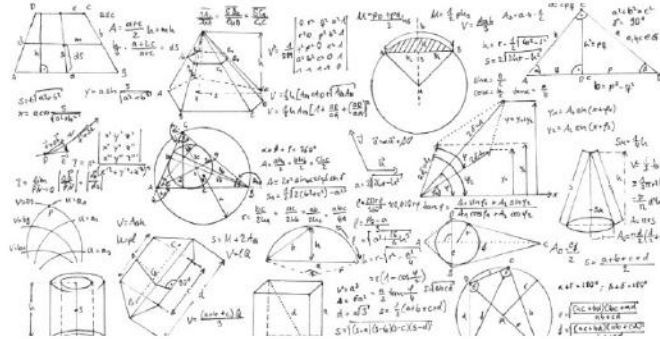


Achieving Academic Excellence

Department of Mathematics
University of California, San Diego

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How to Look at Higher-Education

- Short-sighted view: Treat each course as stand-alone; only think about grades.
- Long-term view: Seek to learn at deeper level and gain mastery of your subjects; also, understand that faculty opinions about you will impact...
 - what, if any, financial or merit awards they nominate you for
 - what, if any, work opportunities you get informed about
 - what they say in letters of recommendation about you

Academic Maturity?

- Being legal adult does not in itself mean achievement of *academic maturity*
- This presentation: Advice on achieving academic maturity
- Why academic maturity important?
 - Very competitive to get satisfying career upon graduation
 - Very competitive to get into reputable graduate programs
- Learn what you can do now to be more desirable candidate for future career or graduate programs

3

Major Requirements

- Be fully aware of *official* requirements for your major. (See UC San Diego General Catalog at catalog.ucsd.edu)
- Be fully aware of *official* requirements of your college and the campus. (See UC San Diego General Catalog)
- Always have tentative plans of coursework, internships, etc. for next 12 months
- Choose electives that will help you reach future goals, not just what is easiest or what fits your schedule

4

Workload

- Be ambitious without taking on greater load (coursework, employment, internships, and other obligations) than you can handle
- Learning to manage greater responsibility is good, but attempting too much simultaneously leads to low grades, poor health, discouragement

5

Prerequisite Material

- You need excellent, *present-day* comprehension of prerequisite content before taking next course
- If too much time passed since prerequisite course(s) taken, responsibility is yours to spend several weeks intensely brushing up before next course begins

6

Syllabus

- Completely, fully read syllabus at start of each new class. (“Glancing at” ≠ “Reading”)
- Be clear on your responsibilities as described in syllabus
- If you have questions, need clarity on syllabus, or want to disclose information, meet with instructor in timely manner – not up to instructor to read your mind

7

Preparation for Class Meetings

- Spending 15+ minutes before each class meeting reviewing last lecture(s) and previewing textbook’s terminology, graphs, methods, concepts to be learned in lecture; this makes new information easier to digest during class
- You might not grasp everything during lecture, but if you copy from board with no understanding of content, you’re just being a stenographer

8

Attendance & Compartment

- Regularly, punctually attend all lectures and discussions in their entirety
- Bring textbook, past notes, handouts, and homework to class
- Turn down (preferably off) and put away personal electronic equipment *before entering classroom*
- Be attentive and involved during class
- Treat learning as active process, not spectator activity

9

Note-Taking

- Stay focused during class; do not get distracted
- Take ample notes of what instructor says and puts on board/screen
- Be careful with assuming you will remember something; new information not used is easily forgotten
- *Caution: Taking notes is virtually pointless if you make no future use of them.*

10

Homework

- Attend to homework as soon as possible after class
- Before starting exercises, use class notes and textbook to grasp concepts; seek to *understand* (not just memorize) terminology/concepts
- Objective of homework is to learn, not just get correct answers; before looking at answer in back of textbook or giving up, have you done your absolute best?
- Reflect on what you gained from each problem solved. What did author(s) want you to learn?

11

Assignments in General

- If you satisfy minimum requirements for assignments, you have done least acceptable work
- In life, do not be satisfied with doing minimum
- In your future professional life, do you want to be known as the person who habitually does the least?
- Endeavor to learn more from assignments by exceeding minimum expectations *in meaningful ways*

12

Learning Materials

- Do not always limit yourself to required learning materials
- In addition to assigned reading material, sometimes good to consult other reputable sources to expand and deepen knowledge
- Different authors' ways of explaining something may increase your curiosity and lead to greater learning

13

Test Preparation (1/2)

- Rather than trying to memorize everything, focus on understanding – easier to remember what you understand
- Memorization alone of minimal value during testing; you must understand and be able to reason when doing test problems
- Make most of review opportunities in class and office hours
- If attending class, paying attention, doing homework, you should be able to anticipate some test problems, and use *reasoning* to solve unfamiliar ones
- Emulate test setting (no notes/textbook/calculator; limited time) when doing practice problems in preparation for test

14

Test Preparation (2/2)

- Small study group of responsible, motivated people may be useful when studying for tests; each person in group can take turn solving a problem at board without notes/textbook
- *Caution: Watching someone else solve a problem is no substitute for doing it yourself*
- If you can solve problem in full detail before your peers and teach it to them, you probably understand it
- Consider how you would solve similar problem on test if information were changed or if problem were tougher

15

Standards

- As you progress in your education, standards you are held to should be increasing
- Learn all you can about your subject, other academic themes, and how to professionally communicate (orally & in writing)
- Get prompt help if scoring less than 80% on any graded work
- Do not wait for others to set expectations for you
- Set your own high standards...

...and then work hard to exceed them

16

Learn from Faculty Members and Teaching Assistants

- Most professors and TA's glad to help if you are responsibly doing your best
- Occasionally visit past professors to show your progress in reaching your goals
- Can use office hours to talk about future courses, majors and career options, research, practical uses of theory
- Excellent forum for building professional relationships: Dine-with-a-Professor and Coffee-with-a-Professor programs; (see your college student affairs office for details)

17

Assistance from Other Campus Professionals

- Waiting until end of term to seek help that was needed weeks earlier is irresponsible; if you want help, ask for it...and express appreciation when received.
- Come prepared to meetings with advisors/faculty with any reading and/or completion of forms done neatly and thoroughly in advance; bring pen/paper to take notes; do not rely on memory of things discussed
- Know the curriculum for your major. (See campus General Catalog at <http://www.ucsd.edu/catalog/curric/MATH-ug.html>). Take initiative to plan your future coursework and ask advisors to review what you come up with

18

Interpersonal Skills

- While you are in school, learn to communicate *professionally*
- Professional communication:
 - In person or by telephone, greet and address people by name and identify yourself
 - In email, address recipient(s) by name and identify yourself; use complete sentences with proper punctuation/spelling
 - Use precise language; avoid slang, embellishing/exaggerating
- Do your best to maintain good hygiene (including breath, underarms) and grooming; wear clean clothes

19

Personal Time

- Reduce time on frivolous social media; every day spend time pursuing best educational profile you are capable of, learning about world, getting to know people you can learn from
- Weekly: ① Learn all you can about your field of interest, career paths, occupations you might want; ② search for and work toward internships or research opportunities
- Post-secondary academic record is permanent; make most of your time at UC San Diego so your record is impressive; how you spend time here will impact rest of your life

20

Extra Opportunities

- If you are excellent student, there may be Honors project, conference presentations, training at practical worksites (internships) or research work you could do
- Always be thinking 5 years ahead and planning
- Advisors, TA's, and faculty members glad to help, but do not wait for them to tell you what to do; your future is your responsibility to take lead in
- End your schooling with record showing you far exceeded minimum requirements of major

21

Major

- Choose a major for well-thought, sensible reasons
- A major may sound interesting and exciting, but do you really know what it is like to work in fields related to it?
- Have you actually talked to people working in jobs that interest you?
- Faculty members and people who are (or have been) in your desired occupation(s) can advise you; take initiative now to meet with and learn from them

22

Degree

- Even if a major is right for your interests and future plans, is undergraduate degree sufficient for career path you want?
- Some majors unlikely to lead to satisfying employment without at least one graduate degree
- Do not wait until graduation to start exploring this. Find qualified people *now* and get their advice. Start with faculty members, department advisors, campus Career Center.
- Do not underestimate value of internship or research work as complement to your academic accomplishments

23

Understand Your Institution

- Learn how your environment (campus, workplace, etc.) functions; read all that you can; ask questions
- At UC San Diego, every undergraduate student has college advisors and department advisors. Do you know which advisors to see for what issues?

24

Giving Your Best Effort

- Easy to apply yourself when doing things you enjoy
- Test of character is striving to do absolute best with responsibilities you dislike and learning material that does not interest you, but that you need to learn
- Be in habit of doing your best even when no one sees
- Realize that life is not always enjoyable; even a satisfying career is sure to have unenjoyable parts

25

Missteps

If you do something wrong...

1. Learn from it;
2. Take responsibility by correcting yourself and making amends with others as appropriate; and
3. Avoid repeating it.

26