HOURS: Lecture: 2  Lab/Shop: 3  Work Exp/Clinical: 0  Credits: 3

COURSE DESCRIPTION:
This course provides theory and processing experience with the injection molding process. Topics include machine type, molds, controls, machine polymer part relationship, molding factors, troubleshooting, and molding problems/solutions. Upon completion, students should be able to demonstrate an understanding of machine setup and operation and be able to optimize common injection molding machines.

PREREQUISITE(S): DMA 010-030 or MAT 060, DRE 097 or RED 080

COREQUISITE(S): NONE

TEXTBOOK(S) & OTHER SPECIAL REQUIREMENTS:
ISBN-13 # 9781428360709

STUDENT LEARNING OUTCOMES:
Upon successful completion of this course, the student will be able to:

1. Discuss the basic chemical and physical properties of polymers and the major resins used in the plastic industry.
2. Apply the basic laboratory and procedures involved in plastics injection molding.
3. Recognize the different types of machines, molds, controls, machine – polymer Part relationship, molding factors, troubleshooting, and molding problems/solutions.
4. Navigate through the in-house multi-media audio-visual software basic lessons on plastic injection machines setup, troubleshooting, operations, optimum production of plastic parts, and pass the related end of lessons tests.
5. Apply the above information to run the in-house plastic injection machine and make plastic parts.
6. Communicate with state plastic injection molding companies to gather information about their plastics injection molding materials, process, and products.
7. Prepare a display of raw materials and products, and make an oral and visual presentation to the class and answer related questions from class members and the instructor.
8. Recognize and apply the American dimensioning units system (English) and the International dimensioning units system (Metric), and apply to the properties of materials.
9. Use the Internet to navigate through websites related to plastics injection applications.
vendor’s updated new products, plastics injection molding related publications/
magazines, and the national and international organizations: International Organization
for Standards (ISO), Society of Plastics Industry (SPI), and the Vinyl Institute (VI).
10. Recognize the Environment Protection Agency (EPA) standard rules to protect the
environment and all living species from hazardous plastic injection products, and
encourage recycling.
11. Apply the US Occupational Safety and Health Administration (OSHA), and the
International American Society of Mechanical Engineers (ASME) standard safety rules of
plastic injection engineering applications.
12. Discuss the global use of the plastic injection molding materials and their impact on
products design, manufacturing, employment, safety, and the economy.

EXPLANATION OF SYLLABUS:

The Student Learning Outcomes listed in this syllabus are those required actions that a
student who successfully completes the course must be able to perform or exhibit. The
educational experience, however, is a two-way, interactive process involving both the student
and his/her instructor. The student must play an active role in the learning process in order to
be successful. Each Instructor will provide an Instructor’s Course Requirements document at
the first class meeting explaining how he/she measures each of the Student Learning
Outcomes listed in the syllabus. A student who is unable to accomplish the outcomes will not
receive a passing grade in the course.

The information in this RCC Syllabus may not be accurate beyond the current semester.
Textbooks and other course materials are subject to change. Students should verify the
textbooks at the first class meeting with their instructor prior to purchasing.

RCC ATTENDANCE POLICY:

Regular attendance is considered essential to realize course outcomes. Students are
expected to attend all scheduled meetings of classes for which they register. Rules on
tardiness and leaving class early are addressed in each Instructor’s Course Requirements
document.

No matter the basis for absence, students are held accountable for academic activities, and
faculty may require special work or tests to make up for missed classes.

When courses are delivered through online instruction (DL or Distance Learning) or through a
combination of traditional classroom and online instruction (hybrid), class participation is no
less important, though its measurement may be somewhat different.

The Nursing Department’s requirement related to attendance exceeds the college policy.
Nursing students are required to attend 90% of classes, labs, and clinicals. At the discretion
of the instructor, a written assignment or makeup clinical may be given for hours missed
determined to be unavoidable.

RCC GRADING SYSTEM:

Richmond Community College employs a system of letter grades and corresponding quality
points per grade to evaluate a student’s performance in meeting the stated goals and
objectives for each course. **

SECURITY AND SAFETY PROCEDURES:

RCC’s upgraded security procedures require all doors to be locked at class start-time.

All students, faculty, staff, and visitors must wear visible identification (ID) badges. Identification badges should be worn on the front of clothing. RCC employees can stop, restrict, and remove from any school-related activity or function anyone who does not display an ID badge.

STUDENTS WITH DISABILITIES:

Richmond Community College complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act, which require that no qualified student with a disability be excluded from participation in or be denied the benefits of any services, programs or activities on the basis of his or her disability. If accommodations in the classroom and/or in extracurricular activities are required, the student is encouraged to contact the Disability Services Counselor in Student Services prior to the start of the semester; however, a student may request accommodations at any time. Reasonable accommodations may take up to three (3) weeks to implement. Richmond Community College is committed to providing support and services to students with disabilities to help them obtain a quality education and to reach their goals. Assistance is provided, as necessary, and is intended to help students participate in and benefit from the programs and activities enjoyed by all students.

WITHDRAWAL:

In order to officially drop or withdraw from one or more courses without academic penalty, students must complete the “Change in Registration Status” form and submit it to the Registrar’s Office before the 75% Point of the Term. Students may obtain the “Change in Registration Status” form from Student Services or from an instructor. Students are responsible for obtaining the course instructor(s) signature(s) and returning the “Change in Registration Status” form to the Registrar.

Students who withdraw before the 75% Point of the Term will receive a grade of “W.” Students who withdraw after the 75% Point of the Term will receive a grade of “WF” or “WP.” The Registrar will inform the students by mail of their withdrawal and the right to appeal.

WITHDRAWAL AND FINANCIAL AID:

The Return of Title IV Funds policy affects any student who receives Federal Financial Aid (for example, Pell Grants) and who withdraws from all classes. Under this policy, any student who withdraws or is withdrawn by the instructor completely from classes on or before the 60 percent point of the term will be required to repay all or a portion of his/her Federal Financial Aid.

**Please refer to the online version of RCC’s Catalog & Student Handbook for current academic and general policies.