

**CCTC Course: IMT 104 (Schematics)**

**SECTION I** (For the student)

Please read this form completely, including Section III (Policies and Disclosure Information). Please note that a grade of 70% or higher is required for successful completion of the proficiency test.

Please complete this section of the form and give it to your teacher.

Your Name: (PLEASE PRINT) \_\_\_\_\_ SSN: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Primary Phone Number: \_\_\_\_\_

High School: \_\_\_\_\_ Career Center: \_\_\_\_\_

Date of (or anticipated) Graduation from High School: \_\_\_\_\_

**SECTION II** (For the teacher)

I verify that this student has mastered the major competencies listed below, and therefore, I recommend this student take the IMT 104 proficiency test. **(Please initial each competency.)**

- \_\_\_\_\_ 1. State the definition of a schematic and list some characteristics of schematics.
- \_\_\_\_\_ 2. Identify a schematic among other kinds of technical drawings and diagrams.
- \_\_\_\_\_ 3. Explain how flow is indicated on a schematic and identify various types of lines on schematics.
- \_\_\_\_\_ 4. Identify electrical, fluid power, & piping schematics by their symbols; give the purpose of legends & other tables of symbols.
- \_\_\_\_\_ 5. Describe a set-by-step approach to troubleshooting when using a schematic.
- \_\_\_\_\_ 6. State the meaning of symbols and lines on an electrical schematic.
- \_\_\_\_\_ 7. Explain the difference between a fuse and a circuit breaker and how to trace an electrical circuit.
- \_\_\_\_\_ 8. Explain the difference in current flow between a series circuit and a parallel circuit.
- \_\_\_\_\_ 9. Explain the purpose of a wiring diagram and demonstrate how to read an electrical schematic.
- \_\_\_\_\_ 10. Identify the objects represented by the symbols on an industrial schematic.
- \_\_\_\_\_ 11. Explain the function/give the purpose of a valve in a piping system; identify the symbols for various types of valves.
- \_\_\_\_\_ 12. Identify the symbols for various kinds of fittings and describe the function of each fitting.
- \_\_\_\_\_ 13. Explain the difference between a check valve and a relief valve.
- \_\_\_\_\_ 14. Demonstrate the ability to determine pipe size from a diagram.
- \_\_\_\_\_ 15. Describe a fluid-power system.
- \_\_\_\_\_ 16. List & give the purpose of the main parts of the hydraulic and pneumatic systems; identify their symbols on schematics.
- \_\_\_\_\_ 17. Explain the difference between a closed and an open hydraulic or pneumatic system.
- \_\_\_\_\_ 18. Identify the actuator in a hydraulic diagram & explain the purpose of local areas on a hydraulic or pneumatic diagram.
- \_\_\_\_\_ 19. Refrigeration, water, air distribution, and control subsystems; Electric, electronic, and pneumatic control schematics.

Teacher (or high school official) Name (PLEASE PRINT): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name of high school/career center course(s) in which this student gained the required competencies for possible exemption credit: \_\_\_\_\_

Date of course completion, or expected completion: \_\_\_\_\_

Comments (if applicable): \_\_\_\_\_

**SECTION III**

**Secondary School Articulation Exemption Credit Procedures & Disclosure Information**

1. Students should contact their guidance counselor or teacher at the high school or career center or the Registrar at Central Carolina Technical College to determine whether specific secondary course work is eligible for articulation and to obtain information on requirements and procedures for requesting exemption credit.
2. Students requesting exemption credit should complete Section 1 of the Secondary School Articulation Form for each course in which s/he is interested in receiving exemption credit.
3. The high school or career center teacher will determine if the student has mastered the major course competencies and is eligible to take the proficiency test. If so, the teacher should complete Section 2 of the Secondary School Articulation Form for each course the student is requesting exemption credit.
4. The high school teacher/official should contact the CCTC program manager (at the email/phone number listed on the Secondary School Articulation Form) to schedule the proficiency test and should submit completed forms to the CCTC program manager/instructor administering the test.
5. The CCTC program manager/instructor should administer the proficiency test and complete a Proficiency Test Form for each student taking the test, indicating whether the student passed or failed the test.
6. The CCTC program manager/instructor should submit the completed Secondary School Articulation Forms, Proficiency Test Forms, and graded proficiency tests to the CCTC Registrar.
7. The CCTC Registrar should provide students with results of the proficiency test and instructions for obtaining exemption credit.
8. Students must meet all admissions requirements at CCTC and should inform the admissions counselor of pending exemption credit when being admitted to the college.
9. After the student is admitted to the College, Student Records will post the exemption credit as a grade of "E" on the student's official CCTC transcript. ("E" grades do not count in a student's grade point average.)
10. Exemption credit may apply to a required course in the articulated program or an elective course depending on whether or not the course is listed as required for a specific curriculum in the College catalog. If a student enters a program at CCTC for which the course is not required, the student may use the course as elective credit if permission is granted by the program department chair/program manager.
11. Students will have no more than two years following high school graduation to complete the secondary articulation procedures and request exemption credit.
12. A high school student who takes a proficiency test will have his/her Secondary School Articulation Form and Proficiency Test Form (indicating if the student passed) kept on file in the Student Records Office for two years following high school graduation. The graded proficiency test will remain on file in the appropriate department office or Student Records Office for two years following the test date.
13. Exemption credit earned at CCTC does not imply or guarantee that such credit will be honored by other institutions of higher education.
14. All proficiency exams will be developed, administered, and scored by Central Carolina Technical College faculty and/or staff.