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## Introduction

What makes Avenues unique is how we teach. In this course guide you will find distinguishing differences of an Avenues education—the learning experiences that define a student’s journey through Avenues Secondary Division. Our program gives students the skills they need to thrive in a world where emphasis is placed on what you can do with what you know. We believe it is the strongest possible response to a future that we cannot yet imagine, but for which we can prepare.

Students attending Avenues will gain access to a highly enriching and stimulating curriculum and co-curricular experience. In each grade, students are exposed to interdisciplinary experiences and studies. Here we combine the knowledge and curricular approach of two or more academic disciplines into one activity to examine a central experience, phenomena or real-world issue. By encouraging students to think across, rather than within, traditional fields of study, this approach invites them to practice the expansive thinking necessary to formulate innovative solutions to the world’s most pressing problems. Whenever possible, the intersections between subjects such as English, art and design, World Course and science are emphasized. Furthermore, intensive study in mathematics, Portuguese, Wellness and Movement along with High Intensity Practice in math and writing (HIP) round out the instructional core.

Because decision-making is an important part of our total learning process, during their secondary years, students are also afforded the opportunity to take elective courses. Teachers, deans, and parents or guardians can support students as they select the electives that best fit their talents, needs, interests and future goals.

The following course descriptions highlight the wide variety of learning opportunities in which Avenues students will engage. If you have any questions, please feel free to contact me or reach out directly to your child’s dean. We would be pleased to discuss with families a student’s specific learning need.

Sincerely,

John Ciallelo  
Head of Secondary Division  
Avenues São Paulo

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## Action Steps

1. **Review this Grade 11 Course Guide** for information on course offerings in both Semester 1 and Semester 2.
2. **Contact your dean** with any questions on how next year’s academic program connects to interests and post-secondary plans.
1. Students interested in enrolling in Mastery Workshop or Mastery: Entrepreneurship + Social Innovation **must complete the mandatory [Mastery Program Application](#) before the Monday, June 6th deadline**
3. **Select your preferred courses** on Tuesday, June 7th. The course selection process will occur on campus and students will receive more details in the upcoming days.

# Semester 1 Academic Program

Each 11th grade student will enroll in 4.0 academic credits in Semester 1 including the following three courses of study:

## **Course 1: Integrated Math 4**

- Semester-long course, 1 Period / day
- 1.0 credit earned at the end of the semester

Grade 11 students enroll in either Integrated Math 4G (General) or Integrated Math 4S (STEM) in Semester 1 according to the Math courses they intend to take throughout their remaining semesters at Avenues.

## **Course 2: Portuguese Language and Literature 11 -or- Academic Elective #1**

- Semester-long course, 1 Period / day
- 1.0 credit earned at the end of the semester

### Portuguese Language and Literature 11

Por meio de práticas centradas no aluno e da aprendizagem baseada em projetos interdisciplinares, o curso de Literatura e Língua Portuguesa da Avenues São Paulo tem como principais objetivos garantir que os estudantes apliquem as habilidades linguísticas de forma intencional ao terem contato com diferentes literaturas (brasileira, portuguesa e africana) e com meios de expressão variados. Desenvolvemos ferramentas para a formação de um olhar ético no contato com as novas tecnologias e com a cultura digital, além de oferecermos aos alunos recursos para que explorem a Língua Portuguesa em suas diferentes modalidades, com competência e clareza.

### Academic Elective

Depending on the elective schedule, some students will have their first of two G11 Academic Electives in Semester 1 and enroll in their requisite Portuguese Language and Literature 11 course in Semester 2. Reference this course guide for Grade 11 Elective options.

- **Note:** Most students will enroll in academic electives that take place in person on our campus with a teacher and São Paulo classmates. Beginning this year, students have the option to enroll in online Global Electives. Details on Global Electives are included at the end of this course guide.

## **Course 3: Futures Literacy Interdisciplinary Project**

- Yearlong course, 2 periods / day
- 4.0 credits earned at the end of the academic year

UNESCO describes Futures Literacy as both a "skill that allows people to better understand the role of the future in what they see and do" and an enhanced capability for "imagination...and ability to prepare, recover and invent as changes occur". With the goal of developing a space for students to build informed, flexible, and anticipatory competencies for the myriad potential futures, all Grade 11 students engage in a daily double block of Futures Literacy coursework. This program is co-taught, interdisciplinary, and provides students the opportunity to authentically engage with our world while building proficiency in the following areas:

- English and World Course Curriculum
  - Reading, writing, and literacy through immersive project-based study including texts affiliated with thematic content
  - Preparation for post-secondary communication and study
- Science and Art & Design Curriculum
  - Deepening skills and practices as well as content understanding
  - Projects driven by authentic, global-scale challenges + student autonomy in medium and final product



## Semester 1 Overview

Periods 1 and 2		Periods 3 and 4
Integrated Math 4G or 4S	Portuguese Lang. / Lit. 10 -or- Academic Elective #1	Futures Literacy Interdisciplinary Project



# Grade 11 Math Pathway Options

The Math course you take in Grade 11 is an important decision as it:

1. Connects to your post-Avenues goals.
2. Determines which Grade 12 Math course you will most likely take.

These Grade 11 Math Courses...	...prepare you for these Grade 12 Math Courses
Integrated Math 4G (General)	Functions, Probability, and Data Analysis (FPDA)* -or- Introduction to Calculus
	Statistics and Data Science* (Semester 2 Math Elective)
Integrated Math 4S** (STEM)	Calculus or Advanced Calculus

\* Both Functions, Probability and Data Analysis and Statistics and Data Science are Upper Grades Math courses designed for students who are interested in an alternative to Avenues' path to Calculus and those who are seeking to study not only statistics, but psychology, journalism and many other humanities-based courses of study.

- o Important Note
  - Many universities require applicants to have taken Calculus courses as a requisite for enrollment.
  - Thus, it is strongly recommended that all Grade 10 students speak with their deans before selecting their Grade 11 Math course.

\*\* Students hoping to take Calculus or Advanced Calculus should enroll in Integrated Math 4S to be best prepared.

- o While it is possible for an Integrated Math 4G student to enroll in Calculus or Advanced Calculus in Grade 12, this requires a significant amount of independent work over break.
- o Thus, it is important to consider which Grade 12 Math course you aim to take now, as a G10 student so you can determine the best pathway for Grades 11 and 12.



# Grade 11 Math Pathway Options

Select one of the following core G11 Math courses for Semester 1:

## **Integrated Math 4 G (General)**

Prerequisite: Completion of Integrated Math 3

This 11th grade math course starts the year with further complex problems with the area of regular polygons and quadrilaterals. There is a main focus at this point on right triangle trigonometry from a conceptual and applied perspective, and the special triangles that are integrated within. This course gives students opportunities to make deeper connections between geometric and algebraic approaches to solve math problems. A deep dive into circle properties and theorems then leads to Investigations into the application of fundamental geometry into the study of the volume of solids and the unit circle. Basic triangle trigonometry explorations are blended in problems of geometry. Students will also have opportunities to expand their math skills to explore the use of matrices, exponential functions and logarithms in real-life situations. Dynamic technology tools are frequently used to collect data, to estimate answers, to explore theorems or to visualize mathematical modeling.

## **Integrated Math 4 S (STEM)**

Prerequisite: Completion of Integrated Math 3G

This 11th grade math course is meant for students who have shown a strong interest in pursuing further study in STEM fields after Avenues and would need specific preparation for their work in college or university. The year continues IM3S with study of further complex problems of the area of regular polygons and quadrilaterals. There is a main focus at this point on right triangle trigonometry from a conceptual and applied perspective, and the special triangles that are integrated within. This course gives students opportunities to make deeper connections between geometric and algebraic approaches to solve math problems. A deep dive into circle properties and theorems then leads to Investigations into the application of fundamental geometry into the study of the volume of solids and the unit circle. Basic triangle trigonometry explorations are blended in problems of geometry. Students will also have opportunities to expand their math skills to explore the use of matrices, exponential functions and logarithms in real-life situations. If time permits, a broader study of functions occurs, including inverses, periodicity and general transformation. Dynamic technology tools are frequently used to collect data, to estimate answers, to explore theorems or to visualize mathematical modeling.



# Semester 2 Academic Program

All Grade 11 students will enroll in 4.0 credits of academic courses in Semester 2.

## **Course 2: Portuguese Language and Literature 11 -or- Academic Elective #1**

- Semester-long course
- 1 Period / day
- 1.0 credit earned at the end of the semester

### Note

- Students enrolled in Portuguese Language and Literature 11 in Semester 1 will take both Grade 11 Academic Electives in Semester 2.
- Students enrolled in their first Grade 11 Academic Elective in Semester 1 will take Portuguese Language and Literature 11 in Semester 2.

## **Course 3: Academic Elective #2**

- Semester-long course
- 1 Period / day
- 1.0 credit earned at the end of the semester

### Note

All Grade 11 students will take their second Academic Elective in Semester 2.

## **Course 3: Futures Literacy Interdisciplinary Project**

- Yearlong course
- 2 periods / day
- 4.0 credits earned at the end of the academic year

Futures Literacy continues into Semester 2 as a two-period double project block.

## Semester 2 Overview

Periods 1 and 2		Periods 3 and 4
Portuguese Lang ./ Lit. 11 -or- Academic Elective #1	Academic Elective #2	Futures Literacy Interdisciplinary Project



# 2022 - 2023 Academic Elective Options

## Avenues São Paulo Academic Electives (Live, In Person)

- Visual Arts and Design
  - Studio Art Seminar
  - Studio Art Workshop
- Design and Engineering
  - Design and Engineering Workshop
  - Creative Computation
- Performing Arts
  - Drama Studies
  - Music Theory and Practice: Instrumental (Intro -or- Intermediate)
  - Music Theory and Practice: Vocal (Intro -or- Intermediate)
- Humanities
  - World Literature: English
  - Advanced Writing in English -or- Portuguese
  - Journalism: Theory and Practice
  - Philosophy
  - Business Strategy
- Mathematics
  - Funções, Probabilidade, e Análise de Dados (FPAD)
  - Introduction to Calculus
  - Statistics -or- Statistics and Data Science
- Science
  - Advanced Chemistry
  - Advanced Biology
  - Advanced Physics (algebra-based)
  - Field Science Practicum
- World Course: Brazilian Social Studies and Geography
  - Advanced Humanities: People, Culture, Politics in the World
  - Advanced Humanities: People, Culture, Politics in Brazil
- Mastery
  - Mastery Workshop
  - Mastery: Entrepreneurship and Social Innovation

## Global Electives (Online)

- AI, Society, and the Future 1
- Astronomy
- Becoming Einstein
- Business Strategy
- Eastern Civilization
- Film and Animation
- Introduction to Coding and Computer Science
- Inventions that Changed the World
- Masterpieces of Antiquity
- Philosophy
- Psychology
- Secrets to a Powerful Memory
- Warriors, Queens, Intellectuals



## Avenues São Paulo Academic Electives (Live, In Person)

### **VISUAL ARTS AND DESIGN**

#### **Studio Art Seminar**

With a focus on hands-on art practices and both traditional and contemporary materials and processes, this semester-long course aims to explore the fundamentals of art. Students will immerse themselves in a routine of an authentic studio practice as they experiment with a wide variety of mediums, such as pencils, charcoal, ink, watercolor, gouache, acrylic, collage, among others, to investigate the elements of line, shape, textures, values and colors. The course will also include discussions of relevant works of art from past and present. Students will also actively engage in critique sessions of the work of their peers and guest artists will serve to inform, inspire, and provide fresh perspectives.

#### **Studio Art Workshop**

Studio Art workshop provides students the opportunity to dive deep into a particular aspect of the visual arts. Technical skill, self-critique, and collaboration are emphasized throughout the course.

In 2022-2023, Studio Art Workshop will center on the medium of picture books. With few or no words, their illustrations function as visual text. Throughout the elective, students will learn about visual communication and the art of illustration and, by the end of the semester, will produce a publishable picture book. This course is designed for students with a strong interest in illustration and storytelling. A wide variety of mediums such as pencils, pen and ink, printmaking, acrylics, pastels, charcoal, collage, and digital tools will be explored. Students will be exposed to countless inspiring examples of great illustration, which will provide the rich and diverse world of picture books, enriching their visual vocabulary and providing a methodology to transform written stories into visual ones.





## DESIGN AND ENGINEERING

### Design and Engineering Workshop

How can 21st century tools be utilized and combined to solve real-world problems in a sustainable, useful and unique way? This design and engineering elective asks students to assume the mindset of a designer/engineer to identify everyday problems in school, their own lives, or the lives of others that can be solved with a physical or digital product. They will research and analyze existing solutions, fabrication techniques, and materials and work both collaboratively and individually to plan, design, build and test new solutions. Students in this studio will be self-directed and expected to identify and learn the skills needed for their projects with the support of their teacher and fellow students. This course is constructed so that students with varied levels of experience can learn the new skills they individually need while building upon and advancing the skills and techniques they already have from previous experiences within and outside Avenues.

### Creative Computation

The program of this course aims to take a deep dive in the universe of computer science through the lens of arts and design. We will navigate through different software and hardware to 1) create interactive pieces of art, 2) design games that can be played physically, including those including sensors, and 3) rethink the use of new technologies to improve people's lives in different areas.

The course will be organized in 1) *coding challenges*, where new computer science concepts will be presented, discussed and deepened by the students, 2) *game design challenges* where students will apply their knowledge to build their own projects, and 3) *design challenges* where students will identify local and global problems and propose design solutions to meet these needs and challenges.



## PERFORMING ARTS

### Drama Studies

To operate well in the world we need to understand other people and different perspectives, whilst being able to effectively express who we are. Studying drama is an invitation to stretch how we think, feel, and communicate.

This practical workshop-based elective connects storytelling through drama across cultures. Working with classic texts, improvisation, and a variety of theater styles, students will expand their creativity, deepen their powers of empathy, and supercharge their public speaking. With a focus on learning by doing, there will be several opportunities to create, write, and perform; sharing what is produced with the Avenues community and beyond.

### Music Theory and Practice: Instrumental (Intro)

Prerequisite: None, but the desire to learn and develop

### Music Theory and Practice: Instrumental (Intermediate)

Prerequisite: Some experience with instrumental - either solo or group

This class meets in a workshop setting, providing musicians an environment in which to patiently develop technical mastery of their instruments through in-depth exploration of a wide variety of musical genres, including Brazilian music, American R&B, Afro pop, contemporary art music, indie rock, blues and jazz, in addition to music suggested by students themselves. The class focuses above all on nurturing the skills needed to play music by listening, singing and playing. While the elements of musical literacy are addressed, equal attention is paid to expression and creativity.

The ensemble is not limited to traditional symphonic band and string instruments but is open to all instruments including keyboards and guitars. (Keyboard players may use instruments provided by the school; guitarists should bring their own instruments to class.) Drummers are given the opportunity to work both on a full kit and with a variety of world percussion instruments. In addition, all ensemble members participate in Brazilian, African, and Afro-Caribbean drumming as an integral part of the ensemble's rhythmic development.

### Music Theory and Practice: Vocal (Intro)

Prerequisite: None, but the desire to learn and develop

### Music Theory and Practice: Vocal (Intermediate)

Prerequisite: Some experience with voice - either solo or choir practice

Each one of us has a unique voice that communicates our story and shows our personality. This program seeks to help students find their voice, develop their technique and express their true selves with artistry and confidence.

Both the Intro and Intermediate courses provide students distinct and complementary opportunities to grow as vocalists. At times, students will join ensembles and collectively learn how to collaborate musically. The repertoire will be varied and according to the students level and interest. At other moments, students will participate in masterclasses, selecting their own repertoire with the teacher's guidance to grow as vocalists through personalized techniques.



## **HUMANITIES**

*In the humanities, students move between World Course and language classes, yet their studies can originate from a single, integrated project, issue, study of phenomena or theme. By reading across a range of genres from historical texts to traditional literary texts, students come to appreciate a full understanding of literature in context.*

### **World Literature: English**

This course continues the development of students as readers, writers, speakers and listeners by providing opportunities to refine the skills introduced and advanced in previous courses. Our study will include a focus on various genres, especially as they inform and are informed by style and structure. Texts will continue to be drawn from those voices that encourage engagement with contemporary issues and will originate from global perspectives. Writing assignments will allow students to exercise their creativity as well as their analytical skills and may range from poetry and short stories to personal and analytical essays.

### **Advanced Writing in English**

This course explores language as an art form while asking what it means to be an artist whose medium is words. Through this elective, students will develop the habits of mind necessary to grow as creative writers. Students will read literature as writers, emulate points of craft, and experiment in prose and verse. In this workshop-centered course, all writing will be centered on an awareness of craft, structure, form, aesthetics—and to the practice of sharing generous and constructive peer feedback.

### **Advanced Writing in Portuguese**

The proposal of this elective course is to leverage Avenues students' reading and writing skills in Portuguese to the college level. It affords them the opportunity to deeply study literary works of universal literature and use them as an object to write an academic paper following the format expected by Brazilian universities. They will be able to recognise the structure of an argumentative paper (title, summary, keywords, introduction, development, conclusion and theoretical references) and apply it to their own original work. Via an inquiry-based approach, they will connect personal observations on a literary work to important issues of the contemporary world.

### **Journalism: Theory and Practice**

This course explores journalism as a force for communication, democracy and change. It asks how professional publications—newspapers and magazines and student publications act as public forums for expression and leading voices in the free and open discussion of ideas.

Students study journalistic principles and develop essential journalistic skills in research, inquiry, reporting and writing for a publication. Students discuss hot-button issues in the field; conduct research; and gather, process and disseminate relevant news. In weekly journalism roundtables, students workshop their feature articles, op-eds, essays and human-interest stories while weighing the principles of truth, accuracy, objectivity, impartiality, accountability and fairness.



## **Philosophy**

Does life have (a) meaning? Why do we think the way we do? How does the world we live in affect who we are and the decisions we make? In a moment in which high school students find themselves making important life choices and facing worldwide dilemmas, this elective aims at discussing how the way we perceive and navigate reality can have an impact on how the future might be. Via an inquiry-based approach, each one of them will be invited to connect the reflections made during the course with their own future, as well as consider the practical application of the skills and knowledge acquired in it on their academic life, job market, political realm, and personal lives. The skill foci in this elective include the development of systematic analysis of texts and videos, as well as a further development of critical thinking and discussion skills.

## **Business Strategy**

This business and economics course presents a comprehensive examination of successful business practices to students. The course posits how to demystify the secrets of business through an analysis of the five disciplines-strategy, operations, finance and accounting, organizational behavior, and marketing commonly taught in college or graduate-level business programs.



## MATHEMATICS

### **Funções, Probabilidade, e Análise de Dados (FPAD)**

Note: Only available Semester 2

Prerequisite: Successful completion of Integrated Math 3

This Portuguese-language math elective is designed for juniors and seniors intending to stay in Brazil and take the vestibular. FPGE meets every day, allowing students to extend beyond what can be covered in traditional after-school vestibular prep sessions. The course will consist of problems from different vestibulares and others that are deemed most important to Brazilian universities, while concurrently maintaining a discussion-based approach typical to Avenues.

### **Introduction to Calculus**

Note: Only Available Semester 2, provides preparation for Grade 12 Calculus

Prerequisite: Successful completion of Integrated Math 4, supplementary break work, and teacher recommendation

This problem-based course begins by looking at the trigonometric functions on the coordinate plane as well as their inverse functions. Further study of functions includes exponential and logarithmic functions and their inverses along with the relationship between these. Students will then collectively and individually build a solid conceptual foundation for the study of calculus by investigating average and instantaneous rate with these functions as well as the concept of the limit. Later in the semester, the derivative function will be applied to such topics as differentiability, continuity, related rates, implicit differentiation, optimization and graphical analysis. Depending on time, slope fields, separable differential equations and the Fundamental Theorem of Calculus may also be discussed

### **Statistics**

Note: Only Available Semester 2

Prerequisite: Successful completion of Integrated Math 3

This inquiry-driven course provides students with opportunities to build a conceptual foundation of the important concepts in the fields of Statistics and Data Science. Through inquiry and experimentation, students will learn about statistical tools & methods, types of bias, sources of error and limitations, probability concepts, and the elements of different types of statistical studies (experiments, surveys, observational studies). Students will utilize digital tools to collect, organize, and clean sets of data, analyze patterns and trends, and share their findings.

### **Statistics and Data Science**

Note: Only Available Semester 2

Prerequisite: Successful completion of Integrated Math 4 STEM or Enrollment in Grade 12

The ability to work with, understand, and use data has become an essential life skill and requirement for an ever-expanding range of jobs and careers. This new data intensive world can be difficult to navigate; decisions that used to be straightforward are now more complex, requiring individuals to be constantly separating fact from fiction. In short, the need to analyze and interpret data is no longer confined to engineering or computer programming; it has become an essential life skill.

This course introduces students to the idea of data, measurement of data and creating and interpreting different representations of data. Students will explore real data and the idea of Big Data from the internet and how it relates to decision making. Further, regression and modeling of data will be an important aspect of this course. This is followed by probability, bivariate data and the basics of the normal distribution in order for students to learn to evaluate claims and make connections about trends in data.

This course is appropriate for students who are interested in statistics, psychology, journalism, and other humanities-based courses of study.



## SCIENCE

### Advanced Physics (Algebra-Based)

Advanced Physics students build upon the foundations of physics from previous science courses to delve more deeply into understanding mechanics, electricity and magnetism, waves and optics and modern physics. Each term focuses on one main idea, including lab design and experimentation, as well as a more rigorous approach to using equations to model complex systems. We begin with a study of projectile motion and two- and three-dimensional mechanics. In electricity and magnetism, we build on the understanding of these systems to study more complex circuit design and apply knowledge of induction to designing motors and other applications.

Our waves and optics unit focuses on geometric optics and light refraction, as well as serving as an introduction to modern wave equations like the Schrodinger equation. Finally, we take a full term to study introductory modern physics, including a study of the development of quantum mechanics as both a model and a way of thinking about the universe.

### Advanced Chemistry

Advanced Chemistry expands upon the foundations of physical science developed in earlier science courses. The course is designed for students to attain a more in-depth understanding of the structure and properties of matter, chemical reactions and thermochemistry. The concept of the conservation of mass and energy is developed more quantitatively. Students apply their understanding of periodic trends to predict the products of a reaction. The nuances of the different types of reactions are explored through laboratory investigation.

### Advanced Biology

Prerequisite: Enrollment in Grade 12; Grade 11 students can enroll with Associate Division Head + Dean approval

With the discovery of the structure of DNA, the sequencing of the human genome and the advent of biotechnology, molecular biology increasingly affects our understanding of the underlying principles of biology. This course builds on previous knowledge to help foster a broad understanding of biological concepts. Major areas of study include the chemical basis of life; cells; similarities and differences in living organisms; evolution; reproduction; and genetics. Major themes are homeostasis; the relationship between structure and function (on both macroscopic and microscopic levels); division of labor; and the evolutionary adaptations of various organisms. Emphasis is placed on the analysis of data generated through lab activities.

The course is intended for students who have exhibited consistent and high proficiency in previous science coursework and have been recommended by a science teacher for advanced study.

### Field Science Practicum

Field Science Practicum provides learners hands-on experiences integral to the life of a scientist.

This semester's iteration of the course centers on **marine biology**, introducing students to the fundamentals, principles, and procedures of marine biology. Through readings, lab investigations, Experiential Learning Opportunities, interactions with researchers in the field and discussions, students will learn about the natural history of marine organisms - their taxonomy, structure, function, and role in the marine environment. Upon completion of the course, students have comprehensive knowledge of marine life adaptations and biodiversity in the ocean, the ways in which organisms interact with each other and their physical environment, and a better understanding of the importance of marine ecosystems to humankind.

Specific topics covered include ocean literacy, primary and secondary pollution, rocky intertidal biodiversity, estuaries, mangroves, subtidal communities, coral reefs, pelagic and deep sea communities, and the impacts of humans on ocean conservation.



## WORLD COURSE

### Brazilian Social Studies and Geography

The World Course program in grade 12 is part of an intensive, interdisciplinary program linked to the Global Studies humanities program. The 12th grade World Course investigation will utilize a variety of historical, sociological, anthropological, economic, scientific and statistical lenses to identify common patterns and trends over time as they relate to current day and future global phenomena.

Em ambas as séries, a Geografia é um importante suporte para a compreensão do espaço político e socioeconômico em diferentes tempos, tanto nos temas referentes à História do Mundo, quanto naqueles que discutem os processos geopolíticos e históricos relativos ao Brasil contemporâneo.

In 11th and 12th grade, the study of geography is critical to understanding political and socio-economic forces. Students will consider the role of geography in different periods of world history, as well as those that eventually shaped Brazil as it is today.

### **Advanced Humanities: People, Culture, Politics in the World**

This elective course affords Avenues students the opportunity to study the world in which they live as they prepare to tackle future academic demands and expectations. The course aims to foster students' curiosity about the ways in which culture has developed over time, and encourage an understanding of its present and the pathways for the future by thinking critically about the past. In doing so, the elective empowers students that want to enrich their core knowledge and deeper conceptual understandings about the humanities via an inquiry based approach. Here students will engage in learning to answer thorny and debatable questions such as: Can we positively say that we still have democracy in the modern world as first envisioned by the Greeks? Have wars shaped the way humans organized the world?

### **Advanced Humanities: People, Culture, Politics in Brazil**

Advanced Humanities uses Brazilian history and culture from the Discovery to the current challenges as the means to explore processes, philosophical areas of study, and societal changes at a deeper level. Major Brazilian thinkers in the Humanities along with Brazil's geopolitical challenges are but just two areas for in-depth inquiry. Thus, the course is not only an inquiry opportunity for students interested in different Humanities' fields but also a preparation for the next step in their academic life given the course's alignment to the rigors of the Vestibular.



## MASTERY

γένοι ὄϊος ἑσσι μαθῶν

“Learn and become who you are.” —Pindar, *Pythian* 2.72

As a cornerstone of the Avenues experience, the Mastery Program has one mission: To inspire a world of happier, more meaningful lives through the beautiful engagement of one’s passions.

It is with this goal in mind that we provide students both time and space during the school day to strive towards the focused achievement of exceptional skill in a desired domain. If you are familiar with *Fifth Term* in the upper grades or *Minimester* in the middle grades, the Mastery Program is all that and more. Imagine a young historian researching a minor historical figure in order to add to the academic literature of this period, a team of young scientists working with college professors to harness the potential of radio waves to power small electronic devices, a budding entrepreneur launching a socially-conscious business, or a songwriter working with mentors to write and produce her first album. The possibilities are endless in Mastery, and our students’ work is limited only by their imaginations.

### Mastery Workshop

Prerequisite: Approved [Mastery Program Application](#) [Deadline → Monday, June 6th]

For those students who have demonstrated a commitment to their domain and who have been accepted into the Mastery Program at Avenues, Mastery Workshop exists as vital time and space within the regular school day to help students develop their knowledge, conceptual understanding, judgment and skill in a particular area. This is a unique opportunity for students to do passion-driven work under the watchful eye of a field expert who will act as both a mentor and a guide on this journey.

Students in Mastery Workshop may choose to work independently or in small teams on long-term interests in this space, whatever that interest may be: community engagement; humanities and literary arts; performing arts; science and math; sports; technology and engineering or visual arts. Students here will be granted common time with those peers who share similar interests in order to discuss their progress. Students are expected to maintain a Mastery portfolio throughout the year and may choose to work toward the completion of a Mastery project for inclusion in the end of year showcase.

### Mastery: Entrepreneurship and Social Innovation

Prerequisite: Approved [Mastery Program Application](#) [Deadline → Monday, June 6th]

Through the Mastery Program at Avenues, this course composes a unified experience for students to practice real-world problem solving, learn from existing professionals and possibly build their own social impact businesses. Engaging in this strand at a Mastery level will position students as budding experts in their fields and may open further doors for mentorships, internships and other rare experiences for students with a deep passion for this work.

This work may see students explore both theory and practice of entrepreneurship and innovation. Students can grapple with the moral implications of civic engagement and consider the future of capitalism while exploring opportunities for concrete projects in partnership with local companies. With economic inequality and environmental challenges at historic levels, there has never been a more urgent need to understand these topics and build these skill sets. As with any Mastery student the opportunity to meet entrepreneurs and participate in authentic events that will prompt true understanding of the challenge of social entrepreneurship is an expectation.





## Avenues Global Electives

### Overview

Global Electives allow students from across the Avenues ecosystem to take the same classes either in addition to or in place of a campus offering. Global Electives are an online adaptation of the Oxford tutorial model, which enable students to learn at their own pace and at various levels of difficulty in a broad range of subjects, and connect with peers across the Avenues ecosystem. Student work in Global Electives is completed asynchronously and accompanied by office hours, optional group discussions, asynchronous feedback, and student-driven projects.

Global Electives are full or semester-year, credit-bearing classes, which also afford highly-motivated students an opportunity to complete their required coursework before the end of the academic year. **9th–12th grade students can take one Global Elective in place of a campus elective per academic year.** Students who wish to take more than one Global Elective in place of campus electives in the same academic year should explore this decision in consultation with their dean.

Additionally, certain Global Electives may have Advanced options available for students who wish to go beyond the required skills, knowledge foundation and expectations for the class. Opting into the Advanced level can be done after enrolling in the course, contingent upon instructor approval and in consultation with the student's dean.

Note that as with any class, Global Elective courses will need to meet a minimum enrollment in order to run. Students who ultimately enroll in Global Electives will still report to the Avenues São Paulo campus for the regular school schedule of 8:00 - 15:45 and will have a dedicated time and space to complete their Global Elective coursework.

### Global Elective Selection

Students interested in taking a Global Elective will use the same Course Preference Form linked at the beginning of this Course Guide.

#### Important Note:

Global Electives are designed for autonomous, proactive students with strong organizational capacity. The self-driven nature of the coursework provides both opportunity and responsibility. To ensure that students interested in Global Electives are set up for success, Avenues São Paulo Associate Division Heads and Deans will collaborate to review Course Preference Forms and, as needed, confer with students before approving or deferring their enrollment in Global Electives.



## Global Elective Options (Online)

### **AI, Society, and the Future 1**

A unique, interdisciplinary approach to AI, this class combines learning the technical skills of AI programming with developing sophisticated perspectives on the past, present, and future of this emergent technology and its inevitable ethical ramifications. Applied projects such as classification, recognition, and prediction are complemented by the foundational science fiction and non-fiction texts for artificial intelligence. Students will finish the class with a robust portfolio of projects and be prepared for more advanced levels in the future.

### **Astronomy**

Students will survey the main concepts, methods, and discoveries in astronomy, such as the constellations drawn by the ancients, the latest reports from planetary probes in our Solar System, and the most recent images offered by telescopes probing the farthest frontiers of space and time.

### **Becoming Einstein**

When one begins to look at the life of Albert Einstein—his childhood, his friends and colleagues, his education, his incredible accomplishments—one very quickly discovers that he led quite an extraordinary life. What made Einstein's life so extraordinary? In this course, we will take a close look at this question with an eye toward discovering what lessons might be learned and applied to your own lives. Activities and provocations centered on the most striking aspects of Einstein's life will present you with the opportunity to shape the way you organize your life, your thinking, your creativity, and your practice. You will engage with Einstein's core world-views, scientific thought experiments, and paradigm-shifting accomplishments ranging from his extraordinary original proof of the Pythagorean Theorem to his laser-sharp work supporting the existence of atoms to his most astounding and beautiful work in general relativity.

### **Business Strategy**

The business and economics course presents a comprehensive examination of successful business practices to students. The course posits how to demystify the secrets of business through an analysis of the five disciplines of strategy, operations, finance and accounting, organizational behavior, and marketing commonly taught in college or graduate-level business programs.

### **Eastern Civilization**

Learn about the origins of East Asian civilization in this humanities course that explores the history of China, Japan, Korea, and Southeast Asia. Throughout the course, students will explore the significant accomplishments of Eastern civilization, from the material economy of day-to-day life to the political and religious philosophies that would bind Eastern cultures together for thousands of years, with Foundations of Eastern Civilization.

### **Film and Animation**

Film represents one of culture's most influential art forms, merging disciplines as diverse as photography, painting, sculpture, performance, music, and writing. This year-long elective examines film's building blocks to understand better the relationship between sound and image in generating meaning. Students will develop their moving image practice by creating a series of live-action and animated short films. They will engage in all steps of the process, from idea generation to pre-production planning, from shooting to primary production, and editing skills to bring their cinematic ideas to life. Film and animation are powerful forms of visual communication and expression, and students will be encouraged to bring both creativity and intentional decision-making to their work.



## **Introduction to Coding and Computer Science**

In this coding course, students will build their skills in Scratch and Python through the completion of practice activities, emulations, and authentic projects. Possible projects that students will take on include creating virus behavior simulations, random math problem generators, image processing and modification, and a variety of games. The project types are suitable for various abilities: beginners will gain foundational skills, and more advanced students will challenge themselves with additional functions and constraints.

## **Inventions that Changed the World**

In this course, students will learn about the remarkable stories surrounding momentous inventions and how consequential these inventions were in history. From prehistoric times to the 21st century, inventions have changed the world, enabling humans to produce more food and energy and establish social order and cultural meaning. In fact, great inventions have marked several key turning points in human history, transforming society and our daily lives—understanding how these inventions have changed and shaped our world.

## **Masterpieces of Antiquity**

Learn about great masterpieces of antiquity and prehistory in this visually rich course that travels around the world, highlighting stunning works of art from ancient cultures. Engage in a journey worldwide to see some of the greatest works of art ever created and explore the cultures that made them.

## **Philosophy (Global Elective)**

Note: Students interested in taking the online version of Philosophy should select "Philosophy (Global Elective)" in the Course Preference Form. The in-person elective that takes place on the São Paulo campus is simply titled "Philosophy".

We have all pondered seemingly unanswerable but significant questions about our existence. There is no better way to study the big questions in philosophy than to compare how the world's greatest minds have analyzed these questions and reasoned out potential solutions. The final step is always deciding for yourself whether you find an explanation convincing. In this course, you will be introduced to and learn to think clearly, identify misconceptions, and reach your conclusions as you confront the questions that have puzzled generations of philosophers.

## **Psychology**

From Freud to mapping brain activity, explore the fascinating world of psychology and its complex history. This class focuses on both human behavior and neurology, beginning with social psychology and extending to how the brain works and how signals are transmitted into the body. Significant topics include behaviorism, sensation and perception, muscle movement, processing, measuring neural activity, and the factors that affect the transmission of nerve signals.

## **Secrets to a Powerful Memory**

Take a voyage into the human mind to discover how the various aspects of your memory operate. Uncover the different systems that make memory possible, how these systems work together, how the various elements of your memory operate, and the impact memory has on your daily experience of life with memory and the human lifespan.

## **Warriors, Queens, Intellectuals**

View history through the stories of 36 women who changed the world with their ideas, leadership, and sacrifices. In unearthing these stories in Warriors, Queens, and Intellectuals, we can rediscover the contributions of women—often lost to time and whose stories were written to fit prevailing prejudices—but we can also see our own history in new, more nuanced ways. Beyond battles and dates and the names of great men, there are other stories that can give us a richer understanding of the past and how it has shaped the world we live in today.



## Grade 11 Course Selection Guide

### Preparations for the Grade 11 Course Selection Session on Tuesday, June 7th

**Step 1:** 1) **Read** the course descriptions; 2) **draw a ☆ next to your top 2 preferences** that run in different periods or semesters.

#### Avenues São Paulo Academic Electives (Live, In Person)

	Period 1	Period 2
Semester 1	Integrated Math 4G or 4S* Portuguese Language and Literature 11** Business Strategy Design and Engineering Workshop Journalism: Theory and Practice Mastery Workshop*** Music Theory and Practice: Instrumental (Intermediate) Music Theory and Practice: Vocal (Intro) Philosophy Studio Art Seminar	Integrated Math 4G or 4S* Portuguese Language and Literature 11** Advanced Humanities: Brazil Design and Engineering Workshop Field Science Practicum Mastery: Entrepreneurship and Social Innovation*** Music Theory and Practice: Instrumental (Intro) Music Theory and Practice: Vocal (Intermediate) Studio Art Seminar Studio Art Workshop
Semester 2	Portuguese Language and Literature 11** Advanced Biology Advanced Humanities: World Advanced Writing: English Advanced Writing: Portuguese Business Strategy Design and Engineering Workshop Intro to Calculus Journalism: Theory and Practice Mastery: Entrepreneurship and Social Innovation*** Music Theory and Practice: Instrumental (Intro) Music Theory and Practice: Vocal (Intermediate) Statistics Studio Art Workshop	Portuguese Language and Literature 11** Advanced Chemistry Advanced Humanities: World Advanced Physics Creative Computation Drama Studies FPAD em Português Mastery: Entrepreneurship and Social Innovation*** Mastery Workshop*** Music Theory and Practice: Instrumental (Intermediate) Music Theory and Practice: Vocal (Intro) Statistics and Data Science Studio Art Seminar World Literature: English

\* All G11 students must enroll in Integrated Math 4G or 4S in Semester 1

\*\* All G11 students must enroll in Portuguese Language and Literature 11 in either Semester 1 or Semester 2.

\*\*\* Requires approved Mastery Program Application

#### Avenues Global Electives (Online)

- One (1) Global Elective / academic year can be taken in place of one of the electives above, either Period 1 or 2, with ADH/ Dean approval.
- |                                  |                                      |                                     |
|----------------------------------|--------------------------------------|-------------------------------------|
| 1. AI, Society, and the Future 1 | 6. Film and Animation                | 10. Philosophy                      |
| 2. Astronomy                     | 7. Intro to Coding+Computer Science  | 11. Psychology                      |
| 3. Becoming Einstein             | 8. Inventions that Changed the World | 12. Secrets to a Powerful Memory    |
| 4. Business Strategy             | 9. Masterpieces of Antiquity         | 13. Warriors, Queens, Intellectuals |
| 5. Eastern Civilization          |                                      |                                     |

**Step 2:** **Select your course preferences** for both Semester 1 and Semester 2.

**Note:** You will complete this step on campus with the guidance of ADHs and Deans on Tuesday, June 7th.

- Semester 1 Course Selection**
  - If **one** of your ☆ top two electives ☆ occurs in Semester 1, **select that elective** as your #1 preference and choose two other electives in that period as your #2 and #3 back-up preferences.
  - If both of your ☆ top two electives ☆ occur in Semester 2, **select Portuguese Language and Literature 11** in Period 1 or 2.
  - After selecting either your ☆ first elective ☆ or Portuguese, **select either Integrated Math 4G -or- Integrated Math 4S** in the other period of Semester 1.
- Semester 2 Course Selection**
  - If you plan on taking Portuguese 11 in Semester 1, then **select your top 3 elective preferences for both Periods 1 and 2.**
  - If you plan on taking your first elective in Semester 1, then **select the #1 preference for your second elective** (along with #2 and #3 preferences), followed by Portuguese Language and Literature 11 in the other period.

