

Approved 6/27/19 JT			
5-12 Computer Science		COMPLETE SHADED FIELDS IN THIS COLUMN	Add links to online course syllabi, or submit course syllabi in separate folder
INSTITUTION NAME	William Penn University		Notes
UNDERGRADUATE OR GRADUATE?	Undergraduate		
NEW OR REVISED?	New		
STATE CORE REQUIREMENTS			
Computer Science methods to include: (1) Curriculum development including recognizing and defining real-world computational problems; computing concepts and constructs; developing and using abstractions; creating, testing, and refining computational artifacts; and problem-solving strategies in computer science. (2) Project-based methodologies that support active and authentic learning, fostering an inclusive computing culture, collaborative groupings, and opportunities for creative and innovative thinking. (3) Communication about computing including multiple forms of media. (4) Digital citizenship including the social, legal, ethical, safe and effective use of computer hardware, software, peripherals, and networks.	EDUC 399 Secondary Computer Science Methods, 3 credits and 25-hour Field Experience		
Applicants must hold a valid Iowa teaching license with at least one other teaching endorsement.			
STATE CONTENT REQUIREMENTS		INSTITUTIONAL REQUIREMENTS (course title, credits)	
A minimum of 12 semester hours of computer science to include coursework in the following:			
(1) Data representation and abstraction to include primitive data types, static and dynamic data structures, and data types and stores.	APCS 350 Data Structures, 4 credits		4
(2) Designing, developing, testing and refining algorithms to include proficiency in two or more programming paradigms	APCS 201 Programming Fundamentals, 2 credits APCS 206 Object Oriented Programming, 2 credits		4
(3) Systems and networks to include operating systems, networks, mobile devices, and machine-level data representation.	APCS 220 Computer Organization and Architecture, 3 credits APCS 311 Networking, 3 credits		6
Other (if applicable):	APCS 265 Systems Analysis and Design, 3 cr MATH 211 Discrete Mathematics, 3 cr		6
Computer science specialist. If the requirements in 13.28(35)"c" and "d" are met and the applicant achieves a minimum of 24 semester hours of computer science content, a computer science specialist endorsement will be granted and the additional teaching endorsement set forth in 13.28(35)"b" will not be required.	APCS 336 Web Programming, 3 credits APCS 242 Computer & Network Mgmt, 3 credits APCS 312 Operating Systems, 3 credits APCS 101 Intro to Computing Professions, 1 credit APCS 326 Database Management Systems, 3 credits APCS 360 Software Engineering Project, 3 credits MATH 303 Statistical Methods, 3 credits		19
Other (if applicable):			
Endorsement Credit Hour Total:		20	39 - Computer Specialist