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# Xavier Senior High School Course Descriptions

Students under the Xavier School Senior High School (XS-SHS) will go through a comprehensive academic program carefully designed to prepare them for university admission and college life.

Grades 11 and 12 students may choose to work towards the full International Baccalaureate Diploma Program (IBDP), pursue the Xavier High School Academic Program (XS-SHSP) or take selected courses for IB Certificate combined with most courses of the XS-SHSP. Following the IBDP Framework, the Xavier School Senior High School Academic Program will be composed of core subject areas representing major disciplines and other subjects that are integral in the Xavier education. Since one of the main goals of the
XS-SHSP is to prepare the students for higher education and eventually employment, each student will be given the option to choose which course from each subject area he wants to enroll in, in accordance with his preferred career.

To keep the Jesuit and Catholic character of Xavier School, CLE will continue to be a required subject of the SHS Academic Program. This is to ensure that Ignatian values and practices are imbibed by the students and strengthened throughout high school. Furthermore, to preserve the school's Chinese-Filipino identity, no student can graduate from SHS without taking Chinese and Filipino classes.

Also embedded in the various courses of the XS-SHSP are the Department of Education Core and Common Subjects. Research work is also integrated in the different subjects offered at XS-SHS. Most importantly, subjects that will be offered in the XS-SHSP are in accordance with the college readiness standards from CHED, which sets the skills and competencies needed of K-12 graduates who wish to pursue higher education.

## Academic Strands

Xavier School offers Accountancy, Business, and Management (ABM), Humanities and Social Science (HUMSS),

General Academic Strand (GAS), and Science, Technology, Engineering, and Mathematics (STEM) strands as proposed by the Department of Education. However, the courses that Xavier School will offer under each strand slightly differ from the proposed courses of the Department of Education.

Please refer to the next page for a table of the subjects that a student under a certain strand may take.

| THE STRANDS AND COURSES AT A GLANCE | | | | |
|---|---|---|---|---|
| | **ABM** | **HUMSS** | **OAS** | **STEM-** |
| **English** | Media, Language, and Literature | l. English Literature<br>2. 1B English Literature | Media, Language, and Literature | English Literature<br>IB English Literature• |
| Mathematica | General Mathematics | General Mathematica | General Mathematics | Mathematics for STEM |
| Science | Choose one:<br>1. Biology<br>2. Chemistry<br>3. Physics | Choose one:<br>1. Biology<br>2. Chemistry<br>3. Physica | Choose one:<br>1. Biology<br>2. Chemistry<br>3. Physics | Choose one:<br>1. Biology<br>2. Chemistry<br>3. Physics |
| Social Science | Business Management | Choose one:<br>l. History<br>2. IB History•<br>3. IB Global Politics• | Choose one:<br>l. Business Management<br>2. Economics<br>3. History<br>4. 1B History4'<br>5. 1B Global Politics• | Choose one:<br>l. Business Management<br>2. Economics<br>3. History<br>4. 1B History4'<br>5. 1BGlobal Politics |
| Strand-Based Elective | Economics | Choose one<br>l. Visual Arts<br>2. 1B Visual Arts | Choose one:<br>l. Any Science not chosen<br>2. Any Social Science not chosen<br>3. 1B Computer Science•<br>4. 1BS. „rta Science• | Choose one:<br>l. Biology<br>2. Chemistry<br>3. Physic.a<br>4. 1B Computer Science•<br>5. 1BS. „rta Science• |
| Second Language | Choose *one:*<br>l. Filipino Utcraturc (with Chinese Modular)<br>2. Mandarin (with Filipino Modular, | Choose one:<br>l. Filipino Literature with Chinese Modular,<br>2. Mandarin !with Filipino Modular) | Choose one:<br>l. Filipino Literature (with Chinese Modular)<br>2. Mandarin (with Filipino **Modular!** | Choose one:<br>l. Filipino Literature (with Chinese Modular)<br>2. Mandarin (with Filipino **Modular!** |
| **CLE** | CLE | CLE | CLE | CLE |
| Computer | Computcr | Computcr | Computcr | Computer |
| **P E** | PE | PE | PE | PE |

*Students may only take ONE (1) IB Certificate Course, which may entail an additional Php 27,500 for 2 years.

**Students applying to the STEM strand will undergo screening based on their diagnostic test results, as well as their Grade 9 and 10 Math and Science grades.

# SUBJECT DESCRIPTIONS

## I. COMMUNICATION ARTS AND LITERATURE (English)

Courses under this area are designed to support academic study by developing a high social, aesthetic and cultural literacy, as well as effective communication skills.

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A. **Media, Language, & Literature**
Media, Language, and Literature will focus on issues on language and its use in mass communication and other text types. The studies in literature, on the other hand, will allow students to read and examine literary works from a variety of genres and cultures. Both studies in language and literature will require students to analyze and closely read fiction, non-fiction, and visual texts. In going through the writing process, their writing skills will be honed further by producing both academic and creative writing. Speeches and audio-visual presentations on language and literature will be prepared by the students to demonstrate their speaking skills.

B. **English Literature**
The Literature course is directed towards developing an understanding of the techniques involved in literary criticism. It also aims to enhance the students' ability to form independent literary judgments while developing an appreciation of literature as an expression of human creative thought. As an integral part of the course, students are asked to read works from a variety of genres (novel, drama, poetry), time periods (ancient, medieval, contemporary), and cultures (Afro-Asian, Anglo-American, and Latin American).

C. **IB English Language and Literature**
In this course, students study a wide range of literary and non-literary texts in a variety of media. By examining communicative acts across literary form and textual type alongside appropriate secondary readings, students will investigate the nature of language itself and the ways in which it shapes and is influenced by identity and culture. Approaches to study in the course are meant to be wide ranging and can include literary theory, sociolinguistics, media studies, and critical discourse analysis among others.

D. **IB English Literature**
Through the study of a wide range of literature, this subject encourages students to appreciate the artistry of literature and to develop an ability to reflect critically on their reading. Works are studied in their literary and cultural contexts, through close study of individual texts and passages, and by considering a range of critical approaches. Committed to intercultural understanding, this course does not limit the study of works to the products of one culture or the cultures covered by any one language. The study of works in translation is especially important in introducing students, through literature, to other cultural perspectives. The response to the study of literature is through oral and written communication, thus enabling students to develop and refine their command of language.

## II. MATHEMATICS

Courses in mathematics enable students to develop an understanding of mathematical concepts and skills for everyday life, to mentally compute number facts, and to visualize mathematical situations. Furthermore, the courses equip the students with the fundamentals of mathematical thinking – disciplined problem solving, logical reasoning, and pattern-seeking.

### A. General Mathematics

This General Mathematics course is a course designed to allow the student to experience and learn general Mathematics that will allow him to develop basic and intermediate skills necessary for college. It emphasizes on the acquisition of computational and analytical skills that will aid him in problem solving, modeling, reasoning and decision-making. Students who finish this course are well-prepared for courses in the social sciences, humanities, languages, and arts. In this course, the students will enable the students to exhibit mastery in performing mathematical operations, and processes and in applying and explaining concepts. Students will also learn to make mathematical connections and make meaning of the relationships between Mathematics and real life, and to be able to communicate their ideas confidently using the language of mathematics.

### B. Mathematics for STEM

In this course, Mathematics is considered both a specific body of knowledge and abstract ideas, as well as a useful tool that helps us understand the world in which we live. The course caters to students who have a working background of basic concepts in Arithmetic, Algebra, Geometry, Trigonometry, Statistics and Probability, and who plan to take mathematics as a major component of their university studies. While the focus is on introducing important mathematical concepts in a comprehensible and coherent way, the course also exposes the student to mathematical rigor in order to develop analytical and technical skills.

In this course, the students will work on mathematical exploration, providing opportunities to perform various mathematical activities, explore and communicate different mathematical ideas, and learn mathematics independently. This course will also enable the students to construct mathematical arguments using precise statements, logical deduction and inference, and by manipulating mathematical expressions. In addition, they will learn to investigate real-world and abstract situations by organizing and analyzing information, making conjectures, generalizing conclusions, and testing their validity. Students in this course will also translate real-world contexts into mathematics by constructing diagrams, graphs or tables and by writing methods, solutions, and conclusions using appropriate notation.

## III. SCIENCES

Courses in science enable the students to develop an understanding of a body of knowledge about an area of science, as well as promote experiential learning through the application and demonstration of skills and attitudes that are accompanied by a scientific way of investigating the world. Students engage in several authentic tasks that deepen their appreciation and understanding of science and the world.

### A. Chemistry

Chemistry is the study of the properties of matter, the changes it undergoes, and the energy changes that accompany those processes. The course includes the essential principles on atomic structure, nature of solutions, stoichiometry, bonding, thermochemistry and chemical kinetics. Part of the course will also introduce students to gas laws, equilibrium and concepts on fundamentals of organic chemistry. This course aims to provide students the skills in research, measurement and data processing that will help them explore the physical environment. It also aims to let students discover the connections of chemistry to other areas, such as medicine, biological science, environmental science, society and technology in the hope that students will be able to use the concepts for providing solutions to everyday problems.

**B. Physics**

Physics is the study of matter, energy, and the fundamental interactions that govern the natural world. This course explores core topics such as motion, forces, energy, momentum, waves, sound, light, electricity, and atomic and nuclear physics. Broader connections between matter and energy and their relevance to the universe, Earth, and human life will also be examined.

The course adopts a conceptual, mathematical, and hands-on approach. Students will engage in both guided and independent inquiry through lectures, collaborative activities, problem-solving tasks, laboratory experiments, and scientific investigations. By the end of the course, students are expected to develop a deeper understanding and appreciation of physics, along with critical thinking, collaboration, research and laboratory skills essential for addressing real-world challenges.

**C. Standard Biology**

The Senior High School Biology is a course designed to provide students an encounter of high level scientific study combined with practical, investigative laboratory skills. The course includes the biological principles of cell biology, molecular biology, genetics, evolution, human and plant physiology, taxonomy, and ecology. It also aims to let students discover the connections of biology to other areas, such as medicine, chemistry and environmental science to help them make better decisions. Learning activities in Biology include group discussions, lectures by experts in the field, film viewing, lab work, and field trips to ecological sites.The course, hopefully will inspire the students in considering a future career in the field of biology.

**IB Biology**

The study of life makes progress through not only advances in techniques, but also pattern recognition, controlled experiments and collaboration between scientists. Unifying themes provide frameworks for interpretation and help us make sense of the living world: Form and function, Unity and diversity, Continuity and change, and Interaction and interdependence are four of the themes around which the IB Biology course is constructed, although other frameworks are possible.

The scale of life in biology ranges from the molecules and cells of organisms to ecosystems and the biosphere. This way of considering complex systems as simpler components—an approach known as reductionism—makes systems more manageable to study. It is the foundation of controlled experiments and has thus enabled major discoveries, but it provides an incomplete view of life. At each level of biological organization, different properties exist. Living systems are based on interactions, interdependence and integration of components between all levels of biological organization. A student of biology should gain not only a conceptual understanding of the subject, but also an awareness of how biologists construct knowledge claims and the limitations of these methods.

**D. IB Sports, Exercise and Health Science**

SEHS is a human science driven by curiosity about what makes humankind flourish, both physically and mentally. Spanning multiple disciplines, it is the formal study of the impacts of physiology, biomechanics and psychology on human health and athletic performance. Its most prominent advances have occurred from the late 19th century onwards, in tandem with similar advances in other scientific and technological fields.

Like other DP sciences, SEHS is also an experimental science that combines academic study with the acquisition of practical and investigative skills. Students undertake practical

experimental investigations in both laboratory and field settings. This helps them to acquire the knowledge and understanding necessary to apply scientific principles to the critical analysis of humankind and its sporting endeavors.

**E. IB Computer Science**

The IBDP Computer Science course requires an understanding of the fundamental concepts of computational thinking, encompassing both theoretical and applied skills, as well as knowledge of how computers and other digital devices operate.

The course is designed to be engaging, accessible, inspiring, and rigorous. It should be able to draw on a wide spectrum of computing and real-world knowledge, enabling and empowering innovation, exploration, and the acquisition of further knowledge. Additionally, it should interact with and influence cultures, society, and how individuals and societies behave, raising ethical issues and being underpinned by computational thinking.

The students would be prompted to utilize computational thinking, therefore stimulating their abilities to think procedurally, logically, concurrently, abstractly, recursively, and think ahead. With this comes the development of computational solutions, which involves their abilities to identify a problem or unanswered question, design, prototype, and test a proposed solution. This requires the learners to liaise with clients to evaluate the success of the proposed solution and make recommendations for future developments.

## IV. SOCIAL SCIENCES

Courses under this area enable the students to develop a critical understanding of human behavior, attitudes, culture, and institutions. Students are required to develop and analyze theories about individuals and their relation to Society, with an aim to generate a greater appreciation for the diversity of the human world, as well as to foster a sense of resolve to help build a better world.

### A. Business Management

The Xavier Senior High School Business Management course is designed to provide students with an overview of business and entrepreneurship. The course will provide a good understanding of the different business theories and principles and the ability to apply these using appropriate models, frameworks and skills in the context of local and global markets. The course hopes to engage students in academic research that would allow them to gain more knowledge and appreciate local and international events. It also aims to enable students to explore the world of business and develop their management skills through activities which integrate economic, socio-cultural, and environmental sustainability in relation to its stakeholders.

### B. Economics

In this course, the students will develop an understanding of various economic terms, concepts, and issues that confront them as members of society. It aims to equip the students with the necessary skills that will enable them to analyze, critique, and evaluate different micro and macroeconomic frameworks. The students will learn supply-demand interactions in the market by constructing, analyzing, and interpreting basic and complex economic graphs. Furthermore, they will learn about the dynamics of a market economy, the producer-consumer interaction, and macroeconomic concepts including fiscal and monetary policy, and international trade and policy. The different economic topics and lessons will be tackled from both national and international perspectives. Students will explore how international trade creates both opportunities and challenges as well as the ongoing balance between market forces and government intervention, analyzing when markets operate efficiently and when policy intervention may be necessary to address market failures or promote social welfare.

### C. History

History is a discipline founded on source-based information acquisition and the interpretation, analysis, and contention of information towards a deeper, more nuanced historical truth. Students engaging in this course will be equipped with skills in documentary academic writing, including evidentiary argumentation, archival research methods, and comparative textual analysis.

To better transition into the knowledge and skill demands of history at the tertiary level, this class will also engage in a renewed study of contemporary Philippine History. This junior and senior-level course emphasizes the political, economic, and cultural developments of the Philippines from the early 20th century until the turn of the 21st century. Although chronological in approach, the course takes a deeper look at key moments in the development of national identity, and equal attention is devoted to the study of the Philippines' struggles towards industrialization, internationalization, and democratization.

By deepening their understanding and appreciation of the Filipino identity, Philippine institutions, and events in the Philippines, students may develop a deeper understanding of the historical context behind contemporary sociopolitical issues in the Philippines, and thereby make them more discerning, engaged, and active Filipino citizens.

### D. IB History

History is a dynamic, contested, evidence-based discipline that involves an exciting engagement with the past. It is a rigorous intellectual discipline, focused around key historical concepts such as change, causation and significance.

History is an exploratory subject that fosters a sense of inquiry. It is also an interpretive

discipline, allowing opportunity for engagement with multiple perspectives and a plurality of opinions. Studying history develops an understanding of the past, which leads to a deeper understanding of the nature of humans and of the world today.

The Diploma Programme (DP) history course is a world history course based on a comparative, multi-perspective approach to history and focused around key historical concepts such as change, causation and significance. It involves the study of a variety of types of history, including political, economic, social and cultural, encouraging students to think historically and to develop historical skills. In this way, the course involves a challenging and demanding critical exploration of the past.

The DP history course requires students to study and compare examples from different regions of the world, helping to foster international mindedness. Teachers have a great deal of freedom to choose relevant examples to explore with their students, helping to ensure that the course meets their students' needs and interests regardless of their location or context.

**E. IB Global Politics**

The 21st century is characterized by rapid change and increasing interconnectedness, impacting individuals and societies in unprecedented ways and creating complex global political challenges. Global politics is a course for students who want to understand more about how the world they live in works, what makes it change, or what prevents it from changing. The course draws on a variety of disciplinary traditions in the study of politics and international relations, and more broadly in the social sciences and humanities. Students build their knowledge and understanding by critically engaging with contemporary political issues and challenges that interest them.

The Diploma Programme global politics course explores fundamental political concepts such as power, equality, sustainability and peace in a range of contexts. It allows students to develop an understanding of the local, national, international and global dimensions of political activity and processes, as well as to explore political issues affecting their own lives. The course helps students to understand abstract political concepts by grounding them in real-world examples and case studies. It also invites comparison between such examples and case studies to ensure a wider and transnational perspective.

The scope of global politics extends over a wide range of topics and areas of study, many of which will find links with other subjects in the individuals and societies group. Students develop their understanding of political concepts and their knowledge of specific content by exploring and researching real-world case studies and examples.

## V. SECOND/MODERN LANGUAGES

Courses under this area are designed to ensure proficiency in a second language, which will help promote a sense of cultural diversity as well as a deeper appreciation for one's cultural heritage.

**A. Filipino Literature**

Filipino Literature provides an opportunity for students to continue to develop oral and written skills in their mother tongue. This encourages students to appreciate the beauty of literature, as well as to develop an ability to critically reflect on their reading. Works studied in their literary and cultural context and include works in translation from other cultural perspectives. Their research skills are also strengthened.

**B. Mandarin**

Mandarin is designed for students who have had previous experience in studying Mandarin. The main focus of the course is on the development of the four macro skills namely listening, speaking, reading, and writing. Development of these skills is done through the study of varied texts and topics in both written and spoken forms. Furthermore, through this course, students learn to communicate more effectively and accurately in a range of situations and contexts. Learning activities include reading Chinese texts, listening for comprehension, composition writing, and speech dialogues.

## VI. THE ARTS

The Arts promote creative problem-solving, deep appreciation of cultural diversity, and hone one's talent and skills.

### A. Visual Arts

The Senior High School Standard Program for Visual Arts aims to cultivate creative thinking and expand cultural appreciation through a holistic study of the arts—art and its production, art and its connection to society, and art and its appreciation. This course will enable students of all levels of artistic ability to experience and experiment with various media in the visual arts ranging from traditional to modern and digital. With an understanding of the visual elements and principles, and through the use of various creative strategies, students will learn to express their ideas visually. In addition, students will be offered a unique perspective into our world's rich and varied cultural heritage through the study of art history and the diverse and changing perspectives of art and aesthetics in relation to it.

Anchored on the vision that the visual arts education curriculum is shaped to enable and encourage students to engage in the creative, expressive, and responsive processes of the arts throughout their lives.

### B. IB Visual Arts

In this visual arts course, students learn how to create, communicate, and connect as artists.

As practising artists, students experiment with a variety of art-making forms and creative strategies, investigate and connect with past and contemporary artworks, and engage with the world and other people's diverse perspectives. By curating, sharing and exhibiting their artworks, students communicate with a variety of audiences. Inquiry and choice are at the heart of this course, allowing students to pursue their artistic intentions and to create with curiosity, empathy and resilience.

The course fosters creativity, communication, critical thinking and collaboration—skills essential in a variety of rapidly evolving fields and professions. Students learn that by making art they are empowered to engage, transform and emerge, both as individuals and as members of a community. These positive and creative approaches will stay with students after they complete the course, enriching any of their future pursuits.

## VII. OTHER REQUIRED XAVIER SCHOOL SUBJECTS

### A. Christian Living Education & Philosophy

This course is a synthesis curriculum given to the Senior High School students for two (2) semesters in the course of two years.

The course is divided into 4 modules: God Matters, Shades of Gray, Of New Things, and Mother Always Said. The 'God Matters' module aims to help students make sense of their questions about God, faith, and religion. It also focuses on critiquing the prevailing relativist attitude of people in our present generation in the light of faith and reason.

The 'Shades of Gray' module is on Christian Morality and discernment. In this module, students are led to examine the principles of Christian morality and see for themselves

how they are applicable to life and to current moral issues and why it actually makes sense to abide by these principles.

The third module is 'Of New Things'. The name came from the 1st Social Encyclical written by Pope Leo XIII, "Rerum Novarum". This module on Social Justice focuses on the dignity of the human person as an important ground in promoting preferential option for the poor and justice in general. Moreover, the students are given the opportunity to critique the current understanding and attitude towards work and development in light of the Church's teachings.

The last and fourth module is 'Mother Always Said'. Whereas our mothers always caution their children not to talk to strangers, this module encourages students to 'talk to strangers'. This is a module on INTERFAITH dialogue where the students learn how to engage in respectful dialogue with other students from around the globe about culture, faith, environment, etc., through video conference, in cooperation with the Face to Faith Program of the Tony Blair Faith Foundation.

This course also employs the philosophies and theories of knowledge and ways of knowing with the purpose of enabling our students to become more critical in arriving at and examining the moral quality of their choices and decisions.

B. **Technology**

Senior High School Computer Education is designed to equip students with essential digital skills and practical knowledge in both software and hardware-based technologies. The course begins with an introduction and discussion to the ethical use of Artificial Intelligence (AI) and the emerging technologies guided field of prompt engineering aligned with the policies and guidelines in Xavier School HS and . Students explore how language shapes AI outputs, understand the importance of responsible digital interactions, and learn to create meaningful content using various AI tools. This unit encourages students to think critically about how technology is developed and used in everyday life.

In the second part of the course, students engage in hands-on learning through physical computing and app development. Using Arduino microcontrollers and a variety of electronic components, students design and build interactive systems such as alarms, sensors, and simple robotics. They also explore mobile app design through user experience (UX) and user interface (UI) principles, culminating in the creation of functional apps using platforms like MIT App Inventor. Through these experiences, students develop practical skills in coding, system design, and digital creativity while solving real-world challenges.

C. **Physical Education & Health/Wellness and Movement**

The Physical Education course aims to provide each student with different opportunities and resources to achieve success in physical activities by offering a diverse program in a healthy and safe environment. It aims to develop in students a positive self-concept through physical experiences, proper attitude, and correct values to effectively interact with others and the environment. The course provides the students with activities that will help them develop muscular strength, flexibility, body composition, and cardiovascular endurance. Sports offerings include Football, Basketball, Table Tennis, Swimming, Chess, Tennis, Gym (Fitness).