FAQ about the PIC Math Program

Question 1: How many students can be involved in the PIC Math course/program?

Answer: For the spring semester PIC math course at your institution, there must be at least the 3-5 students officially participating in the PIC Math program. However, you may have as many students as you want in the spring semester course working on the industrial research problems. In fact, we strongly encourage you to have as many students as possible. In the selection of participants for the PIC Math program, some preference will be given to applicants who plan to have more students involved. In some ways the PIC Math setup is similar to the Putnam Competition. At BYU, we have a fall course/seminar for students who want to solve Putnam like problems. The course/seminar has about 40 students in it. But when it is time for the competition, we have to select 3 official students whose scores count.

Question 2: Can more than one professor from the same institution apply for the PIC Math program?

Answer: There may be more than one professor interested in the PIC Math program. This is great. But each participating professor costs the PIC Math program funds. So, if there are more qualified professors applying for PIC Math than we have open positions, we would give preference to professors at different institutions so that we can spread the influence more widely. If there are fewer qualified applicants, than we could support more than one professor at the same institution.

Question 3: How many credits should the spring semester PIC math course be? Should we need to give students standard grades or just pass or fail?

Answer: We have been vague on the exact number of credits for the course. This is because we are not sure what is feasible for the various types of institutions. Some professors at smaller institutions have talked about offering a 3-credit course using the PIC Math materials for about 20 students with a subset of 4 students participating in the competition component of PIC Math. Others have talked about incorporating this into a senior capstone of seminar. And others have talked about doing this as an independent readings course. The idea of the credit course has partially to do with reducing the number of students dropping out of the program in the middle of the semester. My experience is that even if a program is good, students will stop participating when their time gets pulled in different directions. By making the research component into a credit-bearing course for which the students get a grade, the students will take the experience more seriously. We understand that it might be hard to offer a 3-4 credit “readings/research” course that undergraduate students could fit into their schedule. We are okay with a lesser credit course if you are fairly confident that the students will stick with the program for the entire semester (if this is the case, you should briefly mention in your 1-page statement of interest why you are confident).

Question 4: What courses should students have taken for this program?

Answer: Our plan is to offer at least 5 different problems from BIG (business, industry, and government) and have the student research groups choose one to work on. Some of the problems will require certain backgrounds (e.g., differential equations, matrices, programming, etc.). I expect that a student who is a junior would benefit the most from the program since s/he should have sufficient mathematical background while still having another year to consider career options. However, very good sophomore math majors would also benefit.

Question 5: I have an idea of the 5 students that I would like to have on this project but what if it changes. Three are female and one of them would be African American. What if that doesn't work out and I have already marked it down?

Answer: That is fine. We expect the data to be tentative, but we want a general idea from you about the types of students you might have working on this. We expect that you will officially recruit students during the fall semester.

Question 6: What funding is provided through the PIC Math program?

Answer: PIC Math will cover the airfare and lodging for the new faculty member participating in the summer faculty workshop. Also, PIC Math has funding for 1 student to attend the end-of-the-program celebration that will be at the 2016 SIAM summer conference and at the 2017 MathFest meeting . The MAA does have a different grant that funds student travel to MathFest if the student is presenting a talk or poster, but the students would have to apply separately for that and there is no guarantee that students would get funded. So, it would be great if an applicant could get the dean to fund another student's travel to the end-of-the-program celebration (and if so, it would be great if this were stated in the chair's letter of support).

Question 7: What is the policy on indirect or overhead costs?

Answer: $4,000 is a consulting pay to the PIC Math faculty. Most stipends will be paid by check directly to the faculty as a grant consulting stipend. If your institution requires these funds go through your Sponsored Research office, departmental, or other institutional account, the MAA can make the check payable to them per faculty participant's request. These funds cannot be used towards institutional indirects. Institution may use these funds for the faculty's salary and benefits, or for a course buyout, as long as the total amount paid to the institution by the MAA does not exceed $4,000.

If paid directly to the faculty participant, these stipends are taxable income, and the faculty will be receiving appropriate tax form from the MAA next January. Faculty participants should keep this in mind if considering using these funds for supplies or any other project purposes.