



About VIP

The Vertically Integrated Projects (VIP) Program provides an opportunity for undergraduate students to earn academic credit while engaging in authentic and extended research and design projects related to active research areas of Purdue faculty members and national, international, and industry-sponsored design challenges. Students can participate on interdisciplinary and vertically-integrated teams (first-year through seniors) with faculty and graduate student mentors for multiple semesters to address these real-world research and design challenges. The faculty, staff, and graduate students who lead VIP teams are also known as mentors and/or advisors.

The continuity, technical depth, and disciplinary breadth of these teams are intended to:

- Provide the time and context necessary for students to learn and practice many different professional skills, make substantial technical contributions to the project, and experience many different roles on a large, multidisciplinary design/discovery team.
- Support long-term interaction and mentoring among undergraduate and graduate students on the team and enable the completion of large-scale design/discovery projects that are of significant benefit to faculty members' scholarship and exploration efforts.

VIP Program and Course Administration Contact Information

General email: vip@purdue.edu

Primary Course Instructor:

Prof. Carla Zoltowski (Director)

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Office hours: By appointment

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Leadership: Prof. Jan Allebach
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Learning Outcomes:

Students in VIP will make progress on each of the learning outcomes listed below:

- i. an ability to apply engineering design to create a product (e.g., device, system, process, software, etc.) that meets the specified needs of this engineering design experience with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
- ii. an ability to develop and conduct experimentation, analyze and interpret data, and use engineering judgment to draw conclusions related to the development of the product of this engineering design experience.
- iii. an ability to identify, formulate, and solve complex engineering problems arising from this engineering design experience by applying principles of engineering, science, and mathematics.
- iv. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives associated with this design experience

- v. an ability to communicate effectively with a range of audiences appropriate to this design experience in both a written report and oral presentation.
- vi. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies to complete the engineering design experience associated with this course.
- vii. an ability to recognize ethical and professional responsibilities associated with this engineering design experience and make informed judgments which must consider the impact of the product of this engineering design experience in global, economic, environmental, and societal contexts.

Brightspace sections

- For Overall Course Announcements and Professional Development (PD) opportunities: Summer-2020-ENGR-17920-VIP-PD
- For lab: Summer- -2020-VIP-team

Software Tools

The software tools will vary based on the project. However, in general, the course and teams will use the following software tools:

- Brightspace: Within Brightspace, you will have access to course announcements, schedules, assignments, grades, feedback, and course resources. *Preferred browser:* ITaP recommends Google Chrome or Mozilla Firefox when accessing Brightspace.
- WebEx, Zoom, Slack and/or other conferencing/meeting/messaging platforms
- CATME: You will use CATME to submit information used for Peer & Team Evaluations ([Link to CATME](#)).
- MS Office: Word, Excel, and PowerPoint.
- Adobe: PDF.

Expectations and Grading

Within the VIP course, you will be working in teams on a project. Your project work, both individually and as part of the team, are the most significant aspects of the course. Thus, you are expected to participate in all scheduled (virtual) VIP team meetings (the lab portion of your VIP course), as well as any sub-team meetings. Meetings will be conducted via WebEx, Zoom, or other tool(s) as designated by your VIP team mentor and/or decided by you and your project team. Students should communicate to VIP mentor if they are not able to participate. If you need to miss any meeting, you are expected to communicate your absence with as much lead-time as possible to your mentors and teammates. Furthermore, you are responsible for knowing what occurred in that meeting (typically by discussing it with other team members) and how you can contribute to the project and team until the next meeting. An excused absence does not relieve you of that responsibility. In addition, you will be expected to develop and complete an individualized Professional Development plan to support your success on your project and your team, and overall in your career and your life. The professional development opportunities be generally be offered remotely and asynchronously, although there will be interactive and synchronous activities as well.

Your grade is based on three areas, along with seven requirements, and is assessed according to your course level and major. The grading guidelines are as follows; please note that “+” or “-“ grades may be given if the assessment falls above or below, respectively, the stated guideline.

| Grade | Description |
|-------|---|
| A | Overall, the student’s accomplishments and effort, documentation, and teamwork and interactions are excellent. All of the seven (7) requirements have been satisfied. |

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| B | Overall, the student's accomplishments and effort, documentation, and teamwork and interactions are good. Six (6) of the seven (7) requirements have been satisfied. |
| C | Overall, the student's accomplishments and effort, documentation, and teamwork and interactions are adequate. Five (5) of the seven (7) requirements have been satisfied. |
| D | Overall, the student's accomplishments and effort, documentation, and teamwork and interactions are marginal. More than two of the seven (7) requirements are missing. |
| F | Overall, the student's accomplishments and effort, documentation, and teamwork and interactions are unacceptable. More than three of the seven (7) requirements are missing. |

Accomplishments and effort:

- Quantity of project accomplishments
- Quality of project accomplishments
- Initiative
- Work ethic
- Ability to overcome project setbacks
- Learning needed for the project
- Focuses effort on achieving goals
- Manages time and tasks well
- Overall**

Documentation:

- Individual documentation (quality/quantity)
- Contributions to team documentation (quality/quantity)
- Contributions to team poster/presentations
- Use of appropriate tools (e.g., Git)
- Overall**

Teamwork and Interactions:

- Participates fully in team (lab) meetings
- Participates fully in sub-team meetings
- Contributes fair share of team's work with acceptable quality
- Keeps commitments and completes assignments on time
- Listens to teammates and respects their contributions
- Communicates clearly. Shares information with teammates
- Respects and responds to feedback from teammates
- As appropriate, involves and assists others in efforts
- Demonstrates leadership and/or project management skills
- Development and implementation of PD plan
- Overall**

Seven Requirements

As part of the assessment of the above, each student is required to:

1. Document individual contributions to the project and team in format as required by your project mentor(s).
2. Contribute as appropriate to project documentation, presentations, publications, and/or poster
3. Complete mid-semester individual performance evaluation by Wednesday, July 8th at 11:59 pm in Brightspace.
4. Complete final individual performance evaluation by Tuesday, August 4th at 11:59 pm in Brightspace.
5. Complete mid-semester and final peer evaluation of team members in CATME (mid-semester due Wednesday, July 8th at 11:59 pm and final peer evaluations due Tuesday, August 4th at 11:59 pm)
6. Complete final Purdue course evaluation and submit screen shot of completion to Brightspace (due Tuesday, August 4th at 11:59 pm).
7. Submit Professional Development plan by Monday, June 22nd and completed plan by Tuesday, August 4th.

Performance assessment will be done once at mid-semester and again at the completion of the semester using the criteria that follows. The mid-semester assessment is advisory (formative).

Professional Development (PD) Plan

Each student will create an individualized plan to complete 10 Professional Development (PD) activities throughout the semester.

Three activities are mandatory: 1) Introduction to VIP, 2) Abstract Submission, and 3) Conference Presentation. Typically, VIP students participate in the Purdue Undergraduate Research Conference through the Office of Undergraduate Research to complete the abstract and presentation requirements. A team's advisor may opt for them to participate in a different conference or venue to satisfy the requirement.

| Track/Topic* | Activity | Organizing unit | Date (of activity or expected participation) |
|-----------------------------|---------------------------------------|-----------------|--|
| 1. PD (Required) | Introduction to VIP | VIP | Week 1 |
| 2. Communication (Required) | Conference – Abstract submission | OUR | See Summer Undergraduate Research Conference Website |
| 3. Communication (Required) | Conference – Poster/Oral Presentation | OUR | July 30, 2020* may be extended given virtual format |

The remaining seven activities are to be chosen by the student, depending on their interest and what would be most beneficial for their work on a specific team.

VIP is working with other programs to compile an expansive library of Professional Development videos along with access to interactive workshops, live presentations, etc. Students should browse the materials and talk with their mentors during the first week of the semester to create their individual Professional Development (PD) Plan. The PD plan should be submitted on Brightspace by Monday, June 22nd. However, students may update their plans as needed during the semester without resubmitting to Brightspace.

Students will be expected to document their participation in each of the activity. However, the format will depend on the nature of the activity. For many of the virtual, asynchronous activities, the student will be required to submit a PD Activity Form on Brightspace after they participate to facilitate feedback and an opportunity to respond to questions. In these cases, the PD Activity Form will contain questions: 1) Title of the activity, 2) Three things they learned from participating, and 3) Questions for the presenter(s). For others, the participation will require engaging with a discussion. here will be also be options for documenting activities in addition to those in our PD library.

Major Campus Emergency

In the event of a major campus emergency, course requirements, deadlines, and grading are subject to change that may be necessitated by a revised calendar or other circumstances beyond the instructor's control. Relevant changes to this course will be posted on Brightspace and via email.

Academic Integrity and Professional Responsibility

Academic integrity is one of the highest values that Purdue University holds. The VIP Program expects every member of the Purdue community to adhere to the Purdue Honor Pledge (“As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together - we are Purdue.”) and practice honorable, ethical, and professional behavior both inside and outside the classroom. In VIP, students are encouraged to work together and share information. When indicated, students and teams are allowed to modify previous versions of documents to be submitted for the current assignment. However, it is unacceptable for students to claim individual work that is not their own or to use sources without appropriate citation. It is also unacceptable for students to misrepresent information to their instructional staff, their team, and/or their client. In addition, misuse of VIP resources is considered dishonest. At the instructor's discretion, instances of academic dishonesty will result in a reduced score, a zero score, or a failing grade for the course. All occurrences of academic dishonesty will be reported to the [Office of Students Rights and Responsibilities](#) (OSSR) and the students' respective schools. If there is any

question as to whether a given action might be construed as academic dishonesty, please see the instructor or the teaching assistant before you engage in any such action.

Students with Disabilities:

VIP, and Purdue University, strives to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let us know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: drc@purdue.edu or by phone: 765-494-1247.

Mental Health Resources

- **If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack, <https://purdue.welltrack.com/>.** Sign in and find information and tools at your fingertips, available to you at any time.
- **If you need support and information about options and resources,** please see the Office of the Dean of Students, <http://www.purdue.edu/odos>, for drop-in hours (M-F, 8 am- 5 pm).
- **If you're struggling and need mental health services:** Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at [\(765\) 494-6995](tel:7654946995) and <http://www.purdue.edu/caps/> during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

Labs and Facilities

The VIP Suite will not be available this summer. If your VIP team uses your advisors' research lab facilities, they will communicate if/when access is available, although most, if not all, work is expected to be done virtually.

Learning Remotely Resources

Purdue has posted a number of resources on the "Learning Remotely" website, including tools for working collaboratively with your peers: <https://www.purdue.edu/innovativelearning/learning-remotely/>