



Course Syllabus:
Introduction to
Classic Car Restoration



Introduction to Classic Car Restoration – Syllabus Outline

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Description: Students will learn what tools, space and resources they will need to carry out the restoration of a classic car. We'll cover topics such as: choosing and finding the right car, how to begin, what to tackle yourself and what to outsource, where to find help, where to find parts, bringing your car home, and documenting your restoration plan. This class meets for a total of 12 hours - 3 hours/once a week/for four weeks.

Class #1: "I've always wanted to restore a"

In this session we'll:

1. Introduce the objectives of the class
2. Hear from students on their restoration background (if any) and goals.
3. Provide an overview of the entire 4-part series
4. Discuss the multiple paths available to restoring a car
5. Tonight's Tips and Tricks: Proper "preparation" is needed prior to jumping into restoring a car
 - Space requirements
 - Tools needed
 - Skills required
 - Knowledge required
 - Where to find other resources
 - Time expectations
 - How to get those you love to love your "project"...in other words: getting buy-in from your spouse could be part of your "preparation".
6. Some real-life examples of restoration projects completed by the instructors
7. Homework for next class: assessment and inventory of #5
8. Handouts:
 - Preparation (space, tools, resources)
 - Glossary of terms



Class #2: From Basket-cases to Daily Drivers

In this session we'll:

1. Have a quick 10 minute review of Class 1
2. Hear from students on their "homework" results.
3. Provide an introduction to the night's lesson
4. Tonight's Tips and Tricks: **Choosing the right car**
 - The spectrum: From a basket-case to a daily driver. Which is right for your project?
Note: most people that bring home cars in "plastic bins" get discouraged; therefore, there are lots of partially started projects out there!
 - Understanding what you really want to do with it. Your goals.
 - Coming up with a budget
 - Do you have the experience to choose a car? Can you find help?
 - Types of use: Do you simply want a car to putter around in, or do you want to smoke the tires?
 - Size and Scope: The big '57 Chevy is cool, but that's a lot of car to restore. The small British Car is finicky, but there's not as much surface area. And let's talk about things you don't drive home.
 - Research, research, research: How to find out the going price in its current condition; How to find out what it could be worth restored.
 - Who does what: Will you do it all yourself? Partially outsource? Fully outsource?
5. Homework for next class: Write down what condition you'd like the car to be (on the spectrum scale), what you plan to do with it, whether you'd like a big car or a small car, and how much your total budget will be – remember, the price of the car in its current state is only the initial cost.
6. Handouts such as:
 - Resources list
 - Paths to restoring a car (self, outsource, hybrid, etc.)
 - Templates: Buyers Worksheets, Bill of Sale, Odometer (mileage) statement



Class #3: Field Trip night!

In this session we'll:

1. Have a quick 10 minute review of Class 2
2. Hear from students on their "homework" results.
3. Provide an introduction to the night's lesson
4. Tonight's Tips and Tricks: **Where to find your perfect "project car" and what to do once you've found it!**
 - Places to find cars: Craigslist, eBay, out in fields, Hemming's Motor News, barn finds, friends, etc.
 - The Golden Rule: Once you find something interesting...remove all emotion!
 - Title woes
 - Bill of Sale
 - The Pre-purchase Inspection:
 - Is it complete?
 - How hard will it be to find parts?
 - What's the rust situation?
 - Getting it home
 - Documenting your journey
5. Field trip to Brian and Matt's car trailer in the parking lot to see a real-life project car.
6. Homework for next class: Go to one of the sources we discussed tonight and "pretend" to find the restoration project of your dreams. Investigate all of the tips and tricks we talked about. Be ready to share your "virtual" project car with the class next week.
7. Handouts such as:
 - Vehicle purchase worksheet



Class #4: Can it really be the last class? I can DO this!

In this session we'll:

1. Have a quick 10 minute review of Class 3
2. Hear from students on their "homework" results. Where did you find your "virtual car" and what did you choose?
3. Provide an introduction to the night's lesson
4. Tonight's Tips and Tricks: **The Restoration Plan Begins...**
 - For each project, list current state, desired end state, and the obstacles
 - Current shop manual state
 - Inventory
 - i. Storing parts
 - ii. Bucket-ize and categorize
 1. Body, chassis, engine, running gear, 'what the heck is it' pile
 - iii. Identify what's missing. Keep a list of needed items and watch for them on resources sites.
 - Restoration tips
 - iv. Adding a backup fuel pump
 - v. Using plastic bags when recovering seats
 - vi. Use painters tape on edges of panels
 - vii. Use chalk to mark body flaws as work is done
 - viii. Make or buy an engine test stand
 - Events/Car Shows for your project
 - Restoration plan review
 - What to do next
 - A sample restoration plan
 - Next Steps for success
5. Handouts such as:
 - The restoration begins
 - Sample restoration plan



Quick summary review of entire 4 week course:

- a. Week 1: Preparation
 - i. Space requirements
 - ii. Tools
 - iii. Knowledge
 - iv. Resources (clubs, events, etc)
- b. Week 2: How to chose the right project
 - i. Research value, both current and future
 - ii. Time and budget planning
- c. Week 3: Where to find the project and how to purchase it
 - i. Where to find the project
 - ii. Title woes
 - iii. Pre-purchase inspection
- d. Week 4: How to make sure the project doesn't stall
 - i. Inventory early
 - ii. Bucket-ize and categorize the project
 - iii. Keep everything until you're sure you don't need it
 - iv. Keep your eyes open for parts you need
 - v. Set realistic goals
 - vi. Keep a picture history of the process

ADDENDUMS:

(Following are a few examples of the many handouts given to students to supplement the syllabus. Send me an email and I'll be happy to provide more depending on your needs/focus.)

Handout: Class 2 - Choosing the right car

1. Year, Make, Model

Have a couple of top choices based on your careful thought of how big/small, old/new, rare/common, and parts availability. Some decision may be based on your recent preparation planning, such as space and skills.

See Hemmings June 2010 for "32 Best Cars to Restore"

www.hemmings.com/hcc/stories/2010/06/01/hmn_feature2.html

Before making an offer on your prospective project, spend the necessary time to research the cost of new or rebuilt parts with a "worst case" scenario assumption. If the price of the restoration is well over what the car would eventually be worth, you might want to be prepared to walk away and keep looking. Remember, roughly only 30% of restoration projects are completed because enthusiasm and emotions get in the way of logical thinking. Marriages are strained, bank accounts are drained and the dream of cruising in a classic is shattered because of a lack of research and not being realistic about how much of the restoration you can or can't do.

2. Vehicle Condition

On a scale of 1 (Concours best of show) to 5 (not running, and hasn't for a long time), what level of a project do you want to take on? A scale will help you determine the fair market value for the car in its current condition.

Here's a good break down of the scale:

#5 "Rough". Needs total restoration and is not something you'd bring home without serious pause.

#4 "Fair". Daily drivers, with flaws visible to the naked eye. The chrome might have pitting or scratches, the windshield might be chipped. Paintwork is imperfect, and perhaps the fender has a minor dent. The interior could have split seams or a cracked dash. No major parts are missing, but the wheels could differ from the originals, or the interior might not be stock. A #4 car can also be a deteriorated restoration.

#3 "Good". Could possess some, but not all of the issues of a #4 car, but they will be balanced by other factors such as a fresh paint job or a new, correct interior. #3 cars drive and run well, but might have some incorrect parts. These cars are not used for

daily transportation but are ready for a long tour without excuses, and the casual passerby will not find any visual flaws.

#2 "Excellent". Could win a local or regional show. They can be former #1 cars that have been driven or have aged. Seasoned observers will have to look closely for flaws, but will be able to find some not seen by the general public. The paint, chrome, glass and interior will all appear as excellent. No excessive smoke will be seen on startup, no unusual noises will emanate from the engine compartment. The vehicle will drive as a new car of its era would.

#1 "Concours". This would be a vehicle that is of the best in the world of its kind. The visual image is of the best car, in the right colors, driving onto the lawn at the finest concours. Perfectly clean, the car has been groomed down to the tire treads. Painted and chromed surfaces are mirror-like. Dust and dirt are banned, and materials used are correct and superbly fitted.

Summary

#5 "Rough". Needs total restoration.

#4 "Fair". Daily drivers.

#3 "Good". Good Driver, nice "10 footer"

#2 "Excellent". Could win a local or regional show

#1 "Concourse". No further explanation needed.

Generally, a good rule is to buy the best condition car you can afford. It will generally be more complete and cost less in the long run to get in the condition you want.

3. Vehicle's Future

What do you plan on doing with your classic? Refurbish or restore? Show, drive, or both? Putter around town or smoke the tires at the drag strip? Answers to these questions will determine how much the restoration will cost and how long it will take.

4. Budget

As mentioned before, the initial purchase price of the vehicle will only be the tip of the iceberg, and can easily grow out of control unless you are prepared and have done some research before deciding on the car to restore. Use a good pre-purchase checklist to help you focus when checking out a project. Emotions can make you blind to things like missing floor boards, chrome that needs to be re-plated, or small but costly missing parts. Once you've identified some top choices of vehicles to look for, surveyed a few prospects, researched price vs condition, availability of parts and resources, and developed a budget vs value, you are ready to make an offer! Make the best offer you are comfortable with and always be ready to walk away.

Handout: Class 4 - The Restoration Begins!



With all the planning and research done, it's time to get your hands dirty! There is no instruction booklet to follow, only guides and trial & error. However, staying organized and sticking to the "plan" you already developed will help you stay on track and hopefully prevent a stalled project.

As you begin dismantling your project, remember to take lots of pictures, especially of complicated or "hidden" assemblies like window mechanisms, engine components, or interiors.

Set aside space BEFORE dismantling, or you will end up with parts strewn about with little room left to move. Large items like fenders, doors, and hoods can easily get damaged by falling over or dropped on, so make room outside the work area and cover until future need. Interior pieces need to be kept dry and free from rodents and pests.

Use 15 to 20 quart plastic bins to hold groups of items (one for distributors, one for carburetors, etc), and use quart freezer bags to hold smaller but similar items (left door latch mechanisms with bolts, wiring clips, engine nuts and bolts) and remember to LABEL EVERYTHING! As much you think you'll remember how it all goes back together, you won't be able to.

Inventory everything and keep things combined in groups (bucket-ized) such as:

- body, chassis, engine, running gear, and "what the heck is it" pile

This inventory will help you identify what's missing. Keep a list of needed items handy and watch for them on resources. See the Resources list below.

When putting your project back together, remember these (and other) important tips:

2. Add a backup fuel pump. Use a small electric pump inline with the current electrical or mechanical pump. This will help prime the fuel system when taking out of storage and will add piece of mind in case the main pump fails.
3. Replace points with under the cap electronic ignition. The Pertronix kits are my favorite.
4. Using plastic garbage bags when recovering seats. This will allow the new covers (cloth or leather) to slide over the foam for an easy and wrinkle free finish. You'll pull the bag out as the final step.
5. Use painters tape on edges of panels. Always do this when working with newly painted panels during reassembly.
6. Use a Sharpie to mark body flaws as work is done. This stands out and makes for an easier time when hunting for the elusive flaw.
7. Make or buy an engine test stand. This will save hours of frustrating work leaning on your newly painted fender! And



it makes for a great way to find and fix leaks (like frost plugs) without the “car” being in the way.

Finally, find events that will allow you to connect with other like-minded people and also allow you to see what your project will look like when finished. Most important, HAVE FUN! (And yes, these are some of my ‘before’ and ‘after’ pics of my own projects.)



Resources – this is simply a short list of many:

<http://www.pertronix.com/> (electronic ignition kits)

www.secondchancegarage.com (general)

www.restoredclassic.com (general)

www.ebay.com (general)

www.craigslist.com (general)

www.bringatrailor.com

www.v8monza.com (Monza)

www.andysautosport.com (all)

www.mustangmonthly.com (Mustang)

www.lmctruck.com (1973-91 trucks)

www.thekaiserstore.com (51-55 Kaiser, new and used)

www.midfifty.com (mid '50s Ford truck parts)

Join Forum groups for cars that interest you

Reddit has several subreddits for Classic Car enthusiasts