

Share your views with all your peers.

Your contributions have been published in the flaunt it section. We look forward to more. Keep designing, **Keep Sending!**

- Step 1: Be inspired!
- Step 2: Design, Draw, Doodle....
- Step 3: Ensure your work is original!
- Step 4: Ensure it is related to your Engineering interests!
- Step 5: Show us what you've got!! Mail it to corpcom@caddcentre.ws

We hope your submissions will reach us before the 20th of each month and that the images would be in the jpg format and articles within 250 words. We wish you all the best!



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25 Years
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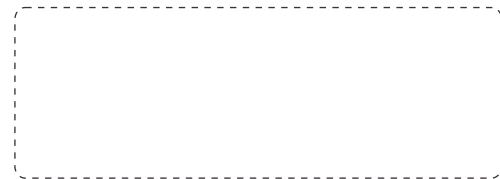
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FLAUNT IT!



Book Post

If undelivered, please return to:



Flaunt it!

It is with great pride we flaunt the designs of budding engineers from our institute.



S. Saravanan

He has completed Master Diploma in Mechanical CADD at CADD Centre, 5Roads, Salem. He has designed "The Destroyer" ship using NX CAD.



Vikrant Sangwan

A graduate in Aeronautical Engineering from Singhania University, Pachari Bari (Rajasthan), he

has completed a course on CATIA from CADD Centre Pitampura, New Delhi. He has designed a Jet Liner using CATIA V5 R19.

Become an automotive design engineer...

Who can create a car?

Automotive design is a field that fascinates everyone. Automotive design might sound like a complex field and you may think that becoming a pro in automotive design could be very challenging. But with right training and understanding, anyone can excel in automotive design.

Automotive design engineering combines the functional design along with the appearances of motor vehicles. The principles of mechanical, electrical, electronic and safety engineering are incorporated in this field.

To demystify automotive design engineering, we invite you to take a look at this field from different angles.

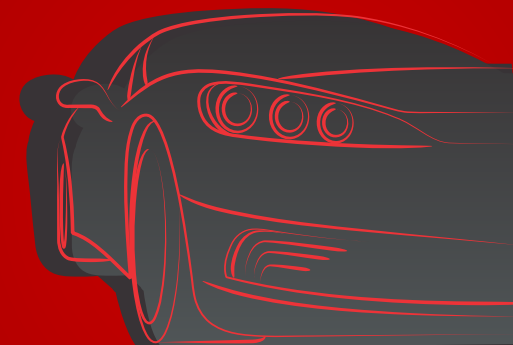
- ❖ The steps involved in the automotive design process
- ❖ A final product as an example
- ❖ Attaining your dreams with the right course

How a car is created?

Designing of a car begins with an idea but goes through many steps before it becomes a real car. Following are the various steps involved in the process:

- ❖ Establishment of vehicle specification
- ❖ The multi-disciplinary team establishes parameters and decision points, ensuring the project runs to schedule
- ❖ Discussion of first concept sketches
- ❖ Designs are presented on theme boards and mood boards
- ❖ Informal selection of concept sketches
- ❖ The design team pick out their favorite sketches
- ❖ Management review of concept sketches
- ❖ CAD models are produced for marketing research purposes
- ❖ 2D market research
- ❖ Concepts are shown to members of the public for their comments
- ❖ Presentation of reworked concepts

- ❖ Reworked concepts are presented again, taking into account market research feedback
- ❖ Approval for detailed engineering
- ❖ Full-size clay models are produced. These are often made using CAD data and hand-finished
- ❖ 3D market research
- ❖ Full-size exterior and interior concept models are shown to members of the public. One concept is selected, informed by public opinion
- ❖ Final approval of 3D model
- ❖ The management team gives final approval to one model which is then fully resolved as a 3D clay model
- ❖ Final feasibility development of chosen concept
- ❖ The full-size clay model is scanned and a new 3D digital model produced. Other engineering disciplines are then responsible for the feasibility of the final design in terms of operation and manufacture
- ❖ Final approval of the design





How a car becomes a legacy?

The word Porsche brings to mind a sleek sports car, not familiar just to car aficionados but to anyone who has flipped through a car magazine. But there is more to the name than just a fabulous car. The name carries with it a legacy of three generations of automotive designers... The design philosophy developed by the three men of the Porsche family gives all aspiring automotive engineers an inspiration to pursue this career field.



Mr. Ferdinand Porsche – Car Engineer of the Century!

Who he was!

Ferdinand Porsche turned engineer when he was just a teenager. He designed his community's first residential electric lighting system for the Porsche household. This early start took him to great heights. He was best known for creating the first hybrid vehicle (gasoline-electric), the Volkswagen Beetle. Porsche designed the 1923 Benz

Tropfenwagen, which was the first race car with mid-engine, rear-wheel drive layout. In April 1931 Porsche founded his consulting firm, "Dr. Ing. h.c. F. Porsche GmbH, Konstruktionen und Beratungen für Motoren und Fahrzeugbau", in Stuttgart which later became Porsche, one of the front runners of the automotive industry.

Features of the car he designed: The Volkswagen Beetle

The Beetle featured a rear-located, rear-wheel drive, air-cooled four-cylinder, boxer engine in a two-door bodywork featuring a flat front windscreen, accommodating four passengers and providing luggage storage under the front bonnet and behind the rear seat – and offering a coefficient of drag of 0.41. Front and rear suspension featured torsion bars along with front stabilizer bar – providing independent suspensions at all wheels. Features including its distinctive overall shape, endured.

Its engine, transmission, and cylinder heads were constructed of light alloy. An engine oil cooler (located in the engine fan's shroud) ensured optimal engine operating temperature and long engine life, optimized by a thermostat that bypassed the oil cooler when the engine was cold.



1949. Ferdinand Alexander "Butzi" Porsche, his grandfather Ferdinand Porsche and young Ferdinand Karl Piëch (also grandson of Ferdinand Porsche).

Mr. Ferdinand Anton Ernst Porsche

Who he was!

Ferdinand Anton Ernst Porsche, also known as Ferry Porsche continued the legacy of his father. Along with his father, he opened a bureau of Automobile Design in 1931. Following his father's old aspiration, Ferdinand Anton Porsche designed the Porsche 356, based on the compact Volkswagen. While the 356's body was an original design by Porsche employee Erwin Komenda, its mechanicals (including engine, suspension and chassis) were designed by Ferdinand Anton Porsche.

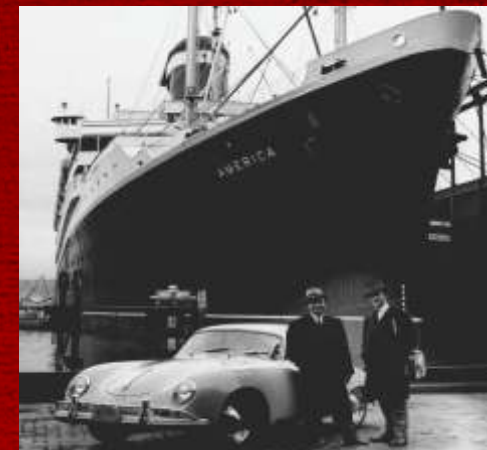
An automobile dealer from Zurich ordered the first shipment in the winter of 1947 and thus production of the automobile first began. Under Ferry Porsche's supervision, the units were built completely by hand at an improvised workshop at Gmünd. The sales of the Porsche 356 are a testament to the contribution of Ferdinand Anton Porsche to the automotive industry. It was Ferry Porsche, who had turned his own father's business from strictly an engineering and design company into a manufacturer as well.

Porsche 356 production	
Type	Quantity
356 (1948–55)	7,627
356A (1955–59)	21,045
356B (1959–63)	30,963
356C (1963-65/66)	16,678
Total	76,313

Features of the car he designed: Porsche 356

The 356 had an air-cooled, rear-mounted, 4-cylinder engine producing 35 hp. Due to the location of its engine; the car was a little unstable but the balance favored potency and light weight.

It was a lightweight and nimble-handling rear-engine rear-wheel-drive 2-door sports car available in hardtop coupe and open configurations. Design innovations continued during the years of manufacture, contributing to its motorsports success and popularity.



1958 New York. 356A, Ferry Porsche and his son, F.A. Porsche.

Mr. Ferdinand Alexander Porsche

Who he was!

Ferdinand Alexander Porsche was born in Stuttgart on Dec. 11, 1935. F.A. Porsche was initiated into the family business while still a boy, spending time in his grandfather's workshops and design facilities. He studied



1963. Porsche 901 and its designer F.A. Porsche.

at the Hochschule fuer Gestaltung in Ulm and joined the company in 1958, taking over the design studio in 1962.

Toward the end of the 1950s, however, Ferry Porsche decided to create a replacement model for the company's signature automobile, and several proposals from designers both within and outside the company were rejected as either too closely tied to the 356 or not tied closely enough to the distinct Porsche aesthetic. But in December 1959, F. A. Porsche completed a full design model for the replacement prototype and in 1963 the new model, originally designated the 901, and was introduced at an auto show.

Features of the car he designed: Porsche 911 It has a distinctive design, rear-engine and with independent rear suspension, an evolution of the swing axle on the Porsche 356. This was the successor to the beloved Porsche 356. The Porsche 911 was first unveiled at the Frankfurt IAA Motor Show in 1963 as the 901. The 160-hp 911S arrived in 1966 with forged alloy wheels from Fuchs. The Porsche 911 is slightly longer and narrower than the 356, more powerful, with a six-cylinder, rather than a four-cylinder, engine, the original 911 also had more legroom, more rear seat room and bigger doors for easier entrances and exits.

Throughout its lifetime, the 911 was modified by private teams and by the factory itself for racing, rallying and other forms of automotive competition. It was among the most successful competition cars of its time.

Reference: www.stuttcars.com/ / www.theglobeandmail.com



Master Diploma in Automotive Design

The Master Diploma in Automotive Design provides comprehensive training in software such as Pro/Engineer, CATIA, ANSYS, NX CAD, NX CAM and NX Nastran. The theoretical principles and practical applications of Geometric Dimensioning and Tolerancing are also covered under this course. On comparison one will find that various software tools covered by this course handle different steps of the design process. It is therefore the most ideal course for Engineers, Diploma Engineers, and students who are pursuing bachelor's degree in mechanical/automotive stream. Upon completion of the course, students can become design or analysis engineers in the automotive industry.

For more details contact your nearest CADD Centre.

