

MICHIGAN STATE UNIVERSITY

To: Jim Galligan
Director Neuroscience Program
From: Sue Barman
Course Coordinator PHM 480 SS13 *Neurobiology of Disease*
RE: Tania Iqbal as Course Assistant for PHM 480

I would like to let you know what an exceptional job Tania Iqbal did as Course Assistant for PHM 480 SS13 *Neurobiology of Disease*. This was Tania's second time to serve in this capacity. I was very pleased with her assistance with the course last year (grading assignments, presenting lectures), and thus I was pleased when she agreed to do it again. But she took an even more active role this year, and she instituted changes that I hope can continue to be part of the student's experience from here forward.

As a bit of background, the course began as part of the *Bridge to the PhD in Neuroscience* program directed by Bill Atchison. However, it now also includes students enrolled in the undergraduate Neuroscience Program. The course is designed to not only provide students with information about several neurobiological disorders, but a key purpose of the course is to improve the students' communication skills (both writing and verbal). The format of the course includes weekly lectures on a neurobiological disorder, biweekly journal clubs (papers selected by the person who gave a lecture that week), five writing assignments, and a brief oral presentation on the student's research interest.



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Tania observed some weaknesses in the course last year that she wanted to correct. Weaknesses included the realization that some students unwittingly had plagiarized material when completing writing assignments. The students had cited the references but did not realize they could not take verbatim from these articles. To correct this problem, two changes were implemented. One, Tania presented an introductory lecture on plagiarism and what it takes to be a good communicator of science. Two, we used TurnItIn for students to be able to have their assignments assessed for "similarity" to published material. Students could upload their files before the due date and get a report with time left to revise before the due date. This turned out to be a useful tool for the students.

Tania also noted that, last year, the short writing assignments were often the same length as the long assignments. This was in part due to the vague description of the assignments (short: "minimum of four pages"; long: "minimum of 10 pages"). Writing assignments often tended to be unfocused as well, including a lot of general information without being informative about a specific aspect of a disorder. Tania thought it would be good to ensure that the students would learn to write a paper that is very focused on an aspect of the disorder they have chosen. This year we instituted a strict limit on the length of the assignment and asked the students to focus on an aspect of a disorder (for example, novel treatments or recent advancements). This undoubtedly had a significant impact on the quality of the submissions.

Tania was also concerned by the singularity of the types of writing assignment, a traditional "term paper" format. She redesigned the writing assignments to include two non-traditional formats. One assignment was to prepare a one-page pamphlet on a particular

neurobiological disorder with the intent of providing a patient or their family with the disease and its treatment options. This assignment turned out to be a favorite of several students and the quality of their submissions was very high. Another assignment was to prepare a brief article written for the lay public about “breakthroughs” on a disorder of their choice, comparable to a New York Times “Science Tuesday” article. This seemed to present a challenge for the students but the experience of writing such an article was a valuable mechanism to improve communication skills.

Tania was also concerned that there was no grading rubric for the assignments, so neither the students nor the assessor had a standard by which to assign a score. Tania established a very helpful rubric for each writing assignment, including clear expectations in terms of “Content & Development,” “Organization & Structure,” “Grammar, Punctuation, & Spelling,” and “Citations.” In the course of reading the submissions this made it easy for the assessor to assign points for each component and for the student to then understand the basis for their grade.

Based on her observations from last year, Tania was concerned that the journal club format was not optimal. We had been allowing whoever chose the article to lead the discussion. Generally, students were just going over each figure and not really looking at the “big picture.” This year we agreed that a student would be responsible for leading the discussions. They were to come prepared to talk about the major objectives of the study and the importance of the findings. This turned out to be a huge improvement in the quality of the journal club sessions. It also helped students develop communication skills in that they discussed a research article in a concise and informative manner.

In addition to taking the lead on implementing the change in format of these assignments, Tania also played a major role in selecting individuals (graduate students and postdocs) from the Neuroscience Program to present lectures. But she did not just get them to sign on but she worked with them on their presentations. She encouraged inclusion of interactive sessions in some cases and in simply improving the quality of the talks given by some repeat presenters.

This year marked the fourth time I have served as Course Coordinator for PHM 480: *Neurobiology of Disease*. This was by far the best class. I give Tania all of the credit for that. Her decision to improve the quality of the course and her commitment to follow through on implementing the changes made this course a rewarding experience for all. Students ranked the course very highly. In fact, one of the undergraduate Neuroscience Program participants has already gotten students to sign up to take it next year.

Tania is a mature, hard-working, dedicated graduate student who undoubtedly will be a remarkable teacher. She is an excellent role model and gives strong hope that future scientists will learn a lot from her. If she has the desire and time to serve as course assistant for me again next year, I would be a very lucky faculty member.

