# Capstones
IUPUI HIGH-IMPACT PRACTICE TAXONOMY

## What is a Capstone?

The capstone is a signature, culminating experience that requires students to integrate knowledge, skills, and dispositions acquired during college and apply them in a situation that approximates some aspect of disciplinary practice. Students are prepared to achieve excellence in the capstone when the unit has intentionally designed a pathway that strategically places the capstone at the end of the students' journey. In this way, the capstone is integrated and connected to the undergraduate experience, and is not a stand-alone course or experience.

Students share their deliverables with external audiences in a way that strengthens their profile or credentials when applying for jobs or continuing education. Sharing work helps students to make meaningful personal, professional, or educational connections with students, faculty, and community members. The nature of the deliverable created by students is specific to the discipline and based upon the learning outcomes identified by that unit. Deliverables might include things like a research paper, performance, portfolio of best work, exhibit of artwork, consulting report prepared for a community partner, creative project, presentation, reflections, or creation of an innovative product or service.

Students should complete the capstone during the final year of their undergraduate experience. Capstones should be highly engaging and can take on various forms including but not limited to classes, seminars, or field experiences that are directed and supervised by expert faculty. Each unit can determine whether students work independently or in groups, on the same or different problems, and meet independently or in a class. Capstones may be disciplinary or interdisciplinary in approach.

## Why Capstones?

For students, the capstone is a culminating experience that pulls together and puts into practice the relevant knowledge from their undergraduate experience and provides a stepping stone to their intended careers and/or next-level learning and educational pursuits. The vast majority (85%) of IUPUI undergraduate students are employed or seeking employment upon graduation, and 14% will pursue advanced education. The purpose of the capstone class is to positively impact the career trajectory of students, preparing them for the next-step that launches their career after graduation.

For units, the capstone is an excellent opportunity for students to collaborate and share their results with key audiences. Units leverage the benefits of dissemination for student recruitment, accreditation, future capstone projects, research, alumni engagement and interdisciplinary connections on campus. Successful capstones should improve the university's reputation and provides opportunities for students and alumni to increase their community pride and support of the unit and university.

For faculty, the capstone affirms the impact of their teaching and curricula on student development. Assessment of student performance in the capstone can provide meaningful data on and support powerful conversations about the effectiveness of the curriculum in equipping students with the requisite knowledge, skills, and dispositions for the capstone experience. Units and faculty can learn from the students to assess and improve the pathway to the capstone and the capstone course itself.

In sum, all stakeholders benefit from positive career preparation, processes, and outcomes in high impact capstone courses.

## Definitions

**Unit:** Refers to any combination of Dean, Chair, School, Major, or Program

**Faculty:** Refers to any combination of instructor, professor, teacher, lecturer

**External Partner:** Refers to any combination of business, non-profit, industry, site supervisor, community partner, sponsor

**Field Experience**: Refers to any combination of internship, practicum, apprenticeship, and co-operative education experiences where students work in their chosen professional practice

**Deliverable:** Refers to the tangible works, artifacts, or products created in the capstone

**Pathway:** An articulated and guided collection of learning and personal development activities and experiences that occur inside and outside of the classroom, commence upon acceptance of admission to university, and progress gradually each semester/year through to graduation

**Undergraduate Experience**: Refers to any combination of program curriculum, co-curricular experiences, general education, employment, and other experiences

## Defining Impact

The taxonomy document that follows differentiates the five attributes of capstones along three dimensions of impact. The common thread that works across all five attributes is defined below:

**High Impact:** The capstone impacts students in the short-term for the duration of the course. The positive impact of the capstone accrues to each individual student.

**Higher Impact:** The capstone impacts the entire class as students share experiences with each other. The impact of the capstone should be felt after the class concludes.

**Highest Impact:** The capstone supports or advances the engagement of students with their next steps and impacts their trajectory in a lasting way. Students see the interdependent connections between their work and the world.

## Alignment with IUPUI Profiles of Learning for Undergraduate Success (PLUS)

| ✚ COMMUNICATOR<br>LISTENS ACTIVELY, BUILDS RELATIONSHIPS | ✚ PROBLEM SOLVER<br>THINKS CRITICALLY, ANALYZES, SYNTHESIZES, EVALUATES | ✚ INNOVATOR<br>INVESTIGATES, CONFRONTS, CHALLENGES, MAKES DECISIONS | ✚ COMMUNITY CONTRIBUTOR<br>ANTICIPATE CONSEQUENCES |
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| Students work with peers, the instructor and external partners to develop a capstone deliverable that could be disseminated to a wide variety of audiences. | Students incorporate learning from their undergraduate experience to solve problems, either individually or as a team. Past experiences and ongoing learning are an integral part of the capstone learning process. | Students utilize knowledge from their entire undergraduate experience to confront a problem and create a tangible deliverable. | Students work with the faculty, peers, or external partners on their capstone project. The capstone environment fosters a community of learning for the students and prepares them to work collaboratively beyond graduation. |

*Learn more about the IUPUI Profiles of Learning for Undergraduate Success*
*https://due.iupui.edu/plus*

## Suggested Citation

# Taxonomy

| ATTRIBUTE | HIGH IMPACT | HIGHER IMPACT | HIGHEST IMPACT |
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| **Units invest in integrated capstone experiences and can clearly articulate why capstones are important to the culture and fabric of the unit** | Units offer capstone experiences. | Units offer a capstone experience to all students. | Units require capstone courses with signature work opportunities to all students in view of a fully integrated pathway. |
| | Unit leadership is supportive of work done in the capstone. | Unit leadership promotes and values the capstone when making resource decisions. | Unit leadership values the quality of work completed in the capstone when setting administrative and curricular priorities. |
| | Most faculty involved in the curriculum engage in discussions about the capstone and recognize their role in the pathway to the capstone. | All faculty involved in the curriculum engage in discussions about the capstone and participate in the pathway to the capstone. | All faculty involved in the curriculum can articulate the importance of the capstone and contribute to meaningful activities along the capstone pathway that creates an integrated capstone experience for all students. |
| | Unit uses assessment outcomes to improve the course. | Unit uses assessment outcomes to improve the course and the major. | Unit uses assessment outcomes to inform curricular decisions and priorities. |
| **Students integrate the knowledge, skills, and dispositions acquired during their previous coursework**<br><br>✚PROBLEM SOLVER<br>✚INNOVATOR | Students draw on learning throughout the program curriculum. | Students incorporate learning from the entire undergraduate experience. | Students incorporate learning from the entire undergraduate experience and show continued capacity for lifelong learning. |
| | Students are asked to integrate past coursework and applying previous knowledge to new contexts. | Students integrate content, knowledge, and skills through facilitated activities designed by the professor. | Students independently and competently leverage their past experiences at IUPUI to achieve excellent results throughout the course. |
| | Students are asked to think about how the capstone may connect with their future plans. | Students discuss how the capstone connects with their future plans. | Students articulate the connection between their capstone and their next step after college across a variety of communication methods (i.e., job interview, resume, cover letter, social media presence, portfolio). |
| | A connection is evident to one IUPUI+. | A connection is evident to learning outcomes in the unit and multiple IUPUI+. | The learning objectives of the course are tightly and strategically linked to the learning outcomes for the major and multiple IUPUI+. |
| **Students reflect on personal growth and professional development.**<br><br>✚COMMUNICATOR<br>✚COMMUNITY CONTRIBUTOR | Students reflect upon academic experiences with opportunity for feedback. | Reflection activities connect academic experiences to personal and professional growth throughout the capstone. | Reflection serves as the bridge that connects the undergraduate experience and the next step in life in a way that allows students to see their place in the community and world. |
| | Timely feedback is provided at various times by the professor. | Regular feedback is provided by faculty and peers, prompting student analysis and action. | Reflection prompts and feedback loops are strategically scaffolded into the course. Students receive meaningful feedback from peers, mentors, faculty, external partners, and classmates on an ongoing basis in multiple formats (written, verbal, public) that guide students to identify personal and professional purpose. |
| **Students produce a tangible deliverable that required a** | The instructor identifies a problem/topic/research area for students to engage in throughout the semester. | The instructor, with input from students, identifies a problem/topic/research area for students to engage in throughout the semester. | Students, with support from the instructor and/or external partner, are challenged with a problem/topic/research area that requires ongoing collaboration and interaction with faculty where students revise and refine their work. |

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| **significant investment of time and effort**<br><br>✚INNOVATOR | Through the work product or a reflection on the product, students articulate their learning and growth through the degree program and how that learning was applied in their capstone.<br><br>Deliverable impacts learning within the capstone course. | Through the work product or a reflection on the product, students articulate connections between their curricular and co-curricular learning, the capstone experience, and its impact on their professional and personal growth.<br><br>Deliverable and capstone experience impacts students beyond the capstone course. | Through the work product or a reflection on the product, students tells a cohesive story that articulates their learning, professional and personal growth from across their undergraduate experience and how they intend to carry this forward after graduation.<br><br>Deliverable and the capstone experience has a lasting and significant impact for students, unit, or external partner. |
| **Students share their tangible deliverables with stakeholders**<br><br>✚COMMUNICATOR | Students share their work with faculty and peers in class.<br><br><br>Students are the primary beneficiaries of the work completed. | Students share their work in class and beyond the capstone in a way that is open to the unit and/or public.<br><br>Students, faculty and the unit benefit from the work completed in the capstone. | Students are required to share their work with multiple audiences (i.e., advisory board, faculty, classmates, program, across IU departments and campuses, industry) or multiple methods of communication (i.e., presentations, posters, website, videos, elevator pitch, publication, abstract, IU Scholarworks).<br><br>External stakeholders benefit from the work shared in the capstone. |

✚ Represents the aligned profile(s) from the *IUPUI Profiles of Learning for Undergraduate Success*

## References

Association of American Colleges and Universities. (2018). The LEAP challenge: Engaging in capstones and signature work. *Peer Review, 20*(2). Retrieved from https://www.aacu.org/peerreview/2018/Spring

Hauhart, R., & Grahe, J. (2015*). Designing and teaching undergraduate capstone courses*. San Francisco, CA: Jossey-Bass.

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