



**SOUTH DAKOTA BOARD OF REGENTS  
ACADEMIC AFFAIRS FORMS**

**New Course Request**

<b>SDSU</b>	<b>Jerome J. Lohr College of Engineering/Department of Construction and Concrete Industry Management</b>	
<b>Institution</b>	<b>Division/Department</b>	
Dennis D. Hedge		4/24/2024
<b>Institutional Approval Signature</b>		<b>Date</b>

**Section 1. Course Title and Description**

Prefix & No.	Course Title	Credits
MNET 469	Immersive Experience in Surface Mount Technology	3
MNET 569	Immersive Experience in Surface Mount Technology	3

<b>Course Description</b>	<p>This course provides hands-on experiences in using state of the art automated surface mount technology circuit board assembly. Students will be provided an opportunity to learn about printing, placement, reflow, and inspection processes. Control of process parameters, typical defects and how to correct them will be practiced.</p>
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**MNET 469 Pre-requisites or Co-requisites**

Prefix & No.	Course Title	Pre-Req/Co-Req?
MNET 467	Principles of Surface Mount Technology	Pre-Req

**MNET 569 Pre-requisites or Co-requisites**

Prefix & No.	Course Title	Pre-Req/Co-Req?
MNET 567	Principles of Surface Mount Technology	Pre-Req

**Registration Restrictions**

None
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**Section 2. Review of Course**

**2.1. Will this be a unique or common course?**

**Unique Course**

Prefix & No.	Course Title	Credits
MNET 231	Manufacturing Processes	3
MNET 367	Production Strategy	3

Provide explanation of differences between proposed course and existing system catalog courses below:

MNET 231 and MNET 367 are introductory courses that cover a wide range of manufacturing processes and strategies. They are prerequisites to MNET 467-567 Principles of Surface Mount Technology, the prerequisite course to the proposed course which will focus on modern surface mount printed circuit board manufacturing. MNET 469-569 will provide hands-on experience in using state of the art automated surface mount technology circuit board assembly.

**Section 3. Other Course Information**

**3.1. Are there instructional staffing impacts?**

No. Schedule Management, explain below: The Surface Mount Technology Education consortium will be providing guest speakers and access to an industrial manufacturing process line for course activities. SDSU will provide an instructor to coordinate the course.

**3.2. Existing program(s) in which course will be offered:** Surface Mount Technology Graduate Certificate, Surface Mount Technology Minor

**3.3. Proposed instructional method by university (as defined by AAC Guideline 5.4):** L - Laboratory

**3.4. Proposed delivery method by university (as defined by AAC Guideline 5.5):** 001 – Face to Face

**3.5. Term change will be effective:** fall 2024

**3.6. Can students repeat the course for additional credit?**  Yes, total credit limit:  No

**3.7. Will grade for this course be limited to S/U (pass/fail)?**  Yes  No

**3.8. Will section enrollment be capped?**  Yes, max per section: 20  No

**3.9. Will this course equate (i.e., be considered the same course for degree completion) with any other unique or common courses in the common course system database in Colleague and the Course Inventory Report?**  Yes  No

**3.10. Is this prefix approved for your university?**  Yes  No

**Section 4. Department and Course Codes (Completed by University Academic Affairs)**

**4.1. University Department:** Construction and Concrete Industry Management

**4.2. Banner Department Code:** SCCM

**4.3. Proposed CIP Code:** 15.0616

Is this a new CIP code for the university?  Yes  No

**NEW COURSE REQUEST  
Supporting Justification for On-Campus Review**

<u>Suzette Burckhard</u> <b>Request Originator</b>	<u>Suzette Burckhard</u> <b>Signature</b>	<u>3/26/2024</u> <b>Date</b>
<u>Suzette Burckhard</u> <b>Department Chair</b>	<u>Suzette Burckhard</u> <b>Signature</b>	<u>3/26/2024</u> <b>Date</b>
<u>Suzette Burckhard</u> <b>School/College Dean</b>	<u>Suzette Burckhard</u> <b>Signature</b>	<u>3/26/2024</u> <b>Date</b>

1. Provide specific reasons for the proposal of this course and explain how the changes enhance the curriculum.

The proposed course, MNET 469-569 Immersive experience in Surface Mount Technology, will introduce students to automated surface mount technology circuit board assembly. The use of Surface Mount Technology is increasing due to the increase in printed circuit boards in consumer electronics and SMART (Self-Monitoring, Analysis, and Reporting Technology), devices. The MNET 469-569 course will allow students to gain knowledge of this process which will enhance their employment opportunities.

2. Note whether this course is:  Required  Elective

3. In addition to the major/program in which this course is offered, what other majors/programs will be affected by this course?

None

4. If this will be a dual listed course, indicate how the distinction between the two levels will be made.

Graduate students will have different assessments compared to undergraduate students as well as more robust projects.

5. Desired section size: 20

6. Provide qualifications of faculty who will teach this course. List name(s), rank(s), and degree(s).

Carrie Steinlicht, Senior Lecturer, PhD

7. Note whether adequate facilities are available and list any special equipment needed for the course.

Surface Mount Technology requires access to industrial equipment not at SDSU. Given the cost and rapidly changing technology, SDSU will partner with the Surface Mount Technology Education Consortium to use equipment at operating surface mount facilities. Daktronics has pledged to provide access to an operating manufacturing line at least one day per week for course activities.

8. Note whether adequate library and media support are available for the course.

Library and media support is adequate for this course as the topic is contained in IEEE journals and other journals presently available through the library.

9. Will the new course duplicate courses currently being offered on this campus?  Yes  No

10. If this course may be offered for variable credit, explain how the amount of credit at each offering is to be determined.

N/A