Course Name	Technological Systems (Grade 8)	Course Code	21.02300
School Name	Peachtree Charter Middle School	Teacher Name	Aaron Campbell
School Phone Number	678-676--7702	Teacher Email	Aaron_Campbell@dekalbschoolsga.org
School Website	http://www.peachtreems.dekalb.k12.ga.us/		http://peachtreems.dekalb.k12.ga.us/aaroncampbell.aspx
Helpful Websites	http://www.gatsa.org (TSA) http://sciencebuddies.org/science-engineering-careers (Engineering Careers)		

Course Description
Technological Systems is designed to introduce students to systems and processes to develop an understanding of the impact of technology on humans, the environment, and the global community.

Students will develop an understanding with regards to how technology can impact humans, the environment, and the global community through the development of systems. A systems model in its simplest form (input, process, output and feedback) and the design process are foundational to understanding technological systems. A system can be as small as two components working together (technical system/device level) or can contain millions of interacting devices (user system/network level). We often break down the macro systems into less complicated microsystems in order to understand the entire system better. However, technology is becoming more integrated, and systems are becoming ever more dependent upon each other. By investigating systems through their function, design, and development, students will understand what systems are, why they are developed, and how the knowledge of "systems thinking" can be used in the design and production of prototypes. The Technological Systems course reinforces the areas of math, science, social studies, and language arts through practical application and/or hands on activities. Exposure to Engineering and Technology related careers, work ethics and leadership skills will be important components in this course.
Curriculum Overview

CURRICULUM OVERVIEW
MS-ENGR-TS-1 Demonstrate employability skills required by business and industry.
MS-ENGR-TS-2 Demonstrate proper safety techniques and tool usage in the Engineering and Technology Laboratory.
MS-ENGR-TS-3 Examine the variety of components that make up several examples of a system model.
MS-ENGR-TS-4 Use the engineering design process along with the knowledge of a systems model in the production of a prototype solution to a design problem.
MS-ENGR-TS-5 Develop an understanding of how humans interact with systems.
MS-ENGR-TS-6 Describe how technological systems continuously improve from one iteration to another.
MS-ENGR-TS-7 Explore how related career and technology student organizations are integral parts of career and technology education courses. Students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association.

CTAE FOUNDATION SKILLS:

CTAE-FS-1 Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.

CTAE-FS-2 Academic Foundations: Learners achieve state academic standards at or above grade level.

CTAE-FS-3 Communications: Learners use various communication skills in expressing and interpreting information.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

CTAE-FS-6 Systems: Learners understand a variety of organizational structures and functions.

CTAE-FS-7 Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.

CTAE-FS-8 Leadership and Teamwork: Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.

CTAE-FS-9 Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the workplace.

CTAE-FS-10 Career Development: Learners plan and manage academic-career plans and employment relations.

CTAE-FS-11 Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.

TSA, **(Technology Student Association),** a co-curricular organization provides additional experiences for development of skills in the technology education program. Activities of TSA are a fundamental part of the instructional program and prepare students to be successful leaders and responsible citizens in a technological society. The program promotes communication, leadership and competitive skill development, scholarship and safety in the classroom/laboratory environment and provides experiences with the community's industrial and technological resources and for recognition for exemplary performance.

SAFETY:
Because of the nature of this course, students will work with and learn to use a variety of tools and equipment. Each student will be oriented and assessed on basic workplace safety procedures. While working in the classroom or in the lab all safety procedures must be followed. If a student does not follow the correct safety procedures the student will not be permitted to complete the activity. If a student places himself/herself or others in danger the student will be removed and the proper disciplinary actions will follow.

GRADING SYSTEM: The DeKalb County School District believes that the most important assessment of student learning shall be conducted by the teachers as they observe and evaluate students in the context of ongoing classroom instruction. A variety of approaches, methodologies, and resources shall be used to deliver educational services and to maximize each student's opportunity to succeed. Teachers shall evaluate student progress, report grades that represent the student's academic achievement, and communicate official academic progress to students and parents in a timely manner through the electronic grading portal. **See Board Policy IHA**.

GRADE PROTOCOL

GRADING CATEGORIES	Description	Weight	
			A 90 – 100
Pre Assessments	Pre-Tests	0%	**B** 80 – 89
Assessment During Learning	Engineering Design Journals, Discussions, Quizzes, Tests	25%	**C** 71 – 79
Guided/Group Practice	Class work, Daily Work, Performance, Projects, Labs	45%	**D** 70
Summative Assessment	Post Test/Capstone Project	30%	**F** Below 70

DISTRICT EXPECTATIONS FOR SUCCESS

STUDENT PROGRESS	Semester progress reports shall be issued four and a half, nine and thirteen and a half weeks into each semester. The progress of students shall be evaluated frequently and plans shall be generated to remediate deficiencies as they are discovered. Plans shall include appropriate interventions designed to meet the needs of the students. **See Board Policy IH.**
ACADEMIC INTEGRITY	Students will not engage in an act of academic dishonesty including, but not limited to, cheating, providing false information, falsifying school records, forging signatures, or using an unauthorized computer user ID or password. **See the Code of Student Conduct - Student Rights and Responsibilities and Character Development Handbook.**
HOMEWORK	Homework assignments should be meaningful and should be an application or adaptation of a classroom experience. Homework is at all times an extension of the teaching/learning experience. It should be considered the possession of the student and should be collected, evaluated and returned to the students. **See Board Policy IHB.**
MAKE-UP WORK DUE TO ABSENCES	When a student is absent because of a legal reason as defined by Georgia law or when the absence is apparently beyond the control of the student, the student shall be given an opportunity to earn grade(s) for those days absent. Make-up work must be completed within the designated time allotted. **See Board Policy IHEA.**

SCHOOL EXPECTATIONS FOR SUCCESS

CLASSROOM EXPECTATIONS	1. **Be on time and prepared for class every day. (ADL)** 2. **Turn in work on time. (ADL)** 3. **Clean work area prior to leaving class/ lab. (ADL)** 4. **Follow all safety rules in the lab or classroom. (ADL)** 5. **Return tools and supplies to proper storage area. (ADL)** 6. **Do not bring food or drinks in the classroom. (ADL)**
MATERIALS AND SUPPLIES	**USB drive 4GB**, Composition Notebooks to be used as the Engineering Design Notebook. A One inch, **BLUE**, three prong notebook with plastic around the outside to serve as a portfolio. One mechanical pencil with lead (does not have to be expensive). Basic supplies for some projects as needed.
EXTRA HELP	Tuesday tutorials 4:15-4:45.
PARENTS AS PARTNERS	**TBA in class**

---------- **DETACH BELOW SIGN AND RETURN OR RETURN THE ONLINE CONFORMATION FORM ELECTRONICALLY** ----------

PLEASE SIGN BELOW AND RETURN

I have read the syllabus.

Student Signature_____

Parent/Guardian Signature_____

Date_____

Additional information to support continued contact:

Information	Parent/Guardian
Day Time Phone Number	
Cellular Phone Number	
Home Phone Number	
Email Address	