

VIP (Vertically Integrated Projects) at Howard for EGPP students

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Charles Kim
ckim@howard.edu



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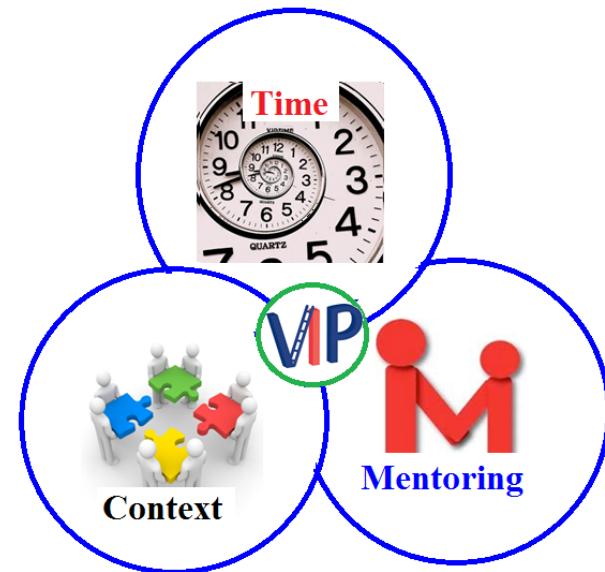
VIP - Summary



- Integration of Research, Education (Teaching & Training), and Service
- Inclusion of UG students in to Research and Innovation
- Faculty Initiated, Research Project Sprouted, Long-Term Project Based
- Vertical Mentoring from Faculty to GR to UG (SR to JR to SP)
- Students: Knowledge and skill set development for innovation from Long-term, 3- 5 year, (rather than 10-week summer long) participation
- Faculty: Exploration and Completion of long-term challenging research by multidisciplinary students
- University: Broadening university community for everyone to participate, which provides students with compelling reason to be on campus and on one's major

Goal of VIP

- Rationale and goal of VIP
 - Foster innovative thinking and entrepreneurial behavior by involving students in challenging projects embedded in research
 - Provide the necessary components to ensure success
 - Time
 - Context
 - Mentoring



VIP Benefits to Students

- Realistic Team Experience
- Opportunity to Learn/Master different Roles/Skills
- In-Depth Experience in their Field
- Authentic Multi-Disciplinary Experience
- Knowledge Exchange across many Boundaries
- Provide a Compelling Reason to be on Campus
- Preparation for the Work Environment
- Learn and Practice Many Skills
- Understanding of the Innovation Process
- Fun!

VIP Benefits to University

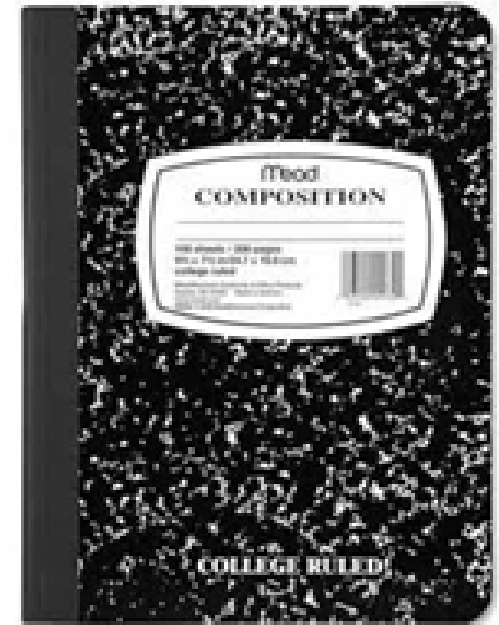
- Enhances Student Learning
- Everyone Participates in the Innovation Process – Innovation Community and Culture
- Enables Major Projects that Make a Difference
- Enables New Partnerships and Innovation
- Opens Up Multidisciplinary Opportunities
- Deepens/Broadens the University Community
 - Everyone can work together
- Leadership Enhancement

VIP Team Members

- Number of teams: 7 (3 and 4)
- Team member Resources
 - 14 ECE Senior Students
 - 25+ EGPP students (Fr and Sp of CV, CHEM, ME, etc.)
 - In Spring 2015, 5 EGPP students started but only 2 stayed until the end.
 - X former team members of existing teams
 - Y new recruits
- Teams are in different phases
 - Existing teams: Design improvement, implementation, more intelligence, new idea
 - New teams: Problem solving, conceptual design, and solution generation

VIP Team Meetings and Activities for EGPP students

- **No Classes to attend**
- **Weekly meetings (with all team members)**
 - Tasks are defined
 - Each task assigned
 - Each task performed individually or in sub-groups
- **Project Note** (Each participant):
 - Write every activities: search. Research, findings, designs, etc
- **Grading for EGPP Students**
 - Evaluation by Faculty Advisor/Grad student
 - Project Notes
 - Peer Evaluation



Team is

- Team is
 - **Formed** by **Relationship** among team members
 - **Guided** by a vision and set of common **goals**
 - **Functioned** by roles of members to **accomplish tasks**
 - **Run** by following **agreed-upon rules and procedures**

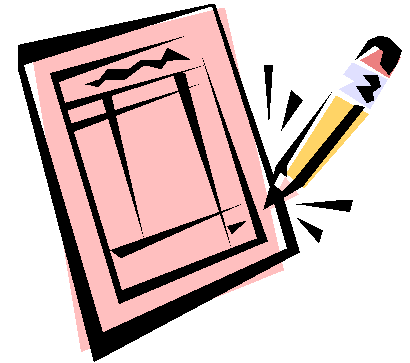


Team Contract

- Goal
- Expectations
- Rules and Policies
- Commitment
- **We will make team contracts later – after teams are formed**

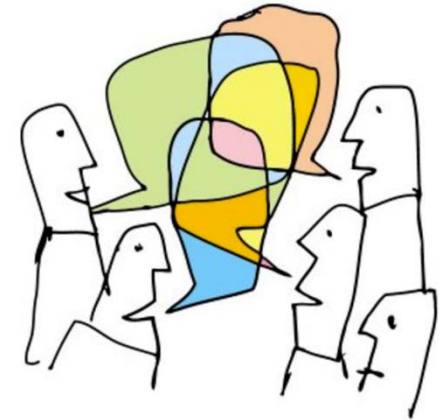
Team Contract
for Inter-Design Class
Department of Electrical and Computer Engineering
Howard University

Team Name	
Team Purpose	The reason of the team is:
Team Objective	The goal/objective for this team is:
Team Expectations	The team's expectations of each member in terms of attendance, learning, level of participation, communication, productivity, etc. are as follows:
Team Rules and Policies	The team's policies and procedures governing such things as behavior, discipline, task assignments, resources, quality of work, and conflict resolution, penalties and rewards are as follows:
Commitment by Members	<p>I understand and agree to the above team purpose, goals, rules, and procedures as stated in this contract. I understand that I am obligated to abide by these rules and conditions. I understand that if I do not abide by the terms and conditions, I will suffer the consequences as stated in this contract.</p> <p>Name: _____ Signature: _____ Date: _____</p> <p>Name: _____ Signature: _____ Date: _____</p> <p>Name: _____ Signature: _____ Date: _____</p> <p>Name: _____ Signature: _____ Date: _____</p>



Peer Evaluation – Rationale

- **Teamwork & Fairness**
- Evaluation of each team member's strength and weakness in terms of **Tasks** and **Relationships**
- Each member fill out the form individually
- Submit the form individually via **email (when required) – at the end of each semester**
- The submitted evaluation forms and results are kept confidentially by the advisor and the instructor.
- But will be used in grading



Peer Evaluation

- For each item (we have 10 items) a team is given a sum of money allocated to \$500 per member.
- For each item, distribute the sum to each member according to his/her performance on the item
- The **same scores** for all members are **not accepted nor counted**.
- $P = [\text{Total Amount of Money}]/5000$

Peer Evaluation

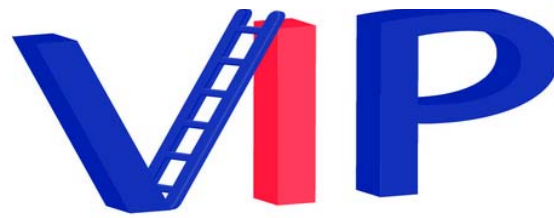
		Write each member's LAST name below (including yours)				
1	Works cooperatively to complete team assignments					
2	Prepares for, arrives on time, and attends meetings					
3	Makes positive contributions to meetings					
4	Work is of high quality and completed on time					
5	Brings a creative spark to the team					
6	Supports and respects other members' efforts and opinions					
7	Is able to give and receive feedback effectively					
8	Is responsible and accessible					
9	Is enthusiastic about the project and energetic					
10	Demonstrates effective leadership, keeps team focused, and elevates the work of the entire team					
	TOTAL					22

Schedule and Tasks

- Team Formation
 - Max Number of ECE Senior students in a team: 2
 - Each Team will have 3 – 4 EGPP students
 - Each team recruits other students (especially former underclass students)
 - A faculty advisor (and a graduate student) will be introduced
- F September 18
 - Submit 3 choices (**how?**)
- Week of September 21 – 25:
 - Team formation and adjustment period
- Week of Sept 28 – 30: First Team Meeting
 - Each will be contacted by his/her team leader

VIP Implementation at Howard

www.mwftr.com/VIPatHOWARD.html



Vertically
Integrated
Projects

VIP Program at Howard University

Howard University

Washington, DC 20059

Coordinator and PI: [Dr. Charles Kim \(CKIM@HOWARD.EDU\)](mailto:CKIM@HOWARD.EDU)

This program is sponsored by [The Leona M. and Harry B. Helmsley Charitable Trust](#) as part of [VIP Consortium Project](#) (lead institution - Georgia Tech) to drive systemic reform of STEM education.

What is VIP?:

The VIP program was created to overcome the fragmented nature of higher education, which is subdivided into research, education, service, and economic development and, for student learning, fractured and dissected into years, majors, and disciplines silos. The VIP program intends to reverse the fragmentation, and introduces a new type of long-term, depth-and-breadth learning environment that can keep students engaged and improve learning and career preparation. Under the VIP program, participating and completing a long-term practical team project provides a significant benefit for the students and the faculty advisors in terms of the continuity, technical depth, and disciplinary breadth involved in the project. This project of VIP Program will start from the ECE department with the projects by the majority of ECE students and ECE faculty, gradually include other majors in the CEACS, and expand to the University. The first one and a half year will be dedicated to preparation and launch of the VIP program in the ECE department. The next 1-year period will become the year of "growth and expansion" by which the VIP program will be expanded to other departments in the CEACS. The last period of a half-year will become a period for "moving toward self-sustenance" from which the VIP program extends to the entire university by the established program and schedule without additional financial. Howard University is a [VIP Consortium](#) member.

Charles Kim – Howard University