Honors Digital Electronics  
Course Syllabus

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Plan Periods: A5, B2  
Office: Room 136  
Best times to contact: After 3:15 or via email

Course Description

From smart phones to appliances, digital circuits are all around us. This course provides a foundation for students who are interested in electrical engineering, electronics, or circuit design. Students study topics such as combinational logic, sequential logic, and programmable logic and state machines. They are exposed to circuit design tools used in industry, including logic gates, integrated circuits, programmable logic devices, and other various components.

Instructional Philosophy

This course is identical to a beginning electronics course at a college or university. Students will be able to analyze and design circuits for use in automobiles, consumer electronics, and industrial applications. In today’s society, electronic devices are everywhere and knowledge of how they operate can serve you well.

Content Standards

Students will demonstrate safe working practices in the electronics lab.  
Students shall have mastery of the subject matter about the fundamentals of analog and digital electronics.  
Students will be able to apply and demonstrate their knowledge of combinational logic.  
By completing the various activities, the student will be able to construct and interpret sequential logic problems.  
Students will be able to design and utilize microprocessors to complete simple tasks.

Major Units of Study

Safe Work Practices  
Foundations of Digital Electronics  
Combinational Logic Analysis and Design  
Sequential Logic Analysis and Design  
Introduction to Microprocessors
Course Expectations

**Late Work:** All assignments given will include a due date. The work is expected to be completed by this date. At grade report time, all incomplete or missing assignments will be recorded as a Missing. If you are falling behind on class work, see me to resolve the situation.

**Absence:** Honors Digital Electronics is a lab-based, project-based class. It is vital to your success that you are present in class each day we meet. Any absence from class will need to be followed by time before or after school.

**Tardies:** Any amount of tardiness will not be tolerated.

**Exams:** There will be safety exams, unit exams, and semester final exams. All students will be expected to take the test on the assigned day. If absent on the day of the test, it must be made up on the student’s own time.

**Technology Use:** Students in this class will spend 80% of class time with access to computers. Abuse of this privilege will result in removal from some or all computer access at North High School. Use of email, internet, or games will not be tolerated and will have detrimental effects on your grade in the class. Efficient use of your time is required to complete assignments on time. I strictly follow the district policy on computer and email use, and will not hesitate to apply the consequences for its misuse.

**Texts**


**Assessment**

Formative Assessment: activities, class observations, peer review, exit slips, constructive quizzes, etc.

Summative Assessment: unit exams, semester exams, end of unit projects

**District Grading Policy**

**Grading Scale/Calculation**

All coursework and assessments are judged based on the level of student learning from “below basic” to “advanced.” This course will provide multiple opportunities to achieve at the “proficient” to “advanced” levels. Students are evaluated based on a proficiency scale or project rubric. Proficiency scales for this course are available upon request (teacher will identify location such as portal, teacher website, attached, etc.)

**There are three types of coursework**

- **Practice** – assignments are brief and done at the beginning of learning to gain initial content (e.g., student responses on white boards, a valid sampling of math problems, keyboarding exercises, and diagramming sentences, checking and recording resting heart rate). Practice assignments are not generally graded for accuracy (descriptive feedback will be provided in class) and are not a part of the grade. Teachers may keep track of practice work to check for completion and students could also track their practice work. Practice work is at the student’s instructional level and may only include Basic (2) level questions.
• **Formative (35% of the final grade)** – assessments/assignments occur during learning to inform and improve instruction. They are minor assignments (e.g., a three paragraph essay, written responses to guiding questions over an assigned reading, completion of a comparison contrast matrix). Formative assignments are graded for accuracy and descriptive feedback is provided. Formative work may be at the student’s instructional level or at the level of the content standard. Formative assessments/assignments will have all levels of learning – Basic (2), Proficient (3), and Advanced (4), which means that for every formative assessment/assignment, students will be able to earn an Advanced (4). Teachers will require students to redo work that is not of high quality to ensure rigor and high expectations. The students score on a formative assessment that was redone will be their final score.

• **Summative (65% of the final grade)** – assessments/assignments are major end of learning unit tests or projects used to determine mastery of content or skill (e.g., a research paper, an oral report with a power point, major unit test, and science fair project). Summative assignments are graded for accuracy. Summative assignments assess the student’s progress on grade level standards and may not be written at the student’s instructional level. Summative assessments/assignments will have all levels of learning – Basic (2), Proficient (3), and Advanced (4), which means that for every formative assessment/assignment students, will be able to earn an advanced (4).

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**Missing Coursework**
Work not turned in at all will be recorded in Infinite Campus (district grade book) as an M for missing which calculates to a score of zero.

**Redoing/Revising Coursework**
Students may be allowed redos and revisions of coursework for full credit during that unit of study based upon the teacher’s professional judgment and evidence collected throughout the unit. Scores for student work after retaking, revision or redoing work will not be averaged with the first attempt at coursework or assessment, but will replace the original student score.

**Late Coursework**
Students are expected to complete coursework on time. Late coursework may be accepted for full credit until the end of the unit based on the teacher’s professional judgment and evidence collected throughout the unit. Accepted late work will not result in a reduction, and the M (missing) will be replaced with the score earned by the student. The teacher or school may make exceptions depending up on student circumstances (such as prolonged absences due to illness).