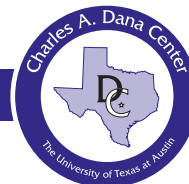


Advanced Mathematical Decision Making

Frequently Asked Questions



A project of the Charles A. Dana Center at
The University of Texas at Austin
in partnership with the
Texas Association of Supervisors of Mathematics



What is the purpose of Advanced Mathematical Decision Making? AMDM, a course for students who have completed Algebra II or its equivalent, enables students to meet Texas's four-year mathematics requirement as well as requirements in other states. AMDM includes a strong emphasis on statistics and financial applications, as well as on the use of mathematical models involving discrete mathematics, algebra, geometry, and trigonometry to solve complex problems in a range of applied contexts.

Algebra II is often cited as the level of mathematics needed to enter—and succeed in—college and the workforce, but even this level of preparation may not adequately prepare all students for the future. In AMDM, students extend what they have learned and engage in activities not typically addressed in traditional high school math courses to develop 21st-century skills—including collaborating, conducting research, and making presentations—that will serve them no matter what path they choose.

Who is AMDM's audience? AMDM is designed for students who may pursue a non-mathematics-intensive major in business, social sciences, or the arts at the postsecondary level as well as for students who may enter workforce training programs or technical certificate programs directly after high school graduation. Students pursuing precalculus and calculus may also take AMDM as an elective.

What are the prerequisites for AMDM? Students in AMDM must have completed the equivalent of Algebra I, Geometry, and Algebra II.

When will AMDM be available for implementation? AMDM is being piloted in selected high schools during the 2009–2010 school year. The course will be available for wider implementation beginning in the 2010–2011 school year.

Is AMDM a course for struggling students? AMDM is a rigorous yet accessible option for all students. It demands from students a high level of thinking and a lot of work. AMDM is not intended as a drop-down course for students who might have trouble in precalculus or AP statistics, nor does it provide remediation on basic arithmetic or algebra skills. Students in the course have many opportunities, however, to reinforce and extend those skills, both with and without technology. The course structure and the recommended instructional approaches engage all students in learning relevant and challenging mathematics in accessible ways—thus, many students who may otherwise struggle can have a good chance of success in this course.

Who developed AMDM? AMDM was developed by a diverse group of teachers, mathematics supervisors, and faculty in mathematics education and mathematics from two- and four-year institutions of higher education. This group was convened by the Texas Association of Supervisors of Mathematics and the Charles A. Dana Center at the University of Texas at Austin in response to the new state graduation requirements in Texas and elsewhere calling for four years of high school mathematics. AMDM development has been supported by the Greater Texas Foundation, the Dana Center, and the Texas Association of Supervisors of Mathematics.

What materials are available for teaching AMDM? The Dana Center, in collaboration with TASM, Texas educators, and other mathematics experts, has developed AMDM course materials (with teacher and student pages) that provide comprehensive support for the course and address every student expectation. The Dana Center grants a nonexclusive license in perpetuity to the people of Texas to use the 2010–2011 edition of AMDM course materials (reflecting improvements based on the 2009–2010 pilot) in Texas classrooms and homes for the education of our children.

Naturally, the use of these materials is optional for any school or teacher; the materials are provided as a starting point so that teachers do not need to begin from scratch. The 2010–2011 AMDM instructional materials will be available as downloadable pdf files. We encourage commercial developers to develop other course materials for AMDM.

What kind of professional development is offered for implementing AMDM? Teaching any new course offers challenges as educators get comfortable with instructional materials and content they might not have taught before. Teaching AMDM is particularly challenging, because it involves content not typically addressed in most teacher preparation and because it calls for a different teaching model than most have used in the past. Because this course is designed to prepare students for work and life after high school, it requires that students develop college-and-career-readiness skills such as working collaboratively, conducting research, and making presentations. Teachers are expected to guide student learning in ways that cause students to think critically, analyze problems, and find solutions to many kinds of problems that may not be familiar to them (see a classroom video posted on the AMDM website at www.utdanacenter.org/amdm).

Thus, professional development on AMDM is critical. For the 2010–2011 school year, the Dana Center will offer a total of 7 days of professional development: a 5-day summer institute with 2 individual follow-up days during the year. A number of AMDM institutes will be offered in late summer 2010, and follow-up days can be scheduled to meet the needs of teachers and schools. In addition to these 7 days, a variety of online supports will be available, including small, facilitated online communities in which teachers access AMDM resources and exchange ideas with others. As it becomes available, information on professional development will be posted on the AMDM website.

What type of assessment support will there be? Each AMDM unit gives teachers access to various types of ongoing, informal, formative assessment, particularly through questioning activities and projects. For the first year of implementation, teachers will also have access to a variety of assessment supports developed by AMDM staff and pilot teachers. Development of additional assessment resources is a high priority but will depend on future funding support for AMDM.

What kind of credit will AMDM carry? Under the Texas Administrative Code (TAC, Title 19, Chapter 74, Subchapter F, Graduation Requirements, §74.63 (b) and §74.64 (b)), AMDM can be assigned fourth-year mathematics credit for either the Recommended High School Program or the Distinguished Achievement High School Program when taught as Mathematics Independent Study with an Algebra II prerequisite.

It is possible that at some point in the future, the Texas State Board of Education may choose to approve AMDM as an official state-adopted course, but there is no such Board action scheduled at this time. Updates on the status of the AMDM course will be posted on the AMDM website, www.utdanacenter.org/amdm.

What does our school need to do to offer AMDM in 2010–2011? If your school (inside or outside Texas) wants to participate in professional development and teacher support for AMDM as part of implementing the course in the 2010–2011 school year, contact amdm@austin.utexas.edu for more information and to get on the AMDM email list. Also, check the AMDM website—www.utdanacenter.org/amdm—for updates and additional resources.