



MEMORANDUM

TO: State Board of Education

FROM: Zach Foughty, Director of College and Career Readiness

DATE: October 23, 2012

SUBJECT: Changes to Course Titles and Descriptions for 2013-14

Each October, the department updates and distributes course titles and descriptions for the following school year. Below are changes to the course titles that we are asking the State Board to approve. Additional CTE course title changes will be brought before the board in November.

We would like to **rename** two mathematics courses:

- 2530 Finite Mathematics (formerly Discrete Math)
 - With the increased focus on dual credit, this will better align the expectations of this course with the entry-level Finite Mathematics course that many universities offer.
- 2568 Advanced Modeling and Analysis (formerly Precalculus, 1 semester)
 - There is some confusion about course reporting, by having a 1 semester “Precalculus” course and a 2 semester “Precalculus/Trigonometry” course. This will help distinguish between the two courses, by renaming the 1 semester course. It also better reflects the changes that need to be made to align the course with Indiana’s Common Core.

In addition, we would like to **remove** the following mathematics course:

- 2534 Investigate Geometry
 - We currently have no standards for this course, nor have we had any standards in this course for quite some time (if ever). As we move forward with implementing Indiana’s Common Core Standards and ensuring that students graduate with a meaningful degree, we request that this course be removed and that all students begin taking the more rigorous Geometry course, based on Indiana’s Common Core Standards.

As a reminder, the board previously approved the following International Baccalaureate courses, which will be offered for the first time in 2013-14. There is **no action** needed on these items, but they are included here to provide a comprehensive list of changes for 2013-14.

- 3016 Environmental Systems and Societies Standard Level
- 1578 Global Politics Standard Level
- 1598 Global Politics Higher Level
- 1134 Literature and Performance Standard Level
- 3510 Sports, Exercise, and Health Science Standard Level
- 1588 World Religion Standard Level

We would like to **add** or **rename** the following courses in order to continue development and implementation of Indiana's College and Career Pathways and facilitate alignment and sequencing of Career and Technical Education (CTE) courses in the Pathways. New course titles without course numbers (signified by "xxxx") will be assigned course numbers upon approval.

- **xxxx Building and Facilities Maintenance I (new course title)**

Building and Facilities Maintenance I prepares students to perform routine care and maintenance activities in commercial and institutional buildings. Activities should include classroom and laboratory experiences concerned with all phases of the care and cleaning of buildings, fixtures and furnishings, including all types of building interiors such as linoleum, plastic, terrazzo, tile, and wood floors; rugs; and plastic, wood panel, paint, and synthetic wall coverings. Emphasis should be placed on the selection and use of professional supplies needed for care and maintenance as well as OSHA safety standards and appropriate guidelines in working with various chemicals and processes.

- **xxxx Building and Facilities Maintenance II (new course title)**

Building and Facilities Maintenance II builds on skills learned in Building and Facilities Maintenance I and encompasses instruction in basic upkeep and repair skills related to the mechanical systems within structures. Emphasis should be placed on the use of hand and power tools and the selection and use of appropriate supplies needed for care, repair and maintenance. Students will reinforce their mathematical skills through the practical study of measurement units, ratios, area, and volume calculations. Scientific knowledge will be enhanced through the emphasis on environmental concerns and chemical and electrical safety instruction. Language skills will be strengthened through oral and written work intended to improve students' abilities to communicate with supervisors, colleagues, and clients.

- **5592 Building and Facilities Management I (formerly Building Facilities and Management)**

Building and Facilities Management I Introduces students to the tools, processes and procedures needed to maintain the various HVAC, plumbing and electrical systems found in all buildings and facilities. Students will learn basic operation and troubleshooting techniques for these systems with an emphasis placed on utilizing appropriate maintenance standards to increase the working life of these systems. Additionally, a focus should be placed on modern automated facility efficiency systems.

- **xxxx Building and Facilities Management II (new course title)**

Building and Facilities Management II offers a more in-depth look at the internal systems contained in modern buildings and facilities. Additionally, students will focus on various management and fiscal procedures for scheduling maintenance and leading a crew responsible for facility maintenance. Emphasis should be placed on scheduling, assigning duties, and basic cost benefit analysis in regards to repairing and/or replacing systems. Students will become familiar with proper facility management procedures per regulatory guidance.

- **xxxx Construction Technology Heavy Equipment I (new course title)**

Construction Technology Heavy Equipment I introduces students to basic heavy equipment operations. Students will learn how to control various land-moving and construction equipment. Emphasis should be placed on appropriate OSHA equipment safety standards. Students will be able to identify when to use specific equipment and know the appropriate operation and safety standards associated with it. Additional emphasis should be placed on performing simple operations with equipment such as basic excavation and debris movement.

- **xxxx Construction Technology Heavy Equipment II (new course title)**

Construction Technology Heavy Equipment II builds on the concepts learned in Heavy Equipment I. Students will explore more complex operations with various land-moving and construction equipment within the context of OSHA and industrial operation and safety standards. Emphasis should be placed on controlling equipment to perform specific operations per industry standards and on basic troubleshooting and maintenance procedures.

- **4530 Digital Citizenship (formerly Computer Applications)**

Digital Citizenship prepares students to use computer technology in an effective and appropriate manner. Students develop knowledge of word processing, spreadsheets, presentation and communications software. Students establish what it means to be a good digital citizen and how to use technology appropriately.

- **5284 Health Science Education II: Nursing (formerly Health Science Education II)**

Health Science Education II: Nursing builds on content and skills of Health Science Education I and prepares students with the knowledge, skills and attitudes essential for providing basic care in extended care facilities, hospitals and home health agencies under the direction of licensed nurses through extended laboratory experiences. Content includes information on the health care system and employment opportunities at a variety of entry levels, health care teams, and legal and ethical considerations. Topics include recording patient medical histories and symptoms, providing medicine and treatments, consulting doctors, operating and monitoring medical equipment, performing diagnostic tests, teaching patients and families how to manage illness or injury, and performing general health screenings. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from school to work in the field of nursing, including self analysis to aid in career selection, job seeking and job maintenance skills, personal management skills, and completion of the application process for admission into a postsecondary program. HOSA, the health science student organization, encourages development of leadership, communication, community service and health care related skills.

- **5214 Health Science Education II: Pharmacy (formerly Introduction to Pharmacy)**

Health Science Education II: Pharmacy builds on content and skills of Health Science Education I and prepares students with the knowledge, skills and attitudes essential to providing basic pharmacy services in clinical settings such as pharmacy retail outlets or hospitals, under the direction of licensed pharmacists. Content includes an overview of health care delivery systems and employment opportunities at a variety of entry levels, health care teams, and legal and ethical considerations. In addition, students will learn to record patient information, count tablets and measure medications, mix medications or ointments, package and label prescriptions, accept payment and process insurance claims, and do routine pharmacy tasks such as organizing medications, taking phone calls, cleaning, and customer service. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from school to work in pharmacy careers, including self analysis to aid in career selection, job seeking and job maintenance skills, personal management skills, and application processes for admission into a postsecondary program. HOSA, the health science student organization, encourages development of leadership, communication, community service and health care related skills

- **5215 Health Science Education II: Physical Therapy (formerly Introduction to Physical Therapy)**

Health Science Education II: Physical Therapy builds on content and skills of Health Science Education I and prepares students with the knowledge, skills and attitudes essential for physical therapy careers. Extended laboratory experiences provide students the opportunity to assume and practice technical skills previously learned in the classroom in clinical settings under the direction of licensed physical therapists. Content includes an overview of the health care delivery systems and employment opportunities at a variety of entry levels. In addition students will learn skills specific to physical therapy including observing patients progress, helping patients with specific exercises, using massage and stretching for treatment, aiding patients with devices for movement, educating patients and families, basic assistance in cleaning treatment areas and clerical work. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from school to work in health science careers, including self analysis to aid in career selection, job seeking and job maintenance skills, personal management skills, and application processes for admission into a postsecondary program. HOSA, the health science student organization, encourages development of leadership, communication, community service and health care related skills

- **5286 Health Science Education II: Special Topics (formerly Health Careers III)**

Health Science Education II: Special Topics builds on content and skills of Health Science Education I and prepares students with the knowledge, skills and attitudes essential for specialized or health science careers. This course allows schools to target specific emerging statewide or regional healthcare workforce needs. Course standards and curriculum must be tailored to the specific healthcare profession preparing students to advance in this career field and should also provide students with opportunities for certification or dual credit. Extended laboratory experiences provide students the opportunity to assume the role of health care provider in clinical settings and practice technical skills previously learned in the classroom under the supervision of licensed health care professionals. Content includes an overview of the health care system and employment opportunities at a variety of entry levels, health care teams, and legal and ethical considerations. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from school to work in health science careers, including self analysis to aid in career selection, job seeking and job maintenance skills, personal management skills, and application processes for admission into a postsecondary program. HOSA, the health science student organization, encourages development of leadership, communication, community service and health care related skills.

- **4528 Information Communications and Technology (formerly IT Essentials)**

Information Communications and Technology introduces students to the physical components and operation of computers. Technology is used to build students' decision-making and problem-solving skills. Students should be given the opportunity to seek an industry-recognized digital literacy certification.

- **4588 Infrastructure of the Internet (formerly Bridges to the Internet)**

Infrastructure of the Internet focuses on learning the fundamentals of networking, routing, switching and related protocols. In this course, students learn both the practical and conceptual skills that build the foundation for understanding basic networking, routing and switching. Students are introduced to the two major models used to plan and implement networks: OSI and TCP/IP. The OSI and TCP/IP functions and services are examined in detail. Students will learn how a router addresses remote networks and determines the best path to those networks, employing static and dynamic routing techniques.

- **4518 Introduction to Business (formerly Business, Marketing, and Entrepreneurship)**

Introduction to Business introduces students to the world of business, marketing and entrepreneurship including the concepts, functions, and skills required for meeting the challenges of operating a business in the twenty-first century on a local, national, and international scale. The course further develops business vocabulary and provides an overview of business and the role that business plays in economic, social, and political environments.

- **xxxx Landscape Management I (formerly Landscape Management)**

Landscape Management I is a two semester course that provides the student with an overview of the many career opportunities in the diverse field of landscape management. Students are introduced to the procedures used in the planning and design of a landscape using current technology practices, the principles and procedures involved with landscape construction, the determination of maintenance schedules, communications and management skills necessary in landscaping operations, and the care and use of equipment utilized by landscapers.

- **5136 Landscape Management II (new course title)**

Landscape Management II is a two semester course that extends the content and skills of Landscape Management and provides the student with in-depth exploration of the many career opportunities in the diverse field of landscape management. Students continue to build knowledge and skill in the procedures used in landscape planning and design using current industry standards and practices. Extended laboratory experiences include application of the principles and procedures involved especially in the Midwest and Great Lakes areas with landscape construction; turf management; scheduling and oversight of landscape maintenance; weed control; non-pathogenic and disease prevention, diagnosis, and treatment; communications; management skills necessary in landscaping operations; and the use and maintenance of equipment utilized by landscapers.

- **5982 Marketing in Hospitality and Tourism (formerly Hospitality, Travel and Tourism)**

Marketing in Hospitality and Tourism is a specialized marketing course that develops student understanding of marketing in the hospitality, travel, and tourism industry. Students gain experiences marketing-information management, pricing, product/service management, promotion, and selling in the hospitality, travel, and tourism industry.

- **5962 Merchandising (formerly Fashion Merchandising)**

Merchandising is a specialized marketing course providing instruction of marketing practices that support the sale of products to retail consumers. Emphasis is placed on oral and written communications, problem solving and critical thinking skills as they relate to product design, selling, pricing, distribution, retail promotion, visual merchandising, retail cycles, retail theories, and career opportunities in the retail industry. This course can focus on specific a specific retail sector, such as fashion, sporting good, electronics, etc.

- **5456 Nutrition Science Careers I (formerly Food and Nutrition Science Careers)**

Nutrition Science Careers I is an instructional program that introduces students to careers in nutrition, dietetics, food science, food research and development, and related careers. The course of study includes topics and issues in nutrition; food science topics and issues; topics related to management of daily living needs of individuals and families; nutrition and foods for children and the elderly; topics related to cleaning and maintenance, purchasing, and food preparation; managing operations in food production, food science, or food research and development establishments; related research, development, and testing. Intensive laboratory experiences with industry applications are a required component of this course of study. Work-based experiences in food and nutrition science careers are strongly encouraged.

- **xxxx Nutrition Science Careers II (new course title)**

Nutrition Science Careers II build on content and skills of Nutrition Science Careers I and prepares students for careers in and higher education programs related to nutrition, dietetics, food science, food research and development, and related careers that focus on assisting individuals and families in managing their personal, family, and social needs regarding nutrition, diet, and foods. The course of study includes, but is not limited to: advanced topics and issues in nutrition; advanced food science topics and issues; food and nutrition for individuals and families with special needs and disadvantaging conditions; topics related to management of daily living needs of individuals and families; nutrition and foods in child care and convalescent care; topics and issues related to maintaining the food supply; topics related to cleaning and maintenance, purchasing, and food preparation; managing operations in food production, food science, or food research and development establishments; providing for the dietary needs of persons with special requirements; related research, development, and testing. Ethical, legal, and safety issues as well as helping processes and collaborative ways of working with others are to be addressed. Intensive laboratory experiences with industry applications are a required component of this course of study. Work-based experiences in food and nutrition science careers are strongly encouraged. This course provides the foundation for study in higher education that leads to related careers.

- **5842 Recreational and Mobile Equipment I (formerly Recreational and Portable Power Equipment)**

Recreational and Mobile Equipment I introduces students to fundamental concepts in the internal workings and operations of engines. Training will cover hydraulics, cooling and electrical systems, and other engine components. Students will explore the interrelatedness of these systems by examining and identifying the commonalities and differences between the various engines that power recreational and mobile equipment. Additional emphasis should be placed on content specific reading of repair and maintenance manuals.

- **xxxx Recreational and Mobile Equipment II (new course title)**

Recreational and Mobile Equipment II builds on the basic engine concepts of Recreational and Mobile Equipment I. Advanced training should cover care and service of recreational vehicles including motorcycles, mini-bikes, snowmobiles, all-terrain vehicles (ATVs), and outboard motors. Daily emphasis is placed on reading technical manuals and using oral communications skills in a customer service setting.

- **5472 Residential and Commercial Facilities Management I (formerly Residential and Commercial Facilities Management Careers)**

Residential and Commercial Facilities Management Careers I introduces students to concepts relating to management and maintenance of residential, commercial, and institutional facilities and equipment. Students will explore basic management concepts and become acquainted with professional and regulatory standards in various venues including convention centers, hotels, leisure and recreation facilities and grounds, and food service establishments. Ethical, legal, and safety issues as well as helping processes and collaborative ways of working with others are to be addressed. Emphasis should be placed on common fiscal accountability measures and the rules and regulations that govern the operations of various residential and commercial facilities. Intensive laboratory experiences with commercial applications are a required component of this course of study. Work-based experiences in the Residential and Commercial Facilities Management industry are strongly encouraged.

- **xxxx Residential and Commercial Facilities Management II (new course title)**

Residential and Commercial Facilities Management Careers II builds on the human capital and resource management components of Residential and Commercial Facilities Management I and provides the foundation for study in higher education that leads to related careers. Students will examine common human resource practices and the laws that govern them; Explore generally accepted accounting practices in regards to a specific venue or operation; and identify appropriate mechanisms to improve facility operations. An additional emphasis should be placed on customer service and collaboration and team-building to achieve organizational success. Management of departments such as security, safety, cleanliness and sanitation, hazardous materials, and waste as well as customer relations and customer service orientations are to be addressed. Intensive laboratory experiences with commercial applications are a required component of this course of study. Work-based experiences in the Residential and Commercial Facilities Management industry are strongly encouraged.

- **xxxx Servers and Security (new course title)**

Servers and Security focuses on the software skills needed to manage a network. Students will learn and practice the skills necessary to perform in the role of a network administrator. They will be able to accomplish fundamental network management tasks on a server such as set up of computer network services, create users and appropriate login scripts, develop groups, set the server remotely, set up security, backup/restore the server and setup/maintain clients.

- **xxxx Sustainable Energy Alternatives (new course title)**

Sustainable Energy Alternatives broadens a student's understanding of environmentally friendly energies. In this course students will use a combination of classroom, laboratory, and field experiences to analyze and critique solar, wind, geothermal, biomass and emerging technologies.

- **5211 Veterinary Careers I (formerly Introduction to Health Care Specialties)**

Veterinary Careers I is a lab intensive course that introduces students to animal care and veterinary medicine while using field experiences to attain necessary skills. Students will learn and demonstrate standard protocols used in veterinary careers. Extended laboratory experiences in clinical settings such as animal hospitals, shelters, or research laboratories provide students the opportunity to assume veterinary assistant roles and practice technical skills learned in the classroom under the direction of licensed veterinary professionals.

- **5212 Veterinary Careers II (formerly Introduction to Health Care Technology)**

Veterinary Careers II builds on content and skills of *Veterinary Careers I*. It is a lab intensive course that expands students' understanding of animal care and veterinary medicine while using field experiences to attain and extend necessary skills. Students will utilize standard industry procedures to assist veterinary practice and to provide client support. Extended laboratory experiences that allow students to build knowledge and skills learned in the classroom under the direction of licensed veterinarians. Content includes an overview of the health care system and employment opportunities at a variety of entry levels and legal and ethical considerations. Students will learn skills for monitoring and caring for animals before and after surgery, maintain and sterilize surgical instruments, clean and disinfect kennels and operating rooms, provide emergency first aid to animals, give medications, do routine lab tests, feed and bathe animals, and collect fluid or tissue samples. This course also provides students with the knowledge, attitudes, and skills needed to make the transition from school to work in health science careers, including self analysis to aid in career selection, job seeking and job maintenance skills, personal management skills, and completion of the application process for admission into a postsecondary program. HOSA, the health science student organization, encourages development of leadership, communication, community service and health care related skills.