**Math 30-2 – Foundations of Mathematics**

**Course Outline Fall 2012**

**Glenmary School Mathematics Department**

**Ms. Andersen**

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**Course Rational:**

The main goals of mathematics education are to prepare students to:

- solve problems

- communicate and reason mathematically

- make connections between mathematics and its applications

- become mathematically literate

- appreciate and value mathematics

- make informed decisions as contributors to society

- taking risks

- thinking and reflecting independently

- sharing and communicating mathematical understanding

- solving problems in individual and group projects

- pursuing greater understanding of mathematics

- appreciating the value of mathematics throughout history

**Course Text:**

- Foundations of Mathematics Grade 12 Workbook

*(Absolute Value Publications)*

- Notes and worksheets handed out in class.

**Course Materials:**

* Binder or Coiled Scribbler for notes
* Loose-leaf paper for assignments
* Pens, pencils, erasers (No red pens)
* Graph paper
* Geometry Set
* Ruler
* Graphing Calculator (TI-83, TI-84 or TI-84 plus)

**Course Outcomes:**

 G.O.1. – Develop logical reasoning.

 G.O.2. – Develop critical thinking skills related to uncertainty.

 G.O.3. – Develop algebraic and graphical reasoning through the study of relations.

 G.O.4. – Develop an appreciation of the role of mathematics in society.

**Course Schedule:**

|  |  |  |
| --- | --- | --- |
| **Topic** | **Unit** | **Timeline** |
| Relations & Functions | 1. Rational Expressions
 | ~10 days |
| 1. Polynomials
 | ~7 days  |
| **SUMMATIVE EXAM 1** |
| Logic Reasoning | 1. Logic
 | ~7 days |
| Relations & Functions | 1. Exponents & Logs
 | ~10 days |
| **SUMMATIVE EXAM 2** |
| **MIDTERM EXAM 1** |
| Probability | 1. Permutations & Combinations
 | ~10 days |
| 1. Probability
 | ~10 days |
| **SUMMATIVE EXAM 3** |
| Relations & Functions | 1. Sinusoidal Functions
 | ~5 days  |
| **SUMMATIVE EXAM 4** |
| **MIDTERM EXAM 2** |
| Research Project | 1. Research Project
 | ~ongoing |
| **DIPLOMA EXAM** |

**\*\*It is intended to have this schedule complete before the start of Christmas break.**

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| \*\*Diploma Exam\*\* – Friday, January 25, 2013 – 9:00am – 11:00am |

**Reporting Terms:**

Report Cards will be distributed on the following dates:

**Nov 2, 2012**

 **Jan 30, 2013**

**Assessment and Evaluation:**

We will participate in a variety of formative exercises throughout the course that will be based on the specific outcomes as outlined in the Alberta Program of Studies for Mathematics. These formative assessments will account for 0% of your final grade.

Your class mark will be based on summative assessments that will be done in front of a teacher and will be solely based on the public published student learning outcomes as outlined in the Alberta Program of Studies for Mathematics. These summative assessments will account for 100% of your final grade.

Formative assessment will include tasks such as quizzes, assignments, problem solving activities, and homework.

Summative assessment will include tasks such as unit exams, quizzes, and performance tasks.

Within the 100% summative, marks will be distributed as follows:

|  |  |
| --- | --- |
| **Unit** | **Weighting** |
| 1. Rational Expressions
 | 25% |
| 1. Polynomials
 |
| **SUMMATIVE EXAM 1** |
| 1. Logic
 | 30% |
| 1. Exponents & Logs
 |
| **SUMMATIVE EXAM 2** |
| **MIDTERM EXAM 1\*\*** |
| 1. Permutations & Combinations
 | 30% |
| 1. Probability
 |
| **SUMMATIVE EXAM 3** |
| 1. Sinusoidal Functions
 | 10% |
| **SUMMATIVE EXAM 4** |
| **MIDTERM EXAM 2\*\*** |
| 1. Research Project
 | 5% |
| **DIPLOMA EXAM** |

\*\*As we move to Outcomes based reporting we are implementing a first step.  Rather than a traditional raw score, the midterms will be divided into specific outcomes and assigned according to the corresponding unit.  This change may be different from previous reporting experiences.  The midterms will be worth 25% of each individual unit. Most recent achievement will be taken into account when the student’s final grade is determined. We encourage you to contact us at the school if you have any questions.

***\*\*The diploma exam mark is averaged (50/50) with the course mark to get a final evaluative mark for the course.***

Students who are successful in this course will:

* gain an understanding and appreciation of the role of mathematics in society
* exhibit a positive attitude toward mathematics
* engage and persevere in mathematical problem solving
* contribute to mathematical discussions
* take risks in performing mathematical tasks
* exhibit curiosity about mathematics and situations involving mathematics

**Expectations:**

1. Attendance: Students must make every effort to attend all classes. Regular attendance is one of the most important factors for academic success. Lateness is a form of disrespect. If you are late, you are still expected to attend class. Enter the room quietly, sit down and get to work. Do not disrupt the class.
2. Study: Regular studying and review of course material at home and preparation for quizzes and tests is essential.
3. Responsible: Students are responsible to obtain and/or make up all missed readings, notes, materials, assignments, and quizzes after any absence. Students may obtain missed items from other students or the instructor at an appropriate time so as to not disrupt instruction. Missed notes can be found posted on my website: <https://sites.google.com/site/missandersenshomeworkpage/home>
4. Question: Be sure to ask questions to clarify concepts. Please make an appointment with your teacher to ensure you get the help you need.
5. Behaviour: Mature and considerate behavior is expected in class. Students who do not meet an acceptable standard will not be permitted to continue disrupting others.

**Math Tutorials:**

|  |
| --- |
| The mathematics department is committed to the success of all students enrolled in mathematics courses. Tutorial sessions will be offered by your teacher throughout the semester. These sessions are for students to clarify concepts and reinforce correct procedures. Access to tutorial may be limited\* to students who **Are motivated**. Students should be willing to commit the time and personal effort necessary to master details of the course. **Are serious about learning**. This is evidenced by a high attendance rate, high participation rate, and willingness to ask questions during class time.**Complete their practice every day**. High school math is fast-paced, so regular review is part of a student’s routine.**Take comprehensive notes**. A complete set of notes includes lecture materials, extra handouts, anecdotal comments, and can be augmented by internet resources. |

\*Special cases may be taken into consideration

**Statement of Classroom Conduct and Behaviour:**

Each student is expected to conduct themselves in a manner which respects the rights, property, and welfare of all of the students, teachers, and school staff. Violators of the above will be dealt with accordingly. Students are expected to follow the effective behavior and levels of consequences of Glenmary School’s ROCKS philosophy.

**Glenmary Math Teachers for 2012-2013 are**:

Mrs. Goudreault, Ms. Surette, Ms. Boisvert

Mr. Moffet, Mrs. Gagnon, Ms. Andersen, Mr. Rosenstein

**Where do we go from here?**



The new 10-12 curriculum is laid out in the following sequence:

**“-1” Course Sequence**

This course sequence is designed to provide students with the mathematical understandings and critical thinking skills identified for entry into postsecondary programs that require the study of calculus. Topics include algebra and number; measurement; relations and functions; trigonometry; and permutations, combinations and binomial theorem.

**“-2” Course Sequence**

This course sequence is designed to provide students with the mathematical understandings and critical thinking skills identified for post-secondary studies in programs that do not require the study of calculus. Topics include geometry, measurement, number and logic, logical reasoning, relations and functions, statistics, and probability.

**“-3” Course Sequence**

This course sequence is designed to provide students with the mathematical understandings and critical thinking skills identified for entry into the majority of trades and for direct entry into the work force. Topics include algebra, geometry, measurement, number, statistics and probability.

If you have any questions or concerns regarding this course, tutorial procedure, or your child’s progress, please feel free to contact me at school (624-5656), or by email at jessica.andersen@hfcrd.ab.ca.

***For Parents/Guardians:***

Please indicate that you have reviewed this outline and understand the course your child is taking by signing the portion below and returning this outline with your child. Check out the school’s website at <http://www.hfcrd.ab.ca/gms/> for updates on homework and contact information. Thank you.

Student’s Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Name (*please print*): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_