|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Computer Science Pathway Scope and Sequence | | | | |
| **Massachusetts High School Program of Studies** | | | | |
| **English/Language Arts**  **4 Units** | **9th Grade** | **10th Grade** | **11th Grade** | **12th Grade** |
| English 9  Course Code: 151 | English 10  Course Code: 152 | Pathway ELA  Course Code: 153 | Pathway ELA  Course Code: TBD  or  ENG 111/112 or its equivalent |
| Mathematics 4 Units  Including the completion of Algebra II or completion of the Integrated Math equivalent*.* |  | | | |
| College Prep Math 1  Course Code: F52 | College Prep Math 2  Course Code: F53 | College Prep Math 3  Course Code: F54  Or  Pre Calculus  Course Code: 457 | Pre Calculus  **or**  Calculus or  Wentworth Pre-Calculus or Discrete Math |
| Science **3 Units of lab-based science**  Coursework taken in technology/engineering may count for MassCore science credit. |  | | | |
| Physics  Course Code: 555  AND  Engineering Physics (Robotics)  Course Code: 552 | Biology  Course Code: 553  AND/OR  Chemistry  Course Code: 554 | Pathway Science or equivalent | Optional **Early College** Classes Available  OR  Independent Study to complete certification testing |
| **History/Social Science**  **3 Units**  Including US History and World History. |  | | | |
| US History 1  Course Code: 2A1 | US History 2  Course Code: 253 | Pathway History/Social Studies  Course Code: 25A | Pathway History/Social Studies  Course Code: TBD |
| **Physical Education** |  | | | |
| Will be available for all students in all grades aligned to the Law (Physical education shall be taught as a required subject in all grades for all students” (M.G.L. c.71 §3).) | | | |
| The Arts\*\* 1 Unit | Available to all students through electives and can be satisfied at any point during grades 9-12 | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Other Core Classes** | **9th Grade** | **10th Grade** | **11th Grade** | **12th Grade** |
|  | Pathway Core Class  (CS, Engineering, Health Sci) | Pathway Core Class  (CS, Engineering, Health Sci) | Pathway Core Class  (CS, Engineering, Health Sci) |
| **Early College Classes\*** | All 9th Graders do a ½ day experience at Wentworth   * Tour * Lunch * Lab experience with Wentworth faculty | **Semester 1:** Wentworth faculty push into Pathway electives to do a college readiness curriculum  **Semester 2: all** students do 3-4 campus experiences to preview curriculum/labs  **and/or**  MATH1000 | Wentworth:  Computer Science Concentration  - Computer Science I (COMP 1000)  - Discrete Math (MATH 2300)  Networking Concentration  - Introduction to Networks (COMP 1100)  - Routing and Switching (COMP 1150)  Engineering Concentration  - Introduction to Engineering (ENGR1000)  - Precalculus (MATH1500) | Wentworth  **Computer Science Concentration:**  - Computer Science II (COMP 1050)  - Integrated Engineering Calculus I (MATH 1775)  *Additional Options from Computer Science:*  - Computer Organization (COMP 1200)  - Integrated Engineering Calculus II (MATH 1875)  **Networking Concentration:**  Computer Science 1 (COMP1000)  Databases (COMP2650)  *Optional Additional Courses:*  Precalculus (MAT1500)  Computer Science II (COMP1050)  **Engineering Concentration:**  - Manufacturing Processes (MANF1000)  - Engineering Graphics (MECH2300)  *Optional additions:*  - Computer Aided Manufacturing  (MANF2000)  - Engineering Calculus 1 (MATH1750 |
|  | | | | |
| **Internship** | **9th Grade** | **10th Grade** | **11th Grade** | **12th Grade** |
|  |  | Internship for most students will be completed the summer between their 11th and 12th grade year. Exceptions can be made based on students individual needs and specific program/track. Alternatively internships could be done during the school year with student being released early to attend their internship .  Course Code: TBD | |
| **Additional Core Course** | Students will have opportunities to take various courses outside of the required core classes. We offer a variety of courses such as: Environmental Science, College and Career Planning, BUILD and others. | | | |