

Experiences in Responding to Computing Curricula 2013

[Conference Program](#)

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No Judgement Just Friendship



What I really should be doing is working on summer school but instead I have been pondering friendships. Specifically, the ripple effects of the divorce on my friendships. You change so much that you can't expect your friendships not to change along

with your own changes. I have found the friendships that I thought I had in large were "couple/family" friends or the other group of friends through thick and thin are gone or nearly gone. I have become the third wheel when I don't have the kids or I am moderately accepted when I do have the kids. Friends that stuck it through the divorce the crying, the anger and the sadness are now tired of you and your life and want to move on. No judgment, it happens, as the world continues to spin and shit happens and the divorce is final, friends vanish. If you are still wondering if those friends are friends or not friends, look at major events in your life, who was there with you? You have your answer. Once again no judgment! I am pass judgment.

So, what happens now? The pity party is over, you have to pick up yourself and move on. Join groups, even if they don't seem interesting, you may find a person or two that are interesting. [Meetup.com](https://www.meetup.com) is a good place to start. It is scary and let me tell you I have meet some crazy people doing this, people who are in it for one night stands, people only in it to meet the "one" and then the others who are in it to make friends. [Meetup](https://www.meetup.com) is an online social networking portal that enables offline meetings, yes it could be formal board meeting or it could be a night at the bar. Anyone can join [Meetup](https://www.meetup.com) and based on zip code find and join groups unified by a common interest.

I have joined and split from a variety of groups for a variety of reasons, all personal. One group made me feel like I was back in high school and it was like "whose having sex with who" this week, I am so over that and never been that kind of person. Another group high school again "very judgmental" even such that when I posted a movie selection for a Meetup I was told it was rather vulgar. I keep trying and while I get down about "how could I be this lonely in my 40s" I know the only way I am going to move forward is to keep trying. What I have gotten out of these different events, a lot of funny stories and people watching. I could fill up an entire book about what I have seen grown ups doing and saying just so maybe they wouldn't be alone. I won't change my core sense of morality or inner personality to say I am with the in crowd but I won't stop trying to find a group of friends that will accept me in my singleness.

Look Who is Changing!

"THE SECRET OF
CHANGE IS TO FOCUS
ALL OF YOUR ENERGY,
NOT ON FIGHTING THE
OLD, BUT ON BUILDING
THE NEW."

— SOCRATES

While I do intend to write about post-baccalaureate degrees I am using this weeks post to address the [ACM Computer Science Curriculum 2013](#) and the impact it has had on the [University of Mary Washington's Computer Science](#) degree. Starting in the fall semester of 2015 our department has reverted back to one track in [traditional computer science](#) from three tracks in computer science, computer information systems and geographic information systems. Our reason for creating these different tracks was to entice more students to major in computer science and I am happy to say it did work. However, with our University now having minors and the new changes in ACM CS 2013 we believe it is no longer necessary to split our focus in three different directions. Instead, students can accomplish the intent of three concentrations by majoring in Computer Science and [minoring](#) in a concentration ([math](#), [business](#) or [GIS](#)).

Another change our department made was that all required core courses are four credits. Our core classes include Introduction to Programming, Object Oriented Analysis & Design, Data Structures & Algorithms, Database and Applications, Computer Architecture, Operating Systems,

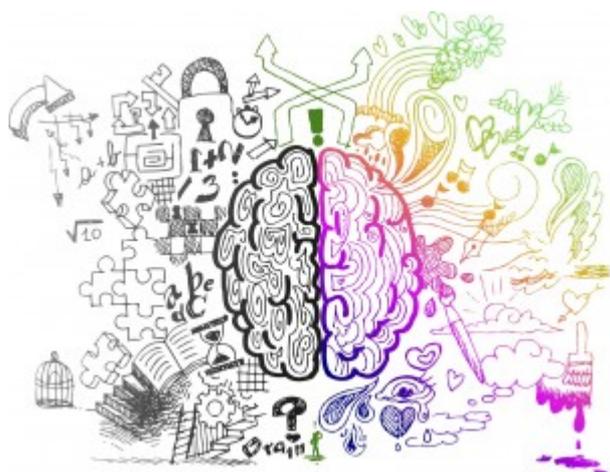
Software Engineering, Discrete Structures and Theory of Computation. Discrete Structures/Mathematics is no longer a hidden pre-requisite; it is actually part of the major requirements.

A major change to our program was to remove the lengthy series of mathematics classes needed to complete coursework in our CS degree. We have noticed just as ACM CS 2013 that the antiquated requirements of Calculus I, Calculus 2, Linear Algebra and Differential equations do not directly relate to what we teach in our core classes. We have followed the recommendation of CS2013 to include the mathematical requirements that are directly relevant for the large majority of our CS undergraduates. While we understand the need for mathematical maturity we believe that teaching two 4-credit courses in Introduction to Discrete Math and Theory of Computation in combination with Data Structures and Algorithms provide this maturity. The three courses that address the CS mathematical requirements cover all the Core-Tier1 and Core-Tier 2 mathematics requirements discussed in ACM CS 2013.

We still feel that it is important for students going onto computer science graduate school to invest in the "mathematical maturity" classes and possibly even minoring in one the UMW math minors. We further recommend that students considering a career with the federal government should be aware that the US Department of Operations and Personnel Management standards require a minimum of 15 credit hours of mathematics in order for employees to be classified as a "[Computer Scientist](#)." These students are also encouraged to invest in specific math classes or a math minor. These minors include a standard [math minor](#), an [applied math minor](#) or an [actuarial science](#).

Another change that we made based on ACM CS 2013 was topics in parallel and distributed computing were added to our core courses. ACM CS 2013 suggested that five tier-1 hours and ten tier-2 hours are invested in parallel and distributed computing. These topics were already included in our junior/senior level operating systems but not to level suggested in ACM CS 2013. In addition to beefing up the topics covered in Computer Architecture and Operating Systems we are now introducing parallelism to our Object Oriented Analysis and Design course, which is the second course in our sequence. This now exposes all computer science majors and minors earlier in curriculum and majors will build on this in computer architecture and operating systems.

STEM Education not so Dangerous



Recently I have read several articles about how our country is going to the crapper because everyone is pushing STEM education and not the humanities. I am here to say that I don't think the problem is STEM education. I honestly believe that STEM is what is needed for the future, however, you must combine that with a well rounded education in all fields. Students who graduate from the University of Mary Washington Computer Science Department constantly get praised

for their speaking and writing skills in addition to their technical skills. Throughout their academic career our students practice not just technical skills but everyday skills they need to succeed in their post-graduate careers. They do not only practice those skills in CPSC courses but in a variety of courses in most disciplines, including humanities.

Now while my students practice a variety of skills in multiple disciplines, including the humanities, I see so many humanities majors avoid any kind of STEM classes and in fact they can graduate with a minimum of 12 credits in these classes. If these students expect to get a good paying job and survive in an ever-changing technology world I find them to be living in the "I deserve" fantasy world.

While STEM students need the humanities, humanities need STEM. Students need to be technologically savvy and have a solid understanding of some of the STEM principles. Now, many of my colleagues may be screaming that how dare I say this but I see students who graduate with certain degrees either not finding a job because they are not qualified or have no specific skillset that makes them stand out. Or these students work at jobs that I believe are below their potential and they do too!

Over the last five years I have rented multiple cars from car rental companies to travel to conferences for work. 95% of the time when I go to get the car the person behind the counter has told me they graduated from UMW in major XYZ (Not STEM).

Yes, after the first two times going and finding UMW graduates working there I started to keep an excel spreadsheet of prior UMW students working there and what their majors were.

These students were good students, they have said this was the only job they could get and they believed they would have more opportunity upon graduating. I don't think they have to be STEM majors but I did talk to them about what STEM classes

they took. Each said minimal, for a variety of reasons many being “they were not good at Math, Science, CPSC or something close to that” and they believed that a college education (any kind) was enough to get a good paying job. Eighty-percent of the post-graduates I have talked with a non-STEM degree are back taking STEM related classes and learning specific skills that will move them, hopefully, in a new career direction, because as one person said “this is not a career, this is a job.”

Once again if people are going to bash STEM maybe they need to look at the other side of the coin. I am not saying everyone has to major in STEM but to ignore them is just as dangerous as ignoring the humanities.

Next Up—The Post Baccalaureate and Why so many people come back for CPSC.