Syllabus for Math 521A – Spring 2014, SDSU

<table>
<thead>
<tr>
<th>Professor Nick Slinglend</th>
<th>Abstract Algebra I</th>
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<tr>
<td>Office GMCS-516</td>
<td>Classroom GMCS-328</td>
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<tr>
<td>Office Hours: Tues &amp; Thurs, 3 to 3:30pm</td>
<td>Classes Tues &amp; Thurs 4 to 5:15 pm</td>
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<td><a href="mailto:nsingle@sdccd.edu">nsingle@sdccd.edu</a></td>
<td>Schedule # 21953</td>
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Textbook:  
Abstract Algebra, Thomas Hungerford, 3rd edition. We will cover material in Chapters 1 through 7 as well as some topics in the appendices.

Catalog Description:  
MATH 521A. Abstract Algebra (3)  
Prerequisites: Mathematics 245 and 254.  
Abstract algebra, including elementary number theory, groups, and rings.

Grades:  
10% attendance, participation, in-class business  
30% homework and other take-home assignments (no late work accepted)  
30% midterm exams (2)  
30% final exam

I will give approximate scales for graded work as we progress in the class – in other words, I will put some sort of letter scale on the numerical grades as the assessments are graded.

Student Learning Outcomes:  
General:  
- Students will understand basic structures and results on rings and groups and their homomorphisms.  
- Students will develop an understanding of results necessary to progress to Math 521B and further work in modern algebra.  
- Students will gain experience in knowing and using specific logical definitions and results. In addition, students will gain practice in writing math proofs.

Specific:  
- Students will learn about some basic number theory results including the division algorithm and simple facts about prime numbers and unique factorization.  
- Students will learn about congruence classes mod n and modular arithmetic in the integers.  
- Students will learn basic facts about rings, polynomials over a field, and ring homomorphisms.  
- Students will revisit congruence (quotient) in the context of rings and polynomials.  
- Students will revisit the prime concept for polynomials (irreducibility) and unique factorization of polynomials.  
- Students will learn the basics of the group structure and their homomorphisms.

Student Disability Services:  
If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services at (619) 594-6473. To avoid any delay in the receipt of your accommodations, you should contact Student Disability Services as soon as possible. Please note that accommodations are not retroactive, and that I cannot provide accommodations based upon disability until I have received an accommodation letter from Student Disability Services. Your cooperation is appreciated.