Quarter-By-Quarter Graduation Plan

For the Pure Concentration

Directions: On the following page is a graduation plan template. Use the checklist on pages 3-5 of this handout to fill in the template with your own graduation plan. As you choose classes, pay attention to pre-requisites and make sure that the course you are interested in is actually offered in the quarter in which you plan to take it (this information can be found on the checklist). In the first row, list the courses you have already taken, courses you are currently taking, and courses covered by AP credit (if you need more space, use the second row as well). If you need more years, download another copy of the template. After you have worked out a plan, take it to your math department advisor and have them look it over with you and sign it (you should give yourself some time to do this since your advisor’s schedule and yours might not align immediately). Turn in your completed and signed graduation plan and checklist in class on 5/22.
<table>
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<th>Plan for future quarters</th>
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<td>Fall</td>
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<td>Winter</td>
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<td>Spring</td>
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<td>Summer</td>
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List courses already taken or currently taking and courses covered by AP credit.
Check list for the Pure Concentration

Use these sheets to ensure that you have fulfilled the requirements of the math major under the pure concentration.

Core Courses: Every math major is required to take each of the following courses. Be sure to note the prerequisites (listed with each course) as well as the quarters in which the course is offered (if no quarters are specified, then the class runs every quarter). All courses are 4 credits unless otherwise listed.

- □ 141 Calc I
- □ 142 Calc II (after C− or better in 141)
- □ 143 Calc III (after C− or better in 142)
- □ 202 Orientation to Math Major (1 credit) (Fall or Spring; after 143)
- □ 206 Linear Alg I (after 143)
- □ 241 Calc IV (after 143)
- □ 242 Diff Eq (Winter or Spring; after 206 and 241)
- □ 248 Methods of Proof (after 143)
- □ 306 Lin Alg II (after 206, 241, and 248 with C− or better)
- □ 412 Analysis I (Fall or Winter; after 306)
- □ 459 Senior Sem (Fall or Spring; after 306 and two other 300+ level courses)
- □ 461 Sen Proj I (2 credits)
- □ 462 Sen Proj II (2 credits)
- □ 481 Abstract Alg I (Fall or Winter; after 306 or 341)
- □ Phys 141 (after Math 141 with C− or better and during or after Math 142)
- □ Phys 132 or 133 (after Phys 141)
Pure Concentration: Choose courses below as indicated in each section. You many not use the same course in more than one section. Be sure to note the prerequisites (listed with each course) as well as the quarters in which the course is offered.

Take each of the following:

- Math 336; Combinatorics *(Fall or Winter; after 248 or Junior standing)*
- 408 Complex Analysis I *(Fall; after 242)*
- 413 Analysis II *(Winter; after 412)*
- 440 Topology I *(Winter; after 412 and after or during 481)*
- 482 Abstract Alg II *(Winter or Spring; after Math 481)*

Take three of the following:

- 406 Linear Alg III *(Spring; after 306)*
- 409 Complex Analysis II *(Winter; after 408)*
- 414 Analysis III *(Spring; after Math 413)*
- 435 Discrete Math I *(Fall; after 248 with C− or better and 336)*
- 441 Topology II *(Spring; after 440)*

Take two of the following:

- CSC/CPE 101 *(Fall or Spring)*
- 350 Math Software *(Spring; after 206, 241 and CSC/CPE 101)*
- Stat 301 *(Fall or Winter; after or during Math 142), Stat 325 *(Spring; after Math 206 and CSC/CPE 101), or Stat 425 *(Fall; after Math 241 and 248)*

Take three of the following:

- 304 Vector Calc *(Winter or Spring; after 206 and 241)*
- 335 Graph Theory *(Fall 2013 or Fall 2015; after 248 or Junior standing)*
- 341 Number Theory *(Fall or Spring; after 248 with C− or better)*
- 344 Linear Analysis II *(Fall or Winter or Spring; after 206 and 242)*
- 350 Math Software *(Spring; after 206, 241 and CSC/CPE 101)*
- 404 Differential Geometry *(Fall 2013 or Fall 2015; after 304)*
- 406 Linear Alg III *(Spring; after 306)*
- 409 Complex Analysis II *(Winter; after 408)*
- 414 Analysis III *(Spring; after Math 413)*
- 416 Diff Eq II *(Winter 2014 or Fall 2014; after 206 and 242)*
- 418 Partial Diff Eq *(Fall or Spring; after 344, recommended 304)*
- 435 Discrete Math I *(Fall; after 248 with C− or better and 336)*
- 436 Discrete Math II *(Winter; after 435)*
- 437 Game Theory *(Spring; after 206 and 248 with C− or better)*
- 441 Topology II *(Spring; after 440)*
- 451 Numerical Analysis I *(Winter; after 206, 242, and CSC/CPE 101)*
- 452 Numerical Analysis II *(Spring 2013 or Spring 2015; after 451)*
- 453 Numerical Optimization *(Spring 2014 or Spring 2016; after 306 and 451)*
- 470 Selected Advanced Topics *(Winter or Spring; junior standing)*
General Education Requirements:
See http://www.ge.calpoly.edu/studentsandadvisors/allgecourses.html for a complete list of available courses along with the various requirements.

Area A: Communication
- □ A1 Engl 133/134 _________
- □ A2 Coms 101/102 _________
- □ A3 Reason, Arg & Writing _________

Area B: Science and Math
- □ B2 Life Science _________

Area C: Arts and Humanities
- □ C1 Literature _________
- □ C2 Philosophy: Phil 230/231 _________
- □ C3 Fine/Perf Arts _________
- □ C4 Upper-division elective _________
- □ C1-C4 Elective _________

Area D/E: Society and the Individual
- □ D1 American Exp _________
- □ D2 Political Economy _________
- □ D3 Comparative Social Inst _________
- □ D4 Self Development _________
- □ D5 Upper-division elective _________

Area F: Technology
- □ Upper division _________

Pure Concentration Free electives: You must have at least 180 credits total to graduate with a Math Major from Cal Poly. For the Pure Concentration, this requires 11 more credits. These can consist of any Cal Poly courses, AP credits, or transfer credits which are not used above.

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