

SPECIAL EDITION

STUDENT DESIGN & EXPERIENTIAL LEARNING CENTER

Spring 2011



The Kummer Student Design Center

The Student Design and Experiential Learning Center (SDEL), soon to move into the sparkling new Kummer Student Design Center at U.S. Highway 63 and 10th Street, was established in 2000 to support a small but growing number of Missouri S&T student design teams. The SDEL provided design teams with a rudimentary student machine shop and basic manufacturing capabilities, but teams often had to turn to other campus assets to complete more advanced processes. In the decade that followed, the center expanded to ten student teams involving nearly 10% of the undergraduate student body, while simultaneously outgrowing its limited equipment and facilities.

The new Kummer Center, slated for occupancy in May, consolidates administrative, design, and production support in a single facility. The structure also provides the university with a superb opportunity to upgrade and expand the production equipment that students use to compete, win, and learn against the world's top engineering schools. The SDEL staff is already training students on how to get the most from the existing machinery, but now its time for the center to improve access to the variety of equipment they'll encounter in industry.

“... now it's time for the center to improve access to the variety of equipment they'll encounter in industry.”

This “special edition” lists equipment necessary to support our student teams. *Please help properly equip our new facility and give our students a better opportunity to succeed.*

We're Online at:

design.mst.edu
experiencethis.mst.edu
www.facebook.com/SandTDesign

Help underwrite our future engineers' equipment needs at design.mst.edu/kummercenter/

Tools & Storage

Webcam server \$3,200
 Web cameras
 18 @ \$800 each
 2 @ \$2,000 each
 Automatic emergency defibrillator (AED) \$3,000
 First aid kits (4) \$250 each
 Floor scrubber \$6,000
 Tool room shelving (10) \$500 each



Machine Shop: Small Items

Vertical band saw \$6,000
 Arbor press \$5,000
 Tube notcher \$5,000
 Air hose reels (6) \$250 each
 Electric cord reels (6) \$250 each
 Anti-fatigue mats (3'x5') (20) \$100 each
 Welding stations (2) \$1,000 each

Machine Shop: Large Items

Waterjet (4x8) \$200,000 (installed)
 CNC mill \$70,000
 Rapid prototyping machine \$35,000
 Hybrid lathe \$30,000
 Manual knee mill \$15,000
 Rolling steel work tables (8) \$5,000 each
 Composites curing heater \$3,500
 Sand blasting station \$3,400
 Parts washer (biodegradable, solvent-free) \$2,600
 Air compressor dryer \$2,500

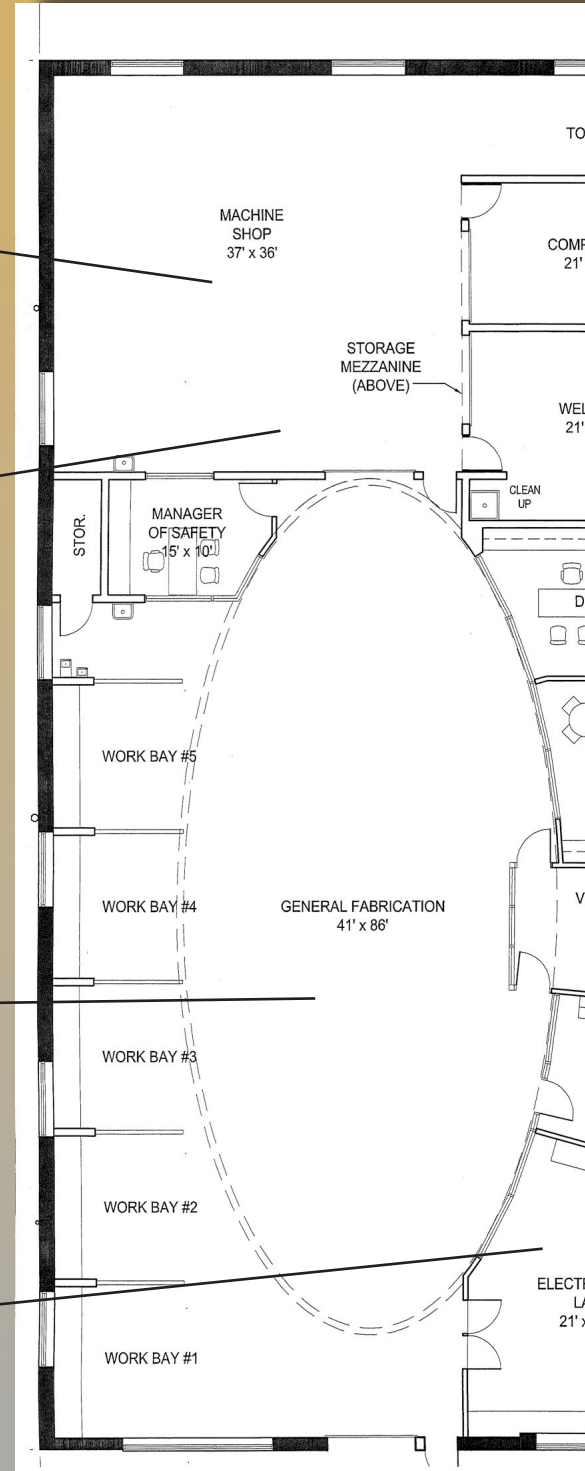
Fabrication

Stationary workbenches (6)
 \$1,000 each
 Mobile workstations (10)
 \$1,000 to \$1,500 each



Electronics

Soldering stations (4) \$250 each
 Solder rework stations (2) \$1,700 each
 Hand-held oscilloscope (4) \$2,700 each
 Bench oscilloscope \$2,300
 Bench multimeter (4) \$1,425 each
 Portable multimeter (4) \$500 each
 Power supply (2) \$750 each
 Function Generator (2) \$2,750 each
 Electronics inspection microscope system \$5,000



Mail-In Donation Form:

Name: _____

Address: _____

*Phone: (____) ____ - _____

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Method of Payment:

Check

Credit Card Visa MC Discover

Card #: _____ Exp: __/__/__

Name: _____

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Name to appear on Donation: _____

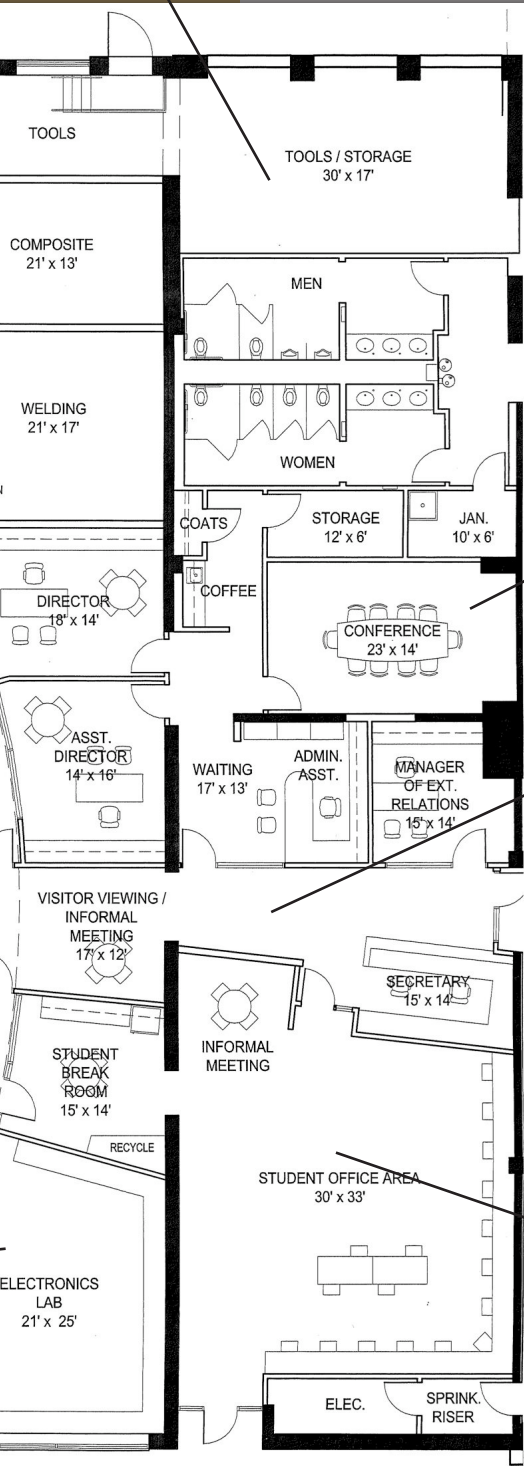
Item(s) you wish to donate _____

Donation amount

\$ _____

Comments: _____

Please clip and mail in



General Office

- Conference room computer \$1,000
- Conference room computer projector \$1,500
- Conference room phone system \$825
- Staff office furniture \$25,000
- Printer \$3,000
- Graphic arts monitor \$1,000
- Microwave \$500
- Refrigerator \$1,000

Lobby

- Lobby PR viewing monitors (2) \$500 each
- Framed lobby artwork/posters of previous team events \$1,000



Student Office

- Student computer work stations (10) \$1,000 each
- Design lab computer projector \$1,500
- Printer \$3,000
- Conference room and student furniture \$25,000
- Student chairs (20) \$175 each
- Numerical intense processing computer (4) \$5,000 each
- Microwave \$500
- Refrigerator \$1,000

Student Design & Experiential Learning Center

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Rolla, Missouri
65409-1410
design.mst.edu

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The students and staff of the SDELIC are grateful beyond measure to Dick Arnoldy, CE'69, Bob Brinkmann, CE'71, and Barry Koenemann, CE'70, whose leadership, foresight and commitment resulted in the Kummer Student Design Center, a facility dedicated solely to S&T student design teams. Special recognition goes to Fred, CE'55, and June Kummer for their most generous gift that moved the dream project to reality.

As director of the Student Design and Experiential Learning Center, I have one of the best jobs on campus. Our top-notch staff is committed to providing our teams with the highest level of support, and they've clearly demonstrated that dedication during the planning and construction phases of this facility.

“... the project won't be complete until we provide our students with quality equipment...”



Roger A. LaBoube, Ph.D., PE

The Kummer Center's administrative offices adjoin larger fabrication, welding, composites and electronics shop areas in a spacious, safe, and efficient working environment. This one-stop concept will enable our students and staff to work closely together in a professional atmosphere to expand experiential learning on the S&T campus.

We are ready to move into the Kummer Center but the project won't be complete until we provide our students with quality equipment that will enable them to bring their design projects to fruition. Please help us by sponsoring part (or all) of a specific machine, donating your firm's surplus equipment, or identifying sources of good nearly-new items. Support the SDELIC as we expand on the potential that the new building offers our teams. Thank you for helping the Kummer Student Design Center provide our students with a world-class education.