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Abstract for an Invited Paper
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From induction to quantum spin: Training Students to become Physicists¹

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At Oregon State University, we have a unique approach to upper division undergraduate physics courses. These courses re-arrange the traditional content to center around conceptual and mathematical ideas in physics, with the aim of having students engage in authentic practices of physics in an interactive environment. I teach the quantum measurement course, our physics majors' first introduction to QM, occurring in the middle of their junior year. I was hired to reform the introductory courses, and am using a curricular model that mirrors these upper division courses. I will explain this QM course, and link it to the model I am using for the introductory course reform. This will build a unified view of our 4-year program aimed at teaching skills needed for success in physics, and scaffolding our physics majors from being apprentices to practicing scientists.

¹The OSU Paradigms project is responsible for the development of this unique course.