**Our Lady of Lourdes Catholic High School**

**Course Overview**

**COURSE TITLE:** Functions – University Preparation

**COURSE CODE**: MCR 3U1

**CREDIT VALUE**: 1.0

**SCHOOL YEAR:** 2021 - 2022

**COURSE DESCRIPTION**:

This course introduces the mathematical concept of the function by extending students’ experiences with linear and quadratic relations. Students will investigate properties of discrete and continuous functions, including trigonometric and exponential functions; represent functions numerically, algebraically, and graphically; solve problems involving applications of functions; investigate inverse functions; and develop facility in determining equivalent algebraic expressions. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

**HOW THIS COURSE SUPPORTS THE ONTARIO CATHOLIC GRADUATE EXPECTATIONS**:

This course encourages the Catholic learner to develop his/her God-given gifts and abilities to promote growth toward personal responsibility in preparation for a chosen career path. Throughout this course, emphasis should be placed on moral, ethical, and realistic decision-making in an effort to build responsible citizenship. The classroom environment should instil a spirit of cooperation, rather than competition amongst students, and should foster a collaborative sense of community. This course provides many opportunities for students to work effectively as interdependent team members and to acknowledge others for their opinions.

**UNIT TITLES (Approximate Time and Sequence):**

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| --- | --- |
| Function Notation and Transformations | 9 Periods |
| Rational Expressions | 9 Periods |
| Quadratic Functions | 9 Periods |
| Exponential Functions | 10 Periods |
| Trigonometric Functions | 11 Periods |
| Graphing Sinusoidal Functions | 7 Periods |
| Sequences and Series (optional) | 9 Periods |
| Financial Mathematics (optional) | 9 Periods |

**ASSESSMENT and EVALUATION**:

Evaluation is based on overall expectations of the course. These can be found at http:www.edu.gov.on.ca/eng/curriculum/secondary/subjects.html

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| **COURSE GRADE WEIGHTING**:  Term Work 70%  Culminating Activity 30% | **CATEGORY WEIGHTING:**  Knowledge and Understanding 40%  Applications / Making Connections 40%  Communications 10%  Thinking / Inquiry / Problem Solving 10% |

**\*\*\* IMPORTANT**: Please note that there is uncertainty with regards to the pace of this course given the abbreviated schedule being used to accommodate pandemic public health safety protocols. An exam (or culminating activity) might not be included in the final assessment; in other words, the final grade might be determined using the term work only. \*\*\*

#### LATE/MISSED EVALUATIONS:

Students are expected to complete and/or submit all assessment and evaluation activities on the date determined by the teacher. **The teacher (and/or principal when necessary) will decide if a late activity will be accepted for evaluation purposes or only for formative assessment with no level/mark recorded for grading.**

**CHEATING AND PLAGIARISM:**

Please see information regarding this topic in the Catholic Student Planners.

**GENERAL COURSE INFORMATION**:

* Learning Skills: regular attendance, working independently, teamwork, organization, work habits, initiative, risk-taking, time-management, perseverance, questioning, curiosity and a love of learning are all essential to success in this course.
* A scientific calculator and graph paper are required.

# APPROPRIATE USE OF GRAPHING CALCULATORS

Students may be provided with graphing calculators to be used at school only. In keeping with Board Policy on Telecommunications: Any malicious attempt to harm or destroy the calculator is prohibited and may result in financial compensation and/or other disciplinary action consistent with the School Code of Behaviour, Board Policy and/or the Education Act. Likewise, **theft or loss, through negligence, of the calculator will result in a cost replacement by the student/parents of $150.00.**

**This course overview document must be kept in the student notebook.**

If you have any questions or concerns please contact the teacher at the school by phone or by e-mail (firstname.lastname@wellingtoncdsb.ca).