "This is really a stressful place" are common expressions. Because the dynamics of the situation are often out of our immediate control, it is more productive to focus on the feelings. The following conceptualization of the kind of stress related to test anxiety was developed by Professor Donald Meichenbaum. His ideas provide a helpful way to look at poor performance due to stress, whether the stress is due to the situation or the feelings.

Dr. Meichenbaum work suggests that there are two components of what we call stress: a mental component and a physical component. The mental component comprises all the thoughts and worries that seem to fly through your brain as you begin to panic. For example, during a test you might look at one of the questions and start to think "Oh no, I don't know that one. I'm really blowing this test. If I don't pass this, I flunk the whole course. If I flunk, I'll be kicked out of here."

The physical component consists of all the physiological symptoms that go along with being stress out: headaches, upset stomach, tight muscles, etc.

Research has shown that the increasing spiral of panic can be stopped or short-circuited by learning to control either the physical or the mental component. You can learn to intervene in either way. You can learn to change how you think as well as how you act.

The first step toward change is awareness. You need to first become aware of the negative things you are saying to yourself in order to be able to change them. For most people, the outside situation is not the main problem. It is the internal reactions, the things you say to yourself that cause you to be stressed out.

For example, in the preceding illustration, instead of allowing yourself to spin off on the countless negative things that can interfere with your performance, you could reword what you say to yourself to be something like: "Oh no, I don't know that one. Well, just take it easy. Maybe it will come to me later. I'll try the next one. I know I studied as much as was possible. It is now time to just take the test."

As simple as this statement sounds, rewording the things you say to yourself into more positive statements can have dramatic impact on your level of confidence. And increased self-confidence can help you perform without interference from irrational worry. But changing what you say to yourself, just like any behavior, takes practice. From now on, every time you catch yourself spinning off on negative, self-destructive thinking, stop, take a deep breath and reword your thoughts into more positive, encouraging statements.

With practice you will notice that you will be able to perform in stressful situations without undermining your own effectiveness. As was mentioned earlier, there are two components to stress. You now have the information necessary to begin to change the effects of the mental component through changing the way you think about your own performance.

You can also affect the physical component of stress by practicing a few simple exercises that will enable you to develop more self-control during stressful situations. The rest of this section will focus on the physical part of stress management.

A primary goal of stress management is to be able to perform as well as possible in a stressful situation. Because it involves performance, the goal cannot be total relaxation. You have to be active enough to perform. You cannot take a test while you are asleep or so relaxed that you cannot get motivated. The trick is to be able to know the correct level of relaxation in order to perform to the best of your ability.

STRESS AND BREATHING

Breathing has well documented and extremely powerful effects on bodily functions. Learning to be aware of breathing is the first step toward controlling the physical and mental effects of stress. There are two basic types of breathing: diaphragm breathing and chest breathing.

The diaphragm is a large sheet of muscle, like a piece of rubber balloon stretched over the bottom of the lungs. When breathing is natural and relaxed, the diaphragm expands down on the inhale, creating a negative pressure that pulls air into the lungs. On the exhale, the diaphragm relaxes back into its original position, pushing air out of the lungs. When the diaphragm moves down when you inhale, the abdomen naturally moves forward and expands. Place your hand on your stomach. If you are breathing diaphragmatically, You will feel it bulge when you inhale and flatten when you exhale.

During times of stress there is a tendency to hold the breath, to breathe irregularly and to exhale incompletely. When exhalation is incomplete, not enough fresh air can enter the lungs on the inhalation. This leads to a pattern of chest breathing, where the diaphragm is not used. Chest breathing (or stress) is rapid and shallow. The chest expands and the shoulders rises with each breath since the small muscles between the ribs, rather than the diaphragm, are expanding the lungs.

This type of breathing results in poor exchange of stale air with fresh air. Blood chemistry changes, resulting in anxiety and fatigue. It also stimulates the sympathetic nervous system, producing a widespread stress response. A vicious cycle results where stress leads to chest breathing, and the physiological consequences of shallow breathing magnify the stress response.

Now take a moment to notice your breathing. Is it chest breathing or diaphragmatic breathing?

Learning to breathe diaphragmatically shifts your body out of the stress mode into the relaxation mode. Begin by relaxing back against a chair. It is helpful to close your eyes. Take a deep breath, and then exhale slowly and completely. Place a hand on your stomach and notice whether you can feel your stomach expand with your inhale and flatten with your exhale. By paying attention, you will soon learn to shift automatically into diaphragmatic breathing. Heart rate will slow, blood pressure will decrease, and the sympathetic nervous system will not be aroused, leading to a subjective sense of relaxation and a decrease in anxiety and restlessness.

Chapter 6

Other Resources

This section describes academic and counseling services available to midshipmen at the Naval Academy. Under each listing is a description of the services offered, along with the location, a phone number and a web page when available. These offices and individuals are here to help you. Like the techniques discussed in this text, these resources are valuable only if you use them. They can be of little assistance unless you ask.

ACADEMIC CENTER

The Academic Center, located in Nimitz Hall, exists as a service unit within the Naval Academy. Current information about The Academic Center can be found at <http://www.usna.edu/AcCenter>.

Plebe Intervention

The Plebe Intervention Program identifies plebes who have a high potential for encountering academic difficulties at the Naval Academy and has developed means for reducing or eliminating those difficulties. Services provided for these at risk midshipmen include: academic effectiveness classes, calculus and chemistry extra instruction and individual counseling from an assigned Academic Center adviser. Go to <http://www.usna.edu/AcCenter> for information about this program.

Plebe Advising

The Plebe Advising Program provides academic advice and study skills to plebes to help them adjust to the academic demands of the Naval Academy. Two faculty advisers are assigned to each company during plebe summer and throughout the academic year. Plebes are assigned a permanent academic adviser when they declare an academic major in the spring. The plebe academic advisers are a valuable source of information and assistance. Get to know your adviser well! Go to <http://www.usna.edu/AcCenter> or talk to your Company Academic Officer to find out the name of your Company Faculty Adviser.

Academic Counseling

Upper class midshipmen may consult with Academic Center staff concerning their choice of major and/or other special requirements that affect their academic performance. Go to <http://www.usna.edu/AcCenter> for information about this program.

Learning Skills

The Learning Skills Program provides a full range of instruction to improve midshipmen learning techniques. The services provided include: reading and learning skills courses,



academic effectiveness lectures, and training/supervision for midshipmen academic officers and company officers. Go to <http://www.usna.edu/AcCenter> for information about this program.

Tutor Coordination

The Tutor Coordination Program is available if you have worked with your course instructor, gone to EI, and are still having problems understanding course material. With the authorization of your course instructor, the Academic Center is able to assign a professional tutor who will work with you to supplement the regular classroom instruction. Go to <http://www.usna.edu/AcCenter> for information about this program.

CHAPLAIN CENTER

The Chaplain Center, located in Mitscher Hall houses the offices of the Naval Academy's chaplains who serve and minister to the needs of the Brigade of Midshipmen. Among other things they provide personal counseling ranging from faith centered issues through crises of life and death to future marriage plans. For more information about the Chaplain Center go to <http://www.usna.edu/Chaplains/>.

CHEMISTRY DEPARTMENT RESOURCE ROOM

The Chemistry Department Resource Room, located in room 114 Michelson, is available for all midshipmen who would like extra assistance with chemistry. The Resource Room has several chemistry software programs, a VCR and videos, reference materials, and tables for study groups. Members of the chemistry department faculty are available in the Resource Room most periods during the academic day and Monday-Thursday evenings. The Resource Room schedule can be accessed at the following web site: <http://chem.mathsci.usna.edu/plebechem>.

MATH LAB (X32795)

The mathematics department coordinates a math lab during first through sixth periods on Tuesdays and Thursdays. The Theodore J. Benac Math Lab is located in Chauvenet 216a and 216b (off the second floor balcony, overlooking the Radford Terrace and the Chauvenet-Michelson fountain).

One room contains PCs loaded with standard midshipman software plus several modern, interactive, self-help programs covering pre-calculus and calculus. Midshipmen are encouraged to drop by to review topics and hone their basic mathematics skills. There is also a study area with an extensive collection of reference calculus textbooks in this room.

Mathematics department faculty members staff the second room and are available for midshipmen who would like guidance in solving mathematics problems. Of course,

midshipmen should always arrange extra instruction first with their own instructors. The mathematics department homepage can be accessed through

<http://www.usna.edu/MathDept/website/index.htm>

MIDSHIPMEN DEVELOPMENT CENTER (293-4897)

The Midshipmen Development Center (MDC) provides individual and group counseling to midshipmen requesting assistance in dealing with a full range of personal concerns. If you have concerns that seem to be interfering with your ability to succeed at the Academy, the Midshipmen Counseling Center can be helpful. To find out more about the MDC go to <http://www.usna.edu/MDC/>.

WRITING CENTER

The Writing Center, located in Room 020 Sampson Hall, provides one-on-one tutorial services to midshipmen who need or want extra writing instruction. Midshipmen may use the Writing Center by scheduling an appointment on line by going to http://www.usna.edu/cgi-bin/w_center. The Writing Center is open for tutorials every class period Monday-Friday and after classes as scheduled. For more information about the Writing Center go to <http://www.usna.edu/EnglishDept/wcenter.htm>.