

# IGNITE SOUTH ACADEMIC PLAN

Automation Engineering CIP 15.0613.00

A student must have 6 courses each semester

## Graduation Requirements

Total: 22

| Grade 9  |        | Grade 10  |        | Grade 11   |        | Grade 12  |        |
|--|--------|---|--------|--|--------|---|--------|
| Required Courses                                     |        | Required Courses                                    |        | Required Courses   |        | Required Courses  |        |
| Courses  | Credit | Courses   | Credit | Courses  | Credit | Courses   | Credit |
| Eng I or Hon Eng I                                   | 1      | Eng II or Hon Eng II                                | 1      | Eng III, AP Language Composition or Dual Credit                      | 1      | Eng IV, AP Eng, Eng 101/102, or ENG-Based College Class                         | 1      |
| Alg I, Honors Algebra I, Geometry or Honors Geometry | 1      | Geometry or Honors Geometry or Algebra II           | 1      | Math Course<br>Suggested: Algebra II or Honors Algebra II or Pre-Cal | 1      | Math Course<br>Dual Credit, Financial Literacy, Medical Math, or Other          | 1      |
| Science Foundations/ Hon Science Foundations         | 1      | Biology or AP Biology                               | 1      | Chemistry, Physics or Conceptual Science                             | 1      | 10 Hours of Service Learning<br><br>Meet ACT Benchmarks<br><br>Pass Civics Test |        |
| Integrated Social Studies or AP Human Government     | 1      | Western (World) Civilization or AP European History | 1      | U.S. History or AP U.S History                                       | 1      |   |        |
| PE 1 (AFROTC)  | 1/2    |   |        |  |        |   |        |
| Health (AFROTC Online)                               | 1/2    |   |        |  |        |   |        |

*Students are required to earn 1 credit of Humanities before graduation. Humanities can be 1 credit of band, art, music, drama, or humanities course.*

*\*\* Pre-college curriculum recommends 2 consecutive years of a foreign language be taken before graduation. This is not a MSHS Graduation Requirement.*

*\*\* To Co-op when you are a senior. (Must have earned 4 credits in a pathway or earned 2 credits and be enrolled in a 3rd class in your pathway + co-op.) See Pathway handout.*

## Pathway Courses

|                                |                                   |                                   |                               |
|--------------------------------|-----------------------------------|-----------------------------------|-------------------------------|
| 210221 Engineering I           | 332001 Intro to 3D Printing Tech. | 210330 Engineering Co-Op          | 331034 Principles of CTE      |
| 210222 Engineering II          | 210225 Manufacturing Engineering  | 210331 Engineering Internship     | 110701 AP Computer Science A  |
| 110111 AP Computer Sci. Princ. | 210135 Industrial Engineering     | 210239 Robotics Automation Design | 110251 Computational Thinking |
| 210117 Advanced Design App.    | 210251 Unmanned Aircraft Systems  | 210110 Engineering Capstone       |                               |

## Possible Occupations

Automation Engineer  
 Electrical Engineer  
 Controls Engineer  
 Build Automation Engineer  
 Operations Engineer  
 Frontend Engineer  
 Process Engineer

Mechanical Engineer  
 Technical Writer  
 Industrial Engineering Technician  
 Machinist  
 IT Consultant  
 Chemical Engineer  
 Civil Engineer