2022

Institute on Project-Based Learning

June 21–24, 2022

WPI

About the Institute

The **Institute on Project-Based Learning** at Worcester Polytechnic Institute is the flagship offering of the WPI Center for Project-Based Learning. The Center serves as a resource to promote and support efforts by colleges and universities looking to advance project-based learning on their campuses. The Institute is a 2.5-day intensive workshop where teams of five or more faculty and administrators work with experts to learn about project-based learning and make tangible progress to integrate best practices into their own curricula.

The Institute draws on over 50 years of experience integrating project-based initiatives into undergraduate education, including projects in a wide range of disciplines, projects in the first year and as major capstone projects; and projects in community settings, classrooms, and—most recently—online. Project-based learning offers students real-world opportunities to research issues, think critically, gain new perspectives, solve problems, and develop written and oral communication skills—all within the framework of in-person or virtual team environments and guided by engaged and involved faculty.

"It was very beneficial to have a coach that was dedicated to us—she pushed us to think bigger picture, and it helped us conceptualize something that will work across our campus, not just in our own individual departments."

Laura Wheeler Poms
Assistant Professor
George Mason University

Institute Goals

Through collaborative work with a dedicated coach, teams of faculty and administrators develop strategies to integrate project-based learning into their courses and programs, whether in general education or in the major, in one department, or across the campus—delivered in person, online or hybrid.

Institute faculty use proven materials and examples to help participants ...

- **bring project work into their classes**, seminars, and capstones, and learn how to use projects to help students make interdisciplinary connections.
- **use faculty-guided project work** to strengthen service-learning, study abroad, and internship programs.
- **develop the fundamental skills needed** to make project-based learning work for students, including student team formation and development, evidence-based thinking and writing, and strategies for attacking open-ended problems.
- **create faculty development plans** to support project-based learning, including community networks and partnerships with external organizations.
- **use student project work** as a key component for overall program evaluation and student learning assessment.
- **build relationships with teams** from other institutions to share ideas and experiences.

Campus Action Plans

Teams from varied institutions—public, private, liberal arts, STEM, community colleges, research universities—come to the Institute with a proposal outlining a specific goal or project they would like to advance. Through engaging and interactive group activity and workshops, teams work with a dedicated coach and other experts to formulate, develop, and refine ideas to fit their own campus environments.

"This has been one of the most well-run, highly impactful, and transformative workshops I've experienced. We came in as a group of disjointed faculty who wanted to improve our individual courses. We left as a team of people excited and dedicated to championing project-based learning on our campus, and with an action plan that could make that possible."

Jen Townsend
Associate Professor
Bellevue College

Institute Faculty and Expertise

MARJA BAKERMANS – WPI
Project-based first-year classes • collaborative co-teaching across disciplines • research projects in biology classes • incorporating citizen science

KRISTIN BOUDREAU – WPI
Project-based learning in the first year, the humanities, and general education • working with teams • bringing the humanities to engineering education • teaching with writing • project-based learning for diversity in STEM • facilitating development of information literacy

J. ELIZABETH CLARK – LAGUARDIA COMMUNITY COLLEGE
E-portfolios • integrative learning • teaching with technology • writing and technology • assessment • faculty development • first year learning

CHRYSANTHE DEMETRY – WPI
Course design • faculty development • assessment for student learning • using projects for program-level assessment • project-based learning in K–12 outreach for girls

MICHAEL B. ELMES – WPI
Using experiential methods to foster social innovation and change • identifying processes that promote learning in organizations and communities • engaging students in reflective practices (such as journaling and digital storytelling)

JOHN GALANTE – WPI
Capstone projects in the humanities assignment stacking and sequencing in project-based learning • migration • ethnicity, race, and belonging • cohort building in research seminars • qualitative research methods in global studies

DESTIN HEILMAN – WPI
Curriculum design • project-based learning throughout the curriculum • senior undergraduate research mentorship • student metacognitive strategies and learning modes • outcomes-based learning and assessment

LORRAINE HIGGINS – WPI
Project-based education in community settings intercultural communication • teaching project proposal and report writing • student and community collaboration

CAITLIN A. KELLER – WPI
Instructional design • faculty development and coaching • experiential education • learner-centered course design (face-to-face, online, and blended) • learning sciences and pedagogy

KIMBERLY LECHASSEUR – WPI
Program evaluation • learning outcomes and assessment • faculty development • education research

AARTI SMITH MADAN – WPI
Project-based language learning • experiential education in the humanities • local and global service learning; cross-cultural competency • teaching with technology • interdisciplinary teaching and research

RYAN MADAN – WPI
Project-based writing • assignment design and sequencing • faculty development • peer-to-peer tutoring and workshopping • uses of reflection • "difficulty" as a metacognitive learning strategy

CHARLES MORSE – WPI
Preventive programming to enhance student project team functioning • project team group dynamics consultations • campus community programming on recognizing and responding to student distress

GEOFFREY PFEIFER – WPI

Project-based learning in the first year and as general education strategy • ethics and politics education • interdisciplinary and integrative teaching and learning

KENT RISSMILLER – WPI

Learning outcomes and project assessment • mentoring project advisors • student preparation for project work

ANGELA RODRIQUEZ – WPI

Project-based coursework • student-led research projects • interdisciplinary research projects • research on human participants • increasing diversity in STEM • alternative evaluation strategies, storytelling, nested mentorship frameworks

DERREN ROSBACH – WPI

Cross-disciplinary collaboration • sustainability across the curriculum • problem-oriented and interdisciplinary teaching and learning • team science • trans-disciplinary methodologies

CAROLINA RUIZ – WPI

Interdisciplinary projects • knowledge discovery from data • artificial intelligence and machine learning in medicine and behavioral health • vertical integration of research teams from high school to PhD students • STEM education and research

ELISABETH (LISA) STODDARD – WPI

Diversity, inclusion, and unconscious bias in student team dynamics • STEM projects for social justice • community engaged learning • project-based learning in the first year • project-based learning in courses • advising undergraduate social science research

ROBERT TRAVER – WPI

Instructional design and assessment (K–16) • science and environmental education • project-based learning in the first year • interdisciplinary research projects • student writing advocacy

RICHARD VAZ – WPI

Experiential education • international education and global learning • design and assessment of engaging pedagogies • integrative and interdisciplinary learning • institutional change and curricular reform

KRISTIN WOBBE – WPI

First-year students • team teaching • program development • interdisciplinary courses • engaging students • faculty development

SARAH WODIN-SCHWARTZ – WPI

Project-based learning in technical courses • hands-on/experiential learning • teaching with technology

Institute Curriculum

The Institute curriculum is a mix of interactive workshops on project-based learning, consultations with experts, and collaborative teamwork. Teams engage with institute faculty during workshops and in mentoring sessions with a dedicated coach focused on their proposed projects. Participants develop curricular and organizational strategies tailored to their own institutions and leave with practical action plans and examples of best practice to integrate project-based learning into varied academic curricula.

Institute Workshops

Teams will choose from a selection of interactive workshops to address their goals and ideas in areas such as ...

- project-based learning as a first-year and general education strategy
- partnering with external organizations for project-based learning
- student project team formation, development, and mentoring
- facilitating equity and inclusion in student teams
- integrating project-based learning into STEM courses
- feedback, evaluation, and assessment strategies for project-based learning
- project-based learning in major capstones
- faculty development for project-based learning
- project-based learning online
- institutional leadership and organizational support for project-based learning

Institute Keynote

The Institute's **keynote speaker** will be Randy Bass, Vice Provost for Education at Georgetown University.

Founding Executive Director of Georgetown's Center for New Designs in Learning and Scholarship, Randy Bass is a thought leader in pedagogical research and an authority on inquiry-based learning.

From Planning to Campus Action

Teams leave the Institute with an enhanced understanding of project-based learning and a tailored plan to advance work on their own campuses. Each team delivers a concise presentation of its action plan to fellow participants, coaches, and experts to gather feedback and advice.

Institute Campus Teams

Each team consists of a minimum of five members from faculty and administration relevant to the teams goals. A team's institutional diversity helps facilitate a comprehensive change in the curriculum and sustains the foundations of initiatives arising from work at the Institute. Each team is assigned a dedicated faculty coach for the duration of the Institute.

Application Components and Selection Criteria

Applications will be considered based on the extent to which the team is likely to benefit from the Institute and advance its project-based learning initiatives. Reviewers will also consider other factors, such as institutional type and project focus, to ensure a diverse group of participants who will complement and benefit from each other.

Applicants are asked to address the following questions:

Need and readiness: What is the current state of project-based learning on your campus? What has motivated a desire for additional action related to project-based learning? Which aspects of project-based learning are you hoping to learn about and implement?

Goals: What high-priority tasks do you expect your team to work on during the Institute? These should be the tasks that, if advanced substantially during the Institute, would lead your team and campus to judge your efforts a success.

Team characteristics: In what ways do your team members reflect the opportunities for implementing project-based learning on your campus? How do they reflect the diversity and the various interest groups on your campus?

Contributions: Educators from many different types of institutions will be participating, and this is a great opportunity for institutions to learn from one another. What perspective do you believe your team can bring to the Institute that will be of interest to other participants?

Visit wpi.edu/+2022institute to apply online.

"We are so grateful to have participated in this institute. We are taking away knowledge and passion to implement PBL at Rivier, which we know will substantially improve our students' education."

Jocelyn Fraga Muller
Assistant Professor and Director of Biotechnology
Rivier University

Application Deadline and Fees

Applications must be received no later than **March 1, 2022.** Notifications regarding acceptance will be sent to teams no later than **March 15, 2022.**

The Institute runs from Tuesday, June 21, through Friday, June 24, 2022. At present, we are planning and hoping for an in-person Institute. In the event that we need to shift to a virtual institute, the dates will remain the same, pricing will be reduced and we will be in contact with all accepted teams with details.

Participants should anticipate attending the Welcome and Reception on Tuesday, at 6:00 pm. The Institute program will officially start with the opening plenary at 8:30 am on Wednesday and will end by noon on Friday with team presentations. Please plan on having your team attend the Institute in its entirety.

The registration fee for the Institute will cover tuition, materials, and consultations; a reception on Tuesday night, three breakfasts, three lunches, and snacks. A limited number of hotel rooms near campus also will be available at a group rate. Reservations and additional costs for hotel lodging will be the responsibility of the teams. Travel costs to and from the Institute are the responsibility of the teams.

- $7,500 per five-member team
- $1,500 per additional team member beyond five (as space permits)

WPI's curriculum features student project work across all four years, both in and out of the major, in and out of the classroom; all WPI faculty are involved with project-based learning. We have found that engaging students in meaningful project experiences enhances learning while developing transferable skills such as critical thinking, communication, teamwork, and problem solving. Our Institute Faculty team has a wealth of experience in implementing project work across a broad range of disciplines and environments. To date, WPI has helped over 150 colleges and universities make progress in integrating project-based learning into their courses, programs, and institutions.

"One of the best things about the project-based curriculum at WPI is that the students gain newfound confidence from solving real-world problems, while also developing essential communication, teamwork, and research skills. They are ready to take on the next phase of their lives as productive, thoughtful engaged citizens."

Kris Wobbe
Director, Center for Project-Based Learning
Worcester Polytechnic Institute

WPI alumni confirm the findings of a Gallup-Purdue index poll that showed students who undertook long-term college projects report more career satisfaction and stronger connections to professional satisfaction, advancement, and personal enrichment.

"The project work can literally be life changing."

Mary Ellen Blunt '79
Worcester Polytechnic Institute

WPI Center for Project-Based Learning

The **WPI Center for Project-Based Learning** supports colleges and universities looking to advance student project work in their courses and programs. To do so, the Center offers a range of engagements to provide examples, materials, resources, and strategies for pedagogical, curricular, and culture change. The Center also supports the development of expertise in project-based learning on the WPI campus.

In addition to the Institute on Project-Based Learning, the Center has the following offerings:

- **Customized professional development on your campus**—professional development opportunities offered to groups of different sizes and compositions, and tailored to your institution's interests, goals, and level of experience with project-based learning.
- **Consultation visits by project-based learning experts**—help for your leadership team, curriculum committee, department, or interdisciplinary group to set goals for project-based learning and make progress toward those goals.
- **Support for assessment and evaluation of project-based learning**—build capacity for assessing projects through workshops, create a customized assessment system to leverage project-based learning for accreditation, or consult with an evaluation expert to determine the opportunities and impact of project-based learning on your campus.
- **Collaborate on research**—from design to dissemination, our education research expertise can help shape the future of higher education at your campus and beyond.

"We were delighted with the workshop that the WPI Center for Project-Based Learning delivered at WKU. They worked with us to develop an agenda that would be relevant to our faculty and goals. The workshop itself was engaging and informative and will help colleagues from across campus enhance their courses with student project work."

Jerry Daday
Professor of Sociology
Executive Director, Center for Innovative Teaching and Learning
Western Kentucky University

For more information about the Center and how WPI can assist in advancing project-based learning initiatives on your campus, visit **wpi.edu/+projectbasedlearning.**

Worcester Polytechnic Institute, Worcester, Massachusetts

Worcester Polytechnic Institute is a private university located in the heart of New England. WPI was founded in 1865 with the mission of providing an education that balances theory and practice. WPI's pioneering undergraduate project education model provides students with extensive experience extending their classroom knowledge through undertaking hands-on projects with real-world impact. With over 50 project centers across the globe, students also have the opportunity to make a difference through project work in communities around the world.

WPI's 80-acre campus is centrally located in Worcester, MA, New England's second-largest city. Worcester is at the crossroads of several major routes, making it accessible from several surrounding airports, including Logan International Airport in Boston; T. F. Green Airport in Providence, RI; Bradley International Airport in Hartford, CT; and Manchester Airport in Manchester, NH. There is also an airport in Worcester with flights to and from a limited number of cities. For more information, visit **wpi.edu**.

"Wake Forest has sent two teams of faculty to WPI's Institute on Project-Based Learning. The teams have returned to campus with focused plans for advancing project work in our curriculum. I'd recommend the experience to any college or university that wants to make its curriculum more engaging and powerful for students and faculty."

Michele Gillespie
Dean of the College
Presidential Endowed Chair of Southern History
Wake Forest University

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