INTRODUCTION to ELECTRONICS 110

Course Outline

Timeline: February 3, 2016 – June 14, 2016
Location: Hartland Community School, Room A-149
Teacher: Mr. Graham Rich, graham.rich@nbed.nb.ca, 375-3000
Witty.ca → HCS → "Intro to Electronics 110"

Course Description

"Introduction to Electronics 110 introduces students to the skills and knowledge required to pursue post-secondary learning in electrical/electronics fields. This course is recognized as a Science or a Technology credit towards graduation. This course presents basic theory and circuitry including components such as resistors, inductors, capacitors, transformers and diodes."

- N.B. Curriculum Document

Expectations on Students for Learning

- This course is hands-on and project-based so **attendance is essential**. If a student should **miss 2 classes**, he/she must arrange with Mr. Rich to **catch up after school**.
- Students must arrive prepared, on-time and ready to work safely while being efficient and productive.
- As per the HCS Attendance Policy, if a student does not attend **20 classes**, then he/she will not receive credit for this course (barring extreme circumstances).

Course Fee and Materials

Students will need a notebook or binder, as this course will involve writing and planning.
The basic electronics for this course are provided, but students may choose to purchase an additional kit to keep. If interested, an order will be placed in week 3 or 4. Sample projects:
https://abra-electronics.com/educational-kits/
https://abra-electronics.com/robotics-embedded-electronics/robot-kits-en/

Communication

- Assignments and deadlines will be posted at:
  http://witty.ca → HCS → "Intro to Electronics 110"
- Parents can contact Mr. Rich by phone, email, at parent-teacher meetings or by appointment.

Assessments

Term 1
- 80% Assignments and Projects
- 20% Tests

Term 2
- 45% Assignments and Projects
- 5% Tests
- 20% Final Project
- 30% Exam

Final Mark
- 50% *Term 1* + 50% *Term 2*

Topics of Study

- History of Electronics
- How Electronics Work-Overview
- Mathematics of Electronics
- Electronics Safety
- Electronics Careers
- DC and AC Circuits
- Electro-Magnetism
- Independent Study Project

Assessment Criteria

- Effort (commitment to excellence)
- Time (used fully and wisely)
- Initiative (risk and difficulty)
- Process (plan, make, assess, clean)
- Craft (quality and completeness)
- Competence (demonstrate growth)

Intro to Electronics 110 (February 3, 2016 – June 14, 2016)

I have read the course outline. I understand the course objectives and assessments.

Parent/Guardian Name: _____ Signature: _____

Student Name: _____ Signature: _____

Comments: _____

_____

Curriculum Outcomes – Introduction to Electronics 110

By the end of this course, students will be expected to:

1. Demonstrate an understanding of the history and evolution of electronics and its social and cultural implications.
2. Identify career opportunities in electronics.
3. Demonstrate proficiency in the mathematical processes used in electronics.
4. Display safety consciousness in working with electronic equipment.
5. Demonstrate and apply an understanding of the basic theory of DC circuits and components.
6. Interpret and summarize the relationship between magnetism and electricity.
7. Demonstrate and apply an understanding of the basic theory of AC circuits and components.