VIP — Apps and Tools for Brain Trauma Assessment Protocol (BTAP)
Spring 2027

Instructor Information

Instructor	Email	Office Hours
Elliot Moore II	em80@gatech.edu	By appointment. Always feel free to email me if you are having challenges with the project and I will help you engage with the project coordinator for your team.

General Course Information

Description

The Apps and Tools for Brain Trauma Assessment Protocol (BTAP) team was primarily created to build a suite of mobile applications for iOS and Android devices that would be used to administer mobile apps to collect data from individuals who have suffered brain traumas with lingering effects (e.g., stroke leading to Aphasia, Alzheimer's, etc.). However, BTAP has expanded to allow students unique opportunities to combine coding, clinical, and user interface design skills into projects that have clinical impact in a variety of arenas. Team projects are based on needs from outside clinicians and researchers as well as ideas from students on the team. Teams should make novel use of the touch, audio, and video capabilities of mobile devices to create clinically relevant applications that collect and analyze (to name a few): visual, auditory, and tactual input; verbal communication; spatial and sequential perception; the ability to analyze information, form mental concepts, and make judgments; motor output; and attention, concentration, and memory.

Pre- and/or Co-Requisites

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

Course Goals and Learning Outcomes

By the end of this course sequence, students will be able to:

1. **Work with interdisciplinary teams.**
2. **Apply design solutions for real-world applications** for subjects with various forms of clinical debilitations related to brain trauma, stress, dementia, or other forms of cognitive impairment. **Integrate diverse technologies** including sensors, embedded systems, mobile/web applications, and wireless networks to collect and utilize real-time data.
3. **Understand how to format and present proper documentation of the design process.**

Course Requirements & Grading

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

- Maintain a design notebook in LabArchives. (See the VIP-BTAP Canvas website for more details.)
- Actively participate on their assigned team.
- Adhere to the guidelines for each assessment.
- Complete the mid-term peer evaluations. This is a web-based form, and links are available at http://vip.gatech.edu. Failure to complete the peer evaluation may result in a full letter grade deduction by the VIP administration. Late submissions are not accepted.
- Complete the final peer evaluation, which will be available for one week during Dead Week. Failure to complete the peer evaluation may result in a full letter grade deduction by the VIP administration. Late submissions are not accepted.

Documentation (60%)

- **Final Design Notebook (40%)** — Design notebooks should document your progress through the semester. We will be using Lab Archives (https://www.labarchives.com/). Use the sign-up link provided on Canvas for VIP. A rubric for grading the design notebook can be found on Canvas.
- **Semester Goals Assignment (10%)** — What you intend to accomplish this semester. Read instructions on the assignment. This assignment is to ensure you have clear objectives and goals for the semester.
- **Midterm Design Notebook Submission (10%)** — You will be required to submit your design notebook around the middle of the term for feedback. The purpose of the submission is to provide feedback to help ensure that your final design notebook will be properly formatted and that you are documenting weekly progress. A rubric will be provided and you should feel free to ask the instructor questions. The progress and quality of your design notebook will be part of this assessment as a means of assessing personal contribution to the project.

Teamwork and Interaction (40%)

- **Professionalism (25%)** — Your professionalism as a teammate is assessed through a variety of factors including your peer evaluations, attendance at group meetings, responsiveness to instruction, etc. Every student starts with a full score of 20%. Points are distributed as follows:
  - **Peer Evaluation Forms (5%)** — You are required to fill out mid-term and final peer evaluations (check the VIP website for dates) for the members of the team that you are working with (at least 2 members).
  - **Milestones Reports (20%)** — There will be two Milestones reports during the semester. Each report will include a summary of the milestones for the period of time covered and a summary of progress. The progress and quality of your design notebook will also be part of this assessment as a means of assessing personal contributions to the project. (NOTE: Points may be deducted if all members do not participate in creation of the team report.)

- **Group Portfolio (10%)** — A final summary of all the work completed by the team including links to existing code will be written by the group. This document should be written in such a way as to help students in future semesters understand the goals and progress of the team project and be able to continue from where the team left off.
- **Final Presentation (5%)** — You will be required to work with your team to create a video final presentation that summarizes your work from the semester. Each member of the team is required to contribute to and speak in the final video project. The important thing is to ensure that you clearly articulate your contributions/work during the semester. You will receive full credit if you turn in this assignment on time and you participated with your group.

Grading Scale

Letter Grade	Percentage Range
A	90–100%
B	80–89%
C	70–79%
D	60–69%
F	0–59%

Class Administration

This course makes use of three main sites:

- **Canvas** — The primary course website is Canvas. All assignments will be given from and submitted to Canvas. Instructor announcements will also be through Canvas.
- **Lab Archives** — Every student will keep a personal electronic design notebook in Lab Archives (see Canvas for more details).
- **Microsoft Teams** — Microsoft Teams is where project communication, information, and milestones are tracked. You will find useful information from previous semesters of VIP that are designed to help current and future team members. (See Canvas for the current link.) NOTE: Every student will use the **Milestones** integration in MS Teams to track their progress on projects throughout the semester. This will be part of your grade.
- Peer evaluations are administered by the VIP Program. Click here to access peer evaluations from off campus. Click here to access from on campus. 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.

Team Skills Members of BTAP **must have or be willing to learn** skills relevant to the following areas:

- **Coding** — Responsible for creating code in a relevant language (Swift, Java, etc.) that drives the app and hardware implementations for all deliverables.
- **Clinical** — Responsible for proper clinical interpretation, design, testing, and identification of potential new areas. Assists with the design and builds applicable medical devices for mobile applications.
- **UX (User Experience)** — Responsible for user testing, graphic design/layout, and comparative study/analysis. Assists with web, poster, and video presentation.

Team Organization There are three levels of student involvement in BTAP:

- **Peer Mentors** — Experienced BTAP students with knowledge in coding, clinical, UX, and other areas related to being a productive member of BTAP. Peer Mentors assist existing and incoming students and are solicited from returning BTAP members each semester.
- **Project Coordinators** — BTAP has multiple projects running simultaneously. Project coordinators exist within each project to assist with week-to-week communications and ensuring that each project is meeting its milestones.
- **Team Members** — Every student on BTAP is part of a project team and assigned responsibilities relevant to the skills they possess or are learning.

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 Attendance at group and sub-team meetings is expected of all students. Failure to attend a required meeting without prior notification may impact your overall professionalism grade. If you must miss a meeting, please show the professional courtesy to contact the instructor and your sub-team members.

Extensions, Late Assignments, & Re-Scheduled/Missed Exams Extensions on assignments may be granted if the instructor is properly notified within 2 days of a missed assignment.

Inclement Weather and Digital Learning Days In the event of a digital learning day, we will meet via MS Teams.

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 There are no restrictions on the use of mobile devices in the classroom provided they are not disruptive or lead to students being inattentive during class time.

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.

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.
- 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.