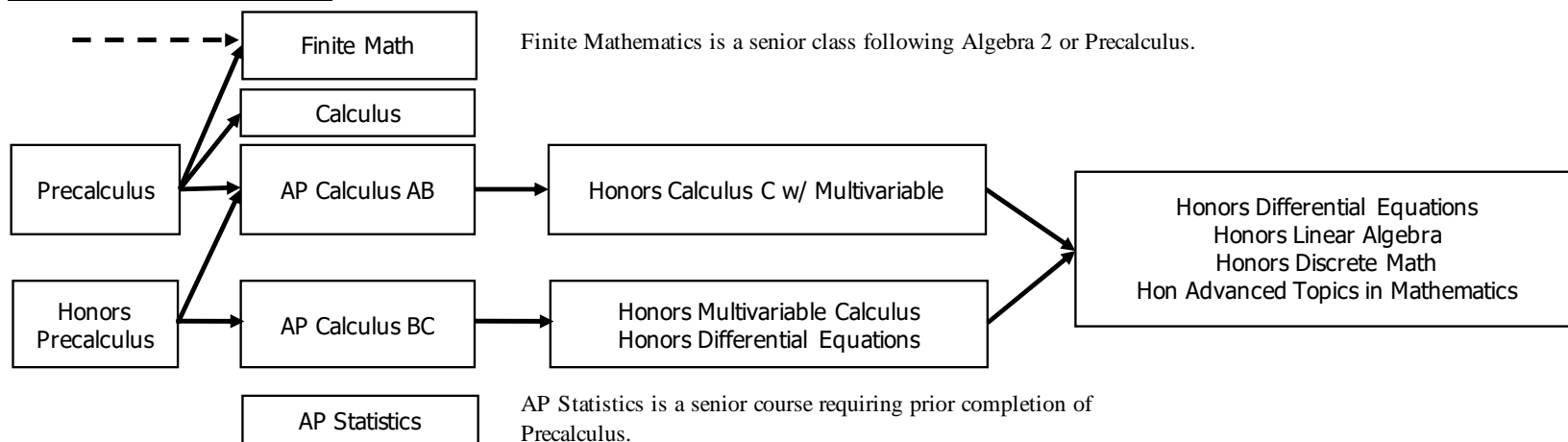


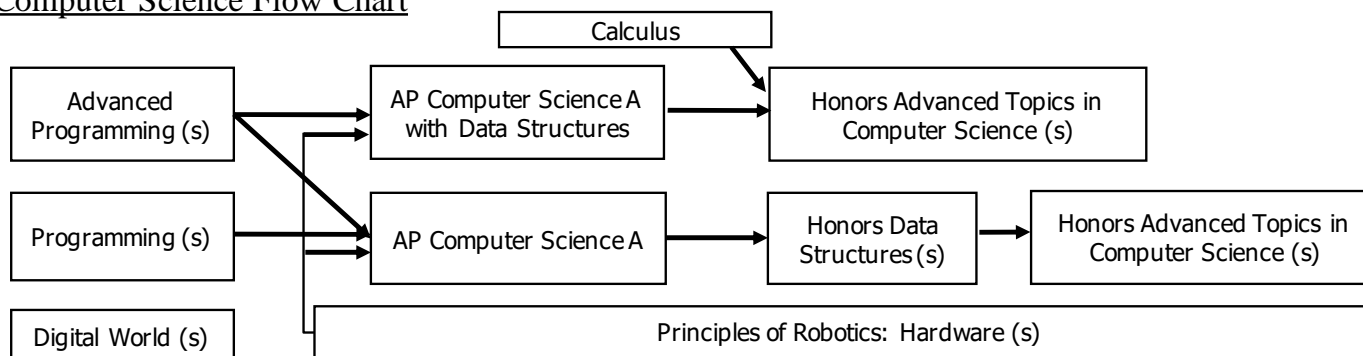
## The Harker School – Academic Planning Chart with Graduation Requirements

|   |                                | 9 <sup>th</sup>   | 10 <sup>th</sup>                                  | 11 <sup>th</sup>        | 12 <sup>th</sup>                                | Requirements                      |
|---|--------------------------------|---|---|-------------------------|---|-----------------------------------|
| 1 | <b>English</b>                 | English 1: Literary Genres                              | English 2: British Lit                            | English 3: American Lit | English 4: 2 semester courses or AP English Lit | 4 years                           |
| 2 | <b>Math</b>                    |   |   |                         |   | 3 years<br>4 recommended          |
| 3 | <b>Science</b>                 | Physics   | Chemistry   | Biology                 |   | 3 years                           |
| 4 | <b>History</b>                 | World 1   | World 2, Honors World 2, AP World, or AP European | United States           |   | 3 years                           |
| 5 | <b>Language</b>                |   |   |                         |   | Complete Level 3                  |
| 6 | <b>Arts / Computer Science</b> | Study of Visual, Music, Dance, Theater, or Tech Theater |   |                         |   | Arts - 1 year<br>Comp Sci – 1 sem |
| 7 | <b>Extra Period Option</b>     |   |   |                         |   |                                   |
|   | <b>Total Credits (min)</b>     | 6   | 5 – 6   | 5 – 6                   | 5 – 6   | <b>22 credits minimum</b>         |

### Mathematics Flow Chart

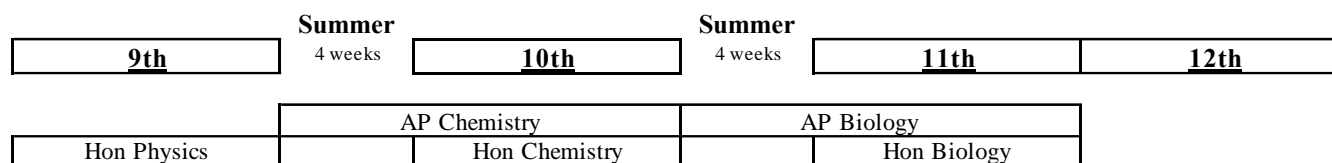


### Computer Science Flow Chart



(s) denotes the course is a semester long course. Students must take the CSPE to qualify for AP CS with Data Structures.

### Optional and by Qualification Summer Science Program for Advanced Placement Chemistry and Biology



Skipping a year of Honors Chemistry and going straight to AP Chemistry is not easy and is therefore only available by qualification based on performance in Honors Physics. 11th grade AP Biology is analogous with qualification based on performance in Honors (or AP) Chemistry. The summer school component of either course is 4 hours of class plus 2-3 hours of homework per day, 5 days per week; this commitment should not be taken lightly!

**ENGLISH**

English 1: The Study of Literary Genres (Y)  
 Honors English 1 (Y)  
 English 2: A Survey of British Literature (Y)  
 Honors English 2 (Y)  
 English 3: A Survey of American Literature (Y)  
 Honors English 3 (Y)  
 AP English Literature (Y, *open to seniors only*)

**English 4 electives for '21-'22** (all semester courses, *open to all seniors, open to juniors with permission*)

Art of Poetry & Fiction  
 Black American Literature  
 Graphic Narrative  
 Holocaust Literature  
 Kerouac & the Beats  
 Literature to Film  
 Mystery & Detective Fiction  
 Postmodern Literature  
 Russian Literature  
 Shakespeare  
 Speculative Fiction

**STUDY OF THE ARTS CLASSES**

*these classes fulfill the arts graduation requirement*  
 Study of Music (Y)  
 Study of Theater Arts (Y)  
 Study of Visual Arts (Y)  
 Study of Dance (Y)  
 Study of Technical Theater (Y)  
 AP Art History (Y) – *open to 10th – 12th graders only*

**COMPUTER SCIENCE**

Digital World (S)  
 Programming (S) or Advanced Programming (S)  
 Robotics Principles: Hardware (S)  
 AP Computer Science A (Y)  
 Honors Data Structures (S)  
 AP Computer Science A with Data Structures (Y)  
 Honors Advanced Topics in Comp. Science (S)  
 • *Robot Kinematics Software (offered every year)*  
 • *Computer Architecture (22-23, 24-25)*  
 • *Compilers & Interpreters (21-22, 23-24)*  
 • *Program Languages (24-25) • Neural Networks (21-22)*  
 • *Numerical Methods (21-22) • Expert Systems (22-23)*

**MATHEMATICS**

Algebra 1 (Y)  
 Geometry / Honors Geometry (Y)  
 Algebra 2/Trigonometry / Hon Alg 2/Trig (Y)  
 Precalculus / Honors Precalculus (Y)  
 Finite Math (Y)  
 Calculus (Y)  
 AP Calculus AB (Y)  
 AP Calculus BC (Y)  
 Honors Calculus C with Multivariable Calculus (Y)  
 AP Statistics (Y)  
 Honors Multivariate Calculus (S, fall)  
 Honors Differential Equations (S, spring)  
 Honors Discrete Mathematics (S)  
 Honors Linear Algebra (S)  
 Honors Advanced Topics in Mathematics (S *each*)  
 • *Dif Eq 2* • *Signals & Systems*  
 Engineering (S)

**SCIENCE**

Physics / Honors Physics (Y)  
 AP Physics 2 (Y)  
 AP Physics C (Y)  
 Chemistry / Honors Chemistry (Y, *taken in 10th*)  
 AP Chemistry in 10<sup>th</sup> grade (Y, *requires 4-week summer course before 10<sup>th</sup> grade*)  
 AP Chemistry in 11<sup>th</sup> or 12<sup>th</sup> grade (Y)  
 Study of Organic Chemistry (S)  
 Honors Analytical Chemistry (S, 2022-23)  
 Honors Nanoscience (S, 2021-22)  
 Biology / Honors Biology (Y, *taken in 11th*)  
 AP Biology in 11<sup>th</sup> grade (Y, *requires 4-week summer course before 11<sup>th</sup> grade*)  
 AP Biology in 12<sup>th</sup> grade (Y)  
 Electronics (S)  
 Astronomy: Life & Death in the Universe (S)  
 Seminar in Modern Physics (S)  
 Research Methods (Y)  
 Honors Adv. Research (S)  
 Marine Biology (S)  
 The Science of Food (S)  
 Biotechnology (S)

**SCIENCE cont.**

*Open to Seniors only*  
 AP Biology (Y, *no summer course required*)  
 Honors Human Anatomy and Physiology (Y)  
 AP Environmental Science (Y)

**HISTORY AND SOCIAL SCIENCE**

*Open to Freshmen*  
 World History 1 / Honors World History 1 (Y)  
  
*Open to Sophomores, Juniors, & Seniors*  
 World History 2 / Honors World History 2 (Y)  
 AP World History: Modern (Y)  
 AP European History (Y)  
 AP Art History (Y)

*Open to Juniors*  
 United States History / Honors US History (Y) /  
 AP United States History (Y)

*10<sup>th</sup>-12<sup>th</sup> grade electives (semester classes)*  
 Civics (S)  
 Psychology (S)  
 Social Psychology (S)  
 History of the Holocaust & Genocide (S) (*Jr/Sr only*)  
 World Religions and Philosophy (S)  
*Offered 22-23*  
 Intro to Ethnic Studies (S)  
 Intro to Social Justice (S)

*Open to Seniors only*  
 AP Psychology (Y)  
 AP United States Government and Politics (Y)  
 Honors Modern International Affairs (S)  
 Honors Modern International Topics (S)

**BUSINESS AND ENTREPRENEURSHIP**

Economics (S)  
 Behavioral Economics (S)  
 Hnrs Entrepreneurship: Startup Incubator I & II (Yea)  
 AP Economics – Micro and Macro (Y)  
 Hon Adv Topics in Economics: Game Theory (S)  
 Hon Adv Topics in Economics: Econometrics (Y)

**PHYSICAL EDUCATION**

Kinesiology & Sports Medicine 1 (S)

**MODERN & CLASSICAL LANGUAGES**

***Latin***

Latin 1 (Y)  
 Latin 2 (Y)  
 Latin 3 / Honors Latin 3 (Y)  
 Latin 4 (Y)  
 AP Latin (Y)  
 Hon Advanced Latin Literature (S *each*)  
     - *Epic*           - *Satire*

***Spanish***

Spanish 1 (Y)  
 Spanish 2 / Honors Spanish 2 (Y)  
 Spanish 3 / Honors Spanish 3 (Y)  
 Spanish 4 / Honors Spanish 4 (Y)  
 AP Spanish Language and Culture (Y)  
 AP Spanish Literature (Y)  
 Honors Advanced Spanish (S *each*)  
     • *The Latin American Short Story*  
     • *Lit and Film of the Spanish-Speaking World*

***French***

French 1 (Y)  
 French 2 (Y)  
 French 3 / Honors French 3 (Y)  
 French 4 / Honors French 4 (Y)  
 AP French Language and Culture (Y)  
 French Literature & Film (S)  
 French Prose (S)

***Japanese***

Japanese 1 (Y)  
 Japanese 2 (Y)  
 Japanese 3 / Honors Japanese 3 (Y)  
 Japanese 4 / Honors Japanese 4 (Y)  
 Japanese 5 (Y)  
 AP Japanese Language & Culture (Y)

***Mandarin***

Mandarin 1 (Y)  
 Mandarin 2 (Y)  
 Mandarin 3 / Honors Mandarin 3 (Y)  
 Mandarin 4 / Honors Mandarin 4 (Y)  
 AP Chinese Language and Culture (Y)

**GLOBAL ONLINE ACADEMY (NOT UPDATED)**

*For most up to date listing, check: [www.globalonlineacademy.org](http://www.globalonlineacademy.org)*  
 Arabic Language through Culture I, II, or III (Y each)  
 Japanese Language through Culture I, II, or III (Y ea)  
 Multivariable Calculus (Y)

**Fall:**

Applying Philosophy to Modern Global Issues (S)  
 Creative Nonfiction (S)  
 Data Visualization (S)  
 Filmmaking (S)  
 Genocide and Human Rights (S)  
 Global Health (S)  
 Microeconomics (S)  
 Number Theory (S)  
 Problem-solving w/ Engineering & Design (S)

**Fall and Spring:**

Architecture (S)                      Abnormal Psychology (S)  
 Bioethics (S)  
 Business Problem Solving (S)  
 Climate Change & Global Inequality (S)  
 Computer Science I: Computational Thinking (S)  
 Cybersecurity (S)  
 Entrepreneurship in a Global Context (S)  
 Game Theory (S)                      Graphic Design (S)  
 Introduction to Investments (S)  
 Introduction to Legal Thinking (S)  
 Introduction to Psychology (S)  
 International Relations (S)            Linear Algebra (S)  
 Medical Problem Solving I (S)  
 Neuropsychology (S).                Personal Finance (S)  
 Prisons & Criminal Justice Systems (S)  
 Positive Psychology (S)               Race & Society (S)  
 Social Psychology (S)

**Spring:**

9/11 in a Global Context (S)  
 Arts Entrepreneurship (S)  
 Computer Science II: Analyzing Data w/ Python (S)  
 Comp Science II: Game Design and Development (S)  
 Computer Science II: Java (S)  
 Digital Photography (S)  
 Fiction Writing (S)                      Gender & Society (S)  
 iOS App Design (S)                    Macroeconomics (S)  
 Medical Problem Solving II (S)

**FINE ARTS ELECTIVES**

Architecture (S)  
 Ceramics / Adv. Ceramics (S)  
 Drawing / Adv. Drawing (S)  
 Filmmaking: Special Topics in Media Arts (S)  
 Glass: Special Topics in 3D Art (S)  
 Graphic Arts / Adv. Graphic Arts (S)  
 Painting / Adv. Painting (S)  
 Photography / Adv. Photography (S)  
 Printmaking: Special Topics in 2D Art (S)  
 Sculpture / Adv. Sculpture (S)  
 AP Drawing, 2-D, or 3-D (Y *each*)  
 Honors Directed Portfolio (S)

**PERFORMING ARTS ELECTIVES**

Advanced Acting (S)  
 Advanced Scene Study (S)  
 Shakespeare in Performance (S, Spring '23)  
 Vocal Interpretation (S, Spring '22)  
 Student-Directed Showcase (S)  
 Conducting Basics (S, Spring '23)  
 Arranging & Composing (S, Fall '22)  
 Basic Voice/Accompanying (S, Fall '21)  
 Intermediate Musicianship (S, Spring '22)  
 Performance Practice for Instrumentalists (S)  
 AP Music Theory (Y)  
 Dance Composition (S)  
 Choreography (S)

**EXTRA PERIOD OPTIONS**

YEAR-LONG COURSES FOR 1/2 CREDIT

Intro to Speech & Debate / Intermediate Spch & Deb  
 Intro to Journalism  
 Journalism: Newspaper/Adv. Journalism: Newspaper  
 Journalism: Yearbook/ Adv. Journalism: Yearbook  
 Principles of Business and Entrepreneurship  
 • Bel Canto • Camerata • Cantilena • Downbeat  
 Harker Dance Company / Kinetic Krew  
 Lab Band / Jazz Band  
 Orchestra

YEAR-LONG COURSES NOT FOR CREDIT

Competitive Speech and Debate  
 Business Leadership

SEMESTER COURSES FOR 1/2 PE CREDIT

PE: Personal Fitness

(S) classes meet for a semester; (Y) classes meet for both semesters.

See the 2021-22 US Course of Study PDF on the student/parent portal or Schoology for graduation requirements and course descriptions including prerequisites.

All placements are subject to departmental review and approval.