## West Texas A&M University Advising Services Degree Checklist 2012-2013

(For assistance completing this form, contact Advising Services at 806-651-5300)

| NAME: | WT ID: | DATE: |
|-------|--------|-------|
|-------|--------|-------|

## **Mathematics**

## Department of Mathematics, Chemistry and Physics Classroom Center, Room 420 (806)651-2540

| CORE CURRICULUM COURSES: 42 HOURS + Specific course(s) required for this major are listed in the next section.   Communication (10)  | Classroom Center, Room 420 (806)651-2540  |         |  |   |  |  |
|--|---|---------|--|---|--|--|
| ENGL 1301 (ENG 101); 1302* (ENG 102) or 2311* (ENG 270) 6  Communication (11)  COMM 1315 (SCOM 101, 1315), 1318 (SCOM 103, 1318), or 1321 (SCOM 201, 1321)  Mathematics (20)  See University Core Requirements below (8)  Humanities (40-41)  ENGL 2321*, 2326*, 2331*, 2341*, 2343*; HIST 2311 (110), 2374 (204); SPAN 2312*/** (207) or SPAN 2315*/** Choose 1  Visual and Performing Arts (50)  HUMA 1315 (FA 101); ARTS 1303 (ART 151), ARTS 1304 (ART 152); DANC 2303; MUS1 1306 (MUS 101) or 1208 and 1209*; or THRE 1310 (105)  Social and Behavioral Sciences (60)  HIST 1301 (201) or 1303; 1302 or 1304; 2301; 2381 (Choose 2)  Social and Behavioral Sciences (70)  POSC 2305 (101) or 2370; 2306 (102)  Social and Behavioral Sciences (80)  AGBE 2317* (213), ANTH 2351 (201); CRIJ 1301 (CJ 105); ECON 2301 (ECO 201), 2302 (ECO 202), 2371; SEOG 1302 (202); PSVC 2301 (FV 201); CNS (201); CNS ( | Specific course(s) required for this major are listed in the next   | HRS     |  |   |  |  |
| Communication (11)   | Communication (10)  |         |  |   |  |  |
| COMM 1315 (SCOM 101, 1315), 1318 (SCOM 103, 1318), or 1321   3   | ,   | 6       |  |   |  |  |
| Mathematics (20)   | Communication (11)  |         |  |   |  |  |
| See University Core Requirements below   Rutural Sciences (30)   |   | 3       |  |   |  |  |
| Natural Sciences (30)  | Mathematics (20)  |         |  |   |  |  |
| See University Core Requirements below   |   | (3)     |  |   |  |  |
| Humanities (40-41)  ENGL 2321*, 2326*, 2331*, 2341*, 2343*; HIST 2311 (110), 2323, 2372 (210); MCOM 1307 (MC 107); PHIL 1301 (101), 2374 [204); SPAN 2312*/** (207) or SPAN 2315*/** Choose 1  Visual and Performing Arts (50)  HUMA 1315 (FA 101); ARTS 1303 (ART 151), ARTS 1304 (ART 152), DANC 2303; MUSI 1306 (MUS 101) or 1208 and 1209*; 3 or THRE 1310 (105)  Social and Behavioral Sciences (60)  HIST 1301 (201) or 1303; 1302 or 1304; 2301; 2381 [Choose 1]  Social and Behavioral Sciences (70)  POSC 2305 (101) or 2370; 2306 (102)  Social and Behavioral Sciences (80)  AGBE 2317* (213), ANTH 2351 (201); CRIJ 1301 (CJ 105); ECON 2301 (ECO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY 201); COMM 2377 (SCOM 265, 2377); SOCI 1301 (201); or SOCW 2361 (SOWK 201) Choose 1  Institutionally Designated Option (90)  ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  Institutionally Designated Option (90)  ANST 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  UNIVERSITY CORE REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20  MATH 1316* (111) Plane Trigonometry OR  MATH 2412* (1348) Pre-Calculus  OR  PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102)  OR  PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102)  OR  PHYS 1401*, 1401L (101) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2414* (241) Calculus II  MATH 3321* (241) Calculus II  MATH 3321* (241) Inear Algebra  MATH 3321* (341) Linear Algebra  MATH 3321* (341) Linear Algebra  MATH 3321* (341) Linear Algebra  MATH 3321* (340) Calculus III  MATH 3340* (340) Calculus III  MATH 3340* (340) Calculus III  MATH 3340* (340) Calculus III   |   |         |  |   |  |  |
| ENGL 2321*, 2326*, 2331*, 2341*, 2343*; HIST 2311 (110), 2323, 2372 (210); MCOM 1307 (MC 107); PHIL 1301 (101), 2374 3 (204); SPAN 2312*/** (207) or SPAN 2315*/** Choose 1  Visual and Performing Arts (50)  HUMA 1315 (FA 101); ARTS 1303 (ART 151), ARTS 1304 (ART 152); DANC 2303; MUSI 1306 (MUS 101) or 1208 and 1209*; or THRE 1310 (105)  Social and Behavioral Sciences (60)  HIST 1301 (201) or 1303; 1302 or 1304; 2301; 2381 Choose 2  Social and Behavioral Sciences (70)  POSC 2305 (101) or 2370; 2306 (102)  Social and Behavioral Sciences (80)  AGBE 2317* (213), ANTH 2351 (201); CRIJ 1301 (CJ 105); ECON 2301 (ESO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY201); COMM 2377 (SCOM 255, 2377); SOCI 1301 (201); or SOCW 2361 (SOWK 201)  ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20  MATH 1316* (111) Plane Trigonometry OR  MATH 2412* (1348) Pre-Calculus  CORE 30  PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR  PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2414* (241) Calculus II  MATH 3325* Introduction to Proofs  MATH 3311* (441) Advanced Calculus  Take 21 semester hours from:  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability  MATH 3321* (322) Probability  MATH 3321* (324) Calculus II  MATH 3321* (321) Probability  | ,   | (8)     |  |   |  |  |
| 2323, 2372 (210); MCOM 1307 (MC 107); PHIL 1301 (101), 2374 (204); SPAN 2312*/** (207) or SPAN 2315*/** Choose 1  Visual and Performing Arts (50)  HUMA 1315 (FA 101); ARTS 1303 (ART 151), ARTS 1304 (ART 152); DANC 2303; MUSI 1306 (MUS 101) or 1208 and 1209*; or THRE 1310 (105)  Social and Behavioral Sciences (60)  HIST 1301 (201) or 1303; 1302 or 1304; 2301; 2381 Choose 2  Social and Behavioral Sciences (70)  POSC 2305 (101) or 2370; 2306 (102)  Social and Behavioral Sciences (80)  AGBE 2317* (213), ANTH 2351 (201); CRIJ 1301 (CJ 105); ECON 2301 (ECO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY 201); COMM 2377 (SCOM 255, 2377); SOCI 1301 (201); or SOCW 2361 (SOWK 201)  Institutionally Designated Option (90)  ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315); C345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20  MATH 1316* (111) Plane Trigonometry OR  MATH 2412* (1348) Pre-Calculus  CORE 30  PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR  PHYS 1421* (240) Calculus I  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2414* (241) Calculus II  MATH 3325* Introduction to Proofs  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability   |   |         |  |   |  |  |
| HUMA 1315 (FA 101); ARTS 1303 (ART 151), ARTS 1304 (ART 152); DANC 2303; MUSI 1306 (MUS 101) or 1208 and 1209*; or THRE 1310 (105) Choose 1  Social and Behavioral Sciences (60)  HIST 1301 (201) or 1303; 1302 or 1304; 2301; 2381 Choose 2  Social and Behavioral Sciences (70)  POSC 2305 (101) or 2370; 2306 (102) 6  Social and Behavioral Sciences (80)  AGBE 2317* (213), ANTH 2351 (201); CRIJ 1301 (CJ 105); ECON 2301 (ECO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY 201); COMM 2377 (SCOM 255, 2377); SOCI 1301 (201); or SOCW 2361 (SOWK 201) Choose 1  Institutionally Designated Option (90)  ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20  MATH 1316* (111) Plane Trigonometry OR MATH 2412* (1348) Pre-Calculus  CORE 30  PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR  PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2414* (241) Calculus II  MATH 3315* Introduction to Proofs  MATH 3311* (411) Linear Algebra MATH 3311* (111) Linear Algebra MATH 3310* (320) Calculus III  | 2323, 2372 (210); MCOM 1307 (MC 107); PHIL 1301 (101), 2374 (204); SPAN 2312*/** (207) or SPAN 2315*/** Choose 1  | 3       |  |   |  |  |
| 152); DANC 2303; MUSI 1306 (MUS 101) or 1208 and 1209*; Or THRE 1310 (105) Choose 1   Social and Behavioral Sciences (60)  | Visual and Performing Arts (50)   |         |  |   |  |  |
| HIST 1301 (201) or 1303; 1302 or 1304; 2301; 2381   Choose 2   Social and Behavioral Sciences (70)   | 152); DANC 2303; MUSI 1306 (MUS 101) <b>or</b> 1208 <b>and</b> 1209*; or THRE 1310 (105) <b>Choose 1</b>  | 3       |  |   |  |  |
| Choose 2   Social and Behavioral Sciences (70)   | ` '   |         |  |   |  |  |
| POSC 2305 (101) or 2370; 2306 (102)   6     Social and Behavioral Sciences (80)     AGBE 2317* (213), ANTH 2351 (201); CRIJ 1301 (CJ 105); ECON 2301 (ECO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY 201); COMM 2377 (SCOM 255, 2377); SOCI 1301 (201); or SOCW 2361 (SOWK 201)   Choose 1     Institutionally Designated Option (90)     ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203)   Choose 1     MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS     CORE 20   | ,   | 6       |  |   |  |  |
| Social and Behavioral Sciences (80)  | Social and Behavioral Sciences (70)   |         |  |   |  |  |
| AGBE 2317* (213), ANTH 2351 (201); CRIJ 1301 (CJ 105); ECON 2301 (ECO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY 201); COMM 2377 (SCOM 255, 2377); SOCI 1301 (201); or SOCW 2361 (SOWK 201) Choose 1  Institutionally Designated Option (90)  ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20  MATH 1316* (111) Plane Trigonometry OR  MATH 2412* (1348) Pre-Calculus  CORE 30  PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR  PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2413* (240) Calculus II  MATH 2414* (241) Calculus II  MATH 3325* Introduction to Proofs  MATH 3311* (411) Linear Algebra  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability  MATH 3340* (340) Calculus III   | POSC 2305 (101) <b>or</b> 2370; 2306 (102)  | 6       |  |   |  |  |
| ECON 2301 (ECO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY 201); COMM 2377 (SCOM 255, 2377); SOCI 1301 (201); or SOCW 2361 (SOWK 201) Choose 1  Institutionally Designated Option (90)  ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20  MATH 1316* (111) Plane Trigonometry OR MATH 2412* (1348) Pre-Calculus  CORE 30  PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR  PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2413* (240) Calculus II  MATH 2414* (241) Calculus II  MATH 3325* Introduction to Proofs  MATH 3311* (411) Linear Algebra MATH 3311* (411) Linear Algebra MATH 3321* (321) Probability MATH 3340* (340) Calculus III  MATH 3340* (340) Calculus III  | Social and Behavioral Sciences (80)   |         |  |   |  |  |
| ANSC 2370; CIDM 1105, 1301 (CIS, IDM 1301), 1315 (CIS, IDM 1315), 2345; CS 1301; IDS 1071; PHIL 2303 (203) Choose 1  MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20 MATH 1316* (111) Plane Trigonometry OR MATH 2412* (1348) Pre-Calculus  CORE 30 PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2413* (240) Calculus I 4  MATH 2414* (241) Calculus II 4  MATH 3325* Introduction to Proofs 3  MATH 4341* (441) Advanced Calculus 3  Take 21 semester hours from: MATH 3311* (411) Linear Algebra MATH 3321* (321) Probability MATH 3340* (340) Calculus III  | ECON 2301 (ECO 201), 2302 (ECO 202), 2371; GEOG 1302 (202); PSYC 2301 (PSY 201); COMM 2377 (SCOM 255, 2377);  | 3       |  |   |  |  |
| MATHEMATICS MAJOR REQUIREMENTS: 55-56 HOURS   A grade of "C" or better must be earned in all courses required for major.   | Institutionally Designated Option (90)  |         |  |   |  |  |
| A grade of "C" or better must be earned in all courses required for major.  UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS  CORE 20 MATH 1316* (111) Plane Trigonometry OR MATH 2412* (1348) Pre-Calculus  CORE 30 PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2413* (240) Calculus I  MATH 3325* Introduction to Proofs  MATH 4341* (441) Advanced Calculus  Take 21 semester hours from: MATH 3311* (411) Linear Algebra MATH 3324* (321) Probability MATH 3340* (340) Calculus III  MATH 3340* (340) Calculus III  |   | 1-3     |  |   |  |  |
| CORE 20 MATH 1316* (111) Plane Trigonometry OR MATH 2412* (1348) Pre-Calculus  CORE 30 PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102) OR PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  MATHEMATICS REQUIREMENTS: 44 HOURS  MATH 2413* (240) Calculus I  MATH 2414* (241) Calculus II  MATH 3325* Introduction to Proofs  MATH 4341* (441) Advanced Calculus  Take 21 semester hours from: MATH 3311* (411) Linear Algebra MATH 3321* (321) Probability MATH 3340* (340) Calculus III  |   | r major |  |   |  |  |
| MATH 1316* (111)   Plane Trigonometry OR   MATH 2412* (1348)   Pre-Calculus  | UNIVERSITY CORE REQUIREMENTS: 11-12 HOURS   |         |  |   |  |  |
| CORE 30  | MATH 1316* (111) Plane Trigonometry <b>OR</b>   | 3-4     |  |   |  |  |
| MATHEMATICS REQUIREMENTS: 44 HOURS           MATH 2413* (240) Calculus I         4           MATH 2414* (241) Calculus II         4           MATH 3325* Introduction to Proofs         3           MATH 4341* (441) Advanced Calculus         3           Take 21 semester hours from:         MATH 3311* (411) Linear Algebra         MATH 3321* (321) Probability         MATH 3340* (340) Calculus III           MATH 3340* (340) Calculus III         MATH 3340* (340) Calculus III   | PHYS 1401*, 1401L (101) and PHYS 1402*, 1402L (102)   | 8       |  |   |  |  |
| MATH 2413* (240) Calculus I 4  MATH 2414* (241) Calculus II 4  MATH 3325* Introduction to Proofs 3  MATH 4341* (441) Advanced Calculus 3  Take 21 semester hours from:  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability  MATH 3340* (340) Calculus III   | PHYS 2425*, 2425L (210) and 2426*, 2426L (211)  |         |  | L |  |  |
| MATH 2414* (241) Calculus II 4  MATH 3325* Introduction to Proofs 3  MATH 4341* (441) Advanced Calculus 3  Take 21 semester hours from:  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability  MATH 3340* (340) Calculus III  | MATHEMATICS REQUIREMENTS: 44 HOURS  |         |  |   |  |  |
| MATH 3325* Introduction to Proofs  MATH 4341* (441) Advanced Calculus  3  Take 21 semester hours from:  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability  MATH 3340* (340) Calculus III   | MATH 2413* (240) Calculus I   | 4       |  |   |  |  |
| MATH 4341* (441) Advanced Calculus 3  Take 21 semester hours from:  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability  MATH 3340* (340) Calculus III   | MATH 2414* (241) Calculus II  | 4       |  |   |  |  |
| Take 21 semester hours from:  MATH 3311* (411) Linear Algebra  MATH 3321* (321) Probability  MATH 3340* (340) Calculus III   | MATH 3325* Introduction to Proofs   | 3       |  |   |  |  |
| MATH 3311* (411) Linear Algebra MATH 3321* (321) Probability MATH 3340* (340) Calculus III   | ` '   | 3       |  |   |  |  |
| MATH 3343* (343) Differential Equations II MATH 4310* (310) Modern Algebra cont.→  | MATH 3311* (411) Linear Algebra MATH 3321* (321) Probability MATH 3340* (340) Calculus III MATH 3342* (342) Differential Equations I MATH 3343* (343) Differential Equations II | 21      |  |   |  |  |

## Bachelor of Arts Degree BA.MATH (115)

| MATH 4340* (440) Complex Variables I<br>MATH 4361* (461) Engineering Statistics<br>MATH 4362* (492) Introduction to Numerical Analysis    |      |  |   |  |
|---|------|--|---|--|
| CS 1315* Programming Fundamentals   | 3    |  |   |  |
| MATH 3306*/*** (306) Secondary Mathematics and Technology <b>OR</b> CS 1337, 1337L (1437) Introduction to Object-Oriented Programming *** | 3    |  |   |  |
| MPS 4370* Senior Investigations   | 3    |  |   |  |
| BACHELOR OF ARTS REQUIREMENTS: 12-14 HOURS  |      |  | N |  |
| Six hours of foreign language.  | 6-8  |  |   |  |
| Six hours chosen from art, English, history, modern languages, music, philosophy and theatre.   | 6    |  |   |  |
| ELECTIVES: 17-22 HOURS BY ADVISEMENT  |      |  |   |  |
| ADVANCED ELECTIVES Additional hours to provide a minimum of 39 advanced hours.  | 6-9  |  |   |  |
| ELECTIVES (ANY LEVEL)   | 8-16 |  |   |  |
| TOTAL HOURS REQUIRED FOR DEGREE   | 120  |  |   |  |

- ♦ A minimum of 42 hours from the core curriculum is required. Some majors specify particular courses to meet core-curriculum requirements when options are available. Ideally, these courses should be taken during the first two years of enrollment.
- \* Indicates prerequisites—see catalog for more information.
- \*\* Or an equivalent course (second year, second semester) in French or German
- German.

  \*\*\* Mathematics majors seeking teacher certification must take MATH 3306, and those who are not seeking teacher certification must take CS 1437.

NOTE: At least 39 hours of advanced work (3000- or 4000-level courses) for which tuition is paid must be earned at WTAMU, and 30 of the final 36 hours counted toward the degree must be earned at WTAMU. A maximum of six semester hours in religion (RELI) and six semester hours in physical education (PHED) courses can count toward a baccalaureate degree.

Note: This is NOT a degree plan. Before completion of 60 hours, students are allowed and encouraged to request an official degree plan in the office of the dean of the College of Agriculture, Science and Engineering, located in the Agriculture and Natural Sciences Building, Room 106 (or call 651-2585). After completing 60 hours, students will not be allowed to progress without requesting a degree plan.