Indiana Department of Education

Dr. Katie Jenner, Secretary of Education

To: Superintendents, Principals, School Leaders

From: Karrianne Polk-Meek, Director of Teaching and Learning

Date: June 10, 2022

Subject: Science and QR Requirements for Core 40 Curriculum Model

Pursuant to IC 20-19-2-21, the Indiana State Board of Education (SBOE) adopted revised rules regarding science requirements for the Core 40 curriculum model. To earn a Core 40 diploma designation, students are still required to obtain:

(1) two credits of Biology I,
(2) two credits of Chemistry I or Physics I or Integrated Chemistry-Physics, and
(3) two credits of any other Core 40 science course.

Acting on recommendations from a committee of content area experts, representing both secondary and postsecondary institutions, industry/community partners, and the Governor's Workforce Cabinet, SBOE approved in June 2022 expanding the list of courses that students can take to satisfy the **third** science course requirement.

Following recent changes to Career and Technical Education (CTE) coursework and the launch of the Next Level Programs of Study (NLPS), the course options have been expanded to satisfy the third science course required to earn the Core 40 diploma. The following NLPS courses, based on prior SBOE approval of equivalent courses, continue to be allowable for science credit. New NLPS courses are also listed in **bold** below. The Indiana Department of Education (IDOE) has convened an educator committee and has determined that the following courses should be added to this list.

Core 40 Science Courses

- 4570 AP Computer Science A
- 4568 AP Computer Science Principles
- 4854 IB Computer Science Higher Level
- 4856 IB Computer Science Standards Level
- 8118 Cambridge International AS Level Computer Science
- 8116 Cambridge International A Level Computer Science
- 4801 Computer Science I
- 5236 Computer Science II
- 5250 Computer Science III: Databases
- 5251 Computer Science III: Informatics
- 5249 Computer Science III: Software Development
- 5253 Computer Science III: Cybersecurity
- 5518 Aerospace Engineering
- 4818 Environmental Sustainability

- 4814/5644 Principles of Engineering
- 5008 Animal Science
- 5180 Natural Resources
- 5170 Plant and Soil Sciences
- 5229 Sustainable Energy Alternatives
- 5216 PLTW Human Body Systems
- 5217 PLTW Medical Interventions
- 5215 Health Science Education II: Physical Therapy
- 7183 Principles of Computing
- 7352 Computer Science
- 7185 Website and Database Development
- 7184 Software Development
- 7179 Cybersecurity Fundamentals
- 7181 Cybersecurity Operations
- 5644 Principles of Engineering
- 5216 Human Body Systems
- 5217 Medical Interventions
- 7323 Physical Therapist Capstone
- **7113 Crop Management**
- **7167 Pharmacy Tech**
- **7170 Nutrition Planning and Therapy**
- **7230 Agriculture Biotechnology Capstone**
- **7232 Horticulture Capstone**
- **7270 Forestry and Wildlife Management**
- **7271 Soil and Water Management**
- **7321 Kinesiology**
- **7351 Topics in Computer Science**
- **7352 Computer Science**

Pursuant to 511 IAC 6-7.1-6 , for the Core 40 Diploma, Academic Honors Diploma (AHD), and Technical Honors Diploma (THD), students must take a mathematics course or a QR (applied mathematics) course each year they are enrolled in high school. Students must also earn two credits in a mathematics course or a QR course during their junior or senior year. The following courses will now qualify for QR credit.

Core 40 QR Courses

- **7100 Smart Manufacturing Systems**
- **7105 Precision Machining Fundamentals**
- **7107 Advanced Precision Machining**

- **7112 Agriculture Structures Fabrication and Designs**
- **7119 Advanced Electrical**
- **7167 Pharmacy Tech**
- **7183 Principles of Computing**
- **7184 Software Development**
- **7185 Website and Database Development**
- **7197 BIM Architecture**
- **7200 Fundamentals of Electricity and Motors**
- **7202 Manufacturing Principles and Design**
- **7218 Aviation Capstone Management**
- **7219 Precision Machining Capstone**
- **7221 Diesel Services Capstone**
- **7222 Smart Manufacturing Capstone**
- **7223 Mechanical Design Capstone**
- **7224 Industrial Automation and Robotics Capstone**
- **7228 Agriculture Mechanization and Technology Capstone**
- **7234 Landscape Management**
- **7238 Agribusiness Capstone**
- **7242 Construction Trades Capstone**
- **7244 HVAC Capstone**
- **7262 Accounting Capstone**
- **7260 Industrial Electrical Capstone**
- **7261 Industrial Maintenance Capstone**
- **7263 Construction Trade Electrical Capstone**
- **7265 Finance and Investment Capstone**
- **7297 Architecture, Engineering and Construction**
- **7351 Topics in Computer Science**
- **7361 Electronic Fundamentals**
- **7362 Electronics and Computer Technology Capstone**

Please contact the Office of Teaching and Learning with any questions.