



## Guidance & FAQs

# Graduation Requirements for Mathematics

### Introduction

The Oklahoma State Department of Education is dedicated to ensuring that all Oklahoma students engage in meaningful learning experiences during their K-12 years. With educators' help, high school students can successfully navigate graduation requirements and progress beyond the high school setting to a successful future.

This document will provide teachers, parents, counselors, and administrators clarity on math graduation requirements in Oklahoma. For both the Core Diploma Pathway and the College Preparatory/Work-Ready Pathway, this document highlights the minimum requirements needed to graduate and a list of sample coursework meeting the math graduation requirements. A number of questions specific to math graduation requirements are provided here along with short answers.

Additional information about high school graduation requirements is available at <http://bit.ly/oklahoma-graduation>.

### Quick Links

1. [Core Diploma](#) and [College Prep/Work-Ready Diploma](#)
2. [Frequently Asked Questions](#)
  - [Math Graduation Requirements](#)
  - [Middle School Students Taking Advanced Coursework](#)
  - [Teacher Certification Requirements](#)
3. [Linked Resources for Additional Graduation Guidance](#)

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## Core Diploma Pathway

### Overview of Pathway:

By choosing the Core Diploma pathway, students are NOT taking courses meeting college admission requirements. In order to choose the Core Diploma pathway, students must have the written approval of their parent or legal guardian. This written approval must be kept on file at the school as a requirement for accreditation.

### Coursework Requirements:

**All students *must* complete three math credits *after* enrolling in ninth grade.**

All students must successfully complete Algebra I. After taking Algebra I, Core Diploma pathway students must choose and successfully complete at least two additional courses from the following list:

- Geometry or geometry taught in contextual methodology
- Advanced programming
- Intermediate algebra\*
- Computer Science 1
- Computer Science 2
- Math of finance
- Other contextual mathematics courses which enhance technology preparation taught at a technology center school by a teacher certified in the secondary subject area (must be taken in eleventh or twelfth grade, approved by the State Board of Education and by the independent district board of education)

*\*This course is a precursor to Algebra II*

If a student successfully completes Algebra I in middle school but then chooses the Core Diploma pathway after enrolling in ninth grade, the student must take at least two courses from the above list and take a third math course between ninth and twelfth grades to satisfy the math graduation requirement.

## College Preparatory/Work-Ready Diploma Pathway

### Overview of Pathway:

By choosing a minimum of three courses from the College Preparatory/Work-Ready Diploma pathway, students are taking courses meeting the minimum college admissions requirements.

### Coursework Requirements:

**All students *must* complete three math credits *after* enrolling in ninth grade.**

College Preparatory/Work-Ready Diploma pathway students must choose and successfully complete at least three courses from the following list:

- Algebra I
- Geometry\*
- Algebra II\*
- Statistics and probability (Algebra II prerequisite)
- Trigonometry (Algebra II prerequisite)
- Pre-Calculus (Algebra II prerequisite)
- Calculus
- AP calculus AB
- AP calculus BC
- Advanced Studies in Mathematics 1 (Calculus 1, AP calculus AB, or AP calculus BC prerequisite)
- Advanced Studies in Mathematics 2 (Calculus 1, AP Calculus AB, or AP Calculus BC prerequisite)
- Statistics and probability
- AP statistics
- IB mathematical studies standard level (aligned to current International Baccalaureate courses)
- IB mathematics standard level (aligned to current International Baccalaureate courses)
- IB mathematics higher level (aligned to current International Baccalaureate courses)
- IB further mathematics higher level (aligned to current International Baccalaureate courses)
- PLTW digital electronics (Algebra II prerequisite, only taught in CareerTech Pre-Engineering Academies)

*\* Recommended second and third credits*

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## Additional Math Courses:

Due to the language of [O.S. §70-11-103.6](#), the following courses do not count toward the math graduation credit requirements for either diploma pathway (these courses do count for math elective credit and must be taught by a math certified teacher).

- Title I math
- Math remediation
- Pre-Algebra
- College career math ready
- Consumer mathematics
- General mathematics
- High school arithmetic
- Applied Math I
- Applied Math II
- Additional courses without the rigor at or above Algebra I

## Frequently Asked Questions

### Math Graduation Requirements

**Q: Which courses meet the math requirements for graduation?**

There are two pathways for high school graduation – the Core Diploma pathway and the College Preparedness/Work-Ready Diploma pathway. Each pathway requires students to enroll in three math credits between ninth and twelfth grade, and each pathway requires students to take Algebra I. Beyond these requirements, the Core Pathway will not meet minimum college admission requirements, while the College Preparedness/Work-Ready pathway will meet minimum college requirements. To view a list of courses accepted for each pathway, please see the guidance at the beginning of this document.

Read more about Core Diploma and the College Preparatory Pathways [here](#).

**Q: A student on the Core Diploma Pathway has opted to take one year of a full-time, three-hour career and technology program in place of a third mathematics credit. What subject code belongs on this student’s transcript?**

If a student is on the Core Diploma pathway and is taking a three-hour career and technology course in place of a third math credit, the subject code for the course they are taking is recorded on the transcript. Then, a comment may be added to the transcript stating that the third math requirement for graduation has been satisfied by [course name/code].

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## Middle School Students Taking Advanced Coursework

Q: If students take a high school level course during middle school, do they only have to take two math courses in high school?

No. Please review the guidance for the three-credit requirement [here](#).

Q: If students complete Algebra I, geometry, and Algebra II in middle school, what are their options for high school?

Advanced math coursework taken in middle school does not count toward high school graduation credit; therefore, it is recommended that students who take advanced mathematics in middle school plan to take calculus in high school.

AP options are recommended for those students taking calculus and statistics/probability. If the student is not prepared to enroll in a Pre-Calculus course, a semester Algebra III course followed by a spring semester of concurrent college algebra is recommended.

The student may also take a course such as math of finance or intermediate algebra to meet the three-credit requirement (since college admissions requirements have already been met). However, these courses are not recommended for a College Preparedness/Work-Ready Diploma pathway.

Q: If students take a high school-level course during middle school, do they earn high school credit?

If a teacher is certified to teach the courses for high school credit and the required rigor is maintained, students may earn credit for high school-level courses taken prior to ninth grade. Students cannot, however, use courses taken in middle school to count toward their three required math courses for high school graduation. To view the language of the applicable statute, click [here](#).

Q: After taking Algebra I in middle school, can a student retake Algebra I in high school to earn a better grade?

While this is not addressed in legislation, it is within a district's authority to allow students to retake Algebra I in high school to earn a better grade or to transfer to

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a different course during the school year if they are struggling (if allowed by district local policy). To ensure equitable practices for all students, districts should have an outlined policy containing consistent practices for transcribing and for GPA determinations.

**Q: Will a high school course taken in middle school appear on a high school transcript?**

If a middle school student takes a high school-level course taught by a high school certified teacher, the student has a right to have this course included on the high school transcript. If the student takes high school math courses in middle school, this student would still need to take three math credits between ninth and twelfth grade to meet math graduation requirements.

## **Teacher Certification Requirements**

**Q: What are the certifications needed to teach math coursework?**

The *Elementary* certification and *Elementary Math Specialist* certifications only extend to sixth grade in mathematics. Previously, a *Middle-Level* endorsement was available, allowing elementary-certified educators to teach seventh and eighth-grade mathematics courses, including Algebra I and geometry, so long as no high school credit was provided.

With an *Intermediate Mathematics certification*, teachers can teach sixth-grade mathematics through Algebra I, II, and III and geometry. While Algebra III has traditionally been allowed, this course is increasingly becoming aligned to Pre-Calculus, and it is strongly recommended that teachers have the advanced mathematics certificate to teach Algebra III. Additionally, courses such as math remediation, math of finance, intermediate algebra, and Computer Science 1 and 2 may be taught by a teacher with an intermediate math certification. It is strongly recommended that those teaching Computer Science 1 and 2 have a Computer Science certificate.

With an *Advanced Mathematics* certification, a teacher can teach any math course available to the intermediate-certified teacher and more. Such additional courses include pre-calculus, trigonometry, calculus (including both AP versions with

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proper endorsements from College Board), statistics/probability, advanced studies (with calculus as a prerequisite course), and IB courses (as allowed by IB).

To view the certification(s) required for each Oklahoma math course, [click here](#).

**Q: Does a teacher have to be math certified to teach the additional math courses not meeting either diploma pathway credit requirements?**

Although many of the additional math courses are rigorous, these courses do not meet the math graduation requirements determined in [O.S. §70-11-103.6](#). However, because they are still courses with a math focus, these courses must be taught by a teacher certified to teach mathematics. To see teacher certification requirements for all math courses, [click here](#).

**Q: Is additional training needed for the College Career Ready Math Course?**

Yes. Training courses are offered in the summer. Without this training, teachers cannot teach the College Career Math Ready course.

## **Individual Math Course Descriptions/Requirements**

**Q: Where can I find guidance about math of finance and intermediate algebra?**

Access FAQs specific to these two courses [here](#).

**Q: Where can I find curriculum guides?**

Curriculum guides are available for many math course offerings. Guides are available [here](#).

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## Linked Resources for Additional Graduation Guidance:

### Oklahoma State Law

- [Oklahoma Graduation Requirements](#)
- [Three Credit Requirement for Mathematics](#)
- [Additional High School Graduation Resources](#)

### Certification Requirements

- [Teacher Certification Requirements for each Oklahoma Math Course Offering](#)

### Course Codes

- [Pre-K through 12 Math Course Offerings with Course Codes](#)
- [Math Courses meeting each Diploma Pathway](#)
- [Oklahoma Course Codes, Grades 9-12](#)

### College and Career Math Ready Course (CCMR)

- [CCMR FAQ](#)
- [CCMR Informational Website](#)

### Curriculum Guides

- [Pre-K through Algebra II Curriculum Maps](#)
- [Intermediate Algebra Curriculum Outline](#) and [FAQ](#)
- [Math of Finance Competencies](#) and [FAQ](#) (Updates coming soon)
- [Statistics and Probability Course Description and Competencies](#)

