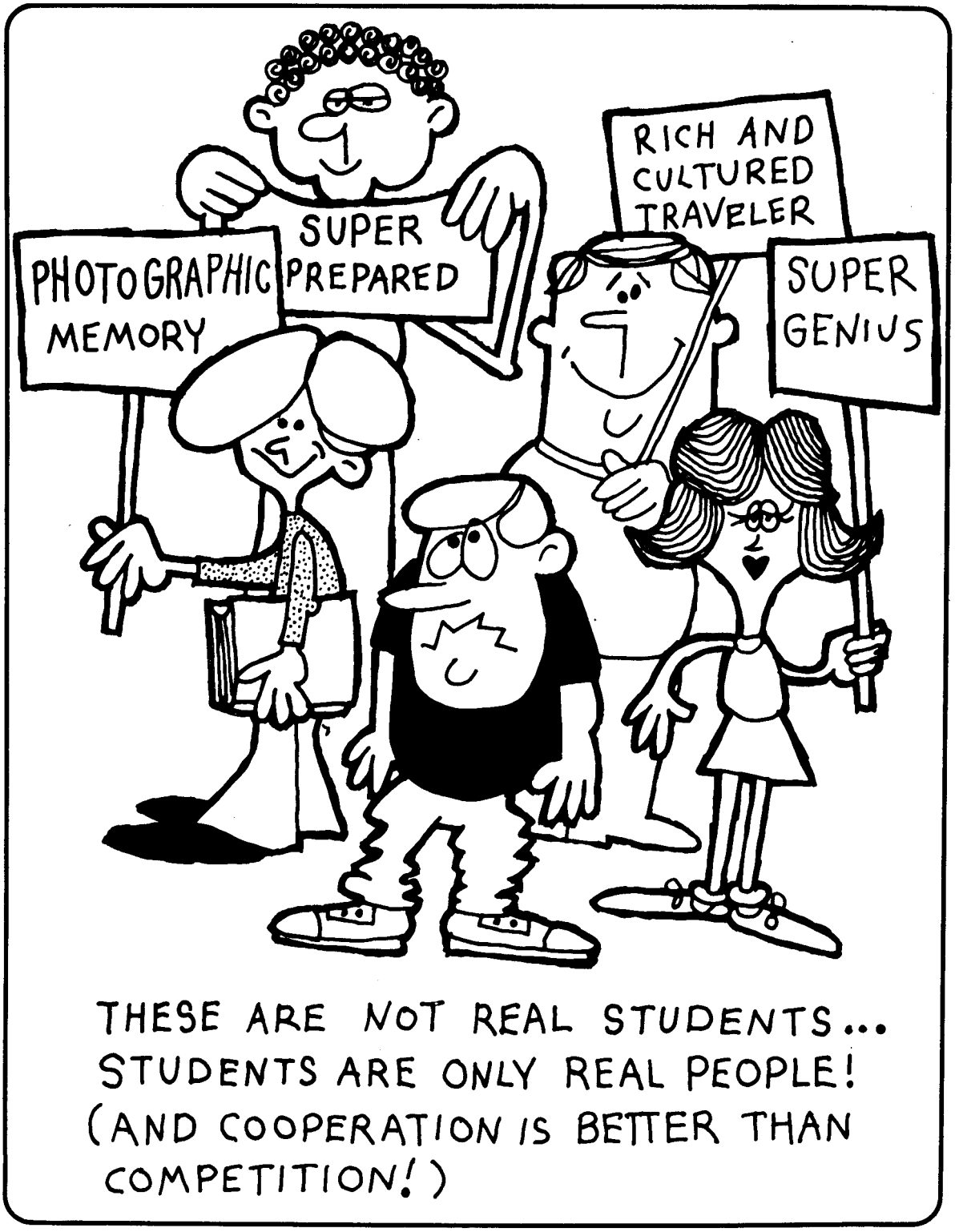
chapter 1 BEFORE CLASSES START:

Take Deep Breath, Close Your Eyes, and Get Ready Jump!

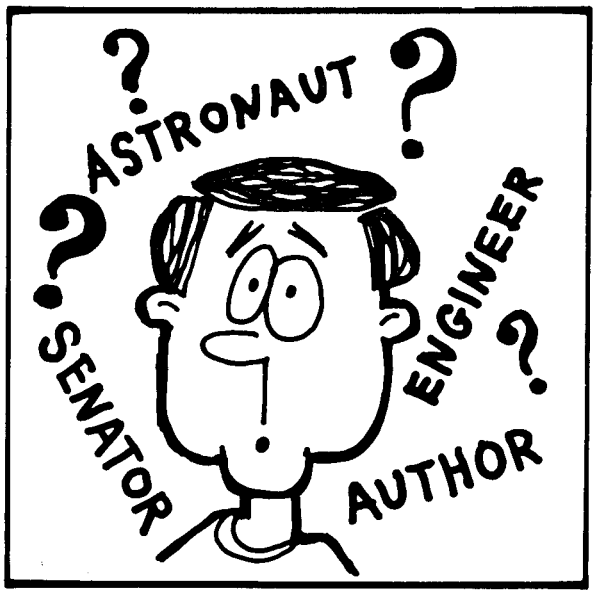


chapter 1
BEFORE CLASSES START:
Take a Deep Breath, Close Your Eyes, and Get Ready to Jump!*

1.1 CAN YOU SURVIVE?

CERTAINLY YOU CAN! Virtually anyone can obtain some kind of a college degree. If you've read this far, your command of English is adequate. (Since you bought—or borrowed—this book, you obviously have intelligence and good taste.) ***Of course*** you can survive college. Don't let anyone convince you otherwise!

That was an easy question. Let's consider a couple of tougher ones:



1.1a Do You Want, or Need, to Survive College?

If you are reasonably certain that what you ***really*** want to do for the rest of your life requires a college program, then the answer is obviously "yes". If it does ***not*** require a college program (and many interesting and rewarding careers do not), then you should seriously consider if the ***time and effort*** are worthwhile. There are, of course, many excellent reasons for obtaining a college education in addition to preparation for a career. Expanding your horizons and gaining an appreciation of our culture can make the investment of time and energy ***VERY*** worthwhile. If you are uncertain about educational requirements for ***your*** goals, a visit to an academic counselor ***will*** be worthwhile.

1.1b Are You Aware of, and Willing to Make, the Effort Required to Survive College?

You have probably been warned that success in college will take more time, will take harder work, and will require better organization than anything you have done so far.

YOU PROBABLY DON'T REALLY BELIEVE THIS.....BUT

*Don't jump too far yet! It is neither necessary nor desirable for you to read "straight through" this book. You should only study Chapter 1 carefully this week (if classes haven't yet started). ***Next week*** you should study Chapter 2 carefully. (If classes ***have*** already started, study Chapters 1 and 2 right away.) After that, use the remaining chapters, or appropriate sections, only as you need them.

YOU WILL!

Nobody wants to "just survive". It is ever so much more fun to have the satisfaction of doing well and of really getting "your money's worth". Some thinking now can help you accomplish both of these goals. Consider the following:

1. Is your "academic goal" really ***yours*** or someone else's?
2. Do you really know what someone in your planned profession does on a day-to-day basis?
3. Do you have a good understanding of the educational level required for your chosen goal?
4. Do you plan to spend college becoming a "superbrain" with no time for friends, a "social animal" with no time for books, or something in between?

IF YOUR HONEST ANSWERS TO THE FIRST THREE QUESTIONS WERE:

"someone else's", "not really", and "not fully"

THEN STOP HERE, SEEK GOOD ACADEMIC COUNSELING, AND THEN CONTINUE. IF YOU ANSWERED THE FIRST THREE QUESTIONS:

"MY goals, by gosh!", "I surely do, and that's what I want.", "good enough"

AND YOUR ANSWER TO QUESTION (4) WAS EITHER "Superbrain" or "the best of both", READ ON.

(If you answered question (4) with "social animal", burn this book, cash in your registration receipt, and buy stock in a saloon or poolhall near campus.)

The real differences among serious students are not with "ultimate survival". The real differences are with the time and effort required for "success" and the ***quality*** of success achieved. Most of this book is designed to help you achieve success with minimum time and effort, through MAXIMUM EFFICIENCY.

(For some thoughts on the ***quality*** of success, see the Backward-Foreword, p. 113.)

1.2 GETTING SIGNED UP (REGISTRATION)

If you have already completed registration, you should still consider the following discussion carefully. Most colleges allow a period of a week or so for "drop-and-add", during which you may rearrange your schedule. If this is possible and the schedule you have is considerably less than ideal, you should certainly attempt rescheduling. See your academic advisor. If he or she is unavailable or unwilling to help, see the head or chairman of your department, or the dean of your college, and request a new advisor. Most advisors are fine people, but faculty are just as human as everybody else. A grouch sometimes sneaks into an advisory position. Remember (and, if necessary, politely help your advisor remember) that it is YOUR life, YOUR tuition, and ultimately YOUR decision. Advisors should ONLY "advise".

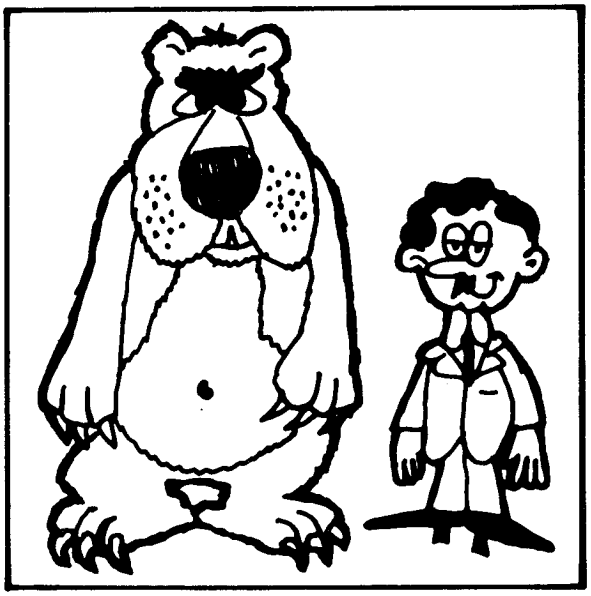
If you have not yet registered, attempt to design an "ideal" schedule. If that doesn't work, consider "drop-and-add" time as an opportunity to get closer to the ideal.

1.2a Courses

Almost every student finds some courses that are really great and some that have to be taken, but are no fun. You should try, as much as possible, to spread the "no fun" classes over several terms. In that way, each term has the maximum possible number of classes that you like (or at least don't mind very much).

In most cases, your college catalog will "specify" the courses to be taken in each term. You should, however, recognize that the college catalog was ***not*** carried down a mountain on stone tablets by Moses. The courses for the "average student load" may be just right for you. They might also be ***all wrong*** for you. If ***you*** feel insecure about your readiness for some "typical" courses, consider starting, instead, with a lower level course to strengthen your background.

For ***quality*** in your program, you need to talk seriously with a good advisor. ***Sometime*** (not necessarily as you first start in college) you will want to broaden your perspectives and become a more cultivated person. If you're eager to do this now, be especially careful to choose ***exciting*** profs. If you're not turned on by these ideas yet, come back later and read the Backward-Foreword (page 113).



1.2b Professors

Except at small colleges, there are usually different sections of a course, taught by different professors. You should, obviously, try to get the best possible professors. Clues to a selection of "good guys and gals" and an avoidance of "grizzly bears" can be obtained from student acquaintances who have had that class. Other sources include published course evaluations (available on many campuses) and advisors or other faculty. (In seeking advice from faculty about selecting professors, you must learn to "read between the lines" and to ask the right questions. Professional ethics should prevent a faculty member from making disparaging remarks about a colleague.)

If you ask other students about professors, be sure that you are asking SERIOUS students. You want VALID opinions, not "sour grapes" from those who just didn't feel like doing the work!

During the term, it may be possible for you to ***visit*** "future" classes in order to form your ***own*** opinion of the profs. If you have time to do this, it can be valuable in providing you with a good perspective of the ***prof*** and of the general nature of the course. Be ***sure*** to ask the prof's permission to visit a class (for the purpose of "getting an idea of what the course will be like"). Most profs are flattered by such requests. If a "grizzly bear" growls a refusal, ***that*** tells you something, too.

Sometimes you will have to make an initial choice from among a totally unknown group, especially when Professor "STAFF" is listed for every section. (You'll discover that Prof. STAFF teaches a lot on many campuses. The secretary in the department office may be able to supply the real names of Prof. "STAFF".)

No matter how you choose a professor, most (but, unfortunately, ***not*** all) will do a good job if you give them a chance. However, you may interact better with some than with others. A rescheduling during "drop-and-add" time is WELL worth considering if it can get you a professor that ***you*** feel better about.

1.2c Credit Hour Load

Most curricula will indicate the normal number of credit hours for each term, often with a specific set of courses. If you carry fewer than the normal number of credits, you're going to have to make that up somewhere (a summer session, an extra term, or a term with a greater than normal load).

It is, however, important that you avoid too heavy a load, especially in your first term or at times in which you must be heavily engaged in other activities (work, athletics, student activities, military programs, etc.). If you plan to be involved in any other activities or if you feel at all insecure about handling a full load, you should certainly consider taking at least a few credits less than the usual load. Planning to avoid too many credits is much better than dropping classes later.

Incidentally, it is NOT good practice to enroll in more courses than you really intend to keep and then to drop "problem" courses. This can develop the bad habit of accepting too much responsibility and quitting the "tough jobs". ***It can also "louse up" an otherwise good schedule!***

It is equally important that you avoid too ***light*** a load. There is usually a minimum credit requirement for qualification for scholarships, student loans, participation in various activities, etc. Although college can be fun, few would care to prolong it more than necessary. Perhaps more important, carrying too light a load is very likely to produce inefficient study habits. LEARNING "HOW TO LEARN" EFFICIENTLY MAY BE THE SINGLE MOST IMPORTANT THING YOU CAN GAIN FROM COLLEGE.

1.2d Class Time Schedule

Arranging classes in a particular way is EXTREMELY important! This will provide overall efficiency in the learning process (the key to gaining the most from the least amount of effort). It will also help you avoid certain traumatic experiences. (Having major exams in chemistry, calculus, and history three hours in a row can just spoil your whole day.)

A really good schedule may require you to exercise some "creative planning" and to make some sacrifices. Don't hesitate to schedule some classes at "unpopular" times such as evenings or Friday afternoons. You will often have to choose between "most desirable" class times and "most available" class times. If LEARNING is important to you, ***choose the times most likely to get you a good learning schedule.***

The optimum class schedule is one that spreads the total work load as evenly as possible throughout the week and leaves a "free" hour between all classes. The total work load spread suggests that it is highly desirable to mix classes that are "difficult" for you with some that are "easy", preferably on an alternating "hard-easy-hard" basis. The reasons for spreading the work load evenly are fairly obvious, but the "free" hour needs some explanation.

Careful studies have shown (page 27) that the reinforcement of learning necessary for long range retention is ***critically*** tied to the length of time elapsed between successive learning experiences. Retention decreases with elapsed time in a truly astonishing way. It is **VERY** important, therefore, to provide time blocks in your schedule for "post-lecture work" and "pre-lecture work". A 30–45 minute block at the right time, and for the right activities, can be worth 2 hours later that day and up to 5 hours a week later.

1.2e Summary

THE IDEAL CLASS SCHEDULE MUST HAVE:
(in order of importance)

***** TIME BLOCKS BETWEEN CLASSES

**** BEST AVAILABLE PROFESSORS

*** EVENLY DISTRIBUTED WORK LOAD

** TOTAL CREDIT HOUR LOAD THAT IS NEITHER TOO HEAVY NOR TOO LIGHT FOR *YOUR* NEEDS

* OPTIMUM MIX OF "LIKED" CLASSES AND "UNLIKED, BUT NECESSARY" CLASSES

Which of the two schedules in Table 1.1 is most nearly IDEAL?

Table 1.1. Sample Class Schedules

Class: Freshman Major: Undeclared Name: Frank Lee Fehling

HR.	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8	CHEM 101		CHEM 101		CHEM 101	8
9	MATH 121	MATH 121	MATH 121	MATH 121		9
10	HIST 105		HIST 105		HIST 105	10
11	CHEM LAB		P.E. 199		P.E. 199	11
12	↓					12
1						1
2	ENGL 103		ENGL 103		ENGL 103	2
3						3
4						4

Class: Freshman Major: Chemistry Name: Joe Cool

HR.	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8		BIOL 113		BIOL 113		8
9	CHEM 101		CHEM 101		CHEM 101	9
10						10
11	ENGL 103		ENGL 103	CHEM LAB	ENGL 103	11
12				↓		12
1	P.E. 199		P.E. 199			1
2					BIOL LAB	2
3	MATH 121	MATH 121	MATH 121	MATH 121	↓	3
4						4

Did you get that right? Just look at how much you've learned already! (How does YOUR present schedule compare with these?)

1.3 THE INITIAL ORGANIZATION

If you have already started your classes, read this over your shoulder while looking in the mirror, because you're already behind. However, all is not lost. Getting ***really*** organized is best before you get started, but it can be done later if necessary. (On the way home with a pocket full of F's may be a ***little*** too late.)

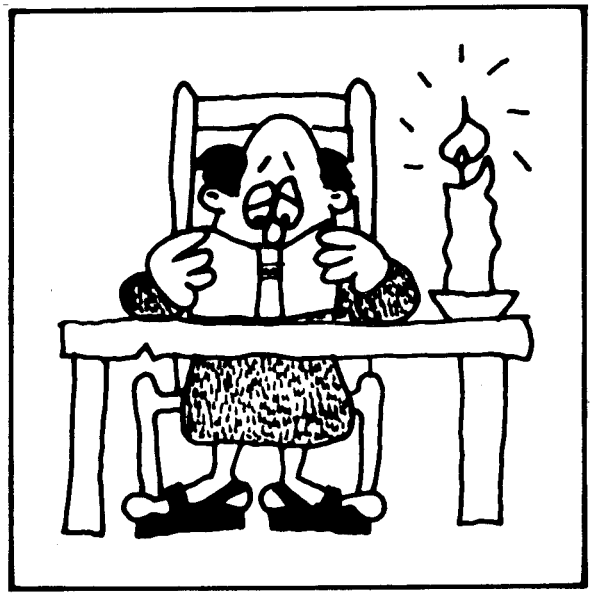
Two aspects of organization are extremely important if you really want to study efficiently (thus saving more time for other activities). These might not appeal to you at a first glance, but give them a try for a reasonable time. You'll be surprised how much they help. These aspects involve DESIGNING A STUDY ENVIRONMENT and DESIGNING A ***REALISTIC*** STUDY SCHEDULE.

How much you ***learn*** in college is, unfortunately, not always the same as how much you are ***perceived*** to have learned (i.e., the grades you get). It is most assuredly important to get your money's worth by learning as much as possible. It is also important to get good grades. If you follow the methods of this book, you can do ***both.*** Some "tricks of the trade", with respect to getting a grade that reflects your real knowledge, are discussed in Chapter 4.

(NOW, DON'T PEEK AHEAD. WE'RE NOT READY FOR THAT YET AND WE ***NEVER WILL BE*** IF WE DON'T GET ORGANIZED.)

1.3a The Monastic Cell: A Study Environment

The study environment has two impacts on your potential grades. If the environment really helps you learn, that ***must*** help your grades. (And guess what affect on your grades you should expect if the environment ***hinders*** your learning.) The second impact is more subtle. Your grade will depend, to a significant extent, on how you perform in an ***exam*** environment. If we model our study "Cell" on an exam environment (quiet, uncluttered, dedicated to a single kind of activity), then an exam will be taken in a familiar, comfortable setting, with reduced tension and better performance. Fortunately, these same criteria are excellent for optimum ***learning.***



The necessary criteria, remember, are "quiet, uncluttered, dedicated to a single activity". To achieve these, you must survey the overall area in which you hope to establish your "Monastic Cell".

1. Can you locate a suitable work area (table or desk) where you can "tune out the world"?
2. Can you find a nearby non-study area where you can take a break, read a novel, write letters, etc.?
3. Can you arrange the identified study area in an "uncluttered and dedicated way"?

If you answered "yes" to ***all*** of these questions, ***great!*** You've found your Shangri-La. (If you don't know what that is, ask your history professor or someone "old", i.e., who remembers the 1940's.)

If you answered "no" to ***any*** of these questions, seek further. If your living quarters can't be kept quiet and isolated, then you should consider a library study carrel, a learning resources center, or a group-of-three study area (page 44).

If your "Monastic Cell" is too far away for between-class study, locate one or more "day-time study areas" that meet the basic requirements. These should be near your classrooms to avoid wasting time in "travel".

1.3b The Suitable "Regular" Study Area Must Have:

A SIZABLE CLEAR DESK (OR TABLE) SURFACE

A BOOKSHELF (OR STABLE BOOKENDS)

A CLOCK OR WATCH (An alarm clock is useful in practicing "examsmanship", Chapter 4.)

PLENTY OF PENCILS AND A SHARPENER

LOTS OF SCRATCH PAPER

A DICTIONARY

A WASTEBASKET

A CALCULATOR OR SLIDE RULE

A COMFORTABLE STRAIGHT CHAIR

A POSTED STUDY CALENDAR (to be described shortly)

THIS BOOK

(When using a "day-time study area", such as a library carrel, your backpack serves as the "bookshelf". It should contain everything you will need, including a copy of your schedule and, naturally, this book.)

1.3c The Suitable Study Area Must *Not* Have:

Photos (especially girlfriend/boyfriend or family)

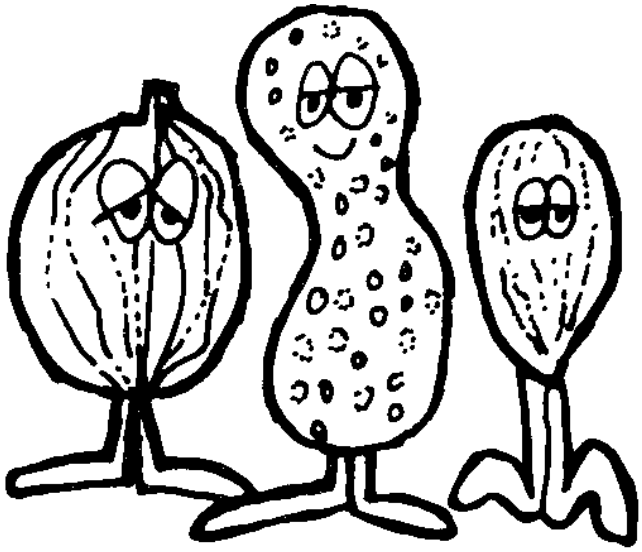
Radio, Stereo, or TV (or ANY noise therefrom)*

View of a window or open door

KEEPSAKES, GRAFFITI, SOCIAL OR SPORTS CALENDARS OR ANYTHING ELSE NOT ON THE "HAVE" LIST

HOLD IT! How dare anyone tell you what to put on your desk? What kind of sadistic nuts wrote this book?

*Some people feel that they study better with ***soft*** music in the background. If this is true for you, have a source of ***SOFT*** music nearby (as long as it won't bother others). However, you ***don't*** want to become dependent on music to help you concentrate. You are ***unlikely*** to get music during exams (or in your final career). Plan for some study blocks (e.g., "exam review") WITHOUT background music. If you "move" in time to the music, it *is decreasing* your concentration.



HEY! We're sorry about that. We just meant, "That's what we think you should try". If you don't like our suggestions, well, you just go ahead and mess it up any old way. We'll still be your friends. (But save this book just in case you change your mind later.)

Rod, Tom, and Paul

THREE NUTS THAT SURVIVED!

1.4 A REALISTIC LEARNING SCHEDULE

Learning to schedule work ***and play*** could very well be as important as anything you can do to prepare yourself for life in the "real world". It involves two factors:

LEARNING TO MAKE A GOOD SCHEDULE, THAT YOU MAY REVISE AT PROPER INTERVALS
(***This*** is pretty easy.)

LEARNING TO *STICK TO* A SCHEDULE FOR A DEFINITE PERIOD OF TIME
(This is NOT so easy.)

At this point, assuming that you've not yet started classes, you really can't make more than a temporary study schedule. Let's see what's involved. Here are the basic steps:

1. The total "Learning Schedule" includes all of the learning experiences--class time, lab time, pre-and-post-class time, library time, alternative resources time, "homework assignment" time and "review" time. Your calendar should, therefore, show all of this, plus scheduled "student activities time", "sleep time", and FREE TIME (for "breaks", for "play", or for whatever ***YOU*** want to do). The real goal is to maximize efficiency to gain the most possible FREE time.)*

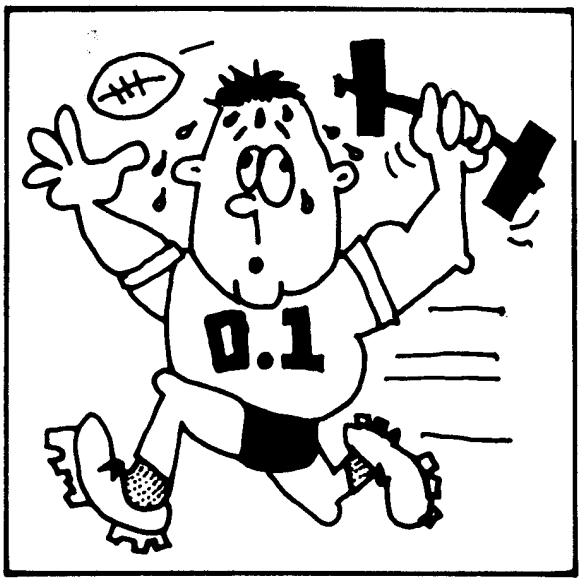
2. It is fact, not theory, that we have relatively short "attention spans". As a result, spending 2 or 3 continuous hours on a single subject is usually much less fruitful than doing the same work in 4 or 5 shorter separated segments. The length of time you can study a subject ***efficiently*** is a very individual matter. It will probably be shorter for some subjects than others. A very good rule to start with is to plan ***no blocks longer than a typical exam period*** (usually 45-60 minutes, depending on the course involved). This limit helps you develop the habit of working something through to completion at a rate similar to the rate that you ***must*** use on exams.

*The things you do and the thoughts you have during your FREE time can have a major impact on your academic work. For some thoughts on this topic, see Chapter 9.

You can make an initial estimate of your "attention span" for each course by a rather simple technique. For each class, select a "typical homework assignment" (or, before classes have started, use the first chapter in each textbook). Record the time when you start work on the assignment (or when you start reading the chapter). As soon as you notice that you are becoming restless, feeling frustrated, or reading the same passage over and over, record the time. The time interval elapsed is a good ***first estimate*** of your "attention span" for this course. Although you can (and will want to) increase your "attention spans", you should plan your initial schedule with time blocks that are not much longer than your estimated "attention span" for each course.

3. Whether you start your work early in the morning ***or*** continue it late into the night depends on whether you are a "day person" or a "night person", and on what times you have classes or other activities. Uniform wake-up time ***is*** important, and one thing you DO NOT DO is to reduce sleep time! (Although the "all-nighter" is a tradition on many campuses, it is one of the ***STUPIDEST*** things you can do. All night cramming is ***very*** likely to leave you tired enough to make lots of "dumb" mistakes the next day. All studies indicate that it ***also*** has a ***negative*** affect on long-range retention.)

   Studying is very much like training for an athletic event, with the exam being the "big game". Consider how a regular daily physical training program compares with saving all the exercises for a solid twenty-four hours just before the big game.



   Although caffeine and other stimulants can make you FEEL alert, they CANNOT significantly improve your "mental performance". That WILL suffer if you miss needed sleep.

4. All of us have some "least efficient" work times, such as early mornings (for "night persons") or late evenings (for "day persons"). Try to schedule your study time ***mainly*** at times when you are reasonably efficient. (However, the best time for "memorization" type study, for most persons, is the block ***just before*** bedtime.)

5. It is very helpful to "shift gears" periodically between quantitative material (e.g., physical science, engineering, or math) and descriptive material (e.g., history, literature, or philosophy). Other "gear-shifting" techniques involve alternating between different "concentration-levels" of the same course material (skimming an assigned reading in physics for a while, then switching to working physics problems). You can also use short breaks at intervals when "gear-shifting" is needed to improve efficiency.

6. Be sure to schedule some hours each week for ***regular*** review of all previously covered material in each course, especially for those courses employing "cumulative" exams. Also schedule "catch-up" blocks that can be used when study for one or more courses is not completed in the time blocks allocated.

   "Catch up" times have many potential uses. You should NOT plan to use them REGULARLY for uncompleted scheduled work. To do so reinforces the bad habit of procrastination. However, these times are especially important if you miss some regular work

because of illness or other problems. "Catch-up" times are also useful for getting ahead on a long range project, such as a term paper. When you don't need "catch-up" hours, use this time for a hobby or other "fun" project to reward yourself for keeping up with your work.

7. To decide how much time to allocate for each course, a good "rule of thumb" for the initial estimates (that you will revise periodically as you develop a better "feel" for the demands of each specific course) is:

   1 to 2 hours study time for each credit hour in "nonquantitative" courses (e.g., English, history, languages) [use 1 hour only for those courses which are "easy" for you]

   2 to 3 hours of study time for each credit hour in "quantitative" or "project" courses (e.g., math, chemistry, engineering graphics) [use 2 hours only for those courses you DON'T expect to be "tough"]

   3 to 5 hours study time for each credit hour in "special demand" courses (e.g., some manipulations courses or classes with very large reading assignments).

   If you are carrying, for example, 17 semester hours consisting of 8 hours of science and math, 8 hours of history and English and 1 hour of a physical education "games" course, then your maximum* total study time would be (as an initial estimate):

$$8 \text{ credits} \times \frac{3 \text{ hours}}{\text{credit}} = 24 \text{ hours}$$

$$8 \text{ credits} \times \frac{2 \text{ hours}}{\text{credit}} = 16 \text{ hours}$$

$$1 \text{ credit} \times \frac{0 \text{ hours}}{\text{credit}} \qquad \frac{0 \text{ hours}}{40 \text{ hours}}$$

Note that membership in a "Student ***Union***" does not guarantee a 40 hour work week or the "right to strike". With 40 study hours, plus class and lab time, you really have a work week of around 60 or more hours. That isn't as bad as it sounds. There are 168 hours in a week. With optimum sleep time (about 8 hours per night) that still leaves you:

168 hours
-60 hours (work)
-56 hours (sleep)
52 FREE HOURS

(or an average of 7.5 hours per day for eating, drinking, visiting, partying, and reading silly books on how to study).

*A recent study (page 22) at the University of California indicates that EFFICIENT study can reduce total study time by as much as 40%.

Realistically, of course, you cannot expect to "notice" 7.5 hours of really "free" time per day during a college term. On a typical class day, most students will average 1–2 hours in "travel" (to and from classes), 2–3 hours eating and preparing meals, and 1½ hours showering, dressing, etc. The "real" free time in the average academic day is, therefore, less than 5 hours. Efficient use of your nonacademic time (Chapter 9) can still net you a significant amount of "fun" time per week.

8. If you want to become a better PERSON, as well as a better student, schedule at least one 30 minute block each week for "thoughtfulness time". This is a time to write a "thank you" note to a favorite professor or to someone who did something you appreciated. It is a time to send a flower to your mother or a special friend. It can also be a time to ***just think about yourself***—what you like or don't like about your life, and how you might improve it. For further suggestions, see Chapter 9 and the Backward-Foreword.

9. Cultural events, such as concerts and/or lecture series, should become a valuable part of your ***true*** education. If these fall regularly on Wednesday evenings, for example, schedule "variable" or "catchup" time for that period.

Whatever study schedule you design, you MUST stick to it consistently for a fixed time period of at least one week **IF YOU REALLY WANT TO ACHIEVE EFFICIENCY AND AN INCREASE OF FREE TIME.** (The interval that you use a particular schedule will become longer as you get further into your studies and develop a better revised schedule.) The total working time scheduled should be designed for the achievement of the success level ***you*** want for your academic work.

DON'T FORGET:

Pre-Class Preparation Time just before each class
(or as close to that as possible)

AND

Post-Class Reinforcement Time just after each class
(or as close to that as possible).

1.4a Case Histories:

1. Joe Cool, whose course schedule (page 6) was "ideal", is a chemistry major. He really enjoys chemistry and math, thinks biology is "OK", and has no real interest in courses such as history or English. He studies best at night and his most effective "wake-up" time is around 7 am. He wants Saturday afternoons and evenings and most of Sunday free. His initial learning schedule is shown in Table 1.2. His basis for designing this schedule is shown in Table 1.3.

2. Frank Lee Fehling, whose course schedule was far from ideal (page 6) because he did not ask an advisor for help, but filled out his own schedule for afternoons free for "fun" and caught the advisor at a hurried moment for a quick signature, has an "undeclared" major. Frank really likes P.E. and thinks Chem lab is fun, but all other courses are bad news. He likes to get to sleep by 10 pm but wakes up eager to go by 5:30 am. He works Saturdays to earn "fun" money. Now Frank isn't really a Fehling. (Unknown to himself, he was adopted). So he discovers he has problems and seeks the advice of a good academic counselor. (He also buys 3 copies of this book and gives 2 to his girlfriends). With proper advice, Frank can devise a learning schedule (page 16) that—although less than ideal—

Table 1.2

LEARNING SCHEDULE for Joe Cool prepared 8/26 to use until 9/10

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
12 m.	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
6 a.m.	↓	↓	↓	↓	↓	↓	↓
7 a.m.	Eat, Shower, etc.	Shower, etc. Eat + Pre-Biol	Eat, Shower, etc.	Shower, etc. Eat + Pre-Biol	Eat, Shower, etc.	Eat, Shower, etc.	Eat, Shower, etc.
8 a.m.	FREE Pre-Chem	BIOL	FREE Pre-Chem	BIOL	FREE Pre-Chem	"CHORES"	FREE
9 a.m.	CHEM	Post-Biol	CHEM	Post-Biol	CHEM	↓	↓
10 a.m.	Post-Chem Pre-Engl	FREE	Post-Chem Pre-Engl	FREE Pre-Chem Lab	Post-Chem Pre-Engl	Biol REVIEW	CHURCH
11 a.m.	ENGL	Learning Center	ENGL	CHEM LAB	ENGL	Chem REVIEW	↓
12 n.	Post-Engl lunch	lunch	Post-Engl lunch	↓	Post-Engl lunch	lunch	lunch
1 p.m.	P.E.	Learning Center	P.E.	↓	Pre-Biol Lab	FREE	Thoughtful-ness Time
2 p.m.	FREE Pre-Math	FREE Pre-Math	FREE Pre-Math	lunch & Post-Chem Lab Pre-Math	BIOL LAB	↓	FREE
3 p.m.	MATH	MATH	MATH	MATH	↓	↓	↓
4 p.m.	Post-Math Math Study	Post-Math Math Study	Post-Math Math Study	Post-Math Math Study	↓	↓	↓
5 p.m.	FREE	FREE	FREE	FREE	CHEM GROUP SESSION	↓	↓
6 p.m.	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner
7 p.m.	Math Study Engl Study	Math Study Biol Study	Math Study FREE	Chem Lab Report	Biol Lab Report	FREE	Math REVIEW
8 p.m.	Break Chem Study	Break Chem Study	CHEM CLUB	Math Study Break	Math Study Break	↓	Engl REVIEW
9 p.m.	Engl Study	Biol Study	↓	Biol Study Chem Study	Biol Study Chem Study	↓	CATCH-UP
10 p.m.	Biol Study CATCH-UP	CATCH-UP	Engl Study CATCH-UP	CATCH-UP	CATCH-UP	↓	↓
11 p.m.	Biol Memory SLEEP	Chem Memory SLEEP	SLEEP	Biol Memory SLEEP	SLEEP	SLEEP	Chem Memory SLEEP

Table 1.3

LEARNING SCHEDULE WORKSHEET
for

JOE COOL

☑ Initial Trial ☐ First Revision ☐ Later Revision

		A	B	C	D	E	F	G
CLASS OR LAB	ESTIMATED ATTENTION SPAN	CREDITS	ESTIMATED OUT-OF-CLASS HOURS PER CREDIT	TOTAL (A×B)	SCHEDULED PRE-AND POST-CLASS HOURS	HOURS LEFT (C-D)	DAYS TO STUDY (3 TO 7)	ADDITIONAL AVERAGE HOURS PER DAY (E÷F)
BIOL 113	30 MIN.	3	3	9	2	7	5	1.4
BIOL LAB	45 MIN.	1	2	2	1	1	1	1
CHEM 101	60 MIN.	3	3	9	3	6	5	1.2
CHEM LAB	60 MIN.	1	2	2	1	1	1	1
ENGL 103	30 MIN.	3	2	6	3	3	3	1
MATH 121	45 MIN.	4	3	12	4	8	6	1.33
P.E. 199	—	1	0	0	0	0	0	0

"Lowest Efficiency" Times: 7-8am, after 11:30 pm

Best "Wake-Up" Time: 7 am

Work (Job) Times: NONE

Organization & Activities Times: CHEM CLUB, W 8-10pm

Minimum Regular Sleep Time for "Alertness": 7-7.5 hours per night

Planned "Thoughtfulness" Time: 45-60 minutes per week

Really Desired "Free" Times: SATURDAY AFTERNOON AND EVENING, PLUS MOST OF SUNDAY

will permit him to survive. (Next term, Frank will get better advice in planning his class schedule. Then he'll do fine.) Frank's basis for making "this term's" initial schedule is shown in Table 1.5 on page 17.

1.4b Your Trial Schedule

Tear out a blank Learning Schedule Form from the back of this book. Get your course schedule (or, if you don't have one yet, make one the way you hope it will be) and a pencil and eraser. Make out a tentative schedule and have it checked by a good academic advisor (or, if no advisor is available, by someone familiar with the study techniques described in this book).

To Facilitate Making the Schedule:

1. First, fill in the information needed on the "worksheet" (on the back of the Schedule Form).

2. Second, on the Schedule Form, fill in all the time blocks scheduled for CLASSES and LABS, marking a horizontal line at half-hour or other class/lab times that start or end at other than "about on the hour". (Don't count 10 or 15 minute between-class times.)

3. Third, fill in PRE-CLASS and POST-CLASS "special study" times, getting these as close as possible to the respective classes. (If you have two or more classes in a row, use PRE-CLASS and POST-CLASS times in ***reverse*** order to classes so that at least two classes will be directly associated with some pre- or post- time for them.)

4. Fourth, fill in essential SLEEP times (for most persons, about 7–8 hours per night). Don't forget to plan a uniform "wake-up" time.

5. Fifth, fill in other ***essential*** times (i.e., those for meals, getting ready in the morning, etc.). DO NOT fill in FREE times for "fun", yet.

6. Use item G from your worksheet ("additional average hours per day") for ***each*** course. Spread this time fairly uniformly over the days you plan to study. The object is to have an approximately equal number of "class-plus-study" hours for each working day.

7. Now take these times per day and fit them into empty time slots on your Learning Schedule Form allocated for such activities as "study", "review", "memory work", "learning center", etc. (Remember the guidelines discussed about maximum times, "attention spans", "shifting gears", optimum times, etc.)

8. If you wish to use a regular "thoughtfulness" time, schedule that.

9. Finally, take the remaining empty time blocks, allocate an appropriate number for "catch-up" activities and mark the rest as FREE. (In subsequent ***revisions*** of your work schedule, you will be trying to increase the amount of FREE time by improving the ***efficiency*** of use of other times.) If possible, allow some time during the class days for visiting faculty offices when you have problems.

Table 1.4

LEARNING SCHEDULE for F.L. Fehling (nee Doe) prepared 9/1 to use until 9/11

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
12 m.	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
6:30 a.m.	Eat, shower, etc.	Eat, shower, etc.	Eat, shower, etc.	Eat, shower, etc.	Eat, shower, etc.	Eat, shower, etc.	Eat, shower, etc.
6 a.m.	Pre-Hist	FREE	Pre-Hist	FREE	FREE	FREE	FREE
7 a.m.	Pre-Math Pre-Chem	Chem Study Hist Study	Pre-Math Pre-Chem	Chem Study Hist Study	Hist Study Pre-Chem	"CHORES"	"CHORES"
8 a.m.	CHEM	Engl Study Pre-Math	CHEM	Engl Study Pre-Math	CHEM	WORK	Engl REVIEW
9 a.m.	MATH	MATH	MATH	MATH	Post-Chem Pre-Hist		Math REVIEW
10 a.m.	HIST -snack-	Post-Math Math Study	HIST	Post-Math Math Study	HIST		CHURCH
11 a.m.	CHEM LAB	Learning Center	P.E.	FREE	P.E.		
12 n.		lunch	lunch & Post-Hist	lunch	lunch & Post-Hist	lunch	lunch
1 p.m.		FREE	Post-Math Pre-Engl	FREE	Hist Study Pre-Engl	WORK	Thought-fulness Time
2 p.m.	ENGL	CATCH-UP	ENGL	CATCH-UP	ENGL		FREE
3 p.m.	Post-Engl Chem Lab Report		Post-Engl Post-Chem		Post-Engl Chem Study		
4 p.m.	Post-Hist	Chem Study	Chem Study Hist Study	Chem Study	Learning Center		
5 p.m.	FREE	Math Study	Math Study	Math Study	CHEM GROUP SESSION	FREE	
6 p.m.	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner
7 p.m.	Post-Math Math Study	Hist Study Math Study	Chem Study Math Study	Hist Study Math Study	Chem Study Math Study	Hist REVIEW	CATCH-UP
8 p.m.	Post-Chem Break	Break Chem Study	Break Engl Study	Break Chem Study	Break Engl Study	Chem REVIEW Break	Pre-Chem Lab
9 p.m.	Engl Study Chem Memory	Engl Study Chem Memory	CATCH-UP Hist Memory	Engl Study Chem Memory	CATCH-UP Hist Memory	Math Study CATCH-UP	Pre-Engl CATCH-UP
10 p.m.	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
11 p.m.							

Table 1.5

LEARNING SCHEDULE WORKSHEET
for

FRANK LEE (NOT REALLY) FENLING

☑ Initial Trial ☐ First Revision

		A	B	C	D	E	F	G
CLASS OR LAB	ESTIMATED ATTENTION SPAN	CREDITS	ESTIMATED OUT-OF-CLASS HOURS PER CREDIT	TOTAL (A×B)	SCHEDULED PRE-AND POST-CLASS HOURS	HOURS LEFT (C-D)	DAYS TO STUDY (3 TO 7)	ADDITIONAL AVERAGE HOURS PER DAY (E÷F)
CHEM 101	30 MIN.	3	3	9	3	6	5	1.2
CHEM LAB	60 MIN.	1	2	2	1	1	1	1
ENGL 103	30 MIN.	3	2	6	3	3	6	0.5
HIST 105	20 MIN.	3	3	9	3	6	5	1.2
MATH 121	30 MIN.	4	4	16	4	12	6	2
P.E. 199	—	1	0	0	0	0	0	0

"Lowest Efficiency" Times: NOON - 3 PM, AFTER 10 PM
Best "Wake-Up" Time: 5:30 am
Work (Job) Times: SATURDAY 8-12, 1-5
Organization & Activities Times: NONE
Minimum Regular Sleep Time for "Alertness": 7.5 - 8 hours per night
Planned "Thoughtfulness" Time: 45 minutes per week
Really Desired "Free" Times: AS MUCH AS POSSIBLE (WITHOUT "FLUNKING OUT")

REMEMBER:

MAKING A SCHEDULE IS PRETTY EASY.

STICKING TO A SCHEDULE IS *NOT* SO EASY.

IF YOU *DON'T* STICK TO A SCHEDULE (until appropriate revision time), YOU *WASTED* TIME MAKING THE SCHEDULE.

1.5 PREPARATION FOR THE FIRST CLASS DAY

Before classes start, you should take a tour to locate the classrooms and labs you will be using. Also be sure to locate the library, the Learning Resources Center, and a day-time study area. If you know who your professors will be, you should also locate their offices (and other areas where help will be available).

Be ***sure*** that you have all the supplies needed. In addition to textbooks, you will need plenty of pencils, pens, notebooks, paper, erasers, paper clips, a calculator, etc. If you are taking a lab or shop class, you will probably need approved eye protection.

To get an initial feeling for how your study schedule might work, try it out for a while (a week before classes, if possible), even though you have no class assignments yet. You can test your ability to stick with a schedule and, at the same time, gain ***very*** valuable knowledge by using time blocks allocated for out-of-class study to survey the textbook and other materials for each course. In each course, try to pre-guess what the professor will emphasize in the first day of class. It's fun AND an extremely efficient way to start.

1.5a Pre-Flight Checklist

- ☐ Course schedule as good as possible (page 5)
- ☐ Study schedule (tentative) prepared (page 15)
- ☐ Normal study area (Monk's Cell) ready (page 7)
- ☐ "Day-time Study Area(s)" and other areas located (page 8)
- ☐ All books and supplies ready (this page)
- ☐ All of this book completed so far (up to this point)

OK! YOU ARE CLEARED FOR TAKEOFF. (See you in Chapter 2).