**Numerical & Graphical Analysis**

Bigfork High School

**COURSE SYLLABUS**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Instructor:  | Josh Feller  | Term:  | Fall 2019 |
| Office:  | 109 | Class Meeting Days:  | M-F |
| Phone:  | 837-7420 x4219 | Class Meeting Hours:  | 5 |
| E-Mail:  | jfeller@bigfork.k12.mt.us | Class Location:  | 109 |
| Office Hours: | See schedule below or by appointment | Lab Location:  | N/A |
|  |  |  |  |

# Welcome

I am looking forward to teaching you the concepts of Numerical & Graphical Analysis, and helping you with applying these concepts to relevant real-world situations, which will be emphasized in this course.

# My Schedule – 2016

7:40 am till 3:25 pm.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   | **M** | **T** | **W** | **Th** | **F** |
| **1st** | ALG II | ALG II | ALG II | ALG II | ALG II |
| **2nd** | M115/S216 | M115/S216 | M115/S216 | M115/S216 | M115/S216 |
| **3rd** | ALG II | ALG II | ALG II | ALG II | ALG II |
| **4th** | ALG II | ALG II | ALG II | ALG II | ALG II |
| **5th** | NGA/M171 | NGA/M171 | NGA/M171 | NGA/M171 | NGA/M171 |
| **6th** | VHS | VHS | VHS | VHS | VHS |
| **7th** | PREP | PREP | PREP | PREP | PREP |

# Course Catalog Description

Topics covered include equations, systems of linear equations and methods of solution (including matrices), exponents and radicals, linear and quadratic functions (and their graphs), exponential and logarithmic functions (and their graphs), sequences and series. Trigonometric functions are introduced using the circular and angular definitions. Trigonometric graphs, identities, equations and applications are investigated. Polar coordinates, polar graphs and conic sections are also covered.

This course is designed to expand the understanding of linear, quadratic, polynomial, exponential, logarithmic, rational, radical and trigonometric functions as well as a deeper understanding of numeracy skills and algebra concepts. The course will also establish the rigorous foundation for mathematical concepts required in higher level mathematics courses and hone the student’s ability to model situations.

Students who complete Numerical & Graphical Analysis and pass the placement test, will take Calculus (M171) the following semester.

# Course Learning Objectives

Upon successful completion of this course, the student should be able to:

* Complete understanding of the domain and range for functions.
* Describe the behaviors of functions regarding zeros, turning points, maximums and minimums, end behaviors, etc. Model the effects of transformations on graphs of functions and will include identifying an appropriate model for a given situation.
* Complete function operations and how they impact the domain.
* Have an understanding of common algebra issues and how to correct the misunderstanding.
* Interpret graphical analysis of functions and relating one curve to another, for example position and velocity or velocity and acceleration

# Course Prerequisites

A grade of “C” or better in Pre-Calculus or placement test through FVCC

# Course Credits

0.5 Credit.

# Required Materials

**Notebooks:**

Two spiral bound notebooks are required, one for class notes and one for homework calculations. Your name and title (“Class Notes” or “Homework”) should be clearly visible on the cover of each notebook.

**Calculator:**

A graphing calculator is required for this class. The TI-83 Plus or TI-84 is recommended, but a TI-89 or TI Inspire is acceptable. It is strongly recommended that each student purchase his or her own calculator for this course.

**On-line Homework:**

MathXL is required to complete the homework. <https://www.mathxlforschool.com/>

Course ID:  **XL09-A1RS-6022-13X3**

**Websites:**

Mr. Feller’s Website (has links to all the following): [bhsmathfeller.weebly.com](http://bhsmathfeller.weebly.com/)

Khan Academy: [www.khanacademy.org](http://www.khanacademy.org)

Learn Zillion: [www.learnzillion.com](http://www.learnzillion.com)

Hippocampus: [www.hippocampus.org](http://www.hippocampus.org)

Purple Math: [www.purplemath.com](http://www.purplemath.com)

Paul’s Online Notes: [tutorial.math.lamar.edu](file:///Volumes/GoogleDrive/My%20Drive/d.%20Syllabi/tutorial.math.lamar.edu)

Desmos Graphing Calculator: [www.desmos.com/calculator](http://www.desmos.com/calculator)

**Miscellaneous:**

A clear ruler and colored pencils/pens are strongly encouraged but not required during the graphing portion of the course.

# Grades

**Grading System:**

|  |  |
| --- | --- |
|  | Weight of Grade |
| Quizzes (every Friday) | 25% |
| Exams (end of chapter) | 50% |
| Homework | 25% |

**Grading Scale:**

Per Bigfork High School Student Handbook:

|  |  |  |
| --- | --- | --- |
| 100-90 |  | A |
| 89-80 |  | B |
| 79-70 |  | C |
| 69-60 |  | D |
| 59 - 0 |  | F |

**Quizzes:**

Quizzes are every Friday. The only exception would be the Friday following a test at the end of the quarter. The purpose of these quizzes is to demonstrate your understanding and application of the current concepts presented during that week. Each quiz will be worth 10 points and calculators may be used. Graded quizzes will be handed back the following Monday.

**Tests:**

There will be a test at the end of the chapter. The exams will be closed notes. You will be given a one-sided 8 ½ by 11-inch cheat sheet to the test. The cheat sheet will be turned in with the test. The graded test and cheat sheet will be handed back the following Monday.

To receive full credit for each problem on the test, you must follow directions carefully, use the correct procedures, and show all work - including calculator functions. Partial credit may be given for incorrect answers if all of your work is shown. To receive full credit, final answers for each question must be clearly identified with either a box or circle. If more than one final answer is identified per question, no credit will be awarded for that particular question. Test dates will be displayed on the board during each quarter.

**Homework:**

Homework is practice in mathematics class. The work will be tracked to determine if you are attempting all problems and completing the assignment. If a student is not completing assignments or making an honest attempt to complete assignments, a conference will be set up with the parents and the student to discuss strategies to improve work.

# Course Policies: Grades

**Quiz/Test Retakes:**

Students will be allowed to take retakes on concepts that they missed on test and quizzes. In order to be eligible for a retake, students must complete additional work on either IXL or other practice problems to demonstrate that they have practiced the concepts to a level that is satisfactory for them to demonstrate mastery on the retake. Students will only have to completed the concepts that they did not perform well on. Concepts that show mastery do not need to be retested/requizzed.

All students are eligible to retake test and quizzes, but students who score a D or F will be required to complete a retake.

**Absent/Late Work Policy**:

Students will miss class from time to time, but it is the responsibility of that student to find what work and notes were done while they were away. All are posted on the website. There are two types of absences:

School-Related Make-up Policy: (SR)

If you miss school due to a school-related absence, work that was missed that day or days is expected to completed and turned in the day you return from the absence.

Non-School-Related Make-Up Policy: (EA, UV, PA, UA, TR, OS, IS)

The student will be expected to make-up the work in an appropriate amount of time. If necessary, students will be placed in after-school study backs until the work is completed. The student will have one day per day absent to make-up the work. This does not mean if a student was gone for 5 days that they have 5 extra days when you return to complete the make-up work. Note that sometimes it is detrimental to the student’s progress if they drag out the length of time in making up the work. All classwork and sections of study are posted on the website, and it is the student’s responsibility to check the website to gather all work for their absences.

Test/Quiz Absence:

If you are absent on the day of a quiz or test, you are expected to take the test or quiz the day you return. Quizzes or tests can be completed before or after school if set up as an appointment with the teacher or during a study hall, provided the student completes the quiz or test in the mathematics classroom.

**10-Absence Policy:**

Any student who is absent from class for ten (10) or more class periods during each semester will be subject to the following:

10+ Absences: for each absence after 10, the student will receive a 0 on that day’s work. This includes, Classwork, Attendance Point, Quizzes and Tests.

The following absences count toward the student’s ten (10): EA, UV, PA, UA, TR, OS, IS

School Related absences do not count toward the student’s ten (10).

Circumstances beyond the student’s control will be considered, and exceptions to this policy apply. This is determined on a case-by-case basis.

**Extra Credit Policy**:

Extra Credit can be earned by from assignments that will be assigned throughout the semester.

**Grades of "Incomplete"**:

The current college policy concerning incomplete grades will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a student from completing the course and the remaining work can be completed the next semester. Incomplete work must be finished by the end of the subsequent semester or the “I” will automatically be recorded as an “F” on your transcript.

**Loss of Credit Policy:**

Bigfork High School has two (2) requirements to earn credit in a course which will begin with the first scheduled day:

1. The student must have a 60% average or better to receive credit in classes taken, and
2. The student must make a sincere effort to attend classes regularly.

While a student will earn credit with a 60%, that student will not be approved to advance to the next mathematics course. Any final grade below a 70% will result in that student repeating that mathematics course.

Regarding “a sincere effort” to attend classes regularly. Absences will occur (See 10 Absence Policy), but students will lose semester credit if they miss more than 25% of the scheduled class periods.

# Course Policies: Student Expectations

**Attendance Policy**:

Regular attendance is essential to your success in this class. You are expected to attend all class sessions. If you are absent, it is your responsibility to learn the missed material and to complete any missing sections of your Class Notes notebook prior to the next exam. Class starts promptly when the bell rings, and it is expected that all students are ready to start when it rings. Please note that our Attendance Policy requires the student to make a sincere effort to attend class regularly to earn credit.

**Tardy Policy**:

It is the student’s responsibility to be on time for class. After the 10-minute mark, a student is considered absent. Parents will be notified at each of the discipline levels, and will be included on the plan for improvement for students who are receiving excessive tardies. Consequences for excessive tardies are as follows:

 **3 – 6 tardies** = after-school detention

 **7 tardies and beyond** = office referral, in-school suspension per tardy (per

 Tardy Policy found on page 18 in the student handbook).

\*Please note that if a student is not prepared for class, they will be issued a tardy for each occurrence they do not bring necessary materials for class.

**Professionalism Policy**:

All electronic devices including laptops, mobile phones, iPods, *etc*. **must be turned off** during all classroom activities unless permission is granted before class due to special circumstances. Behavior that disrupts the learning environment will not be tolerated. Please arrive on time for all class meetings. Refer to the Personal Electronic Communication Devices section of the Student Handbook if you have additional questions.

**Academic Conduct Policy**:

Please refer to Bigfork High School Student Handbook, for all district/school policies regarding Academic Conduct. If a student plagiarizes, cheats, or acts in an academically dishonest way on an assignment, project, or test, the student will receive a zero for the assignment. A second offense will result in the student receiving a zero for the assignment, discipline meeting with teacher/principal/student, which could result in an ‘F’ for the quarter and/or removal from class. However, collaboration on homework assignments is allowed and encouraged. If you have any additional questions regarding cheating and plagiarism, please refer to the Student Handbook.

**Potential Keys to Success:**

1. Attend class and participate
2. Do your homework.
3. Organize and spend effort on your notebooks.
4. Rewrite your cheat sheets after each exam – all cheat sheets can be used on the final
5. Reflect on the most important topics of each lecture

**Additional Comments:**

Please keep this syllabus, as it is your only one for the class. All of the information in this syllabus is subject to change. Changes will be given verbally during regular class time. You are responsible for understanding and recording these changes even if you are not present in class at the time they are announced.

Students are responsible for reading, understanding, and abiding by all of the district/school rules and expectations described in the current Bigfork High School student handbook.

Make the best of the class. Be involved, participate, help others, and ask questions. Be responsible for you own education and make the most of it.

**Contact:**

If there are any questions or concerns about this policy, feel free to contact me. Email is the best way to contact me, as I can check it anywhere and anytime.

I feel that parents are a key in making homework a positive experience for each student. It follows, that I ask that each parent make homework a top priority, provide the necessary supplies/materials and a quiet environment, and most importantly provide praise and support. It is your child's best interest that we work together with regards to his or her schooling. I will keep you informed about your child's progress in my class and I expect you to contact me if you notice any and all problems.

**Mr. Feller**

**jfeller@bigfork.k12.mt.us**

**jfeller@bfsd38.org**

**bhsmathfeller.weebly.com**

**NGA COURSE SYLLABUS ACKNOWLEDGEMENT**

**Keep the syllabus, but return this form.**

**Thank you for taking the time to read the course syllabus. Thank you in advance for your support this year. Please do not hesitate to contact me if you have questions. I am really looking forward to a successful school year.**

**I have read the guidelines and policies of Mr. Feller’s class. I understand the rules and guidelines and agree to follow them on a daily basis.**

**Student Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parent/Guardian Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Write the easiest way for me to contact you.**

**Parent email \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Parent cell phone \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**I have read the guidelines and policies of Mr. Feller’s class. I understand the rules and guidelines and agree to follow them on a daily basis.**

**Please read and return this form by Friday, September 7th.**