CURRICULUM GUIDE

Yeshiva University

The Marsha Stern Talmudical Academy
Yeshiva University High School for Boys

CURRICULUM OVERVIEW

The Academic Program

All talmidim are required to take:

- 4 years of intensive Judaic Studies
- 4 years of English
- 4 years of History, including a semester of History of Israel
- 3 years of Math
- 3 years of Science (Biology, Chemistry, and Physics)
- 3 years of Physical Education
- 3 years of Foreign Language
- 4 years of electives (can include courses at YU for qualified talmidim during Senior year)

Electives

All talmidim are offered a full program of electives throughout their four years of high school. Options include but are not limited to:

- College Preparedness
- Computer Science
- Drama
- Economics
- Entrepreneurship
- Film
- Graphic Arts
- Hebrew Ulpan
- Jewish Philosophy
- Life Skills
- Literature
- Music
- Principles of Engineering
- Speech and Communication

Advanced talmidim are eligible to take courses at Yeshiva College, Sy Syms School of Business, and the Belz School of Music.

AP Courses

Starting in Sophomore year, qualified talmidim may elect to take AP courses. Courses include, but are not limited to:

- Calculus
- Computer Science
- English Literature
- European History
- Physics
- Pre-Calculus
- Psychology
- US History
- US Government and Politics

9th

- Talmud B'iyun (In depth)
- Talmud Bekius (Survey) or Machshava (Jewish Philosophy)
- Chumash Sefer Bamidbar
- Halacha
- English 9
- Biology (with Lab)
- World History I: Developing Civilization
- Mathematics (Geometry)
- Hebrew Language
- Physical Education
- Electives (survey course in Entrepreneurship, Graphic Design, Computer Science, and Principles of Engineering)

10th

- Talmud B'iyun (In depth)
- Talmud Bekius (Survey) or Machshava (Jewish Philosophy)
- Navi Sefer Shmuel Aleph
- Halacha
- English 10
- Chemistry
- World History II: & Development of the Modern World or AP European History
- Mathematics (Algebra I or Algebra II/ Trigonometry)
- Chemistry (with Lab)
- Physical Education
- Foreign Language
- Additional Elective (Computer Programming, Entrepreneurship, Graphic Design, or Principles of Engineering)

11th

- Talmud B'iyun (In depth)
- Talmud Bekius (Survey) or Machshava (Jewish Philosophy)
- Chumash Sefer Shemos
- Halacha
- English 11 or AP English Literature
- United States History I: Foundations in US History
- Mathematics (Algebra II and Trigonometry, Pre-Calculus, AP Pre-Calculus)
- Science Elective (Physics, AP Physics)
- Physical Education
- Foreign Language
- Additional Elective (Computer Science, Entrepreneurship, Graphic Design, or Principles of Engineering)

12th

- Talmud B'iyun (In depth)
- Talmud Bekius (Survey) or Machshava (Jewish Philosophy)
- Navi, Sefer Yonah, Megillas Esther, Megillas Rus
- Halacha
- English (Options by genre)
- United States History II: Modern US History or AP US History
- History of Israel/ Jewish History
- Electives: courses offered at MTA as well as Yeshiva College and Sy Syms School of Business

LIMUDEI KODESH

Overview

Five major objectives define the MTA approach to Torah study:

- Develop a LOVE FOR AND A RELATIONSHIP WITH HASHEM, so talmidim can have a lifelong commitment to yiraas shamayim and shmiras hamitzvos.
- Foster a LOVE FOR TORAH and an ongoing commitment to Torah study within each talmid, as well as a conviction that he can attain Torah greatness.
- Teach TEXTUAL LEARNING SKILLS progressively over four years to create confident and independent learners who can maneuver the texts.
- Teach METHODOLOGICAL SKILLS progressively over the course of four years, enabling each talmid to feel a sense of mastery of the material.
- Expose talmidim to a CRITICAL MASS OF TORAH CONCEPTS, so they can apply their skills to a breadth of knowledge.

When a talmid achieves these objectives, he is drawn to the majesty of Torah learning and is able to visualize the ways in which Torah applies to all aspects of life.

Gemara

Methodological Skills

One of the goals of our four-year Gemara program is to equip talmidim with the methodological skills necessary for proficiency in the classic style of learning. Talmidim in younger grades learn how to read the lines of the Gemara, that is, the methodology of how to "make a laining." Through a development of vocabulary, grammar, and syntax rules, talmidim progress toward mastery of independent Gemara study. The focal point of this methodology is the Gemara itself, Rashi, and Tosafos. Eventually, talmidim are taught how to "extract" the unspoken assumptions in the sugya, and to develop the conceptual basis for each machlokes, havah amina and maskanah, and kushya and terutz in the Gemara. Specific methodologies include, how to identify the "pivotal point" of each dichotomy and how to use deduction and induction in the creation of a sevara.

Research Skills

Gemara research skills are taught as well, with the use of additional rishonim and classical acharonim, as appropriate.

In addition, talmidim are exposed to the breadth of Gemara through a Bekius class, either as part of their regular morning Shiur, or as part of a session in the Beis Medrash.

Text

For Iyun (in depth) Shiur, most talmidim learn Gemara on a five year masechta cycle: Brachos, Pesachim, Bava Kama, Kidushin, Bava Metzia. The High Honors 11th and 12th Grade Shiurim (Beis Medrash Katan) learn the same masechta as is learned in Yeshiva College and RIETS.

For Bekiyus (survey) Shiur, 9th Grade honors Shiurim learn Maseches Megilla, 10th Grade honors Shiurim learn Maseches Makkos, 11th and 12th Grade honors Shiurim learn Maseches Sukkah, 11th and 12th Grade High Honors (Beis Medrash Katan) Shiurim learn the masechta that is learned b'iyun (in depth).

Shiur

Through the combination of the Iyun and the Bekius Shiurim, talmidim gain insight into the depth and breadth of Shas. Each Shiur is geared to the level and the needs of that particular group of talmidim and the specific Shiur curriculum is meticulously designed to reach each talmid in accordance with his ability, so as to instill a love of Torah and an appreciation for learning in every talmid at every level. As a part of Shiur, each talmid learns a Mussar (ethics) work with his rebbe. Mussar works include: Pirkei Avos, Mesillas Yesharim, Orchos Hatzadikim and Olam Hamidos, among others.

In addition to learning from our own outstanding rebbeim, our talmidim have the unparalleled opportunity to benefit from the tutelage and camaraderie of members of the RIETS Beis Medrash and its Kollelim, as well as from consistent exposure to Yeshiva University's esteemed and world-renowned Roshei Yeshiva, who learn with our talmidim on a regular basis.

Halacha

The Halacha curriculum seeks to prepare our talmidim to embrace the world, armed with the knowledge and understanding of how to live life fully according to the will of Hashem.

- All classes learn Halacha with their Gemara rebbeim.
- At the end of four years, talmidim are exposed to laws related to daily living, tefillah, Shabbos, kashrus, and life cycle events.
- Aside from learning the practical laws, talmidim are also able to appreciate how the halacha emanates from the Talmud and the classical commentaries.

Tanach

The richness of Torah SheBichsav is taught in shiurim of Chumash and Nach. The methodological skills in which talmidim are guided, depending on their level, include the following areas:

Reading - translation, textual skills, particularly the use of the ta'amei hamikra in understanding the peshat of the pasuk.

Analysis - understanding themes, literary patterns, conceptual frameworks, particularly using parshanus hamikra to guide us.

Rashi - extracting the unspoken question behind the commentary, that is, "What's bothering Rashi?" and understanding the lesson which the commentary seeks to teach.

Targumim - understanding how to extract the hidden ideas that unfold when the targum deviates from the peshat.

Parshanus - learning to appreciate the unique style and approach of each of the classical meforshim.

Halacha - investigating to see how halacha ultimately derives from the text.

Hashkafa/Relevance - learning the great lessons from Torah and seeing how they speak to us today. To understand and appreciate the dvar Hashem as eternal lessons on how to live their lives as bnei Torah.

Text

- 9th Graders learn Sefer Bamidbar
- 10th Graders learn Sefer Shmuel
- 11th Graders learn Sefer Shemos
- 12th Graders learn Sifrei Yonah, Esther and Rus

תורה ומדע

75 SHIUR
EVENTS OFFERED EVERY YEAR

6
YU Roshei Yeshiva learn with talmidim every week

17 : 1
Talmid-Rebbe Shiur Group Ratio

3.5 Hours
Average time talmidim spend learning Torah every day

35
YU talmidim learn with our talmidim every year

GENERAL STUDIES

Overview

MTA is accredited by the Board of Regents of the State University of New York and by the Middle States Association of Secondary Schools, and is currently completing the process for NYSAIS accreditation. As such, our courses and requirements conform to the standards of the Board of Regents, and examinations in Regents subjects are given in June of each year Talmidim who pass all of the requirements receive a New York State Regents Diploma in addition to their MTA Diploma upon graduation. Regents examinations are not the central focus of the General Studies curriculum, which is developed and evaluated by our faculty and administration.

Our talmidim benefit from a personalized educational program that offers a variety of tracks, including Grade Level, Honors, and High Honors, for the majority of our course offerings.

English

9th Grade

9th Grade units are structured around the major texts we are studying at the time. Within each unit, however, we work on all 4 major foci of our English program:

Literature

- Explore novels, short stories, essays, plays, and poems.
- Improve and develop reading strategies with which to approach different texts.
- Learn to read critically and ask questions.
- Introduce talmidim to a number of classical literary allusions (e.g. Achilles' Heel, Pandora's Box), phrases that are part of the language in Western Culture.
- Develop the ability to present clear, precise oral responses to questions.

Writing

- Understand basic essay structure.
- Work to express thoughts, arguments, and creative ideas with precise, clear, and interesting text.
- Practice writing on demand.
- Learn to write intelligently about the novels, stories, poems, essays, and related works that make up each unit.
- Begin the process of constructing analytical papers with thesis, supports, and warrants.

Vocabulary and Usage

The Freshman vocabulary list was created to expand each talmid's vocabulary and give him the chance to write and speak critically and precisely about the works he is reading. The vocabulary list builds slowly and is cumulative. The program also works to systematically clarify commonly confused or misused words. The word clarification part of the program is also cumulative.

Grammar

This is the toolbox or the palette the writer uses to express himself. Talmidim focus on technical grammar:

- Review of eight parts of speech.
- Examine phrases and clauses, their functions and usage.
- Recognize errors in grammar, usage, and mechanics and understand how to correct them.
- Explore different sentence structures (phrases and clauses) to add variety to writing.

9th Grade Major Works Studied in Recent Years

- Summer reading: Ender's Game by Orson Scott Card
- One additional non-fiction work chosen from Jack Weatherford's *Genghis Khan and the Making of the Modern World*, Rabbi Israel Meir Lau's *Out of the Depths: The Story of a Child of Buchenwald Who Returned Home at Last*, Alfred Lansing's *Endurance: Shackleton's Incredible Voyage,* Joseph J. Ellis's *His Excellency: George Washington or* John Wooden's *They Call Me Coach*
- *The Odyssey* by Homer
- *Lord of the Flies* by William Golding
- *Antigone* by Sophocles
- *Antigone* by Jean Anouilh
- *Richard III* by William Shakespeare
- *All Quiet on the Western Front* by Erich Maria Remarque

Major works of literature are supplemented by additional short stories, poems, and essays relating to the work.

10th Grade

Talmidim choose two books (one fiction and one non-fiction) for the required summer reading from a list that includes *A Separate Peace* by John Knowles, *Challenger Deep* by Neal Shusterman, *Humankind: A Hopeful History* by Rutger Bregman, *Just Mercy: A Story of Justice and Redemption* by Bryan Stevenson, and more. In their sophomore year, talmidim read across genres and time periods to explore different literary genres and styles. The works they read over the course of this year are thematically connected. They read literary fiction and non-fiction works that interrogate the relationship between self and society, focusing on the ways in which individuals define themselves in the context of larger social forces—social, political, economic, material, religious, and technological.

To hone their close reading and interpretation skills, talmidim learn how to identify key words and moments in literary works in order to help them understand the text as a whole. They use different annotation strategies (summarizing, paraphrasing, identifying and defining key words, connecting passages to larger themes, and posing questions) and pay attention to figurative language, syntax, diction, and rhetorical strategies. They observe how interpretation is shaped by the values, assumptions, and personal interests they bring to the text. In-class discussions, group activities and projects, as well as oral presentations allow talmidim to become more attentive and introspective thinkers, writers, and speakers.

10th Grade Major Works Studied in Recent Years

- *The Prince* by Machiavelli
- *Macbeth* or *The Merchant of Venice* by William Shakespeare
- *Hard Times* by Charles Dickens
- *Frankenstein* by Mary Shelley
- *Strange Case of Dr. Jekyll and Mr. Hyde* by Robert Louis Stevenson
- *The House on Mango Street* by Sandra Cisneros
- *The Things They Carried* by Tim O'Brian
- A selection of older and contemporary poems (by Petrarch, William Shakespeare, Percy Shelley, W.H. Auden, Langston Hughes, Layli Long Soldier, Joy Harjo, and more)
- *Paragraphs for High School: A Sentence-Composing Approach* by Don and Jenny Killgallon
- *Vocabulary from Latin and Greek Roots: A Study of Word Families* by Elizabeth Osborne. Level X.

Writing

Over the course of this year, talmidim will:

- Write short response and passage analysis paragraphs to

hone their reading and analytical skills

- Respond to literary works through self-reflective and creative assignments (reading responses, performance of a scene, poetry and vignette creative project, in-class presentations)
- Write critically on literature, including setting up a thesis, incorporating textual evidence, writing a coherent and well-supported argument, and citing sources correctly
- Learn fundamentals of research (identifying a problem, asking good research questions, performing a simple source search)
- Work on crafting effective sentences and paragraphs using elaboration and description
- Engage in the writing process that includes the following: prewriting (brainstorming and outlining); drafting; peer reviewing; revising; presenting

Vocabulary
Vocabulary is taught through etymology-based learning. Talmidim focus on studying Latin and Greek roots, and commonly occurring prefixes, and suffixes to be able to decode unfamiliar words. In addition, talmidim are introduced to literary terms pertinent to the studied works.

Grammar and Usage
Phrasing, sentence structure, punctuation, and paragraphing form the basis of instruction. In addition, mini-workshops are set up throughout the year, as needed, to address recurring grammatical and mechanical errors.

11th Grade

Literature

English in Junior year is geared toward the development of language skills through active reading and intensive writing, and to familiarize talmidim with a canon of literature appropriate for an independent high school. Additionally, we aim to prepare talmidim for the English Language Regents, SAT and ACT examinations, and for talmidim who apply, the Advanced Placement exams. Lastly, we seek to offer talmidim an avenue of personal expression and possibility of publication.

Writing
Talmidim are assigned regular expository and persuasive written essays. Occasionally, talmidim are assigned to research historical data pertaining either to the time period or philosophy of the author or characters. All Juniors are assigned a Fall and Spring Reaction Paper based on a literary work.

11th Grade Major Works Studied in Recent Years

- Summer Reading - *A Connecticut Yankee At King Arthur's Court* by Mark Twain
- *The Scarlet Letter* by Nathaniel Hawthorne
- *The Glass Menagerie* by Tennessee Williams
- *Death of a Salesman* by Arthur Miller
- *The Grapes of Wrath* by John Steinbeck
- *12 Angry Men* by Reginald Rose
- *The Awakening* by Kate Chopin
- *The Sound and the Fury* by William Faulkner
- *Hamlet* by William Shakespeare

AP English Literature and Composition
Talmidim may elect to enroll in the Advanced Placement English Literature and Composition course. AP English Literature and

Composition is an introductory college-level literary analysis course. Students cultivate their understanding of literature through reading and analyzing texts as they explore concepts like character, setting, structure, perspective, figurative language, and literary analysis in the context of literary works.

12th Grade

Senior year presents an opportunity for our talmidim to choose courses designed to study literature and writing, with strong input into course subjects provided by our incoming 12th Grade. Recent course options include:

- A study of two genres (Science Fiction and Historical Fiction)
- Short stories
- Identity in Literature
- Film & Literature
- Law, Literature, and Film
- Creative Writing
- Podcasts

Additionally, 12th grade English commences with a College Essay Workshop unit which provides significant focus and support on the writing of impactful personal statements and essays that will be used in the college application process.

History

We develop each talmid's knowledge and understanding of major turning points in the shaping of world history to help them contribute to the multicultural, increasingly technological, and interdependent world. Going beyond those basic goals, our faculty prepares talmidim to:

- Recognize major trends in historiography: Understand political and economic conflict and consensus as possible motors of history.
- Develop research, writing, and note-taking skills and critically analyze historical evidence.
- Recognize and learn to appreciate the major trends and styles in Art and Music, while appreciating the pieces themselves as historical documents.
- Understand the political process and be able to make sound judgments and choices as active citizens of local, national, and global communities.
- Appreciate various heritages of people throughout the world and recognize gender roles in the shaping of the modern world.
- Become geographically literate: Learn how to use maps for geographic, economic, and political analysis.

9th Grade - Jews in World History

Students will embark on a comprehensive exploration of global historical events and trends from Mesopotamia through the Enlightenment, with a special focus on how the Jewish people have interacted with and been influenced by these many different eras and regions. Students will delve into the dynamic relationship between the Jews and the broader societies in which they lived, uncovering how these interactions shaped both Jewish history and world history as a whole. This course provides a nuanced perspective on global history, allowing students to gain a deeper understanding of the Jewish experience within the context of major historical movements and events from ancient times through the early modern period.

10th Grade - World History II: & Development of the Modern World (Regents)

The content of this course begins with the French Revolution and examines the political, social, economic, and intellectual

forces that have shaped the Modern World. Other topics covered include, the Industrial Revolution, Marxism, Nationalism, Imperialism, the Russian Revolution, World War I, the Rise of Fascism and Nazism, World War II and the Holocaust, the Cold War, the Fall of Communism, and the advancement of developing nations. Talmidim are introduced to various interpretations and primary sources in order to familiarize them with the methods and diversity of historical analysis. A research paper is required for this course, where talmidim are expected to make use of both secondary and primary sources.

10th Grade - AP European History

Similar in content to World History II, this course places greater emphasis on key European historical issues between 1450 and the fall of Communism. Greater attention is given to analysis of key documents in European political, social, and intellectual history. Instead of a research paper, talmidim develop skills in writing document based essays in preparation for the Advanced Placement exam in May.

11th Grade - United States History

Our Juniors delve into the rich tapestry of American history in a year-long course that explores the nation from its founding to modern times.

In the Fall Semester, talmidim embark on a journey from the establishment of the first English colony at Jamestown in 1607, tracing the nation's path through the challenges of colonization, independence, and the creation of a new government. They examine key events such as the American Revolution, the drafting of the Constitution, and the challenges faced by the early republic, including the treatment of Native Americans and the institution of slavery, leading up to the Civil War and the Reconstruction. Throughout the semester, students work extensively with primary sources to gain a deeper understanding of these periods, exploring the experiences of different groups. The course examines the contributions and challenges faced by Jewish Americans during the nation's early years.

In the Spring Semester, the focus shifts to America's transformation into a modern nation. Students explore industrialization, westward expansion, and immigration, analyzing the influence of Jewish immigrants on American culture and industry. They also study the effects of westward expansion and government policies on the Native Americans. The semester covers key historical moments, including the Progressive Era, World Wars I and II, and the Great Depression, the Civil Rights Movement and the struggle for equality faced by other minority groups. Primary source analysis continues to be crucial, as students examine historical documents, speeches, and firsthand accounts to understand the different perspectives that have influenced the country's development. The course wraps up with a look at contemporary America, providing a comprehensive view of the nation's past and present. By the end of the course, students will be well-prepared to excel on the U.S. History and Government Regents exam.

11th Grade - AP U.S. History

Advanced Placement U.S. History is an introductory college-level U.S. history course. Students cultivate their understanding of U.S. history from c. 1491 CE to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like American and national identity; work, exchange, and technology; geography and the environment; migration and settlement; politics and power; America in the world; American and regional culture; and social structures.

12th Grade - U.S. Government and Politics (Fall Semester)

In US Government and Politics, seniors will critically explore the principles and dynamics of American governance, examining the Constitution, government branches, electoral processes, media influence, and interest groups. This course emphasizes analyzing current events, policy debates, and historical contexts,

fostering a well-rounded understanding of how issues influence governmental decisions and societal outcomes. Through active learning, students will engage in simulations, debates, and primary source analysis, developing the ability to intelligently discuss political matters and form informed opinions. By the end, students will be prepared to participate actively and responsibly in civic life with a comprehensive understanding of US government principles and processes.

12th Grade - Contemporary Israel (Spring Semester)

Contemporary Israel is a nuanced examination of the complexities and historical significance of the Israeli-Palestinian conflict. Students will engage in multiple perspectives and narratives, tackling some of the most challenging, provocative and controversial questions about the conflict, giving them the historical knowledge, critical thinking skills, and informed perspectives necessary to effectively counter anti-Zionism in college and beyond. Students will also examine the role of traditional and social media in shaping perceptions of recent conflicts, including the most recent war in Gaza. Through discussions, multimedia resources, and projects, they will gain a deep appreciation of Israel's achievements and challenges, fostering a greater love for Israel, and preparing them to thoughtfully engage with current events and advocate for Israel's place in the modern world.

Math

Talmidim are placed in Math courses based on their achievement in elementary school, their aptitude as indicated by their transcripts, and a placement exam. The department follows the New York State Regents requirement of having each talmid pass one Math Regents during his high school years. Some of the courses integrate the use of graphing calculators and other technological aids into the classroom. All talmidim are required to take at least three years of Math during their high school years.

All talmidim take Geometry in 9th Grade, but those who have already taken and demonstrated mastery of Algebra I, advance directly to Algebra II in 10th Grade.

In 11th grade, four different math courses are offered.

- For talmidim who completed Algebra II in 10th grade, AP Pre-Calculus is offered as is Honors Pre-Calculus.
- For talmidim who completed Algebra I in 10th grade, there are two options: Algebra II or a brand new Financial Literacy class.

Track 1:

9th Grade – Geometry

10th Grade – Algebra I

11th Grade – Algebra II, select topics in Trigonometry or Financial Literacy

12th Grade (Optional) - Pre-Calculus

Track 2:

9th Grade – Geometry, culminating in the Regents Exam in Geometry

10th Grade – Algebra II, Trigonometry, and select topics in Probability and Statistics

11th Grade – Honors Pre-Calculus or AP Pre-Calculus

12th Grade (Optional) - Calculus (AP or YU course)

Geometry

This course is an extensive study of Geometry. Proving of geometric theorems and applying them are the major topics that this course covers. For advanced talmidim, Algebra related to solving geometric problems is also covered. An introduction to

Trigonometry is included as well.

Algebra I
This course is the basic course for 10th Grade talmidim. Among the topics taught are mathematical operations on real numbers, equation solving and related word problems, operations on monomials and polynomials, factoring, linear functions and their graphs, inequality solving, as well as the solving of quadratic equations and systems of equations. The goal of the course is for the talmid to be able to create, manipulate, and analyze equations which will model a real-world situation.

Algebra II and Trigonometry
The fall term begins with Advanced Algebra, extending the topics taught in Integrated Algebra. In addition, logarithms and complex numbers are introduced. The Spring term focuses on the study of Trigonometry. The graphing calculator is used to help talmidim learn linear regression and other statistical topics.

Financial Literacy
This class delves into real-life financial topics that all adults encounter in their personal finances and small businesses as well. Some topics covered include Money Management, Interest (Investing/Loans), Google Sheet skills, Debit v. Credit cards, and many other practical topics.

Math - Advanced Courses

Pre-Calculus
This course offers further preparation for Calculus. After a review of the major topics of Advanced Algebra and Trigonometry, additional topics such as graphical techniques, algebraic and transcendental functions, and analytic Geometry are studied. Talmidim will be prepared to move on to Calculus AB or college-level Calculus.

Calculus AB - Advanced Placement
This Honors course is an elective for those talmidim who have completed Pre-Calculus. Calculus AB consists of a full year of work in differential and integral Calculus and related topics. At the completion of the course in May, talmidim may take the Advanced Placement examination, credit and placement for which are offered by most colleges and universities. After the AP Exam, the instructor will cover advanced topics in Linear Algebra, series, etc.

Calculus BC - Advanced Placement
This Honors course continues and extends the work of the AB course and prepares talmidim for the BC examination.

In addition to our courses in Math, talmidim can take advantage of the following Math competitions during the course of the school year:

- New York Mathematics League - Six examinations for schools in New York State, which measure a talmid's abilities in abstract topics in Mathematics.
- American High School Mathematics Examination - A nation-wide, three-hour examination for Honors talmidim who, upon successful completion, qualify for the American International Mathematics Examination.

Science

The Science Department offers the three fundamental courses of high school Science: Biology, Chemistry, and Physics, in addition to other exciting Science electives and laboratory experiences, such as Advanced Placement (AP) and Engineering courses. Two of these courses, Biology and Chemistry, are required courses based on standards and curricula established by the Board of Regents of the State University of New York; Regents Examinations in Biology and Chemistry are taken at the end of the first and second year Science courses. Both Biology and Chemistry courses include a weekly lab component in our state-of-the-art laboratory facility. The Physics course is offered in two tracks: an Advanced Placement (AP) course for those with highly developed Math and Science skills and a non-AP course for those desiring an introduction to the subject. In addition to the core Science curriculum, talmidim may choose from our electives, which are described in this section.

9th Grade - Regents Living Environment: Biology

A one-year course that covers all living systems and functions in comprehensive detail. There is a weekly lab component, which requires a lab report. Topics include cell theory and chemistry, human biology, organisms, plants and animals, reproduction and development, genetics and heredity, evolution and environment, and data analysis. In addition, health topics such as nutrition and proper hygiene are integrated into the curriculum. The course ends with the administration of the New York State Regents Examination.

10th Grade - Regents: Chemistry

This is a one-year course based on the New York State Core Curriculum for the Physical Setting/Chemistry Regents. Laboratory work is an integral component of the course and completion of the lab component is required before a talmid may take the Regents Examination. Topics taught include, matter and energy, theories of solid, liquid, and gas interaction, mathematics of chemistry, nuclear and atomic chemistry, periodicity, bonding, solutions, acids, bases, salts, kinetics, equilibrium, oxidation reduction, electrochemistry, and Organic Chemistry. Algebraic skills are required, as a significant portion of the course involves mathematical computations. The course concludes with the administration of the New York State Regents Examination.

11th and 12th Grade - Electives: Advanced Placement (AP) Physics

A one-year university level course, wherein successful completion of the AP exam may result in one or two semesters of college course credit in Algebra based Physics.. Pre-Calculus is a co-requisite . Classes meet for a double period every day; lab sessions are held in the University's Physics Laboratories. The course uses Pre-Calculus material, supplemented by additional introductory calculus topics presented by the instructor, to cover a broad sampling of Introductory Physics, including Newtonian mechanics, statics and kinematics, rotational motion, oscillations, gravity, electrostatics, etc. After the AP is administered in May, advanced topics such as special relativity, circuits, fluid mechanics, thermal physics, waves and optics, atomic and nuclear physics, may be discussed. In addition to the coursework, lab reports are a component of the final grade.

Physics

Physics is the science of interactions among bodies and energy at their most fundamental level. This course provides talmidim with an appreciation of the application of non-calculus mathematics to solving conceptually simple problems, as well as an understanding of the issues revolving around some of the most exciting scientific challenges of our age. The first semester covers the motion of particles and their interaction with energy, gravitation, behavior of forces, etc. The second semester covers electricity and magnetism, including circuits, thermal physics, optics, and modern physics.

Foreign Languages

Talmidim are required to take Hebrew Language in 9th and 10th Grade. Advanced Hebrew elective options are offered in the 11th and 12th grades, including Ulpna, and Meet the Israeli Author.

Our Foreign Language Program curriculum is structured according to the following goals and objectives:

- Instruction is centered on the development of communication skills including, listening, speaking, reading comprehension, and writing.

- Our aim is to help talmidim develop an understanding and appreciation of the cultural, social, and historical background of those speaking the target language.

Our language courses do not present language as an abstract linguistic system, focusing solely on grammar or vocabulary in isolation. Instead, we strive to present the target language as the medium of the culture, history, and literature. For this reason,

instructional methodology is both inductive and integrated in its approach, presenting concepts and skills, such as grammar and vocabulary, in the context of thematic readings and cultural background. In beginning and intermediate classes, the target language is used as often as possible. In advanced classes, instruction is conducted almost entirely in the target language and talmidim are required to participate in the same manner. A wide variety of techniques and strategies are employed in addition to this emphasis on oral and aural instruction. Through these strategies, talmidim are expected to become proficient in critical listening, speaking, reading comprehension, and written expression. Target language texts used are semi-authentic and authentic.

In addition to the acquisition of the basic skills of communication and the understanding of diverse cultures, we also expect our talmidim to develop a critical appreciation of the way language is used to develop thoughts, to express ideas, and to influence others. As talmidim progress through course levels, they are expected to build and enhance their ability to analyze literature with a sound level of sophistication and to demonstrate that understanding in written and oral expression.

Hebrew Language Electives

In 11th Grade, talmidim are offered the opportunity to take our Meet The Israeli Author workshop, which is the first of its kind in a North American Jewish high school. This unique course enables talmidim to interact with internationally renowned and award winning Israeli writer Chana Bat Shachar, who guides them as they write their own Hebrew stories, which are published in a journal and housed in the Publication Room at the National Library of Israel in Jerusalem. The course introduces them to modern Israeli culture and helps them develop the skills and self-confidence required to write excellent Hebrew stories of their own. In 12th Grade, talmidim are offered an Ulpan elective, which immerses them in the Hebrew language and prepares them for a year of learning in Israel.

Areas of Concentration

Every incoming talmid has the opportunity to select an elective area of concentration, one of four subject areas where they will have the opportunity to study in detail over the course of either three or four years. The areas of concentration are: Business and Entrepreneurship, Graphic Design, Computer Science, and Scientific Engineering.

In ninth grade, each talmid takes a survey course that includes one academic quarter devoted to each of the areas of concentration. They are then given an opportunity to select the subject area that they would like to focus on for 10th and 11th grade, with additional optional opportunities available in their subject in 12th grade as well.

Electives

Talmidim in 10th and 11th grade will select an area of concentration for their elective courses. Seniors are required to take at least three electives.

10th Grade - Fundamentals of Computer Programming

This course explores key concepts of computer programming. Students study: top-down design, system input and output, conditionals, loops, variables, functions, parameters, and data structures. Through assignments and projects, students reinforce their understanding of each topic, develop critical thinking skills, and show off their creativity.

11th Grade - Object-Oriented Programming

This course emphasizes object-oriented programming and design using the Java programming language. Themes of this course include breaking down complex problems, storing and manipulating data, controlling the order of a program's code, and computing ethically and responsibly. Specifically, students explore: data types, variables, system input and output, methods, conditionals, loops, objects, classes, arrays, and lists.

12th Grade - AP Computer Science

This course is equivalent to a first-semester, college-level course in Computer Science. The course emphasizes object-oriented

programming and design using the Java programming language. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems.

In this course, students will cover all the topics found on the APCSA exam and will also go over test taking strategies to help them best prepare for the exam.

10th Grade - Business and Entrepreneurship

This course presents and analyzes basic business concepts through a socio-historical lens using real-world past and current examples to illustrate how certain core business principles are meant to apply, and when/why they either did or did not work. Both global business phenomena and more focused individual entrepreneurial narratives are presented.

11th Grade - Business and Entrepreneurship

This course introduces talmidim to the basic principles and terminology of business and finance, across 4 general areas: 1) accounting, focused on the elements of a balance sheet; 2) valuations, including value propositions and minimum viable products; 3) microeconomics, including pricing, manufacturing, market research and target markets; and 4) business law and ethical practice (including the special considerations regarding ethical practice as Orthodox Jews).

Financial Literacy

Financial Literacy is a course designed to equip students with essential skills for managing personal finances effectively. The course covers budgeting, saving, investing, credit management, consumer awareness, insurance, taxes, and financial planning. Through interactive activities, real-life scenarios, and guest speakers, students will gain practical knowledge to make informed financial decisions and plan for a secure future. This course empowers students with financial literacy, ensuring they are prepared to navigate the complexities of personal finance confidently.

10th Grade - Graphic Design

In this class talmidim learn basic design principles like balance and unity while learning Adobe Photoshop, Illustrator, and InDesign. The course focuses on creativity, idea generating, and executing work that matches what students have in their heads. Students also learn how to give and accept constructive criticism by participating in class critiques.

11th Grade - Graphic Design

This class builds upon the foundations developed in Graphic Design 10. Talmidim learn more advanced skills in Adobe Photoshop, Illustrator, and InDesign to create projects. This course focuses on projects that are more conceptual and that integrate with the rest of the academic curriculum. (Think redesigning book covers for the books read in English, making postcards for places covered in History, and designing menus for restaurants that one may visit in other countries.) Students will also learn how to present ideas as well as how to give and accept constructive criticism by participating in class critiques.

12th Grade - Hebrew Ulpan

This class is designed to improve each talmid's ability to converse in Hebrew in preparation for studying in Israel after high school.

11th and 12th Grade - Meet The Israeli Author

A Workshop in Creative Writing (in Hebrew) This is an elective course in Hebrew Language for talmidim in grades 11 and 12 (advanced level of Hebrew). Talmidim, will be able to participate, through video conferencing with Israel, in a workshop on Creative Writing, led by Chana Bat Shahar, a famous Israeli author, who has written 9 books and received the Prime Minister's Prize for Literature in 1994. The talmidim work with Hebrew Language Instructor Ms. Haibi in order to prepare for the monthly video-conference with Israel.

12th Grade - Julius Wrubel Beis Medrash Katan, Enhanced

Twelth graders have the opportunity to learn Torah in the afternoon for up to three periods per day. They can learn with a chavrusa or join different shiurim that allows them to grow tremendously in their learning and prepare themselves for the rigorous, lenghty, sedarim of the high-level yeshivos that they are likely to attend.

12th Grade - AP Psychology

Equivalent to a Psychology I course in college, AP Psychology covers topics such as the human brain, child development, thinking and language, and principles of testing.

12th Grade - Names, Not Numbers©

Names, Not Numbers© includes an integrated, multidisciplinary curriculum, that combines research, interviewing techniques, documentary film tools and editing, and which enables talmidim to learn firsthand about the Holocaust through the making of their own professional oral history documentary. Professionals, including journalists, Holocaust scholars, and documentary filmmakers, instruct and mentor the talmidim in all facets of the project. Talmidim conduct oral history testimonies, and in doing so, form intergenerational connections with Holocaust survivors that inspire them to combat anti-semitism and all forms of hatred and intolerance. Unique to the MTA Names, Not Numbers© program, is a leadership training and chessed mission to Poland, where talmidim and alumni visit the current Jewish communities in Poland and lead programming in informal Jewish education. This special program enables talmidim to experience and contribute to the revival of Jewish life in Poland.

12th Grade - Elements of Effective Speech & Communication

First Semester: Elements of Communication. Though the spoken and written word seem important, approximately 80 percent of communication is nonverbal. How we sell ourselves is based on our awareness and skill balance of both.

Second Semester: Public Speaking, Learn how to transform any idea into an informative, entertaining speech. In this course, talmidim will learn elements of effective public speaking including matching the topic with the audience, how to connect with and maintain audience interest, and how to integrate effective body language to improve comprehension.

12th Grade - Senior Fellowship

This prestigious Senior designation is available to up to four Seniors, chosen by the Administration and Department Head. The selected talmidim forgo two periods of elective course work and, instead, meet individually with a designated Yeshiva University faculty advisor to collaborate on a special project agreed upon between them. Whether as lab assistant, research assistant, or simply as a participant in an independent study, Senior Research Fellows meet regularly with their YU advisor. Every semester, each talmid makes a presentation on his progress to a super committee composed of the advisory committee, the other Senior Fellows, the MTA Educational Leadership, and other selected invitees. Criteria for selection includes superior academic performance and standardized test scores, propensity for independent study and research, and outstanding middos. Disciplines may include: Jewish Studies, Biology, Chemistry, English, History, Math, Physics, Economics, and Music.

12th Grade - Yeshiva University, Sy Syms School of Business Electives

Seniors who meet the academic requirements of an 85 average and a combined score of 1250 on the Critical Reading and Math sections of the SAT Exam, may be eligible to take up to four courses at Yeshiva College and/or the Syms School of Business. There is no additional tuition charge and grades in college courses appear on both the high school transcripts, where they meet elective requirements, and on the college transcript. College credit for these courses is earned for talmidim who will attend YU.

10th Grade - Scientific Engineering I

The first in a two-year Scientific Engineering program, this course provides talmidim with hands-on opportunities to learn

meaningful science and gain practical knowledge and thinking skills that will allow them to pursue higher level degrees in high-tech fields and careers.

Scientific Engineering is a foundational course of study that focuses on engineering design, electrical engineering, and computer science. The year begins with an introduction to the engineering mindset of analyzing technological systems and proposing solutions for current human needs, just as bridges, elevators, and indoor plumbing did for past generations. The fundamentals of electricity and electronics build an awareness of circuits, feedback systems, and control systems in preparation for learning to write computer programs to control electronic devices. Wiring, part of the C-family of computer languages, is taught and used with the Arduino microcontroller. LEGO Mindstorms Robotics, oscilloscopes, soldering irons, resistors, LEDs, solar panels, motors, and many more components are used to guide talmidim towards a final project of their choosing, where they are able to utilize the design, electrical, and computer programming skills they have learned throughout the year. The course uses innovative methods of teaching and learning, including in-class contests, student discovery, group work, reflection and rebuilds, teacher-talmid conferences, and guest experts from the Engineering field.

11th Grade - Applied Engineering II

The second in a two-year Scientific Engineering program, this multidisciplinary course unites many Engineering subjects. The course investigates fields that are at the cutting edge of research and development worldwide, and trains talmidim in self-study as a tool for use in the dynamic world of Science and Engineering. It also provides them with skills in new areas of knowledge, the ability to work in teams, independent judgment, and thinking with initiative. Questions on subjects such as cloning, extension of life expectancy, bone marrow transplants, creating live cells and live tissues, experiments on humans, genetic engineering, genetic planning, and so on, are explored as a general framework for the possibilities of integrating Engineering and Biology. Units build upon the foundations of engineering design, electrical engineering, and computer science gained in the Scientific Engineering I course, and allow for advanced study of biomechanics used for movement analysis and robotics, design of bio-electronic monitoring instruments, building and training artificial neural networks in their application in artificial intelligence, and the use of nanotechnology for future transposing of DNA information to molecular electronics.

11th Grade - The 2000s

The 2000s was an important time in our history. Major changes that had big impacts occurred in that time. From the Bush v Gore election to the 9/11 attacks to the 2008 recession. This project based course focuses on this time period through the lens of these and other major events, focusing on their causes and effects. Projects include creating podcasts, movies, debates and other interactive classroom activities. Students are expected to do research and be ready to share their findings with the class. This highly engaging class is marked by deep, well-thought out discussion and debate.

12th Grade - Short Stories 101

Stories are models of the real world. The real world is the living world experienced by society, not a world merely written on paper. The author can write about a human society, as most do, or a menagerie of animals, such as Disney's Bambi, Mickey Mouse, Animal Farm, or a combination of the two, as in Lassie or Rin Tin Tin. The group of characters that form the narrative are the microcosms that are imitating reality.

This real world as seen and as it is described by the author constitutes the author's picture and imagination put into words. It must be assumed that the author has a bias. The short story is fiction and therefore not journalism – not an actual account of an event as seen through the author's eyes, experienced by the author, but one interpreted by the author. For example, the American Revolutionary War about which chapters or whole books exist in the American library but is just a passing remark in Great Britain. American authors see the revolution as an important turning point of history while British history books speak of an insurgency resulting in British retreat from

colonies not worth fighting over.

12th Grade - Creative Writing

Why does one author become critically acclaimed while another languishes on the shelf? How do successful writers make the words jump off the page? In this course we study samples of popular literature to understand the elements used to gain the reader's trust and attention. Then it is the talmid's turn to try his hand at writing in a variety of genres including:

- Myth, fable, folktale / fairy tale
- Historical fiction
- Thriller/Mystery
- Sci fi/fantasy

The first brief unit covers creative nonfiction with a look at how college applicants have used creative writing in their college essays.

12th Grade - Storytelling Through Podcasts

"We are, as a species, addicted to stories. Even when the body goes to sleep, the mind stays up all night, telling itself stories."
-Jonathan Gottschall, The Storytelling Animal: How Stories Make Us Human

In this course, we will focus on the art and craft of storytelling through podcasts. Students will be introduced to all aspects of podcasting and learn how to become better storytellers. In the first part of the course, we will listen to and deconstruct great podcasts to analyze how they build tension, conflict, climax and lead to a resolution. We will learn how to think critically about stories we consume. In the second part of the course, we will focus on essential skills for podcast production—how to find ideas that matter for you and have an impact on your community; how to write a script; how to create a narrative structure and write probing interview questions; how to record and edit audio and incorporate sound. Students will upload, edit and mix sound using Audacity software.

This course is project-based. Students will be working in small groups to create 8-minute and 5-minute podcasts on a subject of students' interest, with the goal of submitting them to the annual Student Podcast Challenge held by NPR (March deadline) and New York Times (May deadline).

9TH GRADE
Sample Schedule

Time	Subject
9:24am – 10:35am	Gemara
10:35am – 10:45am	Break
10:45am – 11:21am	Gemara
11:24am – 12:01pm	Chumash (3 times per week) and PE (1 time per week)
12:01pm – 12:41pm	Lunch
12:43pm – 1:22pm	Gemara Bekius (3 times per week) and PE (1 time per week)
1:25pm – 2:05pm	English Literature
2:08pm – 2:48pm	History: The Jewish Experience in World
2:51pm – 3:02pm	Mincha
3:04pm – 3:44pm	Elective Rotation (2x per week) Hebrew Labguage (2x per week)
3:47pm – 4:27pm	Math: Geometry
4:30pm – 5:10pm	Science: Biology

10TH GRADE
Sample Schedule

Time	Subject
9:24am – 10:35am	Gemara
10:35am – 10:45am	Break
10:45am – 11:21am	Gemara
11:24am – 12:01pm	Tanach (3 times per week) and PE (1 time per week)
12:01pm – 12:41pm	Lunch
12:43pm – 1:22pm	Gemara Bekius (3 times per week) and PE (1 time per week)
1:25pm – 2:05pm	Science: Chemistry
2:08pm – 2:48pm	Math: Algebra I or II
2:51pm – 3:02pm	Mincha & Break
3:04pm – 3:44pm	History: AP European History or World History
3:47pm – 4:27pm	English Literature
4:30pm – 5:10pm	Elective Rotation (2x per week) Hebrew Labguage (2x per week)

11TH GRADE
Sample Schedule

Time	Subject
9:24am – 10:35am	Gemara
10:35am – 10:45am	Break
10:45am – 11:21am	Gemara
11:24am – 12:01pm	Tanach (3 times per week) and Advisory (1 time per week)
12:01pm – 12:41pm	Lunch
12:43pm – 1:22pm	Gemara Bekius (3 times per week) and PE (1 time per week)
1:25pm – 2:05pm	English: Literature & Composition (AP option)
2:08pm – 2:48pm	Science: Physics (AP option)
2:51pm – 3:02pm	Mincha & Break
3:04pm – 3:44pm	Math: AP Precalculus
3:47pm – 4:27pm	History: US History (AP option)
4:30pm – 5:10pm	Electives 2x per week PE 2x per week

12TH GRADE
Sample Schedule

Time	Subject
9:24am – 10:35am	Gemara
10:35am – 10:45am	Break
10:45am – 11:21am	Gemara
11:24am – 12:01pm	Tanach
12:01pm – 12:41pm	Lunch
12:43pm – 1:22pm	Gemara Bekius
1:25pm – 2:48pm	English: Creative Writing (2x per week) BC Calculus (2x per week)
2:51pm – 3:02pm	Mincha & Break
3:04pm – 4:27pm	US Government & Politics (2x per week) Yeshiva University Principles of Economics (2x per week)
4:30pm – 5:10pm	Yeshiva University: American Constitutional Law (2 times per week)

Yeshiva University

The Marsha Stern Talmudical Academy
Yeshiva University High School for Boys