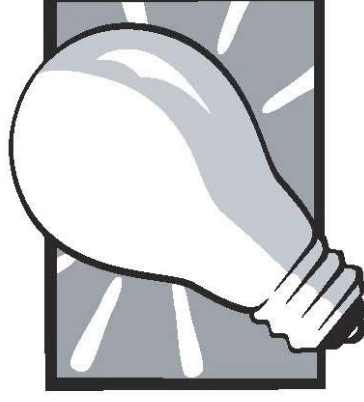
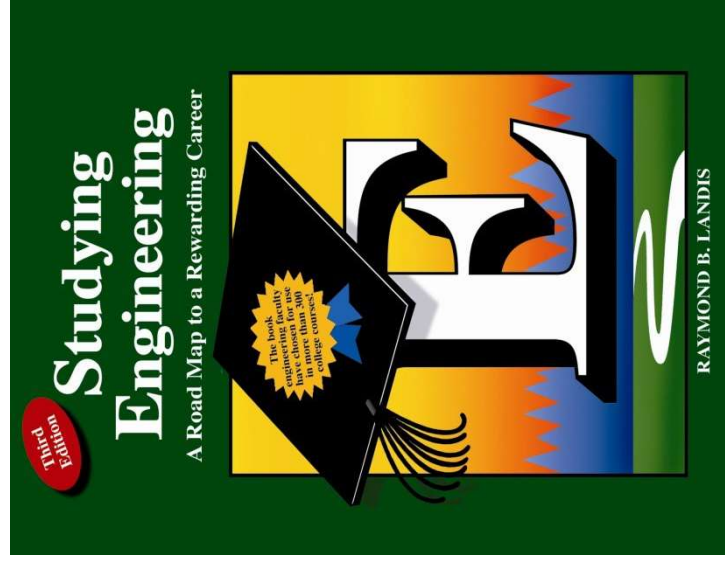


# ENGR 1201 Introduction to Engineering



## 5. Making the Learning Process Work for You

## Chapter Overview

- Skills for learning
- Reading for comprehension
- Problem solving
- Organizing your learning process
- Preparing for and taking tests
- Making effective use of your peers

# Reading for Comprehension

- What to do before you read?
- What to do while you read?
- What to do after you read?



## **Before You Read**

- Establish a purpose for the reading.
- Survey/skim/preview.
- Make a list of questions to be answered.



## While You Read

- Read actively.
- Focus on understanding concepts thoroughly.
- Take your time; don't try to read too fast.
- Write down questions that need to be answered about anything you do not understand.
- Periodically, stop and recite (ideally aloud) what you have read.



## **After You Read**

- Recite answers to the questions you prepared before you started reading.  
Reread where needed.
- Review within a day; again in a week; when you prepare for an exam; and when you prepare for the final exam.
- Solve problems.



## Analytical Problem Solving

Step 1 - Understand the problem.

Step 2 - Devise a plan.

Step 3 - Carry out the plan.

Step 4 - Look back.



# Organizing Your Learning Process

- “Take it as it comes”
- Procrastination
- Mastering the material
- Learn to manage your time
- Priority management



## Take It As It Comes

*Don't allow the next class session in a course to come without having mastered the material presented in the previous class session.*



## **Procrastination**

*Procrastination* – “Choosing to put off something we know we should be doing and instead do something we know we shouldn’t be doing.”

### Reasons for procrastination

Fear of failure

Fear of success

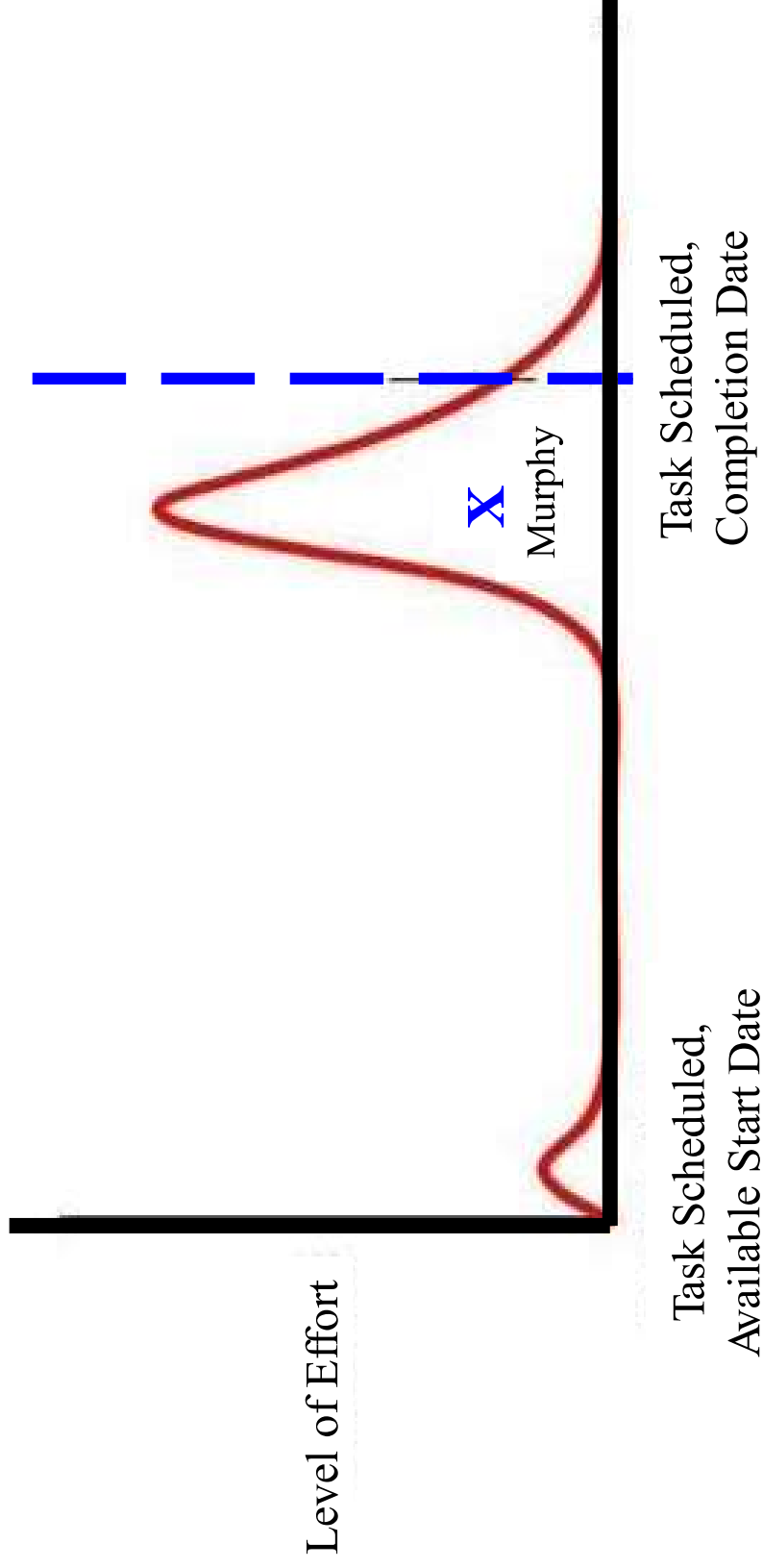
Low tolerance for unpleasant tasks

Disorganized

# What is the busiest day for a college student?



# The Student Syndrome



D. C. Smith, University of Cape Town, Rondebosch, South Africa, paper:

<http://iisit.org/Vol7/IISITv7p489-494Smith805.pdf>

## Mastering the Material

- Learn from your lecture notes.
- Reread the text.
- Solve problems.



## **Learning From Your Lecture Notes (Cornell Note-Taking Method)**

- Study and annotate your notes.
- Formulate a question answered by each section of your notes and write it in the “cue column”.
- Write a summary of each page in the summary area at the bottom.
- Recite answers to questions in the “cue column”.
- Reflect on what you have learned.
- Review (at least weekly).

## Learn to Manage Your Time

- Place a high value on your time.
- Schedule your time.
- Make a serious commitment to your study time.





## **Benefits of Scheduling Your Study Time**

- See if you are overextended.
- More likely to keep up in your classes.
- Provide feedback as to how much you are studying.
- You will learn what you can do and cannot do.
- You will feel that you have more time.
- You will feel much less stressed-out over school

## How Many Hours Should You Study?

- How difficult is the course?
- How good a student are you?
- How well prepared are you for the course?
- What grade do you want to receive?



## Making Up Your Weekly Schedule

- Block out all of your commitments (classes, meetings, part-time work, time to get to and from school, time for meals, etc.)
- Remainder of time is available for one of two purposes –
  - 1) study; or 2) recreation
- Schedule your study time to avoid wasting time answering three questions:
  - Should I study now or later?
  - Where should I study?
  - What subject should I study?



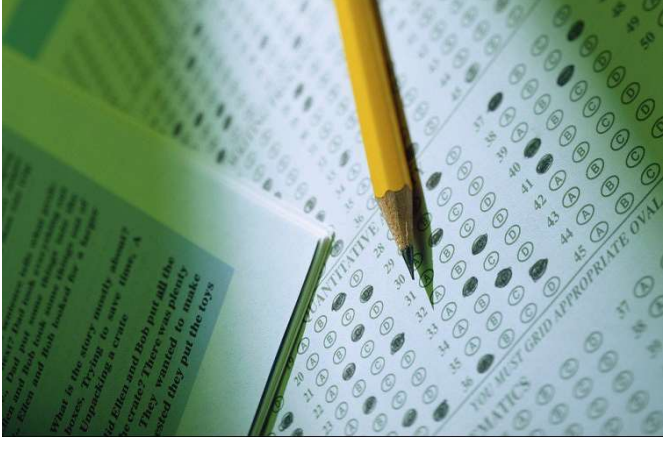
## **Priority Management Per Stephen Covey – Seven Habits of Highly Effective People**

- Decide what has high personal value (school, family, health, etc.)
- For each thing that needs to be done decide:  
How urgent is it? (Requires immediate attention; doesn't require immediate attention)  
How important is it based on personal values? (Important; or not important)
- Unimportant things whether urgent or not – ignore
- Things that are both important and urgent (crisis management) – must be tended to
- Things that are important but not urgent – tending to them is the key to overall effectiveness

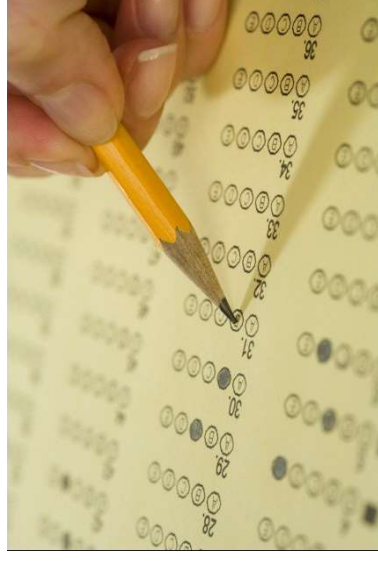
<b>I</b> Urgent Important	<b>II</b> Not urgent Important
<b>III</b> Urgent Not Important	<b>IV</b> Not urgent Not important

## Preparing For Tests

- Schedule time for review
- “Scope out” tests
- Practice under time pressure
- Get a good night’s sleep
- Make sure you have the right materials and tools
- Arrive early



## Test-Taking Strategies



- Size up the test
- Work the easier problems first
- Be aware of the time
- Complete a problem before leaving it
- If time permits, check and recheck your work  
(never leave a test early)
- Other?

## **Making Effective Use of Your Peers**

- Overview of collaborative learning
- Benefits of group study
- Frequently asked questions



## Learning Modes

- Solitary – You learn by yourself
- Collaborative – You learn with others

*“My anecdotal research indicates that about 90 percent of first-year engineering students do virtually 100 percent of their studying alone.”*

**R. Landis**

## **Class Poll on Collaborative Learning**

- How many of you spend some fraction of your study time on a regular basis studying with at least one other student?
- How many of you spend virtually 100 percent of your study time studying alone?
- For those who study alone – “Why don’t you study with other students?”
- For those who study with other students – “How is it working for you?”

## Why Do Students Study Alone?



- I learn more studying by myself.
- I do not have anyone to study with.
- It is not right. You are supposed to do your own work.

## Benefits of Group Study

- You will be better prepared for the engineering “work-world”
- You will learn more
- You will enjoy it more

