Academic Notes

ACADEMIC NOTES PUBLICATION SCHEDULE

Below is the publication schedule for the electronic copy of *Academic Notes* through December 30, 2013. All submissions for inclusion in Academic Notes are due in the Office of Academic Affairs no later than 11:00 a.m. on the Deadline for Items date shown below. Submissions must be in hard copy along with an email, zip drive, 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
During the summer months, Academic Notes is published every other week.
If you have questions, please contact Yvonne Russell in Academic Affairs, extension 3662.

ACADEMIC NOTES PUBLICATION SCHEDULE FOR SPRING 2014

Deadline for Items	Issue Date
December 19	January 6
January 3	January 13
January 10	January 20
January 17	January 27
January 24	February 3
January 31	February 10
February 7	February 17
February 14	February 24
February 21	March 3
February 28	March 10
March 7	March 17
March 14	March 24
March 21	March 31
March 28	April 7
April 4	April 14
April 11	April 21
April 18	April 28
April 25	May 5

CURRICULUM

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UNDERGRADUATE PROPOSALS

COURSE REVISIONS

COLLEGE OF ARTS AND SCIENCES: Mathematics and Computer Science

MATH 308 - Mathematical Structures
3 credits
Systems of equations, matrices, vectors, linear systems, algebraic structures with an emphasis on number systems, congruences, and number theory.
Prerequisites: MATH 131 or equivalent.
Note: Not open to mathematics or mathematics education majors.

Change of description to:

MATH 308 - Mathematical Structures
3 credits
Vector and matrix operations, linear systems, modeling, and applications. Algebraic structures with an emphasis on number systems, congruences, and number theory.
Prerequisites: MATH 131 or equivalent.
A-F Grading
Effective term: Fall 2014

MATH 320 - Discrete Mathematics
3 credits
Sets, relations, and functions; elementary methods of logic; combinatorial methods; recurrence relations; graphs and digraphs; Boolean algebra.
Prerequisites: A programming language, and a grade of C or better in MATH 131 or 301.

Change description and prerequisites to:

MATH 320 - Discrete Mathematics
3 credits
Sets, relations, functions, graphs, trees, and networks; propositional and predicate logic; combinatorial methods; recursion and iteration; applications of discrete structures that could include linear programming and designing data structures.
Prerequisites: A grade of C or better in MATH 132.
A-F Grading
Effective term: Fall 2014

MATH 323 - College Geometry
3 credits
Foundations of Euclidean and non-Euclidean geometry, metric and synthetic approaches. Incidence, betweenness, separation, congruence, transformation, similarity, and the role of the parallel postulate.

Change description and prerequisites to:

MATH 323 - College Geometry
3 credits

Core concepts and principles of Euclidean and non-Euclidean geometry in two and three dimensions; role of the parallel postulate, congruence, similarity, transformations; axiomatic reasoning and proof; geometric constructions using compass and straightedge and dynamic geometry software.
Prerequisites: A grade of C or better in MATH 122 or MATH 131.
A-F Grading
Effective term: Fall 2014

MATH 341 - Probability and Statistics
3 credits
Probability sampling, statistical inference, graphical and numerical representation of data, correlation, regression and probability distributions, analysis of variance, covariance.
Prerequisites: MATH 132.
Note: Not open to liberal arts mathematics majors and minors.
Change description and prerequisites to:
MATH 341 - Probability and Statistics
3 credits
Empirical and theoretical probability, survey creation and implementation, sampling methods, statistical inference, graphical and numerical data representation and analysis, simulations, probability distributions, analysis of variance and covariance using appropriate technology.
Prerequisites: C or better in MATH 131.
A-F Grading
Effective term: Fall 2014

PROGRAM REVISIONS

COLLEGE OF ARTS AND SCIENCES: Mathematics and Computer Science

Mathematics Teaching Major (52 credits)
CIP Code: 270101 Major Code: 3063

Brief Summary:

Remove the two required upper division electives and require MATH 308 and MATH 320.

With the 2012 NCTM Standards, there is a content standard of Discrete Mathematics. It is essential that all of our students learn the topics in Discrete Mathematics, so it needs to be required. In the NCTM standards, there is an expectation that secondary mathematics teachers will learn mathematics content using multiple representations, concrete materials, and appropriate mathematics related technology. With the MATH 308 requirement, we will ensure that our student have this for topics in number theory, linear algebra, and abstract algebra. This will also better prepare them to be successful in the 400-level versions of those courses which are required for the Mathematics Teaching major. In addition, these changes will make it possible for a student to enter the major in their sophomore year (given they can start in calculus) and complete it in their remaining six semesters.

Proposed Catalog Copy:

Mathematics Teaching Major (52 credits)
CIP Code: 270101 Major Code: 3063

Required Mathematics (42 credits)

MATH 122 – Analytic Geometry 3 credits
MATH 131 – Calculus I 4 credits
MATH 132 – Calculus II 4 credits
MATH 231 – Calculus III 4 credits
MATH 308 – Mathematical Structures 3 credits
MATH 320 – Discrete Mathematics 3 credits
MATH 323 – College Geometry 3 credits
MATH 341 – Probability and Statistics 3 credits
MATH 380 – Introduction to Abstract Mathematics 3 credits
MATH 410 – Introduction to Analysis 3 credits
MATH 411 – Theory of Numbers 3 credits
MATH 412 – Abstract Algebra 3 credits
MATH 413 – Linear Algebra I 3 credits

Required Foundational Studies Upper Division Integrative Elective (3 credits)

MATH 492 – History of Mathematics 3 credits

Required Professional Education (7 credits)

MATH 388 – The Teaching of Middle School Mathematics 3 credits
MATH 391 – The Teaching of High School Mathematics 3 credits
MATH 402 – Teaching an Integrated Unit 1 credit

Required Professional Education Taught in the Bayh College of Education (30 credits)

The following are required in the Senior High-Junior High/Middle School Professional Education sequence also described in the Department of Curriculum, Instruction, and Media Technology.

CIMT 200 – Teaching I 2 credits
CIMT 301 – Teaching IIa 2 credits
CIMT 302 – Teaching IIb 2 credits
CIMT 400 – Teaching III 3 credits
CIMT 400L - Teaching III Practicum 1 credit
CIMT 401 – Student Teaching 11 credits
EPSY 202 – Psychology of Childhood and Adolescence 3 credits
EPSY 341 – Education in a Multicultural Society 3 credits
SPED 226 – The Exceptional Learner in the Regular Classroom 3 credits

Effective term: Fall 2014

UNDERGRADUATE APPROVALS

PROGRAM REVISIONS

COLLEGE OF TECHNOLOGY: AETM

Civil Engineering Technology Major (77 credits)
CIP Code: 150201 Major Code: E643

Brief Summary:

Civil Engineering Technology (CVET) program was revised in Feb 2013 to comply with the 120 credit hours mandate requiring ENVI 401 GIS Applications. Recently Department of Earth & Environmental Systems has revised ENVI 401 by adding a pre-req of ENVI 342 Intro to GIS (ENVI 342 is a revision of ENVI 242). In order to keep the major within 120 cr-hrs, this proposal is to replace the requirement of ENVI 401 with ENVI 342 for BS-CVET.

Approved Catalog Copy:

Civil Engineering Technology Major (77 credits)
CIP Code: 150201 Major Code: E643

Program Educational Objective: The program will prepare graduates with the technical and managerial skills necessary to enter careers in the planning, design, construction, operation or maintenance of the built environment and global infrastructure. The graduates will be able to analyze and design systems, specify project methods and materials, perform cost estimates and analyses, and manage technical activities in support of civil projects.

Required Courses (77 credits*):

CNST 111 Construction Materials, Methods, and Equipment (3)
CNST 111L Soils Laboratory (1)
CNST 201 Construction Contract Documents and Project Delivery (3)
CNST 420 Construction Surveying (2)
CVET 401 CAD-Based Applications in Civil Engineering Technology and Surveying (3)
CVET 410 Structural Analysis and Reinforced Concrete Design (3)
CVET 420 Highway Design (3)
CVET 411 Waste Water System Design (3)
ENVI 170 Earth Science (3)
ENVI 170L Earth Science Laboratory (1)
ENVI 342 Intro to Geographic Information Systems (3)

ENVI 454 Introduction to Hydrology (3)
MET 103 Introduction to Technical Graphics with CAD (3)
MET 130 Introduction to Engineering and Technology (2)
MET 302 Applied Statics (3)
MET 304 Engineering Analysis (3)
MET 329 Fluid Power Technology (3)
MET 405 Economic Analysis for Engineering and Technology (3)
MET 406 Strength of Materials (3)
MET 409 Senior Project in Industrial Technology (3)
MET 430 Senior Seminars (1)
MATH 115 College Algebra (3)
or
MET 215 Graphic Analysis (3)
MATH 123 Analytic Geometry and Trigonometry (3)
MATH 301 Fundamental and Applications of Calculus (3)
PHYS 105 General Physics I (3)
PHYSL 105 General Physics I Laboratory (1)
*Includes 7 credits of Foundational Studies (ENVI 170 & 170L; MATH 115 or MET 215).

Electives from the following: (9)

INS 340 Introduction to Risk and Insurance (3)
MET 337 Thermo Systems (3)
MET 351 Cooperative Industrial Practice (3) or equivalent
TMGT 361 Quality Systems and Tools (3)
TMGT 421 Research and Development of Technology (3)
TMGT429 Workplace Law for the Technical Manager (3)
other course(s) approved by the advisor.

Effective term: Fall 2014