

**Recommended Academic Plan for Bachelor of Science Mathematics, Systems Analysis Option (MTHBS  
SYANL at University Park) Effective Summer 2008**

Semester 1	Credits	Semester 2	Credits
<i>MATH 140(GQ) Calculus with Analytic Geometry I</i>	4	<i>MATH 141(GQ) Calculus with Analytic Geometry II</i>	4
FOREIGN LANGUAGE	4	<b>MATH 220</b> (GQ) Matrices	2
NATURAL SCIENCE (GN)	3	NATURAL SCIENCE (GN)	3
ARTS (GA), HUMANITIES (GH) or SOCIAL SCIENCE (GS)	3	ENGL 15 or 30 (GWS)	3
First-Year Seminar	1	FOREIGN LANGUAGE	4
Total Credits:	15	Total Credits:	16
Semester 3	Credits	Semester 4	Credits
<b>MATH 230</b> Calculus and Vector Analysis	4	<b>MATH 250 or 251</b> – Ordinary Differential Equations or Ordinary and Partial Differential Equations	3 - 4
<b>MATH 311W</b> Concepts of Discrete Mathematics	3	<b>MATH 312</b> Concepts of Real Analysis	3
NATURAL SCIENCE (GN)	3	CMPS 121 or CMPS 101 or CMPS 201C Introduction to Programming Techniques or Introduction to Algorithmic Processes or Computer Programming for Engineers Using	3
ARTS (GA), HUMANITIES (GH) or SOCIAL SCIENCE (GS)	3	Select 3 credits of supporting courses in consultation with academic adviser	3
		Select 3 credits of supporting courses in consultation with academic adviser	3
Total Credits:	13	Total Credits:	15-16
Semester 5	Credits	Semester 6	Credits
<b>MATH(STAT) 414</b> Introduction to Probability Theory	3	<b>MATH(STAT) 415</b> Introduction to Mathematical Statistics	3
<b>MATH 310 or 485 or 486 or MATH(CMPSC) 451</b> Elementary Combinatorics or Graph Theory or Mathematical Theory of Games or Numerical Computations	3	<b>MATH 310 or 485 or 486 or MATH(CMPSC) 451</b> Elementary Combinatorics or Graph Theory or Mathematical Theory of Games or Numerical Computations	3
APPLICATION COURSE	3	APPLICATION COURSE	3
CAS 100 A, B, or C (GWS) Effective Speech	3	ENGL 202C (GWS) Effective Writing: Technical	3
ARTS (GA), HUMANITIES (GH) or SOCIAL SCIENCE (GS)	3	ARTS (GA), HUMANITIES (GH) or SOCIAL SCIENCE (GS)	3
HEALTH AND PHYSICAL ACTIVITY (GHA)	1.5	HEALTH AND PHYSICAL ACTIVITY (GHA)	1.5
Total Credits:	16.5	Total Credits:	16.5
Semester 7	Credits	Semester 8	Credits
<b>MATH 484</b> Linear Programs and Related Problems	3	<b>400-Level MATH course</b> except MATH 401, 405, 406, 441, 470 or 471	3
<b>MATH 436</b> Linear Algebra	3	APPLICATION COURSE	3
APPLICATION COURSE	3	ARTS (GA), HUMANITIES (GH) or SOCIAL SCIENCE (GS)	3
ARTS (GA), HUMANITIES (GH) or SOCIAL SCIENCE (GS)	3	Select 3 credits of supporting courses in consultation with academic adviser	3
Select 1-2 credits of supporting courses in consultation with academic adviser	1-2	Select 3 credits of supporting courses in consultation with academic adviser	3
Total Credits:	13-14	Total Credits:	15

- **Bold type** indicates courses requiring a quality grade of C or better.
- *Italics* indicate courses that satisfy both major and General Education requirements.
- ***Bold Italics*** indicate courses requiring a quality grade of C or better and that satisfy both major and General Education requirements.
- GWS, GHA, GQ, GN, GA, GH, and GS are codes used to identify General Education requirements.
- US, IL, and US:IL are codes used to designate courses that satisfy University United States/International Cultures requirements.
- W is the code used to designate courses that satisfy University Writing Across the Curriculum requirement.

**Scheduling patterns:** Courses taught fall semester only – MATH 485. Courses taught spring semester only - MATH 310.

**Notes:**

- Students should learn if they can apply their area of application courses towards a minor in that area.
- Courses with a US/IL designation may also be used to satisfy a GA/GH/GS/GN requirement. A course with a US and IL designation may not be used to satisfy both US and IL courses.
- A student must earn a total of 120 credits for graduation. Students who choose to use their high school foreign language experience to satisfy the foreign language requirement will need to take additional supporting courses to meet the 120 credit requirement.