

## Study Guide for Analytical Studies

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Students that *study away from housing* and *study with others* religiously, seven days a week, *can improve their GPA* from 0.5 to *as much as a full grade point*.

### Do All of Your Homework

- Your study periods per week should equal an absolute minimum of three times the hours enrolled.
- Complete assignments as soon as possible.
- Complete the extra homework problems, even if not collected.
- Do not memorize problems or their solutions; learn to apply the theories learned, using the problem-solving method.
- Memorize only definitions, equations, etc. as suggested by the instructor.
- Be neat

### Study Away from Housing

- Too many distractions. (TV, videogames, etc.)
- Too easy to fall asleep on bed or couch.
- Too easy to take long breaks. (eating, cleaning, etc.)
- Too many people interrupting you to do

### Study with Other Students

- Eliminates procrastination. (Commitments to others are generally kept but with self, its "I'll do it tomorrow.")
- More efficient with time.
- Minimizes repetitive mistakes.
- You will spend less time on difficult problems, before finally seeking help.
- More viewpoints available to determine priorities of the instructor.
- Learn to organize and work with a team to enhance your laboratory, homework, and project grades. Also enhances team skills for career opportunities. \*\*

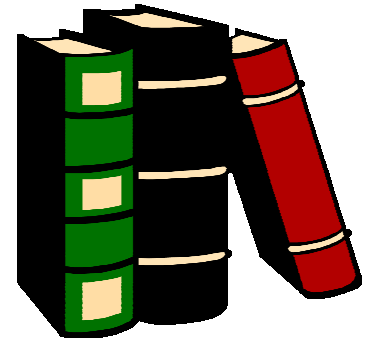
\*\* Always verify with your instructor whether teamwork on a project or homework is allowed. Otherwise, it may be considered cheating.  
K-State Honor Pledge: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work."

<http://www.k-state.edu/honor/basics/pledge.html>

## Exam Preparation

- Practice, practice, practice working homework problem assignments until:
  - ◇ The easy ones can be completed in less than 5 minutes, and
  - ◇ The more difficult ones in less than 10 minutes.
  - ◇ Time yourself.
- After you have completed a new homework assignment, work one problem from every previous assignment every week of the semester without any notes or help. This will take considerable time, so balance your weekly schedule (see Time Management Chart).
- Occasionally work different problems from those assigned so you learn the proper procedures instead of memorizing problem solutions.
- Don't mislead yourself. If you had to use a reference to complete a problem...you don't know it!
- Watching someone else do a problem doesn't mean you know how to do it!

**REMEMBER, MOST EXAM PERIODS ARE ONLY 50 MINUTES LONG**



### week before an exam

- Rework all problems expected to be on the exam more often than the other sample problems. Use a blank sheet of paper.
- Practice with study partners recalling all theorems and facts required to be memorized. Some students find flash cards useful (titles or questions on the front side, answers on the back side).

*Be sure to work each problem completely when reviewing; don't just scan them.*

## Reduce Stress from Family Relationships

- This advice is especially important for non-traditional students
- Make sure spouse is enrolled in at least one class.
  - ◇ Helps your spouse understand why so many hours are required for study.
- Be sure to plan time for the family each week (see Time Management Chart).
- Be sure to do something with the spouse alone, that he or she wants to do (leave children with baby sitter or trade baby sitting duties with friends).

This is **NOT** a five-day per week program like high school.

Starting with more than the average hours and later dropping courses causes you to be behind and earn **lower grades** in the remaining classes.

## Don't Commute Long Distances

- It is extremely rare for a student to graduate in Engineering if they:
  - ◇ commute more than 15 miles one way daily, or
  - ◇ commute home, or to a weekend job, more often than once a month
- You will not have the advantage of studying away from housing and studying with other students, which greatly lowers your GPA.



## Balance Your Weekly Schedule

- Plan all seven days of a week for:
  - ◇ Study time (highest priority)\*
  - ◇ Recreational time\*\*\*
  - ◇ Regular exercise\*\*\*
  - ◇ Regular sleeping a must, from 7 to 8 hours per night\*\*\*
  - ◇ Eating properly and regularly\*\*\*
- An average engineering student can work and/or be involved in non-academic activities 15 hours per week and earn "C" or higher grades in 15 credit hours.
- If you must work more hours because of financial need, then the number of credit hours enrolled must be reduced by one for every two additional hours on the job, or "D" - "F" grades can be guaranteed
- Determine the average number of hours per semester that a "C" or higher grade was earned the past two or more semesters. In future semesters, you should enroll in no more than that average number of credits, including retakes, or reduce your non-academic hours.
  - \* Allow for break times during study periods every 30 to 40 minutes, but the break should be no more than five minutes long.
  - \*\*\* A healthy body maintains a healthy mind.

## Commitments—learn to fulfill them!

- Fulfill commitments to yourself (follow good health practices, Time Management Chart, etc.).
- Never be tardy to class or appointments.
- Never skip classes or appointments, except in emergencies.
- Never skip study periods. (postpone within seven day period, but never skip).
- Always inform Engineering Student Services Office when you are sick or involved in emergencies and are unable to attend classes for more than two days or when missing exams (so they can verify emergencies and notify instructors).

## Balance your Weekly Schedule (cont'd)

### SEMESTER TIME/LOAD CHART

Non-academic activities and/or work-hours/wk	Credit hrs./sem	Credit hrs./summer session
9	18	-----7
11	17	
13	16	-----6
15 #####	15	
17	14	-----5
19	13	
21	12	
(12 hrs./sem. required for PELL grant)		-----4
23	11	
25	10	-----3
27	9	
29	8	-----2
31	7	
33	6	-----1
35	5	
36	4	
>39	3	

[www.engg.ksu.edu/student-services](http://www.engg.ksu.edu/student-services)

*"It is never too late to retake College Algebra and earn the "B" grade; and this is the only method that works to improve ability in algebraic skills (using self-study workbooks won't help).*

### Difficulty with Mathematics, Science or Engineering Courses

- RETAKE COLLEGE ALGEBRA. A grade of "B" or "A" in College Algebra, and at least a "C" in Trigonometry, is an **absolutely necessary** prerequisite for Calculus I, II, and III, Differential Equations, Engineering Physics I and II, and all engineering courses.
- "B" grade in College Algebra will increase the probability of earning higher grades in all future analytical courses, and the courses will be **less stressful**.
- Difficulty only in Calculus II and Engineering Physics I:
  - ◇ Weakness in Trigonometry is likely
  - ◇ Retake Trigonometry or complete a self-study workbook such as "Schaum's Outline on Plane Trigonometry."
- If mathematics ability is sufficient ("C" grades and no retakes), then retake the prerequisite course(s) for the "problem" course(s).

**Note: RETAKE classes must be treated as new classes, if you hope to improve your grade point average. Take all new notes and redo all assignments from the beginning of the semester.**