

NOUVEL CATHOLIC CENTRAL HIGH SCHOOL

COMPUTER SCIENCE

COURSE SYLLABUS

COURSE DESCRIPTION:	This one-semester course for 11 th and 12 th grade students is designed to introduce the basic concepts of computer programming. Students will use the Microsoft Visual Basic programming language to create Graphic User Interfaces (GUIs) that perform various tasks ranging from ordering pizza to calculating average distance students live from school to finding the total cost of an order of some sort of product (including taxes and shipping). From there, students will use their skills to create games including tic tac toe and blackjack.
MAJOR COURSE GOALS:	At the end of the semester, students will use MS Visual Basic to: <ol style="list-style-type: none">1. Create GUIs according to specific criteria.2. Write code to change the visible, enabled, and other properties for objects placed in the form.3. Write code to perform algebraic calculations.4. Use If-Then statements as well as And-Or commands to execute operations within the form.5. Create Message Boxes to provide feedback to users.6. Use Container objects such as Group Boxes.7. Write code for Do Until loops.8. Insert Menu Strips into forms.9. Use all of the above skills to create forms and games according to specific criteria.
COURSE ASSESSMENT PLAN:	◆ Daily work will include a minimum of lecture time, with self-directed study and work on programming occupying the majority of students' class time. Within each unit, students will code a sample program in which they use the key tools and code being taught. That is followed by 1-2 practice programs that are similar to the sample program. The unit culminates in a program requiring students use of all elements learned to date, with a novel end result. Emphasis is placed on problem-solving and application of information.

	<ul style="list-style-type: none"> ◆ Participation—Students are expected to be active, self-motivated participants in this course, asking questions and pursuing solutions to any problems they have along the way. Although students will not receive participation points, it is impossible to complete required tasks without being actively engaged on a daily basis. <p style="margin-left: 40px;">Due to the nature of this course, regular attendance in class is critical.</p> ◆ Homework, quizzes and tests—There will be occasional paper and pencil homework and quizzes in addition to the practice programs. End-of-unit assessments will be programs (in the place of tests) written by the students that conform to specific standards. ◆ Midterm and Final Exams—At the end of both the first half of the class and at the end, students will create a number of programs showcasing what they have learned to that point. Students will have some degree of choice in the topic of their programs, as long as they meet the key criteria given for the programs. ◆ Grades will be determined based on total cumulative points. Quarter grades will be figured based on the following breakdown: <ul style="list-style-type: none"> *Sample programs: 5 points each *Homework programs: 10-15 points each *Paper and pencil homework: 10 points each *Paper and pencil quizzes: 10 points each *Final unit programs: 15-20 points each ◆ Final semester grades are determined according to the policy set forth in the Student Handbook.
<p>SUPPLIES AND MATERIALS NEEDED:</p>	<ul style="list-style-type: none"> ◆ General—One-subject spiral notebook, pen (blue or black) and pencil. ◆ Program Usage—Microsoft Visual Basic is installed on all computers in the library and both computer labs. Students are able to download the program onto personal computers (PCs only, not Apple products), but this is not required as time will be given in class to complete programs. If students have difficulty or need extra time, they may use the library computers before/after school or during lunch hours. <p style="margin-left: 40px;">All work will be saved on flash drives provided by the school.</p>
<p>EXTRA HELP:</p>	<p>Extra help is available before school (most days) and after school by appointment. Many questions can also be answered via email. If the student needs help with anything, do not wait until the last minute to seek it out!</p>

<p>INSTRUCTIONAL PHILOSOPHY:</p>	<p>Every student learns in a different way, and every effort is made to ensure that every student has an opportunity to operate within their comfort zone while still stretching and pushing the student to do something new and different. Flexibility is a critical skill for the student to learn.</p> <p>Learning how to write code requires students to think in ways they are not necessarily accustomed to. In fact, many schools are offering foreign language credit for successful completion of programming courses. Initially, students may find the transition to this way of communicating challenging, and it will require perseverance. However, the sense of pride and satisfaction in seeing the finished programs that actually do what they're supposed to is well worth the effort!</p>
<p>MAJOR COURSE PROJECTS AND INSTRUCTIONAL ACTIVITIES:</p>	<p><i>This is a sampling of the programs students will produce over the course of the semester:</i></p> <ul style="list-style-type: none"> ◆ Airplane Snacks—Students will code a GUI that allows users to choose between a number of snacks on their flight. Pictures and descriptions will become visible/not visible on command and buttons will be enabled/disabled appropriately. <i>(Major course goals #1, 2)</i> ◆ How Old is Your Dog?—Students will create a GUI that allows users to input the age of their dog and the form will return the age in dog years. <i>(Major course goal #1, 2, 3)</i> ◆ Weight on Other Planets—Students will use If-Then statements to calculate a person's weight if the traveled to the Moon, Saturn, or Mars. <i>(Major course goals #1, 3, 4, 6)</i> ◆ A Penny or a Nickel a Day?—Students will use loops to calculate their pay if they start out being a paid either a penny or a nickel and their pay doubles every day. <i>(Major course goals #1-8)</i>
<p>CLASSROOM EXPECTATIONS:</p>	<p>Everything that is expected of the student can be summed up in three simple statements:</p> <ol style="list-style-type: none"> 1. Be respectful of yourself and others. 2. Be respectful of any and all materials found in the classroom and in the possession of yourself or others. 3. Do as the teacher requests to the best of your ability. <p>Failure to abide by these guidelines will result in verbal reprimand, detention, or removal from class, depending on the severity and/or repetitive nature of the offense.</p> <p><i>***Please note school policy regarding excessive absences (found in the Parent-Student Handbook)—A student who exceeds 10 absences in a semester will lose credit for that class. This policy will be enforced.</i></p>

<p>HOMEWORK POLICY AND GRADING SCALE:</p>	<ul style="list-style-type: none"> ◆ Late work—Homework is expected to be turned in on time and be of high quality. Late work will be accepted only at the discretion of the instructor. Any extenuating circumstances that interfere with a student’s ability to complete assignments should be discussed with the teacher. ◆ Letter grades will be determined according to the scale published in the Student Handbook.
<p>CONTACT INFORMATION:</p>	
<p>Teacher:</p>	<p>Deb Yats</p>
<p>Email Address:</p>	<p>dyats@sacschools.org</p>
<p>Phone Number:</p>	<p>989-791-4330 ext. 458</p> <p><i>Please note: E-mail is the most efficient mode of communication.</i></p>