

Career Counseling for Undergraduates
and
Writing Letters of Recommendation

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1. Career Counseling

My main topic here is “letter writing”, but I feel compelled to say a few words about “career counseling”. Here is a postcard I recently received from one of our undergraduates:

“Dear Prof. Kappe,

don't know what you said about me in the letter of recommendation that got me this REU, but I know that I can't thank you enough!

I truly love it here! It's such a beautiful feeling to wake up in the morning and know that I'll be doing math all day! I love my project! I love my advisor! I'm not going even to mention the scenery and how great other people are here! I think I finally know what I want to do with my life: I want to be a professor.”

Liberal arts education or not, giving guidance and advice to students on what to do with their lives is a primary responsibility for me as an educator and it is one dear to my heart.

Career counseling is nothing which can be done during the last semester of the senior year. Work has to start in the freshman year so that students can make an educated choice, whether to pursue a career in academia, as an actuary or in industry, just, to mention the most prominent ones at our place. Academia and the actuary profession are well aware of the fact that this is a long term process. Industry has still some learning to do in this respect. They only see short term goals: hiring the three graduates right now.

At Binghamton, our main forum for career counseling is the UG Math Club/MAA Student Chapter and we involve alumni and our own graduate students in this process. The following sampler of events is typical for a given year:

- Is there life after majoring in math?
- Research experiences for undergraduates
- Career opportunities in the actuarial field
- Career opportunities in industry

2. Writing Letters of Recommendation.

Now that students are provided with a more or less clear idea on what to do after graduation, they come to you and ask for letters of recommendation. What next?

Don't expect from me a set of rules for letter writing which you can take home. I consider letter writing as an art form, and as any art, it is stifled by too stringent rules, nevertheless, good guidelines and experience help. Don't hesitate to learn from the experience of others.

A. Preparations.

- Consultation with student
- CV or resume, transcripts, cover letter
- purpose of letter
- deadlines
- special forms and format to be used
- confidential or open letter
- declining to write a letter

Insist on attaching a letter, even if questions are spread all over the form (“see attached”). Make sure to address all points. Reduce “check-mark questions” to a minimum. Otherwise too much work involved, which it is no matter what.

Confidential or open, this question may come up when talking with the students. I tell them that my letters are the same whether confidential or open. But employers may think there is something to hide if the applicant opts for an open letter. This usually settles the question.

I have declined to write letters, but not for the reason which might come to mind first: that student of yours who drew your attention because of a case of cheating and of whom you hope that he will never knock at your door asking for a letter. He never shows up! But I have declined to write letters on too short notice, e.g. deadlines of 24 hours or less for a letter to be written from scratch.

B. Writing the letter

- quality time

As for all creative work, you need quality time to finalize the letter! Minimize its use by mulling over it in some “down-times”, like when you do your dishes.

- have facts and information ready

“I never observed her teaching, but I am sure she is an excellent instructor.”

A case of missing data! If you don’t have them, get them from other instructors, the TA’s in your lectures, etc....

“The following comments on Mr. C.’s classroom performance have its origins in class visitations by my Head TA, and myself: “C. solves the problems on the board by breaking them apart in steps, indicating how he arrives at each step as he goes along. He gets the students involved in the class by asking them to fill in missing pieces to the solutions of the problems. He handles student responses to the questions well, including the incorrect responses. He is a very lively expositor and has a good blackboard technique. He is organized and prepared. C. is doing an excellent job as a teaching assistant.”

“It is a pleasure to write this letter in behalf of Mr. K., who has applied to your graduate program. He was a student of mine for two semesters in Modern Algebra I and II, during the academic year 1997/98. The students in this course are in their junior and senior year and it covers an introduction to group theory and ring theory in the first semester, and field and Galois theory in the second, the latter one being one of the most difficult

topics offered at the undergraduate level. The emphasis of this course sequence is gaining independence in solving problems and is considered one of the more demanding courses of the undergraduate curriculum and is often avoided by students who are over-conscientious about their grades."

The last quote is from a letter for a Japanese student applying for graduate school in his country. But I would not write much different in any other case. Not here, but in any other case involving a foreign student I comment on proficiency in the English language:

"Z.'s mother tongue is not English. But she spent all her college years in this country. She is fluent enough in English so that any language deficiencies should not interfere with her functioning as a tutor."

"It should be mentioned that Miss S. is a native speaker of English and has no language problems."

- A must in every letter: motivation, working habits, talent, personality.

Here, without further ado and only sparse running commentary, excerpts from my letters on these and related points until I run out of time. I start with two more or less typical conclusions:

"I was pleased with the performance of Miss S. in both courses, where she obtained each time the grade of B. She is well motivated and has good working habits. This together with a talent which she manages very well should make her an asset to any company."

"He has excellent working habits, is well motivated and has very good interpersonal skills. Above all he has a very fine mathematical talent. Your company has chosen well in hiring Mr. G., and I assure you, you will not be disappointed in him."

Watch for the nuances:

"The setting of the seminar requires the students to rely on their own initiative, and R. was very good at that."

"The setting of the seminar requires the students to rely on their own initiative. B. worked very hard on it."

It is easy to write for a genius:

"J. is in a class by himself and I have never encountered anyone like him and I doubt I ever will again in the remaining years of my career. To keep my feet on the ground, let me provide some background material. J. took his first college course, Elementary Linear Algebra, here in the summer of 1994 while still a thirteen year old high school student."

But C-average students also need letters of recommendation:

"Furthermore, it is apparent that she is well aware of the boundaries of her abilities which are nevertheless above average."

"Assuming the necessary potential, I have no doubt that he has the necessary drive to reach his goal."

“Overall I was pleased with the performance of Mr. P. who received the grade of C+ at the end, making him an above average student in the class.

Nevertheless, passing Calculus I was a personal triumph for Mr. P. This was the second attempt for him in doing so after a failed attempt the semester before, his first semester here as a freshman. P. had learned his lesson from his previous experience. He was a model student. He missed class only once because of illness, he developed excellent working habits, was always prepared for class and actively participated there. He regularly came for help either to the Calculus Help room or to my office hours, where our discussions focused mainly not only on technical aspects but on ways how to learn.”

Sometimes you are asked to judge if an applicant is Ph.D. material. Honestly, you can't answer this question with yes or no. You may want to use the following formulations:

“I have seen students with similar talent, working habits and motivation succeed in a Ph.-D.-program at an institution comparable to yours.”

“I feel he has the necessary potential to benefit from further graduate work in mathematics.”

You don't want to write such comments too often:

“Most of his peers with similar credentials go on to the software industry or get their Ph.D. to become college teachers. His goal is to become a high school teacher and one only could wish that more with similar credentials would follow his calling. He is the one every parent would like to see as the teacher for their children.”

But don't hesitate either if it is warranted:

“The most remarkable thing about her is her decision to switch careers, which is nothing unusual today, but the direction of her switch is. Many such switches occur today such that high school teachers go into government or industry. Having a secure government position and a family, she decided to enter the MAT-program and pursued her goal with determination while still holding her job and caring for her family. Everyone doing this must certainly have boundless energies! For her, becoming a teacher, was certainly a calling, and I am sure she will become a fine teacher, given her determination and enthusiasm.”

Some things you always should keep in mind when writing letters:

- Your task as a letter writer is to convince the recipient that the applicant can do the job!
- Don't hurt the student with your comments, but always stay truthful!