



# Academic Notes

May 10, 2010

AN 2009-2010

## ACADEMIC NOTES PUBLICATION SCHEDULE FOR SUMMER 2010

Below is the circulation schedule for the electronic copy of *Academic Notes* through August 16, 2010. All submissions for inclusion in *Academic Notes* are due in the Office of Academic Affairs no later than 10:00 a.m. on the Wednesday prior to the distribution of *Academic Notes* on the following Monday. Submissions must be in hard copy along with an e-mail, disk, or CD with the same information. The electronic version must be formatted either in Word with pages with signatures scanned and inserted as a picture OR PDF saved as text and image. (Do NOT send PDF just saved as an image.) Information submitted to *Academic Notes* that is not accompanied by an electronic version or that is incomplete or unusable will be returned to the appropriate office.

*Academic Notes* is available using Acrobat Reader at

[http://www.indstate.edu/academicaffairs/academic\\_notes.htm](http://www.indstate.edu/academicaffairs/academic_notes.htm)

During the summer months, *Academic Notes* is published every other week.

## ACADEMIC NOTES PUBLICATION SCHEDULE FOR SUMMER 2010

<u>Deadline for Items</u>	<u>Issue Date</u>
May 19	May 24
June 2	June 7
June 16	June 21
June 30	July 6
July 14	July 19
July 28	August 2
August 11	August 16

## ACALOG NOTE

The format for curriculum proposals has changed to correspond with the structure of Acalog, the new version of the electronic catalogs. Some proposals will be published under the old structure and some under the new structure during this transition period.

### Improved Electronic Catalog

The new electronic version of the undergraduate catalog is posted at

<http://www.indstate.edu/academics/catalogs.htm> Some advantages of the new format are:

- It is easily searchable and searchable from the internet
- It is easier for students and advisors to find and choose the courses students need
- Students create a personal portfolio of courses in which they are interested
- Links to information such as department web sites, advising information, and video clips can easily be added
- Every page can easily be printed.

If you have questions, please contact Academic Affairs, extension 3662.

# CURRICULUM

## INDEX

Item	Page #
<b>Undergraduate Proposals</b>	
<i>New Courses</i>	
OMA 475.....	2
<i>Course Revisions</i>	
OMA 490.....	3
<i>Course Revisions – Foundational Studies Credit</i>	
ENVI 360 .....	3
PHYS 360.....	4
<i>New Programs</i>	
Sales and Negotiations Minor .....	4
<i>Program Revisions</i>	
Music Performance Major – Bachelor of Music .....	6
<b>Graduate Proposals</b>	
<i>New Courses</i>	
AET 532, 540, 557 .....	10
AET 558; MET 610.....	11
<i>Course Revisions</i>	
AET 535; MET 603A.....	11
MET 811, 812 .....	12
<i>Program Revisions</i>	
M.S. Industrial Technology.....	12
<b>Undergraduate Approvals</b>	
<i>Program Revisions</i>	
Marketing Major.....	16
Marketing Minor .....	19
<b>Graduate Approvals</b>	
<i>New Courses</i>	
OMA 575.....	20
PE 683, 684 .....	21
<i>Course Revisions</i>	
PE 680, 681 .....	21
<b>Corrections</b>	
M.A./M.S. Physical Education.....	22

## UNDERGRADUATE PROPOSALS

### NEW COURSES

#### SCOTT COLLEGE OF BUSINESS: Analytical

#### **OMA 475 – Enterprise Resource Planning Systems**

3 credits

This course introduces students to Enterprise Resource Planning systems using SAP software. Students learn how Enterprise Resource Planning systems can be used to manage and integrate

all functional areas of a modern firm. Students gain extensive hands-on experience using SAP software. Students repeating the course also complete a semester research project on Enterprise Resource Planning systems.

**Prerequisite:** junior standing in business or consent of Department Chairperson.

**Repeatable:** up to six credits.

**Note:** Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

*Preferred effective term: Fall 2010*

## **COURSE REVISIONS**

### **SCOTT COLLEGE OF BUSINESS: Analytical**

#### **OMA 490 - Supply Chain Management**

3 credits

This course is designed to build a basic understanding of the processes involved in managing and integrating the supply chain by using both qualitative and quantitative skills. Focus is on the management of the entire organization, with emphasis placed on managing the flow of information, materials, people, and services from raw materials through production (or service delivery) to the final customer.

**Prerequisites:** OMA 445 with a minimum grade of C, or consent of Department Chairperson.

**Note:** Open to graduate students. Graduate students are required to do additional work of a research nature.

*Change prerequisites to:*

#### **OMA 490 - Supply Chain Management**

3 credits

This course is designed to build a basic understanding of the processes involved in managing and integrating the supply chain by using both qualitative and quantitative skills. Focus is on the management of the entire organization, with emphasis placed on managing the flow of information, materials, people, and services from raw materials through production (or service delivery) to the final customer.

**Prerequisites:** BUS 351 or equivalent with a minimum grade of C, or consent of Department Chairperson.

**Note:** Open to graduate students. Graduate students are required to do additional work of a research nature.

A-F Grading

*Preferred effective term: Spring 2011*

## **COURSE REVISIONS**

### **FOUNDATIONAL STUDIES CREDIT**

### **COLLEGE OF ARTS AND SCIENCES: Earth and Environmental Systems**

#### **ENVI 360 - General Astronomy**

3 credits

Introduction to the basic concepts in astronomy. Both the solar system and stellar astronomy are

covered.

**General Education Credit:** [GE2000: Scientific and Mathematical Studies-Elective]

**Cross-listed:** (Also listed as Physics 360.)

*Change General Education Credit to Foundational Studies Credit:*

**ENVI 360 - General Astronomy**

3 credits

Introduction to the basic concepts in astronomy. Both the solar system and stellar astronomy are covered.

**Foundational Studies Credit:** [FS 2010: Integrative Upper-Division Electives]

**Cross-listed:** (Also listed as Physics 360.)

*Preferred effective term: Fall 2010*

**COLLEGE OF ARTS AND SCIENCES: Chemistry and Physics**

**PHYS 360 - General Astronomy**

3 credits

Introduction to the basic concepts in astronomy. Both the solar system and stellar astronomy are covered.

**General Education Credit:** [GE2000: Scientific and Mathematical Studies-Elective]

**Cross-listed:** (Also listed as Geography/Geology 360.)

*Change General Education Credit to Foundational Studies Credit, and cross listing to:*

**PHYS 360 - General Astronomy**

3 credits

Introduction to the basic concepts in astronomy. Both the solar system and stellar astronomy are covered.

**Foundational Studies Credit:** [FS 2010: Integrative Upper-Division Electives]

**Cross-listed:** (Also listed as ENVI 360.)

*Preferred effective term: Fall 2010*

**NEW PROGRAMS**

**SCOTT COLLEGE OF BUSINESS: Organizational**

**Sales and Negotiations Minor (18 credits)\***

**CIP Code: 521401**

**Brief Summary:**

This proposal is to create a new Minor in Sales and Negotiations. The rationale for the proposing this new minor is as follows. This new Minor provides the opportunity for ISU students to develop and document skills within this important career area. A recent study reported that sales was second only to teaching in the number of job offers made to new college graduates (see: [http://www.bnet.com/2403-13074\\_23-325280.html](http://www.bnet.com/2403-13074_23-325280.html)). While students will develop content knowledge in their major fields, the minor is an excellent way for students from other majors (especially in the hard sciences) to supplement that important factual knowledge with the skills developed from the Sales and Negotiation Minor. This combination of technical knowledge plus selling skills is an extremely attractive form of career preparation for students with an interest in selling complex products or services. Attracting students from the hard sciences to our program

also contributes to the learning experience for College of Business students enrolled in the same classes alongside these students pursuing the Minor. Oftentimes, excellent learning synergies emerge when bright students from different fields work together on projects together in a class.

### **Student Learning:**

We have carefully reviewed our student outcomes assessment and determined that we need to make this adjustment to our current offering.

### **Proposed Catalog Copy:**

#### **Sales and Negotiations Minor (18 credits)\***

**CIP Code: 521401**

The Sales and Negotiations Minor provides an opportunity for students to develop and document sales and negotiations skills. These are valuable workplace skills that can be utilized by students from a variety of majors and in a number of different work environments.

\*The Sales and Negotiations Minor is not available to students who select the Sales Management Track within the Marketing Major. For all other students, completion of the Sales and Negotiations Minor requires at least 9 credit hours beyond the requirements for any other major, minor, or certificate.

#### **Required Courses (15 credits):**

- 
- BUS 361 Principles of Marketing 3 credits
  - OR
  - MKTG 301 Introduction to Marketing 3 credits

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AND

- MKTG 344 Professional Selling 3 credits
- MKTG 443 Business to Business Marketing 3 credits
- MKTG 444 Salesforce Management 3 credits
- MKTG 445 Business Negotiations 3 credits

#### **Elective Courses (Select 3 credits):**

- COMM 312 Introduction to Persuasion Theory 3 credits
- MKTG 310 Marketing for Non-Profit and Service Organizations 3 credits
- MKTG 414 International Marketing 3 credits
- MKTG 333 Product and Pricing Strategy 3 credits
- MKTG 334 Promotional Strategy 3 credits
- MKTG 347 Principles of Retailing 3 credits
- MKTG 353 Marketing Channel Structure and Strategy 3 credits
- MKTG 439 Marketing Internship 3 credits
- MKTG 449 Individual Study in Marketing 3 credits
- MKTG 475 Seminar in Current Marketing Topics 3 credits
- OMA 490 Supply Chain Management 3 credits [Please note prerequisites]

*Preferred effective term: Fall 2010*

## **PROGRAM REVISIONS**

### **COLLEGE OF ARTS AND SCIENCES: Music**

#### **Music Performance Major – Bachelor of Music**

**CIP Code: 500903 Major Code: 3323**

#### **Brief Summary:**

An error occurred in the previous revision to this major. MUS 448 (Basic Composition) was a choice in the core, and it has been banked. The Department of Music wishes to replace this with MUS 117 (Introduction to Composition).

#### **Student Learning:**

No change to student learning is anticipated.

#### **Proposed Catalog Copy:**

#### **Music Performance Major – Bachelor of Music (88 credits)**

**CIP Code: 500903 Major Code: \_\_\_\_\_**

#### **Core Courses (57 credits):**

##### **Theory (22 credits):**

- MUS 111 - Music Theory I 2 credits
- MUS 112 - Music Theory II 2 credits
- MUS 113 - Music Skills I 2 credits
- MUS 114 - Music Skills II 2 credits
- MUS 211 - Music Theory III 2 credits
- MUS 212 - Music Theory IV 2 credits
- MUS 213 - Music Skills III 2 credits
- MUS 214 - Music Skills IV 2 credits
- MUS 445 - Analytical Techniques of Tonal Music 3 credits

Choose one from the following:

- MUS 117 – Introduction to Composition 3 credits
- MUS 443 - Counterpoint 3 credits

##### **History and Literature (12 credits):**

- MUS 150 - Introduction to Musical Traditions I 3 credits
- MUS 237 – Introduction to World Music and Culture 3 credits
- MUS 350 - Music History I 3 credits
- MUS 351 - Music History II 3 credits

##### **Other Basic Musicianship Courses (5 credits):**

- MUS 204 - Technology for Musicians 1 credits

MUS 222 - Basic Conducting 2 credits

MUS 260 - Basic Scoring 2 credits

**Performance (18 credits):**

Choose 8 credits from the following

MUS 276(A-G; I-U) - Individual Performance Study for Music Performance Majors 2 credits

Choose 8 credits from the following:

MUS 476(A-G; I-U) - Individual Performance Study for Music Performance Majors 2 credits

MUS 379 - Junior Recital 1 credits

MUS 479 - Senior Recital 1 credits

Note: Students must enroll in eight semesters of performance courses.

**In addition to the core, students must choose one of the following concentrations:**

**Concentration in Piano (31 credits):**

**Required courses (16 credits)**

MUS 396 - Accompanying 1 credits

MUS 404 - Piano Pedagogy I 3 credits

MUS 406 - Piano Literature 3 credits

MUS 407 - Piano Teaching Materials 2 credits

Choose 2 credits from the following:

MUS 217-\*417 - Masterworks Chorale 0-1 credits

MUS 219-\*419 - Concert Choir 0-1 credits

MUS 259-\*459 - University Symphony 0-1 credits

MUS 269S-\*469S - Symphonic Band 0-1 credits

MUS 269W-\*469W - Wind Orchestra 0-1 credits

Choose 2 credits from the following:

MUS 253K-\*453K - The Piano in Ensemble 0-1 credits

MUS 253S-\*453S - String Ensembles 0-1 credits

Choose 3 credits from the following:

MUS 253K-\*453K - The Piano in Ensemble 0-1 credits

**Literature Elective (3 credits )**

**Music Electives (12 credits)**

**Concentration in Strings: Violin, Viola, Cello, or String Bass (31 credits):**

**Required Courses (18 credits):**

MUS 195 - Secondary Piano I 1 credits

MUS 196 - Secondary Piano II 1 credits

MUS 295 - Secondary Piano III 1 credits

MUS 296 - Secondary Piano IV 1 credits

MUS 428 - String Literature and Pedagogy 2 credits  
Minor string instrument 2 credits

Choose 8 credits from the following:  
MUS 259-\*459 - University Symphony 0-1 credits

Choose 2 credits from the following:  
MUS 253S-\*453S - String Ensembles 0-1 credits

**Literature elective (3 credits)**

**Music electives (10 credits)**

**Concentration in Brass: Trumpet, Horn, Trombone, Euphonium, or Tuba (31 credits):**

**Required Courses (18 credits):**

MUS 195 - Secondary Piano I 1 credits  
MUS 196 - Secondary Piano II 1 credits  
MUS 295 - Secondary Piano III 1 credits  
MUS 296 - Secondary Piano IV 1 credits  
MUS 430 - Brass Literature and Pedagogy 2 credits  
Minor brass instrument 2 credits

Choose 8 credits from the following:  
MUS 259-\*459 - University Symphony 0-1 credits  
MUS 269S-\*469S - Symphonic Band 0-1 credits  
MUS 269W-\*469W - Wind Orchestra 0-1 credits

Choose 2 credits from the following:  
MUS 253B-\*453B - Brass Ensembles 0-1 credits  
MUS 288-\*488 - Jazz Ensemble 0-1 credits

**Literature elective (3 credits)**

**Music electives (10 credits)**

**Concentration in Percussion (31 additional credits):**

**Required Courses (19 credits):**

MUS 195 - Secondary Piano I 1 credits  
MUS 196 - Secondary Piano II 1 credits  
MUS 295 - Secondary Piano III 1 credits  
MUS 296 - Secondary Piano IV 1 credits  
MUS 436 - Percussion Literature and Pedagogy 2 credits  
MUS 456 - Music in the Romantic and Contemporary Eras 3 credits

Choose 6 credits from the following:  
MUS 259-\*459 - University Symphony 0-1 credits



MUS 269S-\*469S - Symphonic Band 0-1 credits  
MUS 269W-\*469W - Wind Orchestra 0-1 credits

Choose 4 credits of the following:

MUS 253P-\*453P - Percussion Ensembles 0-1 credits

**Music electives 12 credits**

**Concentration in Winds: Flute, Oboe, Clarinet, Bassoon, or Saxophone (31 additional credits):**

**Required Courses (18 credits):**

MUS 195 - Secondary Piano I 1 credits  
MUS 196 - Secondary Piano II 1 credits  
MUS 295 - Secondary Piano III 1 credits  
MUS 296 - Secondary Piano IV 1 credits  
MUS 429 - Woodwind Literature and Pedagogy 2 credits  
Minor woodwind instrument 2 credits

Choose 8 credits from the following:

MUS 259-\*459 - University Symphony 0-1 credits  
MUS 269S-\*469S - Symphonic Band 0-1 credits  
MUS 269W-\*469W - Wind Orchestra 0-1 credits

Choose 2 credits from the following:

MUS 253W-\*453W - Woodwind Ensembles 0-1 credits  
MUS 288-\*488 - Jazz Ensemble 0-1 credits

**Literature elective (3 credits)**

**Music electives (10 credits)**

**Concentration in Voice (31 credits):**

**Required Courses (19 credits):**

MUS 195 - Secondary Piano I 1 credits  
MUS 196 - Secondary Piano II 1 credits  
MUS 287 - Italian and English Diction and Repertoire for Singing 1 credits  
MUS 289 - German and French Diction and Repertoire for Singing 1 credits  
MUS 295 - Secondary Piano III 1 credits  
MUS 296 - Secondary Piano IV 1 credits  
MUS 411 - Vocal Techniques 1 credits  
MUS 435 - Vocal Literature for the Solo Voice 3 credits  
MUS 458 - Survey of the Opera 3 credits

Choose 4 credits from the following:

MUS 217-\*417 - Masterworks Chorale 0-1 credits  
MUS 219-\*419 - Concert Choir 0-1 credits

Choose 2 credits from the following:

MUS 253M-\*453M - Chamber Singers 0-1 credits

MUS 253T-\*453T - Music Theater Performance 0-1 credits

**Vocal ensemble elective 2 credits**

**Music electives 10 credits**

*Preferred effective term: Fall 2010*

## **GRADUATE PROPOSALS**

### **NEW COURSES**

#### **COLLEGE OF TECHNOLOGY: Electronics, Computer, and Mechanical Engineering Technology**

##### **AET 532 - Parts Distribution and Marketing**

3 credits

A study of the organization and structure of the automotive industry's parts, tools, equipment and accessory business. Traditional parts stores, mass merchandising, accessory specialists, warehouse distributors, and buying groups are investigated. Also included are market strategies and methods, distribution systems, sales techniques, and understanding of the various catalogs involved.

A-F Grading

*Preferred effective term: Fall 2010*

##### **AET 540 - Fixed Operations Management**

3 credits

Management principles, personnel management, and financial operations management of automotive service facilities.

**Prerequisite:** AET 533

A-F Grading

*Preferred effective term: Fall 2010*

##### **AET 557 - Fleet Management**

3 credits

This course familiarizes students with fleet maintenance operations and organizations. Topics include: transportation systems technology, analysis of tasks and organizations designed for fleet maintenance, operations, maintenance concepts, and safety.

**Prerequisites:** consent of the instructor.

A-F Grading

*Preferred effective term: Fall 2010*

##### **AET 558 - Technological Perspectives in Entrepreneurship**

3 credits

Students examine entrepreneurship from various social, managerial, and technological vantage

points. Topics include risk, social capital, business/project planning, and idea evaluation and development. Projects include interviewing entrepreneurs and proposal evaluation and development. Technology applications may vary according to section.

A-F Grading

*Preferred effective term: Fall 2010*

### **MET 610 - Vehicle Body Structure Design**

3 credits

Principles of structural analysis and design for modern commercial and passenger vehicle bodies. Body architecture layout. Fabrication and assembly options. Noise, vibration, and harshness (NVH) assessment and optimization. Material selection for safety, reliability, cost reduction, and weight reduction. Use of industry standard design and analysis software. A team-based major design project is required.

**Prerequisites:** MET 403 or 633.

A-F Grading

*Preferred effective term: Fall 2010*

## **COURSE REVISIONS**

### **COLLEGE OF TECHNOLOGY: Electronics, Computer, and Mechanical Engineering Technology**

#### **AET 535 - Contemporary Engines**

3 credits

Advanced engine design and theory. Dynamometer testing, wear analysis, and study of reconditioning processes are included in this course.

**Prerequisites:** consent of instructor.

*Change title to:*

#### **AET 535 – Engine Thermodynamics**

3 credits

Advanced engine design and theory. Dynamometer testing, wear analysis, and study of reconditioning processes are included in this course.

**Prerequisites:** consent of instructor.

A-F Grading

*Preferred effective term: Spring 2011*

#### **MET 603A – Survey of Logistics and Distribution Systems**

1-3 credits

Experiences selected or designed to provide understanding and experience with automotive and mechanical functions in our society.

*Change number, title, credits, and description to:*

#### **MET 614 – Logistics and Distribution Systems**

3 credits

This course introduces concepts on logistics and distribution systems, a critical function of modern supply chain systems. It covers major logistics functions such as order processing, materials/inventory management, warehousing, and transportation; and addresses issues in design, planning, and control of such systems.

A-F Grading

*Preferred effective term: Spring 2011*

**MET 811 - Experimental Design and Process Analysis**

3 credits

This is an advanced course in design and analysis of experiments for industrial applications. Topics include single factor models, blocking, factorial design, and regression analysis. Emphasis is given to problem modeling, implementation, and output analysis in applied research.

**Prerequisites:** 607 or equivalent.

*Change number and description to:*

**MET 611 - Experimental Design and Process Analysis**

3 credits

This course introduces design and analysis of experiments for industrial applications. Topics include single factor models, blocking, factorial design, and regression analysis. Emphasis is given to problem modeling, implementation and output analysis in applied research.

**Prerequisite:** TMGT 607 or equivalent.

A-F Grading

*Preferred effective term: Fall 2011*

**MET 812 - Reliability, Maintainability, and Serviceability**

3 credits

This is an advanced course in reliability analysis. It focuses on techniques to determine and predict the reliability and availability of components and systems, including strength-stress interference, failure mode, and affect analysis (FMEA) and fault tree analysis (FTA).

**Prerequisites:** 607 or equivalent.

*Change number to:*

**MET 612 - Reliability, Maintainability, and Serviceability**

3 credits

This is an advanced course in reliability analysis. It focuses on techniques to determine and predict the reliability and availability of components and systems, including strength-stress interference, failure mode, and affect analysis (FMEA) and fault tree analysis (FTA).

**Prerequisites:** TMGT 607 or equivalent.

A-F Grading

*Preferred effective term: Spring 2011*

**PROGRAM REVISIONS**

**COLLEGE OF TECHNOLOGY: Technology Management**

**M.S. Industrial Technology (33 credits)**

**CIP Code: 150612 Major Code: E563**

**Brief Summary:**

In meetings, the faculty of the program developed the following changes to the program:

1. Increase the total hours in the program from 33 to 36.
2. Become a distance delivery program.
3. Change the name from Industrial Technology (MSIT) to Technology Management
4. Add a required concentration to the program.

5. Add a required comprehensive evaluation into the culminating experience (per policy at the program level, i.e., it will become part of our process (one of the steps) for how we administer the culminating experience.
6. Eliminate the Cognate category.

The faculty met in several meetings over a period of the past year to refine course work in the program, particularly the core, to better address the current needs in the areas of technology management.

The core courses of this degree have been offered by distance means for several years. It is the intent to now formalize this as a distance program.

The name change to Technology Management will: (a) bring it in line with the name of the similar B.S. and Ph.D. programs in Technology Management within the Department and College and (b) reflect changes in the name of the field at the national level.

Currently, every required course and most electives are offered at a distance. Currently, a rollout exists to also all required courses on campus, e.g., one year or semester off and the next on. Currently, there is no permission from the State to advertise the program as a distance program. Paperwork to officially categorize the program as a distance program is being routed by the State process. Most, if not all, courses used in the core and the concentrations of the proposed program will be offered according to a rollout both at a distance and on campus (this is an advantage to local students and international students who have restrictions on the number of distance courses they can take).

In order to provide clear options for students, concentrations will be defined as options within the program. Currently concentrations are developed by negotiation between the student and the advisor. Defined concentrations will bring a uniformity to the program that will better serve students and enable better course scheduling.

The change to the named concentrations is expected to increase enrollments. Many students considering the current MSIT have stated they want a more focused degree. Better marketing and advertising is planned, e.g., to take advantage of named concentrations. Currently, the COT has focused BS degrees and a PhD with specializations. However, the current MSIT does not have named concentrations. The MS as proposed would fill in the gap between current BS and PhD programs and specializations. As a concentration to fill in the gap between current and proposed BS majors and minors and the current PhD in Technology Management specializations, it is expected that both (a) some BS students will stay on for the MS Concentration and (b) some PhD students will use the MS concentration as a prerequisite. It is intended that more concentrations will be added as they are developed and approved.

The comprehensive evaluation is viewed as a significant increase in quality and will become a major part of the program's outcome assessment. A program policy exists to guide the process.

The elimination of the Cognate category will enable flexibility within the size of the attached concentrations.

### **Student Learning:**

Formal students outcomes assessment for the program is new but functioning. The outcomes for the program developed and the measures for the outcome have been used and evaluated (except for the evaluation of comprehensive evaluations; comps will not take effect unless the proposal is approved). The outcomes assessment for the current MS in Industrial Technology was developed with input from (or in consideration of) the following. Feedback via other program's outcome assessment; the Advanced Manufacturing Management program's advisory committee; practitioners in various technology fields, e.g., automotive, manufacturing, packaging, etc.; students and faculty in the PhD in Technology Management program; members of professional organizations, e.g., American Society of Automotive Engineers, American Society for Quality, and others.

### **Proposed Catalog Copy:**

#### **M.S. Technology Management (36 credits)**

**CIP Code: 150612 Major Code: \_\_\_\_\_**

Mission Statement: The Master of Science in Technology Management program provides a strong graduate education by integrating teaching with applied research in an engaging, challenging and supportive learning environment to prepare leaders to serve the technology needs of the State of Indiana, the U.S., and the international community.

The Technology Mangement program is meant to further the academic preparation and professional advancement of the baccalaureate graduate with a degree in, and professional orientation toward technology management or similar industrial-technical field. The program provides theoretical and practical learning experiences to prepare graduates for leadership positions in a relevant industry and/or prepare them for doctoral level programs such as the PhD in Technology Management. Unconditional entrance to the program requires a baccalaureate degree closely related to one of following technical areas: automotive; manufacturing; mechanical engineering technology; packaging; or similar technical, engineering technology, or technology management field aligned with one of the concentration areas.

This degree is an interdisciplinary graduate major within the College of Technology and administered by the Technology Management Department. The technical concentration is meant to allow an individualized contract of study that can best fit the student's prior course work, experiences, and goals.

#### **Technology Mangement Core (15 credits):**

- MET 505 - Economic Analysis for Engineering and Technology 3 credits
- TMGT 591 - Creativity and Ideation Techniques and Practice 3 credits
- TMGT 601 - Technology and the Supervisor 3 credits
- TMGT 607 - Statistics for Experimental Research in Technology 3 credits

Select one course from the following:

- ECT 698 - Research in Electronics and Computer Technology 3 credits
- TMGT 698 - Research Methods 3 credits

**Concentration (15 - 18 credits):** 15 hours required if TMGT 699 is selected for the culminating

experience (below). 18 hours required if TMGT 697 is selected.

Note: Additional undergraduate course work may be required to correct deficiencies.

### **Automotive Concentration (15 - 18 credits)**

The automotive concentration prepares individuals for career enhancement and or advancement within the automotive industry.

Select four courses from the following list:

- AET 532 - Parts Distribution and Marketing 3 credits
- AET 533 - Service Facility Organization and Management 3 credits
- AET 535 - Engine Thermodynamics 3 credits
- AET 540 - Fixed Operations Management 3 credits
- AET 557 - Fleet Management 3 credits
- AET 558 - Technological Perspectives in Entrepreneurship 3 credits
- AET 577 - Advanced Vehicle Technologies 3 credits

Electives:

- Select 3-6 credits in consultation with advisor

### **Manufacturing Concentration (15 - 18 credits)**

The Manufacturing Concentration prepares individuals for certification and professions in Manufacturing, e.g, Manufacturing Engineer or Manufacturing Manager.

- TMGT 563 - Quality and Process Control 3 credits
- TMGT 571 - Production Planning and Control 3 credits
- TMGT 578 - Industrial Organization and Functions 3 credits
- MFG 700 - Human Relations and Leadership in Manufacturing 3 credits
- Manufacturing Electives - Select 3-6 credits from other graduate course work in manufacturing or closely related technical area

### **Mechanical Engineering Technology Concentration (15 - 18 credits)**

The Mechanical Engineering Technology Concentration prepares graduates to have advanced careers in the analysis, design, development, implementation, testing, maintenance, management, or technical sales of complex mechanical systems and processes.

Select four courses from the following:

- MET 504 - Engineering Design and Management 3 credits
- MET 608 - Application of Simulation Modeling and Analysis 3 credits
- MET 610 - Vehicle Body Structure Design 3 credits
- MET 612 - Reliability, Maintainability, and Serviceability 3 credits
- MET 633 - Computer Aided Graphics Software 3 credits

Electives - 3 - 6 credits from the following:

- MET 605 - Advanced Economic Analysis for Technology 3 credits
- MET 611 - Experimental Design and Process Analysis 3 credits
- MET 614 - Logistics and Distribution Systems 3 credits
- Other course(s) as approved by the advisor

## Packaging Concentration (15 - 18 credits)

The Packaging Concentration is designed to prepare technical managers for service in the field of packaging engineering and design.

- PKG 582 - Package Development and Analysis 3 credits
- PKG 584 - Packaging Design, Analysis and Testing 3 credits
- PKG 586 - Packaging Machinery Systems 3 credits
- PKG 589 - Packaging Industry Projects 3 credits
- Related electives 3 - 6 credits depending on whether student chooses thesis option

Note: Additional undergraduate course work may be required to correct deficiencies.

Culminating Experience: Choose one course from the list below (3-6 credits):

Note: a comprehensive examination may be required in each of these options.

- TMGT 697 - Major Project 3 credits
- TMGT 699 - Thesis 6credits

*Preferred effective term: Fall 2010*

## UNDERGRADUATE APPROVALS

### PROGRAM REVISIONS

#### **SCOTT COLLEGE OF BUSINESS: Organizational**

#### **Marketing Major (72 credits)**

**CIP Code: 521401 Major Code: 6230**

#### **Brief Summary:**

This proposal changes the requirements for the Marketing Major and introduces a two track system providing students with a choice of the nearly the current offering within marketing or the chance to pursue a track in sales. The rationale for proposing these changes includes the following issues. First, the Marketing Major has experienced significant declines in enrollment over the past several years. An important goal of this substantial change is to increase the overall enrollment within the Marketing Major. The goal is to maintain current enrollment in the marketing area and to attract a substantial number of new students who will pursue the new track in Sales Management. The logic of future enrollment increases follows. This new track in Sales Management will develop a skill set among our students which is in very high demand by employers (sales is second only to teaching as a source of jobs for all college graduates, see: [http://www.bnet.com/2403-13074\\_23-325280.html](http://www.bnet.com/2403-13074_23-325280.html)). The skills developed in the Sales Management track by our graduates will lead to a substantial improvement in career placement and this should lead to a subsequent increase in enrollment.

Secondly, the development of a focus on sales education within the marketing program at ISU is



consistent with national trends. In 1990, there were fewer than five universities in the USA with a significant offering in sales education. Today, there are about 40 universities doing so and the numbers are increasing.

Thirdly, the development of the Sales Management Track is an attempt to revitalize what was once an ISU area of strength. Several years ago, ISU had a very good reputation for developing Marketing majors with the potential for sales success. Due to faculty retirements and other factors, this strength had faded. Based on recent faculty recruitment and a commitment from the Dean to this subset of the marketing field, ISU is now poised to move forward and become a national leader in sales education. The proposed revisions are an important step in that regard.

Fourth, the College of Business now has a Sales and Negotiation Lab that provides a substantial resource for teaching within this area. The proposed revision of the Marketing curriculum will facilitate usage of this outstanding teaching resource and will significantly enhance our experiential education focus with the College of Business.

MKTG 314, elective, has changed number to MKTG 414.

### **Student Learning:**

We have carefully reviewed our student outcomes assessment and determined that we need to make this adjustment to our current offering.

### **Proposed Catalog Copy:**

**Marketing Major (72 credits)**

**CIP Code: 521401 Major Code: \_\_\_\_\_**

### **Required Courses on all Four-Year Professional Programs (45 credits):**

Business:

- BUS 100 - Introduction to Contemporary Business 3 credits
- BUS 180 - Business Information Tools 3 credits
- BUS 201 - Principles of Accounting I 3 credits
- BUS 202 - Principles of Accounting II 3 credits
- BUS 205 - Business Statistics I 3 credits
- BUS 263 - Legal Environment and Business 3 credits
- BUS 305 - Business Statistics II 3 credits
- BUS 311 - Business Finance 3 credits
- BUS 321 - Introduction to Management Information Systems 3 credits
- BUS 351 - Introduction to Operations Management 3 credits
- BUS 361 - Principles of Marketing 3 credits
- BUS 371 - Management and Organizational Behavior 3 credits
- BUS 401 - Senior Business Experience 3 credits

Economics:

ECON 200 - Principles of Macroeconomics 3 credits

ECON 201 - Principles of Microeconomics 3 credits

### **Required Courses for Marketing Majors (27 credits)**

All Marketing Majors Must Complete these Required Core Courses:

#### **Required Core Courses for All Marketing Majors Regardless of Track (9 credits):**

MKTG 332 Buyer Behavior 3 credits

MKTG 338 Marketing Research 3 credits

MKTG 448 Marketing Management 3 credits

Select One of Two Available Tracks:

EITHER:

#### **Marketing Management Track:**

Required Courses for Marketing Management Track (9 credits):

MKTG 333 Product and Pricing Strategy 3 credits

MKTG 334 Promotional Strategy 3 credits

MKTG 353 Marketing Channel Structure and Strategy 3 credits

AND

Elective Courses for Marketing Management Track (Select 9 credits):

Working with an advisor, the student will select 9 credits of 300-400 level MKTG courses

OR:

#### **Sales Management Track:**

Required Courses for Sales Management Track (12 credits):

MKTG 344 Professional Selling 3 credits

MKTG 443 Business to Business Marketing 3 credits

MKTG 444 Salesforce Management 3 credits

MKTG 445 Business Negotiations 3 credits

AND

Elective Courses for Sales Management Track (Select 6 credits):

COMM 312 Introduction to Persuasion Theory 3 credits

MKTG 310 Marketing for Non-Profit and Service Organizations 3 credits

MKTG 414 International Marketing 3 credits

MKTG 333 Product and Pricing Strategy 3 credits

MKTG 334 Promotional Strategy 3 credits

MKTG 347 Principles of Retailing 3 credits

MKTG 353 Marketing Channel Structure and Strategy 3 credits

MKTG 439 Marketing Internship 3 credits

MKTG 449 Individual Study in Marketing 3 credits

MKTG 475 Seminar in Current Marketing Topics 3 credits

OMA 490 Supply Chain Management 3 credits [Please note prerequisites]

*Preferred effective term: Fall 2010*

## **SCOTT COLLEGE OF BUSINESS: Organizational**

### **Marketing Minor (18 credits)**

**CIP Code: 521401**

#### **Brief Summary:**

This proposal changes the requirements for the Marketing Minor. The rationale for proposing this change includes the following issues. First, the Marketing faculty has reached a consensus that all Marketing Minors should complete courses across the fundamental strategic dimensions of marketing: product, price, promotion, and place. This was possible with the prior minor, but not a requirement. To our regret, many students had been selecting courses for the minor based on scheduling convenience and some finished without a well rounded array of courses. This revision will remedy this problem.

Secondly, the revised list of required courses will facilitate faculty scheduling and increase productivity. The revision will lead to increased enrollment in the required courses and enhance faculty productivity. The revision will reduce the need for a wider variety of elective courses to be offered which might not attract substantial enrollment.

Thirdly, this change is necessary because with the flexibility that had been allowed in the past, a student could have selected the Sales Management Track in the new major, complete those courses, then ask that the Marketing Minor be added to his or her credentials because the course work for the old highly flexible Marketing Minor would have met. The proposed revision to the Marketing Minor will avoid this problem.

MKTG 314, elective, has changed number to MKTG 414.

#### **Student Learning:**

We have carefully reviewed our student outcomes assessment and determined that we need to make this adjustment to our current offering.

#### **Proposed Catalog Copy:**

### **Marketing Minor (18 credits)\***

**CIP Code: 521401**

\*The Marketing Minor is not available to students who select the Marketing Major.

#### **Required Courses (15 credits):**

- MKTG 332 Buyer Behavior 3 credits
- MKTG 333 Product and Pricing Strategy 3 credits
- MKTG 334 Promotional Strategy 3 credits
- MKTG 353 Marketing Channel Structure and Strategy 3 credits

Choose one from the following:

- BUS 361 Principles of Marketing 3 credits

MKTG 301 Introduction to Marketing 3 credits

**Elective Courses (3 credits):**

Choose 3 credits from the following:

MKTG 310 Marketing for Non-Profit and Service Organizations 3 credits

MKTG 414 International Marketing 3 credits

MKTG 344 Professional Selling 3 credits

MKTG 347 Principles of Retailing 3 credits

MKTG 439 Marketing Internship 3 credits

MKTG 443 Business to Business Marketing 3 credits

MKTG 444 Salesforce Management 3 credits

MKTG 445 Business Negotiations 3 credits

MKTG 449 Individual Study in Marketing 3 credits

MKTG 475 Seminar in Current Marketing Topics 3 credits

*Preferred effective term: Fall 2010*

## **GRADUATE APPROVALS**

### **NEW COURSES**

#### **SCOTT COLLEGE OF BUSINESS: Analytical**

##### **OMA 575 – Enterprise Resource Planning Systems**

3 credits

This course introduces students to Enterprise Resource Planning (ERP) systems using SAP software. Students learn how ERP systems can be used to manage and integrate all functional areas of a modern firm. Students will gain extensive hands-on experience using SAP software and complete a semester research project on ERP systems.

A-F Grading

*Preferred effective term: Fall 2010*

#### **COLLEGE OF NURSING, HEALTH, AND HUMAN SERVICES: Physical Education**

##### **PE 683 – Cardiorespiratory Physiology**

3 credits

A graduate survey of human cardiorespiratory physiology and the adjustments within the system in response to exercise and other stressors.

A-F Grading

*Preferred effective term: Fall 2010*

##### **PE 684 – Neuromuscular Physiology**

3 credits

This course examines mechanisms by which the nervous system controls motor function to include endurance training, strength training, fatigue, blood flow, muscle soreness, muscle potentiation, environmental factors influencing force output, power, effects of gender and aging on force production.

A-F Grading

*Preferred effective term: Fall 2010*

## **COURSE REVISIONS**

### **PE 680 – Cardiorespiratory Physiology**

3 credits

A graduate survey of human cardiorespiratory physiology and the adjustments within the system in response to exercise and other stressors.

*Change title, description, and add prerequisites to:*

### **PE 680 – Advanced Physiology of Exercise**

3 credits

Advanced treatment of the effects of acute and chronic exercise or lack of exercise on the human organism with emphasis given to mechanisms. Additional attention will be devoted to controversies, traditional practices, fads, and human performance.

**Prerequisites:** kinesiology, physiology of exercise.

A-F Grading

*Preferred effective term: Fall 2010*

### **PE 681 – Neuromuscular Physiology**

3 credits

This course examines mechanisms by which the nervous system controls motor function to include endurance training, strength training, fatigue, blood flow, muscle soreness, muscle potentiation, environmental factors influencing force output, power, effects of gender and aging on force production.

*Change title, description, and add prerequisites to:*

### **PE 681 – Seminar in Exercise Physiology**

3 credits

Critique of research and individual studies.

**Prerequisites:** 680 or consent of instructor.

A-F Grading

*Preferred effective term: Fall 2010*

## **CORRECTIONS**

**The Department of Physical Education requested that PE 680 and 681 revert to their original title and description and be substituted in the M.A./M.S. in Physical Education (Exercise Science) with PE 683 and 684. The change was approved by the College of Graduate and Professional Studies. The update is reflected in bold and italic.**

**M.A./M.S. Physical Education (Exercise Science) (33 credits)**

**CIP Code: 131314 Major Code: \_\_\_\_\_**

The objective of this degree is to provide an opportunity for graduate students to further develop their knowledge and understanding in the area of Exercise Science.

Exercise Science:

Core (9 credits): 601-3 credits; 666-3 credits; 675-3 credits

Required (12): **683-3 credits; 684-3 credits;** 685-3 credits; 688-3 credits

Suggested Electives (M.S. degree-9 credits; M.A degree-6 credits): 583-3 credits; 584-3 credits; 585-3 credits; 616 - 3 credits; 660-3 credits; 665-3 credits; 682-3 credits; FCS 529-3 credits; ATTR 610-3 credits or approved by advisor.

Culminating Experience (M.S. degree - 3 credits): 602-3 credits or 629-3 credits; (M.A. degree - 6 credits): 699-6 credits