Insight Learning Lab VIP Syllabus

VIPXXXX, Sections, Variable Credits

Tuesday, 12:30 – 1:20 PM, Klaus 1440

Instructor Information

Instructor	Email	Drop-in Hours & Location
Yan Liang	yan.liang@gatech.edu	Fridays 11am-12pm (virtual) and by appointment Please access the Zoom link on Canvas

General Course Information

Description

Modern higher education increasingly values deep, transformative learning that engages students cognitively, emotionally, socially, and ethically. This project explores the synergy among four key learning domains: cognitive, affective, reflective, and integrative. In science, engineering, and computing programs, learning has traditionally placed strong emphasis on cognitive skills**,** including technical mastery, problem-solving, and analytical thinking, while affective and reflective dimensions may receive comparatively less attention. This emphasis can leave fewer opportunities for students to develop emotional engagement, self-awareness, and ability to connect learning to personal values and real-world contexts. Our project addresses these dimensions by promoting affective learning, which fosters motivation and empathy, and reflective learning, which encourages critical examination of assumptions and experiences. Integrative learning links these insights across academic, personal, and professional contexts, supporting well-rounded development, emotional resilience, and a deeper sense of purpose in students' learning and future careers.

Pre- &/or Co-Requisites

There are no pre-requisites or co-requisites for this course.

Course Goals and Learning Outcomes

This VIP course aims to build a sustainable, student-centered research community in which students work as co-researchers to investigate, document, and improve affective, reflective, cognitive, and integrative learning in STEM education.

Through this VIP, students will be able to:

1. Explain foundational concepts related to affective, reflective, cognitive, and integrative learning in education.
2. Synthesize relevant literature and background knowledge to identify research questions, learning problems, or project opportunities connected to the goals of the VIP team.
3. Design and implement educational research or development projects that address affective, reflective, or integrative dimensions of STEM learning.
4. Use data-driven approaches, such as data analytics, trend analysis, statistical analysis, and data visualization to analyze and interpret evidence generated from project activities.
5. Reflect on and integrate learning by connecting project experiences with concepts in affective learning, reflective practice, integrative learning.

Course Requirements & Grading

VIP teams function like real-world project teams. Members work on different aspects of a shared project, ranging from sophomores to graduate students, and from first-time participants to those with multiple semesters of experience. Students may enroll for variable credit hours, which are considered in grading. **Note:** Zero-credit enrollment is reserved for paid participants and follows the same grading criteria.

Major activities of this VIP course include:

1. Acquiring and Mastering Foundational Knowledge

Students will build a strong foundation in the core concepts, tools, and methods relevant to the VIP course. Through guided readings, discussions, and hands-on exercises, they will develop the technical and collaborative skills needed for project work. This phase emphasizes understanding fundamental principles and gaining confidence in applying them.

2. Applying Knowledge to Develop and Execute Projects

Students will apply foundational knowledge to real-world and research-driven projects within collaborative team environments. Through project planning, problem-solving, implementation, and iterative refinement, students will develop and improve solutions to meaningful challenges. This phase emphasizes practical application, teamwork, innovation, and the integration of knowledge into real-world contexts.

3. Demonstrating Integration in Learning

Students will synthesize and reflect on their learning by presenting project outcomes, documenting their contributions, and assessing the broader impact of their work. They will demonstrate the ability to connect theory with practice and communicate their ideas effectively to diverse audiences. This phase emphasizes the integration of knowledge, professional development, and a commitment to continuous learning.

Grading Overview

Each student is evaluated across three core areas, with three mandatory requirements. Regardless of role or experience, students must demonstrate achievement in all three areas:

1. **Documentation and Records (33%)**
    - Maintain individual documentation: VIP Project Notebook (required).
    - The Insight Learning Lab VIP project website and project wiki
    - Portfolio of research and learning artifacts

VIP Project Notebook is a digital weekly memos students use to document their weekly activities. The weekly memo provides a simple way for students to document their progress, experiences, and contributions to the VIP project. Students begin by identifying This Week's Goal and describing What I Worked On and What I Accomplished during the week. They reflect on What I Learned, describe any Challenges & Solutions, and share important Team/Project Updates. Finally, students identify Next Week's Goals and record any Questions or Notes that may need attention or discussion. **The project website and wiki** serve as a shared space for documenting project knowledge, activities, progress, and resources that support ongoing team collaboration. Students collaborate and contribute to these sites. A **portfolio of research and learning artifacts** may include reflective learning journals, concept maps, and other project deliverables that demonstrate students' learning, growth, and achievement.

2. **Personal Contributions (33%)**
    - Completion of required project development, reports and/or essays
    - Pursue knowledge relevant to the project
    - Engagement in project activities
    - Contribute to technical progress
    - Leadership or project management contributions (experienced members)

At midterm and final, students create coversheet summarizing their contributions for the first half of the semester (or full semester).

3. **Teamwork and Interaction (33%)**
    - Participate in peer evaluations (twice – midpoint and final). Failure to submit results in a full letter grade deduction.
    - Attend meetings on time.
    - Collaborate toward team goals.

- Coordinate and assist teammates.
- Contribute to team presentations.

Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Course Materials

Materials/Resources

This VIP course uses open educational resources (OER) and other freely available materials related to experiential learning, transformative learning, and citizen science. For detailed resources and readings, please refer to the relevant modules on the Canvas course site.

Project Website and Learning Management Tools

This VIP course uses the Canvas learning management system (LMS) to support and manage project activities, learning materials, communication, and student learning.

Information for Peer Evaluation

Peer evaluations are administered by the VIP Program. Please refer to the Ga tech VIP website for related information and links to access the peer evaluation. https://vip.gatech.edu/current-students/ To access peer-evaluations from off campus, it requires VPN. You will be prompted to sign in. Users can only log in from on campus or via VPN. Students can only access the peer evaluation portion of the system during active evaluation periods.

Course Policies, Expectations, & Guidelines

VIP is a collaborative, multidisciplinary, project-based learning and research experience. Your success in this course depends not only on your technical contributions but also on your active engagement with your team and the broader learning process.

Your Role in the Learning Process

As a VIP student, you are expected to:

- Take initiative in exploring and applying knowledge relevant to your project.
- Collaborate effectively with team members across disciplines and experience levels.
- Document your work thoroughly.
- Reflect on your learning and contributions throughout the semester.

This course is a real-world team environment, where learning is dynamic, self-directed, and collaborative. Your growth depends on your willingness to engage, contribute, and learn from others.

Team Meetings and Participation

Attendance and active participation in **team meetings** and **sub-team meetings** are required. These meetings are essential for:

- Coordinating project tasks and timelines.
- Sharing progress and receiving feedback.
- Learning from peers and mentors.
- Contributing to team decisions and direction.

Failure to attend meetings without valid reason may negatively impact your grade and your team's progress. If you anticipate missing a meeting, communicate with your team and advisor in advance.

Use of External Resources

You are encouraged to consult external sources to support your learning and project work. However:

- Do **not present someone else's work as your own**.
- Always **cite and reference** external materials used in your notebook, code, presentations, or other deliverables.
- Proper attribution is essential to maintain transparency and integrity in a collaborative research environment.

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. Review Georgia Tech's Honor Code and the student Code of Conduct.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Attendance and/or Participation

This VIP course is designed around active participation, collaboration, and hands-on project work. Regular attendance and meaningful engagement are therefore essential to your success and to the success of the team. Students are expected to attend all scheduled class meetings on time, come prepared, and actively participate in project and learning activities.

If you are experiencing symptoms of illness, such as a fever, cough, or nausea, please stay home, rest, and seek medical attention when appropriate. Please notify the instructor as soon as possible so that arrangements can be made for you to stay engaged with the course remotely when feasible.

Excessive lateness or absences—three or more unexcused absences during the semester—may affect your final course grade because missed sessions can impact both your individual learning and your team's progress. If you experience circumstances that make regular attendance difficult, please communicate with the instructor as early as possible. We will work together to identify appropriate options or accommodations when available.

Inclement Weather and Digital Learning Days

In the event of inclement weather in the Atlanta metropolitan area, students should check official Georgia Tech communications to determine whether the university is open or closed.

If Georgia Tech remains open, class will meet as regularly scheduled. If the university is closed, students should not come to campus. Instead, the course will transition to a digital learning day, with project and learning activities completed remotely.

Student-Faculty Expectations Agreement

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Student Use of Mobile Devices in the Classroom

Students may use mobile devices, including laptops, tablets, and smartphones, when they support course learning, project activities, research, or collaboration. Students are expected to use devices responsibly and respectfully and to minimize distractions during class. The instructor may provide additional guidance or restrictions on device use when appropriate for specific learning activities.

Student Use of Artificial Intelligence in Research and Learning

Generative AI tools may be used in this course and VIP research project as learning and research aids when their use supports, rather than replaces, the student's own thinking, learning, and scholarly work. Students may use AI for activities such as brainstorming, exploring concepts, developing research questions, improving writing, coding assistance, and organizing or analyzing information, when appropriate for the assignment or research activity. Students are responsible for verifying AI-generated information, including facts, citations, code, data interpretations, and other outputs, and must not use AI to fabricate data, sources, research findings, or project activities. Students should not enter confidential, sensitive, proprietary, or protected research information into AI tools unless the tool and use have been approved for that purpose. When AI meaningfully contributes to a student's work, students should acknowledge and document its use in accordance with course or project requirements; regardless of AI assistance, students remain responsible for the accuracy, originality, integrity, and final content of their work.

Additional Course Policies

VIP Room and Equipment Use Policy

VIP rooms and equipment are shared resources used by multiple teams. To ensure a productive and respectful working environment, the following rules apply:

1. Room Usage Priorities

Room use is prioritized as follows:

1. Scheduled team meetings, lectures, and learning modules
2. Weekly sub-team meetings (multiple groups may share the space)
3. Video conferences or special meetings with VIP stakeholders
4. Other project-related work (multiple groups may share the space)

Room schedules are available on the VIP website.
Note: A "good neighbor" policy applies—students may use rooms during other activities as long as they do not cause disruption. Quiet individual work or studying is allowed when it does not interfere with scheduled uses. Similarly, multiple groups may use a VIP room at the same time.

2. Cleanliness and Conduct

- Everyone is responsible for keeping rooms clean.
- Food is allowed, but spills must be cleaned immediately.
- **Gum must be disposed of properly—do not stick it under desks or on carpets.**
- Rooms are monitored by cameras; violations may be reviewed via video.

3. **Equipment Use**

- Equipment may be designated for general use or assigned to specific teams.
    - General use examples: Projector in Klaus 1440, monitors in VL 465 and VL 463B.
    - Equipment assignments may change each semester.
- If unsure about equipment access, contact: vip-request@ece.gatech.edu
- Use equipment only for its intended purpose. Misuse may pose safety risks.

Important Equipment Rules:

- Equipment may not be removed from VIP rooms without a signed loan agreement approved by a VIP Director.
- You are financially responsible for any equipment not returned in good condition.
- You must know how to operate equipment safely. Approval to use equipment does not imply safety training has been provided.

4. Computer Accounts

- Accounts are for individual use only—do not share with others.
- All usage must comply with Georgia Tech, USG Board of Regents, and State of Georgia policies.
- Respect privacy and data integrity. Having access to a file does not mean you are authorized to read or modify it.

5. BuzzCard Access

- Access is a privilege and is logged.
- Rooms are under video surveillance. In cases of theft, vandalism, or messes, logs and footage will be reviewed.
- Do not allow unauthorized individuals into VIP spaces.
- Always secure the room (close the door) when leaving.

Campus Resources for Students

Undergraduate Student Academic Success Resources:
A list of resources for undergraduate students' academic success and information about advising can be found at Success at Tech.

- 1:1 Tutoring: Students looking for additional assistance outside of the classroom are advised to consider working with a peer tutor through Knack. Georgia Institute of Technology has partnered with Knack to provide students with access to verified peer tutors who have previously aced this course. To view available tutors, visit gatech.joinknack.com and sign in with your student account.

Graduate Student Academic and Professional Success Resources:
A list of resources for graduate students is given on the Office of Graduate and Postdoctoral Education website. Specific information for current graduate students includes

- Academic Resources such as the Communications Center, Language Institute, Library, Catalog, Registrar, resources for conducting research, Advocacy and Conflict Resolution resources, and how to manage unexpected situations that may impact your academic performance;
- Student Resources such as Campus Services, Child Care/Family programs, Health & Wellness, Career Services, and the Student Resource Guide; and
- Professional Development such as the programming from the Career Center and other professional development resources and events"]

Student Well-Being:
At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being (student-resource-guide (gatech.edu)

Course Schedule (Tentative)

Week	Date	Activity/Event
Week 1	Week of Jan 11	Introductions Overview of team's work Discussion of semester goals …
Week 2	Week of Jan 18	Sub-team selections finalized Sub-team meeting times finalized
Week 2-3	Jan 20 – Jan 26	Verification of Student Participation in class, due by Tuesday at 4pm

Week 3	Week of Jan 25	Assignment: Self-grade VIP notebook with rubric
Week 8	Week of Mar 1	Web-based peer-evaluations released for students to complete. Online form due by end of the day Friday. Late submissions will not be accepted.
Week 7 or 8	Week of Feb 22 or Mar 1	Submit individual VIP documentation for mid-term grading.
Week 8	Week of Mar 1	Midterm review and feedback Midterm grades for 2000-level courses due in OSCAR (S for satisfactory, U for unsatisfactory).
	Mar 17	Withdrawal Deadline
Week preceding finals	Apr 19 – Apr 27 Open Close	Web-based peer-evaluations released for students to complete. Online form closes at 11:59PM on Tuesday. Late submissions will not be accepted.
Last week of class	Apr 19 – Apr 27	Final review and feedback Turn in individual VIP documentation for final grading.
Finals Week	Apr 29 – May 6	No final. No assignments.