

# CENTRAL FABRICATION UNIT

*Central Fabrication Unit at Sree Vidyanikethan Engineering College is an educational platform where science is translated into technology. The Institute provides extensive student support via centralized fabrication unit in addition to the departmental laboratories.*

*The Central fabrication unit consists of various facilities/shops with well-equipped latest tools, equipments and machineries to support the students to fabricate their experimental set-up with the required quality and quantity within stipulated time. Further, the unit supports all branches of student's research, academic projects, minor and major projects of B.Tech, M.Tech and Ph.D and supporting the college in infra structure fabrication works. Fabrication works pertaining to sponsored research and consultancy are also done at this unit. Various facilities are also exist for the manufacture of components, parts and repair and servicing works.*

*At central fabrication unit students have the access to the following facilities:*

- 1. Fitting Shop*
- 2. Machine Shop*
- 3. Welding Shop*
- 4. Forging Shop*
- 5. Carpentry Shop*
- 6. Foundry Shop*
- 7. Tin Smithy Shop*
- 8. Plumbing section*
- 9. Metrology section*



***CENTRAL FABRICATION UNIT***



***CENTRAL FABRICATION UNIT STAFF***

## **Fitting Shop**

*The fitting shop is related to assembly of parts, after bringing the dimension or shape to the required size or form, in order to secure the necessary fit. students identify and select various tools for holding, assembling or dismantling the work piece and carry out basic work bench activities such as marking, sawing, filing, drilling and fitting to ensure work pieces fitting. Further, students can produce a product through the given technical drawing by using appropriate engineering tools and equipments in fitting shop.*

## **Machine Shop**

*The Machine shop is dedicated to taking the theoretical knowledge learned in a classroom environment and applying it to real world tactile solutions. Machine Shop provides engineering students with a well-equipped, safe working environment in which the students can design and manufacture their projects using various machine tools and cutting tools. The shop contain a spectrum of equipment and technology ranging from simple hand tools to advanced machine tools including CNC Lathe and Vertical Machining center. The facility has become an unmatched resource, accessible to students and staff across multiple disciplines and departments.*

## **Welding Shop**

*Welding is an important fabrication and sculptural technique, possessing both practical and artistic capabilities. The Welding shop provides students to construct and/or repair metal structures and equipment using welding fabrication procedures, including those associated with SMAW, GMAW, GTAW, fuel-oxygen. The facility is equipped with advanced welding machines and cutting processes. Students are acquire skills during welding processes. The students learn further, industrial safety measures.*

## **Forging Shop**

*Forging shop provides the facility for shaping of metal in cold and hot working stages. Structures made of mild steel are fabricated at this facility. Students develop the steels structures for their automotive designs. Utilize hand forging for relatively small components, Machine forging for medium sized and large components are forged by drop forging method.*

## **Carpentry Shop**

*Carpentry shop provides the facility for woodworking, woodcutting, shaping, patterns or repairs wooden structures, as houses or shelving. Students work with wood for various applications. Further, the students have the access to design different types of wooden patterns.*

## **Foundry Shop**

*Students uses foundry shop to produce their own metal castings. Required patterns are prepared in the carpentry shop using timber wood and then brought to the foundry. Metals/wax materials are cast into shapes by melting them into a liquid, pouring the metal/wax in a mold, and removing the mold material or casting. The most common materials processed in the foundry shop are Aluminium and wax in few cases.*

## **Tin Smithy Shop**

*Tin smithy shop supports the students to prepare their minor and major projects involving sheet metal bending, trimming, shaping the sheets to their desired shapes related to engineering articles, Common examples of sheet metal works done by the students at sheet metal shop are hoopers, canisters, guards, covers, pipes, hoods, funnels, bends, boxes etc.*

## Metrology section

*Students once they fabricate their models/projects , they uses the metrology instruments to check the internal and external dimensions of the models. The metrology section is having advanced computerized instruments. Students identify and use reference materials to ensure good quality, accurate, traceable measurement and dimensional accuracy for accurate results as per Indian standards.*

## Plumbing section

*Plumbing is a skilled trade of working with pipes or tubes and plumbing fixtures. The facility is provided with pipe bending and joining, installing plastic pipes, working on copper pipes, soldering, pipe fitting, dies using taps and pneumatic lining.*

**For any fabrication works contact:**

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### Photo Gallery Central Fabrication Unit



Fitting Shop



Machine Shop



Welding shop



Forging shop



Carpentry shop



Foundry shop



Tin smithy shop





Plumbing section



Metrology section