2022-2023
Liberty Middle School
281 Dock Murphy Drive, Madison, Alabama 35758
Mrs. Joy Hearrington
Project Lead The Way - Green Architecture (PLTW GA)
Technology Student Association (TSA) Advisor

Teacher Contact Information	**Email:** jhearrington@madisoncity.k12.al.us **Classroom Phone:** 256-430-0001 ext. 83112
Course Digital Platforms	**Webpage Link: https://www.madisoncity.k12.al.us/Domain/2099** **Schoology Link:** https://madisoncity.schoology.com/home **Distribution List:** PowerSchool will be used for parent contact, including class updates and announcements. **Please ensure** with the LMS Front Office **that your preferred email address and/or phone number is in PowerSchool correctly.**
Textbook Information	There is a digital textbook for this course which is accessed via a login and password assigned to us from PLTW. We use Schoology as our lessons and activities organizer and PLTW as our curriculum resource. Please ensure your student brings their MCS Chromebook charged and ready for class each day, with their earbuds/headphones.
Course Description	Today's students have grown up in an age of "green" choices. In this course, students learn how to apply this concept to the fields of architecture and construction by exploring dimensioning, measuring, and architectural sustainability as they design affordable housing units using Autodesk's Revit® 3D architectural design software. *If forced to be in a virtual environment, we will do our best to replicate these projects to achieve course learning targets/objectives.* **All assignments will also be listed in Schoology should a student be absent for any reason.**
Course Prerequisites	None
Course Objectives	K1 – Identify the systems required in a residential home, including electrical, plumbing, heating, ventilation, and air conditioning. U7 K2 – Describe the three areas of a house and the rooms that belong to them. U7 K3 – Identify common roof styles. U7 K4 – Describe the working triangle and its purpose. U7 K5 – Identify and use appropriate symbols in a basic floor plan for a residential home. G1 – Demonstrate an ability to identify, formulate, and solve engineering problems. G2 – Demonstrate an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability. G3 – Demonstrate an ability to design and conduct experiments, as well as to analyze and interpret data. G4 – Demonstrate an ability to apply knowledge of mathematics, science, and engineering. G5 – Demonstrate an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice. G6 – Pursue the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

	G10 – Gain knowledge of contemporary issues. G11 – Recognize the need for, and develop an ability to engage in life-long learning.
Course Goals	Students will: 1. Explore the variety of careers related to engineering, biomedical sciences, and computer science. 2. Communicate effectively for specific purposes and settings. 3. Collaborate effectively on a diverse and multidisciplinary team. 4. Demonstrate personal responsibility and initiative and an understanding of professional and ethical responsibility. **5.** Persistently apply an iterative process to solve a problem or create an opportunity that can be justified. 6. Generate ideas or build upon other ideas to innovate. 7. Incorporate safety in all designs, products, and solutions.
Instructional Delivery Plan, Course Outline & Culminating Project	**Unit 1**: **Architectural Basics** Measuring Practice, Architectural Measurement, Architectural Dimensioning, Measuring Your Classroom, Autodesk Revit® Creating Your Classroom Tutorial, Estimating Floor Materials, Bedroom Floor Plan, Fundamentals of Construction, Room Sizes & Relationships, Reading a Floor Plan. **End Project:** Design a Bedroom Using Autodesk Revit® **Unit 2: Introduction to Sustainable Architecture** Rebuilding Greensburg, KS, Green Vocabulary, Why Recycle?, Indoor Air Quality, Building Green. **End Project:** Research and Identify House Styles in Our Community **Unit 3: Architectural Challenge** Wood Frame Construction, Building a Balsa Wood Shed, Why Insulate?, Shipping Container Home **Culminating Project:** Build a wall for a wood framed shed, test insulation materials, and use Autodesk Revit® to design a sustainable home using shipping containers.
Credentialing	**None**
CTSO Integration *(LMS Career & Technical Student Organization is TSA.)*	[Technology Student Association](), TSA, is a **career technical student organization** and a fundamental part of this course. It is a national career and technical student organization of students engaged in science, technology, engineering, and mathematics (STEM). TSA is integrated into the program which includes competitions and leadership opportunities. TSA provides students with activities during their class time and after school with our local TSA Chapter. *TSA Based Activities relevant to Green Architecture include but are not limited to: Lab Safety Posters, Career Prep, Essays on Technology, Challenging Tech Issues, CAD Foundations, Problem-Solving, Structural Engineering, Off the Grid, and Construction Challenge.*
Embedded Numeracy Anchor Assignment *(Sustainable Home Using Shipping Containers)*	S1 – Demonstrate the proper use of a standard ruler and an architectural scale. U1, U2, U3, U4, U5 S2 – Use proper notation in regards to dimensioning an architectural drawing. U1, U2, U3, U4, U5 S3 – Calculate area and perimeter of a floor plan given dimensions. U6 S4 – Measure a room and draw it to scale using common symbols. U2, U3, U4, U5, U6, U7 S5 – Read and interpret a blueprint of a floor plan. U7, U8

Embedded Literacy Anchor Assignment *(Lesson Concluding Questions & Activities)*	Students will use precise language and domain-specific vocabulary to inform about or explain the topic (L1.1 - L3.2, L3.4). Students will document work, including processes, research and solutions (L1.1-L3.2, L3.4). Students will produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience (L1.2-L2.7). Students will draw evidence from literary or informational texts to support analysis, reflection, and research (L1.2-L2.7).
CTE Lab Safety Guidelines	Each student in a CTE/PLTW course will be required to complete a lab safety exam and score a 100% correct before being allowed to use any tools on projects. We expect students to responsibly and safely use the CTE equipment. Examples of equipment used in CTE courses may include and are not limited to the following: scissors, hot glue guns, box cutters, power tools, hand tools, measuring tools, electronic equipment, computers, medical supplies, robotics equipment, food items (consumable and non-consumable).
Classroom Expectations	1. **Be Respectful.** 2. **Lean into Struggles & Own Your Education.** 3. **Be a Learner, Not a Finisher** 4. **Feed Your Passion** 5. **Cheerful Collaboration** 1. Be in your seat when the tardy bell rings starting on bell work immediately. Don't wait to be told. *Detention for tardies will be assigned per LMS policy.* 2. Come prepared for class. Bring all necessary supplies, including a positive mindset for learning. 3. Treat others as you want to be treated. Show respect for yourself and others at all times. 4. Cell Phones should be off & put away unless instructed by the teacher otherwise.* 5. If it's not yours, don't touch it. Keep your hands, feet, and objects to yourself. 6. Be responsible for ALL technology and supplies. 7. The teacher dismisses the class, not the bell. 8. Behave in a manner conducive to learning for all. 9. Do not visit gaming, video, non-Green Architecture curriculum websites during class. 10. Follow all Lab Safety rules in class and all rules listed in your LMS Handbook, District Technology Policy & MCS Code of Conduct. ***NOTE:** Student misuse of cell phones/devices during class may result in a **cell phone "time out"** and/or from the use of devices in our class, on an individual basis.
Progressive Discipline *(LMS Policy)*	**Step 1:** Verbal warning **Step 2:** Student/teacher conference **Step 3:** Parent contact/conference **Step 4:** Detention and a parent contact **Step 5:** Office referral
Grading Policy & Scale *(MCS Policy)*	**60%** = Assessments (Tests, Mini-Assessment, Projects) **40%** = Daily Grades (Quizzes, Progress Checks, Classwork, Daily Activities & Participation) **Grade Scale:** 90-100 = A; 80-89 = B; 70-79 = C; 65-69 = D; <64 = F
Late Work Policy	The Student handbook policy for late work will be followed. If students have an unexcused absence a 0 will be assigned for missed assignments. If students have an excused absence, they will have a minimum of 3 days and a maximum of 1 week to complete missed assignments. Time extensions may be determined on a case by case basis for the level of difficulty of the assignment.
Make-up Work/Test Policy	Students with excused absences will be allowed to make-up all work within three days of returning to school. It is the student's responsibility to ask for make-up work. Students can get with a classmate or ask the teacher for help. Work that is not made up will become a zero (including quizzes/tests). Many times, missed quizzes and tests can be made up during school.

Technology Policy	Student laptops should not be hard-wired to the network or have print capabilities. Use of discs, flash drives, jump drives, or other USB devices will not be allowed on Madison City computers. Neither the teacher, nor the school is responsible for broken, stolen, or lost laptops. Laptops and other electronic devices will be used at the individual discretion of the teacher.
Accomodations	Requests for accommodations for this course or any school event are welcomed from students and parents.
Materials & Supplies	Each student should have a personal set of earbuds/headphones for in class use brought with them daily in a protective case in their backpack. It is also recommended that each student have a graph paper composition book OR a graph paper single-subject notebook OR a hand-bound graph paper booklet that **will stay in the class**. (He/she will be given their own file folder in a file cabinet). Colored pencils, regular pencils, erasers, scissors, and a glue stick would be helpful if they could keep those in their backpack as well (or in their classroom notebook file).
Homework	*It is extremely rare that there is homework in Green Architecture class other than thinking about projects and designs.* However, if a student does not use their time wisely in Green Architecture class, work does come home.
Parent & Student Acknowledgment Form	*All Student assignments will be posted in Schoology; however, all grades will be posted in PowerSchool. Thank you for your support and I encourage you to contact me with any questions or concerns . A digital copy of this syllabus is available* [on the teacher webpage](). *Please sign below that you have received and read the syllabus and will abide by all policies. It will need to be the paper copy that is signed. Thank You! Mrs. Joy Hearrington* **STUDENT FULL NAME (Please Print)** **BLOCK** **DATE** **PARENT SIGNATURE** **PARENT PHONE NUMBER(S)** **PARENT EMAIL(S):** *Please include any concerns or notes to Mrs. Hearrington below:*