Design your Destiny!

Who are we?

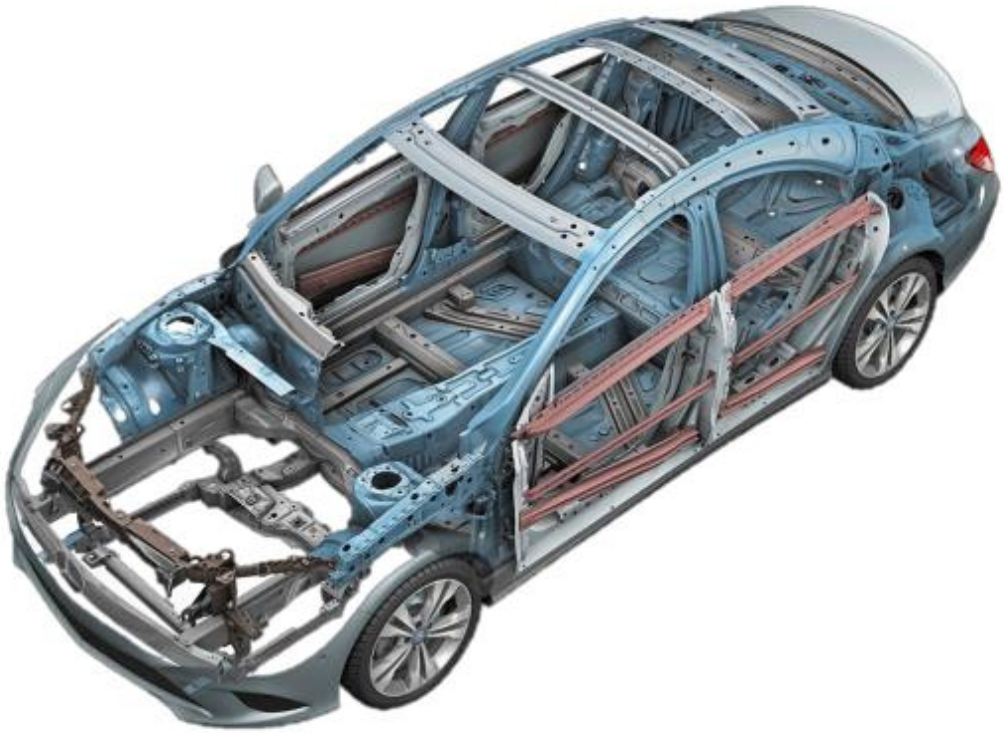
Mission: Imparting Practical Domain knowledge to Mechanical Engineering Graduates and Automotive enthusiasts by our seasoned industry experts. Empowering our students to become an expert in the domain of their choice.

3,00,000 mechanical engineers graduate every year in India and only a few get into core companies. Mechanical engineers find it difficult to get employed in the industry due to their sole focus on learning the design software, without proper domain knowledge. We Disenosys, are working to bridge this skill gap between students and the industry requirements. We

have a team of industry experts, with over a decade of experience who empower our students to land their dream jobs. We connect to our students from all the corners of the world through live, interactive and virtual classrooms.

Disenosys is bootstrapped by Praveen Kumar, who has worked with many multinational OEMs like Ford, Daimler, Ashok Leyland. Together as a team, we are constantly working to provide Automotive industrial domain training to young and aspiring design engineers around the globe.

Our students are our Hope. We are dedicated to making their dreams into reality.



Automotive

Body in White (BIW)

Design

What is Body in White?

Body in white or BIW refers to the stage in automotive design or automobile manufacturing in which a car body's sheet metal components are welded together. In a factory, the sheet metal undergoes several operations to become automotive body parts as well as chassis parts. Once all the sheet metal is shaped, and formed parts are integrated or welded, it partially looks like a car body, which will not be painted. Body in white is called because of the metallic appearance of the car body. The automotive body-in-white component market has experienced a significant growth rate in the past few years owing to increasing vehicle production worldwide. The BIW components account for 20 – 33 % of curb weight of the vehicle and therefore represents high revenue potential for component suppliers across the automotive value chain. Despite disruptions in the automotive sector such as the evolution of electric / hybrid vehicle, development of driverless and connected vehicles, BIW components is invariable segment of the automotive sector and therefore associated as the major business segment in the overall automotive industry.

Who can take this course?

- 3rd and Final year B.E/BTech students in Mechanical/Automobile and Aerospace discipline
- MTech students in Mechanical/Automobile and Aerospace discipline.
- Working professionals who are looking for better job opportunities in CAD, CAM, CAE, Auto Cad, Autodesk Domain.
- Automotive enthusiasts

Prerequisite: Working knowledge of Mechanical CATIA V5

Why should I take the Automotive BIW Design course with Disenosys?

Top benefits of Automotive Body in White course:

- You will learn about various materials and manufacturing process involved in the design of the car body.
- **you should be able to design BIW of a car independently after successful completion of the course program.**
- Get trained by seasoned industry **experts working in OEMs**.
- We help **in building your resume** after completion of the course.
- Get a **course completion certificate** from Disenosys.
- **Mock interviews** will be conducted after completion of the course, to clear Industrial Technical rounds for placement.
- Excellent performers will be **referred to top OEMs** through our internal contacts.
- Stand out among your peers in getting selected as **BIW Designer Engineer.**
- **Industry-oriented projects** at the end of the course which will add value in your interviews.

What do Students Say about our BIW Design Course?

" I heard first about DISENOSYS through one of my colleagues, believing his word I enrolled for Automotive Body In White Design course, at that time I was having 1.5 years of experience in BIW domain, I thought I was well versed in many things in BIW, but this course was a big surprise !!! I learned many new things in technical as well as in software & I learned how a car is developed from scrap. The mentor was having 12+ years of experience in the automotive domain. He is good and available to you whenever you have doubts. The assignments given by them were really good. The main thing is if you are having doubts you can approach them any time. As a result, I have developed my skills & I am having more confidence to face the interview!!!"

Siva Subramaniam, BIW Designer, Tata Technologies

I'm a sheet metal design engineer and I aim to become a BIW design engineer. While attending interviews I was not that confident in surface design, I just know basics but it was not sufficient to clear BIW design interviews. There are a lot of institutions outside saying that they will provide domain training and placement.

Finally, I found Disenosys through LinkedIn. The Course fees are comparatively 50% lesser than the other institutions. Seriously the sessions are conducted by a minimum 10 to 12 yrs of experienced professionals who are still working in OEMs in India & abroad. After attending Disenosys BIW and GD&T session, I found it very helpful for me since I was very much struggling in BIW design and concepts. Now I feel very much confident in remastering, master section, GD&T, etc.

I suggest young graduates and working professionals make use of Disenosys as it is different from other money-minded institutes. And as promised they have also moved my profile for interviews. I hope I will be placed in a better position and I will update in the future."

Jayesh K J, Design Engineer, Siemens

OUR TRAINERS

Our team comprises of design experts, working in top OEMs around the globe. We stand apart from others with the quality we deliver to our students. Our seasoned industry experts impart their knowledge for the betterment of the future generation.

Course Duration

- **3 Months Live, Online and Interactive Sessions**

Certification

- **A digital certificate will be provided by Disenosys after successful completion of the course.**

Course Curriculum

Introduction to Automotive BIW

This introductory module helps you understand the basics of BIW, different terminologies you are going to use and the various steps involved in BIW design.

- What is BIW?
- History of BIW
- Types of CAB
- According to Style
- According to Chassis Type
- What is carline?
- Importance of carline
- How to take sections
- Vehicle co-ordinate System (VCS)
- Examples of sections at specific planes
- General Terminologies in Automotive
  - Inboard/outboard
  - To & Fro
  - Up/Down
  - Formability of sheet metal
  - Joining Technologies in BIW
  - RSW
  - SPR

- Projection Welding
- Studs
- Bonding Adhesive

- Steps Involved in BIW Design (various steps)
  - Target setting
  - Benchmarking
  - Concept themes & Packaging
  - Style development
  - Ergonomic & packaging
  - A-class surfacing
  - CFD analysis
  - System packaging
  - BIW design
  - CAE analysis
  - Prototype manufacturing
  - Testing and validation

Introduction to Body Structure

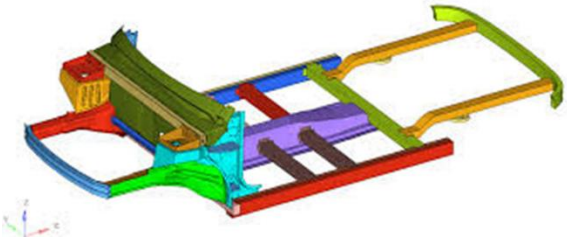
Know the structure of the body (monocoque body)

We are going to study the body structure of a car in 5 different components:

- Underbody
- Upper Body
- Roof Structure
- Closures
- Bolt-on Parts

Underbody

In this module, you will understand the different automotive components that form the underbody of the automotive body in white. You will be able to understand the position and the design of the following components in the vehicle.



- Front End
- Floor Assembly
- Underbody Rear
- Assembly Sequence for each
- Design part for seat cross member for seat mounting
- Show some master section

Upper Body

The upper body mainly consists of the passenger compartment and the rear compartment of the vehicle. In this module, you learn about the following topics.

- Body side outer Assembly.
- The inner Ring reinforcement assembly.
- Rear Quarter assembly.
- D-pillar assembly.
- Shot-Gun assembly.
- Assembly Sequence for each.

- Design of some small bracket in that area.
- Show some master section.

Roof Structure

In this module, you will understand the different automotive components that form the roof structure of the automotive body in white.

- Front, Middle, Rear Roof Bow
- Roof Panel
- Master section Y=0 for Roof Bows
- Design of small part if possible

Closures

closures are all components that are not part of the inherent body structure, i.e., those parts welded together. These include not only highly style-sensitive components such as doors, trunks, tailgates and hoods, but also a variety of crash management parts like door impact beams and structural parts like roofs ed or bolted on to the underlying structure of the **vehicle.**

- **Front & Rear door**
  - Inner panel
  - Outer panel
  - Hinge reinforcement (Upper hinge &Lower hinge)
  - Window slot reinforcement
  - Latch reinforcement
  - Intrusion Beam
  - Frame part
  - Glass guide channel
- **Hood & Deck/ Trunk lid door**
  - Inner panel

- Outer panel
- Hinge reinforcement (Upper hinge &Lower hinge)
- Latch reinforcement

Project 01: Door Design Process

- Class A Surface analysis.
- Hinge axis Determination
- Seal surface creation
- Master section
  - Upper hinge
  - Lower hinge
  - Latch area
  - Hemming Requirement
  - Cantrail section
- Packaging study
  - Glass drop study
  - WW mechanism packaging
  - Seals study

Project 02: Hood Design Process

- Class A Surface analysis.
- Hinge axis Determination
- Seal surface creation
- Master section
  - Upper hinge
  - Lower hinge
  - Latch area
  - Hemming Requirement
  - Cantrail section
- Packaging study
  - Glass drop study

- Latch mechanism packaging
- Seals study.

• Pedestrian Safety regulation Study

CERTIFICATE

CONTACT US

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