May 24, 2013

To: Dr. Leo Kempel  
Acting Dean, College of Engineering

Subject: Final report of EGR items processed by UCC in 2012-2013

Following is a summary of EGR curricular changes approved by the UCC during the academic year 2012-2013:

1. Changes to 3 programs (B.S. in C pE, B.S. in EE, and B.S. in ASE).
3. Changes to 37 courses (AESC 210, AESC 310, AESC 410, CE 221, CE 485, CE 999, CHE 999, CSE 999, ECE 201, ECE 202, ECE 203, ECE 230, ECE 331, ECE 345, ECE 410, ECE 411, ECE 420, ECE 474, ECE 477, ECE 816, ECE 832, ECE 835, ECE 836, ECE 837, ECE 960, ECE 989A, ECE 999, ENE 483, ENE 806, ENE 999, ME 999, MSE 350, MSE 370, MSE 410, MSE 841, MSE 870, and MSE 999).

In subsequent pages, details of the above changes are included – these are extracts of agenda items processed through the UCC; all were approved.

Sincerely,

Nihar R. Mahapatra  
Associate Professor, Electrical and Computer Engineering  
E-mail: nrm@egr.msu.edu  
Phone: (517) 432-4617

ec: Pam Cosner, Jamie Ramos, Tom Woff, Rich Enbody
PART I - New Academic Programs and Program Changes

None.

PART II – New Courses and Changes

COLLEGE OF ENGINEERING

EGR 811 Foundations of Engineering Education
Fall of every year. 3(3-0) R: Teaching experience (e.g., TA) and interest in becoming a higher education faculty member as a career. R: Open to graduate students in the College of Engineering. Approval of department.

NEW Introduces the theoretical foundations of engineering education, student learning theories, educational research, and instructional design. Students will learn how to effectively teach, manage, and assess student performance.

Approved Effective Fall 2012

MSE 841 Advanced Spectroscopy and Diffraction Analysis of Materials
Fall of every year. Spring of every year. 3(2-3) R: PHY 184 or PHY 184B or PHY 234B R: Open to graduate students in the College of Engineering. Not open to students with credit in MSE 451.


Approved Effective Fall 2014 Effective Spring 2013

MSE 870 Electron Microscopy in Materials Science
Fall of every year. Spring of every year. 3(2-3) R: Open to graduate students in the Materials Science and Engineering major or approval of department. R: Open to graduate students in the Materials Science and Engineering major or program.


SA: MSE 870 Effective Fall 2002 Effective Spring 2013

MSE 601 Introduction to Computational Science for Evolutionary Biologists
Fall of every year. 3(3-0) R: A strong background in molecular biology, evolution, ecology. R: Not open to graduate students in the College of Engineering or in the Department of Computer Science and Engineering. Approval of department.

NEW Introductory and intermediate programming and scripting for data analysis and modeling. Algorithmic considerations. Scientific code, workflows, and reproducibility.

Approved Effective Fall 2012

CSE 636 Probabilistic Models and Algorithms in Computational Biology
Fall of every year. 3(3-0) P: CSE 331 R: Basic understanding of data structures; probabilities; programming experience (no restriction to programming language).

NEW Canonical probabilistic models and algorithms used in important bioinformatics tools

Approved Effective Fall 2012

CSE 843 Language and Interaction
Spring of every year. 3(3-0) P: CSE 440 R: Programming skills. Basic probability and statistical knowledge.

NEW This course provides an introduction to foundations and the state-of-the-art technology enabling natural language communication with artificial agents. Topics include speech recognition, acoustic modeling and language modeling, dialogue and discourse, and psycholinguistic studies on situated human language processing, and their applications in situated human robot dialogue. These topics will be examined through reading, discussion, and hands-on experience with situated conversational systems.

Approved as changed Effective Spring 2013

October 25, 2012

PART I - New Academic Programs and Program Changes

None.

PART II – New Courses and Changes
MICHIGAN STATE UNIVERSITY

MSE 360  Electronic Structure and Properties of Materials
Spring of every year. 3(3-0) P: (PHY 184 or concurrently) and (CEM 141 or CEM 151 or LBS 171)
Not open to students with credit in MSE 455.
Fundamentals of electrical, thermal, magnetic and optical properties of metals, dielectrics
semiconductors and polymers. Crystal structure, reciprocal space, quantum mechanics,
electron band structure, and phonons. Materials applications in electronics and
optoelectronics.
DELETE COURSE
Effective Fall 2012

CE 485  Landfill Design
Spring of every year. 3(3-0) Interdepartmental with Environmental Engineering. P: CE 200 and CE
342 P, ENE 200 and CE 312
Approved
Geotechnical and environmental design of solid waste landfills.
Effective Summer 2009 Effective Spring 2013

ENE 806  Environmental Engineering Process Laboratory
Spring of every year. 3(2-0) P: CE 480 and ENE 202 and ENE 204 P: ENE 480 and ENE 802 and
ENE 804 R: Open to graduate students in the Environmental Engineering major.
Development of skills related to planning, design, and execution of processes related to
environmental engineering, enhance decision making skills, teamwork, analysis of data,
report writing, and oral presentation.
Effective Spring 2014 Effective Spring 2013

November 29, 2012

PART I - New Academic Programs and Program Changes

None.

PART II – New Courses and Changes

CSE 845  Multi-disciplinary research methods for the study of evolution
Spring of every year. 3(3-0) Interdepartmental with Microbiology and Molecular Genetics and
Zoology.
NEW
Approved

as changed

January 31, 2013

PART I - New Academic Programs and Program Changes

None.

PART II – New Courses and Changes
PART I - New Academic Programs and Program Changes

1. Request to change the requirements in the Bachelor of Science degree in Computer Engineering in the Department of Electrical and Computer Engineering.

The optional concentration in the Bachelor of Science degree in Computer Engineering will be noted on the student's academic record when the requirements for the degree have been completed.

   a. Under the heading Requirements for the Bachelor of Science Degree in Computer Engineering make the following changes:

   (1) In item 3. c. change the first sentence to read:

       Complete 24 credits in electives as specified below. At least 18 credits must be from core and focus track electives combined with at least one course with a laboratory.

   (2) In item 3. c. under Core replace the entry with the following:

       At least 6 credits from the following:

       CSE 420 Computer Architecture 3
       CSE 422 Computer Networks 3
       or
       ECE 442 Introduction to Communication Networks 3
       ECE 410 VLSI Design 4

       Both CSE 422 and ECE 442 may not be used to fulfill this requirement.
(3) In item 3. c. under Hardware add the following course:

ECE 445 Biomedical Instrumentation

b. Add the following concentration:

Biomedical Engineering Concentration
The department offers a concentration for students who plan to pursue graduate work in biomedical areas or seek employment in selected medical-related areas. The concentration is available to, but not required of, any student enrolled in the Bachelor of Science degree program in Computer Engineering. Courses completed to satisfy requirement 3. above may also be used to satisfy the requirements of the concentration. The concentration will be noted on the student's transcript.

Biomedical Engineering
To earn a Bachelor of Science degree in Computer Engineering with a biomedical engineering concentration, students must complete requirements 1., 2., and 3. above and the following:

CREDITS

1. Complete 6 credits from the following courses:
   ANTR 350 Human Gross Anatomy for Pre-Health Professionals 3
   BS 181 Cell and Molecular Biology 3
   PSL 250 Introductory Physiology 4
   PSL 310 Physiology for Pre-Health Professionals 4

2. Complete 6 credits from the following courses:
   ECE 445 Biomedical Instrumentation 3
   ECE 449 Biomedical Signal Processing 3
   ECE 447 Introduction to Biomedical Imaging 3
   ECE 445 Modeling and Analysis of Bioelectrical Systems 3

3. Complete 3 credits from the following courses:
   BE 445 Biosensors for Medical Diagnostics 3
   ME 494 Biofluid Mechanics and Heat Transfer 3
   ME 495 Tissue Mechanics 3
   MSE 425 Biomaterials and Biocompatibility 3
   A 400-level listed above or other approved Electrical and Computer Engineering (ECE) courses with biomedical engineering content as approved by the student's advisor. The course used to fulfill this requirement may not be used to fulfill concentration requirement 1. or 2.

Effective Fall 2013.

2. Request to change the requirements in the Bachelor of Science degree in Electrical Engineering in the Department of Electrical and Computer Engineering.

The optional concentration in the Bachelor of Science degree in Electrical Engineering is noted on the student's academic record when the requirements for the degree have been completed.

a. Under the heading Requirements for the Bachelor of Science Degree in Electrical Engineering make the following changes:

(1) In item 3. b. delete the following courses:
   CSE 251 Programming in C 1
   EGR 102 Introduction to Engineering Modeling 2

   Add the following course:
   CSE 220 Programming in C 3

(2) In item 3. d. Power add the following course:
   ECE 425 Solid State Power Conversion 3
b. Under the heading Biomedical Engineering Concentration make the following changes:

(1) In item 1. delete the following courses:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS 111</td>
<td>Cells and Molecules</td>
<td>3</td>
</tr>
<tr>
<td>PSL 431</td>
<td>Human Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>PSL 432</td>
<td>Human Physiology II</td>
<td>3</td>
</tr>
</tbody>
</table>

Add the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS 101</td>
<td>Cells and Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>PSL 310</td>
<td>Physiology for Pre-Health Professionals</td>
<td>4</td>
</tr>
</tbody>
</table>

(2) In item 2. add the following course:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE 445</td>
<td>Biosensors for Medical Diagnostics</td>
</tr>
</tbody>
</table>

Effective Fall 2013.

PART II – New Courses and Changes

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGR 240</td>
<td>Global Systems: Economics, Engineering, Environment</td>
<td>Fall of every even year, Spring of every odd year, 3(3-0) R: EGR 102 or CSE 234 P: EGR 102 or CSE 231 or CSE 220 R: Not open to freshmen</td>
</tr>
</tbody>
</table>

Globalization as a process driven by economics, enabled by engineering, and constrained by the environment. Development of systems analysis tools for understanding how these themes interact globally. Enhancement of communication skills through teaming, presentations, and active listening.

Effective Fall 2010 Effective Fall 2013

Approved
Sustainable Systems Analysis
Fall of every year. Spring of every year 3(2-0) 3(0-3) P: EGR 310 and (AE 310 or concurrently) and completion of Tier I writing requirement P: (EGR 310 and (AE 310 or concurrently) and completion of Tier I writing requirement P: (EGR 310 and (AE 310 or concurrently)) or approval of department.
Concepts of sustainable systems; computational analysis tools for project management, life-cycle analysis, system-level representation, and six-sigma approaches. Case studies. Modeling and computational analysis.
SA: EGR 300
Effective Fall 2010 Effective Fall 2013

System Methodology
Spring of every year, 3(1-4) P: (EGR 310) and completion of Tier I writing requirement P: (AE 310) and completion of Tier I writing requirement P: Open to seniors in the Applied Engineering Sciences major. Approval of department; application required.
System analysis experience involving analysis tools and practices appropriate to the project, oral and written communication, professional ethics.
SA: MSM 400, SYS 410
Effective Summer 2014 Effective Fall 2013

Statics
Fall of every year. Spring of every year. Summer of every year 3(2-2) 3(1-0) Interdepartmental with Mechanical Engineering. P: ((PHY 183 or PHY 183B or PHY 193H) or (PHY 231 and PHY 233B)) and ((MTH 234 or concurrently) or (LB 220 or concurrently) or (MTH 254 or concurrently))
SA: MSM 205
Effective Summer 2009 Effective Fall 2013

Programming in C
Fall of every year. Spring of every year. 3(2-2) P: (EGR 100 or ECE 101) and (MTH 132 or concurrently) R: Open to undergraduate students. Not open to students with credit in CSE 251.
Basics of programming in C: Data types, operators, control, functions, arrays, pointers, file processing, testing and debugging.
Effective Fall 2013

Circuits and Systems I
Fall of every year. Spring of every year. Summer of every year. 3(3-3) P: (EGR 310 or concurrently) or (ECE 210 or concurrently) or (EGR 102 or concurrently) and (MTH 334 or concurrently) or (MTH 234 or concurrently) or (AE 310 or concurrently) or (CSE 231 or concurrently) or (EGR 102 or concurrently) or (CSE 231 or concurrently) or (EGR 102 or concurrently) or (CSE 220 or concurrently)
SA: ECE 200
Effective Fall 2008 Effective Spring 2013

Circuits and Systems II
Fall of every year. Spring of every year. Summer of every year. 3(3-3) P: ECE 201 and (MTH 235 or concurrently) or (LB 119 or concurrently) or (MTH 210H or concurrently) or (MTH 210bh or concurrently)
SA: ECE 300
Effective Fall 2003 Effective Spring 2013

Electric Circuits and Systems Laboratory
Fall of every year. Spring of every year. Summer of every year. 1(0-0) P: ECE 202 or concurrently
Electrical test equipment and measurement fundamentals. Circuit and filter design using integrated circuit amplifiers.
Effective Spring 2007 Effective Spring 2013
ECE 230  Digital Logic Fundamentals
Fall of every year. Spring of every year. Summer of every year. 3(3-0) P: CSE 131 or CSE 231 or EGR 190 P: CSE 131 or CSE 231 or EGR 102 or CSE 220
- SA: ECE 330
- Effective Fall 2006 Effective Spring 2013

ECE 345  Electronic Instrumentation and Systems
Fall of every year. Spring of every year. 3(3-0) P: (MTH 234 or concurrently) or (MTH 254 or concurrently) or (LB 220 or concurrently) and (PHY 184 or PHY 184B or PHY 234B) and completion of Tier I writing requirement R: Open to juniors or seniors in the College of Engineering.
- Electrical and electronic components, circuits and instruments. Circuit laws and applications, frequency response, operational amplifiers, semiconductor devices, digital logic, counting circuits.
- SA: EE 345
- Effective Fall 2010 Effective Spring 2013

ECE 410  VLSI Design
Fall of every year. Spring of every year. 4(3-3) P: ECE 302 and ECE 303 and ECE 230 R: Open only to juniors or seniors or graduate students in the Department of Electrical and Computer Engineering or Department of Computer Science and Engineering. R: Open to juniors or seniors or graduate students in the Department of Electrical and Computer Engineering or Department of Computer Science and Engineering.
- SA: EE 410
- Effective Spring 2004 Effective Spring 2013

ECE 411  Electronic Design Automation
Fall of every year. Spring of every year. 4(3-3) P: CSE 320 or ECE 331 R: Open only to juniors or seniors or graduate students in the Department of Electrical and Computer Engineering or Department of Computer Science and Engineering. R: Open to juniors or seniors or graduate students in the Department of Electrical and Computer Engineering or Department of Computer Science and Engineering.
- SA: EE 411
- Effective Fall 2000 Effective Spring 2013

ECE 420  Machines and Power Laboratory
Fall of every year. Spring of every year. 1(3-0) P: (ECE 320 or concurrently) or (ECE 423 or concurrently) R: Open only to juniors or seniors in the Department of Electrical and Computer Engineering. R: Open to juniors or seniors in the Department of Electrical and Computer Engineering.
- Experimental investigation of machines, power electronics and power systems. Experimental verification of material found in introductory courses on energy conversion with extension to power electronics and power systems.
- Effective Spring 2004 Effective Fall 2013
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 425</td>
<td>Solid State Power Conversion</td>
<td>Fall of every year. 3 Credits. A student may earn a maximum of 3 credits in all enrollments for this course. P: ECE 320 and ECE 313 and (ECE 420 or concurrently). R: Open to undergraduate students in the Department of Electrical and Computer Engineering. Power converter topologies: DC/DC converters, DC/AC inverters, AC/DC rectifiers, AC/AC converters. Semiconductor switching devices. Modeling and control of power converters: steady-state analysis, state space averaging, small-signal model, closed-loop control, simulation. Application of power converters in motor drives and renewable power generation. Effective Fall 2013.</td>
</tr>
<tr>
<td>ECE 474</td>
<td>Principles of Electronic Devices</td>
<td>Fall of every year. Spring of every year. 3 Credits. P: ECE 320 and ECE 305. Energy levels in atoms, crystal properties, energy bands and charge carriers, semiconductors, transport properties of bulk materials, P-n junction diodes, bipolar transistors, field effect transistors. SA: EE 474. Effective Summer 2009. Effective Spring 2014.</td>
</tr>
<tr>
<td>ECE 477</td>
<td>Microelectronic Fabrication</td>
<td>Fall of every year. 3 Credits. P: ECE 474 or concurrently. R: ECE 305. Open only to juniors or seniors in the Department of Electrical and Computer Engineering. Open to juniors or seniors in the Department of Electrical and Computer Engineering. Microelectronic processing fundamentals and simulations. Comparison of current microfabrication technologies and their limitations. SA: EE 483. Effective Fall 2009. Effective Fall 2013.</td>
</tr>
<tr>
<td>ECE 836</td>
<td>Advanced Electromagnetic Fields and Waves II</td>
<td>Fall of every year. Spring of even years. 3 Credits. R: ECE 835. Theory of guided transmission systems, microstrip lines, metallic and dielectric waveguides, EM cavities, excitation and discontinuities of waveguides, surface wave and radiation modes, integrated optics, scattering of EM waves. SA: EE 836. Effective Fall 2009. Effective Spring 2014.</td>
</tr>
</tbody>
</table>
PART I - New Academic Programs and Program Changes

1. Request to change the requirements for the Bachelor of Science degree in Applied Engineering Sciences in the College of Engineering.

The concentrations in the Bachelor of Science degree in Applied Engineering Sciences are noted on the student's academic record where the requirements for the degree have been completed.

a. Under the heading Requirements for the Bachelor of Science Degree in Applied Engineering Sciences make the following changes:

   (1) In Item 1., paragraph two, replace the statement with the following:

   The University's Tier II writing requirement for the Applied Engineering Sciences major is met by completing Applied Engineering Sciences 410. That course is referenced in Item 3.

   a. below.

   (2) In Item 3. a. make the following changes:

      (a) Change 'EGR 210' to 'AESC 210'.

      (b) Change 'EGR 310' to 'AESC 310'.

      (c) Change 'EGR 410' to 'AESC 410'.

   (3) In Item 3. b. change 'CE 250' to 'ENE 280'.

   (4) In Item 3. c. make the following changes:

      (a) Under the Telecommunications concentration replace the entire entry with the following:

      All of the following courses (18 credits):

      | Course | Title                                      | Credits |
      |--------|--------------------------------------------|---------|
      | TC 101 | Understanding Media in the Information Age| 3       |
      | TC 201 | Introduction to Media and Information Technology| 3   |
      | TC 300 | Media Policy and Economics                  | 3       |
      | TC 301 | Bringing Media to Market                    | 3       |
MICHIGAN STATE UNIVERSITY

TC 361 Information and Communication Technology Management 3
TC 468 Project Management (IV) 3

(c) Add the following concentrations:

Business Law (10 credits):
1. All of the following courses (13 credits):
   EC 301 Intermediate Microeconomics 3
   EC 426 Law and Economics 3
   GBL 395 Law, Public Policy, and Business 3
   GBL 480 Environmental Law and Sustainability for Business: From Local to Global (1) 3
   PHY 192 Physics Laboratory for Scientists, Part II 4

2. One of the following courses (3 or 4 credits):
   PHL 345 Business Ethics 4
   PHL 354 Philosophy of Law 3
   PLIS 320 The American Judicial Process 3
   PLIS 421 American Constitutional Law 3
   PLIS 322 Comparative Legal Systems 3

Packaging (18 credits):
All of the following courses:
   CEM 143 Survey of Organic Chemistry 4
   PKG 101 Principles of Packaging 3
   PKG 221 Packaging with Glass and Metal 3
   PKG 322 Packaging with Paper and Paperboard 4
   PKG 323 Packaging with Plastics 4

Effective Fall 2013.

PART II – New Courses and Changes

CHE 483 Brewing and Distilled Beverage Technology
Spring of every year. Under John's Fruithouse Winery, Brewing Company, East Lansing 3(2-3)
Interdepartmental with Food Science. P: CHE 311 or BI 305 or EE 429 R: Major in Chemical
Engineering, Biosystems Engineering or Food Science. Must be 21 years of age. R: Approval of
department.

Raw materials for fermentation and basics of alcohol fermentation, beer and cider
production; basics of distillation; brandy and eau de vie production; whiskey production;
vodka, gin and flavored spirits production; flavor chemistry.

Effective Spring 2014

ECE 331 Microprocessors and Digital Systems
Fall of every year. 4(3-3) P: (EGGR 102 and (CSE 251 or concurrently) or
CSE 223 and CSE 233 or concurrently) or (EGGR 102 and (CSE 251 or concurrently) or CSE 233
or CSE 220) and ECE 230 R: Open to students in the Department of Electrical and
Computer Engineering and open to students in the Department of Computer Science and
programming. Parallel and serial input and output. Interfacing. Interrupts. Peripheral
device controllers. Applications and design.

SA: EE 331

Effective Fall 2010 Effective Spring 2013

ECE 877 Cleanroom Procedures
Fall of every year. 3(2-3) R: Open to graduate students in the College of Engineering.

NEW

Approved as charged

April 25, 2013

PART I - New Academic Programs and Program Changes

None.

PART II – New Courses and Changes
CHE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 12 credits. A student may earn a maximum of 32 credits in all enrollments for this course. A student may earn a maximum of 38 credits in all enrollments for this course. R: Open only to Chemical Engineering majors. R: Open to graduate students in the Chemical Engineering Major.
Approved
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 1994 Effective Fall 2014

MSE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 22 credits in all enrollments for this course. A student may earn a maximum of 38 credits in all enrollments for this course. R: Open to graduate students in the Department of Chemical Engineering and Materials Science.
Approved
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
SA: MSM 999
Effective Fall 2002 Effective Fall 2014

CE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 22 credits in all enrollments for this course. A student may earn a maximum of 38 credits in all enrollments for this course.
Approved
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
Effective Spring 1994 Effective Fall 2014

ENE 483  Water and Wastewater Engineering
Fall of every year. 3(0-0) Interdepartmental with Civil Engineering. R: (ENE 280 or BE 230) and (Civil 200 or 321 or 331 or 311)
Scientific basis and design of physical, chemical and biological treatment methods for the control of water and wastewater. Operation and process selection. Engineering and scientific basis and design of physical, chemical and biological methods for the treatment of drinking water and wastewater. Operation process selection, and design.
Approved

ENE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 22 credits in all enrollments for this course. A student may earn a maximum of 38 credits in all enrollments for this course.
Approved
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 2002 Effective Fall 2014

CSE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. 1 to 36 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open only to Computer Science majors. Approval of department. R: Open to graduate students in the Computer Science major. Approval of department. A student may earn a maximum of 36 credits in all enrollments for this course.
Approved
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
SA: CPS 999
Effective Summer 2002 Effective Fall 2014

ECE 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 22 credits in all enrollments for this course. A student may earn a maximum of 36 credits in all enrollments for this course.
Approved
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
SA: EE 999
Effective Summer 1994 Effective Fall 2014

ME 999  Doctoral Dissertation Research
Fall of every year. Spring of every year. Summer of every year. 1 to 24 credits. A student may earn a maximum of 22 credits in all enrollments for this course. A student may earn a maximum of 36 credits in all enrollments for this course.
Approved
Doctoral dissertation research.
Request the use of the Pass-No Grade (P-N) system.
Effective Fall 1994 Effective Fall 2014