

## Mathematics Area/Secondary Certification

The following guide is intended to assist a student with an Associate's degree in completing a Bachelor's degree in an efficient manner. For such a student, there will be no University Studies requirements, but there may still be requirements within the Area coursework. The Education coursework adds quite a few additional hours; in addition, programs in Mathematics all require completion of Calculus II before the student can begin to take more than one Mathematics course in a semester. Thus, it will be most efficient if some of the hours within the student's Associate's degree are directed towards requirements of the program. When replacing several MSU courses by courses from a two-year college or another university, be careful to note that the total number of hours is still at least 120 hours and that the number of hours of coursework at or above the 300 level is still at least 42 hours. Courses transferring from a 2-year college **can not** count toward the number of hours of coursework at or above the 300 level, even when the transferred course is counted as the equivalent of a 300-level MSU course.

When known, the KCTCS equivalent course is listed in brackets after the MSU course.

### Beginning *after* MAT 309 Calculus III with Associate's degree

#### First Year

##### First Semester

MAT 100T.....1 hr  
MAT 312.....3 hrs  
MAT 335.....3 hrs  
Comp. Prog\*.....3 hrs  
EDU 103 [EDU 201]..3 hrs  
EDP 260 [EDP 202]...3 hrs  
**Semester Total....16 hrs**

##### Second Semester

MAT 517 (Spring)....3 hrs  
MAT 551 (Spring)....3 hrs  
MAT LimElec†.....3 hrs  
SED 300 [EDP 203]..3 hrs  
EDU 303.....3 hrs  
Area°°.....3 hrs  
**Semester Total....18 hrs**

#### Second Year

##### First Semester

MAT 540 (Fall).... 4 hrs  
MAT 550 (Fall)....3 hrs  
MAT LimElec† ....3 hrs  
EDU 405\*\*.....3 hrs  
EDU 420\*\*.....3 hrs  
**Semester Total....16 hrs**

##### Second Semester

MAT LimElec† .....3 hrs  
SEC 422\*\*.....4 hrs  
EDU 403\*\*.....3 hrs  
HEA 191 [KHP 190]..3 hrs  
Area°°.....3 hrs  
Area°°.....3 hrs  
**Semester Total 19 hrs**

##### Next Fall:

##### Student Teaching Semester

SEC 421.....14 hrs  
**Semester Total 14 hrs**

### Beginning in MAT 309 Calculus III with Associate's degree completed.

#### First Year

##### First Semester

MAT 100T.....1 hr  
MAT 309 [MAT 275]..4 hrs  
EDU 103 [EDU 201]...3 hrs  
EDP 260 [EDP 202]...3 hrs  
Area°°.....3 hrs  
**Semester Total.....14 hrs**

##### Second Semester

MAT 312.....3 hrs  
MAT 335.....3 hrs  
SED 300 [EDP 203]...3 hrs  
HEA 191 [KHP 190]..3 hrs  
Area°°.....3 hrs

**Semester Total.....15 hrs**

#### Second Year

##### First Semester

MAT 540 (Fall).. 4 hrs  
MAT 550.....3 hrs  
Comp. Prog\*.....3 hrs  
EDU 303.....3 hrs  
Area°°.....3 hrs  
**Semester Total....16 hrs**

##### Second Semester

MAT 517 (Spring)..3 hrs  
MAT 551 (Spring)..3 hrs  
MAT LimElec†.....3 hrs  
EDU 405\*\*.....3 hrs

EDU 420\*\*.....3 hrs

**Semester Total.....15 hrs**

#### Third Year

##### First semester

MAT LimElec† ...3 hrs  
MAT LimElec† ...3 hrs  
SEC 422\*\*.....4 hrs  
EDU 403\*\*.....3 hrs  
**Semester Total....13 hrs**

##### Second Semester:

##### Student Teaching Semester

SEC 421.....14 hrs  
**Semester Total....14 hrs**

**Beginning in MAT 308 Calculus I with Associate's degree completed.**

**First Year**

**First Semester**

MAT 100T.....1 hr  
MAT 308 [MAT 185]..5 hrs  
EDU 103 [EDU 201]..3 hrs  
EDP 260 [EDP 202]....3 hrs  
Area°°.....3 hrs  
**Semester Total.....15 hrs**

**Second Year**

**First Semester**

MAT 335.....3 hrs  
MAT 540 (Fall) .....4 hrs  
MAT 550.....3 hrs  
EDU 303.....3 hrs  
HEA 191 [KHP 190]..3 hrs  
**Semester Total.....16 hrs**

**Third Year**

**First semester**

MAT LimElec† ...3 hrs  
MAT LimElec† ...3 hrs  
SEC 422\*\*.....4 hrs  
EDU 403\*\*.....3 hrs  
Area°°.....3 hrs  
**Semester Total....16 hrs**

**Second Semester**

MAT 309 [MAT 275]..4 hrs  
MAT 312.....3 hrs  
Comp. Prog\*.....3 hrs  
SED 300 [EDP 203]....3 hrs  
Area°°.....3 hrs  
**Semester Total.....16 hrs**

**Second Semester**

MAT 517 (Spring).3 hrs  
MAT 551(Spring)..3 hrs  
MAT LimElec†.....3 hrs  
EDU 405\*\*.....3 hrs  
EDU 420\*\*.....3 hrs  
**Semester Total.....15 hrs**

**Second Semester:**

**Student Teaching Semester**

SEC 421.....14 hrs  
**Semester Total....14 hrs**

**Beginning in MAT 250 Calculus I with Associate's degree completed.**

**First Year**

**First Semester**

MAT 100T.....1 hr  
MAT 250 [MAT 175]..5 hrs  
EDU 103 [EDU 201]..3 hrs  
HEA 191 [KHP 190]..3 hrs  
Area°°.....3 hrs  
**Semester Total.....15 hrs**

**Second Year**

**First Semester**

MAT 309 [MAT 275]..4 hrs  
MAT 312.....3 hrs  
MAT LimElec†.....3 hrs  
EDU 303.....3 hrs  
Area°°.....3 hrs  
**Semester Total.....16 hrs**

**Third Year**

**First semester**

MAT 540 (Fall) 4 hrs  
MAT 550 (Fall) 3 hrs  
MAT LimElec† 3 hrs  
EDU 405\*\*.....3 hrs  
EDU 420\*\*.....3 hrs  
**Semester Total....16 hrs**

**Second Semester**

MAT 308 [MAT 185]..5 hrs  
Comp. Prog\*.....3 hrs  
EDP 260 [EDP 202]....3 hrs  
SED 300 [EDP 203]....3 hrs  
**Semester Total.....14 hrs**

**Second Semester**

MAT 335.....3 hrs  
MAT 551(Spring)..3 hrs  
MAT LimElec†.....3 hrs  
Area°°.....3 hrs  
**Semester Total...12 hrs**

**Second Semester:**

MAT 517(Spring).3 hrs  
SEC 422\*\*.....4 hrs  
EDU 403\*\*.....3 hrs  
may add a course to be full time  
**Semester Total....10 hrs**

**Next Fall:**

**Student Teaching Semester**

SEC 421.....14 hrs

As mentioned above, it may shorten the time to a Bachelor's degree if some of the coursework towards the Associate's degree is chosen judiciously. For instance, as a part of our Mathematics Area/Secondary Certification, there are

- a) four Mathematics courses with equivalents in KCTCS and in most two-year colleges (all of which are noted on this document);
- b) three Education courses with KCTCS equivalents;
- c) one Computer programming course with a KCTCS equivalent,
- d) several courses which count towards the Area/Allied courses (noted below) have KCTCS equivalents.

\*The computer programming course can be chosen from among CSC 145, CSC 232 [CIS 148 or CIT 148], CSC 235, EGR 140.

†These three courses must satisfy:

One of MAT 513, MAT 516, MAT 525 All are offered in Fall only. MAT 516 is offered in the Falls of odd-numbered years.

One of MAT 442, MAT 506, MAT 524, MAT 541 Most are offered in Spring only. MAT 506 is offered in the Falls of odd-numbered years.

**One** more course chosen from MAT 338 [MAT 285] and MAT courses at or above the 400 level.

\*\*EDU 405 and SEC 420 must be taken two semesters prior to student teaching; SEC 422 must be taken the semester before student teaching; EDU 403 may be taken one or two semesters prior to student teaching. All of these courses require admission to Teacher Education.

°° These are three courses related to the application of Mathematics, approved by the student's advisor and the department chair. The list of automatically approved courses is currently: CHE 201 [CHE 105], CHE 202 [CHE 107], CHE 305, CHE 405, ECO 230 [ECO 202], ECO 231 [ECO 201 or ECO 260], ECO 330, ECO 331, PHY 235/6 [PHY 231/241], EGR 240, PHY 255/6 [PHY 232/242], EGR 259 [EM 259], EGR 264, EGR 330, EGR 340, EGR 359, PHY 370, PHY 470, ENT 286, CET 298, ENT 382, ENT 400, IET 597, CSC 245, CSC 301, CSC 302, CSC 332, CSC 340, CSC 345, CSC 405, CSC 415, CSC 420, CSC 445.

This is only a rough guide. Additional transferred credits, prerequisite requirements, or changes in course offerings and schedules might require you to take courses in a different semester than listed above.

- ☐ 2.75 Cumulative GPA      ☐ 2.75 GPA in courses taken at MSU      ☐ 2.75 GPA in area, majors
- ☐ 2.75 GPA in courses taken at MSU in area, majors, minors      ☐ Minimum of 120 earned hours (exclusive of non-degree credit)
- ☐ Minimum of 40 earned hours in residence at MSU      ☐ 20 of the last 32 hours earned in residence at MSU
- ☐ Minimum of 42 upper-level hours (at least 300 level) earned at a 4-year institution