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Office of the Dean

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February 4, 2025

Dear Members of the Senate Committee on Education,

I am writing in support of Senate Bill 541.

I am James Hook, Professor of Computer Science and Associate Dean at the Maseeh College of Engineering and Computer Science at Portland State University. I have served at PSU for over 20 years. Prior to that I was a faculty member at the Oregon Graduate Institute, which merged with the Oregon Health & Science University, for 15 years. I am testifying based on my professional expertise in Computer Science education.

Computer Science, broadly construed, is essential knowledge for all learners. Full participation in society requires this knowledge. It is necessary to be an informed news consumer, an informed voter, and to participate in the workforce. It is now as ubiquitous and necessary as basic literacy.

Oregon has a two-dimensional computer science problem. We lack access and we lack participation. Access is concentrated in urban schools, with urban students having twice the access as rural students. But even when there is access, participation is low and unrepresentative of the communities our schools serve. Only 4% of high school students in Oregon enrolled in an introductory, core CS course. Frequently that participation does not reflect the makeup of the community served by the school.

The Oregon Department of Education led an open and participatory process to develop a Computer Science Education Implementation Plan. It sets a goal that every learner in every grade will have some computer science education, with specific expectations for high school course offerings.

SB 541 provides the investment to take the first steps to implement this plan.

SB 541 prioritizes foundational computer science courses that encompass the breadth of computer science and its social impact, including artificial intelligence, problem solving, the impact of computing on society, and understanding algorithms.

For the past eight years I have been collaborating with colleagues at the University of Oregon and Oregon State University on to build teacher capacity to teach foundational computer science courses through the CS for Oregon project supported by the National Science Foundation. We have provided evidence-based programs that prepare high school teachers with any credential to teach a proven foundational computer science course that welcomes all learners. We have worked with teachers as they have seen new students enter their classrooms and have seen the makeup of the students completing their computer science programs better resemble the communities they serve. We have worked with teachers across the state, preparing teachers from all 13 of the STEM Hub regions in Oregon. We have demonstrated that any district in Oregon can build capacity for effective, foundational computer science education with existing teachers.

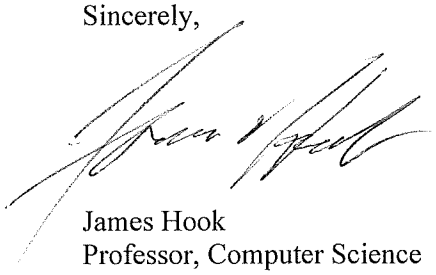
While my colleagues and I have helped thousands of learners and dozens of teachers, we cannot, by ourselves, transform CS education in the state. In Oregon's decentralized educational system, statewide transformation requires legislative direction.

SB 541 directs the Oregon Department of Education to lead the implementation of the State Plan. It designates Computer Science as a content area. It makes computer science count.

SB 541 is a first step. More steps will need to be taken in the future. But it is a first step that can begin a journey that Oregon needs to take to prepare all learners in the state to fully participate in society.

Thank you for your consideration,

Sincerely,



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