

Spring 2017

# INFORMATION LITERACY AND PRECALCULUS MATHEMATICS I

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## Recommended Citation

Jing, Wu, "INFORMATION LITERACY AND PRECALCULUS MATHEMATICS I" (2017). *Chesnutt Fellows Information Literacy Projects*. 5.

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# INFORMATION LITERACY AND PRECALCULUS

## MATHEMATICS I

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May 16, 2017

My MATH 129-05 *Precalculus Mathematics I* course benefited significantly from the inclusion of Information Literacy component. As an Information Literacy fellow, I enjoyed working with Mrs. Sun and learned a lot from her.

There are two major reasons that I chose MATH 129 as the Information Literacy project course. First, MATH 129 is one the most important courses for science majors. Students majoring in science (mathematics, computer science, biology, chemistry, etc.) must have solid foundation in precalculus sequence courses --- MATH 129 and MATH 130, in order to advance to calculus courses. Second, the ability of obtaining needed information is critical to science majors. Most students in this class are either science majors or high school students from International Early College High School and Cross Creek Early College High School. These early college high school students are among top of their class and good at math and science. My goal is to engage students to improve their ability of information literacy and have a better understanding of mathematics through this project.

I collaborated closely with Mrs. Sun, who has nine-year experience as an Information Literacy librarian at FSU. First, we revised the course syllabus to include information literacy

competency skills as one of Student Learning Outcomes and information literacy statement including the five ACRL Information Literacy standards. After the information literacy assignment was developed, I revised the course grading policy by giving 10 points (10%) in the final grading for the information literacy assignment as part of the course assessment. I also addressed the plagiarism issue and listed library's resource in revised syllabus.

One of main collaborations I worked with Mrs. Sun was to identify and develop the Information Literacy project implementing the five ACRL standards into our curriculum. My initial thought about the project during the workshop in last December is to ask students to write an essay on the background and real life application of some topics that are covered by this course, for example, compound interest and equilibrium price. However, after doing a lot of online search through the databases in FSU library, we found the initial topic did not reflect an appropriate level of research and writing for the students: either the available references we got were far beyond the students' mathematic knowledge or possible lengthy complex digging in searching might discourage the students. During the winter break, we continued to identify the right project by searching through the databases and internet. Finally, we decided the topics for the project that we believed appropriate for the students. These credits should be given to Mrs. Sun. Without her help and support, our success would not have been possible. Before the new semester started in January 2017, the syllabus revisions was successfully completed with redesigned information literacy assignment and necessary implementing details.

It is worth to mention during the processing of redesigning the information literacy assignment, Mrs. Sun suggested the students submit their project topics first for approval to avoid that many students work on the same mathematician. This has been proven a good decision. When the students submitted their topics, I found there were two mathematicians

selected by four or five students. Since the limit I set was three, I had to ask some students to choose other mathematicians.

The Information Literacy instruction session was given by Mrs. Sun on February 16, 20017 from 12:30 pm to 1:45 pm in FSU library conference room. Mrs. Sun gave students step by step instructions and many useful search techniques on how to narrow down the data search in order to get the needed information effectively and efficiently. The students were well-engaged during this session. Each student had one laptop to do some hands on practice. Mrs. Sun received very positive feedback and comments from the students: out of 21 students, 19 students evaluated this instructional session as “excellent” and two evaluated it as “very good”. After the session, the students were asked to complete the Information Literacy Post-Test. Comparing to the Pre-Test, the percentage of confidence in the abilities to determine the extent of information needed rose from 63% to 96%, the percentage of confidence in the abilities to assess the needed information effectively and efficiently rose from 83% to 100%, the percentage of confidence in the abilities to evaluate information and its sources critically and incorporate selected information into one’s knowledge base rose from 78% to 96%, the percentage of confidence in the abilities to use information effectively to accomplish a specific purpose rose from 91% to 100%, the percentage of confidence in the abilities to understand the economic, legal, and social issues surrounding the use of information, and access the use information ethically and legally rose from 82% to 91%.

As an instructor, I learned a lot from Mrs. Sun and students’ projects. During the online searching through databases, it was the first time that I knew that we have so many useful databases through FSU library. It was also the first time for me know what APA format is. I enjoyed reading students’ essays on their favorite mathematicians.

Overall, Information Literacy is a wonderful program. I applied for the Information Literacy fellow in 2009, 2010, and 2016. Though it took a village to get here, it's worth it. Looking to the future, I will incorporate Information Literacy with my high level math courses to equip my students with the information literacy skills so that they will be well-trained to assess the needed information effectively and efficiently and use information effectively to accomplish a specific purpose in order to face the challenge and become lifelong learners.