

**PURDUE UNIVERSITY**  
REQUEST FOR ADDITION, EXPIRATION,  
OR REVISION OF AN UNDERGRADUATE COURSE  
(10000-40000 LEVEL)

*FFD 47-10*

DEPARTMENT School of Materials Engineering EFFECTIVE SESSION Fall 2010

**INSTRUCTIONS:** Please check the items below which describe the purpose of this request.

- |   |   |
|---|---|
| <input type="checkbox"/> 1. New course with supporting documents          | <input type="checkbox"/> 7. Change in course attributes (department head signature only)  |
| <input type="checkbox"/> 2. Add existing course offered at another campus | <input type="checkbox"/> 8. Change in instructional hours                                 |
| <input type="checkbox"/> 3. Expiration of a course                        | <input type="checkbox"/> 9. Change in course description                                  |
| <input type="checkbox"/> 4. Change in course number                       | <input checked="" type="checkbox"/> 10. Change in course requisites                       |
| <input type="checkbox"/> 5. Change in course title                        | <input type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type                  | <input type="checkbox"/> 12. Transfer from one department to another                      |

**PROPOSED:**

Subject Abbreviation   
Course Number   
Long Title Atomistic Materials Science  
Short Title Atom Mtls Sci

**EXISTING:**

Subject Abbreviation MSE  
Course Number 27000

**TERMS OFFERED**

Check All That Apply:

Summer  Fall  Spring

**CAMPUS(ES) INVOLVED**

Calumet  N. Central  
 Cont Ed  Tech Statewide  
 Ft. Wayne  W. Lafayette  
 Indianapolis

Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

**CREDIT TYPE**

1. Fixed Credit: Cr. Hrs. 3  
2. Variable Credit Range:  
Minimum Cr. Hrs.   
(Check One) To  Or   
Maximum Cr. Hrs.   
3. Equivalent Credit: Yes  No

**COURSE ATTRIBUTES: Check All That Apply**

1. Pass/Not Pass Only   
2. Satisfactory/Unsatisfactory Only   
3. Repeatable   
Maximum Repeatable Credit:   
4. Credit by Examination   
5. Special Fees   
6. Registration Approval Type   
Department  Instructor   
7. Variable Title   
8. Honors   
9. Full Time Privilege   
10. Off Campus Experience

Schedule Type	Minutes Per Mtg	Meetings Per Week	Weeks Offered	% of Credit Allocated
Lecture	50	3	16	100
Recitation				
Presentation				
Laboratory				
Lab Prep				
Studio				
Distance				
Clinic				
Experiential				
Research				
Ind. Study				
Pract/Observ				

**Cross-Listed Courses**

**COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):**

**MSE 27000 Atomistic Materials Science. Sem.2. Class 3, Cr. 3. Prerequisite: MA 261; Co-requisite: MA 265 and MSE 230 or consent of instructor**  
Introductory course with an atomistic view point on material properties. Three primary class sections: bonding crystallography and statistical mechanics. Bonding topics include introduction to quantum mechanics, emphasis on understanding of metallic, ionic and covalent bonding. Crystallography topics include crystal descriptions and symmetry principles. Statistical mechanics developed with application to electronic and thermodynamic properties.

**\*COURSE LEARNING OUTCOMES**

Calumet Department Head	Date	Calumet School Dean	Date
Fort Wayne Department Head	Date	Fort Wayne School Dean	Date
Indianapolis Department Head	Date	Indianapolis School Dean	Date
North Central Faculty Senate Chair	Date	Vice Chancellor for Academic Affairs	Date
<i>Kurt</i>		<i>Michael C. ...</i>	
West Lafayette Department Head	Date	West Lafayette College/School Dean	Date

*Landra Schaffer* 5/20/10  
West Lafayette Registrar Date

*5/20/10*



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| <input type="checkbox"/> 6. Change in course credit/type                  | <input type="checkbox"/> 12. Transfer from one department to another                      |

<b>PROPOSED:</b>	<b>EXISTING:</b>
Subject Abbreviation <input type="text"/>	Subject Abbreviation <u>MSE</u>
Course Number <input type="text"/>	Course Number <u>27000</u>
Long Title <u>Atomistic Materials Science</u>	
Short Title <u>Atom Mtls Sci</u>	

**TERMS OFFERED**  
Check All That Apply:

Summer  Fall  Spring

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Calumet Department Head _____ Date _____	Calumet School Dean _____ Date _____
Fort Wayne Department Head _____ Date _____	Fort Wayne School Dean _____ Date _____
Indianapolis Department Head _____ Date _____	Indianapolis School Dean _____ Date _____
North Central Faculty Senate Chair _____ Date _____	Vice Chancellor for Academic Affairs _____ Date _____
West Lafayette Department Head _____ Date _____	West Lafayette College/School Dean _____ Date _____

*[Signatures]*

West Lafayette Registrar \_\_\_\_\_ Date \_\_\_\_\_

**TO:** The Engineering Faculty  
**FROM:** The Faculty of the School of Materials Engineering  
**RE:** Prerequisite Change for MSE 27000, Atomistic Materials Science

The faculty of the School of Materials Engineering have approved the following changes to prerequisites for an undergraduate course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

**From:** **MSE 27000 Atomistic Materials Science**  
Sem. 2. Lec. 3, Cr. 3.  
Prerequisite: MA 26100 and MA 26500; Co-requisite: MSE 23000 or consent of instructor.

**To:** **MSE 27000 Atomistic Materials Science**  
Sem. 2. Lec. 3, Cr. 3.  
Prerequisite: MA 26100; Co-requisite: MA 26500 and MSE 23000 or consent of instructor.

**Reason:** Course instructors for MSE 27000 have deemed that it is acceptable for MA 26500 to be a co-requisite.



Keith J. Bowman, Professor and Head  
School of Materials Engineering

APPROVED FOR THE FACULTY  
OF THE SCHOOLS OF ENGINEERING  
BY THE ENGINEERING  
CURRICULUM COMMITTEE

ECC Minutes       #22      

Date       4/6/10      

Chairman ECC       R. Cipra