Instructor
Melissa Wrenchey
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#TSTEMHS
Office Location
Room 227
Office Hours
Monday 7:15-7:30 AM & 2-2:30PM
Wednesday 7:15-7:30 AM & 12-12:30 PM
T, TH: 7:15-7:30 AM & 2-3:15 PM
Friday: 2-2:30PM

Student Expectations
Expectations include contributing to class, using time wisely and discovering connections in class and with technology. Learning will be personalized and rigorous; time outside of class could be spent finishing remaining classwork exercises, research and or student designed learning opportunities. Larger assignments will be posted on PowerSchool so use the calendar and create your own reminders for projects that are due. There is the PowerSchool assignment block and the calendar; larger assignments will have extended time and will often be broken into manageable increments with many class reminders. We also use Class Notebook internally for assignment descriptions, class notes, reflections and communication between teacher and student.

Class Standards
Attendance, attentiveness and on-task behavior are expected of all students. Think about how you can optimize your learning of concepts and social responsibility and let that be your guide in comportment at Nikola Tesla STEM High School. This course is aimed at providing students rigorous application and extensive projects to learn some innovative uses of programming; students should exceed course requirements and then look for more challenges.

Course Materials:
- A fully charged LWSD laptop, updated per district requirements
- An Arduino Starter Kit (http://amzn.to/2gxTUFw) (use sample starter kit as a reference of what is required if student already has a kit.)
What does the AP Content look like?

**Important Dates:**

- AP CSP Portfolio due: 4.30.18
- APCSP test: 5.11.18
- 9th grade PBL launch: est. 5.7.18

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<tr>
<th>Units</th>
<th>Topics</th>
<th>Sample Activities</th>
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<tr>
<td>1 The Internet</td>
<td>Representing and Transmitting Info Inventing the Internet</td>
<td>simulations</td>
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<td>2 Digital Information</td>
<td>Encoding and Compressing Complex Info Manipulating and Visualizing Data</td>
<td>Code.org tools</td>
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<td>3 Algorithm and Programming</td>
<td>Programming Languages and Algorithms</td>
<td>Python programs microprocessor projects</td>
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<td>4 Big Data and Privacy</td>
<td>Implication of Big Data</td>
<td>Excel and Big Data</td>
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<td>5 Building applications</td>
<td>Event Driven Programming Programming with Data Structures</td>
<td>Python, PyGame</td>
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<tr>
<td>AP Performance Tasks</td>
<td>Submit Create and Explore Performance Tasks prior by end of April AP Exam in May 11, 2018</td>
<td>Tools for programming, Photoshop or Illustrator video tool like wevideo</td>
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Students are strongly encouraged to take the AP Exam but it is **not** mandatory. The content we cover is collaborative, inquiry based, integrated with other courses and designed to engage STEM students in the work they will continue throughout the year.

This is a course six years in the making reflecting current trends in technology as well as desired skills for someone in a collaborative, dynamic team in a workplace setting or college. Students will practice time management, problem solving, flexibility, communication and independent thinking every day.
Based Learning

Nikola Tesla computer science curriculum includes projects to complement course work. You can expect three large projects including:

- a 9th grade PBL in Spring
- an integrated project with Language Arts in 1st semester
- Opportunities to engage with other content practitioners and experts
- Invitations to lead learning with other schools

Typical Mondays will provide students opportunities to explore other tools in our classroom like Raspberry Pi, 3D printing, and app development. These projects are designed as companion pieces to the programming work for AP Computer Science Principles content with the goal of students driving and extending their own learning. These projects lay the groundwork for STEM foundations like collaboration, contest based mentorships, and learning through problem solving. **Exploration beyond class resources is welcome but may need some pre-arrangement.**

Grading Policy

All work will be assessed in a timely manner and the grade will be based on classwork, assessments, major projects, team building and/or participation in the class as a whole. PowerSchool calendar and assignment list will show upcoming work and Skyward will reflect the same graded assignments. The grading policy is included and is the standard at STEM.

Assignments will need to be turned on time, but extensions will be given on an as needed case due to extenuating circumstances. Students can also expect that late work will receive a percentage penalty of 10% for each day the work is late. Because assignments rely on scaffolding the pieces, that extended time would be delaying the learning and not demonstrating necessary skills for the next pieces. So please plan on turning in work on time for full credit. Also, it is a LWSD policy to adhere to rules around absences and expected turning in of work after a pre-arranged absence. **If you are gone, plan on spending time in the next office hours to make up work and check in on things you have missed. If you are tardy to class or using time inappropriately, expect the time to be made up other ways.**

Additional Information

E-mails are used for confirmation of appointments, sending information about class attendance and showing me cool sites and content. Please do not use e-mail for sending assignments unless expressly directed. All assignments will be posted on PowerSchool with appropriate instructions for submitting. Rely on classmates and not teachers to answer questions via e-mail.