

Coming this June!!

Superabrasives Engineering Certificate Course

An understanding of superabrasive tools – diamond and cubic boron nitride – is vital if you are involved in grinding, finishing or machining in any way. These tools will provide productivity improvements that can keep your operation competitive...if you know what the materials are, how to select the right ones for your particular application and how to apply them properly. You can gain this expertise by attending this only comprehensive, hands-on course offered in this fields. Taught by experienced educators and industry experts, the course is designed to achieve a practical competency each attendee can employ the day he/she completes the course. The SEC course incorporates lectures, video instruction and hands-on machine shop training that will fully prepare attendees:

- To understand the composition and properties of diamond, CBN and related superabrasive materials.
- To select the appropriate superabrasive wheels, slurries and cutting tools to grind, polish, lap, turn and mill the hardest, most abrasive metals, composites and non-metallic materials used in today industry.

- To analyze the economics of superabrasive tools and learn how to process materials more efficiently in order to achieve the targeted economic results.
- To understand how superabrasive tooling can improve quality, precision and predictability in grinding and machining.
- To replace tedious grinding operations with hard turning and burnishing.
- To make CNC operations much more efficient and productive.
- To understand the broad application potential of diamond wheels, slurries, and machining tools and be able to setup and apply them.
- To select and use CBN wheels, slurries, and machining tools to process the hardest, toughest metals, with greater productivity and overall cost reduction.

The course includes a detailed course book and a comprehensive set of practical reference information, which will provide ongoing help in your operation, long after the course concludes.

DAY 1

- What are diamonds and CBN?
- What are their physical properties?
- What are they used for?
- Product types available?
- Wheel&tool composition.
- Wheel& tool comparison.

DAY 2

MACHINING

- The machining system.
- When to machine.
- How to select the right tools.
- How to set-up the machine.
- How to get best machining results.

DAY 3

GRINDING, POLISHING, LAPPING

- The grinding system.
- When to grind.
- How to select the right wheel or slurry
- How to setup to grind.
- How to get best grinding results.

Course produced and conducted by



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The SECC will be offered twice a year in 2002: - First session: June 3-5
- Second session: October 7-9

_____ Send me registration information for the June course.
_____ Send me registration information for the October course.

Name: _____ Title: _____

Company: _____

Address: _____

City: _____ State/Prov.: _____ Zip/Postal Code: _____

Phone: _____ Fax: _____ E-Mail: _____



Send this form to: **Precision Micro-Machining Center**, The University of Toledo, MIME Dept., 2081 W. Bancroft, Nitschke Hall, Toledo, OH 43606, USA. Tel.: 419-530-6089, Fax: 419-530-6096, e-mail: pmmc@eng.utoledo.edu.

. **ATTN:** Stephanie Hanna, Conference coordinator.