Pre A.P. Advanced Algebra & Trigonometry
PAPAAT (pronounced pah-pot ☺)
With an emphasis on thinking and problem solving skills

2017-2018
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The Course
The Pre A.P. Advanced Algebra & Trigonometry (PAPAAT) course is a yearlong course that is designed to challenge the highly motivated learner of mathematics. The PAPAAT course is essentially condensing one year of Advanced Algebra (Algebra-2) and one year of Pre-calculus into a single academic school year. The students in PAPAAT at HeLa will be challenged by both the amount of content to be mastered and the level of critical thinking and problem solving which is required. So as to not scaremonger, let it be said challenge in learning can and should be the root of having fun while learning. So while challenge is the reality for PAPAAT, having fun while learning will be the emphasis.

Benefits and Challenges of PAPAAT for the student
Benefits of PAPAAT (in no particular order and definitely not an exhaustive list)
- Students will be advanced in the curriculum by one year compared with the traditional sequence. This allows students access to more of the challenging math courses at HeLa in their future years (Calculus AB, Calculus BC and Statistics)
- Students will be working in a classroom with other students who have all opted for the more challenging course option
- The thinking and problem solving skills required for PAPAAT are modeled after the requirements for success in the math department's Advanced Placement coursework offered at HeLA (and thus, those required by STEM fields in universities and colleges).

Challenges of PAPAAT
- Students will learn two years of curriculum in one year. (read: course may feel very fast for some)
- Students will be expected to do mathematics practice on a daily basis (class only meets three times a week)
- Students will, at times, be expected to do independent study (often on review topics and/or basic skills but occasionally prior to a new lesson as well)

Student Expectations to be successful in PAPAAT
Students will be prepared to learn each class. Student should be prepared:
- With materials and supplies.
- With assignments completed *on-time*.
- For Quizzes and Tests. There is a timeliness component ingrained into the course grade earned.
  - *(the next items cannot be emphasized enough)*
- To make mistakes and learn from them
- To make more mistakes and to continue learning from them
- To explore, to ask questions of the peers, to be questioned by their peers, to demand justification, to be required to justify, to struggle, to adapt and to grow as learners of mathematics and as people (instructor included ☺)
- To think critically
- To be challenged

Course Content

Unit #	Primary Unit Focus	Secondary Unit Focus OR connections to world
1	Quadratic Functions	Parametric Functions
2	Higher Degree Polynomials	Position and Velocity and Acceleration
3	Exponential and Logarithmic functions	Financial and Scientific Connections
4	Linear Functions	Statistical analysis
5	Rational Functions	Limits
6	Trigonometric Functions (& unit circle)	Transformations
7	Probability	Graphical Representations
8	Trigonometric Properties	Trigonometric Identities

The first Semester will encompass units 1 thru 4. The second semester will encompass units 5 thru 8.
Only the Second Semester will have a final (more on this later).

Student Grades
Components of the Grade

The grade for each semester will be calculated by 4 components (each component is found in each unit).

Prior Math Course Standards (Basic Skills Quizzes)	10%
Content Standards (Quizzes and Projects)	35%
Problem Solving Standards (Free Response Questions –FRQ's)	25%
Mastery of skills	30%

The only difference is the 2nd semester has a final and this final will make up ½ of the Mastery score for the 2nd semester.

P.A.P.A.A.T Grading Scale:

Each component above will be assessed on the Standards Based Grading Scale. The letter grade earned will be according to the H.E.L.A. schoolwide adopted grading scale (table below).

A	3.20 – 4.00	B +	2.90 – 2.99	C +	2.40 – 2.49	D +	1.90 – 1.99	F	1.49 and below
A –	3.19 – 3.00	B	2.60 – 2.89	C	2.10 – 2.39	D	1.50 – 1.89		
		B –	2.50 – 2.59	C –	2.00 – 2.09				

Note: There will be no rounding at the end of the semester and no extra credit possibilities.

a quick note on the end of year final
Though the end of course final only impacts the 2nd semester grade, the final can be used to improve your first semester grade. The final will be scored as a 1, 2, 3, 4 or 5.
- A score of a 1 is equivalent to a 1.5 and will not impact the 1st semester.
- A score of a 2 is equivalent to a 2.0 and will guarantee a minimum grade of D+ for both semesters.
- A score of a 3 is equivalent to a 2.5 and will guarantee a minimum grade of a C for both semesters.
- A score of a 4 is equivalent to a 3.0 and will guarantee a minimum grade of a B- for both semesters.
- A score of a 5 is equivalent to a 4.0 and will guarantee a minimum grade of a B+ for both semesters.

More will be shared on the final as we draw nearer to June.
The next pages define the components AND provide information on reassessment possibilities.

The grade components (definitions and frequencies):

Grade Component	What it is	Frequency and time requirement
Prior Math Course Standards (Basic Skills Quiz)	Small quizzes which frequently assess skills students must recall from earlier math courses OR Occasionally assess non-complex new skills which are necessary to be assessed before continuing new learning.	Multiple times each unit (each Basic Skills Quiz will be 5 to 8 minutes)
Content Standards	Quizzes covering new material. Will be short answer format and composed of questions of varying complexities and problem solving requirements. Content of questions will be known and questions clearly grouped by standard. No assessment of previous units / standards.	2 to 3 per unit Lasting 20 to 30 minutes and will encompass 2 or 3 skills (scored and recorded separately)
Problem Solving Standard (FRQ's or Projects)	The Free Response Questions (FRQ's) are multipart questions which, besides requiring deep understanding of the content, will also assess a student's ability to reason, think critically and to justify their responses. Projects will be student created items demonstrating their ability to connect the learning to the world around them.	FRQ's are given once per unit at the end of the unit. (typically 2 Questions 1 new and 1 previous. Each FRQ is allotted 20 minutes) Projects (a few per semester, much of work must be completed outside of class time)
Mastery of Skills	Mastery assessments are provided at the end of each Unit (except the 1st). They will be a mixture of short answer questions (of varying complexities) from the present unit and any previous units.	Mastery Assessments are once per unit and usually 10 questions with 3 minutes allotted per question (30 minutes total).

Reassessments (Retakes)?

It is recognized that life happens and is not always able to be scripted to our liking. With this recognition, it is understood that sometimes a student will be unhappy with their performance on a quiz or test and seek an opportunity to further demonstrate their learning after a quiz or test is complete.

Following (on the next page) is the comprehensive guide for reassessment for each type of student work:

Reassessment (Retake) Policies, requirements and timeframes

Component	Reassessment (Retake) Policy	Additional requirements for reassessments	Timeframe for reassessment
Prior Math Standards (Basic Skills Quiz)	Students can retake any basic skills Quiz one time. *Score (SBG) will be averaged and rounded up.	none	Within one week of Basic Skills Quiz being returned. Must be scheduled a minimum of 1 day prior and taken outside of class time.
Content Standards	Students can retake any Content Skill one time. *The retake grade will replace the original grade regardless of result. **Students will be allowed a total of 2 second retake possibilities per semester	Home-practice-work will be checked and scored for effort/completion. Though home-practice-work will not affect the student's grade, home-practice-work will affect the ability to retake. Home-practice-work completed at a level of 100% (a packet for each content quiz) will allow for 1 retake for that Content quiz. *each second retake will require an assignment and/or a student/teacher tutorial/conference.*	Within one week of the Content Quiz being returned. Must be scheduled a minimum of 1 day prior and taken outside of class time. (The same is true for a second retake if/when you opt to use one of your 2 second retake options.)
Project(s)	None – It is up to students to schedule time for feedback prior to turning in finished projects (a rubric will be provided for each project)	Project grades are final	None
Problem Solving Standard (FRQ's)	For each unit, the FRQ grade will be comprised of 2 FRQ's on the content topic. One will be taken at the end of the unit. The second will be taken at the end of the *next* unit. The two scores will be averaged. *Two retake options will be possible for each unit's FRQ scores. -The first retake replaces the lower of the 2 FRQ scores for the unit. -The second retake *averages* with the lowest of the 2 FRQ scores of record.	None – though scheduling a teacher conference prior to retake to ensure understanding is recommended.	The 1st and 2nd retakes will be given at predetermined times (typically spanning a two day period) If the retake window is missed, the retake option evaporates.
Mastery	None – Though if a student can demonstrate (at the end of the year) that a score on any unit's mastery assessment is an outlier when compared with the others, that specific mastery assessment will be dropped for the student.	Student must demonstrate with statistical analysis that a score for a mastery assessment is an outlier. (by definition, an outlier is an unlikely occurrence and is guaranteed to happen a maximum of one time)	Analysis must be complete (and correct) and turned in prior to the sitting for the final.
Final	None	Final score is Final	None

PAPAAT
Signature page

I have read and understand the previous pages policies and definitions. I understand that if something is unclear it is upon the student to seek clarification prior to the occurrence of an issue during the school year.

I understand the following supplies will be needed daily:
- A pencil (student work completed in pen will not be graded)
- Lined paper free of torn spiral edges. (graph paper may be useful)
- A Ti-83+ calculator at a minimum (recommended students obtain a Ti-84+, the Ti-84+ will be the calculator used by the instructor for demonstrations and is the calculator heavily recommended for students future A.P. math coursework and A.P. Tests (Calculus and/or Statistics)
- A different colored 'grading' pen is recommended for students to identify clearly which practice questions were missed and, thus, which type of questions may need further study.
- It is recommended students have a separate 3 ring binder with 10 to 12 dividers for their math class. At a minimum a separate section in their binder for math, though it is felt this will be insufficient and impossibly difficult to organize as a reference for the final and for mastery assessments.
- **A Positive attitude**
- **A willingness to make mistakes...and learn from them! (these are the best learning opportunities)**

Students, please sign and date the following and have your parent/guardian do the same.

Student Name (printed neatly)_____

Student Signature _____

Parent/Guardian Name (please print neatly)_____

Parent/Guardian Signature_____

Date_____

****Students, your first Basic Skills Quiz score will be based on your completion of and timely turn-in of the following items (this is the only time a score will be entered which is not math work).****

Five Items (to be stapled in this order)   **DUE: Thursday, September 7th**

1. Student information sheet (filled out by student)
2. This signed syllabus sheet (please remove this page and keep the other pages for your reference)
3. An email sent to instructor with a question regarding the class (email to neil.hanson@evergreenps.org)
4. Student has signed up for REMIND [if a parent disagrees or is hesitant on this requirement, please email Mr. Hanson (prior to the due date for this packet) and this requirement will be waived.]
5. The predetermined printed page from the website (www.scubamoose.weebly.com) It is recommended that students add this website as a favorite for their browser.

Grade: 0.0 (not turned in)   1.0 (syllabus signature returned)   2.0 (syllabus & 2 other items completed)
                3.0 (Syllabus and 3 other items returned)   4.0 (all items returned)

For each day the packet is late (class scheduled or not), the score will decrease 0.5 per day. Students CAN turn in early.