

Student Credit for VIP



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Vertically-Integrated Projects Program

How VIP Counts Toward Your Degree

The VIP program supports large, multidisciplinary teams that work on joint research and education projects. Students from the following disciplines have participated in VIP so far: AE, BIO, BME, CEE, ChE, CS, CM, ECE, ISyE, MechE, Phys, and Public Policy. The current set of VIP courses and the policies established for how they contribute to a student's degree are:

For All Students: The VIP courses are currently ECE 2811, 381X, 481X. The first digit indicates the level: 2 = sophomore; 3 = junior; 4 = senior. The last digit indicates the number of credits: X = 1 or 2. Each school in CoE and whose faculty and students participate in VIP determines how VIP credits count toward their students' degrees. In general, VIP credits will at least count as free elective credits; see below for further information.

For Students in the College of Architecture: Three VIP teams that are homed in the CoA are starting up in Fall 2014. At least five VIP teams are seeking students from the CoA. Please return to this site later to see how VIP credits will count toward degrees in the CoA or the Schools of Architecture, Building Construction, Industrial Design, and Music (minors).

For Students in the College of Computing:

- **Starting with the Summer 2011 term and ending with the Summer 2013 term:** VIP can count for Senior Capstone Credit (CS 4911) when: (a) There are at least three credit hours in the same VIP project; (b) At least two of those credit hours are in CS 481X VIP; and, (c) All three VIP credits used for capstone credit are at the ECE-381X/481X level. Additional VIP credits taken beyond those meeting the criteria above can count as free electives. NOTE: VIP credits acquired via CS-designated VIP courses during or before Spring 2011 may also count toward capstone credit -- for details, please check with the CoC Undergraduate Office.
- **Starting Fall of 2013:** The CoC will be implementing a new approach to a design project course. The approach requires CS students to take a two-semester "project" class that will be taken in conjunction with a two-semester LMC class that will fulfill both CS 4911 and LCC 3403 requirements. There are currently three options for this project class: a CS project class, a CS research class, or a VIP project. To choose the VIP option, students will sign up for a 1- or 2-hour VIP class and a 2-hour LMC class the first semester and, for the second semester, sign up for a 1- or 2-hour VIP class and a 1-hour LMC class. The VIP credits must be at the junior (38xx) or senior (48xx) level and must all be from the same project section. The total number of credits must be 3 or 4; 4 is preferred because you will both learn more from and contribute more to the project. The VIP projects will also be used as projects for the LMC class to provide a more realistic context. For details, please check with the CoC Undergraduate Office.

For Students in the College of Engineering

- **For CEE and EnvE Students:**
 - **For CEE Students:** Up to 3 credits can be used as CEE Technical electives. After earning those 3 credits, any additional VIP credits can be used only as approved elective credits. Please check with the CEE undergrad office if you have questions or need further information.
 - **For EnvE Students:** Up to 3 credits can be used as EnvE Technical Elective Focus Area. After earning those 3 credits, any additional VIP credits can be used only as approved elective credits. Please check with the CEE undergrad office if you have questions or need further information.
- **For ECE Students:**
 - **VIP Independent of Senior Design:** If a student takes six or more credits of VIP, three can count as ECE elective credits and three can count as approved elective credits.
 - **VIP Incorporating Senior Design:** Students may use their VIP participation towards Senior Design II (ECE 4012 or ECE 4007) if: (a) their VIP project is suitable for an EE or CmpE culminating design project, (b) they have previously registered for the same VIP team in 3 successive semesters (semesters off for co-op allowed) prior to taking Senior Design II; (c) during those semesters they take VIP for at least 1 - 2 - 2 credits; (d) the last two credits are taken in their senior year; and (e) they satisfy all other senior design requirements, including completion of Senior Design I (e.g., ECE 4001 or 4011). Then, in the 4th semester, students may register for Senior Design II instead of VIP (ECE 481x). Specifically, VIP students register for the ECE 4012 VIP (or ECE 4007 VIP) lecture section and the senior design project section corresponding to their VIP team, ECE 4012 VPx (or ECE 4007 VPx).
 - **More Information:** Please contact the ECE Undergraduate Affairs Office for questions about VIP in the ECE Curriculum. Contact Dr. Randal Abler to determine if your VIP project is appropriate for ECE senior design credit.
- **For ISyE Students:** Up to 3 credits can be used as engineering or free elective credit. After earning those 3 credits, another 4 can count as Senior Design, subject to several constraints (see below), or as free elective credit. Beyond those 7 credits, additional VIP credits can be used only as free elective credits. To use VIP credit for Senior Design, a student should register for VIP in 4 successive semesters, for at least 1 - 2 - 2 - 2 credits in those semesters, with the last 4 credits being in their senior year. At the end of the second semester, the student should submit a proposal to ISyE's Senior Design coordinator for approval, describing how the VIP project will fulfill the basic requirements of Senior Design. If approved for Senior Design credit, the student will need to submit interim and final reports and presentations to the Senior Design coordinator at the end of the third and fourth semesters. The Senior Design coordinator will assign the student's grade in consultation with the student's VIP advisor. Please check with the ISyE undergrad office if you have questions or need further information.
- **For ME Students:** Students can use either a maximum of 6 credits of VIP courses (ECE 2811, 381X, 481X) or a maximum of 6 credits of research / special problems courses (2699, 4699 & 4903) as free electives. If doing both types of courses, a maximum of 6 credits is allowed.

For Students in the College of Science: VIP courses have recently been created in Biology and Physics. Please check with the undergraduate advising office in your discipline to determine how participation in these VIP courses will count toward your degree.

For Students in Other Disciplines: Please check with the undergraduate advising office in your discipline to determine how participation in VIP will count toward your degree.

A Note on Registration for VIP: If you have a time conflict with the Friday, 3:00-4:30 VIP lecture, a time-conflict permit can usually be issued for you. If you are returning to a VIP team and have a time conflict with your team meeting time, a time-conflict permit can be created for you. If you are a new VIP student and the meeting time of the team you want to join conflicts with another course, then you must either choose another VIP team or wait until the next semester.



Vertically-Integrated Projects Program

VIP courses: academic credit toward student's degree

Credit model should encourage 4 semesters of participation

Implementation is determined by individual discipline/major

A more uniform model would be less confusing for both students and advisors

Coherent enrollment/registration mechanism is in place



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ECE Credit:

- If a student takes six or more credits of VIP, three can count as ECE elective credits and three can count as approved elective credits.

Any combination of VIP courses accumulating 6+ credits
Additional credits count as approved elective.

Goal is to have a substantial experience in a VIP team
– 2-2-2 or 1-1-2-2 or ...



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- VIP participation towards Senior Design if:
 - (a) their VIP project is suitable for an EE or CmpE culminating design project,
 - (b) they have previously registered for the same VIP team in 3 successive semesters prior to taking Senior Design II (ECE 4012);
 - (c) during those semesters they take VIP for at least 1 – 2 – 2 credits
 - (d) the last two credits are taken in their senior year; and
 - (e) they satisfy all other senior design requirements, including completion of Senior Design I (ECE 4011)
- Register for ECE 4012A + ECE 4012VP* by VIP permit



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ECE VIP Senior Design Course Sample

	VIP Course	Senior Design
Fall 2013	ECE 3811 VP3 (1 credit)*	
Spring 2014	ECE 3812 VP3 (2 credit)	
Fall 2014	ECE 4812 VP3 (2 credit)	ECE 4011 (2 credit)
Spring 2015	ECE 4012A + ECE 4012VP3 (3 credit)	

Currently, because this is less than 6 credits of VIP this would not give ECE technical electives, one additional credit of VIP would be required. (This is up for review)



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) Suitable EE or CmpE culminating design project

Needs to have some hardware/software design and build aspect

– Not all teams have relevant work areas

Questions to Randal Abler (randal.abler@gatech.edu)



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ECE 4012 A + VP* Grading

- Major deliverables per Senior Design are required
 - Preliminary Proposal
 - Proposal
 - Final Report
 - Final Presentation
 - Design Notebook
- These deliverables are submitted to Randal Abler randal.abler@gatech.edu for grading per VIP
 - Collaboration with Team Advisor
 - Forwarded to Senior Design for long term archival & review



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VIP Grading

- Avoid assigning a uniform “Team” grade
- Design notebooks
 - Individual performance record
- Final presentation
 - Assess overall team accomplishments
- Peer Evals
 - Especially useful for calibrating teamwork



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Design Notebooks!

- If it's not in their design notebook, they didn't do it.
- Emphasis on ALL work, not just class notes
- Looking at electronic variants (smart pens, etc)
- Reviewed at mid-term and final-semester
- Individual feedback to students is critical



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Student/Advisor Challenges

- Students expect assignments, not challenges
 - Students need a clear understanding of their responsibility
 - Use workplace analogies
- Communications skills are lacking
 - Students work to barrier and stop rather than reach out
 - Collaboration between students is weak
 - Established (returning) VIP students are a significant benefit