BACHELOR OF SCIENCE DEGREE
AUTOMOTIVE TECHNOLOGY

DIVISION OF CAREER & TECHNICAL EDUCATION

Admission requirements:

Upper Division Standing

Students interested in pursuing the Bachelor of Science in Automotive Technology must meet the following requirements to be considered to have upper division standing:

1. Specialized Knowledge
   • Major courses: 35 units of transportation related courses from a designated associate degree course sequence per California Community College Chancellor’s Office Taxonomy of Programs (TOP) codes 0948.00. Each course must be completed with a C or higher.
   • A minimum of 30 units (45 quarter units) in general education from either the CSU GE or IGETC patterns with a 2.0 cumulative GPA. The 30 units must include the following courses, completed with a C or higher:
     - Written Communication
     - Oral Communication
     - Critical Thinking
     - Mathematics

Students must complete the CSU GE or IGETC pattern prior to earning the bachelor’s degree.

Steps for applying for upper division standing:

• Apply to Rio Hondo College
• Submit a completed supplemental application
• Submit all official transcripts to Admissions and Records (must be delivered from sending institution)

Program Learning Outcomes

Graduates will be technically competent and possess strong interpersonal skills. They will have the ability to communicate effectively, be able to solve problems, work in teams, and will have developed an understanding of the need for continued professional development. The Program Learning Outcomes are grouped into five broad interrelated categories:

1. Specialized Knowledge
   a. This category addresses what students should demonstrate with respect to the Automotive Technology Industry beyond the vocabularies, theories, and skills of the particular fields of study.

2. Broad and Integrative Knowledge
   a. This category asks students to consolidate learning from different broad fields of study (e.g., Humanities, Arts, Applied Sciences, and Social Sciences) and to discover and explore concepts and questions that bridge these essential areas of learning.

3. Intellectual Skills
   a. This category includes both traditional and nontraditional cognitive skills, which include analytic inquiry, use of information resources, engagement with diverse perspectives, ethical reasoning, and quantitative and communicative fluency. All of these emphasize the importance of students making, confronting, and interpreting ideas and arguments from different points of reference (e.g., cultural, technological, and political).

4. Applied and Collaborative Learning
   a. This category emphasizes what students can do with what they know. Students will be asked to demonstrate their learning by addressing unscripted problems in scholarly inquiry, both at work and in other settings outside the classroom. It also includes research and creative activities involving both individual and group efforts, and may also include practical skills crucial to the application of expertise.

5. Civics and Global Learning
   a. This category recognizes higher education’s responsibilities both to democracy and global community. Students will demonstrate integration of their skills and knowledge by engaging with and responding to civic, social, environmental, and economic challenges at local, state, national, and international levels.

Specific Program Learning Outcome Proficiencies

The following is an overview of the five categories of learning listed above at each level of the Automotive Technology Degree Courses (Lower Division and Upper Division), and defines the basic proficiencies to each area of learning, as well as describing their relationship to one another.

1. Specialized Knowledge
   o Lower Division Courses: Automotive Service Technician Major
     ■ Students shall describe the scope of the field of study, its core theories and practices, using field-related terminology, and offer a similar description of the field of study per Industry Standards.
     ■ Students shall apply tools, technologies, and methods to selected questions or problems of the field of study per Industry Standards.
     ■ Students shall generate substantially error-free products, reconstructions, data, juried exhibits, or performances appropriate to the field of study per Industry Standards.
   o Upper Division Courses: Automotive Technical Studies or Business Marketing Pathway
     ■ Students shall define and explain the structure, styles, and practices of the field of study using its tools, technologies, methods, and specialized terms per Industry Standards.
     ■ Students shall investigate a familiar but complex problem in the field of study by assembling, arranging, and reformulating ideas, concepts, designs, and techniques per Industry Standards.
     ■ Students shall frame, clarify, and evaluate complex challenges that bridges the field of study and at least one other related field, using theories, tools, methods, and academics from those fields to produce independently or collaboratively an investigative, creative, or practical work illuminating said challenge per Industry Standards.
• Students shall identify and frame a problem or question in selected areas of study and distinguish among elements of ideas, concepts, theories, or practical approaches to the problem or question per Industry Standards.

• Students shall identify, categorize, evaluate, and cite multiple information resources so as to create projects, papers, or performances in either a specialized field of study or with respect to a general theme within applied science, social science, humanities, or technology per Industry Standards.

• Intellectual Skills

o Lower Division Courses: Automotive Service Technician Major

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• Broad and Integrative Knowledge

○ Lower Division Courses: Automotive Service Technician Major

■ Students shall describe how existing knowledge or practice is advanced, tested, and revised in each core field studied, such as disciplinary and interdisciplinary courses in technology, applied sciences, social sciences, and humanities per Industry Standards.

■ Students shall describe a key debate or problem relevant to each core field studied, explain the significance of the debate or problem to the wider society, and show how concepts from the core fields can be used to address the selected debates or problems per Industry Standards.

■ Students shall use recognized methods of each core field studied, including the gathering and evaluation of evidence, in the execution of analytical, practical, or creative tasks per Industry Standards.

■ Students shall describe and evaluate the ways in which at least two fields of study define, address, and interpret the importance for society of a problem in applied science, social science, humanities, or technology per Industry Standards.

○ Upper Division Courses: Automotive Technical Studies or Business Marketing Pathway

■ Students shall describe and evaluate the ways in which at least two fields of study define, address, and interpret the importance for society of a problem in applied science, social science, humanities, or technology, and explain how the methods of inquiry in these fields can address the challenge and proposes an approach to the problem that draws on these fields per Industry Standards.

■ Students shall produce an investigative, creative, or practical work that draws on specific theories, tools, and methods from at least two core fields of study per Industry Standards.

■ Students shall define and frame a problem important to the major field of study, justify the significance of the challenge or problem in a wider societal context, explain how methods from the primary field of study can be used to address the problem, and develop an approach that draws on both the major and core fields per Industry Standards.

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■ Students shall produce an investigative, creative, or practical work that draws on specific theories, tools, and methods from at least two core fields of study per Industry Standards.

■ Students shall define and frame a problem important to the major field of study, justify the significance of the challenge or problem in a wider societal context, explain how methods from the primary field of study can be used to address the problem, and develop an approach that draws on both the major and core fields per Industry Standards.
- Students shall analyze competing claims from a recent discovery, scientific contention, or technical practice with respect to benefits and harms to those affected, articulate the ethical dilemmas inherent in the tension of benefits and harms, and either arrive at a clearly expressed reconciliation of that tension that is informed by ethical principles, or explain why such a reconciliation cannot be accomplished per Industry Standards.
- Students shall identify and elaborate key ethical issues present in at least one prominent social or cultural problem, articulate the ways in which at least two differing ethical perspectives influence decision making concerning those problems, and develop and defend an approach to productively address the ethical issue per Industry Standards.
- Students shall translate verbal problems into mathematical algorithms so as to construct valid arguments using accepted symbolic systems of mathematical reasoning, and present the resulting calculations, estimates, risk analyses, or quantitative evaluations of public information in papers, projects, or multimedia presentations per Industry Standards.
- Students shall construct mathematical expressions where appropriate for issues initially described in non-quantitate terms per Industry Standards.
- Students shall construct sustained, coherent arguments, narratives, or detailed explanations of issues, problems, or technical issues and processes in writing and at least in one other medium to general and specific audiences per Industry Standards.
- Students shall conduct an inquiry concerning information, conditions, technologies, or practices in the field of study that makes substantive use of non-English-language sources per Industry Standards.
- Students shall negotiate with one or more collaborators to advance an oral argument or articulate an approach to resolving a social, personal, or ethical dilemma per Industry Standards.

### Civics and Global Learning

- **Lower Division Courses: Automotive Service Technician Major**
  - Students shall describe in writing at least one case in which knowledge and skills acquired in academic settings may be applied to a field-based challenge, and evaluate the learning gained from the application per Industry Standards.
  - Students shall analyze at least one significant concept or method in the field of study in light of learning outside the classroom per Industry Standards.
  - Students shall locate, gather, and organize evidence regarding a question in a field-based venue beyond formal academic study and offer alternate approaches to answering the question per Industry Standards.
  - Students shall demonstrate the exercise of any practical skills crucial to the application of expertise per Industry Standards.

- **Upper Division Courses: Automotive Technical Studies or Business Marketing Pathway**
  - Students shall prepare and present a project, paper, exhibit, performance, or other appropriate demonstration linking knowledge or skills acquired in work, community, or research activities with knowledge acquired in one or more fields of study, explain how those elements are structured, and employ appropriate citations to demonstrate the relationship of the product to literature of the field per Industry Standards.
  - Students shall negotiate a strategy for group research or performance, document the strategy so that others may understand it, implement the strategy, and communicate the results per Industry Standards.
  - Student shall write a design, review, or illustrative application for an analysis or case study in an applied scientific, social scientific, technical, or business context per Industry Standards.
  - Student shall complete a substantial project that evaluates a significant question in the field of study, including an analytic narrative of the effects of learning outside the classroom on the research or practical skills employed in executing the project per Industry Standards.
weaknesses of the processes, and describe the results per Industry Standards.

■ Students shall identify a significant issue affecting countries, continents, or cultures, present quantitative evidence of that challenge through tables and graphs, and evaluate the activities of either non-governmental organizations or cooperative inter-governmental initiatives in addressing identified issue(s) per Industry Standards.