



TITANS
of **CNC**

ACADEMY
SMALL GROUPS

FREQUENTLY ASKED QUESTIONS

What is a Titans of CNC: Academy Small Group?

An Academy Small Group is a team of learners who support one another to complete the Titans of CNC: Academy Curriculum.

Who can create a Small Group?

Small Groups are created by a Host, an organization or an individual, with access to at least one CNC machine and a safe, clean learning environment.

Who leads a Small Group?

Hosts or Facilitators (members with requisite skills) may lead a Small Group. All Hosts and Facilitators must adhere to the Small Groups Code of Ethics in deploying and supporting Academy Curriculum.

Who can participate?

Small Groups can either be Open (available to participants in a local area) or Closed (limited to employees or associates of the sponsoring organization). The Hosts determine the type and size of their Small Group.

How do I create a Small Group?

If you think you have what it takes to start a Small Group, sign up for FREE on [TITANS of CNC: Academy](#).

What is the time commitment?

There are multiple lessons within each TITANS of CNC: Academy learning series. Each meeting should focus on the completion of one lesson. Meetings should last 2-3 hours and occur every week or every two weeks. Participants are expected to work on their CAD drawings and CAM programs between meetings as “Homework” so that the group remains focused on discussion and machining parts.

What is the structure of a Small Group meeting?

Safety is ALWAYS priority #1. The Small Group Host is responsible for the safety of all participants and has the final decision on all aspects of the Small Groups to ensure a safe and effective learning environment. An average group meeting should consist of 25% support for CAD/CAM questions and discussions, 50% CNC machining of Academy Parts, and 25% for completing part inspection, safety reviews, and recaps. Since participants are likely to have access to a PC or Mac but not a CNC machine outside of the meeting, the majority of the meeting should be spent machining and expanding hands-on skills. Each meeting, the Academy Part should be run multiple times at different speeds and feeds so that participants can learn how changing parameters impacts cycle time and tool life.

What is the recommended size of a Small Group?

The ideal Small Group size is between 5 to 30 participants, with the facility size and the number of CNC machines as a guiding factor. The recommended ratio for adequate learning opportunities is 10 participants to 1 CNC Machine. It is possible to expand your participant-to-machine ratio with presentation equipment such as camera-equipped machines and video monitors.

What experience level is relevant to participate?

No experience is necessary to participate in a Small Group. TITANS of CNC: Academy projects are designed to advance individuals of all skill levels. Everyone from hobbyists, product engineers, designers, and shop supervisors can benefit from a deeper understanding of Advanced CNC Machining Techniques.

Who covers the costs of running a Small Group?

CNC Machining is an expensive trade and it will cost Hosts to set-up and complete each meeting. At TITANS of CNC: Academy we believe that members should realize the tremendous role that host plays in opening up their shops and their lives to others. When opening your shop, there is both risk and expense involved. We do not want to hinder growth by regulating the monetary actions of a Small Group but do understand that the Host has overhead wrapped up in the standard machines and tooling needed to host a small group. Hosts and members are advised to develop a plan where members come together to pay for specific tooling needed for Academy Projects. All money given or received should benefit the Small Group and its objective of completing Academy Projects (i.e. the purchase of Academy Tool Kits, Consumables, and Raw Materials).

What are the roles of the Small Group Hosts and Facilitators?

The Small Group Host manages the group's scheduling, activities, and membership. The Small Group Facilitator leads group discussions and CNC Machining exercises. Safety is theirs and everyone's responsibility. The roles of Host and Facilitator could be held by the same person or by one or more different individuals.

What is the agenda for the first Small Group meeting?

Your first meeting should focus on introducing members to one another, setting objectives for the group, and making plans to complete TITANS of CNC: Academy Projects. Meeting locations, schedules, and meeting durations should also be discussed during the first meeting. For Homework, all members should download and install Autodesk Fusion 360 on their home computers and complete the model of the TITAN-1M from the Building Blocks Series. The second meeting should begin with a Homework Review, followed by a question and answer session to address any issues members may have had with the Project.

What are the guidelines for health and safety?

TITANS of CNC: Academy does not provide specific guidance on health and safety in the workplace and assumes no liability for risk of danger, bodily harm, injury, emotional stress, or death as a result of an individual's participation in your Small Group. We strongly suggest, however, that your first meeting should include health and safety information specific to the Facility, the Machines, and the Tools that you will use in your Small Group.

Can I use a CAD/CAM software other than Autodesk Fusion 360?

The TITANS of CNC: Academy Curriculum centers around the use of Autodesk Fusion 360. Using a CAD/CAM software other than Autodesk Fusion 360 will be very difficult. All training videos demonstrate how to complete the parts within Autodesk Fusion 360 and translating that to another software could complicate the lesson for the learner. The Autodesk Fusion 360 software is ideal for all Small Group participants because: 1) it is free to download for education and hobbyist use, 2) Small Group discussions will be richer if all participants are using the same tools, and 3) the cloud-based features of Autodesk Fusion 360 allow groups of any size to easily share their project files with each other. In addition, users of other softwares may find it interesting and beneficial to learn another CAD/CAM program that their suppliers or customers could be using.