

MODERN ENGLISH SCHOOL CAIRO

A Guide to the American High School Diploma



Jolie Amin G11Y

Program of Studies 2027-2028

Message From the American Section Principal

Individual Graduation Plan (IGP)

Leadership Through Education: Care, Challenge, and Inspire

Dear Parents, Guardians, and Students:

Welcome to one of the most exciting opportunities in your high school journey: planning your personalized pathway to university success! We understand that mapping out a four-year high school program can feel overwhelming, but we're here to guide you every step of the way. Think of this as your chance to design an education that reflects your unique goals, passions, and dreams.

Your IGP Meetings: Where Planning Meets Possibility



Parent Information Session November 4th, 2026

Learn about the complete IGP process, including university planning and course selection strategies



Grades 10-11 Individual Sessions Beginning November 8th

One-on-one meetings tailored to upperclassmen preparing for university applications



Grades 8-9 Individual Sessions Beginning January 10th

Personalized guidance as you begin your high school journey



Preparing for Your IGP Meeting: A Family Conversation

To make the most of your IGP session, spend time together reviewing the Program of Studies and discussing these questions:

For Students to Consider:

- What subjects do you enjoy most? Which classes challenge you in a good way?
- What are your strengths, and where would you like to grow?
- What university majors or career fields interest you?
- Do you prefer hands-on learning, creative projects, or analytical problem-solving?
- What activities outside of class are important to you?

For Families to Discuss Together:

- Which courses align with your university and career goals?
- How can you balance required courses with electives that spark curiosity?
- What is a realistic and healthy course load?
- Are there prerequisite courses needed for future classes?
- How do your course choices connect to university majors?

Action Steps Before Your Meeting

- 1 Review the Program of Studies together:** Each department section includes comprehensive course descriptions, prerequisites, grade-level placement, and connections to university majors and career pathways
- 2 Explore course and faculty alignments:** Use the college and career pathway information to see how courses connect to your interests
- 3 Complete your Course Request Form:** Fill out the elective course request form to bring to your IGP meeting
- 4 Participate in homeroom and HRCF activities:** Engage with Program of Studies activities leading up to IGP meetings

Message From the American Section Principal

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✅ Action Steps Before Your Meeting (continued)

- 5 **Create a tentative 4-year plan** – Map out required courses and potential electives
- 6 **Check graduation and university requirements** – Ensure your plan meets all diploma requirements
- 7 **Prepare questions** – Write down anything you'd like to discuss during your IGP meeting

⚠️ Making Your Selections Count

Your Program of Studies is your roadmap—please review it carefully with your family! Course selections made during IGP meetings are final, and schedules for next year will be built based on your choices and enrollment eligibility.

While we encourage thoughtful planning, we understand that circumstances can change. Schedule adjustments after courses begin are limited to three specific situations:

- Student qualification requirements are not met
- A different course is needed to fulfill graduation requirements
- A school error occurred in course placement

📖 What You'll Find Inside This Program of Studies

- Graduation and university requirements
- Available course pathways within the American program
- Comprehensive course descriptions with prerequisites and grade-level placement details
- Aligned courses and faculties with college majors and career pathways
- Clear connections between your course choices and future university goals

👏 Your Support Team

- Parents, family members, teachers, and our Deans of Students are here to help you understand your goals, plan for graduation, and explore university majors and careers
- Connect with professionals in fields that interest you—their real-world insights can be invaluable
- Remember: you're not alone in this process!

🌟 The Big Picture

High school is about more than checking boxes—it's about discovering your passions, building commitment, and laying the foundation for university success. Choose courses that excite you, challenge you, and open doors to new possibilities. Your plan is flexible and will evolve as you grow, so embrace the journey with curiosity and confidence.

Let's get started! Your future begins now.

Administrative Team



American Section Leadership Team

MODERN ENGLISH SCHOOL CAIRO



Leadership Team

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General Information

Graduation Requirements

A minimum of **28.0 credits** earned in grades 9-12 is required for a college preparatory MES Cairo diploma in the American Program. In order to graduate from MES Cairo, a student must meet set course requirements and attendance guidelines. These requirements are meant to serve as a minimum standard rather than the standard which students should strive to achieve.

Subject	Required Credits	Highly Recommended for College/University
English (Pre-AP English I or I, AP Seminar - English II or II, III or AP Language, and IV or AP Literature)	4.0	
Mathematics (Algebra 1 taken in Grade 8; 3 math credits in high school including Geometry or Pre-AP Geometry and Statistics, and Algebra 2)	3.0	4.0
Science ^ (Biology and Pre-AP Chemistry or Chemistry plus 1 additional science - Environmental Science, Physics, AP Biology, AP Chemistry, AP Physics 1 or AP Physics C)	3.0	4.0
Social Studies (Global Studies I, Global Studies II or AP Human Geography, and US History or AP World History)	3.0	3.0 + 1 elective
World Languages (Spanish or French)	2.0 consecutive	3.0 - 4.0, fluency
Expressive Arts (Art & Design, Digital Art & Design, Photography, Theatre, Choir, Sculpture, or Instrumental Music)	2.0	
Physical Education	1.0	
Health	0.5	
Religion*	2.0	
Arabic*	4.0	
Electives**	3.5	
Minimum MES Cairo requirement	28.0	

Students in Grades 9 through 12 earn a cumulative Grade Point Average (GPA). This GPA is based on the grades earned per trimester. It is important to note that the GPA earned by students in Grade 9 will be part of their permanent record (Transcript) throughout their high school career, and is a significant document for college admissions.

Notes:

^ Must have 3 lab sciences for highly competitive universities. Should be Physics or higher.

* All students follow courses in Arabic Language and Culture, and Religious Studies to fulfill the Egyptian Ministry of Education requirements.

** Electives requested should support student interests and academic goals.

Initial-Eligibility Standards

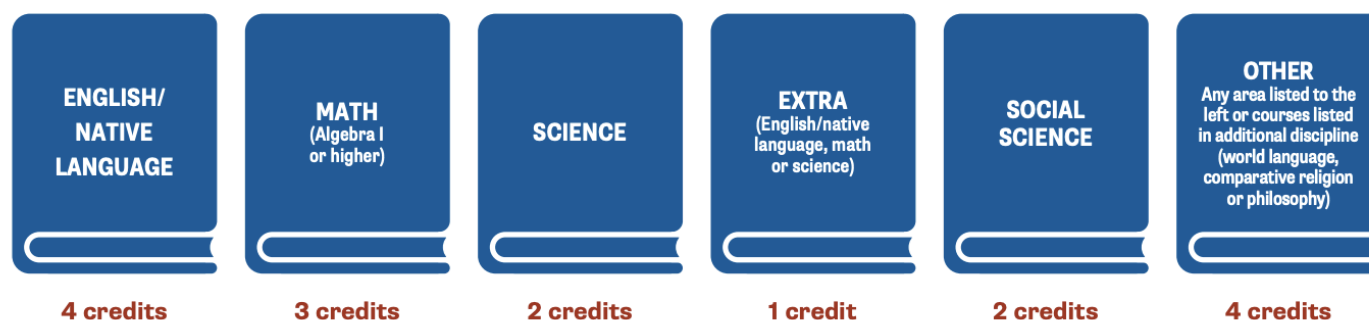
If you want to compete in NCAA sports, you need to register with the NCAA Eligibility Center at eligibilitycenter.org. Plan to register before year nine of secondary school. For more information on registration, visit on.ncaa.com/RegChecklist.

INTERNATIONAL ACADEMIC REQUIREMENTS [\(click here for flyer\)](#)

Division I and II schools require you to meet academic standards. To be eligible to practice, compete and receive an athletics scholarship in your first year of full-time enrollment, you must earn 16 NCAA-approved **core-course credits**, earn a corresponding test score that matches your **core-course grade-point average** (GPA), and submit your final transcript with proof of graduation to the Eligibility Center.

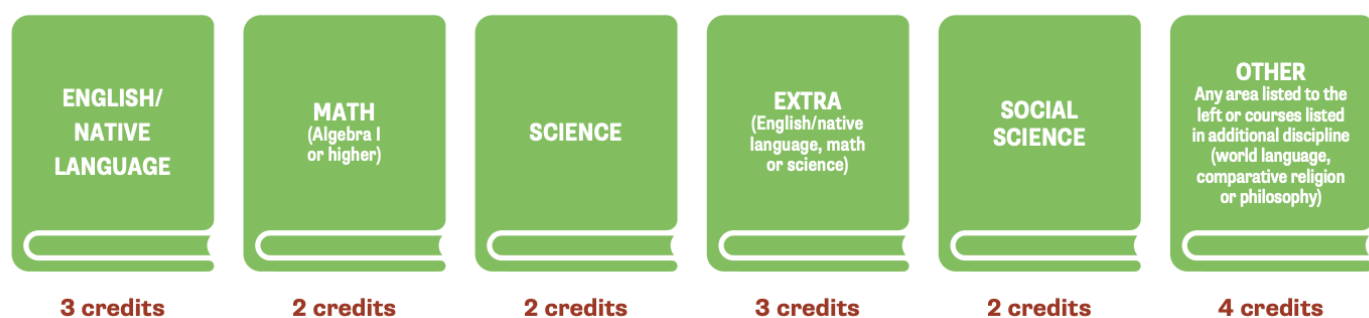
Division I

1. Earn 16 NCAA-approved core-course credits in the following areas:



Division II

1. Earn 16 NCAA-approved core-course credits in the following areas:



GRADE-POINT AVERAGE

The Eligibility Center calculates your **core-course GPA** based on the grades you earn in NCAA-approved core courses.

- » Division I requires a minimum 2.3 core-course GPA.
- » Division II requires a minimum 2.2 core-course GPA.

For more information on GPA conversions for your country, see the [Guide to International Academic Standards for Athletics Eligibility](#) or visit ncaa.org/countries.

DIVISION III

While **Division III schools** set their own admissions and academic requirements, **international student-athletes** (first-year students and transfers) who initially enroll full time at a Division III school on or after Aug. 1, 2023 must be certified as an amateur by the Eligibility Center. Contact the Division III school you plan to attend for more information about academic requirements.

University Requirements

Understanding What Universities Look For in Applicants

While every university has unique requirements, all accredited North American universities share common expectations for high school graduates. Understanding these requirements early helps students make informed course selections and build strong applications.

Minimum High School Course Requirements

4

English

Years of study required

3

Mathematics

Years of study required

3

Science

Including 2 lab sciences

3

Social Studies

Years of study required

2

World Language

Consecutive years, same language

2

Fine Arts

Years of study required

What Universities Evaluate Beyond Your Transcript

1

Rigor

Universities assess the difficulty and challenge level of your course selections. Choose courses that challenge you while ensuring success. Rigor is personal—it's about pushing yourself appropriately, not just taking the most AP courses.

2

Well-Rounded Education

Universities value students who explore subjects beyond their intended major. Taking Drama while pursuing Engineering demonstrates intellectual curiosity and dedication to diverse interests.

3

Extra-Curricular Activities

Activities outside regular school hours reveal your abilities beyond academics. Longevity in sports, arts, volunteering, or clubs demonstrates loyalty, dedication, and work ethic—qualities not measured by grades alone.

4

Letters of Recommendation

Teachers and administrators provide an inside perspective on your character, contributions, and growth. These confidential letters discuss your abilities, challenges overcome, and how you handle setbacks.

General Information

Academic Timeline & Fit

When Grades Matter & Choosing the Right University

When Your Grades Matter Most

Universities review your academic performance from 9th grade through first semester of 12th grade. Improvement over time is highly valued.



Growth Matters: A low GPA in 9th grade doesn't eliminate your chances at top universities. Consistent improvement demonstrates resilience and academic development.

Key Takeaways for Students & Families

- ✓ **Grades matter significantly**, but they're part of a complete picture that includes course rigor, activities, and personal qualities.
- ✓ **Challenge yourself appropriately** by selecting courses that push your abilities while ensuring you can succeed.
- ✓ **Explore diverse interests** through courses and activities to demonstrate intellectual curiosity.
- ✓ **Commit to activities long-term** rather than joining many briefly. Depth shows loyalty and work ethic.
- ✓ **Build strong relationships with teachers** who can speak authentically about your character and growth.
- ✓ **Academic improvement over time** is valued highly. A challenging 9th grade doesn't prevent admission to competitive universities.

Choosing the Right University for You

1

Consider Smaller Universities

While prestigious "big name" schools are appealing, smaller universities often provide excellent education and may better support your success.

2

Transfer Opportunities

Transferring between US universities is easier when you're already at a US institution. Starting at one university doesn't lock you in.

3

Location & Environment

Consider proximity to family, climate preferences (desert, four seasons, coastal), and area type (urban, suburban, rural, college town).

4

Residential vs. Commuter

Most universities offer on-campus housing. Consider whether you want the full residential experience or commuting flexibility.

Making Your Decision: Choosing where to apply is deeply personal. Balance academic excellence with campus culture, residential options, climate, and personal fit. For guidance, consult your university counselor, dean, teachers, and administrators.

General Information

Egyptian University Requirements

General Entrance Requirements for International Diploma Students

The Ministry of Higher Education of Egypt is the governing body of the largest higher education system in the entire Middle East. Each university will have specific requirements, but listed below are the general conditions for enrollment into these institutions of higher learning.

Key Eligibility Requirements

12 Years of Education

Students with an **American Diploma** must complete **12 years of education** and study **3 years after Edadeya**.

5% Admission Quota

Only **5% of students** with an American Diploma and IB Diploma will be accepted into Egyptian universities.

AR Arabic & Religion

Students can join without passing these exams but **will not graduate** until both are passed.



Major-Specific Courses

Students must study **courses required for their intended major** at university level.

Subject Distribution Requirements

4

Grade 11 Subjects

4

Grade 12 Subjects

Total: 8 Subjects Required — General Science, Arabic, Religion, PE, Music, and Military Studies do not count toward these requirements.

Egyptian Scholastic Test (EST) Requirements

EST I All Admissions

The **EST** is required for admissions to all Egyptian universities and assesses general academic readiness.

EST II Competitive Faculties

Required for Medicine, Pharmacy, Dentistry, Physiotherapy, Veterinary Medicine, Nursing, Engineering, IT, Computer Science, Fine Arts (Architecture), and Urban Planning.

⚠ Important Graduation Requirement

Students who do not pass the **Arabic and Religion exams** are permitted to enroll but **will not graduate** until both examinations are successfully passed. Plan accordingly during your studies.

Need More Information?

For detailed guidance, please see your **Dean of Students** or visit the **Senior Google Classroom** for additional resources.

Planning Your Education

Modern English School Cairo • Course Selection Guide

Before You Begin

Modern English School Cairo is committed to helping students develop a course of study that meets their academic goals. Early in the year, students meet with advisors to create a comprehensive four-year graduation plan.

You will receive:

- A Program of Studies document (detailed course descriptions)
- A Course Request Form to complete with your parents
- An Individual Graduation Plan (IGP) advisory meeting

Course Selection Steps

1. **Review carefully:** Read the Program of Studies and course descriptions with your parents
2. **Select courses:** Choose based on graduation requirements and future college/career goals
3. **Complete form:** Fill out the course request form thoughtfully and ensure both you and your parents sign it
4. **Submit:** Provide the signed form to your Academic Office (AO) by the deadline

During Your IGP Meeting

Your advisor will review:

- Your transcript, historical grades, and current performance
- Your course requests and educational goals
- Your eligibility for advanced/AP courses
- A complete 4-year course plan for your high school career

Important: You have a 4-week period to review materials, discuss with parents, and meet with your advisor. Choose alternative courses carefully—they become part of your final schedule.

What You Need to Know

- **No guarantees:** Due to scheduling conflicts and course availability, not all requested courses can be guaranteed
- **Selection matters:** Courses are scheduled based on your requests, eligibility, and availability
- **Think ahead:** Remember you're planning 4 years of coursework, not just one semester
- **Ask questions:** Meet with your advisor if you're unsure about courses or requirements

Planning Your Education (Continued)

Course Changes & Important Policies

Course Change Policy

Courses should be selected carefully. Once the master schedule is built, changes are limited and require approval from the American Section Principal or Vice Principal.

Changes ARE Allowed For:

- Technical errors in scheduling
- Unresolvable scheduling conflicts
- Class balancing needs

Changes Are NOT Allowed For:

- Teacher preference
- Class time preference
- Personal reasons

Additional Important Notes:

- **Teacher choice cannot be honored** — you cannot request a specific teacher
- **Schedules cannot be rearranged** for early dismissal or late arrivals
- **Head of Faculty (HoF) recommendations** are based on historical grades, MAP and PSAT scores, attitudinal disposition to learning (behavior and work completion), and skill level in prerequisites

17 Timeline Overview

1

Program of Studies Shared

2

Review with Parents (4 weeks)

3

IGP Meeting with Advisor

4

Submit Signed Request Form

5

Master Schedule Built

6

Schedule Confirmed

✓ Tips for Success

- Start the review process early—don't wait until the deadline
- Have meaningful conversations with your parents about your goals and strengths
- Be realistic about your workload and course difficulty
- Consider how courses support your long-term plans, not just next year
- Choose alternative courses thoughtfully—these may become part of your schedule
- Ask your advisor questions if anything is unclear
- Meet all deadlines and ensure all forms are properly signed

Final Reminder: Course selection is an important investment in your future. This thoughtful planning process exists to help you make the best choices for your academic and personal goals. If you have questions at any point, reach out to your Academic Office or advisor.

Assessments and Entrance Exams

Assessments and Entrance Exams

Modern English School Cairo • Understanding Your Academic Progress



Measures of Academic Progress (MAP)

What is MAP?

The Measures of Academic Progress (MAP) assessment is designed to measure a student's academic achievement and growth over time in literacy and numeracy. MAP Growth is the most trusted assessment for measuring achievement and growth in reading, language usage, mathematics, and science.

Why MAP Matters

MAP provides teachers with accurate, actionable evidence to help target instruction for each student regardless of how far above or below they are from their grade level. Reliable data allows teachers to plan differentiated instruction, develop interventions for struggling students, and identify what students are ready to learn next.

When is MAP Administered?

Testing Schedule: Students are tested twice per academic year during the **Fall** and **Spring**

- **Fall MAP:** Gathers baseline data at the beginning of the year
- **Spring MAP:** Measures students' growth to that point in the year

How Does MAP Work?

MAP adjusts the difficulty of the questions so that each student takes a unique test. The difficulty of each question is based on how well the student has answered previous questions. This adaptive format ensures accurate measurement of each student's achievement level.

The RIT Scale

The RIT (Rasch Unit) scale is an equal interval scale that estimates student achievement and growth. Equal interval means that the difference between scores is the same regardless of whether a student is at the top, bottom, or middle of the RIT scale, and it has the same meaning regardless of grade level.

Lexile Measurement

Lexile is a unit for measuring text difficulty that is linked to the RIT score. The Lexile Range helps identify reading material at an appropriate difficulty level for students. Important note: Lexile does not evaluate genre, theme, content, or interest—it measures text complexity only.



MAP Content Areas

Reading & Language Usage Literary & Informational Text, Vocabulary, Writing, Grammar, Usage & Mechanics	Mathematics Operations & Algebraic Thinking, Geometry, Real and Complex Number Systems, Statistics and Probability
Science (General) Physical Sciences, Life Sciences, Earth & Space Sciences	Grade 9 Science Molecules & Organisms, Ecosystems, Heredity & Evolution

Assessments and Entrance Exams

Modern English School Cairo • College Entrance & Promotion Requirements

Pre-College Entrance Assessment

PSAT (Preliminary SAT / NMSQT)

The PSAT/NMSQT (National Merit Scholarship Qualifying Test) is a standardized test that provides first-hand practice for the SAT.

- **Mandatory:** All 10th graders take the PSAT at MES Cairo
- **Optional Re-take:** Any student interested in attending university in the United States, holds a US passport, and wishes to compete for the National Merit Scholarship should register and re-take the exam in 11th grade

College Entrance Assessments

SAT (Scholastic Aptitude Test)	ACT (American College Testing)
<p>Purpose: Measures verbal, mathematical, and reasoning abilities to forecast success at university level</p> <p>Format: Digital exam</p> <p>Use: Many universities use SAT as an indicator of college readiness</p> <p>Info: Visit College Board site or see Dean of Students</p>	<p>Purpose: Assesses general educational development and ability to complete college-level work</p> <p>Skill Areas:</p> <ul style="list-style-type: none">• English• Mathematics• Reading• Science <p>Info: Visit www.actstudent.org or see Dean of Students</p>

Grade Level Promotion Requirements

Grade 9 Freshman	Grade 10 Sophomore	Grade 11 Junior	Grade 12 Senior
All students promoted from grade 8 or retained in 9th grade Credits: 8 total	Earned ALL credits attempted in grade 9 and passed all courses Credits: 8 total	Completed at least 16 credits Credits: 8 additional	Completed 24 credits Credits: 6 minimum Note: AP students eligible for early release/late arrival

Assessments and Entrance Exams

Modern English School Cairo • Advanced Placement Program

Advanced Placement (AP) Program

The AP program enables students to pursue college-level studies while still in high school. Based on performance on the AP examination, students may earn college credit and/or advanced placement in college-related courses.

Important: All students enrolled in an AP class are expected to take the AP examination. GPA bonus points are only awarded to students who take the AP exam and fulfill all conditions outlined in the AP Contract.

Characteristics of Successful AP Students

- Demonstrate strengths in study skills, motivation, reading skills, organization, time management, and initiative
- Take responsibility for their own learning
- Spend time beyond what is expected in a college preparatory or honors course
- Willingly accept challenges and persevere despite difficulty
- Accept and learn from constructive criticism and mistakes
- Are intellectually curious and enjoy the learning process

AP Grade Scale

A = 90-100

Meets all or nearly all standards with excellent work

B = 80-89

Meets most standards with good work

C = 70-79

Meets an acceptable number of standards

D = 60-69

Meets few of the standards

Summer School & Credit Recovery

MES offers summer school opportunities for students who need to remediate a credit or wish to become eligible for the Honors/Advanced track.

Summer School Details:

- Offered through the University of Nebraska (UNHS)
- All examinations are proctored on MES campus by certified instructors
- Students in grades 7-12 are eligible to take up to **two classes per summer**
- Students may recover credit for a total of **4 classes in grades 9-12**

Course Pathways Overview

At MES Cairo, we offer multiple course levels to challenge and support every student according to their academic strengths, work habits, and post-secondary goals. Our comprehensive pathway system allows students to select courses that match their abilities while preparing them for college success. As an authorized Pre-AP school, we now offer College Board Pre-AP courses in Mathematics, English, and Science that provide scaffolded preparation for Advanced Placement coursework.

Students should work closely with teachers, deans, and families during Individual Graduation Plan (IGP) meetings to select the appropriate level for each subject. Course levels may vary by subject—a student might take Honors Mathematics while taking College Preparatory English, depending on their strengths and interests. The pathway descriptions below outline the characteristics, eligibility requirements, and expectations for each course level.

Course Level Descriptions

Course Level	Description, Eligibility, and Expectations
College Preparatory (CP)	<p>Description</p> <p>Rigorous courses aligned with college entrance requirements that provide solid academic preparation for university success. CP courses follow Common Core and AERO standards with comprehensive coverage of content.</p> <p>Eligibility</p> <ul style="list-style-type: none"> • Open to all students who have completed the prerequisite courses • No minimum grade requirement <p>Workload & Assessment</p> <ul style="list-style-type: none"> • 45-90 minutes of homework per class meeting • Standards-based grading • Balance of formative and summative assessments
Honors	<p>Description</p> <p>Accelerated courses covering the same standards as CP with greater depth, faster pace, and enhanced critical thinking expectations. Students investigate topics with increased independence and analytical rigor.</p> <p>Eligibility Criteria</p> <ul style="list-style-type: none"> • Minimum grade of B+ in prerequisite course, • Teacher recommendation based on work habits, independence, and analytical skills, AND • MAP scores at/above 75th percentile (when applicable) <p>Workload & Assessment</p> <ul style="list-style-type: none"> • 75-120 minutes per class meeting • 30-60 minutes additional study beyond CP courses • More rigorous grading with emphasis on synthesis and application

<p>Pre-AP (New 2026-27)</p>	<p>Description</p> <p>College Board-designed courses that build foundational skills for AP success through inquiry-based learning, disciplinary practices, and challenging texts and problems.</p> <p>Current Offerings & Eligibility</p> <ul style="list-style-type: none"> ● Pre-AP Geometry & Statistics (G9): B+ in Grade 8 Algebra I, teacher recommendation, MAP math 230+ ● Pre-AP English I (G9): B+ in Grade 8 English, B+ in Mid Year and End of Year Assessment, Teacher recommendation, MAP reading score of 227+ ● Pre-AP Chemistry (G10): B+ in Biology Honors, concurrent MAP math score of 230+ <p>Workload</p> <ul style="list-style-type: none"> ● 75-120 minutes per class meeting (similar to Honors) ● Follows College Board Pre-AP frameworks
<p>Advanced Placement (AP)</p>	<p>Description</p> <p>College-level courses culminating in College Board examinations. Successful AP exam scores (typically 3-5) may earn college credit at most universities worldwide.</p> <p>General Eligibility</p> <ul style="list-style-type: none"> ● Minimum B+ in prerequisite Honors/Pre-AP course, ● Head of Faculty recommendation required ● Demonstrated strong work ethic and time management skills ● Specific requirements vary by course (see individual descriptions) <p>Requirements & Workload</p> <ul style="list-style-type: none"> ● 90-150 minutes per class meeting ● AP exam required for all enrolled students ● Must fulfill all AP Contract conditions ● Weighted GPA bonus only if AP exam is taken

MES Cairo Pre-AP Program

As an authorized Pre-AP school, MES Cairo offers College Board Pre-AP courses that provide scaffolded learning experiences preparing students for AP success. Pre-AP courses emphasize:

- **Disciplinary practices and skills** specific to each subject area
- **Rich, challenging texts and problems** that develop analytical thinking
- **Formative assessment and feedback** to guide student growth
- **Collaborative learning environments** that build communication skills

Note: Students completing Pre-AP courses with a B or higher are well-prepared for corresponding AP coursework and have priority placement in AP classes.

Course Pathways Overview

Recommended Pathways by Subject

Mathematics Pathways	
College Preparatory Track	Geometry (G9) → Algebra II (G10) → Pre-Calculus (G11) → Statistics or Calculus (G12)
Honors/Pre-AP/AP Track	Pre-AP Geometry & Statistics (G9) → Algebra II Honors (G10) → AP Pre-Calculus (G11) → AP Calculus AB/BC or AP Statistics (G12)
English Pathways	
College Preparatory Track	English I (G9) → English II (G10) → English III (G11) → English IV (G12)
Honors/Pre-AP/AP Track	English I Honors or Pre-AP English I (G9) → English II Honors or AP Seminar (G10) → English III Honors or AP English Language (G11) → English IV Honors or AP English Literature (G12)
Science Pathways	
College Preparatory Track	Biology (G9) → Chemistry (G10) → Physics or Environmental Science (G11-12)
Honors/Pre-AP/AP Track	Biology Honors (G9) → Pre-AP Chemistry or Honors Chemistry (G10) → AP Biology/Chemistry/Physics I (G11) → AP Science Elective (G12)
Social Studies Pathways	
College Preparatory Track	Global Studies I (G9) → Global Studies II (G10) → US History (G11) → Electives (G12)
Honors/AP Track	Global Studies I Honors (G9) → Global Studies II Honors or AP Human Geography (G10) → US History or AP World History (G11) → AP Social Studies Electives (G12)

Course Pathways Overview

Moving Between Pathways

Transition	Requirements and Process
CP to Honors/Pre-AP	<p>Students may move from CP to Honors or Pre-AP if they demonstrate readiness for increased rigor. Eligibility requires:</p> <ul style="list-style-type: none"> -B+ or higher in the prerequisite CP course -Teacher recommendation for strong work habits and analytical skills -Standardized test data (e.g., MAP, PSAT or internal benchmarks) at/above the 75th percentile -Head of Faculty approval based on overall performance review -Students not fully meeting criteria may qualify through approved summer coursework via the University of Nebraska High School (maximum two courses per summer) or an equivalent accredited program.
Honors/Pre-AP to CP	<p>Students earning a B or lower in Honors or Pre-AP courses will be placed in College Preparatory level the following year unless summer coursework is completed to demonstrate mastery.</p>
Mixed Pathways	<p>Students may take different levels in different subjects based on their individual strengths (e.g., Pre-AP Math with CP English). All placements subject to eligibility requirements.</p>
Pathway Approval	<p>All pathway changes must be approved by the Head of Faculty and meet the eligibility requirements listed above. Discuss options during IGP meetings.</p>

COURSE INFORMATION

English Department Course Offerings

The MES Cairo English Department follows an American Curriculum for the English Language Arts, offering a varied and rigorous program which integrates the main subject elements of [Reading](#), *Writing*, *Listening*, and *Speaking*. Students are assessed against the [American Common Core State Standards](#) and the [AERO ELA Framework](#) in Reading, Writing, Speaking and Listening and Language. Preparation for exams such as the PSAT, SAT, and ACT are woven throughout the curriculum. Successful completion of the class will result in a student earning 1 credit.

Related College Majors and Career Pathways -The English program develops critical thinking, analytical reading, and effective communication skills that prepare students for success in any field. Students who enjoy English courses often pursue majors or careers in:

- English, Literature, or Linguistics
- Journalism, Media, Film, Broadcasting, and Communications
- Education, Law, or Political Science
- Creative Writing or Publishing
- International Relations or Cultural Studies
- Marketing, Public Relations, and Business Communication

English Department

Language Arts Requirements & Pathways

Graduation Requirements

- **4.0 Credits Required** (Grades 9-12)
- English I or Pre-AP English I (Grade 9)
- English II, English II Honors, or AP Seminar (Grade 10)
- English III, English III Honors, or AP Language (Grade 11)
- English IV, English IV Honors, or AP Literature (Grade 12)

Aligned to Common Core State Standards
& AERO ELA Framework

Available Pathways

College Preparatory (CP)

Standard track for college readiness

Honors

Accelerated with greater depth & rigor

Pre-AP NEW 2026-27

College Board prep for AP success (Grade 9)

Advanced Placement (AP)

College-level courses with AP exams

Electives: Creative Writing, Film & Literacy Studies

Course Levels	English Requirements for Course Enrollment by Pathway (level)
Honors: Grades 9-12	<ul style="list-style-type: none"> ● Honors: Successful completion of English Honors with a minimum grade of a B+ ● Midterm and End of Year Exam grades must be a B minimum ● Minimum Reading MAP score must be within the range of 227-230 for grade 9 and 230+ for grade 10 ● Minimum Language MAP score must be in the range of 222 - 227 ● PSAT Reading score must be a minimum of 460 ● Teacher recommendation is required
Pre-AP: Grade 9	<ul style="list-style-type: none"> ● Successful completion of Grade 8 English with a minimum grade of a B+ ● Midterm and End of Year Assessment grades must be a B+ minimum ● Minimum Reading MAP score must be within the range of 227-230 ● Minimum Language MAP score must be in the range of 222 - 227 ● Teacher recommendation is required
AP Seminar: Grade 10	<ul style="list-style-type: none"> ● Successful completion of Grade 9 English Honors or Pre AP English I with a minimum grade of a B+ ● Midterm and End of Year Exam grades must be a B minimum ● Reading MAP score must be 230+ ● Language MAP score must be in the range of 222-227 ● Teacher recommendation is required
AP: Grades 11- 12	<ul style="list-style-type: none"> ● Successful completion of English II Honors or English III Honors with a minimum grade of a B+ ● Midterm and End of Year Exam grades must be a B minimum ● PSAT Reading score must be a minimum of 460 ● Teacher recommendation is required

ENGLISH COURSE INFORMATION

English I: World Literature - Grade 9

English I introduces students to the study of World Literature, emphasizing close reading, literary analysis, and effective communication. Students read a range of classic and modern works—such as *The Outsiders*, *Romeo and Juliet*, and *Animal Farm*—to explore universal themes, human experiences, and cultural perspectives. Writing, speaking, and critical thinking are developed throughout the year through analytical, narrative, and argumentative assignments.

Key Learning Goals:

- Analyze literature for themes, characterization, and author's craft
- Strengthen grammar, usage, and sentence structure
- Develop analytical, narrative, and argumentative writing skills
- Engage in discussion, presentation, and reflective thinking
- Build vocabulary and reading comprehension for PSAT/Pre-ACT readiness

Course Pathways:

- College Prep (CP): Focuses on foundational literary

English I: World Literature Continued

- analysis, grammar, and structured writing.
- Honors: Explores texts in greater depth, emphasizing higher-level analysis, independent inquiry, and timed writing.
- Pre-AP: Aligns with College Board Pre-AP English frameworks, emphasizing critical reading, evidence-based writing, and skills that prepare students for AP-level coursework.

English II - Grade 10

English II deepens students' understanding of literature and language through the study of world voices and diverse perspectives. Students explore four literary genres—personal narratives, oral traditions, historical fiction, and speculative fiction—while examining how culture and identity shape storytelling. Core texts may include *The Thief and the Dogs* by Naguib Mahfouz and *Things Fall Apart* by Chinua Achebe. Writing emphasizes analysis, argument,

ENGLISH COURSE INFORMATION

English II - Grade 10 Continued

and comparison, with continued focus on grammar, clarity, and effective expression.

Key Learning Goals:

- Analyze literary and rhetorical elements in fiction and nonfiction texts.
- Examine cultural perspectives and historical context in world literature.
- Strengthen grammar and syntax for clarity and precision in writing.
- Develop strong argumentative, comparative, and literary analysis essays.
- Engage in discussion, debate, and reflection on global themes.
- Prepare for PSAT and Pre-ACT through vocabulary and comprehension practice.

Course Pathways:

- College Prep (CP): Builds foundational analytical and writing skills through world literature.
- Honors: Expands critical thinking and independent literary analysis through challenging texts and timed writing
- AP Seminar English II: College Board course emphasizing inquiry, research, and evidence-based argumentation across academic and real-world topics. Prepares students for AP Language and Composition.
 - Identifying and developing a research question about a problem or issue.
 - Reading critically to comprehend and analyze a source's arguments, reasoning, and evidence.
 - Comparing and contrasting different viewpoints on an issue to appreciate its complexity.
 - Using gathered and evaluated information to form a well-reasoned, evidence-based argument

English III: American Literature - Grade 11

English III immerses students in the study of American Literature and the American Experience, examining how writers express identity, values, and culture through fiction, nonfiction, poetry, and

English III: American Literature Continued

drama. Students read major works such as *The Crucible*, *The Great Gatsby*, and *I Know Why the Caged Bird Sings* while analyzing how historical context and social movements shape literary expression. Writing focuses on analysis, argument, and research, including an argumentative research paper in MLA format. Speaking, listening, and presentation skills are also emphasized through class discussion and projects.

Key Learning Goals:

- Analyze key themes, rhetorical strategies, and literary techniques in American texts.
- Explore connections among literature, history, and culture.
- Strengthen analytical, argumentative, and research-based writing.
- Practice grammar, syntax, and effective expression in both formal and creative writing.
- Develop speaking and presentation skills for academic and real-world communication.

Course Pathways:

- College Prep (CP): Focuses on developing analytical reading, essay writing, and research skills through diverse American texts.
- Honors: Expands depth and pace of study, emphasizing critical interpretation, timed analytical writing, and independent inquiry.

OR

AP English Language & Composition – Grade 11

This course benefits all students, regardless of intended college major. According to the College Board, AP English Language and Composition develops essential college and career readiness skills—reading complex texts closely, interpreting meaning, evaluating sources, synthesizing evidence, and writing effectively for a range of purposes. Students analyze nonfiction texts to understand how writers use language to inform and persuade, then apply those same techniques in their own evidence-based writing. Frequent essays, revisions, and discussions build students' confidence and skill in analytical, academic, and real-world communication.

Key Learning Goals:

- Reading Closely: Analyze and interpret nonfiction texts to understand the writer's purpose, audience, and rhetorical strategies.
- Analyzing and Interpreting Texts: Examine how structure, style, and rhetorical choices convey meaning and impact

ENGLISH COURSE INFORMATION

AP English Language & Composition Continued

- Evaluating Sources: Assess the credibility and relevance of sources to support evidence-based reasoning.
- Gathering and Synthesizing Information: Integrate multiple perspectives and sources into coherent, well-supported arguments.
- Writing Evidence-Based Arguments: Develop thesis-driven essays that use logical reasoning and textual evidence.
- Drafting and Revising: Refine written work through revision, editing, and peer feedback to enhance precision and style.

English IV: Global Literature - Grade 12

English IV challenges students to think critically about global perspectives through literature, writing, and discussion. Students read diverse texts from around the world to explore themes of culture, identity, and social issues, while refining advanced literacy and communication skills essential for college and beyond. The course emphasizes analytical and argumentative writing, as well as creative and narrative expression. Honors students engage in deeper literary analysis, extensive research, and more rigorous reading and writing expectations.

This course benefits all students, regardless of intended college major, by strengthening essential college and career readiness skills—reading complex texts closely, interpreting meaning across cultures, evaluating and synthesizing information, and writing effectively for a variety of purposes and audiences.

Key Learning Goals:

- Analyze global literature across genres and cultural perspectives
- Write narrative, analytical, and argumentative essays with clarity and purpose
- Evaluate and synthesize information from multiple credible sources
- Strengthen speaking, listening, and presentation skills through discussion and projects
- Prepare for college-level reading, writing, and research expectations

Course Pathways:

- College Prep (CP): Focuses on developing analytical reading, academic writing, and

English IV: Global Literature Continued

research skills through diverse world literature and global themes.

- Honors: Expands depth and pace of study, emphasizing critical interpretation, independent research, and advanced analytical and argumentative writing in preparation for college-level coursework.

OR

AP English Literature & Composition - Grade 12

This college-level course engages students in the close reading and critical analysis of fiction, drama, and poetry from diverse cultures and time periods.

Students examine how authors use language, structure, and style to create meaning and emotional impact.

According to the College Board, *AP English Literature and Composition* develops essential college and career readiness skills—reading complex texts, identifying literary techniques, interpreting meaning, and writing analytical arguments with clarity and insight. Frequent essays and discussions prepare students for the AP Exam and for college-level writing across disciplines. College majors that benefit from this AP can be found [here](#).

Key Learning Goals:

- Read and analyze complex literary works from diverse periods and genres
- Identify how authors and poets create meaning through language and structure
- Develop original interpretations supported by textual evidence
- Write analytical essays that communicate insight and argument effectively
- Revise and refine writing for clarity, coherence, and style
- Engage in thoughtful literary discussion and timed writing practice in preparation for the AP Exam

ENGLISH COURSE INFORMATION

~English Elective~

Creative Writing – Grades 9-10

This workshop-style course allows students to explore and develop their creative voice through writing and sharing original work. Students practice key techniques such as description, characterization, and narration while creating short fiction, poetry, drama, and creative nonfiction. Emphasis is placed on revision, peer feedback, and publication, with opportunities to submit writing to school and external contests.

Related College Majors and Career Pathways:

- College Majors: Creative Writing, English, Journalism, Film Studies, and Communications
- Future Careers: Author, Editor, Screenwriter, Marketing Copywriter, Public Relations Specialist, and Content Creator.

~English Elective~

***Film and Literary Studies - Grades 11-12**

This course explores how stories shape our understanding of the world through both literature and film. Students examine film as a powerful visual art form and analyze how directors and authors use character, mood, symbolism, and narrative structure to convey meaning. The first part of the course introduces the history and evolution of film; the second compares literary works and their film adaptations. Emphasis is placed on analytical writing, discussion, and interpretation. Students enrolling in this course should enjoy reading, viewing, and critical analysis.

Related College Majors and Career Pathways:

- College Majors: Film Studies, English, Media Studies, Communications, Creative Writing, and Journalism
- Future Careers: Film Director, Screenwriter, Editor, Journalist, Media Producer, and Communications Specialist

**Counts as an English elective and may also fulfill a Fine Arts credit.*

SOCIAL STUDIES COURSE INFORMATION

Social Studies Department Course Offerings

The MES Cairo Social Studies Department adheres to the American Curriculum for Humanities, incorporating the [C3 Framework](#) and [National Curriculum Standards for Social Studies](#) (NCSS). Our program fosters a broad understanding of history, geography, civics, culture, business, and economics to prepare students for active participation in a complex and interconnected world.

Students explore how societies evolve, how economies function, and how individuals and institutions make decisions that shape both global and local communities. Through critical inquiry, research, debate, and project-based learning, students develop analytical reasoning, ethical decision-making, and problem-solving skills that connect classroom learning to real-world challenges. Courses across the department emphasize global awareness, economic literacy, and civic responsibility. Successful completion of each course earns one credit toward graduation.

Related College Majors and Career Pathways - The MES Cairo Social Studies program equips students with critical thinking, communication, and analytical skills that prepare them for success across a wide range of academic disciplines and future careers. Students who enjoy Social Studies often pursue majors or professional fields in:

- *Social Sciences & Humanities*: History, Political Science, Sociology, Psychology, Anthropology, and International Studies
- *Economics & Business*: Economics, Business Administration, Finance, Accounting, Marketing, and Entrepreneurship
- *Global & Civic Fields*: International Relations, Global Development, Peace and Conflict Studies, and Diplomacy
- *Public Policy & Law*: Law, Criminology, Public Administration, Urban Planning, and Sustainability Studies
- *Data & Society*: Behavioral Economics, Data Analytics, Human Geography, and Social Research
- *Media & Communication*: Journalism, Strategic Communications, and Public Relations
- *Education & Leadership*: Education, Curriculum Design, and Nonprofit or NGO Management

Social Studies Department

Humanities Requirements & Pathways

Graduation Requirements

- **3.0 Credits Required** (Grades 9-11)
- Global Studies I or Global Studies I Honors (Grade 9)
- Global Studies II, Global Studies II Honors, or AP Human Geography (Grade 10)
- US History or AP World History (Grade 11)
- **Highly Recommended:** 3.0 credits + 1 elective

Aligned to C3 Framework & NCSS Standards
National Curriculum Standards for Social Studies

Available Pathways

College Preparatory (CP)

Standard track for college readiness

Honors

Accelerated with greater depth & rigor

Advanced Placement (AP)

College-level courses with AP exams

Electives Available (Grades 10-12):

Business Studies • Economics • AP Microeconomics
AP Macroeconomics • Psychology • AP Psychology
AP Comparative Government • AP Art History

Course Levels	Social Studies Requirements for Course Enrollment by Pathway (level)
Honors	Global Studies I Honors: Minimum grade of B+ in Grade 8 Social Studies Global Studies II Honors: Minimum grade of B+ in Global Studies I All: Minimum grade of B on Midterm exam, Teacher and HoF recommendation; student behavior and attitude toward learning, writing samples and PSAT/MAP scores will also be considered
AP	AP Microeconomics and Macroeconomics: PSAT Math score 390 or higher All: Minimum grade of B+ in current Social Studies course, Teacher and HoF recommendation; student behavior and attitude toward learning, writing samples and PSAT/MAP scores

SOCIAL STUDIES COURSE INFORMATION

Global Studies I - Grade 9

This course continues our survey of world history with an exploration of the medieval and early modern eras, including medieval Egyptian societies. Our studies will be structured around historical thinking skills such as comparison and causation. Students will read from both primary and secondary sources, while completing projects, discussions, and other class activities.

Key Learning Goals:

- Examine the major political, cultural, and economic developments of the medieval and early modern worlds
- Explore the global significance of medieval Egyptian civilization within world history
- Analyze primary and secondary sources to construct historical understanding
- Apply historical thinking skills such as comparison, causation, and continuity and change
- Communicate ideas effectively through discussion, writing, and collaborative projects

Global Studies I - Grade 9 Continued

Course Pathways:

- College Prep (CP): Emphasizes core historical concepts and skill-building through structured reading, guided analysis, and collaborative inquiry.
- Honors: Includes the same foundational content with additional depth, rigor, and complexity. Students engage with more challenging primary and secondary sources, demonstrate higher-level analytical writing, and work at an accelerated pace with greater independence.

Global Studies II - Grade 10

This course concludes our four-year survey of world history with an exploration of the nineteenth and twentieth centuries. Studies are structured around historical thinking skills such as periodization, cause and effect, and perspective. Topics include significant events and themes from around the world, including Mohamed Ali and his dynasty in Egypt. Students will read from primary and secondary sources and complete projects and activities to develop their understanding.

Key Learning Goals:

Understand major historical events and themes from the nineteenth and twentieth centuries.

Develop historical thinking skills, including

periodization, cause and effect, and change over time.

Analyze primary and secondary sources for perspective and reliability.

Communicate historical understanding through writing and discussion.

Apply historical knowledge to connect past events with contemporary issues

SOCIAL STUDIES COURSE INFORMATION

Global Studies II - Grade 10 Continued

Course Pathways:

- College Prep (CP): Standard pace and workload, focus on comprehension and foundational historical thinking skills, preparation for college-level expectations.
- Honors: Faster pace, more rigorous assignments, higher workload, emphasis on critical analysis, and preparation for advanced study.

OR

AP Human Geography - Grade 10

This course explores how humans interact with their physical environment and how societies, economies, and cultures change as a result. Students focus on analyzing maps, graphs, and other visual data to understand spatial patterns and human behavior across time and cultures. The class emphasizes developing 21st-century skills, including problem-solving, pattern recognition, data analysis, and research. AP Human Geography prepares students for further Advanced Placement coursework in the Social Studies department and provides a strong foundation for students interested in civil engineering, data science, law, urban studies, environmental science, political science, and international relations.

Key Learning Goals:

- Understand patterns of human population, migration, and settlement.
- Analyze how culture, economics, and politics influence human-environment interactions.
- Interpret maps, graphs, and other data to identify spatial and temporal trends.
- Apply critical thinking and research skills to solve geographic problems.
- Connect geographic concepts to contemporary global issues and career pathways.

United States History – Grade 11

This course examines the structure of the United States government, the nation's modern history, and its role in the broader historical context. Special attention is given to social and cultural history, exposing students to a range of American music, art, and literature. Students will make comparisons between the American experience and that of Egypt and other societies. The course also includes an investigation of contemporary demographics and current events to connect historical knowledge to today's world.

Key Learning Goals:

- Formulate questions and investigate U.S. historical events using primary and secondary sources.
- Analyze sources for credibility, perspective, and evidence.
- Explain continuity, change, and cause-and-effect in U.S. history.
- Examine the development and function of U.S. political institutions, and investigate social, cultural, and economic trends and their impact on society.
- Compare the U.S. experience with other nations, including Egypt, to understand global interconnections.

OR

AP World History - Grades 11-12

This course provides a university-level survey of world history from the Stone Age to the twentieth century. Its truly global scope offers balanced coverage of all major regions and emphasizes critical thinking, reading, and writing skills necessary for success in higher education. Students must demonstrate continued progress to remain in the course and are expected to take the AP exam at the end of the year. College majors that benefit from this AP can be found [here](#).

Key Learning Goals:

- Formulate questions and investigate historical events using primary and secondary sources.
- Analyze sources for credibility, perspective, and context.
- Identify patterns of continuity, change, and cause-and-effect across world history.

SOCIAL STUDIES COURSE INFORMATION

AP World History - Grades 11-12 Continued

Key Learning Goals:

- Compare political, economic, social, and cultural systems across regions and eras.
- Examine global interactions, including migration, trade, conflict, and cultural exchange.

~Social Studies Electives~

Psychology - Grades 10-12 (CP / College Prep)

This course surveys the basics of behavioral and social psychology. Students study essential thinkers such as Freud, Jung, and Skinner, and examine the structure and function of the human brain. Famous psychological experiments and case studies allow students to explore how psychological methods and theories are applied in laboratory and real-world contexts.

Key Learning Goals:

- Formulate questions and plan investigations about human behavior using primary and secondary sources.
- Analyze sources and evidence to evaluate credibility, perspective, and context.
- Explain patterns of behavior, continuity, change, and cause-and-effect in psychological theories.
- Examine social, cultural, and biological influences on human thought and behavior.
- Apply psychological concepts to real-life contexts and personal experiences.

Related College Majors and Career Pathways:

- College Majors: Psychology, Neuroscience, Cognitive Science, Sociology, Human Development, Education, Business, Marketing, Fine Arts, Social Work, Public Health
- Future Careers: Counselor, Therapist, Social Worker, Educator, Market Research Analyst, Human Resources Specialist, Public Relations or Marketing Professional, UX/UI Designer, Artist, Public Health Professional, Content Creator, User Experience Researcher

~Social Studies Electives~

AP Psychology – Grades 11-12

This [course](#) introduces students to college-level concepts in human behavior and thinking, including social and behavioral psychology, brain function, cognition, and major theorists such as Freud and Jung. Those who enroll in the course are expected to take the AP examination, [which can be found here](#).

Key Learning Goals:

- Master foundational principles across multiple psychology domains: behavioral, cognitive, social, and biological.
- Analyze the contributions and theories of major psychologists.
- Evaluate research methods, experiments, and case studies.
- Apply psychological concepts to explain human behavior and thought.
- Develop critical thinking, scientific reasoning, and evidence-based writing skills for college-level analysis.

Related College Majors and Career Pathways:

- College Majors: Psychology, Neuroscience, Cognitive Science, Sociology, Human Development, Education, Business, Marketing, Communications, Fine Arts, Law, Social Work, Public Health, Media Studies
- Future Careers: Clinical Psychologist, Counselor, Therapist, Social Worker, Educator, Market Research Analyst, Human Resources Specialist, Public Relations or Marketing Professional, UX/UI Designer, Artist, Filmmaker, Lawyer, Public Health Professional, Policy Analyst, Content Creator, Behavioral Data Analyst, Digital Media Strategist

SOCIAL STUDIES COURSE INFORMATION

~Social Studies Electives~

Economics - Grades 10-12

This course introduces students to the fundamental principles of economics. The first half of the year focuses on microeconomic concepts such as supply and demand, market behavior, and decision-making at the individual and firm level. The second half emphasizes macroeconomic ideas, including government policy, economic growth, and international trade. Students develop critical thinking, data analysis, and problem-solving skills applicable to real-world economic issues.

Key Learning Goals:

- Understand basic principles of supply and demand, market behavior, and consumer decision-making.
- Examine individual, business, and government decisions in economic contexts.
- Analyze economic data to identify patterns and make informed predictions.
- Explore national and global economic systems, policies, and trade dynamics.
- Apply economic concepts to real-life, business, social, and technological contexts.

Related College Majors and Career Pathways:

- College Majors: Economics, Business Administration, Finance, Marketing, Management, Data Analytics, Public Policy, Environmental Studies, Technology Management
- Future Careers: Financial Analyst, Market Researcher, Entrepreneur, Business Consultant, Policy Analyst, Data Analyst, Environmental Policy Analyst, Digital Strategy Consultant, Content Creator in Business/Finance, UX Researcher

AP Macroeconomics - Grades 11-12 Continued

This course focuses on **macroeconomic principles**, examining national and global economies, fiscal and monetary policy, economic growth, inflation, and international trade. Those who enroll in the course are expected to take the AP examination, which [can be found here](#).

~Social Studies Electives~

AP Macroeconomics - Grades 11-12 Continued

Key Learning Goals:

- Understand macroeconomic indicators such as GDP, unemployment, and inflation.
- Analyze the effects of fiscal and monetary policy on national and global economies.
- Examine international trade, exchange rates, and global economic interconnections.
- Apply macroeconomic models to interpret real-world economic, technological, and policy trends.
- Develop quantitative reasoning, critical thinking, and evidence-based analysis skills.

Related College Majors and Career Pathways:

- College Majors: Economics, International Relations, Finance, Political Science, Public Policy, Business Administration, Data Analytics, Technology Management, Environmental Economics
- Future Careers: Economist, Policy Analyst, Financial Analyst, Government Advisor, International Trade Specialist, Market Research Analyst, Content Creator in Business/Economics, Digital Strategy Consultant, Public Policy Consultant, Behavioral Data Analyst, Tech and Innovation Strategist

Pathway Notes: AP Macroeconomics provides a **broad view of national and global economies**, complementing Microeconomics and preparing students for careers in policy, finance, technology, and global economic analysis.

AP Microeconomics - Grades 11-12

This course focuses on **microeconomic principles**, exploring how individuals and firms make decisions, how markets function, and how government policies affect consumer and producer behavior. Those who enroll in the course are expected to take the AP examination, which [can be found here](#).

SOCIAL STUDIES COURSE INFORMATION

~Social Studies Electives~

AP Microeconomics - Grades 11-12 Continued

Key Learning Goals:

- Analyze supply and demand and market equilibrium across various market structures.
- Examine consumer and producer behavior in decision-making processes.
- Evaluate the impact of government policies on markets and resource allocation.
- Apply microeconomic models to real-world business, technology, and social scenarios.
- Develop quantitative reasoning, critical thinking, and evidence-based analysis skills.

Related College Majors and Career Pathways:

- College Majors: Economics, Finance, Business Administration, Accounting, Entrepreneurship, Marketing, Data Analytics, Technology Management, Behavioral Economics
- Future Careers: Financial Analyst, Entrepreneur, Market Research Analyst, Business Consultant, Policy Analyst, Investment Banker, Content Creator in Business/Finance, UX Researcher, Behavioral Data Analyst, Digital Strategy Consultant

Pathway Notes: AP Microeconomics emphasizes **individual and firm-level** economic behavior, providing a foundation for AP Macroeconomics and careers in business, tech, and applied social sciences.

AP Comparative Government - Grades 11-12

Prerequisite: HoF Recommendation

This [course](#) surveys six different governmental systems used around the world today. Students analyze these systems through historical and contemporary case studies to understand how governments function, make decisions, and influence societies. Those who enroll in the course are expected to take the AP examination, which [can be found here](#).

Key Learning Goals:

- Understand the structure and functions of different government systems.
- Compare political institutions, processes, and behaviors across nations.
Analyze the impact of political decisions on societies and global affairs.

~Social Studies Electives~

AP Comparative Government - Grades 11-12 Continued

Key Learning Goals:

- Develop critical thinking, evidence-based analysis, and argumentation skills.
- Connect historical and contemporary political trends to current events.

Related College Majors and Career Pathways:

- College Majors: Political Science, International Relations, Public Policy, Economics, Law, Global Studies
- Future Careers: Policy Analyst, Diplomat, Political Consultant, Government Advisor, International NGO Specialist, Lawyer, Content Creator in Politics/Policy, Research Analyst

AP Art History - Grades 11-12

Prerequisite: HoF Recommendation

This course surveys world art historical traditions, exploring key artistic works and architectural achievements from Europe, the Middle East, India, East Asia, and beyond. Students examine how these works shaped societies and were influenced by historical contexts, developing a deeper understanding of cultural expression and visual literacy. Those who enroll in the course are expected to take the AP examination, which [can be found here](#). College majors that benefit from this AP can be found [here](#).

Key Learning Goals:

- Analyze major works of art and architecture within their historical, cultural, and social contexts.
- Understand artistic movements, styles, and techniques across regions and time periods.
- Compare and contrast the functions and meanings of artworks across societies.
- Develop visual literacy, critical thinking, and evidence-based writing skills.
- Connect historical art to contemporary cultural and societal expressions.

SOCIAL STUDIES COURSE INFORMATION

~Social Studies Electives~

AP Art History - Grades 11-12 Continued

Related College Majors and Career Pathways:

- College Majors: Art History, Architecture, Architectural Engineering, Urban Planning, Museum Studies, Design and Visual Communications, Digital Arts, Fashion Design, Film Production, Anthropology, Comparative Literature, Ethnic Studies, Humanities, History, and more.
- Future Careers: Architect, Architectural Engineer, Urban Planner, Museum Curator, Art Conservator, Exhibit Designer, Art Director, Graphic Designer, Fashion Designer, Film Editor, Cultural Heritage Manager, Art Educator, Digital Media Specialist, and roles in various technology-driven design fields.

Note: For a comprehensive list of related majors and careers, please refer to the [College Board's resources](#).

Business Studies - Grades 11-12

This course surveys the foundational principles of establishing and managing a business. Students explore topics such as business ethics, leadership and management, accounting, marketing, and risk assessment. Real-world case studies and problem-solving exercises develop critical thinking and analytical skills, emphasizing how businesses operate within societal and economic contexts.

Key Learning Goals:

- Understand core business concepts and their role in society and the economy.
- Analyze ethical, managerial, and financial decisions within organizations.
- Apply problem-solving and decision-making strategies to real-world business scenarios.
- Explore the relationship between business operations and societal impact.
- Develop communication, teamwork, and analytical skills relevant to business environments.

Related College Majors and Career Pathways:

- College Majors: Business Administration, Management, Marketing, Entrepreneurship, Accounting, Human Resources, International Business, Supply Chain Management

~Social Studies Electives~

Business Studies - Grades 11-12 Continued

Related College Majors and Career Pathways:

- Future Careers: Business Consultant, Marketing Coordinator, Entrepreneur, Operations Manager, Financial Analyst, Human Resources Specialist, Supply Chain Coordinator, Project Manager, Community Business Advocate

AP Business with Personal Finance - Grades 11-12

This college-level course introduces students to business management and personal financial literacy. Students engage in project-based learning, simulations, and applied exercises that integrate entrepreneurship, marketing, finance, accounting, and management. The course is organized into five units: Businesses, Competition, and Innovation; Marketing; Personal Saving and Borrowing; Business Finance and Accounting; Management and Strategy; and Personal Goals, Budgeting, and Investing. The AP examination is not yet available, but the **course framework can be found [here](#)**. Students who earn a qualifying score may also receive the *AP Business with Personal Finance Credential*.

Key Learning Goals:

- Apply core business and financial principles.
- Develop personal financial literacy and budgeting skills.
- Analyze financial statements and business performance metrics.
- Engage in project-based, data-driven decision-making.
- Prepare for college-level study and career readiness in business and finance.

Related College Majors and Career Pathways:

- College Majors: Business Administration, Finance, Accounting, Economics, Marketing, Entrepreneurship, Data Analytics, Information Systems, Financial Planning, Technology Management
- Future Careers: Entrepreneur, Financial Planner, Marketing Analyst, Business Consultant, Investment Analyst, Operations Manager, UX/Business Data Analyst, Digital Strategy Consultant, Content Creator in Business/Finance, FinTech Specialist

MATHEMATICS COURSE INFORMATION

Mathematics Department Course Offerings

The Mathematics curriculum at MES creates an environment of inquiry and reasoning, where students are encouraged to think independently and apply mathematical modeling to relationships and real-world situations. Students develop an understanding of numerical, graphical, and algebraic representations, while mastering essential concepts and procedures necessary for academic progress. In each classroom, within a respectful and supportive environment, students' curiosity is challenged and motivated through problem-solving, creativity, and critical thinking. The program prepares students thoroughly for future study in any discipline that requires mathematics, from STEM fields to business, social sciences, and the arts. The Math curriculum is based on the following standards: [AERO Common Core Plus](#) and [Common Core Math](#). Please note A TI-84 series or TI-Nspire graphic calculator is **required** for all students from Grade 9 through Grade 12.

Related College Majors and Career Pathways

- *STEM Fields*: Engineering, Computer Science, Data Science, Actuarial Science, Physics, Chemistry, Environmental Science, Architecture
- *Business & Finance*: Economics, Accounting, Finance, Marketing Analytics, Entrepreneurship, Management
- *Social Sciences & Research*: Psychology, Sociology, Political Science, Public Policy, Statistics, Operations Research
- *Technology & Innovation*: Artificial Intelligence, Machine Learning, Software Development, Cybersecurity, Information Systems
- *Creative & Applied Fields*: Game Design, Architecture, Industrial Design, Digital Media, Quantitative Art & Design

Mathematics Department

Mathematics Requirements & Pathways

Graduation Requirements

- **3.0 Credits Required** (Grades 9-12)
- **Must include:** Algebra I (Grade 8), Geometry, Algebra II, plus one additional math
- Geometry or Pre-AP Geometry & Statistics (Grade 9)
- Algebra II or Algebra II Honors (Grade 10)
- Pre-Calculus, Statistics, or AP Math (Grades 11-12)
- **Highly Recommended:** 4.0 credits - math every year through Grade 12

Aligned to Common Core Math Standards
& AERO Common Core Plus

Available Pathways

College Preparatory (CP)

Standard track for college readiness

Honors

Accelerated with greater depth & rigor

Pre-AP NEW 2026-27

College Board prep for AP success (G9, G11)

Advanced Placement (AP)

College-level courses with AP exams

Required Tool: TI-84 series or TI-Nspire graphing calculator required for all students Grades 9-12

Advanced Courses Available:
AP Pre-Calculus • AP Statistics
AP Calculus AB • AP Calculus BC
Calculus • Statistics

Course Levels	Mathematics Requirements for Course Enrollment by Pathway (level)
Honors	Geometry Honors: Minimum grade of B+ in Algebra I Algebra II Honors: Minimum grade of B+ in Geometry CP or Geometry Honors All: Minimum grade of B on Midterm exam, minimum MAP Math score of 240, Teacher recommendation
Pre-AP	Minimum grade of B+ in Algebra I, Minimum grade of B+ on Midterm exam, minimum MAP Math score of 240, Teacher recommendation
AP	AP Pre-Calculus: Minimum grade of B+ in Algebra II Honors, Minimum PSAT Math score of 540 AP Calculus: Minimum grade of B+ in AP PreCalculus, Minimum PSAT Math score of 540 AP Statistics: Minimum grade of B+ in Algebra II Honors, Minimum PSAT Math score of 540 All: Minimum grade of B on Midterm exam, Teacher recommendation

MATHEMATICS COURSE INFORMATION

Geometry - Grade 9

Geometry introduces students to the study of shapes, figures, and spatial reasoning, emphasizing logic, problem-solving, and real-world applications. Students explore properties of lines, angles, polygons, and three-dimensional figures, learn to construct proofs, and calculate perimeter, area, surface area, and volume. In the Pre-AP pathway, students also engage in statistical reasoning, data analysis, and connections between algebra, geometry, and statistics. The course develops mathematical reasoning and prepares students for higher-level mathematics.

Key Learning Goals:

- Understand geometric terms, relationships, and properties of figures
- Apply logical reasoning to construct mathematical proofs
- Calculate perimeter, area, surface area, and volume of geometric shapes
- Develop problem-solving and critical thinking skills through real-world applications
- Apply coordinate geometry, transformations, and statistical reasoning (Pre-AP)

Course Pathways:

- College Preparatory (CP): Standard pace and coverage for students completing Algebra I. Focuses on understanding fundamental geometric concepts, developing problem-solving skills, and applying logic in proofs.

Geometry - Grade 9 Continued

Course Pathways:

- Honors: Accelerated and rigorous. Builds on CP content with deeper exploration of coordinate geometry, inequalities, congruence, parallel lines and planes, and more advanced proofs. Intended for students with strong Algebra I performance (B+ or above), high MAP scores, and teacher recommendation.
- Pre-AP Geometry with Statistics: Follows College Board Pre-AP frameworks, emphasizing critical reasoning, multiple representations, real-world modeling, and preparation for AP-level mathematics. Covers all Honors content, with additional rigor, extended problem-solving, and statistical applications integrated throughout the course.

Required Tool: TI-84 series or TI-Nspire graphing calculator

MATHEMATICS COURSE INFORMATION

Algebra II - Grade 10

Algebra II builds on the foundations of Algebra I and Geometry, emphasizing reasoning, problem-solving, and functional thinking. Students study linear, quadratic, exponential, and rational functions, as well as sequences, series, and operations on expressions. Applications of algebraic concepts to real-world problems are integrated throughout the course. Honors students engage in more rigorous problem-solving, complex numbers, advanced functions, and preparation for higher-level mathematics.

Key Learning Goals:

- Solve linear, quadratic, exponential, and rational equations and inequalities
- Understand and apply functions, sequences, and series
- Perform operations on rational expressions, radicals, and complex numbers
- Analyze and model real-world situations using algebraic methods
- Develop problem-solving, reasoning, and critical thinking skills

Course Pathways:

- College Preparatory (CP): Focuses on mastering Algebra II concepts with additional time for practice and reinforcement. Prepares students for Pre-Calculus or Statistics.
- Honors: For students who completed Geometry Honors with B+ or above, strong MAP scores, and teacher recommendation. Builds on CP content with more challenging problem-solving, rigorous applications of functions and sequences, and integration of complex numbers. Prepares students for higher-level mathematics courses such as Pre-Calculus or AP-level math.

Upper School Mathematics Pathways – Grades 11–12

After completing Algebra II, students select from two primary mathematics pathways depending on their academic strengths, interests, and college goals. Each pathway is designed to challenge students through inquiry, reasoning, and real-world application, while preparing them for college-level coursework.

- The Pre-Calculus Pathway develops advanced algebraic and trigonometric skills leading to Calculus and AP Calculus AB.
- The Statistics Pathway focuses on data analysis, probability, and decision-making, leading to AP Statistics.

College Majors and Career Pathways:

- Pre-Calculus / Calculus Pathway: Engineering, Architecture, Physics, Computer Science, Data Science, Economics, Artificial Intelligence, Finance, and other STEM-related fields that rely on advanced analytical and problem-solving skills.
- Statistics Pathway: Business Analytics, Data Science, Psychology, Sociology, Public Health, Environmental Studies, Political Science, Marketing, and other fields that require data interpretation, research, and evidence-based decision-making

Both pathways also build 21st-century skills including critical thinking, quantitative reasoning, modeling, problem-solving, and interdisciplinary application, preparing students for success in modern, multidisciplinary college programs and careers. All students are required to have a TI-84 series or TI-Nspire graphing calculator for coursework and assessment.

MATHEMATICS COURSE INFORMATION

Pre-Calculus - Grade 11

This course strengthens students' understanding of advanced functions, trigonometry, and analytical geometry. Emphasis is placed on modeling, problem-solving, and connecting algebraic and geometric reasoning. Students build a strong foundation for Calculus or AP Calculus.

Key Learning Goals:

- Analyze, graph, and model polynomial, rational, exponential, and logarithmic functions
- Apply trigonometric identities and relationships to solve problems
- Connect algebraic and geometric reasoning to real-world contexts
- Strengthen analytical and problem-solving fluency for higher-level mathematics

OR

AP Pre-Calculus - Grade 11

This College Board course models dynamic phenomena through advanced functions and transformations. Students deepen conceptual understanding through analysis, modeling, and graphing, preparing for college-level Calculus and STEM fields. Those who enroll in the course are expected to take the AP examination, which can be found [here](#).

Key Learning Goals:

- Analyze complex functions and their transformations
- Model real-world phenomena using polynomial, rational, and trigonometric relationships
- Apply trigonometric and parametric reasoning to solve problems
- Build readiness for AP Calculus and university-level STEM coursework

OR

Statistics - Grade 11

This course introduces students to the fundamentals of data analysis, probability, and inference. Students learn to collect, represent, and interpret data, applying statistical concepts to real-world problems in business, science, and the social sciences.

Statistics - Grade 11 Continued

Key Learning Goals:

- Represent and analyze data using statistical tools
- Understand variability, sampling, and probability
- Draw conclusions using basic inference and hypothesis testing
- Communicate data findings clearly and effectively

OR

AP Statistics- Grade 11-12

Students may take AP Statistics in Grade 11 as their third mathematics course after completing Algebra II Honors. Because this is a rigorous, college-level course, students should demonstrate strong quantitative skills. Placement is recommended for students with:

- Algebra II Honors performance B+ or higher;
- PSAT Math score at or above the national average, **and**
- Head of Faculty recommendation based on demonstrated readiness for advanced quantitative reasoning.

Students who enroll in this course may not drop the class once the academic year begins.

The course introduces statistical reasoning and data analysis, covering probability, sampling distributions, confidence intervals, and hypothesis testing. Students develop skills to analyze real-world data and prepare for college-level coursework. Those who enroll in the course are expected to take the AP examination, which can be found [here](#).

Key Learning Goals:

- Design and evaluate statistical studies appropriate for Grade 11-level mathematics
- Interpret data using probability and statistical models
- Apply inference methods and test hypotheses
- Communicate findings using evidence-based reasoning
- Develop critical thinking, quantitative reasoning, and real-world application skills

MATHEMATICS COURSE INFORMATION

~Mathematics Electives~

Calculus - Grade 12

This course provides an introduction to university-level calculus concepts for students coming from Pre-Calculus Honors. It focuses on foundational skills in limits, differentiation, and integration. Emphasis is placed on understanding the principles and techniques of calculus, applying them to solve real-world problems, and preparing students for advanced quantitative reasoning. This course is less rigorous than AP Calculus AB but covers the same core concepts with guided instruction and structured practice.

Key Learning Goals:

- Understand the concept of limits and instantaneous rates of change
- Apply differentiation techniques to solve problems in motion, optimization, and modeling
- Perform basic integration and use it to calculate area and volume
- Develop problem-solving and analytical reasoning skills within calculus contexts
- Connect calculus concepts to real-world applications in science, engineering, and economics

~Mathematics Electives~

AP Calculus (AB & BC) - Grade 12

This College Board course offers students a rigorous, college-level study of calculus. Students explore the core topics of [Calculus AB](#)—limits, derivatives and their applications, integrals, and the Fundamental Theorem of Calculus. Those who wish to extend their study may also explore [BC topics](#), including advanced integration techniques, parametric, polar, and vector functions, and infinite sequences and series. College majors that benefit from [AP Calculus AB](#) and [AP Calculus BC](#) are linked

All students enrolled are required to take the AP Calculus AB exam, while students who choose to study BC topics may also take the AP Calculus BC exam.

Key Learning Goals:

- Analyze functions and apply limits to study behavior and continuity
- Compute and apply derivatives to solve real-world problems involving motion, optimization, and rates of change
- Evaluate integrals and apply them to calculate areas, volumes, and accumulations
- Explore sequences and series, and extend differential and integral concepts for BC students
- Apply mathematical modeling to solve complex, real-world problems
- Communicate mathematical reasoning effectively using multiple representations

College and Career Pathways:

Students completing AP Calculus AB/BC are well-prepared for STEM disciplines such as Engineering, Computer Science, Physics, Data Science, Mathematics, Economics, and Architecture. The skills developed — quantitative reasoning, analytical problem-solving, modeling, and abstract thinking — are also highly applicable to multidisciplinary fields and 21st-century careers in AI, finance, and technology.

SCIENCE COURSE INFORMATION

Science Department Course Offerings

The Science curriculum at MES fosters an environment of inquiry, reasoning, and hands-on investigation, where students are encouraged to think independently and apply scientific modeling to understand relationships and real-world phenomena. Students develop a deep understanding of biological, chemical, physical, and environmental systems while mastering essential concepts and laboratory skills necessary for academic progress. In each classroom, within a respectful and supportive environment, students' curiosity is challenged and motivated through experimentation, critical thinking, and problem-solving. The program prepares students thoroughly for future study in any discipline that relies on scientific reasoning, from STEM fields to social sciences, technology, business, and the arts.

The Science curriculum is based on the [Next Generation Science Standards](#) (NGSS), emphasizing [three-dimensional learning](#): Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts.

Related College Majors and Career Pathways

- *STEM Fields*: Biology, Chemistry, Physics, Environmental Science, Biomedical Engineering, Neuroscience, Materials Science, Actuarial Science
- *Technology & Innovation*: Data Science, Artificial Intelligence, Software Development, Biotechnology, Renewable Energy, Robotics, Scientific Computing
- *Health & Medicine*: Pre-Medicine, Public Health, Pharmacology, Biomedical Sciences, Genetic Counseling, and other medically or scientifically oriented health professions
- *Social Sciences & Research*: Environmental Policy, Psychology, Sociology, Sustainability Studies, Forensic Science, Operations Research
- *Business, Finance & Analytics*: Economics, Finance, Risk Management, Actuarial Science, Management Science, Quantitative Analytics
- *Creative & Applied Fields*: Architecture, Industrial Design, Scientific Visualization, Science Communication, Quantitative Art & Design

Science Department

Science Requirements & Pathways

Graduation Requirements

- **3.0 Credits Required** (Grades 9-11)
- **Must include:** Biology and Chemistry plus 1 additional science
- Biology or Biology Honors (Grade 9)
- Chemistry, Chemistry Honors, or Pre-AP Chemistry (Grade 10)
- Physics, Environmental Science, or AP Science (Grades 11-12)
- **Highly Recommended:** 4.0 credits including 3 lab sciences for competitive universities

Aligned to NGSS Standards
Next Generation Science Standards

Available Pathways

College Preparatory (CP)

Standard track for college readiness

Honors

Accelerated with greater depth & rigor

Pre-AP NEW 2026-27

College Board prep for AP success (G10)

Advanced Placement (AP)

College-level courses with AP exams

Advanced Courses Available (Grades 11-12):
AP Biology • AP Chemistry • AP Physics 1
AP Physics C • Environmental Science • Physics

Course Levels	Science Requirements for Course Enrollment by Pathway (level)
Honors and Pre-AP	Biology Honors: Minimum Grade of B+ in Middle School Science Chemistry Honors: Minimum grade of B+ in Biology or Biology Honors Pre-AP Chemistry: Minimum grade of B+ in Biology or Biology Honors All: Minimum grade of B on Midterm exam, Teacher recommendation
AP	AP Environmental Science: Honors Biology (B+ or higher) AP Biology & AP Physics I: Chemistry Honors or Pre-AP Chemistry (B+ or higher) AP Physics C: Chemistry Honors or Pre-AP Chemistry (B+ or higher) + Physics or AP Physics I (B+ or higher) <i>All courses require Head of Faculty and teacher recommendation and a grade of B+ or higher in prerequisite courses</i>

SCIENCE COURSE INFORMATION

Biology - Grade 9

This lab-based course introduces students to the foundations of modern biology through hands-on investigations, data analysis, and scientific reasoning. Students explore topics including the chemistry of life, cell structure and function, cell transport, photosynthesis and cellular respiration, cell division, genetics, protein synthesis, evolution, ecology, and human biology. Emphasis is placed on applying concepts to real-world phenomena and developing critical thinking and problem-solving skills.

Key Learning Goals:

- Understand the structure, function, and processes of cells and organisms
- Apply principles of genetics, evolution, and ecology to explain biological phenomena
- Analyze and interpret data from experiments and laboratory investigations
- Explore the interactions between organisms and their environments
- Develop scientific communication, reasoning, and problem-solving skills

Course Pathways:

- College Preparatory (CP): Focuses on core biological concepts and lab skills at a structured pace, providing a solid foundation for future science coursework

Biology - Grade 9 Continued

- Honors: Builds on CP content with additional depth and rigor, emphasizing independent inquiry, advanced lab techniques, and preparation for AP Biology. Students receive enriched instruction on topics such as emergent properties, biosphere organization, and in-depth cellular and molecular biology.

Chemistry - Grade 10

This lab-based course introduces students to the principles of matter and chemical interactions through structured investigations, experiments, and data analysis. Students explore topics including matter and its changes, measurement, atomic structure and the periodic table, chemical formulas and equations, stoichiometry, gas laws, thermochemistry, and acids and bases. Emphasis is placed on applying chemical concepts to real-world phenomena and developing critical thinking and problem-solving skills.

Key Learning Goals:

- Understand the structure and properties of matter and how it changes
- Apply chemical principles to solve problems using formulas, equations, and stoichiometric reasoning
- Explore thermodynamics, gas laws, and reaction kinetics in laboratory investigations

SCIENCE COURSE INFORMATION

Chemistry - Grade 10 Continued

Key Learning Goals Continued:

- Analyze chemical data and communicate findings effectively
- Develop scientific reasoning, problem-solving, and experimental design skills

Course Pathways:

- College Preparatory (CP): Builds a solid foundation in core chemistry principles, chemical reactions, and lab inquiry to prepare for upper-level science courses.
- Honors: Extends CP content with greater depth and rigor through advanced labs, quantitative analysis, and independent study. Prepares students for AP Chemistry with deeper focus on molecular structure, kinetics, and thermodynamics.
- Pre-AP Chemistry (Beginning 2026–27): A College Board–aligned course developing conceptual understanding, mathematical reasoning, and experimental design for future AP-level sciences.

Upper School Science Pathways – Grades 11–12

After completing Biology (Grade 9) and Chemistry (Grade 10), students select from two primary science pathways depending on their academic strengths, interests, and college goals. Each pathway is designed to challenge students through inquiry, experimentation, and real-world application, while preparing them for college-level science coursework. Both pathways also develop 21st-century skills including critical thinking, data analysis, modeling, problem-solving, and interdisciplinary application, preparing students for success in modern, multidisciplinary college programs and careers.

- *Physics / STEM Pathway:* Develops strong foundations in classical and modern physics, quantitative reasoning, and problem-solving, leading to AP Physics 1, AP Physics C, or AP Chemistry. Ideal for students planning STEM, engineering, or technology-related majors, as well as pre-medical and biomedical programs.
- *Environmental & Life Sciences Pathway:* Focuses on ecosystems, environmental processes, and applied biological sciences, leading to courses such as Environmental Science (CP or AP) or AP Biology.

Upper School Science Pathways – Grades 11–12 Continued

College Majors and Career Pathways:

- Ideal for students pursuing life sciences, public health, or multidisciplinary research fields.
- *Physics / STEM Pathway:* Engineering, Architecture, Physics, Computer Science, Data Science, Robotics, Artificial Intelligence, Environmental Engineering, Chemistry, Biomedical Sciences, Pre-Medicine, and other STEM-related fields that rely on analytical and experimental problem-solving.
- *Environmental & Life Sciences Pathway:* Biology, Biomedical Sciences, Public Health, Environmental Science, Genetics, Data Science, Psychology, Sustainability Studies, and other fields that require experimental design, research, and evidence-based reasoning.

Environmental Science - Grades 11-12

This lab- and field-based course focuses on ecological systems, human-environment interactions, and sustainability. Students apply scientific methods to investigate environmental processes and design solutions to real-world environmental challenges.

Who Should Take This Course:

- Ideal for students interested in life sciences, public health, environmental studies, or research-oriented multidisciplinary fields.
- Not recommended as a substitute for Physics for students applying to design, engineering, or architecture programs in Egypt.

Key Learning Goals:

- Understand the nature of science: scientific ethics, paradigm shifts, and defining environmental science
- Analyze environmental systems, species interactions, human populations, biomes, and biodiversity
- Investigate climate, water, agriculture, geology, global warming, and climate change
- Explore environmental health: disease, pathogens, carcinogens, bioaccumulation, biomagnification, waste, and landfills
- Examine environmental economics, policy, and sustainability
- Conduct fieldwork and laboratory experiments, develop reasoning, and apply evidence-based decision-making

SCIENCE COURSE INFORMATION

Environmental Science - Grades 11-12 Continued

Course Pathways:

- *College Preparatory (CP)*: Focuses on core ecological principles, data collection, and environmental awareness through local and global case studies. Builds foundational scientific literacy for life sciences and environmental studies.
- *Advanced Placement (AP) Environmental Science*: A college-level, interdisciplinary course aligned with the College Board framework. Students engage in complex data analysis, systems modeling, and fieldwork to explore the interconnections between Earth's systems, human activity, and sustainable resource management.

Physics - Grades 10-12

This course is designed for students in Grades 10–12 who wish to gain a deeper understanding of the natural world through the study of motion, forces, energy, and matter. Students explore key topics such as motion, forces, thermodynamics, circular motion, electricity, waves, and nuclear physics. Through inquiry-based investigations and laboratory work, students apply mathematical reasoning and problem-solving to analyze experimental data and explain real-world phenomena.

Who Should Take This Course:

- Students with strong mathematical reasoning and problem-solving skills
- Those interested in engineering, architecture, interior design, product design, or technology-related fields
- Students planning to apply to universities in Egypt, where Physics is often required for STEM or design majors
- Learners preparing for medicine, computer science, or other science-related programs

Key Learning Goals:

- Understand and apply fundamental principles of motion, forces, energy, and matter
- Conduct investigations and analyze data to explain physical phenomena
- Develop models to represent and predict real-world systems and interactions
- Strengthen quantitative reasoning, scientific communication, and experimental design skills

Advanced Physics Pathways – Grades 10–12

After completing Chemistry and Algebra II, students may select from two Advanced Placement Physics pathways.. Either AP cannot be removed from a schedule once scheduling is complete.

→ Pathway 1: AP Physics 1 (Algebra-Based)

- ◆ This course is equivalent to the first semester of an algebra-based college Physics class. Students explore key topics including linear and projectile motion, dynamics, work and energy, momentum, circular and rotational motion, and torque. Laboratory work emphasizes open inquiry, data analysis, and scientific reasoning.
- ◆ *Recommended for students interested in:* Medicine, Dentistry, Architecture, Interior Design, Product Design, and other fields where an understanding of physical systems and structural principles supports design, analysis, or scientific application.

→ Pathway 2: AP Physics C (Calculus-Based)

- ◆ Prerequisites: Physics or AP Physics 1 and Pre-Calculus; Calculus or AP Calculus taken concurrently
- ◆ This advanced pathway consists of two semester-long, college-level Physics courses:
- ◆ *AP Physics C: Mechanics* – kinematics, Newton's laws, energy, momentum, rotation, oscillations, gravitation
- ◆ *AP Physics C: Electricity & Magnetism* – electrostatics, conductors, capacitors, circuits, magnetic fields, electromagnetism
- ◆ *Recommended for students interested in:*
 - AP Physics C is ideal for students planning to pursue Engineering, Astrophysics, Computer Science, Robotics, and other STEM disciplines requiring strong calculus-based analytical reasoning.
 - College Majors & Career Pathways: Engineering, Architecture, Industrial Design, Product Design, Computer Science, Robotics, Artificial Intelligence, Astrophysics, and other STEM- or design-related fields.

SCIENCE COURSE INFORMATION

AP Biology Grades - 11-12

AP Biology provides a college-level survey of modern biology, emphasizing conceptual understanding, inquiry-based learning, and laboratory investigations. Topics include evolution, molecular biology, cell structure and function, genetics, physiology, ecology, and organismal biology. Students learn to analyze data, design experiments, and make evidence-based conclusions. Students who enroll in this course may not remove it from their schedule once scheduling is complete. Those who enroll in the course are expected to take the AP examination, which can be found [here](#).

Key Learning Goals:

- Develop a conceptual understanding of biological principles and systems
- Analyze and interpret data from experiments and simulations
- Apply scientific reasoning to formulate hypotheses and design investigations
- Connect molecular, organismal, and ecological concepts to real-world phenomena
- Develop evidence-based writing and communication skills for scientific argumentation

Who Should Take This Course:

- Students planning to pursue Medicine, Dentistry, Biomedical Sciences, Genetics, Public Health, or other life sciences
- Students interested in laboratory research, scientific inquiry, or clinical applications
- Students aiming to strengthen their biology foundation for competitive university programs

College and Career Pathways:

- Medicine, Dentistry, Biomedical Sciences, Genetics, Biotechnology, Public Health, Epidemiology, Environmental Health, Pharmacy
- Research and laboratory-based careers, clinical sciences, biotechnology, and health policy
- 21st-century skills include critical thinking, data analysis, research methodology, problem-solving, and interdisciplinary application

AP Chemistry - Grades 11-12

AP Chemistry is a college-level course emphasizing the study of chemical principles, problem-solving, and laboratory investigation. Key topics include atomic structure, stoichiometry, thermodynamics, kinetics, chemical equilibrium, acids and bases, molecular structure, and electrochemistry. Students develop strong quantitative reasoning skills and engage in inquiry-based experiments. Students who enroll in this course may not remove it from their schedule once scheduling is complete. Those who enroll are expected to take the AP examination, which can be found [here](#).

Key Learning Goals:

- Understand the structure, properties, and behavior of matter
- Apply chemical principles to quantitative problem-solving
- Design and conduct laboratory investigations with rigorous data analysis
- Develop scientific reasoning and critical thinking skills
- Connect chemical knowledge to real-world phenomena and applications

Who Should Take This Course:

- Students planning to pursue Engineering, Chemistry, Environmental Engineering, Materials Science, or other STEM-related fields
- Students who wish to develop advanced laboratory and quantitative skills
- Students preparing for university programs requiring strong chemistry foundations

College and Career Pathways:

- Chemistry, Chemical Engineering, Environmental Engineering, Materials Science, Biochemistry, Biomedical Engineering, Pharmacy, Industrial Chemistry
- Research and laboratory-based careers, chemical analysis, materials design, energy and sustainability sectors
- 21st-century skills include critical thinking, quantitative reasoning, data modeling, problem-solving, and interdisciplinary applications

ELECTIVE COURSE INFORMATION

Elective Courses

Explore Your Interests • Develop New Skills • Discover Your Passions

Elective courses allow you to personalize your education by exploring subjects beyond the core curriculum. Whether you're passionate about the arts, interested in technology, eager to learn a new language, or looking to enhance your physical fitness, MES Cairo offers a diverse range of electives to support your goals and interests. Electives can strengthen college applications, develop career-ready skills, and help you discover new talents. Choose courses that align with your passions, challenge you to grow, and prepare you for future success.



World Languages

8 Course Options

Develop fluency in French or Spanish through consecutive years of study. Language study enhances cognitive skills, cultural understanding, and career opportunities in our global economy.

Examples: French I-III, AP French, Spanish I-IV Honors



Physical Education & Health

3 Course Options

Build lifelong fitness habits, leadership skills, and wellness knowledge. Courses emphasize physical literacy, mental health, nutrition, and personal development through active learning.

Examples: Health and Personal Fitness (Grades 9-10, Required); PE: Team Sports or PE: Lifetime Fitness (Grades 11-12, select one)



Expressive Arts

18 Course Options

Express your creativity through visual arts, performing arts, and music. Develop technical skills, artistic vision, and portfolio-ready work for college applications and personal growth.

Examples: Art & Design I-III, Pre-AP/AP Art, Digital Art & Design, Photography, Sculpture, Theatre I-II, Choir I-IV Honors, Instrumental Music



Computer Technologies

6 Course Options

Master digital design, animation, and computer science fundamentals. Courses prepare students for careers in technology, creative media, and computer science through hands-on projects.

Examples: Multimedia, Digital Animations I-II, AP Computer Science Principles, AP Cybersecurity

Elective Requirements for Graduation

2

World Languages

2.0 credits required (same language, consecutive years). 3.0-4.0 credits highly recommended for competitive universities.

1

Physical Education

1.0 credit required. Health and Personal Fitness (Grades 9-10) is required, followed by one PE course in Grades 11-12: PE: Team Sports or PE: Lifetime Fitness.

2

Expressive Arts

2.0 credits required from visual arts, performing arts, or music courses.

Note: Digital Animations (Computer Technologies) and Film and Literacy Studies (English) also count toward art credit.

3.5

Additional Electives

3.5 credits from any department. Choose electives that support your college major and career interests.

ELECTIVE COURSE INFORMATION

World Languages Department

French & Spanish • Building Global Communication Skills

Why Study World Languages? Language study develops cognitive skills, cultural understanding, and career opportunities in our global economy. MES Cairo offers comprehensive French and Spanish programs emphasizing the ACTFL World-Readiness Standards for Learning Languages.

ACTFL World-Readiness Standards for Learning Languages

All courses align with ACTFL standards: Communication, Cultures, Connections, Comparisons, and Communities—preparing students for global citizenship and multilingual competence.



Communication



Cultures



Connections



Comparisons



Communities

Graduation Requirement

2.0 Credits Required: 2 consecutive years of the SAME language (French or Spanish). **Highly Recommended:** 3.0-4.0 credits for competitive universities.

FRENCH LANGUAGE PROGRAM

French I

Grades 9-11

Prerequisite: Grade 8 French & teacher recommendation

ACTFL Target: Novice Mid to Novice High

Communication: Simple conversations on familiar topics
Cultures: French customs, celebrations, daily life
Connections: Link language to other disciplines
Comparisons: Compare French & English structures
Communities: Use French in school & beyond

French II

Grades 10-12

Prerequisite: French I & teacher recommendation

ACTFL Target: Novice High to Intermediate Low

Communication: Handle unpredictable situations
Cultures: French literature, poetry, cultural practices
Connections: Explore interdisciplinary topics
Comparisons: Analyze cultural perspectives
Communities: Engage with French media

French III Honors

Grades 11-12

Prerequisite: French II & teacher recommendation

ACTFL Target: Intermediate Mid to Intermediate High

Communication: Narrate & describe in detail
Cultures: Research French-speaking cultures
Connections: Independent study across disciplines
Comparisons: Cultural & linguistic analysis
Communities: Films, books, newspapers

AP French

Grade 12

Prerequisite: French III & teacher recommendation

College Board AP Course

ACTFL Target: Intermediate High to Advanced Low

ACTFL Standards Emphasis:

- **Communication:** Fluent expression in varied contexts
- **Cultures:** Arts, current events, literature, sports
- **Connections:** Use French across disciplines
- **Comparisons:** Language structures & cultural perspectives
- **Communities:** Authentic materials (films, newspapers)

Related College Majors & Career Pathways: International Relations • Translation/Interpretation • Linguistics • Education • Business/Marketing • Diplomacy • Tourism & Hospitality • Journalism • Law • Global Health • Foreign Service • International Development

Note: World language proficiency is highly valued by universities and employers worldwide. Fluency opens doors to global opportunities in virtually every career field.

ELECTIVE COURSE INFORMATION

World Languages Department

French & Spanish • Building Global Communication Skills

Why Study World Languages? Language study develops cognitive skills, cultural understanding, and career opportunities in our global economy. MES Cairo offers comprehensive French and Spanish programs emphasizing the ACTFL World-Readiness Standards for Learning Languages.

ACTFL World-Readiness Standards for Learning Languages

All courses align with ACTFL standards: Communication, Cultures, Connections, Comparisons, and Communities—preparing students for global citizenship and multilingual competence.



Communication



Cultures



Connections



Comparisons



Communities

Graduation Requirement

2.0 Credits Required: 2 consecutive years of the SAME language (French or Spanish). **Highly Recommended:** 3.0-4.0 credits for competitive universities.



SPANISH LANGUAGE PROGRAM

Spanish I

Grades 9-11

Prerequisite: None

ACTFL Target: Novice Mid to Novice High

Communication: Simple conversations on familiar topics
Cultures: Spanish customs, greetings, daily life
Connections: Link language to other disciplines
Comparisons: Compare Spanish & English structures
Communities: Use Spanish in school & beyond

Spanish II

Grades 10-12

Prerequisite: Spanish I

ACTFL Target: Novice High to Intermediate Low

Communication: Practical conversations with complexity
Cultures: Spanish & Latin American culture, traditions
Connections: Explore interdisciplinary topics
Comparisons: Cultural perspectives & practices
Communities: Engage with Spanish media

Spanish III Honors

Grades 11-12

Prerequisite: Spanish II & teacher recommendation

ACTFL Target: Intermediate Mid to Intermediate High

Communication: Narrate & describe across time frames
Cultures: Research Spanish-speaking societies
Connections: Independent cultural research
Comparisons: Analyze cultural & linguistic differences
Communities: Newspapers, articles, authentic materials

Spanish IV Honors

Grade 12

Prerequisite: Spanish III Honors & teacher recommendation

ACTFL Target: Intermediate High to Advanced Low

Communication: Advanced linguistic competence
Cultures: In-depth examination of societies
Connections: Cross-cultural & interdisciplinary mastery
Comparisons: Sophisticated cultural analysis
Communities: Literary texts, journalism, cultural immersion

Related College Majors & Career Pathways: International Relations • Translation/Interpretation • Linguistics • Education • Business/Marketing • Diplomacy • Tourism & Hospitality • Journalism • Law • Global Health • Foreign Service • International Development

Note: World language proficiency is highly valued by universities and employers worldwide. Fluency opens doors to global opportunities in virtually every career field.

ELECTIVE COURSE INFORMATION

Physical Education & Health Department

Building Lifelong Fitness, Leadership & Wellness

SHAPE America National Standards: All courses align with SHAPE America Standards to develop physically literate individuals with the knowledge, skills, and confidence for lifelong healthful physical activity.

1

Motor Skills

2

Concepts & Strategies

3

Fitness

4

Behavior

5

Value

Health and Personal Fitness

REQUIRED

Grades 9-10

Health:

- Social media, health, and well-being
- Components of fitness and methods of training
- Performance analysis
- Body systems: muscular, skeletal, cardio-respiratory
- Psychology: health behaviors, self-efficacy, social determinants of health

Personal Fitness:

- Fitness assessment and personalized goal setting
- Design and implement individualized workout plans
- Nutrition for athletes: balanced diet for performance

SHAPE Standards: 3 (Fitness knowledge & application), 4 (Responsible behavior), 5 (Value of wellness & lifelong activity)

Grades 11-12: After Health and Personal Fitness, students select **one** Physical Education course: **PE: Team Sports** or **PE: Lifetime Fitness**.

PE: Team Sports

SELECT ONE

Grades 11-12

Team Sports:

- Basketball, soccer, and volleyball
- Striking and Fielding: baseball and softball

Science and Strategy of Sport:

- Science of sport: how the body performs in game play
- Tactical understanding and game strategies
- Team dynamics, communication, and collaboration
- Leadership development in team settings
- Performance analysis and skill refinement
- Officiating and rules application

SHAPE Standards: 1 (Advanced motor skills), 2 (Tactical concepts & strategies), 3 (Fitness programs & goal achievement), 4 (Leadership & teamwork), 5 (Lifelong physical activity)

PE: Lifetime Fitness

SELECT ONE

Grades 11-12

Fitness Training:

- Circuit training and strength conditioning
- Aerobic and cardio fitness activities
- Yoga, flexibility, and mindfulness
- Movement and physical fitness progression

Lifetime Activities:

- Gym games and paddleball
- Trampolining: skills development and sequences
- Track and Field: running, jumping, throwing events
- Aquatics: swimming skills and water safety

SHAPE Standards: 1 (Motor skills & movement patterns), 2 (Concepts, strategies & tactics), 3 (Fitness development), 4 (Cooperation, respect & sportsmanship)

Related College Majors & Career Pathways:

College Majors: Kinesiology • Exercise Science • Sports Medicine • Physical Therapy • Occupational Therapy • Sports Psychology • Nutrition & Dietetics • Public Health • Recreation Management • Coaching • Physical Education • Fitness and Wellness Management • Pre-Medicine • Biomedical Sciences • Human Biology

Multidisciplinary Fields: These courses support pathways in biomechanics, human performance, sports technology, and health sciences, providing an excellent foundation for careers connecting movement science, health, and leadership.

SHAPE America Standards: For complete documentation, visit www.shapeamerica.org | All courses based on National PE Standards for US Diploma program

ELECTIVE COURSE INFORMATION

Expressive Arts Department - Visual Arts

Building Creative Skills & Artistic Expression

National Core Arts Standards: All Visual Arts courses align with National Core Arts Standards to develop artistically literate individuals who understand art as communication, express thoughts and feelings through visual media, and appreciate the social and cultural impact of the arts throughout history and contemporary life.

1

Creating

2

Presenting

3

Responding

4

Connecting

Art and Design I

Grades 9-11

Prerequisite: None

Course Overview:

Comprehensive overview of historical and contemporary art. Learn to see art as communication that expresses thoughts and feelings through images and words.

What You'll Create:

- 2-D Art: Drawing, painting, printmaking, photography, mixed media
- 3-D Art: Sculpture, environmental art, installation art
- Various styles, techniques, media, and tools

Art and Design II

Grades 10-12

Prerequisite: Art and Design I with A or B

Course Focus:

Develop personal work using traditional and non-traditional materials. Investigate contemporary art ideas through theme-based projects.

What You'll Learn:

- Expanded Elements and Principles of Design
- 2-D and 3-D project series
- Critical analysis of contemporary culture through art

Pre-AP Art and Design III

PRE-AP

Grades 11-12

Prerequisites: Art and Design I and II with A or B + Teacher recommendation

OR B+ minimum in Digital Art & Design I & II + Teacher recommendation

Advanced Studio Work & AP Preparation:

Enhance artistic abilities using critical thinking and problem-solving. Produce body of work demonstrating personal approach. Explore drawing and 2-D design in greater depth. Introduce media, processes, artists, and art criticism. Create at least 5 pieces for AP Portfolio.

Portfolio Development:

- Sketchbook and preliminary assignments
- Advanced Elements and Principles of Design
- Focus on technique, skills, creative processes
- Preparation for AP Studio Art exam

Digital Art & Design I

Grades 9-11

Prerequisite: None | **Required:** Laptop with Adobe Photoshop

Course Focus:

Cultivate artistic abilities and technological aptitude. Focus on computer and digital camera technology for digital print and online media creation.

What You'll Learn:

- Design original works using digital techniques
- Critically analyze digital imagery
- Develop digital visual communication skills
- Equal balance of technical skill and creativity

Digital Art & Design II

Grades 10-12

Prerequisite: Digital Art & Design I with A or B | **Required:** Laptop with Adobe Photoshop

Intermediate Digital Imaging:

Further artistic abilities and technological aptitude beyond basics. Move students beyond fundamental digital techniques.

Advanced Skills:

- Create original works using variety of digital media
- Further develop digital visual communication
- Preparation for Visual Arts or Digital Media industry

ELECTIVE COURSE INFORMATION

Expressive Arts: Visual Arts Department

Building Creative Skills & Artistic Expression

National Core Arts Standards: All Visual Arts courses align with National Core Arts Standards to develop artistically literate individuals who understand art as communication, express thoughts and feelings through visual media, and appreciate the social and cultural impact of the arts throughout history and contemporary life.

1

Creating

2

Presenting

3

Responding

4

Connecting

AP Studio Art

AP COURSE

Grade 12

Prerequisites: B+ minimum in Pre-AP Art + Teacher recommendation

Portfolio Options - Students Select:

2-D Design Portfolio: Advanced understanding of Elements and Principles of 2-D Design. Develop Sustained Investigation topic and produce 15 artworks. Submit 5 selected works showcasing best work.

3-D Design Portfolio: Explore design issues through depth, space, volume, and surface using sculptural processes. Create portfolio addressing design principles in 3-dimensional work.

Drawing Portfolio: Emphasizes expressive and experimental mark-making addressing broad range of drawing issues and media (line quality, light/shadow, form rendering). Create portfolio of 24 pieces addressing Breadth, Concentration, and Quality.

All Portfolios:

- College-level work for seriously motivated students
- Demonstrate mastery of concept, composition, execution
- Portfolio submitted to College Board
- Judged by national college and university art instructors

Photography

Grades 11-12

Prerequisites: None | **Required:** Laptop with Adobe Photoshop + digital camera

Course Focus:

Experience creative and technical aspects of photography. Generate portfolio suitable for website presentation or university application.

What You'll Learn:

- Photojournalism and portrait photography
- Wide range of photographic themes
- Photographic theory
- Adobe Photoshop editing and manipulation
- Creative and enhancement techniques

Sculpture

Grades 11-12

Prerequisite: None

3-Dimensional Art:

Comprehensive overview of historical and contemporary 3-D art. Develop sculptural ideas through exploration of materials and techniques.

What You'll Create:

- Sculptural forms using various styles and techniques
- Functional objects and mixed-media 3-D works
- Exploration of diverse materials and media

Related College Majors & Career Pathways:

College Majors: Fine Arts • Graphic Design • Photography • Sculpture • Art History • Art Education • Studio Art • Digital Arts • Illustration • Animation • Industrial Design • Interior Design • Architecture • Museum Studies • Art Therapy • Visual Communications • Digital Media • Game Design

Career Pathways: Professional Artist • Art Teacher • Museum Curator • Art Director • Graphic Designer • Photographer • Sculptor • Illustrator • Art Therapist • Gallery Owner • Set Designer • Art Restoration Specialist • Creative Director • Digital Media Designer • UX/UI Designer • Video Game Artist

National Core Arts Standards: For complete documentation, visit www.nationalartsstandards.org | All courses develop artistic literacy through Creating, Presenting, Responding, and Connecting

ELECTIVE COURSE INFORMATION

Expressive Arts Department - Performing Arts

Theatre • Choir • Instrumental Music

National Core Arts Standards: All Performing Arts courses align with National Core Arts Standards to develop artistically literate individuals who understand performing arts as communication, express thoughts and feelings through performance, and appreciate the social and cultural impact of the performing arts throughout history and contemporary life.

1

Creating

2

Performing

3

Responding

4

Connecting

Theatre I

Grades 9-11

Prerequisite: None

Course Components:

Acting & Plays: Hands-on experience with extracts and play scripts introducing character creation and development. Focus on acting technique with opportunities to approach directing.

Theatre History & Development: Practical experience from Ancient Greek Tragedy through Theatre of the Oppressed. Research and written assignments consolidate practical work.

Performance Requirements:

Students perform publicly at least three times during the course.

Theatre II

Grades 10-12

Prerequisite: Theatre I with A or B

Performance Ensemble:

Create and build performance ensemble. Select published material and devise original theatrical pieces. Production process in students' hands under expert guidance.

Student Responsibilities:

- Set design and costume design
- Lighting design and sound design
- Publicity and marketing
- Amalgamation of all elements into public performance

Students perform publicly frequently during the course.

Theatre Design & Technology

Grades 9-11

Prerequisite: None

Requirements: Attending production rehearsals and performances required

Technical Theatre Production:

Comprehensive understanding of technical aspects focusing on dramaturgy, design, construction, and operation of theatrical elements.

Skills Development:

- Scenic, lighting, and sound design
- Costume and properties elements
- Technical skills and problem-solving
- Creative thinking and collaboration

Women's or Men's Ensemble (Choir I)

Grades 9-12

Prerequisite: None

Requirements: Purchase choral uniform • Rehearsing and performing outside school time required

Course Focus:

Performance-based class with mandatory participation in scheduled concerts and events as critical component. Group opportunities to perform styles ranging from musical theatre to rock to classical.

What You'll Learn:

- Vocal technique and music literacy development
- Sight-reading and performance skills
- Musical interpretation with historical and cultural context
- Self-discipline, teamwork, and accountability

ELECTIVE COURSE INFORMATION

Expressive Arts Department - Performing Arts

Theatre • Choir • Instrumental Music

National Core Arts Standards: All Performing Arts courses align with National Core Arts Standards to develop artistically literate individuals who understand performing arts as communication, express thoughts and feelings through performance, and appreciate the social and cultural impact of the performing arts throughout history and contemporary life.

1

Creating

2

Performing

3

Responding

4

Connecting

Concert Choir (II, III, IV)

Grades 10-12

Prerequisites: Women's or Men's Ensemble with A or B + Instructor approval | **Note:** Honors designation for Level III and IV only

Requirements: Purchase choral uniform • Rehearsing and performing outside school time required

Advanced Performance-Based Course:

Performance-based class with mandatory participation in scheduled concerts and events. More rigorous expectations for performance assessment and advanced literature.

What You'll Learn:

- Advanced vocal technique and music literacy
- Sight-reading and advanced performance skills through daily rehearsal
- Musical interpretation: historical and cultural context of pieces
- Self-discipline, teamwork, and accountability in high-quality ensemble
- Small group, large group, and solo performance opportunities

Instrumental Music

Grades 9-12

Prerequisite: Instructor approval required

Performance-Based Course:

For intermediate and advanced musicians. Refine technical and musical skills through ensemble and solo work in creating, performing, responding, and connecting.

Course Components:

- **Performance:** Rehearse and perform diverse repertoire with mandatory concert participation
- **Creation:** Explore improvisation, arrangement, and composition
- **Response:** Analyze musical works for historical and cultural context
- **Connection:** Understand relationships between music, culture, and history

Related College Majors & Career Pathways:

College Majors: Theatre Arts • Musical Theatre • Acting • Directing • Technical Theatre • Stage Management • Music • Music Education • Voice/Vocal Performance • Choral Conducting • Music Theory • Music Composition • Instrumental Performance • Sound Engineering • Theatre Design • Dramatic Arts • Performance Studies • Arts Administration

Career Pathways: Actor • Director • Stage Manager • Theatre Designer • Lighting/Sound Designer • Costume Designer • Set Designer • Professional Singer • Choir Director • Music Teacher • Voice Coach • Musician • Composer • Music Producer • Arts Administrator • Event Coordinator • Theatre Critic • Dramaturge • Casting Director

National Core Arts Standards: For complete documentation, visit www.nationalartsstandards.org | All courses develop artistic literacy through Creating, Performing, Responding, and Connecting

ELECTIVE COURSE INFORMATION

Computer Technologies Department

Multimedia • Digital Animations • AP Computer Science

Preparing for the Digital Future: Computer Technologies courses develop creativity, technical skills, and problem-solving abilities essential for success in the modern world. From multimedia design to 3D animation and computer science, our programs prepare students for exciting careers in technology and creative industries.

ISTE Standards for Students & CSTA K-12 Computer Science Standards

All Computer Technologies courses at MES Cairo align with ISTE (International Society for Technology in Education) and CSTA (Computer Science Teachers Association) standards, which emphasize digital citizenship, computational thinking, creativity, and innovation—preparing students for success in our technology-driven world.



Empowered Learner



Digital Citizen



Knowledge Constructor



Innovative Designer



Computational Thinker



Creative Communicator



Global Collaborator

Multimedia

Grades 9-12

Perfect for Students Who:

- Enjoy creative expression, designing, and storytelling
- Are interested in technology and digital tools
- Want to develop communication skills for the digital world
- Are considering careers in creative or tech industries

Career Pathways:

Web Design • Graphic Design • Video Production • Digital Marketing • Content Creation

Digital Animations I

FINE ARTS

Grades 9-12

What You'll Learn:

- Create 3D models using modeling software
- Apply textures, colors, and materials for realism
- Compose and light scenes to create mood
- Rig and animate models with keyframes

Career Opportunities:

Character Animator • 3D Animator • Stop-Motion Animator • Game Developer
• 3D Modeler • Environment Artist • Visual Effects Artist • Architectural Visualization

Related Majors:

Animation • Computer Graphics • Game Design • Visual Effects • Fine Arts

ELECTIVE COURSE INFORMATION

Computer Technologies Department

Multimedia • Digital Animations • AP Computer Science

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Empowered Learner



Digital Citizen



Knowledge Constructor



Innovative Designer



Computational Thinker



Creative Communicator



Global Collaborator

Digital Animations II

FINE ARTS

Grades 10-12

Prerequisite: Digital Animations I

Building upon Digital Animations I skills to create more complex and sophisticated 3D scenes and worlds.

Advanced Career Pathways:

All opportunities from Digital Animations I, PLUS:

Technical Director (oversee technical aspects) • Animation Supervisor (lead animator teams) • Pipeline TD (develop animation production systems)

Related Majors:

Animation • Computer Graphics • Game Design • Visual Effects • Fine Arts • Computer Science (computer graphics/game development focus)

AP Computer Science Principles

Grades 9-12

Prerequisites: Algebra I with B+ or better • Strong foundation in algebraic concepts, function notation, and problem-solving • Ability to use Cartesian (x, y) coordinate systems • NO prior programming experience required!

Course Topics:

- Programming fundamentals and computational thinking
- Data analysis and representation
- Internet and cybersecurity principles
- Impact of computing on society and global issues
- Algorithm development and problem-solving strategies

Future Opportunities:

Opens doors to exciting careers in technology, research, and innovation across virtually all industries

Valuable for These College Majors:

Computer Science • Engineering • Information Technology • Mathematics • Business • Data Science • Social Sciences • and many more!

Why Computer Technologies? These courses develop critical 21st-century skills including creativity, technical proficiency, problem-solving, and digital literacy—essential for success in our digital world.

ELECTIVE COURSE INFORMATION

Computer Technologies Department

NEW for 2026-2027: AP Cybersecurity

Preparing for the Digital Future: Computer Technologies courses develop creativity, technical skills, and problem-solving abilities essential for success in the modern world. From multimedia design to 3D animation and computer science, our programs prepare students for exciting careers in technology and creative industries.

ISTE Standards for Students & CSTA K-12 Computer Science Standards

All Computer Technologies courses at MES Cairo align with ISTE (International Society for Technology in Education) and CSTA (Computer Science Teachers Association) standards, which emphasize digital citizenship, computational thinking, creativity, and innovation—preparing students for success in our technology-driven world.



Empowered Learner



Digital Citizen



Knowledge Constructor



Innovative Designer



Computational Thinker



Creative Communicator



Global Collaborator

AP Cybersecurity

AP COURSE

Grades 10-12

Prerequisites: Basic computer skills (comfort with fundamental computer terms and software) • Foundational algebra (strong mathematical and logical reasoning skills) • Willingness to "learn by doing" through problem-based instruction • NO prior cybersecurity experience required!

Course Overview:

AP Cybersecurity is a broad introduction to the field of cybersecurity that aligns closely with a standard first-year college introductory cybersecurity course. Students explore how to protect individuals, organizations, and society from cyber threats through hands-on, career-connected instruction.

What You'll Learn:

- Common threats, vulnerabilities, and how they create risk
- Risk management strategies and defense-in-depth approaches
- Securing physical spaces, computer networks, and devices
- Protecting applications and data through cryptography and access controls
- Detection measures and incident response across multiple domains
- Impact of cybersecurity on individuals, organizations, and societies

Course Units:

- Unit 1: Introduction to Security (social engineering, AI attacks and defense)
- Unit 2: Securing Spaces (physical security controls and monitoring)
- Unit 3: Securing Networks (firewalls, segmentation, wireless security)
- Unit 4: Securing Devices (authentication, malware protection, detection)
- Unit 5: Securing Applications and Data (cryptography, access controls)

Career Pathways & Future Opportunities:

Career Opportunities: Security Analyst • Network Security Engineer • Cybersecurity Consultant • Penetration Tester • Security Operations Center (SOC) Analyst • Incident Response Specialist • Security Architect • Cryptographer • Digital Forensics Analyst • Chief Information Security Officer (CISO)

Valuable for These College Majors:

Cybersecurity • Computer Science • Information Technology • Information Systems Security • Computer Engineering • Network Administration • Digital Forensics • Risk Management • Criminal Justice (Cybercrime) • Business Administration (Information Security) • and many more technology-related fields!

Why AP Cybersecurity? This course prepares students for high-demand careers in cybersecurity while earning college credit. With hands-on learning and real-world scenarios, students develop critical skills to protect digital infrastructure and data in our increasingly connected world. The course aligns with industry standards and prepares students for cybersecurity certifications and careers.

Learning Development Department (LDD)

Supporting All Students to Reach Their Full Potential

Our Mission: The Secondary Learning Development Department recognizes that students learn at different rates. We ensure all students have equal access to high-quality education through differentiation, scaffolding, and organizational support for students with special educational needs (Grades 7-10).

Who Qualifies?

- Documented learning differences (dyslexia, dysgraphia, dyscalculia, ADHD)
- Processing difficulties
- Language-based learning needs
- Other diagnosed exceptionalities

Identified through: Psychoeducational assessments, MAP data, teacher referrals, parent requests

IEP & 504 Plans

IEP (Individual Education Plan): Customized plan for students with learning differences. Reviewed 3 times/year with parents and students.

504 Plan: Accommodations for students with temporary/permanent medical or physical impairments affecting education.

Documentation Needed

- Current psychoeducational evaluation (within 3 years)
- Diagnostic reports from qualified professionals
- Previous IEP/504 (if applicable)
- Medical documentation (for 504)

Note: All documentation confidential

LDD Support Services



Co-Teaching

In-class support in English, Math, Science



1:1 Support

Individual check-ins during breaks



Accommodations

Extended time, separate setting, assistive tech



Skills Development

Organization, time management, self-advocacy

Gifted & Talented (G&T) Program

MES Cairo identifies and supports students with exceptional abilities through:

- Multiple criteria: MAP scores, teacher nominations, portfolio reviews
- In-class differentiation and extension activities
- Invitation-only G&T After-School Activities (ASAs)
- Dedicated G&T Google Classroom with advanced resources
- Opportunities for acceleration, independent study, mentorship

Contact LDD if you believe your child demonstrates exceptional ability.

Parent Partnership

- Attend IEP/504 meetings (3x/year)
- Communicate with LDD staff regularly
- Support accommodations at home
- Access Learning Hub online resources

Transition & Exit

Grade 10: Transition planning for Grade 11

Exit: When support no longer needed (with team agreement)

Frequently Asked Questions

Q: Will LDD support affect my child's grades?

A: No. Accommodations level the playing field but don't lower standards.

Q: Will colleges see LDD support?

A: No. IEPs and 504 Plans are not on transcripts sent to universities.

Q: How do I request an evaluation?

A: Contact Ms. Mona Hanno or your child's Dean of Students.

Confidentiality: All LDD information is strictly confidential and shared only with staff working directly with the student. IEPs and 504 Plans are NOT shared with colleges.

Contact Us

Ms. Mona Hanno

Secondary Learning Development
Department

mhanno@mescairo.com

For inquiries, contact administrative officers listed at the front of this booklet.

GUIDE TO HIGH SCHOOL COURSE LEVELS: AN ACADEMIC LADDER



COLLEGE PREP (CP)

Definition:

Standard classes providing foundational skills required for two- or four-year college entry after graduation.

Pace & Workload:

Moderate pace with standard homework assignments and regular testing schedules.

GPA Weight:

Usually unweighted. Standard 4.0 Scale



Primary Goal:

Build a solid, baseline academic foundation in core subjects (Math, Science, English).



HONORS (Advanced Track)

Definition:

Accelerated, in-depth versions of College Prep classes covering subjects faster with greater depth.

Pace & Workload:

Faster pace featuring challenging assignments, independent projects, and critical thinking requirements.

GPA Weight:

Often weighted. e.g., 4.5 Scale



Primary Goal:

Challenge high-performing students demonstrate capability for rigorous work to college admissions.



PRE-AP (College Board)

Official grade-level courses by the College Board designed to build foundational reasoning and analytical skills.

Pace & Workload:

Structured and supportive; focuses on skill scaffolding rather than just heavy assignment volume.

GPA Weight:

Varies by school; often weighted similarly to Honors courses.



Primary Goal:

Specifically prepare students for AP rigors via evidence-based writing & multi-step problem solving.



AP COURSES (Advanced Placement)

Official introductory college-level high school courses following a strict national curriculum by College Board.

Pace & Workload:

Rigorous, demanding, and fast-paced; concludes with a standardized national AP Exam in May.

GPA Weight:

Weighted grade scale. e.g., 4.5 or 5.0 Scale



Primary Goal:

Earn college credit or advanced placement with a score of 3 or higher on the standardized AP Exam.

STRATEGIC LADDER PROGRESSION

Build on your strengths. Start with CP or Pre-AP. Advance to Honors.
Take AP as your subject mastery and study habits improve.
Seek balance and avoid academic burnout.

Course Classifications

AMERICAN SECTION · PROGRAM OF STUDIES 2026 TO 2027

AP Courses by Level of Demand

Every AP course is college level. The three levels show how much preparation, math, and content load a course demands, so students can plan a sequence that builds.

How each course was placed

Prerequisite depth

1: B+ in current course · 2: specific Honors or Pre-AP course · 3: prior AP or concurrent calculus (MES Program of Studies)

Math demand

1: little or none · 2: algebra and data analysis central · 3: calculus required

Content and exam demand

1: more manageable · 2: moderate · 3: difficult · 4: very difficult (Research.com difficulty tiers)

Introductory AP: 3 or 4 points

Intermediate AP: 5 or 6 points

Advanced AP: 7 to 10 points

9 COURSES

Introductory AP

Recommended as a first AP. Open entry or one Honors prerequisite; little math.

AP Computer Science Principles [G9 to 12](#) [IB](#) 3

Through course project plus exam

AP Comparative Government [G11/12](#) [IB](#) 3

B+ in current Social Studies; HoF recommendation

AP Seminar (English II) [G10](#) 4

B+ in English I Honors or Pre-AP English I

AP Human Geography [G10](#) 4

B+ in current Social Studies

AP Cybersecurity [G10 to 12](#) 4*

Computer Technologies elective

AP Art and Design [G12](#) 4

Portfolio; after Pre-AP Art (Art III)

AP Psychology [G11/12](#) 4

B+ in current Social Studies

AP Art History [G11/12](#) 4*

HoF recommendation

AP Business with Personal Finance [G11/12](#) 4*

Project based; AP exam not yet available

8 COURSES

Intermediate AP

Builds on a subject sequence. Heavier content load or algebra at the center.

AP Environmental Science [G11/12](#) [IB](#) 5

B+ in Honors Biology

AP Microeconomics [G11/12](#) [IB](#) 5*

B+ in Social Studies; PSAT Math 390

AP Macroeconomics [G11/12](#) [IB](#) 5*

B+ in Social Studies; PSAT Math 390

AP World History [G11/12](#) 5

B+ in current Social Studies

AP Precalculus [G11](#) 6*

B+ in Algebra II Honors; PSAT Math 540

AP Statistics [G11/12](#) 6

B+ in Algebra II Honors; PSAT Math 540

AP English Language [G11](#) 6

After AP Seminar or English II Honors

AP Biology [G11/12](#) 6

B+ in Pre-AP or Honors Chemistry

6 COURSES

Advanced AP

Highest demand. Depends on a prior AP, calculus, or dense quantitative work.

AP Physics 1 [G11/12](#) [IB](#) 7

B+ in Pre-AP or Honors Chemistry

AP English Literature [G12](#) 7

After AP English Language or English III Honors

AP Chemistry [G11/12](#) 8

B+ in Pre-AP or Honors Chemistry

AP Calculus AB [G12](#) [IB](#) 9*

B+ in AP Precalculus; PSAT Math 540

AP Calculus BC [G12](#) [IB](#) 10

B+ in AP Precalculus; PSAT Math 540

AP Physics C [G11/12](#) [IB](#) 10

Physics or AP Physics 1; calculus taken concurrently

[IB](#) Section shared with an IB Diploma Programme course.

* Not rated by Research.com; content and exam demand set by MES (moderate by default, difficult for AP Calculus AB).

Pass rates were not used to rank courses. They reflect who sits the exam: AP Calculus BC shows a higher national pass rate than AP Calculus AB because only the strongest math students take it (College Board 2025 data).

MODERN ENGLISH SCHOOL CAIRO



Modern English School Cairo is a co-educational school catering to students aged 3 1/2 to 18 years. Starting with the Comprehensive Early Years Programme in the Foundation Section, the National Curriculum of England is followed throughout the primary school. Arabic and Religious Studies are taught from Year 1, with Arabic as a Foreign Language offered to non-Arabic speakers.

Secondary Education at MES Cairo provides students with a choice of British or American Curriculum (from Year/Grade 7). Students then continue to study in their chosen section, gaining qualifications in either IGCSE, AS, and A levels or the American High School Diploma (including AP courses). Towards the end of Year/Grade 10, all students may apply to join the two-year International Baccalaureate Diploma Programme (IBDP) prior to gaining places at universities both nationally and internationally.



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