



## **CURRENT COURSE OFFERINGS**

The Fastener Training Institute®'s core purpose is to *enhance fastener use, reliability and safety*. To that end we have put together both advanced and fundamental fastener training courses. These are taught yearly as public seminars but are also available to be taught on-site where requested. Check the website for dates and registration fees. For private courses please email or call FTI to discuss the options; customized programs can be tailored to the hosting company's needs. Remember on-site training can save on travel costs by having our instructors come to you!

**Aerospace Fasteners: An Overview** — This training was created to provide a better understanding of aerospace fasteners for fastener distributors, fastener manufacturers and specifying and consuming OEMs. This three-day training includes two days of classroom instruction along with a full day touring aerospace fastener manufacturers and processing facilities.

**Automotive Fastener Technology** — This training is targeted towards technical personnel and support staff looking to consolidate fundamental knowledge and to acquire advanced technical information about automotive fasteners. Engineers, technicians, metallurgists, and technical sales staff will all benefit from this two-day course.

**Dimensional and Material Specifications** — An in-depth study of the most common inch and metric dimensional and material specifications for nuts, bolts and screws, including purchasing and sales criteria. **CFS class\***

**Fastener Basics** — This basic class combines the highlights of the three-day Product Training Program into one day of valuable, fundamental information.

**Fastener Manufacturing** — Visit fastener manufacturing facilities and see cold heading, hot heading and thread rolling for commercial and aerospace products. **CFS class\***

**Fastener Quality Assurance** — Quality assurance requirements for fasteners, including thread gaging, dimensional inspection, sampling plans, physical testing, ISO 9000 and fastener certifications. This training includes hands-on lab work with inspection equipment. **CFS class\***

**Fastener Secondary Processes** — Visit facilities that provide secondary processes to fasteners, including plating, heat treating and application of locking devices. **CFS class\***

**Fastener Specifications and Terminology** — Learn about the consensus standards organizations that govern our industry, get a thorough grounding in terms and definitions used in fastener specifications, study actual specifications and learn how to identify and meet customer and industry requirements. **CFS class\***

**Fastener Technology Workshop** — This seminar focuses on the practical aspects of working in the fastener industry. Subjects covered include: product standards and materials, thread types and selection criteria, quality issues, heat treatment and vibration loosening and locking technologies.

**Fastener Testing** — Taught on-site at an independent fastener testing laboratory, attendees will participate in hands-on metallurgical, physical, NDT, chemical testing and failure analysis. **CFS class\***

**Fastener Training Week** — This training, in partnership with the Industrial Fasteners Institute, incorporates seven of FTI's advanced fastener courses and plant tours in an accelerated version taught over five consecutive days. **CFS class\***

**Fastening Technology and Bolted/Screwed Joint Design** — This technical two-day course was created to give design, manufacturing, and quality engineers along with industrial technicians a thorough grounding in the complexities of mechanical joining with fasteners and will provide the most current specifications, techniques and guidelines.

**Metric Fasteners** — This full day technical seminar focuses exclusively on metric fasteners, going well beyond the basics. Initially fundamental information will be covered to set the stage for more advanced technical aspects of metric fasteners.

**Print Reading for Fastener Industry Professionals** — Learn the fundamentals of fastener drawings as well as advanced concepts. Topics covered include: how to explain the technical details of prints to your customers in plain English and how to spot the unnecessary but expensive features in custom-designed fasteners.

**Product Training Part #1** — The first class in a series of three covering basic fastener information. Subjects include: hex head products, nuts, socket products, methods of manufacturing, consensus standards, parting numbering, and how to use the IFI manual.

**Product Training Part #2** — The second class in a series of three covering basic fastener information. Subjects include: screw drives, head styles and threads, washers, coatings and finishes, hydrogen embrittlement, thread forms and fit, large threaded fasteners, and thread call-outs.

**Product Training Part #3** — The last class in a series of three covering basic fastener information. Subjects include: pins, anchors, rivets, metrics, self-locking and sealing fasteners, inspection and the Fastener Quality Act.

**Quality Management Systems** — Whether or not your company has a Quality Management System (QMS) and whether or not it is registered, in this competitive climate you can be assured that most of your competitors do have registered systems, and all of the best customers expect it. This full-day seminar will help you look at how your company manages quality and see if you need to make some changes.

**Solid Modeling and Computer Aided Design for Fasteners and Assembly Components** — Add value to your customers at a low cost by learning how to create professional 3-D fastener images. Your instructor will use advanced 3-D computer modeling software to demonstrate how solid models are used to develop fastener images, animations and manufacturing drawings.

**Structural Bolting** — This interactive seminar will help you prevent some of the most common mistakes and pitfalls involving structural bolting. Besides the course materials attendees will receive a copy of *Structural Bolting Handbook* by the Steel Structures Technology Center.

**Understanding Hydrogen Embrittlement in Fasteners** — This two-day workshop will provide a broad understanding of hydrogen embrittlement with a particular focus on the conditions leading to hydrogen embrittlement failure of high strength mechanical fasteners.

**Understanding the Bolted Joint** — Learn why tension in bolts and screws is more critical than the applied torque in making a joint secure. Among other things participants will learn first-hand how to calculate general torque recommendations and how to use simple torque calculation software.

**CFS class\***

\*The **Certified Fastener Specialist™** advanced technical training program was created in 1998 and now has over 390 graduates.

To receive the **CFS™** designation, students must complete seven full-day training courses offered throughout the year (or the 5-day accelerated version) and pass a final exam at the end of the training. Upon completion of the program, students receive an engraved plaque designating their certification as a fastener specialist, according to the requirements established by the Fastener Training Institute®.