Application for
Open Education Initiative grant

Applicant:

1. Full name: Hossein Pishro-Nik

2. Course, including number, title, number of students, current textbook and its cost:

   Two courses will benefit from the outcome of this proposal:

   1. ECE 314: Introduction to Probability and Random Processes
      a. Number of students: 77 (Spring 2013)

   2. ECE 603: Probability and Random Processes
      a. Number of students: 64 (Fall 2012).

3. Department: Electrical and Computer Engineering

4. School/College: UMass Amherst

5. Email Address: pishro@ecs.umass.edu

6. Position Title/Rank: Associate Professor

Financial Information:

1. Name of Bookkeeper: Joan K. Kermensky

2. Bookkeeper email: kermensk@ecs.umass.edu
Application:

I have taught ECE314 and ECE603 several times during the last 6 years. I have always received high ratings by students in these courses (usually more than 4.5/5). Students have always commented that they have found my lecture notes (that I post online) more useful than the textbooks. Thus, my plan is to extend my notes to a textbook format so that my students do not have to purchase the current expensive textbooks.

Since I already have my lecture notes, I estimate that converting them to a textbook format should not take more than 6 months if the $1000 grant is awarded. My current plan is that to make the text available in several different digital formats. To serve the students who prefer a hard copy, I have already talked to a printing company that can print the book with high quality for under $10.

Current cost per year:

ECE 314: (no. students)*(textbook cost) =77*$143 = $11,011.

ECE 603: (no. students)*(textbook cost) =62*90 = $5,580.

Cost after my text is written:

Assuming all students want the hard copy:

(no. students)*(estimated printing cost) = (77+62)*10 = $1390.

Total Cost Savings: $16,591-$1390 = $15,201 per year.

The textbook will be available for my students in Fall 2013. Part of the grant can be used for reviewing purposes and getting help from students.

I have already identified several other courses on campus that could also use my textbook. In particular, I have talked to Prof. Balasubramanian from MIE department and Prof. Park from CEE department who teach “CE-ENGIN 260 Probability and Statistics” that usually has more than 100 students each semester. I got their syllabus and my plan is to write the textbook in a way that it can be used for their courses as well. They already expressed interest in using my textbook for their courses. If this happens, the savings for students will be much more than the stated $15,000 above. In general, the topic of probability and statistics is taught in many different departments in UMass and other colleges in the area, and I will do my best to contact the professors who teach these courses and encourage using my textbook for their courses. This could increase the total savings dramatically.
Here are a few courses that could potentially use my textbook; all of them have syllabi that are entirely covered in my textbook:

1. CE-ENGIN 260, “Probability and Statistics”.
2. CMPSCI 240, “Reasoning Under Uncertainty”.
3. Amherst College, “MATH-360 –Probability”.
4. Smith College, “246 Probability”.

My plan is to occasionally attend the above classes during the next semester while I am working on the textbook. This not only is useful for writing the book but also helps me to make the book compatible to these courses.

I understand that writing a good textbook is much more challenging than writing lecture notes. During this effort I hope to get advice from the library staff in different aspects of the project. I have already attended the Open Education Initiative workshop in November and obtained lots of useful information.