**Southfield-Lathrup Senior High School**

Syllabus 2014-2015

**Department**: Mathematics

**Course Name**: Pre-Calculus

**Textbook:** Precalculus, Graphing, Numerical, Algebraic, 5th Edition (Addison Wesley Longman) 2001

**Teachers**:

**N. Valentine** **Email Address:** **nanette.valentine@southfieldk12.org**

 **Web Site:** <https://teacherweb.com/mi/southfield-lathruphighschool/valentine/>

**A.Orban Email Address: amandaorban7@gmail.com**

 **Web site:** <http://slhs-precalc-orban.weebly.com>

**Course Description**:

This course develops advanced topics in mathematics in preparation for the calculus courses offered in high school or in college. The use of models in making connections between related ideas and real world applications is stressed. Topics include analysis of various types of functions (linear, quadratic, rational, radical, circular, logarithmic, and exponential), limits, solving systems of equations using a variety of methods. Students are expected to use transformations for graphing the functions mentioned above. Other topics include continuity, end behavior, maxima and minima, composition of functions, inverses, and exponential, logarithmic and trigonometric functions. Complex numbers as well as conics are also investigated. If time permits, this course concludes with work on infinite sequences and series, the sum of infinite series and an introduction to the concept of derivative. A graphing calculator is required.

**Goals:**

Students will:

* learn to graph and analyze functions using domain, range, continuity, zeros, asymptotes, maximums, minimums, and increasing and decreasing behavior
* be able to determine and interpret the limits of functions and sequences
* be able to understand and evaluate derivatives and know how to use them appropriately
* develop proficiency in the use of the graphic calculator
* be able to use appropriate formulas and identities from trigonometry
* be able to express solutions and ideas in written form with descriptions and presentations using correct notation, vocabulary, logic and concepts from this course content and that of previous courses
* develop problem-solving skills

**Grading Scale**:

A 94 – 100 B+ 88 – 89 C+ 78 – 79 D+ 68 – 69

A- 90 – 93 B 84 – 87 C 74 – 77 D 64 – 67

 B– 80 – 83 C– 70 – 73 D– 60 – 63

 F 0 – 59

**Marking Period Grade Criteria:**

Tests 55%

Quizzes 20%

Homework/Class work 25%

**Semester Grade Criteria:**

* A comprehensive mid-semester exam will be given.
* A comprehensive exam will be given at the end of Semester 1 and Semester 2.
* Each student must take these comprehensive exams.
* Semester grades are computed based on the following weighted average:

**30% for each of the three marking periods + 10% Semester Exam**

**Student Responsibilities:**

In this course the study of mathematics intensifies and students will be expected:

* To accept responsibility for their own learning.
* To discuss solutions and explain their reasoning to others.
* To keep a complete notebook which includes class assignments, homework, notes, tests, and quizzes.
* To come to class prepared to participate and study.

All work assigned to individual students is expected to be their own product. In the event that collaboration took place when inappropriate, as in taking a test or quiz, a zero will be given to each student and the parents will be contacted for violation of this policy.

Class will begin each day following the tardy bell; therefore it is vital that students come to class on time to gain the most from each class.

Almost all students need help at one time or another; therefore students are encouraged to stay after school with their teacher for extra help. Please make appointments with individual teachers for extra help.

The Southfield Public Schools Board of Education Policy and High School Code of Conduct will be followed for dress code, electronic devices, hats, ID’s and planners.

**Recommended Materials:**

Textbook, notebook, paper, pencil and a graphic calculator.

The mathematics department recommends the TI-83 or TI-84 Plus for all of our students. This calculator provides the technology that is most appropriate for the mathematics taught in high school and in the early years of college. Please do not purchase a TI-85, TI-86, TI-89 or TI-92 since these calculators have advanced features that our students will not use and lack basic features, which are necessary for our students.

**Make up work:**

Students are expected to make up all work missed due to absence from class for any reason. Students will be given the number of class periods missed plus one (1) to turn in missed assignments and class work. Extenuating circumstances may require teachers and student to negotiate reasonable time lines for making up work that both can accept.

**Attendance Policy:**

Once students reach **(5)** **unexcused** tardies or **(5)** **unexcused** absences in one semester the student will receive **zero points toward their grade point average**. However, the students will receive credit for the class if satisfactory work has been completed despite the tardies or absences, or will not receive credit if satisfactory work has not been completed. Parents/Guardians **must call** within 24 hours to excuse an absence.

Attendance line: (248) 746-7342.

**Late work policy:**

Late work in general is unacceptable for any reason other than absence from school.

**Hints for success:**

Success in mathematics depends on doing mathematics on a regular basis. Listening in class and working to understand the concepts during class is important. That is not enough without daily written work, practicing the skills and attempting to do the problem solving. This reinforces the concepts and makes them your own. To this end, homework will be assigned at almost every class meeting. Your regular routine should include the following in order to be successful:

* listen in class
* take notes in class, keep these notes to study for the chapter test, mid-semester exam, and semester exam. They may even be helpful in future math classes.
* visit website for worksheets, classwork/homework and helpful hints:

 **Valentine:** <https://teacherweb.com/mi/southfield-lathruphighschool/valentine/>

 **Orban:** [http://slhs-precalc-orban.weebly.com](http://slhs-precalc-orban.weebly.com/)

* try every problem
* give your best every day
* bring your assignments and material to class every day
* ask questions when you need clarification
* review one day’s assignment before beginning a new one

We look forward to a pleasant and productive year learning mathematics!

Dear Student,

I welcome both your comments and concerns regarding the items presented here. I’m looking forward to a wonderful and engaging school year with you.

Student, please sign below indicating that you have received this Course Syllabus 2014-2015 and will abide by it

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**Print Student Name** **Date**

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**Student signature Student E-mail or Cell Phone #**

Dear Parent/Guardian,

In an effort toward communication between us I would appreciate it if you signed this sheet indicating that the Course Syllabus 2014-2015 for Mathematics has been shared with you. It would also be very helpful if you would indicate a number where I might be able to reach you during the school day and in the evening.

Sincerely,

Nanette Valentine - Mathematics Teacher

Amanda Orban – MSU Student Intern

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**Parent/Guardian Signature** **Print Parent/Guardian name**

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**Day Time/Work Number** **Home Phone**

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**Cellular Number Parent/Guardian E-mail**

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**Date**

Comments/Concerns: