UNIVERSITY OF
NOTRE DAME

The ITA Survival Manual

An International Teaching Assistant Guide for the College of Science

Summary

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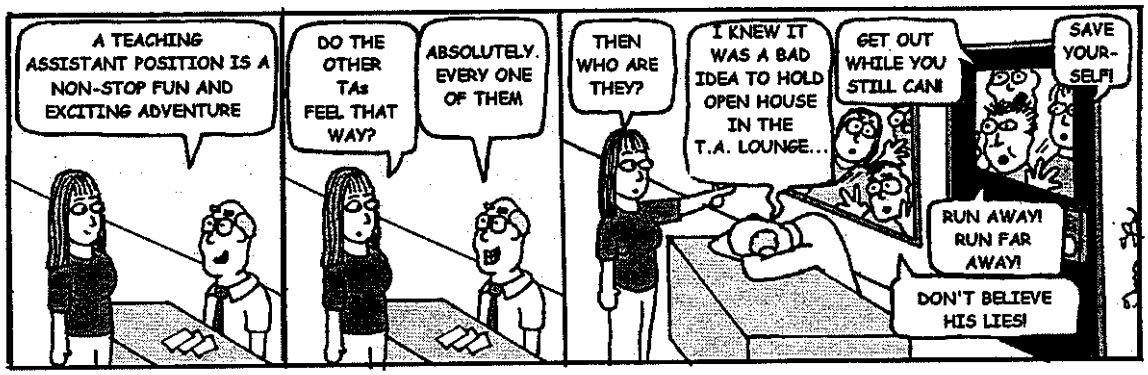


The ITA's survival manual

Welcome

Dear ITA (International Teaching Assistant),

Soon you will arrive to the United States and discover a new world, a new way of living, and maybe a new language. As a graduate student in the College of Science, you will have to teach a lab section almost as soon as you arrive. Labs start at the same time as your own lectures. It can be hard to adapt so quickly to a new culture and maybe you will feel lost.

Since many of us went through this process, we have decided to write for you this *ITA's Survival Manual*. The purpose of this booklet is to give you useful and practical information on your future assignment and to ease your first steps in the lab's jungle.

We hope you will take time to read this booklet. Remember that numerous students at ND have lived the same adventure and will always be happy to help you!

Elsa -

1. Who are Notre Dame students?

a. The American system

Here is a schematic representation of the American school system.

Age	School type	Diploma
Below 6	Kindergarten	
6 to 13	Elementary school	
13 to 15	Junior high	
15 to 18	High school	High school diploma
After high school	University	Bachelor's degree

After high school, American students wishing to study science can apply to a university to earn a Bachelor's degree in four years. During these four years, they are called *undergraduate students* or *undergrads* (freshmen the first year and then sophomores, juniors and finally seniors). They choose one or two *majors* (study areas). The students who choose to study science at Notre Dame belong to the *College of Science*. They earn a *B.S.* or *Bachelor of Science degree.*

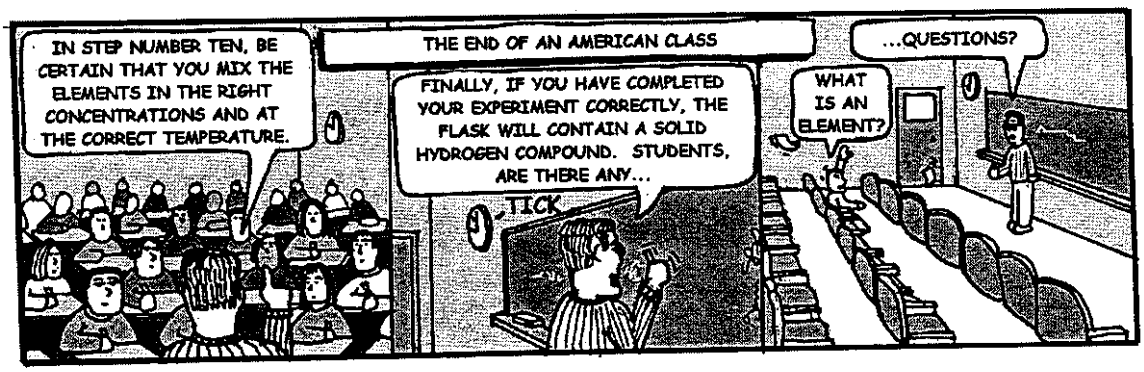
Once they have obtained their B.S., they can:

- Enter a Medical School
- Enter another university for a Master (2 years of study) or a Ph.D. (Doctor of Philosophy Degree in 5 years)
- Or even start working.

Graduate students like you generally teach labs for freshmen and sophomores.

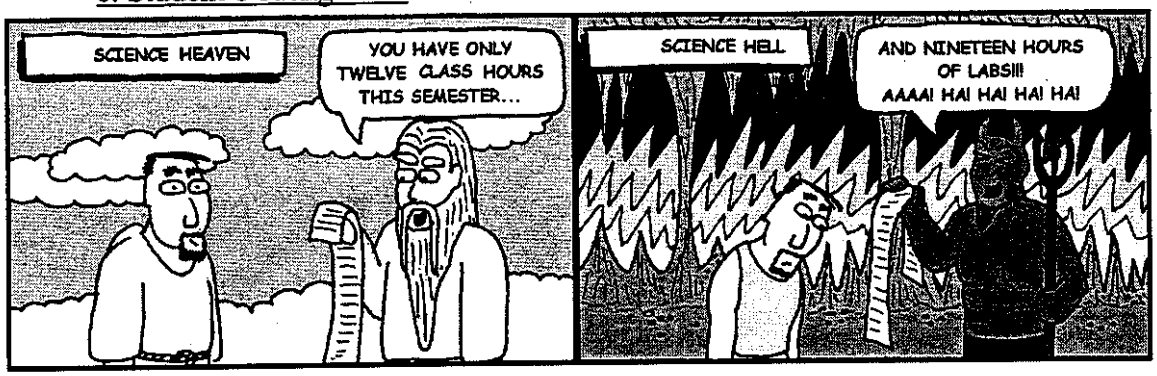
b. University schedule

An academic year is divided into two semesters: *Fall semester* (from August to December) and *Spring semester* (from January to May). There is one of week vacation in the middle of each semester, called *Fall break* and *Spring break*. The summer vacation lasts from mid-May to mid-August.



Each lecture has a few tests during the semester in addition to one *mid-term exam* (before the break) and one *final exam* (at the end of the class). Labs grades are assigned based on lab reports (one report for each lab) and a *lab final* (a written exam) at the end of the semester.

c. Student's background



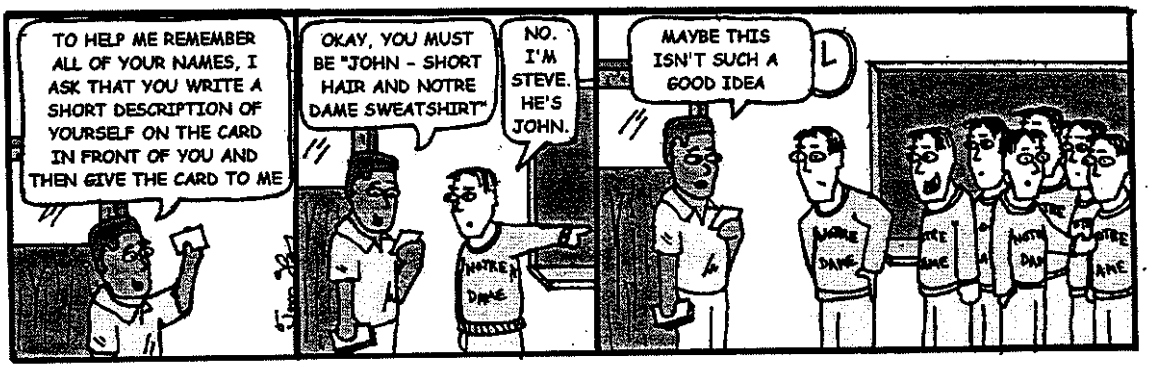
Chemistry: Some chemistry is studied in high school, but overall, students have little background. They are starting the lab at the same time as their lecture. It means that you will have to teach them the names of the glassware, the compounds you use in the lab, …

Biology : Students biology background will vary greatly. Some will arrive with extensive knowledge, good lab experience, and having done research (I even had a student who had published). For others this will be their first time in a real Biology class. The latter group would know next to nothing about scientific methods or lab procedures. Regardless of their biology background, almost all will be very good students.

Physics : Physics is not mandatory in high school, so some students may have seem some basic subjects like mechanics and electromagnetism. However, some students have never studied physics in their lives. Therefore, it is fair to assume that in general they have no background. They also start the lab at the same time as their lectures, so it is important for them if the TA goes through the explanations with details.

d. Particularities of Notre Dame students

Every year, Notre Dame ranks among the 15th top universities in the United States for its undergraduate program. On a general basis, students are above the average Academically. They generally come from wealthy families and have received a top education. They are hard-workers and have their priorities well set. Notre Dame is also a Catholic University and 90% of the undergrads belong to this religion. They value integrity and are honest (they generally don't cheat).



2. The different labs in the College of Science

Labs and lectures are two different classes. It means that students have to register for both of them. They also have a grade for each class. The lab is designated by the same code as for the lecture, followed by the letter L. For example, the organic chemistry lab associated with the organic chemistry lecture Chem 223 is Chem 223L. Numbers in the hundreds are related to freshman labs (first years), in the 200s to sophomore labs, …

Chem = Chemistry Phys = Physics Bios = Biology Math = Mathematics

a. Chemistry Labs (Chem 117L and Chem 223L)

They are two labs taught by first year graduate students in the Chemistry and Biochemistry departments:

- General chemistry (Chem 117L) – taught by physical and inorganic chemistry majors
- Organic chemistry (Chem 223L) – taught by organic chemistry and biochemistry majors

These labs are both directed to *pre-med students* and to chemical engineer undergrads. Pre-med students are the students who want to enter Medical school. To be admitted in a school, they need to have very good grades. Thus, they are generally serious and hard-working students. Don't be surprised if they try to argue their grades with you. Chemical engineers don't need a high grade in general or organic chemistry. Their work load is very important, thus they will probably spend less time working on their lab reports. However, they are much interested in chemistry than pre-meds.

b. Biology labs

First year graduate students who TA will probably be assigned to Bios201L (General Biology for non-majors) or to Bios155L (General Biology lab for Biology majors). These labs are directed to pre-med students, biology majors and students outside from the department. Non-majors are Biology department students who are in programs like Environmental Biology, Business Science or Pre-med. Most of these students have interest in biology, but their main career goal is not to be a professional biologist or researcher. Biology majors are students with great interest in biology and most want to pursue a career in the field. Depending on your background, you could also be assigned to teach at a higher level course, like Ecology or Cell Biology.

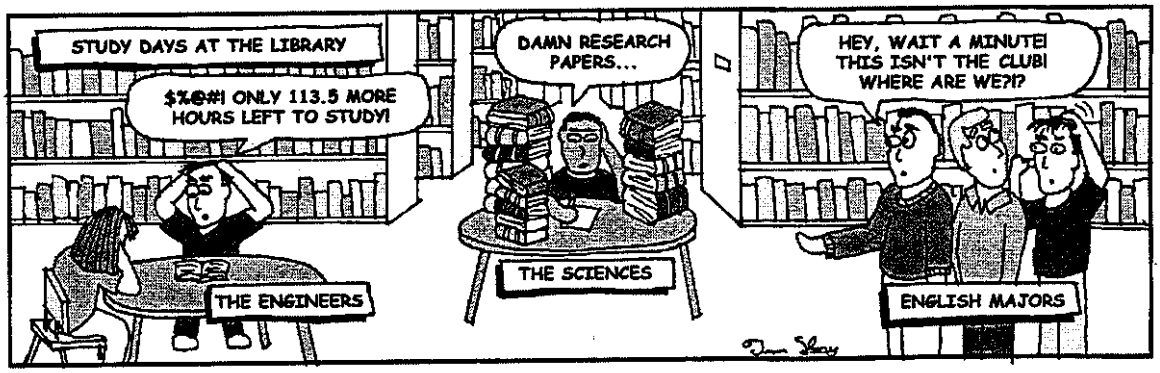
c. Physics

Physics TAs assist lab sections, grade exams and homeworks and lead discussion sections and tutorials. Incoming physics TAs have to grade exams and homeworks and/or assist a faculty in lab sections. They don't lead discussion or tutorial.

ITAs can be assigned to work in

- 131L/221L : mechanics and/or
- 132L /222L electromagnetism and modern physics

The 130's are usually taken by freshmen that want to join the College of Science or the College of Engineering while the 220's are usually taken by pre-med sophomores. Pre-med students are the students who want to enter Medical school. To be admitted in a school, they need to have very good grades. Thus, they are generally serious and hard-working students. Don't be surprised if they try to argue their grades with you. Their lab reports are in general very neat and complete. The engineers and science students don't need so high grades and so they don't put as much effort in their reports. On the other hand, they are whole lot more independent than pre-meds and will work hard to go through the experiment with a minimum amount of help. There are other undergraduate labs, but they are very rarely assigned to new ITAs.



3. Biology Labs

The format of each lab course, your responsibilities and your workload will depend mostly on the lab you are teaching and the professor in charge of this lab. On most labs your work will consist of :

- a "Prep Meeting",
- Teaching a lab session, once a week (5 hours)
- Grading
- Office hours

In Bios201L you have the least flexibility on what to teach, but with the advantage of having everything standardized for you, from lectures to experiments to grading. In Bios155L you will have more flexibility on your pre-lab lectures, but with that a higher workload and responsibility, as you have to prepare those. For Ecology, Cell Biology or other courses, your workload and responsibilities will vary greatly, depending on the professor, but in general, you will have more leeway on what to teach, but also more responsibility and accompanying workload.

a. Prep Meeting

In your first meeting the professor will assign your schedule, undergraduate TAs and discuss the generalities of your work. It is the moment to ask questions about what is expected from you. Read the student's manual before the meeting so you can ask the professor for clarification on anything you did not understand. If you did not understand something, chances are your students won't either and will ask you.

b. Teaching

Most of what you will be teaching will be either something you already know or at least easy for you to learn.

- Before starting the lab.

Arrive early and make sure all reagents, materials and equipment are ready and/or in working condition. Talk to your professor about changes in the procedure that might have occurred since the preparation meeting. Ask your undergraduate TAs for hints. They probably have done the lab as students a year ago and will know it better than you.

Review your outline of points to discuss with the students or your lecture notes, in case you will be giving one. Whatever you are going to write on the board, write it before students arrive, to save time.

- The first lab

Start by distributing index cards (you can get them for free at the stockroom at the basement of the Biology building) and ask them to write their name, major, email address and something about them. This will show them you care about them and will allow you to contact them (email) easily.

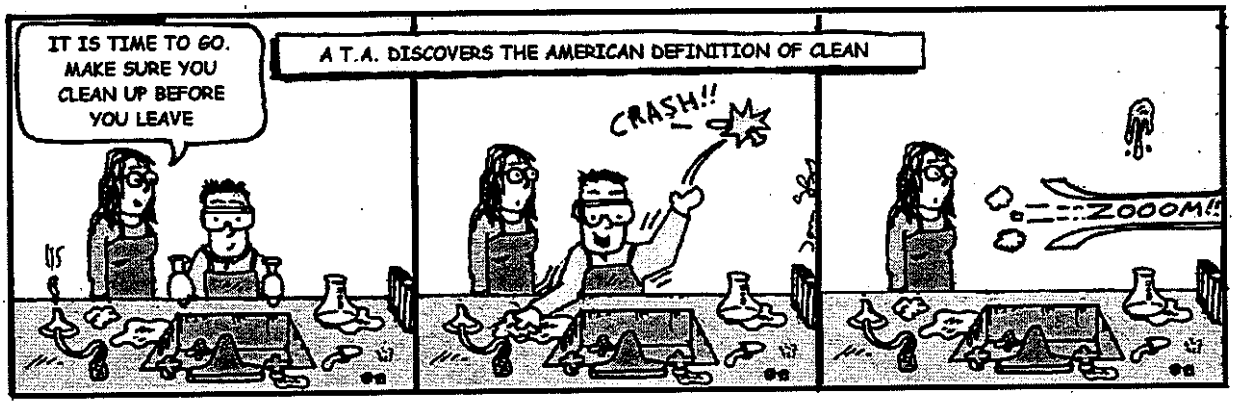
- During lab

Walk around the benches to check that everybody is following the procedure. Answer all questions politely and completely, no matter how stupid the questions are. The most common reason for students not asking questions is that they think the question is stupid.

Up to now, most of your students have been in very large classes (up to 300 students at once). The lab can be for them a good opportunity to interact directly with a teacher.

- Close to ending the session

Here is where you have to be the most alert. Some students will be in a hurry to leave. Make sure that all your students have finished every step, handed-in every assignment, and left their workspace clean. You will spare yourself cleaning time.



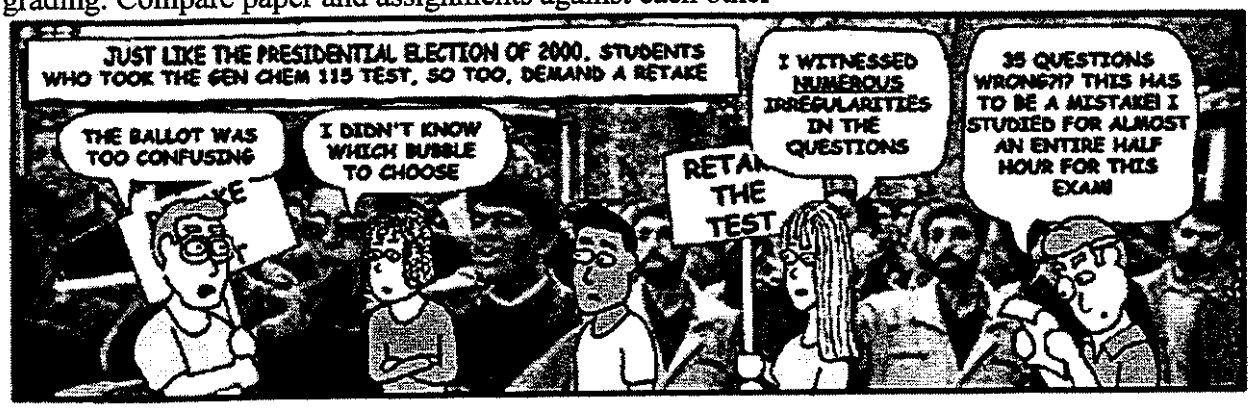
c. Grading

As part of your job, you will have to grade lab reports, quizzes (short tests), homework, progress reports and/or posters.

Grades are very important for all ND students. Since you probably don't have the same background as your students, your standards will be different than theirs. It can be a tricky part of your teaching.

You must first tell your students what your standards are. What is a good paper? What is not acceptable? Will you consider grammar an important part of the grade? (I do). Do you like long, comprehensive explanations, or do you prefer short, concise answers? You need to tell them beforehand.

When grading, write down explanations for every point you deduct. If the answer was good, say so too. Every minute you spend writing comments will save you hours of later explanations. Another benefit of writing comments is that your students learn what you expect and learn from their mistakes. Try also to be as consistent as possible with your grading. Compare paper and assignments against each other



d. Outside help

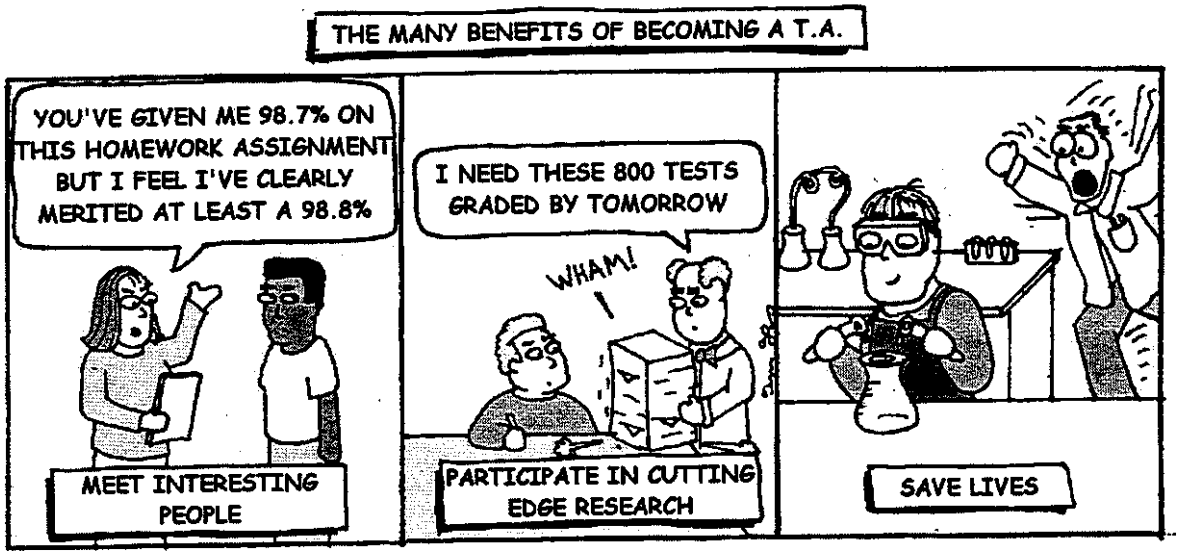
It is up to you if you want to offer your students regular office hours. Many TAs schedule a few hours a week in which they promise their students they will be at their office to answer any questions. However, it can be a burden: you will have to wait in your office, and students won't come each time. You can solve the problem by making yourself easily available to your students: replying to their email within hours or offer to make appointments with students when they need it.

4. Being an International TA.

对于大多数中国学生来说，作 TA 的最大挑战是来自于语言而不是教课的内容. 令人欣慰的是在 Notre Dame 你不用参加许多学校在做 TA 前所必须的英语口语考试. 最困难的是前两三次 TA. 由于语言障碍而造成的不自信会引起些许的紧张. 这样会使你越发听不懂学生的问题. Mrs. Peterson 会很热心的帮助你度过难关. 在你做 TA 前，最好观摩一下其他 TA 的课. 弄清楚包括实验准备，实验内容，操作步骤等各个细节. 这样做起 TA 就会胸有成竹一些. 如果怕自己讲不清楚就在黑板上多写一些提纲. 如果有时间给学生发一些 handout 也是有必要的.

For most Chinese graduate students, the biggest challenge for a TA is from the English language instead of the content of courses. Pleasantly, at Notre Dame, you do not need to take an English Oral Examination that is required in most universities before you become a TA. The first two or three tutorial classes are the most difficult. A lack of self-confidence caused by your language problem will make you too nervous to understand the students' questions. Mrs. Peterson will warmly help you to pass this tough time. Before you are going to teach, it is better to listen to the courses taught by others and make sure you have considered all the processes in details including experiment preparation, content, and operations. This will help you teach more successfully. If you are afraid that you can not speak clearly sometimes, you can write your answers and ideas on the whiteboard. It is also necessary to print some handouts for students.

- Weiquiang-



The life of an international TA in the Physics department of Notre Dame is not as tough as it is in other schools. The workload is not so hard, so you can expect to be able to manage the TA job and your courses simultaneously, as long as you work as hard as a graduate student is expected to work. You can even manage to do some research if you are really a hard working guy (or girl !). The relationship among the student is usually good and you will meet a lot of fellow graduate students who will be willing to help you get acquainted to the TA duties. Moreover, most of the faculty makes all efforts to be close to the students, so you should fell free to ask questions every time you think you need. You don't have to worry about being underestimated by a professor just because you don't know how to perform some experiment in your TA lab or because you are not very much sure about how to solve a particular problem in a test you have to grade. This is an advice I collected among the professors themselves because their experience shows that it's better for the well going of a lab or a grading session if you have your doubts and concerns straighten out in advance.

A vida de um TA estrangeiro no departamento de fisica de Notre Dame não é tão dura quanto em outras escolas. A carga de trabalho não é tão pesada de modo que você pode esperar ser capaz de fazer o seu trabalho de TA e estudar para os cursos simultaneamente, se você trabalhar tanto quanto um estudante de pós-graduação é esperado. Você ainda pode ser capaz de fazer pesquisa se você trabalha muito mesmo! O relacionamento com os outros estudantes de pós-graduação é, em geral, bom e você deve encontrar vários colegas que estarão dispostos a ajudá-lo a se familiarizar com o trabalho de TA. A maioria dos professores, por sua vez, se esforçam para se materem acessíveis aos estudantes de forma que você pode se sentir a vontade para fazer perguntas sempre que precisar. Não se preocupe em ser subestimado por um professor só porque você não sabe como realizar um experimento no laboratório do qual você é TA ou não tem certeza de como resolve um problema que caiu em uma prova que você tem que corrigir. Esse é um conselho que eu obtive com alguns professores porque, baseado na sua própria experiência, é melhor para o bom desenvolvimento da sessão de laboratório ou de correção de provas se você tirar todas as dúvidas e preocupações antes de iniciar.

- Igor -

Being a TA at Notre Dame's Biology department can be one of the best experiences of your professional life. The professors are very supporting of your work, the workload is reasonable and the students willing to do the work you demand. With just a bit of common sense, care for your students and attention to your professors' instructions, being a TA will be a pleasurable, easygoing and rewarding experience. You will make friends with your students, share with fellow TAs, improve your academic credentials and get paid, all at the same time. What can be better than that? Be sure to enjoy the process completely by fully engaging in the teaching process. I improved my teaching (or so say my students) by attending the Kaneb Center's seminars. You should give these seminars a try. Good luck.

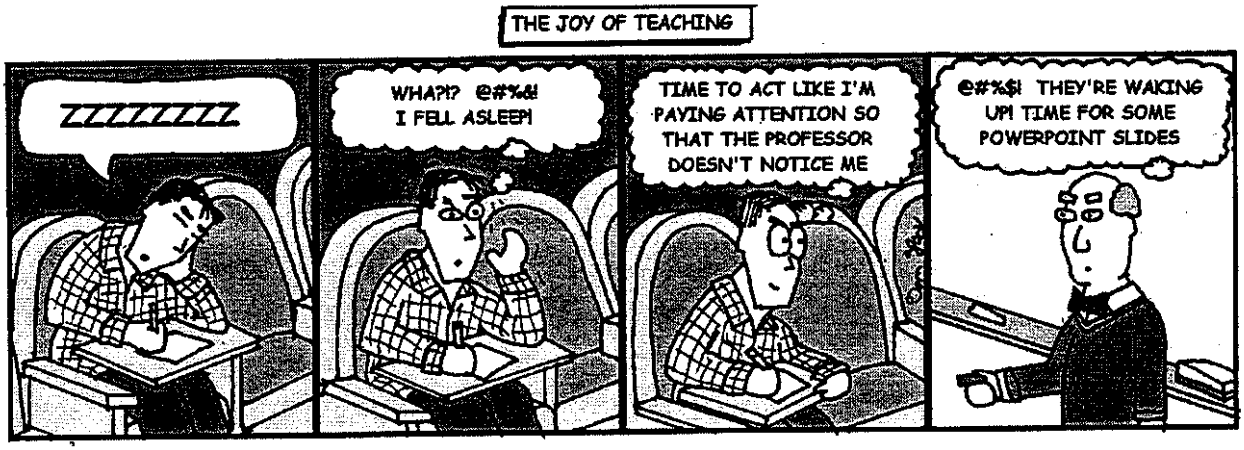
Ser un asistente de cátedra (TA) en el departamento de Biología de Notre Dame puede convertirse en una de las mejores experiencias de tu vida profesional. Los profesores dan buen apoyo, la carga de trabajo es razonable y los estudiantes listos para hacer el trabajo que les exijas. Con un poco de sentido común, cariño a tus estudiantes y prestar atención a las instrucciones de tu profesor, ser un asistente de cátedra puede ser una experiencia placentera, fácil de llevar y gratificante. Vas a hacer amigos con tus estudiantes, compartir con otros compañeros asistentes, mejorar tus credenciales académicos y ser pagado, todo esto a la misma vez. ¿Que puede ser mejor que esto? Asegúrate de disfrutar el proceso a plenitud sumergiéndote por completo en el proceso de enseñanza. Yo mejoré mucho mis destrezas de cátedra (o por lo menos eso dicen mis estudiantes) asistiendo los seminarios del Kaneb Center. Te recomiendo por lo menor intentar asistir a estos seminarios. Buena suerte.

- Sebastián -

5. Where to seek help ?

If you have any question or problem related to your teaching, don't hesitate to ask your fellow TAs. They will all be very happy to answer your questions and help you. You can also ask an appointment to the person in charge of your lab.

Finally, the *Kaneb Center for Teaching and Learning* has, among many things, the mission to serve TAs in their teaching roles. Throughout the year, they offer many workshops to graduate students as well as individual consultation as needed by TAs.



Good luck !

Acknowledgments

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