AMERICAN INTERNATIONAL SCHOOL IN EGYPT

AIS MAIN CAMPUS

Course Description Catalog

High School

2023 - 2024

an Esol Education school

AMERICAN INTERNATIONAL SCHOOL IN EGYPT

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PROFILE OF AN AISE GRADUATE

AMERICAN INTERNATIONAL SCHOOL IN EGYPT

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Message from the High School Leadership

Dear Students and Parents,

This booklet has been created to help you plan out your course of study in the high school at AIS Main. Everything from graduation requirements to course descriptions can be found in this document and we encourage you to be open minded when looking at all of the course options. These are important years as college opportunities depend both on the program of courses you choose and the grades you earn. It is really important that you plan your academic future carefully while also remembering to choose courses that match your personal interests and strengths or that challenge you to learn outside of your comfort zone. Be balanced in your selections so that you remain well rounded and grow to exemplify the Portrait of an AISE Graduate.

Choosing courses should be exciting as you think about your next year in high school but it can also be a challenging process so please take the time to discuss your choices with your parents, teachers, and counselor.

Sincerely;

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Message from the Counseling Office

Your course selection while in high school will be important as you plan for your future at university and with your career. Most universities will have prerequisite courses that you will be required to take in high school in order to be accepted into your desired major, so please consider this when choosing your classes. Also, most universities want to see that you have challenged yourself while in high school by taking rigorous courses. We advise you to choose classes that will best prepare you for university and for our IB Program. The full IB Diploma is the suggested program should you want to study in Canada, the UK, or Europe.

Please be sure to check the AIS graduation requirements so that you are on track with your academic program. The choice of which class the student will attend, and the instructor of this class, is entirely the responsibility of the school and the counseling department. We will not make any changes to a student's schedule based on preference for teacher or a preference for a certain class section.

If you have any questions about this process please contact the counseling department at any time.

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AISE School Mission Statement

The American International School in Egypt (AISE) provides a comprehensive and rigorous American and international education that fosters informed and engaged local, regional and global citizenship. We inspire students to be lifelong learners who contribute positively within a diverse and changing world.

American High School Diploma (Graduation Requirements)

The American International School in Egypt (AISE) requires a minimum of 26 high school units of credit taken in eight semesters in grades 9-12.The courses listed below are required. A class which meets the equivalent of four periods per eight day cycle for one academic year earns one credit.

Required Credits

English	4 credits
Mathematics	4 credits
Science *(Biology is required)*	4 credits
Social Studies	4 credits
World Language (Arabic, French, Spanish)	4 credits
Physical Education/Health	1 credit
Fine Arts (Band, Choir, Theater, Visual Arts, Creative Writing, Culinary Arts)	1 credit

Choose 4 additional credits to reach the minimum graduation requirement of 26

Additional Graduation Requirements

The AIS mission, Profile of a Graduate, and vision of an AIS student collectively set out our goals for educating AIS students. Based upon that vision and the belief that AIS students should make the world a better place, all students are expected to fulfill the graduation requirements of completing 25 hours of CAS each year that they are enrolled in AIS High School.

American Diploma Program of Studies

English Program of Studies

Grade 9 English

Required

Grade 9 English is a mandatory high school English course. Students identify and explain literary terms in their own writing and in their analysis of significant literary works. Students meet increased requirements for research and use print, electronic databases, online resources, and MLA style to cite reference sources. Students also distinguish between reliable and questionable Internet sources. Students read and analyze a wide variety of literary genres such as short stories, novels, plays and epics. Students will read *Romeo and Juliet*, *The Odyssey* and mythology. In addition, students demonstrate correct use of language, spelling, and mechanics by applying grammatical conventions in both writing and speaking. By the end of Grade 9 English, students should be confident in writing 600-800 word essays.

Grade 10 English

Required

Grade 10 English is a mandatory high school English course focusing on non-European world literature. Tenth-grade students read and analyze literary texts from a variety of cultures such as the Middle East, Asia, Africa and Latin America. Students also study the important work of authors, poets, and playwrights of various historical periods and critique their works, using analysis to improve writing skills. Students continue to build research skills by crediting sources and presenting information in correct manuscript (MLA) format appropriate for content. Grade 10 English students write or deliver increasingly sophisticated research reports. Knowledge of Standard English

conventions including grammar and mechanics of writing is expanded as the student presents, writes, and edits materials, applying the conventions of language. By the end of grade 10, students should be able to write essays of 1,000 - 1,200 words in length.

Grade 10 Honors English
Graded on IB scale

Prerequisite:
An A or B in Grade 9 English is required or approval from the Grade 9 teacher

In **Grade 10 Honors English**, students meet the same standards as those of Grade 10 English; however, students examine and analyze as well as evaluate a greater variety of literature and demonstrate an ability to make use of techniques of literary criticism. In addition, Grade 10 Honors English students read more complex texts including both contemporary and classical literary selections from a variety of cultures such as the Middle East, Asia, Africa and Latin America. Grade 10 Honors students are expected to demonstrate greater independent initiative when reading texts and expressing ideas in class discussions and assignments. Honors courses require greater mastery in terms of critical reading, thinking, and written analysis. By the end of grade 10, students should be able to write essays of 1,000 - 1,200 words in length.

Grade 11 English Required

Grade 11 English is a mandatory high school English course. In grade 11, students focus on analyzing the historical genres and literary traditions of American literature. The survey of both classic and contemporary American literature enhances the
student's appreciation for the major themes and characterizations, which are reflective of the history and culture in American literature. Students are able to make and analyze informative and persuasive oral presentations, with attention to the accuracy of evidence and the effectiveness of delivery. Grammar development continues throughout the course with the application of rules for sentence formation, usage, spelling, and mechanics. The student develops informative and persuasive compositions by locating, evaluating, synthesizing, and citing applicable information with careful attention to organization and accuracy. By the end of Grade 11 English, students should be comfortable in writing 1,000- 1,500-word essays, depending on the audience and purpose for the specific piece of writing.

Grade 12 English

Required

Grade 12 English is the final mandatory high school English course, which focuses on British and European literature. Students read and analyze classics such as *Beowulf* and *Macbeth*. Twelfth-grade students also use organizational skills, audience awareness,

appropriate vocabulary and grammar, and both verbal and nonverbal presentation skills to plan and deliver effective oral presentations. Writing includes the production of expository papers, which are organized logically and contain clear and accurate ideas supported by evidence. Students demonstrate advanced knowledge of grammatical conventions through writing, editing, and speaking. By the end of Grade 12 English, students should be comfortable writing a 1,500-2,000-word research paper using MLA format.

Mathematics Program of Studies

Integrated Mathematics I

Prerequisite: Mathematics 8

Note: This course is part of the new mathematics curriculum at AISE. The curriculum will be rolled out over three years.

The course is the first course in Common Core Integrated Mathematics alignment. It is for Grade 9 students that studied Mathematics 8 in Grade 8. The course focuses on the following topics:

- Numbers and Quantities: Reasoning with units to solve problems.
- Algebra: Graphing linear and exponential equations; solving one variable linear equations and inequalities; modelling with linear equations and inequalities; solving systems of two linear equations.
- Functions: Introduction to domain and range, function notation and evaluation, transformations of linear and exponential functions, interpretation of parameters in linear and exponential functions.
- Geometry: Definitions of angles, circles, and lines; congruent and similar triangles, constructing geometric shapes; using linear functions in geometric problems.
- Statistics and probability: Analysis of scatter plots including correlation coefficient, and distinguishing between correlation and causation.

Integrated Mathematics II

Integrated Mathematics II is the second course in the High School Integrated Math series. The course focuses on increasing students' complete mathematical understanding as they work with:

- Algebra: Algebraic operations, Indices, Sets and Venn Diagrams, Algebraic Expansion, Factorization, Laws of Algebra, Radical, Equations and problem solving.
- Geometry: Coordinate Geometry, Congruence and Similarity and Pythagoras.
- Statistics: Probability, types of data, Standard deviation and the normal Distribution.

Integrated Mathematics III

Prerequisite:
Integrated Mathematics II

Integrated Mathematics III is the final course in the High School Integrated Math series. With this course, students further explore quadratic functions and extend learning to polynomial functions. Students must have a graphing calculator. The course will include the following topics:

- Algebra: Indices, Sets and Venn Diagrams, Algebraic Expansion and Factorization, Radicals and surds, System of Equations, Exponential functions and Logarithms, vectors and problem solving.
- Geometry: Congruence and Similarity and Pythagoras' theorem.
- Trigonometry: Trigonometric ratios, the area of triangle, the sine rule and the cosine rule.
- Statistics: Probability, types of data, box-and-whisker plots.

Pre-Calculus

Prerequisite:
Integrated Mathematics III

Students enrolled in **Pre-Calculus** are assumed to have mastered Integrated Math III concepts (review of linear and quadratic functions, inequalities, systems of equations and graphs, and polynomial, rational, exponential and logarithmic functions) and have some exposure to trigonometry. Pre-Calculus develops students' understanding of algebraic and transcendental functions, finite and infinite sequences and series, matrices, vectors, and probability. The content of this course provides appropriate preparation for a calculus course.

Graphing calculators, computers, and other appropriate technology tools will be used to assist in teaching and learning. Graphing utilities enhance the understanding of realistic applications through modeling and aid in the investigation of functions and their inverses. Graphing calculators also provide a powerful tool for solving and verifying equations and inequalities.
At the level of Pre-Calculus, students apply problem-solving skills to justifying the steps in simplifying and graphing functions and solving equations.

Required Materials
Graphing Calculator

Business Mathematics

Grade 11-12

Prerequisite: Integrated Mathematics II

This course is constructed to develop the knowledge and skills necessary to solve arithmetic problems commonly found in real life business situations. Algebraic concepts, such as system of equations, quadratic equations, ratios, and growth & decay are applied to the business model. The student is introduced to central tendency and standard deviation and how it applies in the business world. In semester 2 accounts and finance is covered. This includes, but not limited to, sources of finance, investment appraisal, working capital, balance sheets, and ratio analysis. After completion of the Business Mathematics course the student should have developed the skills necessary to solve complex mathematical problems within a business context.

Required Materials
Graphing Calculator

Calculus

Prerequisite: Precalculus

Students enrolled in **Calculus** are presented with the same level of depth and rigor as entry-level college and university calculus courses. This course is intended for students who have a thorough knowledge of analytic geometry and elementary functions in addition to algebra, geometry, and trigonometry. The Calculus course outlines a complete curriculum in one-variable calculus. Calculus is a widely applied area of mathematics and involves an intrinsic theory. Students mastering this content will be exposed to both aspects of the subject. Decisions may have to be made with regard to topics because of the time factor required to cover all topics in-depth.

Required Materials
Graphing Calculator

Statistics

Prerequisite: Integrated Mathematics II

The purpose of **Statistics** is to present basic concepts and techniques for collecting and analyzing data, drawing conclusions, and making predictions.
Applications may be drawn from a wide variety of disciplines ranging from the social sciences of psychology and sociology to education, allied health fields, business, economics, engineering, the humanities, the physical sciences, journalism, communications, and liberal arts. Students should be able to design an experiment, collect appropriate

data, select and use statistical techniques to analyze the data, and develop and evaluate inferences based on the data.

Required Materials
Graphing Calculator

Science Program of Studies

Biology

Required:
Grade 9

Biology is a mandatory course for all ninth grade students. Students enrolled in Biology focus on the study of living organisms and their environments. In addition, students study topics that include cellular functions and structures at the molecular level, introductory biochemistry, DNA, RNA, cellular respiration, photosynthesis and genetics. Students also explore topics such as viral replication, biotechnology, genetic engineering, ethics and stem cell research and the human body.

Physical Science

Required:
Grade 10,

Physical Science is an introduction to the conceptual foundations of both Physics and Chemistry. This course is designed to make students familiar with each of these disciplines. Students will be studying motion, work, force, matter and energy in Physics. In Chemistry, students will be studying how atoms interact to form various substances, as well as the periodic table, physical and chemical changes, temperature and heat. This course will involve problem-solving as well as design, data collection and analysis during experimentation. Students will learn to write formal lab reports.

Physics

Elective: Grade 11-12

This course will follow the IB

Physics is a class intended for students who have a curiosity about the physical world in which they live. Emphasis is placed on the concepts of energy, energy transfer, and energy conservation. Topics will include astrophysics, motion, mechanics, heat, fluids, sound, light, electricity and magnetism, and nuclear physics. Physics students will develop their problem solving skills, though the emphasis will be on qualitative rather than fully quantitative solutions. Even so, a sound

curriculum standards	understanding of algebra and trigonometry is necessary to be successful in this class.

Chemistry **Elective:** Grade 11-12	**Chemistry** is a college preparatory course in which students study all major topics in chemistry, including the study of matter, energy, the structure of the atom, stoichiometry, gas behavior, thermodynamics, and acid/base theory. Students are expected to utilize their algebraic skills while examining mathematical properties of chemical reactions while gaining conceptual understandings of chemical systems. Students participate in a variety of labs and demonstrations to gain a thorough knowledge of chemistry. Chemistry emphasizes the qualitative and quantitative study of substances and the changes that occur in them, the use of safety procedures and sound lab techniques, and technology where feasible. Students are encouraged to use the language of chemistry, discuss problem-solving techniques, and communicate effectively in the lab and classroom.

Applied Science and Technology **Elective:** Grade 11-12	**Applied Science and Technology** is a uniquely designed course that focuses on a different topic each term. In Term 1, students will study Astronomy. During this time, we will discuss current space exploration, calculate distance and luminosity of stars, as well as compare astronomy to astrology. In Term 2, students will discover the Chemistry and Biology behind Forensic Science and Crime Scene Investigation. Term 3 focuses on Human Anatomy, specifically the muscle system, digestive system, reproductive system and pregnancy. In Term 4, students research world diseases through their investigation of Epidemiology. Throughout the year, we will discuss the uses of basic science and math skills in the "real world".

Environmental Systems and Societies IB **Elective:** Grade 11-12	Environmental systems and societies is grounded in both a scientific exploration of environmental systems in their structure and function, and in the exploration of cultural, economic, ethical, political and social interactions of societies with the environment. As a result of studying this course, students will become equipped with the ability to recognize and evaluate the impact of our complex system of societies on the natural world

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This is an open access IB course for all students

Social Studies Program of Studies

Global Perspectives

Required
Grade 9

Global Perspectives is a mandatory high school social studies course in grade nine. This course will explore diverse global issues in a historical context and trace their evolution to the present. The course will develop critical thinking skills through essays, group work, seminars, presentations and projects. The emphasis is on developing the ability to think critically about a range of global issues and their solutions. A variety of topics are covered that include but are not limited to: Inequality and Poverty, Trade and Aid, Language and Technology.

United States History

Required
Grade 10

United States History is a mandatory high school social studies course in grade ten. Students survey American history from the colonial period to the present with nation building as a guiding theme. Students will examine long-term changes in the American political and economic systems as well as cultural themes. Special emphasis is placed on the evolving role of theUnited States in world affairs, particularly during the 20th century.

Modern Egyptian Culture

Elective:
Grades 11-12

Modern Egyptian Culture is an elective social studies course for students in grade 11 or 12. Students are exposed to Egyptian literature, history, music, art, architecture, and intelligentsia. Students are also introduced to the works of various novelists, singers, cinematographers, poets, and thinkers whose works and ideas have shaped modern Egypt. The course gives students a short historical account of modern Egypt through reading literary works of Egyptian novelists and poets, watching films, listening to music and visiting art museums. Students learn to communicate their ideas both orally in class presentations and by writing analytical research essays. Moreover, students' evaluation skills are developed by comparing social, economic, and political conditions of the past with those which prevail today.

Economics

Elective:
Grades 11-12

Economics is the study of how individuals and nations make decisions about the use of resources in an effort to satisfy their wants and needs. Students in Economics discover how fundamental economic concepts directly relate to individuals, their community, the world, and the interrelated nature of the three through the use of simulations, projects, and other assignments. Additionally, students will conduct investigations to learn how the physical and human geography of a region can impact economic realities. Study includes the basic economic principles of micro-and macro-economics, international economics, comparative economic systems, measurement, and method.

Business Management

Elective:
Grade 11-12

Business Management is designed to develop students' knowledge and understanding of Business Management theories, as well as their ability to apply a range of business tools and techniques. Students learn to analyze, discuss and evaluate business activities at local, national and international levels.

Emphasis is placed on strategic decision-making as the course explores business organizational structure, internal and external environmental factors that impact a business, human resources and marketing. Through the study of these topics this course aims to develop skills necessary to prepare a student for a successful university career. These skills include the ability to: think critically; make ethically sound and well informed decisions; appreciate the pace, nature and significance of change; think strategically; and undertake long term planning, analysis and evaluation. Advanced development of these skills should build a solid foundation for students to begin the study of business at the university level. Recommended: This course should be taken in conjunction with Business Math and Business Computing.

Psychology

Elective:
Grades 11-12

Psychology is an elective course offered to students in Grades 11 and 12. This course extends the course offerings in the social sciences by helping to explain human behavior and mental processes for the purpose of applying this understanding to oneself and to society at large. The course is studied through various perspectives inclusive of, but not limited to, the following: biological, cognitive, and

sociocultural. Through analysis, examination, evaluation, and application, students will explore the breadth of psychology, while exploring research within the three levels of analysis. As students' progress through the course, new insights will be presented that will attempt to explain, through theoretical and practical applications, the complexity of human behavior.

Active Citizen

Elective:
Grades 11-12

Prerequisite:
Teacher interview

Active Citizen is a social studies elective course meant to develop students' sense of citizenship by encouraging them to take an active role in their community. Students have the chance to apply what they learn in the classroom in other classes to what is happening in Egypt today. Students are exposed to issues such as sustainability, consumption and energy use, media, health, poverty, environment, conflict, and citizenship, while also nurturing the skills needed to create their own solutions to these issues. Students cultivate skills through practical application in action plan development, evaluation, self-critique, analysis, identifying biases, research and writing, problem solving, critical thinking, creative expression, negotiating and mediating, and interpersonal skills, including communication and leadership. Students are expected to continuously volunteer with different organizations throughout the year and earn community service hours.

Arabic Program of Studies

Arabic 9-12

Required:
Unless exemption on file

Meets foreign language requirement

Arabic 9-12 courses are considered a preparation for students who plan to enter one of the private or public universities within the Republic of Egypt, and comply with the requirements of the Ministry of Education. Such preparation culminates in studentswriting the Thannawia Amma Exam as a way of qualifying for university entrance.

Each course is composed of integrated units to develop all language learning skills. Each course includes analytical study of Arabic literature, both modern and classical, introduces students to more advanced grammatical and linguistic rules, and gives students the opportunity to become involved in mock exam writing.

Arabic as a ForeignLanguage (AFL) Meets foreign language requirement	There are 4 levels of **Arabic as a Foreign Language (AFL).** Students in these courses are non-native speakers and may be admitted to the appropriate level based on a placement test as well as previous knowledge of Arabic. **AFL I**: Students engage in conversational Arabic and begin to write in Arabic. **AFL II:** Students must have either AFL I or the equivalent. Students continue to build their proficiency in reading, writing, and speaking Arabic. **AFL III:** This course includes advanced reading and writing as well as lectures in special topics. At the end of the advanced course, students should be able to communicate with ease and clarity with native speakers. **AFL IV:** This course is designed specifically for students who are from an Arabic-speaking background, but are exempted from studying Arabic by the Egyptian Ministry of Education. Students in this class are expected to be fluent in spoken and written Arabic. Students are expected to exchange and support opinions on more complex topics in Arabic. They comprehend spoken and written texts from a variety of authentic sources as well as produce compositions containing well-developed ideas on various topics.

World Languages Program of Studies

Spanish I **Elective:** Grade 9-11	**Spanish I** focuses on students beginning to develop their ability to communicate in Spanish and their understanding of the culture of Spanish-speaking countries through speaking, listening, reading and writing. Students will learn to communicate in real-life contexts about topics that are meaningful to them. Rather than isolating grammar in a separate strand, it is integrated into instruction according to the vocabulary and structures needed in the various situations in which students are required to function.

Spanish II **Elective:** Grade 9-12 **Prerequisite:** Spanish I or placement test	In **Spanish II**, students continue to develop their proficiency in reading, listening, speaking and writing. They are able to understand oral and written short messages in Spanish and are able to make simple oral and written presentation on topics studied in class. They continue to focus on communicating about their immediate daily life activities.
Spanish III **Prerequisite:** Spanish II or placement test	In **Spanish III,** students continue to develop their proficiency in reading, listening, speaking and writing. They are able to interact with other speakers of Spanish. They also can use more complex structures in Spanish on a variety of topics moving gradually from concrete to more abstract concepts.
Spanish IV **Prerequisite:** Spanish III or placement test	In **Spanish IV,** students are able to exchange and support opinions on more complex topics in Spanish. They comprehend spoken and written texts from a variety of authentic sources, as well as produce compositions containing well-developed ideas on various topics. They are able to compare and contrast cultural elements of Spanish-speaking countries with their own.
French I **Elective:** Grades 9-11	**French I** focuses on students beginning to develop their ability to communicate in French and their understanding of the culture of francophone countries through speaking, listening, reading and writing. Students will learn to communicate in real-life contexts about topics that are meaningful to them. Rather than isolating grammar in a separate strand, it is integrated into instruction according to the vocabulary and structures needed in the various situations in which students are required to function.
French II **Elective:** Grades 9-12 **Prerequisite:**	In **French II** students continue to develop their proficiency in reading, listening, speaking and writing. They are able to understand oral and written short messages in French and are able to make simple oral and written presentation on topics studied in class. They continue to focus on communicating about their immediate daily life activities.

French I or placement test

French III

Elective:
Grades 9-12

Prerequisite:
French II or placement test

In **French III** students continue to develop their proficiency in reading, listening, speaking and writing. They are able to interact with other speakers of French. They also can use more complex structures in French on a variety of topics moving gradually from concrete to more abstract concepts.

French IV

Prerequisite:
French III or placement test

In **French IV** students are able to exchange and support opinions on more complex topics in French. They comprehend spoken and written texts from a variety of authentic sources as well as produce compositions containing well-developed ideas on various topics. They also are able to compare and contrast cultural elements of francophone countries with their own.

Performing Arts Program of Studies

Advanced Band

Elective:
Grades 9-12

Prerequisite:
Audition

Fee: 600 EGP (200 EGP refund if instrument returned in good condition)

Advanced Band is open to wind players and percussionists only. Classroom activities are designed to develop elements of musicianship including tone production, technical skills, intonation, music reading skills, listening skills, analyzing music, and integration of other applicable disciplines such as sight-reading and correct responses to a conductor's suggestions. Students study a varied repertoire of developmentally appropriate concert band literature. There is periodic classroom assessment to monitor student progress. Private lessons are strongly encouraged but not required. Practicing at home is expected. Students must have previous band experience.

HS Choir **Elective:** Grades 9-12 **Prerequisite:** Audition	**HS Choir** is the high school level ensemble of the AISE HS Choral Program. Students will learn a broad range of choral repertoire and perform on several occasions throughout the year. The students will work on basic vocal technique, warm-ups, sight reading, and ear training exercises to perform a vast array of musical styles from classical to pop, to jazz and gospel. Some songs will be sung a cappella (which means no instruments and only voices will be heard) and all of the repertoire will be in three and four-part harmony. The singers will have opportunities to solo in class, as well as during performances. The Choir is an integral part of the AISE community and will perform for the school at a variety of events throughout the year. Previous choral experience is preferred but not required.
Theater Arts I **Elective:** Grades 9-12	In **Theatre Arts I**, students focus on mastering basic drama skills which are universally applicable. Through participation in drama exercises, improvisation and theatre games, students train in creativity and collaboration and develop the vocal, physical, and mental skills necessary to act in and to produce plays. Students may audition for the school play or musical as an outside extension of their studies in Theatre Arts I but students focus on the development of skills and the study of drama which includes a survey of theatre history.
Theater Arts II / III **Prerequisite:** Theater Arts I & audition or Theatre Arts II	In **Theatre Arts II & III,** students continue to perfect those drama skills introduced in Theatre Arts I, but assignments are of longer duration and greater sophistication. Students delve more deeply into the areas explored in Theatre Arts I and are involved in producing performances for the public. All areas of theater arts are explored, including live performance, show production, and set/makeup/costume design. Writing and in-class presentations are an integral part of the course, providing students with the chance to reflect on their work. Students are required to participate in the major Semester 1 all-school production AND in an in-class student-directed Spring production. *NOTE: A minimum of 30 hours after school rehearsal is required in semester 1.*

Physical Education Program of Studies

Physical Education & Health

Required:
Grade 9

Physical Education & Health is a mandatory physical education course. Students complete the transition from modified versions of movement forms to more complex applications across all types of physical activities — games, sports, dance, and recreational pursuits. They demonstrate the ability to use basic skills, strategies, and tactics. Students demonstrate more specialized knowledge in identifying and applying key movement concepts and principles. They assess and develop a personal physical activity program aimed at improving their skill performance. They apply their understanding of personal fitness to lifelong participation in physical activity. Students demonstrate independence of others in making choices, respect all others, avoid conflict, but are able to resolve it appropriately, and use elements of fair play and ethical behavior in physical activity settings. Students demonstrate the ability to plan for and to improve components of fitness and to achieve and maintain a health-enhancing level of personal fitness.

Sports Exercise Health Science

Elective:
Grades 10-12

Prerequisite:

Grade 9 PE

The **Exercise Science** course incorporates the disciplines of anatomy and physiology, biomechanics, psychology and nutrition, which are studied in the context of sport, exercise and health. A combination of syllabus content and experimental work provides the opportunity for students to acquire the knowledge and understanding necessary to apply scientific principles and analyse human performance. The course has strong international dimensions such as international sporting competition and the international bodies that regulate them. Ethical issues that exist within sporting competitions are considered. The comprehensive curriculum provides excellent preparation for university courses including those specifically related to Sport, Sports Science or Physical Education.

Sports Exercise Health Science 2

Elective:
Grades 10-12

Prerequisite:
SEHS 1

Approx Cost:

The **SEHS** curriculum at AISE is designed for students interested in the career of athletic training. The primary focus will include, but not be limited to, the following topics: The Sports Medicine Team, organization and administration, injury prevention, physical training and conditioning techniques, nutritional considerations, protective sports equipment, psychology of sports injury/illness, mechanisms and characteristics of sports trauma, tissue response to injury, human anatomy, exercise physiology, biomechanics, kinesiology, CPR/bloodborne pathogens, injury assessment and evaluation, environmental concerns, basic taping and bandaging, explanations of therapeutic modalities, basic exercise rehabilitation, drug

2,000 EGP	use/abuse in sports, and skin disorders. Students must pay an additional subsidy for the cost of certification programs to include CPR, Lifeguard, and Sports Injury.

Advanced Sports **Elective:** Grade 10-12 **Prerequisite:** Grade 9 PE	Advanced Sports introduces skills, strategies and rules associated with team and individual sports. This course will provide learning opportunities for students to develop knowledge related to fitness, physical competence, cognitive understanding and positive attitudes about physical activity that promotes a healthy and active lifestyle. The emphasis is on active participation, sportsmanship, teamwork,and developing organization skills.

Technology Program of Studies

Computers 9/10 **Elective:** Grades 9-10	**Computer 9/10** develops an understanding of the computer and its capabilities, while providing students with advanced skills in the following applications: The Microsoft Office Suite, Introduction to web design using HTML and Dreamweaver to provide a foundation in concepts of authoring for the world wide web; desktop publishing skills using MS Publisher; an introduction to computer graphics using Adobe Photoshop; By the end of the course the student is expected to: Define, discuss, and understand the concepts of word processing, spreadsheets, databases, presentations using PowerPoint, web authoring and design, computer graphic design and desktop publishing. Student will create and explore elements of the Microsoft Office Suite, Adobe Dreamweaver, Adobe Photoshop and MS Publisher

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Business Computing **Elective:** Grades 10-12	**Business Computing** is a course directed at students considering a career in business. An extensive study of Microsoft Office 2010 Applications will be undertaken; including: word processing using Microsoft Word and presentation skills using Microsoft PowerPoint. Concepts of consumer mathematics will be developed with spreadsheets and relational databases using Microsoft Excel and Microsoft Access.

By the end of the course the student is expected to:

- Define, discuss and understand the concepts of word processing, spreadsheets, relational databases and presentation skills.
- Define, discuss and understand consumer mathematics, business, finance and investment concepts
- Create and explore intermediate and some advanced elements of word processing, spreadsheets, relational databases and presentations

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Programming and Robotics

Elective:
Grades 10-12

Programming and Robots is designed to introduce the concepts of computer programming using Java, focusing on developing the student's analytical thinking and problem-solving skills and techniques. An extensive study of robotics will be undertaken using Carnegie Mellon Robotics Academy software in connection with Lego Mindstorms robotic equipment. The history of programming, the study of various programming languages and the impact they have on the development of technology in business, the Internet and computer games.

By the end of the course the student is expected to:

- Use the algorithmic approach to solve problems.
- Explore concepts of object-oriented programming.
- Use program applications and applets producing both text and graphic output, extensively.
- Solve problems that involve branching, looping, file input and output, and arrays
- Understand classes and methods supporting OOP.
- Translate solutions into computer programs using Java through the IDE JCreator.

It is strongly suggested that students wishing to take IB Computer Science take this Programming and Robotics course in the tenth grade.

Videography

Elective:
Grades 10-12

This **Videography** course aims to teach basic skills to aspiring movie producers. Some theory is involved, but this is mostly a practical course, meaning students will be required to have a device with video editing software. Most free applications will work, with IMovie being the most common.

The course will focus on various aspects of Filmmaking, including Marketing, Entertainment, and creating Informative and Educational Videos. We look at the roles of directors, actors, editors and audio specialists. We will also look at various forms of Videos, including Cartoons/ Stop Motion, Visual Effects and Presets.

Pending approval and depending on the student's level, they will enter an International Short Film competition towards the end of the course.

Requirements: A device (Laptop or Macbook) with local storage (harddrive) and video editing software the student is familiar with. Ipads will work if it has enough local storage.

Digital Graphic Design

Digital Graphic Design

Elective:
Grades 10-12

This course is an introduction to the processes of graphic design and digital art media. In this class students can expect to learn the basics of photo editing, 3D design, video editing, and animation production. Students can also expect to work with open source and subscription based software. All work within this course will be project based and each student can be expected to be graded individually.

Digital Media

Elective:
Grades 10-12

This course is an introduction to the processes and production techniques for developing digital media content. This is a team-oriented class, where students work together, to complete high quality video productions. You will be graded on individual work assignments and have the opportunity to shoot and edit video productions. Students will be required to demonstrate competency in camera operation, script writing, storyboarding, audio recording and video editing. Students will have the opportunity to create video projects on a variety of subjects. Digital video/audio production is accomplished using Apple Final Cut Pro X.

Visual Arts Program of Studies

Art I

Elective:
Grades 9-11

Art I is a multimedia experience and the first step into high school art. Students will work to master the Visual Art Vocabulary and develop a strong understanding of how to work through the Artistic Process. Utilizing the Elements of Art and Principles of Design, students will develop ideas from start to finish and will develop skills in a variety of mediums (drawing, painting, digital, 3D, printmaking, etc.) The course will include a focus on art history, art critique, and developing skills in writing about art. This class is a prerequisite to Art 2 and IB Visual Arts

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Art II

Prerequisite:
Art 1

Elective:
Grades 10-12

Students will continue developing and mastering their skills in the visual arts. By continuing to develop their fluency in the Visual Art Vocabulary, students will become better equipped to produce, refine, critique, and interpret visual artworks. This course takes a stronger focus on art history, writing about art, and working with more independence. Students will continue to develop skills in a variety of 2D and 3D mediums, including drawing, painting, printmaking, and 3D arts. Students will be provided with a sketchbook, but may choose to provide additional materials when desired.

Creative Writing
Elective:
Grades 10-12

This course is an introduction to the art of creative writing and publishing. Class participants will write and revise pieces in a number of genres including personal essays, short stories,poetry, and media, and we will also be dabbling in emerging alternative genres. The central focus of the class will be on various processes for creating, using mentor texts as inspiration and models, and learning from providing and listening to feedback. Most important, however, will be learning to engage in a supportive creative community that empowers individual curiosity, and artistic risk-taking.

Expands on level 1.

Creative Writing 2

Elective:
Grades 11-12

Electives

International Relations MUN

Elective: Grades 10-12

Additional costs required for conference attendance

International Relations/MUN is a two-part elective course, designed to provide an orientation to the activities of the United Nations and an understanding of the modalities of international diplomacy. Students review current events and pressing international issues, and study the basics of international law and some of the protocol and procedures in diplomacy. All studies will assist students in preparing for their role as a distinguished diplomat at the Model United Nations conferences that take place during the academic year.

International Relations/MUN also provides an introduction to the fascinating reality of today's complex, dynamic, and interconnected international system whose diverse actors include individuals, multinational corporations, nation-states, non-governmental organizations, and multilateral organizations such as the UN. In light of the demise of the Cold War, new patterns of relationships are now shaping this field and are examined. Globalization, terrorism, environmental conflicts, international human rights laws, child soldiers, child labor, landmines, and inter-state conflict are some of the diverse issues to be studied.

Culinary Art

Elective: Grades 11-12

The AIS Culinary Arts course focuses on developing students' understanding of the history of the culinary industry as well as examining proper identification, preparation, and evaluation of basic culinary ingredients. Students will learn the principles of cooking as well as proper cooking methods for different products. Basic math skills necessary for recipe conversions will be introduced as well as writing standard recipes. Students will put into practice concepts and knowledge discussed in the theory class. Students will learn basic cooking techniques, how to use a knife, a scale, and properly identify and use other kitchen equipment. The course focuses on sauces, soups, rice, pasta, vegetables, meats, fish and proteins, baking, and salads, as well as Latin-American, Japanese, and Italian cuisines. Appropriate plating and presentation methods will also be addressed.

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e-Journalism

This course is for the student who wants to create and work on the publication and distribution of the AISE Yearbook. Students will also assist with the student newspaper. This class will look at

Elective: Grade 11 - 12	composition, layout, design concepts, image use, writing concise body copy and captions. This course is great for those students who work well both independently and within a team environment. Students should feel connected to the school community (via clubs, sports, and regular attendance) and be ready to work with peers, teachers and administration for gathering media for the yearbook, newspaper and video news. Each student will be an influential part in decisions made about the creation and design of the yearbook.
Study Hall **Elective**: Grade 10 - 12	Study Hall provides students with a structured, scheduled academic environment providing the opportunity to complete assignments and access school resources. Students are assigned to an instructor for the class period and required to adhere to behavioral and academic expectations. This is a non-credit bearing course but will be recorded on the report card as meeting expectations or not meeting expectations.
9 CAS	This course is mandatory for grade 9 students beginning in August 2020. It will teach skills for success in highschool, introduce students to the concepts of service learning and social emotional wellbeing as well as provide focused study time.

IB (International Baccalaureate) Diploma

What is the Diploma Program?

The IB Diploma Program (DP) is an academically challenging and balanced program of education with final examinations that prepares students, aged 16 to 19, for success at university and life beyond. It has been designed to address the intellectual, social, emotional and physical well-being of students. The program, has gained recognition and respect from the world's leading universities

The Diploma Program prepares students for effective participation in a rapidly evolving and increasingly global society as they:

- develop physically, intellectually, emotionally and ethically
- acquire breadth and depth of knowledge and understanding, studying courses from 6 subject groups
- develop the skills and a positive attitude toward learning that will prepare them for higher education
- study at least two languages and increase understanding of cultures, including their own
- make connections across traditional academic disciplines and explore the nature of knowledge through the program's unique theory of knowledge course
- undertake in-depth research into an area of interest through the lens of one or more academic disciplines in the extended essay
- enhance their personal and interpersonal development through creativity, action and service

IBO Learner Profile

Inquirers
We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

Knowledgeable
We use critical and creative thinking skills to analyze and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

Thinkers
We use critical and creative thinking skills to analyze and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

Communicators
We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

Principled
We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

Open-minded
We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

Caring
We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

Risk-takers
We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

Balanced
We understand the importance of balancing different aspects of our lives intellectual, physical, and emotional to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

Reflective
We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses.

Diploma Program Subject Briefs*

GROUP 1: LANGUAGE & LITERATURE

Language A: literature SL & HL

Language A: language and literature SL & HL

GROUP 2: LANGUAGE ACQUISITION

Language B SL/HL

- Arabic B, offered as an HL course only
- French
- Spanish - Offered online through Pamoja

Language ab initio SL

- French
- Spanish

GROUP 3: INDIVIDUALS AND SOCIETIES

Business management SL/HL

Economics SL/HL

Environmental systems and societies SL

Global Politics SL/HL

Psychology SL & HL

GROUP 4: EXPERIMENTAL SCIENCES

Biology SL/HL

Chemistry SL/HL

Environmental systems and societies SL

Physics SL/HL

GROUP 5: MATHEMATICS

Mathematics: analysis and approaches SL & HL

Mathematics: applications and interpretation SL

GROUP 6: THE ARTS & ELECTIVES

Visual arts SL/HL

IB CORE REQUIREMENTS

Creativity, activity, service

Extended Essay

Theory of Knowledge

*** All links to course descriptions/subject briefs were obtained from the IBO website**
****All International Baccalaureate students enter into the diploma programme under the guidelines provided by IB and the school administrative team. Students acknowledge that the school will work to ensure students will have the same teacher for both years of the course, however, students understand that the content teacher may change from one year to the next.**

IB Analysis and Approaches SL **Prerequisite:** Integrated Mathematics III (Students that studied Integrated Mathematics II in Grade 10 can enroll under certain conditions)	**IB Analysis and Approaches SL** is one of the standard level mathematics courses offered in the IB programme. It is for students that enjoy mathematics at a theoretical level. The course duration is 2 years starting in Grade 11. The course focuses on: Numbers and Algebra: Sequences and series; financial applications of sequences and series; exponents and logarithms; formation of deductive proofs; the Binomial Theorem. Functions: Linear functions; domain and range; inverse functions; composite functions; quadratic functions; quadratic equations and inequalities; rational functions; exponential functions; graphical solutions of functions; transformations of functions. Geometry and trigonometry: Distance in three dimensions; volume and surface area of three dimensional shapes; angles between lines and planes; trigonometric ratios to solve right angle triangles; sine and cosine rules; area of general triangles; applications of trigonometry; radian measure of angles; length of arc; area of sector; the unit circle; trigonometric identities; trigonometric functions; solving trigonometric equations. Statistics and probability: Concepts of population and sample; discrete and continuous data; reliability of data; outliers; sampling techniques;

	presentation of data; measures of central tendency; measures of dispersion; linear regression; concepts of trial, outcome, equally likely, relative frequency, sample space, and event; finding probability of events; expected value; venn diagrams; sample space diagrams; tree diagrams; independent events; conditional probability; random variables; binomial distribution; normal distribution. Calculus: Derivatives of polynomials; derivative of trigonometric functions; derivatives of exponential functions; derivatives of logarithmic functions; chain rule; product rule; quotient rule; second derivatives; graphical interpretation of derivatives; tangents and normals; optimisation; modelling in kinematics; integrals of polynomials; integrals of trigonometric functions; integrals of reciprocal functions; integration by substitution; definite integration; area under curve, area between curves.
IB Applications and Interpretations SL **Prerequisite:** Integrated Mathematics II	**IB Applications and Interpretations SL** is one of the standard level courses offered in the IB programme. The course is less demanding than IB Analysis and Approaches SL. It is for students that enjoy the application of mathematical concepts. The course duration is 2 years. The course focuses on: Numbers and Algebra: Sequences and series; financial applications of sequences and series; exponents and logarithms; approximations and estimations; financial modelling; solving systems of equations using technology; solving polynomial equations using technology. Functions: Linear functions; domain and range; inverse functions; interpretation of graphs; modelling with linear quadratic, exponential, cubic, and trigonometric functions. Geometry and trigonometry: Distance in three dimensions; volume and surface area of three dimensional shapes; angles between lines and planes; trigonometric ratios to solve right angle triangles; sine and cosine rules; area of general triangles; applications of trigonometry; the unit circle; perpendicular bisectors; Voronoi diagrams. Statistics and probability: Concepts of population and sample; discrete and continuous data; reliability of data; outliers; sampling techniques; presentation of data; measures of central tendency; measures of dispersion; linear regression; concepts of trial, outcome, equally likely, relative frequency, sample space, and event; finding probability of events; expected value; venn diagrams; sample space diagrams; tree diagrams; independent events; conditional probability; random variables; binomial distribution; normal distribution; Spearman's rank correlation coefficient; hypothesis testing; chi-squared tests; t-tests.

	Calculus: Derivatives of polynomials; graphical interpretation of derivatives; tangents and normals; optimisation; integrals of polynomials; integrals of trigonometric functions; definite integration; area under curve, area between curves; trapezoidal rule.
IB Analysis and Approaches HL **Prerequisite:** Integrated Mathematics III Extended (Students that studied Integrated Mathematics III in Grade 10 can enrol under certain conditions)	**IB Analysis and Approaches HL** is one of the higher level mathematics courses offered in the IB programme. It is for students that enjoy mathematics at a theoretical level. The course duration is 2 years starting in Grade 11. The course focuses on: Numbers and Algebra: Sequences and series; financial applications of sequences and series; exponents and logarithms; formation of deductive proofs; the Binomial Theorem; counting principles; partial fractions; complex numbers; powers and roots of complex numbers; proof by mathematical induction; proof by contradiction; disprove by example; systems of equations. Functions: Linear functions; domain and range; inverse functions; composite functions; quadratic functions; quadratic equations and inequalities; rational functions; exponential functions; graphical solutions of functions; transformations of functions; polynomial functions; remainder theorem; rational functions with quadratic components; symmetries of functions; formulating inverse functions; solving general inequalities; further transformations. Geometry and trigonometry: Distance in three dimensions; volume and surface area of three dimensional shapes; angles between lines and planes; trigonometric ratios to solve right angle triangles; sine and cosine rules; area of general triangles; applications of trigonometry; radian measure of angles; length of arc; area of sector; the unit circle; trigonometric identities; trigonometric functions; solving trigonometric equations; further trigonometric identities; inverse trigonometric functions; compound angle identities; transformations of trigonometric functions; vector operations; vector representation of lines and planes. Statistics and probability: Concepts of population and sample; discrete and continuous data; reliability of data; outliers; sampling techniques; presentation of data; measures of central tendency; measures of dispersion; linear regression; concepts of trial, outcome, equally likely, relative frequency, sample space, and event; finding probability of events; expected value; venn diagrams; sample space diagrams; tree diagrams; independent events; conditional probability; random variables; binomial distribution; normal distribution; Baye's Theorem;

variance; continuous random variables; transformations of random variables.
Calculus: Derivatives of polynomials; derivative of trigonometric functions; derivatives of exponential functions; derivatives of logarithmic functions; chain rule; product rule; quotient rule; second derivatives; graphical interpretation of derivatives; tangents and normals; optimisation; modelling in kinematics; integrals of polynomials; integrals of trigonometric functions; integrals of reciprocal functions; integration by substitution; definite integration; area under curve; area between curves; definition of the derivative; higher order derivatives; evaluation of limits; implicit differentiation; related rates of change; derivatives of further trigonometric functions; derivatives of further logarithmic functions; derivatives of inverse trigonometric functions; integrations with partial fractions; integration by parts; vertical integration; volumes of revolution; first order differential equations; euler's method; separation of variables; substitution method; integrating factor; Taylor Series.

IB Applications and Interpretations HL

Prerequisite: Integrated Mathematics III Extended (Students that studied Integrated Mathematics III in Grade 10 can enrol under certain conditions)

IB Applications and Interpretations HL is one of the higher level courses offered in the IB programme. It is for students that enjoy the application of mathematical concepts. The course duration is 2 years.

The course focuses on:
Numbers and Algebra: Sequences and series; financial applications of sequences and series; exponents and logarithms; approximations and estimations; financial modelling; solving systems of equations using technology; solving polynomial equations using technology; logarithmic laws; rational exponents; infinite geometric series; complex numbers; summing trigonometric functions; geometric interpretation of complex numbers; matrix operations; solving system of equations using matrices; eigenvalues and eigenvectors.
Functions: Linear functions; domain and range; inverse functions; interpretation of graphs; modelling with linear quadratic, exponential, cubic, and trigonometric functions; composite functions; formulating inverse functions; transformations of functions; logarithmic, sinusoidal, logistic, and piecewise models; logarithmic scaling; interpretations of logarithmic graphs.
Geometry and trigonometry: Distance in three dimensions; volume and surface area of three dimensional shapes; angles between lines and planes; trigonometric ratios to solve right angle triangles; sine and cosine rules; area of general triangles; applications of trigonometry;

the unit circle; perpendicular bisectors; Voronoi diagrams; radian measure of angles; length of arc; area of sector; trigonometric identities; ambiguous case of sine rule; graphical solving of trigonometric equations; matrix representation of transformations; vector operations; line representation of vectors; kinematic applications of vectors; graph theory characteristics; sub graphs; trees; adjacency matrices; walks; adjacency tables; tree and cycle algorithms; eulerian trails and circuits; hamiltonian paths and cycles; minimum spanning tree algorithms; traveling salesman problem.
Statistics and probability: Concepts of population and sample; discrete and continuous data; reliability of data; outliers; sampling techniques; presentation of data; measures of central tendency; measures of dispersion; linear regression; concepts of trial, outcome, equally likely, relative frequency, sample space, and event; finding probability of events; expected value; venn diagrams; sample space diagrams; tree diagrams; independent events; conditional probability; random variables; binomial distribution; normal distribution; Spearman's rank correlation coefficient; hypothesis testing; chi-squared tests; t-tests; data collection methods; data analysis methods; data categorization; reliability and validity; non-linear regression; transformation of random variables; biased and unbiased estimates; combinations of normal random variables; central limit theorem; confidence intervals; poisson distribution; critical values and regions; proportion testing using binomial distribution; population mean tests using poisson distribution; Type I and II errors; transition matrices; Markov chains; steady state probabilities.
Calculus: Derivatives of polynomials; graphical interpretation of derivatives; tangents and normals; optimisation; integrals of polynomials; integrals of trigonometric functions; definite integration; area under curve, area between curves; trapezoidal rule; derivatives of trigonometric functions; chain rule; product rule; related rates of change; second derivatives; integration by substitution; area between curves; volumes of revolution; kinematic modelling; modelling using differential equations; separation of variables; slope fields; euler's method for first and second order differential equations; numerical and graphical solution of a system of two differential equations.

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