

**Area Career Center of Hammond
Area District of Career and Technical Education # 2
Course Syllabus
Collision and Refinishing
School Year 2011-2012**

Course Title: Collision and Refinishing

Meeting Dates: Monday - Friday
AM Session: 7:45 - 10:15
PM Session: 11:45 - 2:15

Instructor: Paul Uhrina, Instructor
Rm. 147
933-2428 x 2044
Fax 933-1680
pjuhrina@m1.hammond.k12.in.us

Office Hours: 7:30-7:45 11:00-11:45

Prerequisites: Basic Math and Science

Course Description:

Students will have the opportunity to develop entry level skills in dent repair, welding, cutting, priming, paint mixing, paint application, frame straightening, estimating, and mechanical repairs, as well as, fiberglass, plastics repair, and paintless dent repair.

Course Intent:

It is the intent that the students will learn basic entry level skills which include work ethic to gain employment or continue to a post secondary school.

Assigned Text:

James E. Duffy (2008) *Collision Repair Fundamentals* (First Edition)
Thomson/Delmar Learning, Albany NY.

Paul Uhrina (2008) Student Workbook to Accompany Collision Repair Fundamentals (First Edition) Thomson/Delmar Learning, Albany NY
Indiana Professionals Standards Covered:

Standard 1

Student Safety

Safety issues are considered when designing and implementing career and technical programs.

1.1 Safety is taught as an integral part of the instructional program. (511 IAC 8-2-4(b))

Example: Written training plans identify hazardous equipment and materials used by students in extended labs and workplace training stations.

1.2 Safety issues are addressed during all phases of program planning and implementation including selection and maintenance of facilities and equipment as well as management of classroom activities.

Example: All original equipment safety restraints are operational and regularly maintained.

1.3 The Occupational Safety and Health Administration (OSHA) and Environmental Protection Agency (EPA) standards guide the implementation and maintenance of environmental health and safety features.

Example: Safety zones in manufacturing labs are clearly marked.

1.4 Facilities are accessible to all populations and are appropriate for the instructional program being offered.

Example: Commercial kitchen facilities have been modified so that physically handicapped students can participate in food service programs.

Advisory Committees

A broad-based group with representatives from education, industry, and the community at large actively assists in planning and implementing career and technical programs.

- 2.1 Advisory committees (general and program area) are organized and meeting as required each school year. (511 IAC 8-2-8)
- 2.2 Advisory committees meet a minimum of twice per year and maintain accurate minutes of each meeting.
- 2.3 Membership includes a balanced representation from business/industry, labor, education, males and females, and advocates for racial and ethnic minorities, and the disabled.
- 2.4 Program advisory committees annually review course standards, curriculum, assessment practices, and resources (including equipment) for appropriateness and effectiveness.

Standard 4

Curriculum

Course content standards clearly define what students should know and be able to do. Locally developed curriculum meets all rules specified in the Indiana Administrative Code for career and technical education.

- 4.1 State content standards are used as the foundation for local curriculum development and input from the community is considered during the development process.

Example: Local curriculum includes written goals, objectives, and activities that meet state program and content standards.

- 4.2 Curriculum activities help students apply appropriate English/language arts, mathematics, science, and social studies standards in work-related situations.

Example: Senior projects based on individual career interests are used to demonstrate research, communication, and presentation skills.

- 4.3 Local curriculum emphasizes the technical, academic, and employability skills needed for success.

Example: Students work in teams to complete assignments based on real-world problems.

- 4.4 Curriculum is consistent with available state and national industry certification standards.

Example: Classroom activities prepare students for assessments connected to certifications recognized by business and industry.

- 4.5 Curriculum is aligned with existing postsecondary programs.

Example: Students graduate from high school with college credits leading to technical certificates and associate and baccalaureate degrees.

- 4.6 Curriculum is connected to available apprenticeship training programs.

Example: Students are prepared to enter apprenticeship programs that extend existing skills and provide on-the-job training.

- 4.7 A variety of assessment strategies is used to document student achievement.

Example: Students' work products are organized into portfolios to provide evidence that concepts have been learned.

- 4.8 Each course or program has the resources necessary to implement state standards and local curriculum and to adapt to needs of students.

Example: Facilities and equipment are continuously updated and maintained to model current industry and community conditions.

4.9 Career and Technical Student Organization (CTSO) activities enhance the instructional program.

Example: CTSO activities are used to develop student technical and leadership skills.

4.10 Career pathways are used to identify a sequence of courses that includes a rigorous technical core and academic preparation.

Example: Students' four-year career plans connect elective choices to stated career goals.

4.11 Guidance activities are used to help students affirm or adjust career goals.

Example: Students research postsecondary opportunities for additional training in their career areas.

4.12 Sequenced career and technical courses meet the directed elective requirements of the Core 40 curriculum.

Example: Students earn six or more credits from a related technical area.

4.13 Student data is collected to meet state and federal accountability requirements.

Example: Graduates are contacted to determine placement in further education, advanced training, employment, or military service. [IAC 511 8-2-3 (A)]

Learning Objectives:

Students will be able to demonstrate and verbally explain their understanding of basic auto body concepts. Students will work both individually and in teams to practice communication and problem solving skills. Second year students will be expected to prepare a resume and conduct job search exercises.

Instructional Strategies/Methods

1. After reading and outlining chapters students will participate in class discussion.
2. Students will be given real life scenarios that may not have an answer in the text book.
3. Role Playing/Simulation...Students will write mock estimates and do interviews
4. 1st year students will receive thirty minutes of lecture everyday before shop
5. Auto Expense (Monopoly like board game) is used to teach students expenses.
6. Many first year students will work with second year students.
7. Internships are available to second year students or first year seniors.
8. Numerous videos and power point presentations will be used.

Diversity:

It is the policy of the Area Career Center not to discriminate on the basis of race, color, religion, sex, national origin, age or handicap in its programs as required by the Indiana Civil Rights Act (I.C. 22-9.1), Title VI and VII (Civil Rights Act of 1964, Title IX (Educational Amend-ments), and Section 504 (Rehabilitation Act of 1973).

Special Needs Learners:

If you need course adaptations or accommodations because of a disability, if you have an emergency medical condition to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible.

Assignments:

First year students will write a 10+ page paper covering one decade of the 1900's. Students will identify historic events and trivia as well as automotive industry trends, products, careers and salaries, and costs. After the projects are completed, the class will discuss their research and compare their findings to the current automotive industry. A completion of vocabulary words will be due the first week of January. February all students will have an opportunity to participate in a job shadowing experience. Second year students are eligible to become interns. Grading scale is as follows.

Grading Scale

Shop grade 40%
 Notebooks and workbooks 40%
 Pop quizzes and exams 20%

If student has an unexcused absence the due date of an assignment, the assignment will not be accepted. Make up work will be accepted only with excused absences. 1% per hour will be deducted from every absence or tardy.

Student Expectations:

1. Be prepared to start on time.
2. Submit all assignments by due date. Extra credit for early work.
3. Read and be prepared to discuss and evaluate all required materials.
4. Participate in all class discussions and shop activities.
5. Come prepared with proper work clothes, boots, and safety glasses.

Date	Topic	Reading	Assignment
Week 1	Orientation		
1ST YEAR			
Week 2	Careers in Collision	Ch. 1	Outline, questions
Week 3	Safety	Ch 2	Outline, questions
Week 4	Safety	Videos,	Discussion,

		workbook	quiz
Week 5	Safety	SP2	Safety Exam
Week 6	Hand tools	Ch 3	Outline, questions
Week 7	Hand tools	Videos, workbook	Review, quiz
Week 8	Hand tool demo		Work on panel
Week 9	Power tools	Ch 4	Outline, questions
Week 10	Power tools	Videos, workbook	Review, quiz
Week 11	Power tools demo		Work on panels
Week 12	Body shop materials	Ch 7	Outline, questions
Week 13	Body shop materials	Videos, workbook	Review, quiz
Week 14	Body shop demo		Work on panels
Week 15	Metal straightening	Ch 10	Outline, questions
Week 16	Metal straightening	Videos, workbook	Review, quiz
Week 17	Metal straightening	Demo	Work on panels
Week 18	**		**
Week 19	**		**
Week 20	**		**
Week 21	Vehic surface prep	Ch 14	Outline, questions
Week 22	Vehic surface prep	Videos, workbook	Review, quiz
Week 23	Vehic surface prep	Demo	Work on panels
Week 24	Shop, equip prep	Ch 15	Outline, questions
Week 25	Shop, equip prep	Videos, workbook	Review, quiz

Week 26	Paint gun prep	Demo	Spray panels
Week 27	Spraying fundam	Ch 16	Outline, questions
Week 28	Spraying fundam	DuPont books	Paint formulas
Week 29	Spraying fundam	Videos, demo	Review quiz
Week 30	Spraying primer		Work on panels
Week 31	Spraying bc/cc		Work on panels
Week 32	Color matching	Ch 17	Outline, questions
Week 33	Color matching	Videos, demo	Review, quiz
Week 34	Tinting color, prim	Video, demo	
Week 35	Paint problem	Ch 18	Outline, question
Week 36	Paint problems	Video, demo	Review, quiz
Week 37	Detailing, PDR	Demo	Work on project
Week 38			Clean shop
<u>2nd YEAR</u>			
Week 1	Orientation		
Week 2	Safety review	Ch 2	Discussion,
Week 3	ASE Certification	Ch 2	Review, quiz
Week 4	Measurements	Ch 5	Discussion
Week 5	Service Information	Ch 5	Demo
Week 6	Measurements		Shop vehicles
Week 7	Fasteners	Ch 6	Discussion, review
Week 8	Adhesives	Ch 6	Work on panels
Week 9	Welding	Ch 8	Review, discussion
Week 10	Welding		Demo, practice
Week 11	Cutting	Ch 8	Review, discussion
Week 12	Plasma cutting		Panels
Week 13	Oxy/acetylene		Panels

Week 14	Plastic repair	Ch 11, video	Review, quiz
Week 15	Plastic repair	Demo	Practice
Week 16	Composite repair	Ch 11, video	Review, quiz
Week 17	Composite repair	Demo	Practice panels
Week 18	Replacing hoods	Ch 12	Review, quiz
Week 19	Replacing hoods		Practice, measuring
Week 20	Replacing bumpers	Ch. 12, videos	Demo
Week 20	Replacing bumpers		Practice, mocks
Week 21	Servicing doors	Ch 13, videos	Review quiz
Week 22	Servicing doors	Demo	Practice, mocks
Week 23	Windows, leaks	Ch 13, videos	Review quiz
Week 24	Windows, leaks	Demo	Practice, mocks
Week 25	Diff. paint applicats	Ch 16	Discussion, review
Week 26	Spray single stage	Ch 16	Demo, practice
Week 27	Blending single stg	Ch 16, video	Demo, practice
Week 28	Blending bc/cc	Ch 16, video	Demo, practice
Week 29	Panel repairs	Ch 16, video	Demo, practice
Week 30	Overall paint	video	Project car
Week 31	**	**	Project car
Week 32	**	**	Project car
Week 33	Color matching	Ch 17	Review, discussion
Week 34	Color matching	video	Practice panels
Week 35	Paint problems	Ch 18, video	Review, panels
Week 36	Paint problems	**	Practice panels
Week 37	PDR	Video, handouts	Demo, practice
Week 38			Clean shop