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| **SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**  **SAULT STE. MARIE, ONTARIO** COURSE OUTLINE | | | | | |
| **COURSE TITLE:** | Calculus | | | | |
| **CODE NO. :** | MTH 626 | | **SEMESTER:** | Four | |
| **PROGRAM:** | Aviation (Flight) | | | | |
| **AUTHOR:** | Math Department | | | | |
| **DATE:** | May 2012 | **PREVIOUS OUTLINE DATED:** | | | May 2011 |
| **APPROVED:** | “Brian Punch” | | | | Jun 13/12 |
|  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Chair | | | | **\_\_\_\_\_\_\_**  **DATE** |
| **TOTAL CREDITS:** | 4 | | | | |
| **PREREQUISITE(S):** | MTH 613 | | | | |
| **HOURS/WEEK:** | 4 | | | | |
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| *For additional information, please contact*  *Brian Punch, Chair, Environment/Design/Business* | | | | | |
| *(705) 759-2554, Ext. 2681* | | | | | |
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| **I.** | **COURSE DESCRIPTION:**  This course provides the student with a more advanced study of calculus. Topics of study include techniques and applications of integration, trigonometric identities, and differentiation of transcendental functions with an emphasis on applications. |

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| **II.** | **LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:** | |
|  | Upon successful completion of this course, the student will demonstrate the ability to:  1. integrate various functions with applications  2. differentiate transcendental functions with applications | |
|  | 3. recognize and use trig identities | |
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| **III.** | **TOPICS:**  **1. Applications of Integration: Ch. 26 Sec. 1, 2, 3, 6**  **2. Additional Topics in Trigonometry: Ch. 20**  **3. Differentiation of the Transcendental Functions: Ch. 27**  **4. Techniques of Integration: Ch. 28 Sec. 1-6**  **5. Basic Number Systems: in class handouts** | |
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| **IV.** | **REQUIRED RESOURCES/TEXTS/MATERIALS:**   1. Basic Technical Mathematics, Allyn J. Washington. Ninth Edition,   SI Version, with MathXL, Addison-Wesley   1. Calculator: any scientific calculator.   *The use of some types of calculators will be restricted during tests.* | | 3 | Differentiation of Transcendental Functions Chapter 27 |
|  |  | | 4. | Techniques of integration Ch. 28, Sec. 1-6 |

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| **V.** | **EVALUATION PROCESS/GRADING SYSTEM:**  **MAJOR ASSIGNMENTS AND TESTS:**  While regular tests will normally be scheduled and announced beforehand, there may be an unannounced test on current work at any time. Such tests, at the discretion of the instructor, may be used for up to **30%** of the overall mark.  At the discretion of the instructor, there may be a mid-term exam and/or there may be a final exam, each of which can contribute up to **30%** of the overall mark.  The instructor will provide you with a list of test dates. Tests may be scheduled out of regular class time.  **Unexcused absence from a test may result in a mark of zero (“0”).** Absence may be excused on compassionate grounds such as verified illness or bereavement. On return from an excused absence, you should ask your instructor to schedule the writing of a make-up test. Failure to do so will be considered as an unexcused absence. |

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|  | The following semester grades will be assigned to students: |

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|  | Grade | Definition | *Grade Point Equivalent* |
|  | A+ | 90 – 100% | 4.00 |
|  | A | 80 – 89% |
|  | B | 70 - 79% | 3.00 |
|  | C | 60 - 69% | 2.00 |
|  | D | 50 – 59% | 1.00 |
|  | F (Fail) | 49% and below | 0.00 |
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|  | CR (Credit) | Credit for diploma requirements has been awarded. |  |
|  | S | Satisfactory achievement in field /clinical placement or non-graded subject area. |  |
|  | U | Unsatisfactory achievement in field/clinical placement or non-graded subject area. |  |
|  | X | A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. |  |
|  | NR | Grade not reported to Registrar's office. |  |
|  | W | Student has withdrawn from the course without academic penalty. |  |
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| **VII.** | **COURSE OUTLINE ADDENDUM:** | | | |
| The provisions contained in the addendum located on the portal, form part of this course outline. | | | | |