

State develops academic standards for computer science

Standards

By Lauren Anderson

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WAUKESHA — Recognizing the need to prepare students for a techheavy future, a panel of educators is working to provide more definition around what Wisconsin students should know about and be able to do in the area of computer science.

The Wisconsin Department of Public Instruction recently announced it's working to develop computer science standards in an effort to define the knowledge and skills students are expected to learn in that subject during their pre-kindergarten through 12th grade education.

It comes when schools are making concerted efforts to increase their computer science course offerings, in response to student interest and a significant skills gap in the industry.

Academic standards, like those being developed for computer science, are a defined set of knowledge and skills that students are expected to know and be able to do. Standards set goals for teaching and student learning that help teachers plan curriculum and develop classroom lessons.

Sitting on the DPI's panel of classroom educators, school leaders and higher education representatives is Kristina Blomquist, a business education teacher at Pewaukee High School.

Blomquist has been involved in the process of increasing Pewaukee High School's computer science opportunities. This year, she's teaching a new course, Exploring Computer Science, which is designed to foster an interest in the field while also promoting participation by groups traditionally underrepresented in the industry, particularly women and minorities.

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“Students have been responding to it,” she said. “We feel a real need to grow that interest.”

Next year, the school will roll out the new AP Computer Science Principles course, which, Blomquist said, is designed to help students draw connections between computer science and other fields of interest.

Growing curriculum

Elsewhere in Waukesha County, districts are also bolstering their curriculum.

The Waukesha School District recently decided to add a new sequence of computer science courses and additional courses in hopes of preparing students for the job market. The district will add four computer science classes, including one at the middle school level.

Mukwonago High School is in its second year of offering an IT Academy that pairs computer science courses with job skills training to help prepare students for careers in technology-related fields.

As schools look to add computer science curriculum, Blomquist said the standards will help guide the process.

“As an educator it’s really nice to have those standards in place,” she said. “Computer science changes pretty rapidly so the focus of the standards is not on things like programming languages — it’s on students needing to understand problem solving.”

The state computer science standards are the first set to be developed using Wisconsin’s new standards review process. The process began last August with a public comment period regarding the need and expected outcomes for computer science standards. The State Superintendent’s Standards Review Council examined those comments and recommended that Wisconsin develop academic standards for computer science.

“It is critical that our schools keep pace with changes in what citizens and employers expect from our students and how we teach that material,” State Superintendent Tony Evers said in a news release. “The technology sector continues to grow in Wisconsin and with that comes an increasing demand for people prepared to work in computer science and related fields. To better meet those needs, the state must provide standards to align how we teach computer science to our students.”

The committee is working on a set of academic standards that spans all grade levels. A draft of the standards will then be available for a period of open review to obtain feedback from the public, key stakeholders, educators and the Legislature.

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