MEMORANDUM

To: Superintendents and Principals

From: Stefany Deckard, State CTE Director

Date: April 6, 2018

Re: Amendment to Course Title and Descriptions 2018-2019

The Indiana Department of Education has amended the 2018-2019 Course Titles and Descriptions document to include the following course additions:

To assure that Indiana provides students with the most current offerings to prepare for college and careers, the Department of Education annually updates and distributes the course titles and descriptions for the following school year. Changes for 2018-2019 were presented at the November 2017 State Board meeting. Since that time, additional changes have been identified, based on demand and feedback from a pathway committee comprised of secondary and post-secondary education members as well as business and industry representatives.

Changes to Indiana's State Approved Course Titles
The following changes in course titles will expand the offerings available to schools, increase flexibility, and continue development and implementation of Indiana's College and Career Pathways.

Course Titles to Be Renamed:

Pathway		**Current Course Titles**		**Proposed New Course Titles**	
	Course Code	Name of Course	Course Code	Name of Course	
Computer Science	5236	Computer Science II: Programming	5236	Computer Science II	
	5251	Computer Science II: Informatics	5251	Computer Science III: Informatics	
	5250	Computer Science II: Database	5250	Computer Science III: Database	
Network Support	5230	Computer Tech Support	5230	Information Technology Support	
	5257	Networking II: Servers and Security	5257	Networking II: Servers	

New Course Titles to Be Added:

Computer Science III: Software Development, Capstone, IT Cluster, Computer Science Pathway -
(Proposed Course Code 5249)
Computer Science III: Software Development focuses on gaining knowledge and acquiring competencies in the processes, techniques and tools used to develop production quality software. The course framework aligns with professional standards and situates software development within the context of a software project, providing focus on requirements development and management; project scheduling; project success metrics; code design, development and review principles; testing procedures; release and revision processes; and project archival. An additional topic provides exposure to career opportunities within the software development field. The final product of this capstone experience is a working software product that adheres to industry standards.

Computer Science III: Cybersecurity, Capstone, IT Cluster, Computer Science Pathway –
(Proposed Course Code 5253)
Computer Science III: Cybersecurity introduces the secure software development process including designing secure applications, writing secure code designed to withstand various types of attacks, and security testing and auditing. It focuses on the security issues a developer faces, common security vulnerabilities and flaws, and security threats. The course explains security principles, strategies, coding techniques, and tools that can help make software fault tolerant and resistant to attacks. Students will write and analyze code that demonstrates specific security development techniques. Students will also learn about cryptography as an indispensable resource for implementing security in real-world applications. Students will learn foundations of cryptography using simple mathematical probability. Information theory, computational complexity, number theory, and algebraic approaches will be covered.

Networking II: Cybersecurity, Capstone, IT Cluster, Network Support Pathway –
(Proposed Course Code 5245)
Networking II: Cybersecurity is a capstone experience of the Network Support Pathway. It builds upon a base knowledge of Information Technology as gained through lower level courses such as IT support and Networking I. This particular capstone course concentrates on the Security field within networking, also called the cybersecurity field. Laboratory and classroom components are used to cover key elements such as Information Security, Systems Security, Network Security, Mobile Security and, Defense and Mitigation Techniques. The core concepts of confidentiality, integrity and availability are covered.

IT Support Capstone, Capstone, IT Cluster, Network Support Pathway –
(Proposed Course Code 5231)
IT Support Capstone is designed to for students to showcase the knowledge gained from the Information Technology Pathway. Through troubleshooting hardware, software, and networks, students problem-solve through a variety of real-world IT problems. Throughout the course, students communicate with other team members and document progress to fix a variety of devices.