Independent Research Paper Specification

Purpose: To provide individual insight into the relative importance of general programming knowledge/skills in future academic and professional endeavors.

Formatting Specifications:

- Font style Ariel
- Font Size 12
- Margins (left/right/top/bottom) - 1"
- Line spacing – 1.5
- Length: 7-8 pages
  - Cover page – containing title of paper and identifying info (e.g. name, etc.)
  - 5-6 pages of discussion content
  - Last page – table containing class information

- Submitted to instructor via hard copy on or before due data listed on class schedule.

Content Specifications:

To begin, make a list of all of the courses that are necessary to complete your undergraduate degree here at the university. Research these classes (using available resources, such as faculty web sites and other university web resources) to determine which ones require some level of programming knowledge/skills. Determine things such as: the types of languages required (i.e., programming, scripting, pseudo, markup, instructional, etc.), which environments they are dependent upon, which associated development tools may be required, etc. Create a table to hold (at a minimum) this information: the class, the class references used, the programming languages required and any required tools. Feel free to add any additional information to this table that is deemed appropriate.

Secondly, discuss the details of your findings regarding the classes. Also discuss your perspective on the bigger picture (i.e., the overall impact of this particular skill set on your discipline).

Lastly, think about what your plans are after the undergraduate degree is completed. For those of you planning to continue your academic studies, perform the same sort of exercise outlined above for advanced degrees. For those of you contemplating entering the workforce, investigate how programming is used in those environments. In pondering this last part of the exercise, don't worry if you don't "know" what you are going to do. For a lot of students, this is an uncertainty. Just direct the investigation in toward what feels right at the time. This exercise may even assist in making some of those choices down the road.

Final Note: Do not trivialize this assignment. The intent is to help you understand how knowledge of programming as a tool will assist you in successfully proceeding through your academic and professional careers. Take full advantage of the opportunity to obtain a better perspective on some of the challenges that lie ahead.