

**CUNY New York City Council-funded Initiatives  
Technology Incubator  
School of Continuing and Professional Studies  
at Lehman College**

**April 20, 2018**

Prepared by: Lehman College SCPS team



# **Tech Initiatives Report**

## **Innovation Lab and Technology Incubator Comprehensive Report** **March 2017 - April 2018**

### **CUNY New York City Council-Funded Initiatives at the Technology Incubator and Innovation Lab, CUNY on the Concourse, Lehman College, the City University of New York**

#### **Table of Contents**

#### **A. Introduction**

#### **B. Computer Science After-School and Summer Program at Lehman High School**

##### **1. Program Plan/ Narrative**

###### 1.1 Program Specific Description

###### 1.2 Services to Be Performed by the Contractor (the “Services”)

##### **2. Code Interactive (Contractor) signed contract**

##### **3. Contractor Deliverables**

###### 3.1 Period one

###### 3.2 Period two

###### 3.3 Period three, four and five

##### **4. Acquisitions (Chrombooks, carts, metro cards), Student meals**

##### **5. Training Calendar**

##### **6. Students’ Graduation**

###### 6.1 Students letters

###### 6.2 End of class survey

###### 6.3 Photos and links to the video

## **C. Small Business Consulting Practice**

- 1. Introduction**
- 2. Program Plan/ Narrative**
  - 2.1 Part one: Training, Certificates, and Credentials
  - 2.2 Part two: Forming the “Small Business Consulting Practice”
  - 2.3 Part three: Recruitment of Bronx Small Businesses
- 3. Timeline**
- 4. Eligibility criteria**
- 5. Benefits for the students in the Department of Economics and Business**
- 6. Benefits for businesses**
- 7. Open House pictures**
- 8. Student Recruitment Process**
- 9. Student Contracts**
- 10. Credit Course**
- 11. Online Course**

## **D. Virtual Reality Training Academy- EON Scholarships to Computer Information Systems majors**

- 1. VR/AR Grand Opening**
- 2. Graduation, EON Reality Certified AR/VR Developers**
- 3. Media and News broadcasts**
- 4. Career Panel, breaking into the VR/AR industry in collaboration with NYC Media and Entertainment**
- 5. City of Science Bronx**
- 6. NYVR Expo 2017**

## **7. Scholarships to Computer Information Systems majors**

## **8. Overall Budget (April 2017-April 2018)**

### **Appendixes:**

**Appendix A: Code Interactive (Contractor) signed contract**

**Appendix B: Templates for Assignment Materials**

**Appendix C: Course Syllabus**

**Appendix D: Templates for Rubric**

**Appendix E: HR Document for Program Manager hire**

**Appendix F: Marketing Flyers**

**Appendix G: Student Applications**

**Appendix H: Training Calendar**

**Appendix I: Student letters to the City Council**

**Appendix J: End of class survey**

**Appendix K: Flyer Small Business**

**Appendix L: Student completed applications**

**Appendix M: Students Signed Contracts**

**Appendix N- Online Course syllabus**

**Appendix O: Completion letters for IT Scholarships**

## **A. Introduction**

The Lehman College School of Continuing and Professional Studies (SCPS) is pleased to submit this report on the outcomes of the City Council funding for Create New Tech Incubators. As a result of the expanding role of the internet and social media businesses have become increasingly reliant on people who are competent in the digital space. With that in mind and to ensure that young people in the Bronx have access to quality computer science programming and are prepared to become future business leaders, City Council funding has enabled Lehman College to spearhead initiatives such as:

- Computer Science After-School and Summer Program at Lehman High School
- Small Business Consulting Practice
- Virtual Reality Training Academy- EON
- Scholarships to Computer Information Systems majors

This is done by tailoring programs that focus on connecting learning to business.

## **B. Computer Science After-School and Summer Program at Lehman High School**

Lehman High School hosted a computer science and coding afterschool program. The program was run collaboratively by Lehman College and Code/interactive, a proven leader in computer science education. It was an immersive program that focused on web development (HTML, CSS), programming (Scratch, JavaScript), and technology entrepreneurship. One of the goals of the program was to prepare students interested in this subject to take AP

computer science courses in high school. An additional goal of the program was to prepare the students to study computer science at Lehman College as a College Now course (pending CUNY approval) offered through CUNY and taught by Code/Interactive. The key to Lehman's method has been combining the resources of the university, Lehman high school, and Code/interactive. This approach has allowed us to give students technical training, but more importantly, the opportunity to learn through experience. During the program, a program manager from Code/Interactive led the students through several professional projects in which students produced websites, mobile applications, and business plans for technology products.

## **1. Program Plan/ Scope of Services**

The College pursued the services of Contractor to develop a customized computer science and coding program (the "Program") for Lehman High School.

### **1.1 Program Specific Description**

The Program provided training for Lehman High School students (the "Students") in grades 10 and 11.

The Program consists of 3 instructional units ("Instructional Units"), each lasting four weeks:

- Unit 1: Web Development (HTML, CSS)
- Unit 2: Programming (Scratch, JavaScript)
- Unit 3: Technology Entrepreneurship

The Students were assigned to one of three cohorts. Each cohort participated in an after-school session one (1) day per week over a period of twelve (12) weeks at Lehman High School, and the

Students were expected to participate in two (2) of the four (4) all-day Saturday sessions per Instructional Unit. The Teachers and Parents were invited to attend to the Saturday sessions, each held at CUNY on the Concourse, Innovation Lab ("COTC"). Accordingly, the Contractor offered after-school sessions three (3) days per week over twelve (12) weeks (4 weeks per Instructional Unit) and four (4) Saturday sessions per Instructional Unit.

### **Student Participation:**

Contractor provided the students with 12 weeks of instruction (the three, four week units described above) from December 2017 – March 2018. The after-school segment was two hours in length and scheduled from 3-5 p.m. The Saturday session was 6 hours in length and scheduled from 10am to 4pm. Contractor planned the program so the Students will gain experience in employing computational practices, analyzing the impact of computing on their lives, designing and implementing creative solutions and artifacts, applying abstractions and models, analyzing their computational work and the work of others, connecting computation with other disciplines, communicating thought processes and results, and working effectively in teams.

### **Student Contact Hours:**

- a) After School: 2 hours per week for each student after school for a total of 24 contact hours.
- b) Saturdays: 6 hours every other week for each student (every other Saturday) for 6 weeks for a total of 36 contract hours.
- c) 60 hours per student combined total contact hours.

## **1.2 Services Performed by the Contractor (the “Services”)**

Scope of Work extracted from the Contract.

### **(PERIOD 1) Staffing Recruitment and planning phase:**

Within the first 4 weeks after the Effective Date:

- a) Hire two (2) full-time Program Managers, responsible for providing instruction on computer science courses on web development (HTML, CSS), programming (Scratch, JavaScript), and technology entrepreneurship. Proof of vetting process for Program Managers (e.g. resumes, references from prior assignments and background checks in accordance set forth by the standards of the New York City Department of Education) to be submitted to the University in advance of Contractor extending an offer.
- b) Prepare the course syllabus.
- c) Prepare the assignments materials
- d) Prepare templates and tools for Student’s pre and post assessments rubrics and end of course satisfaction survey which shall cover areas such as: quality of the instructional materials, extent to which the course met its objectives, and instructor evaluation.
- e) Design and prepare the Students, Teachers and Parents recruitment campaign.

### **Deliverables:**

Contractor shall submit all materials delineated in III.1. (a)-(e) for College’s review and approval.

### **(PERIOD 2) Implementation of Student Recruitment:**

Within the first 4 weeks of 2017-2018 Academic Years, Contractor shall close out the Student recruitment process. Contractor shall manage the Student recruitment process in its entirety with a goal of

all students at Lehman High School learning about the Program. Contractor shall recruit through class presentations and letters to parents, and employ specific diversity recruitment strategies, and a competitive application process to identify the students with a balance of gender, racial, and socioeconomic diversity. Contractor shall create a web link to the application form that Contractor and Lehman High School can use to advertise the Program to applicants. Contractor will also conduct a parent meeting before the beginning of the program to serve as an informational session where the parent/guardian will be provided with the necessary information to better understand the program in its entirety, how to best provide support to the student to ensure successful completion of the program and as a tool to recruit interested new parents/guardians to participate in the program. Contractor shall demonstrate that the recruitment of the appropriate number of individuals is fully executed by providing the materials below.

**Deliverables:**

Contractor shall submit the following deliverables for College's review and approval:

- a) Samples of marketing flyers proof of their distribution
- b) All Student applications including the approved student application
- c) Screenshots and links to the live application website
- d) Sign-in sheets from the parents/guardians and students meeting
- e) Meeting agenda
- f) Waivers/permission slips signed by Students' parents/guardians to allow them to participate in the Saturday portion of the Program at COTC.

## (PERIODS 3,4,5) Program Academic Instruction Phase:

The following table is the overview of the program academic structure:

		1st day	2nd day	3rd day	Saturday
		Cohort 1	Cohort 2	Cohort 3	Varies
<b>Period 3</b> -Unit 1: Web Development (HTML, CSS)	Week 1	Group A	Group B	Group C	Group A,B
	Week 2	Group A	Group B	Group C	Group B,C
	Week 3	Group A	Group B	Group C	Group A,B
	Week 4	Group A	Group B	Group C	Group B,C
<b>Period 4</b> -Unit 2: Programming (Scratch, JavaScript)	Week 5	Group A	Group B	Group C	Group A,B
	Week 6	Group A	Group B	Group C	Group B,C
	Week 7	Group A	Group B	Group C	Group A,B
	Week 8	Group A	Group B	Group C	Group B,C
<b>Period 5</b> -Unit 3: Technology Entrepreneurship	Week 9	Group A	Group B	Group C	Group A,B
	Week 10	Group A	Group B	Group C	Group B,C
	Week 11	Group A	Group B	Group C	Group A,B
	Week 12	Group A	Group B	Group C	Group B,C

Contractor is responsible for implementation of the following:

- a) Enrollment of Students in 3 Cohorts to follow the detailed program schedule/calendar.
- b) Instructional methods and learning models in computer science education throughout all components of the program.
- c) Support to Students with their assignments which shall include opportunities for Students to build and present projects during the program to demonstrate mastery of new concepts as they learn new objectives and skills.
- d) Portfolio management: Contractor shall lead Students to create several professional projects to add to their portfolios, including websites, mobile applications, and business plans for technology products.

**Deliverables:**

Contractor shall submit 3 monthly reports, one for each Unit as detailed in the table above. Each report shall include:

- a) Attendance sheets for Students, Parents and Teachers for the Unit.
- b) Projects and work samples from Students that illustrate the types of skills that Students are acquiring. Contractor shall evaluate the projects and work samples using a rubric that reflects the quality of the work.
- c) Rubric ratings on each instructional unit for each of the Students.
- d) Monthly equipment inventory checklist listing the condition of devices

**(PERIOD 6) End of course survey results:**

Within 2 weeks and after successful completion of Program Academic Instruction Phase, Contractor will submit the end of course satisfaction survey and student's pre and post assessments. Contractor shall ask the Students to rate their knowledge, skills and dispositions for each Unit on a Likert scale that ranges from 1-5.

**Deliverables:**

Contractor shall submit for the College's review the Results of the end of course satisfaction survey and students' pre and post assessments for 60 students.

**(PERIOD 7) Program Logistics Management:**

Contractor is responsible for staff members' travel expenses however; Contractor shall not be responsible physical upkeep of the Lehman High School and COTC locations, except to the extent damage occurs during the course of the Program.

**(PERIOD 7) Asset Management:**

The Contractor is responsible for transporting program assets, materials and equipment including any consumable materials (notebooks, post it notes, etc.) between Lehman High School and COTC throughout the duration of the Program.

Contractor is responsible for signing University equipment (Chromebooks) in/out during after-school and Saturday sessions, securing a safe location for the hardware, following the University's Asset Management inventory procedures, including necessary coordination with the University for tagging equipment. Contractor shall be responsible to return the Chromebooks to the College as per the initial inventory list, and at the close-out stage of the program.

**Deliverables:**

Contractor shall submit proof of handing over/return of tagged materials at the close-out stage of the program, which shall be independently confirmed by the College thereafter.

**Payment Terms:**

- a) Upon completion of any independently identifiable portion of the services and no sooner than the delivery dates listed below, Contractor shall contact the College and request confirmation of receipt of and satisfaction with such services "Acceptance". If the Contractor is advised that any services were unsatisfactory, then Contractor shall complete or re-perform such services until College is satisfied.
- b) Contractor shall submit invoices in triplicate to College's Accounts Payable Department at a time interval and in a format approved by the College, in no event more often than the payment schedule set forth below.
- c) Contractor shall provide sufficient and appropriate documentation with invoices. College reserves the right to request additional information at any time.
- d) Contractor shall not submit invoices to College to be paid for any goods or services until it has received approval from College.
- e) College will pay Contractor the contract price in accordance with amounts set forth in the payment schedule below for services rendered in accordance with the terms of the contract.

**(PERIOD 1) Staffing Recruitment and planning phase:**

Within the first 4 weeks of contract post award and upon successful completion of the services/deliverables identified in Section III.1 above, and upon receipt of College approval, the Contractor may invoice the College in an amount not to exceed \$12,800.

**(PERIOD 2) Implementation of Student, Parent and Teacher Recruitment:**

Within the first 4 weeks of 2017-2018 Academic Years and upon successful completion of the services/ deliverables identified in Section III.2, and upon receipt of University approval, the Contractor may invoice the University in an amount not to exceed \$12,800.

**(PERIODS 3,4,5) Program Academic Instruction Phase:**

Contractor shall prepare and submit monthly reports, one for each Unit that detail the deliverables described in Sections III.3 above, Contractor shall obtain University's approval and invoice in an amount not to exceed \$15,000/report. Total amount for this task is \$38,400.

**(PERIODS 6) End of course survey results:**

Within 2 weeks after successful completion of Program Academic Instruction Phase and upon successful completion of the services/deliverables described in Sections III.4 above, Contractor shall obtain University's approval and invoice in an amount not to exceed \$5,000.

**(PERIODS 7) Remainder of Tasks (Program Logistics Management and Asset Management):**

At the end of the Program after all other Services are completed, and after the University has independently verified that all University hardware in the care and control of the Contractor has been returned to the University, and upon receipt of University approval, the Contractor may invoice the University in an amount not to exceed \$30,000.



	Scope of work	Timeline	Fees
1,2	<b>(PERIOD 1)</b> Staffing Recruitment and planning phase	First 4 weeks of contract post award	\$12,800
3	<b>(PERIOD 2)</b> Implementation of Student, Parent and Teacher Recruitment	Prior to class start date(class start date to be jointly agreed upon, anticipated to begin in September 2017)	\$12,800
4	<b>(PERIOD 3)</b> Unit 1- Program Academic Instruction Phase, First monthly report	Upon completion of the after school 1st month	\$12,800
5	<b>(PERIOD 4)</b> Unit 2- Program Academic Instruction Phase, Second monthly report	Upon completion of the after school 2nd month	\$12,800
6	<b>(PERIOD 5)</b> Unit 3- Program Academic Instruction Phase, Third monthly report	Upon completion of the after school 3rd month	\$12,800
7	<b>(PERIOD 6)</b> End of course survey results	Upon completion of Period 6 deliverables	\$5,000
8	<b>(PERIODS 7)</b> Asset Management	Upon independent verification that all University hardware has been returned	\$30,000
	<b>Total Budget</b>		<b>\$99,000</b>

## **2. Code Interactive (Contractor) signed contract**

See (Appendix A)

## **3. Contractor Deliverables**

Examples and references to the contract's deliverables are demonstrated in this section.

### **3.1 Period one**

#### **Templates for Assignment Materials:**

See (Appendix B)

#### **Templates for Course Survey:**

Course Satisfaction Survey

- 1 - Strongly Agree
- 2 - Agree
- 3 - Neutral
- 4 - Disagree
- 5 - Strongly Disagree

The instructor:

- Made me feel welcomed in the class
- Had classroom management
- Informs students about how they are going to be graded on projects
- Grades students by the standards the instructor explained to students
- Grades projects accurately but is willing to make corrections if errors occur
- Returns feedback within a reasonable period of time
- Explains materials in response to questions

- Presented course material in an organized manner
- Seems interested in the subject matter
- Responds to student's queries within a reasonable time period
- Had an appropriate amount of content/course material to the length of the course
- Offers students help with problems in course or refers them elsewhere for help

Please rate your overall satisfaction with this course

- Very satisfied
- Satisfied
- Somewhat satisfied
- Not very satisfied
- Not very satisfied
- Very unhappy

What could be done to improve this course?

Other Comments

Survey ENDS

### **Course Syllabus:**

See (Appendix C)

### **Templates for Rubric:**

See (Appendix D)

### **Hiring Document for Program Manager and Recommendation letters:**

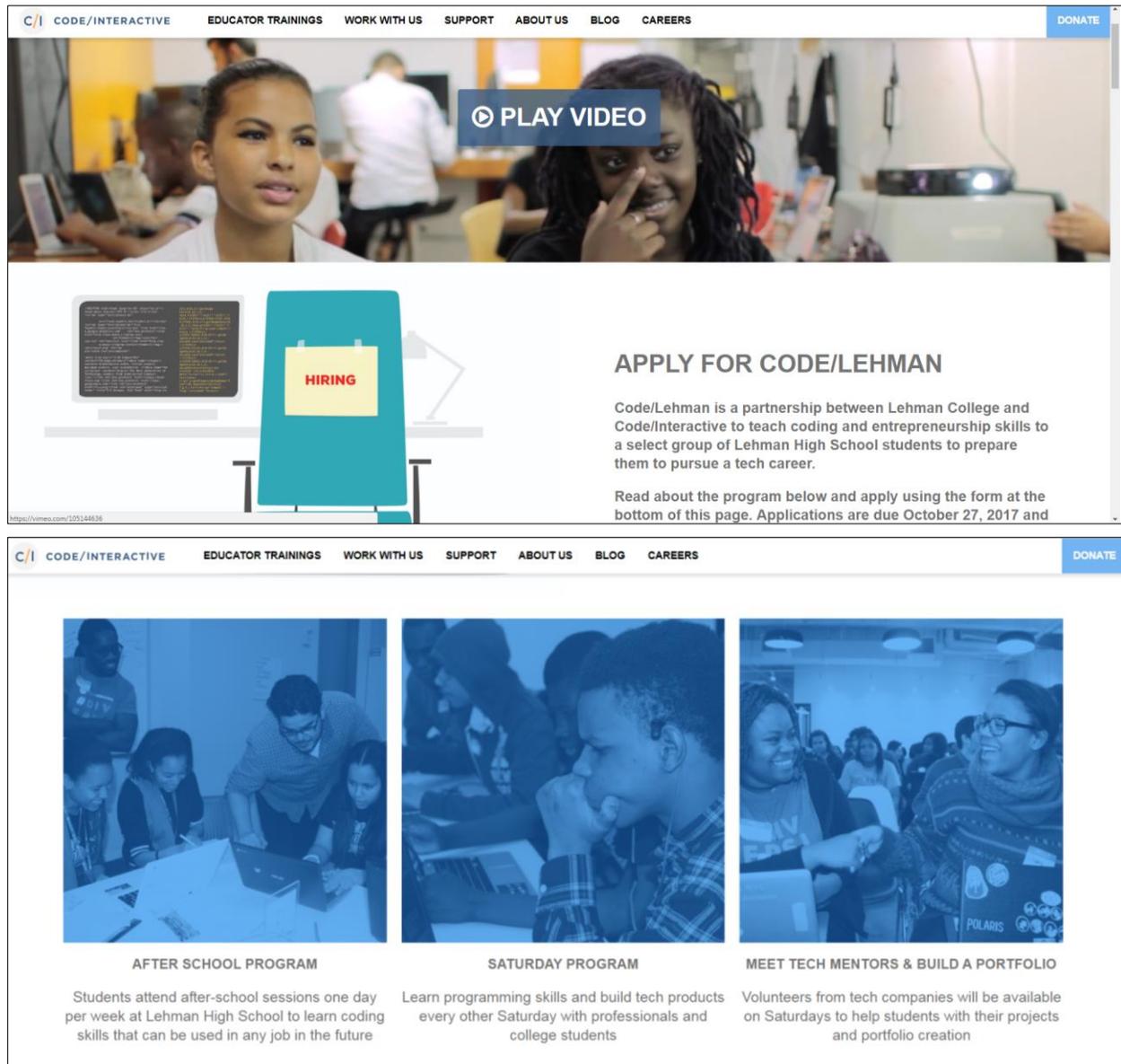
See (Appendix E)

## Students Recruitment Campaign:

Refer to the below link for the Recruitment Campaign website

<https://weare.ci/codelehman/>

Here are few screenshots from the website:



The screenshot displays the Code/Lehman website interface. At the top, a navigation menu includes 'CODE/INTERACTIVE', 'EDUCATOR TRAININGS', 'WORK WITH US', 'SUPPORT', 'ABOUT US', 'BLOG', 'CAREERS', and a 'DONATE' button. The main content area features a video player with a 'PLAY VIDEO' button, an illustration of a computer monitor displaying code and a 'HIRING' sign, and a section titled 'APPLY FOR CODE/LEHMAN' with descriptive text and application instructions. Below this, three program descriptions are shown with blue-tinted images: 'AFTER SCHOOL PROGRAM', 'SATURDAY PROGRAM', and 'MEET TECH MENTORS & BUILD A PORTFOLIO'.

**APPLY FOR CODE/LEHMAN**

Code/Lehman is a partnership between Lehman College and Code/Interactive to teach coding and entrepreneurship skills to a select group of Lehman High School students to prepare them to pursue a tech career.

Read about the program below and apply using the form at the bottom of this page. Applications are due October 27, 2017 and

**AFTER SCHOOL PROGRAM**  
Students attend after-school sessions one day per week at Lehman High School to learn coding skills that can be used in any job in the future

**SATURDAY PROGRAM**  
Learn programming skills and build tech products every other Saturday with professionals and college students

**MEET TECH MENTORS & BUILD A PORTFOLIO**  
Volunteers from tech companies will be available on Saturdays to help students with their projects and portfolio creation



## WHAT WILL I LEARN?

### BUILD YOUR OWN WEBSITES

Learn how to build websites using HTML, CSS, and JavaScript. These professional tools prepare students to become a front-end web developer.

### BUILD YOUR OWN COMPANY

Learn marketing and branding skills to create your own company.

### INTRO TO PROGRAMMING: CREATE ANYTHING USING CODE

Learn the basics of programming by creating games, apps, and animations. Develop problem solving skills by creating fun and engaging projects.



## HOW DO I APPLY?

Accepted students will gain access to Code/Lehman courses, with available high school and college credit for students who complete the entire course.

Fill out the application below with as much detail as possible. Applications are due on October 27th.

Code/Interactive will review applications and notify students of acceptance by November 3rd. Parents and students must attend a mandatory accepted students meeting on Thursday, November 9th or Saturday, November 11th.

Please contact Natasha Green at [natasha@codeinteractivie.org](mailto:natasha@codeinteractivie.org) with any questions about the application process.

For more information, see our [Code/Lehman One-Pager](#) and our [tentative class schedule](#).

### Code/Lehman Student Application

Students apply to Code/Lehman for the 2017 - 2018 School Year



**Code/Lehman Student Application**

Students apply to Code/Lehman for the 2017 - 2018 School Year!

First Name\*

Last Name\*

Email Address\*

Cell Phone Number\*

Current Grade Level\*

Parent or Guardian Name\*

Parent or Guardian Email Address\*

Teacher Recommendation\*

*Please list the name of a teacher that we can contact for a recommendation.*

Teacher Recommendation Email Address\*

*Please list the email address of a teacher that we can contact for a recommendation.*

Why do you want to join Code/Lehman?\*

*Please describe why you want to join the program and what you think you will get out of participating.*

What activities are you currently involved in at school or out of school?\*

*Please describe what clubs you are in, what you do after school and on Saturdays, and what conflicts you have during the week.*

**SUBMIT**

## Template for Student's Pre and Post Assessment Rubrics:

Short Rubric			
	Poor	Fair	Good
Knowledge of Topic	Shows little or no knowledge of topic. Shown by an assessment score of lower than	Shows adequate knowledge of topic.	Shows interest and increased knowledge of topic.
Notes:			
Motivation	Shows little or no motivation in assigned tasks.	Shows adequate motivation in assigned tasks.	Shows interest and increased motivation to complete assigned task
Notes:			

## 3.2 Period two

### Marketing Flyers:

See (Appendix F)

### Student Applications:

See (Appendix G)

### Program Website:

<https://codeinteractive.org/codelehman/>

## 3.3. Period three, four and five :

### Link to Students' works and print screens.

- Matthew Moscol

<https://codepen.io/mmos8941/pen/MraqYE>

<https://codepen.io/mmos8941/pen/mpKgJe>

- Navidra Basil

<https://codepen.io/BigDaddyNav/pen/dJKLNy>

- Wilbert Medina

<https://codepen.io/Wmedina04/pen/RxWYow>

<https://codepen.io/Wmedina04/pen/EobERK>

- Christopher Arturo Perez

<https://codepen.io/XChrisx12/#>

- Alexa Nunez

<https://codepen.io/ahlehxah/#>



Run Fork Settings Change View Log In Sign Up

*Awesome boy* SERVICES PORTFOLIO ABOUT TEAM CONTACT

Welcome To My Page!

# IT'S NICE TO MEET YOU

TELL ME MORE

Ad Finish Signing Up--Start Using 25+ Always-Free Products Share Export Em

Run Fork Settings Change View Log In Sign Up

### INTERESTING THINGS ABOUT ME



Most people believe that I have multiple NBA players as my favorite and not a specific one. But that is untrue. I actually do have a favorite NBA player and that is Stephen Curry. Curry is my favorite player because he is so amusing to watch, especially when he makes those insane half court shots to end off a quarter. If you think that is insane, well your wrong. Curry is even more insane when he's behind the three point line, especially when he has to hit those clutch shots to lead his team to victory.



Well when it comes to my most favorite actor, it has to be the one and only Paul Walker. You may be shocked because he is not the only best actor, but he is the best one to me in my opinion. He's the best because he was the best character in the Fast and Furious series, which is a very favorite series of movies to watch.



Fork Settings Change View Log In Sign Up

Now Showing, The Bully-Free Day

# Now Showing, The Bully-Free Day

**Bullying!**

**Our solution is to spread awareness, and you can do this by coming to our events**

**I would hope that those who feel similarly, help me in the fight to end bullying**

**At our event there will be free food, shirts will be raffeled off among other prizes.**

Ad Own your code from end to end. Resolve errors fast in your workflow with Sentry; open source and loved by 500K developers. Share Export Embed

Fork Settings Change View Log In Sign Up

## FIND A JOB OR EMPLOYEE NOW! WITH SOME MAGIC

MAGIC is a web application which helps connect employers with qualified employees

### FOLLOW THESE EASY STEPS

- Go on the internet and visit: [www.magic.com/jobs](http://www.magic.com/jobs)
- Fill in your information and click "Find". Now there you go! The site will re-direct you to nearby people who match your information / requirements.

**THE GOAL OF MAGIC: OUR GOAL IS TO HELP EVERYDAY PEOPLE WHO STRUGGLE FINANCIALLY SEEN AN OPPORTUNITY TO IMPROVE THEIR BUSINESS OR LIVES BY FINDING THEMSELVES A JOB**

By Christopher Perez

Ad Track Space ID: 3441102724-Black-For-Photos Share Export Embed

## Links to Rubric ratings on each instructional unit for each of the students:

Rubric Topics	Low (1 point)	Medium (3 points)	High (5 points)
<b>HTML Tags Accuracy</b>	50% or fewer of the HTML tags are correctly functioning and showing up on the website with open and closing tags, correct bracketing, and	50-75% of the HTML tags are correctly functioning and showing up on the website with open and closing tags, correct bracketing, and	90-100% of the HTML tags are correctly functioning and showing up on the website with open and closing tags, correct bracketing, and

	correct spelling	correct spelling	correct spelling
<b>CSS Tag Accuracy</b>	50% or fewer of the CSS tags are correctly functioning and showing up on the website with open and closing tags, correct bracketing, and correct spelling	50-75% of the HTML tags are correctly functioning and showing up on the website with open and closing tags, correct bracketing, and correct spelling	90-100% of the HTML tags are correctly functioning and showing up on the website with open and closing tags, correct bracketing, and correct spelling
<b>HTML Tags Added</b>	1-3 HTML tags added to the project	4-7 HTML tags added to the project	8 or more HTML tags added to the project
<b>CSS Tags Added</b>	1-3 CSS tags added to the project	4-7 CSS tags added to the project	8 or more CSS tags added to the project
<b>Text + Content</b>	Text and content are inappropriate, incorrect, or poorly created for the topic assigned	Text and content are appropriate for the topic assigned	Text and content are well designed and demonstrate perfect spelling and grammar

## Period 3

Students	Detailed Rubric Ratings	Total Rubric Rating
<a href="#">Christopher Arturo Perez</a>	HTML Tags Accuracy: 5 CSS Tag Accuracy: 3 HTML Tags Added: 3 CSS Tags Added: 1 Text + Content: 5	17
<a href="#">Matthew Moscol</a>	HTML Tags Accuracy: 1 CSS Tag Accuracy: 3 HTML Tags Added: 5 CSS Tags Added: 3 Text + Content: 1	13
<a href="#">Navidra Basil</a>	HTML Tags Accuracy: 5 CSS Tag Accuracy: 5 HTML Tags Added: 5 CSS Tags Added: 5 Text + Content: 5	25
<a href="#">Wilbert Medina</a>	HTML Tags Accuracy: 5 CSS Tag Accuracy: 5 HTML Tags Added: 3 CSS Tags Added: 3 Text + Content: 3	19
<a href="#">Zaher Choudhury</a>	HTML Tags Accuracy: 5 CSS Tag Accuracy: 3	21

	HTML Tags Added: 5 CSS Tags Added: 3 Text + Content: 5	
<a href="#">Alexa Nunez</a>	HTML Tags Accuracy: 5 CSS Tag Accuracy: 3 HTML Tags Added: 3 CSS Tags Added: 1 Text + Content: 5	17
<a href="#">Justin Ortiz</a>	HTML Tags Accuracy: 5 CSS Tag Accuracy: 3 HTML Tags Added: 5 CSS Tags Added: 3 Text + Content: 5	21
<a href="#">Yulisa Saavedra</a>	HTML Tags Accuracy: 5 CSS Tag Accuracy: 3 HTML Tags Added: 3 CSS Tags Added: 1 Text + Content: 5	17

## Period 4

Student	Detailed Rubric Ratings	Rubric Rating Unit 2 Bootstrap
<a href="#">Christopher Arturo Perez</a>	Usage of Bootstrap's Column System: 5 Using Bootstrap's Components: 3 HTML Tags Accuracy: 5 CSS Tag Accuracy: 3 Text + Content: 1	17
<a href="#">Matthew Moscol</a>	Usage of Bootstrap's Column System: 5 Using Bootstrap's Components: 3 HTML Tags Accuracy: 5 CSS Tag Accuracy: 5 Text + Content: 5	23
<a href="#">Navidra Basil</a>	Usage of Bootstrap's Column System: 5 Using Bootstrap's Components: 3 HTML Tags Accuracy: 3 CSS Tag Accuracy: 5 Text + Content: 1	17
<a href="#">Wilbert Medina</a>	Usage of Bootstrap's Column System: 3 Using Bootstrap's Components: 3 HTML Tags Accuracy: 3 CSS Tag Accuracy: 3 Text + Content: 1	13
<a href="#">Zaher Choudhury</a>	Usage of Bootstrap's Column System: 5 Using Bootstrap's Components: 3 HTML Tags Accuracy: 5 CSS Tag Accuracy: 5 Text + Content: 1	19
<a href="#">Alexa Nunez</a>	Usage of Bootstrap's Column System: 5 Using Bootstrap's Components: 3 HTML Tags Accuracy: 5 CSS Tag Accuracy: 3 Text + Content: 1	17
<a href="#">Justin Oritz</a>	Usage of Bootstrap's Column System: 3 Using Bootstrap's Components: 3 HTML Tags Accuracy: 5 CSS Tag Accuracy: 5 Text + Content: 1	17
<a href="#">Yulisa Saavedra</a>	Usage of Bootstrap's Column System: 5 Using Bootstrap's Components: 3 HTML Tags Accuracy: 5 CSS Tag Accuracy: 5 Text + Content: 1	19

## Period 5

Student	Detailed Rubric Ratings	Rubric Rating Unit 3 JavaScript
<a href="#">Christopher Arturo Perez</a>	Variables: 5 Functions: 3 Conditionals: 3 JavaScript Functionality: 1 Game Creativity: 5	17
<a href="#">Matthew Moscol</a>	Variables: 3 Functions: 3 Conditionals: 3 JavaScript Functionality: 1 Game Creativity: 5	15
<a href="#">Navidra Basil</a>	Variables: 5 Functions: 3 Conditionals: 5 JavaScript Functionality: 3 Game Creativity: 5	21
<a href="#">Wilbert Medina</a>	Variables: 3 Functions: 5 Conditionals: 3 JavaScript Functionality: 1	17
	Game Creativity: 5	
<a href="#">Zaher Choudhury</a>	Variables: 5 Functions: 5 Conditionals: 5 JavaScript Functionality: 5 Game Creativity: 5	25
<a href="#">Alexa Nunez</a>	Variables: 5 Functions: 3 Conditionals: 5 JavaScript Functionality: 1 Game Creativity: 5	19
<a href="#">Justin Ortiz</a>	Variables: 5 Functions: 5 Conditionals: 3 JavaScript Functionality: 1 Game Creativity: 5	19
<a href="#">Yulisa Saavedra</a>	Variables: 3 Functions: 3 Conditionals: 1 JavaScript Functionality: 1 Game Creativity: 5	13

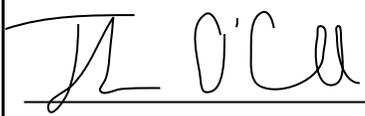
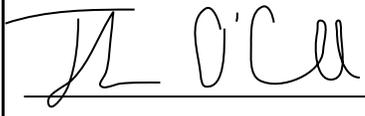
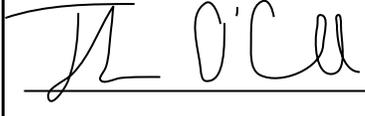
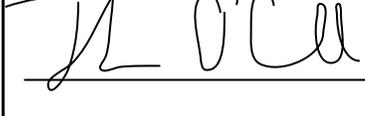
## Template for Inventory Checklist:

### Code/Lehman Inventory Checklist

Lehman High School

Instructors: Jose Ortiz, Natasha Green

C/I Reporting By: Zuzanna Kobrzynski, Tom O'Connell

Check-In Month	Total # of Laptops	Condition of Laptops	Signature
December	30	# Poor: # Fair: # Good: # Excellent: 30	
January	30	# Poor: # Fair: # Good: # Excellent: 30	
February	30	# Poor: # Fair: # Good: # Excellent: 30	
March	30	# Poor: # Fair: # Good: # Excellent: 30	
Delivered to Lehman College  Date:  3/26/2018	30	# Poor: # Fair: # Good: # Excellent: 30	

## 4. Acquisitions

Using funding from the City Council students and instructors were given Chromebooks, Chromebooks carts to use in the classrooms. Snacks, such as sandwiches and pizza, and Metro Cards were also provided to the students throughout the training.

## 5. Training Calendar

See (Appendix H)

## 6. Students' Graduation

### 6.1 Students letters

See (Appendix I) for student letters to City Council.

### 6.2 End of class survey

See (Appendix J) for student end of class survey.

### 6.3 Photos and links to the video from the Graduation day.

Pictures and videos are contained inside of [this Zip Folder](#) inside of the Google Drive.



## C. Small Business Consulting Practice



Students learning about web site design with teacher, Ariel Maduro.

## 1, Overview

As higher education continues to adapt to new expectations from students, hands-on (“experiential”) learning in business programs has become more important. Graduating students need to build skills, which can only be taught via experiential learning.

Using funding from the City Council, the Small Business Consulting Practice is designed to accommodate the demanding work and academic schedules of 30 accounting and business students, divided into two cohorts. The program, managed jointly by the School of Continuing and Professional Studies and the Department of Economics and Business, consist of 60 hours of training in marketing (including website development and how to use social media), procurement of government contracts, Excel and PowerPoint. It also provides them with the opportunity to work with small businesses, chosen and supported by the Small Business Development Center (SBDC). Students that have been selected by the Economics and Business department have taken prerequisite courses in business, management, and accounting. The program will serve two distinct purposes. (1) to deliver technical training, not generally available through the undergraduate curriculum to Lehman College undergraduates and (2) to simultaneously provide consulting services to small businesses (especially tech companies) in the Bronx through the SBDC.

The SBDC will recruit small businesses and startups interested in receiving free consulting services from the “Small Business Consulting Practice” students. Students from Part One (training) will form the Small Business Consulting Practice Group and will be housed inside Lehman’s CUNY on the Concourse (COTC) Innovation

Lab/Technology Incubator. The students will support local businesses by providing consulting services in the areas of technology and business in collaboration with business advisors from the Small Business Development Center.

Department of Economics and Business will offer an online course for credit for the summer internship so that students can reflect critically and constructively on their internship while building upon the work experience to advance students' careers. This reflection includes assessing how the coursework relates to the students' job and career plan, and what additional skills they may need. Students in the 2<sup>nd</sup> Cohort will be able to earn 4 credits for the 60 hour training, pending approval by the University Curriculum Committee

## **2. Program Plan/ Narrative**

Lehman College has enhanced its two existing incubators, Bronx Business Incubator and Innovation lab (IT Incubator) at CUNY on the Concourse. The goals are to develop a pool of talent, create the foundation to attract high tech startups in the Bronx, and simultaneously enhance Lehman's academic excellence and student success. Additionally, it aims to leverage the resources of the college and Bronx businesses while promoting collaborations between the two. The key to Lehman's approach has been to combine skills development with an appropriate level of classroom instruction in management theory while offering a full range of entrepreneurial support and technical training. The Bronx Business Incubator and the IT Incubator provide the local small businesses and startups with flexible office space, technology and the business support in

which to bring their business plan from concept to reality and move to the next level. New York City Council funding will allow Lehman College SCPS to initiate, plan and implement the Small Business Consulting Practice program:

## **2.1 Part one: Training, Certificates, and Credentials**

### Cohort 1

Spring 2018

Summer 2018

### Cohort 2

Summer 2018

Fall 2018

The program is designed to accommodate up to 30 Lehman College undergraduates from the Economics and Business Department. This will be accomplished by utilizing technology and various methods of instruction such as online, hybrid, face-to-face as well as flipped learning to support student experiences.

Lehman students who want to enhance their knowledge in a specific area of business will obtain certifications of professional achievement and Continuing Education certificates through this program. These credentials will also benefit those students who plan to pursue graduate degrees in business and related areas.

### Lehman's School of Continuing and Professional Studies:

Students from Lehman's Department of Economics and Business, as well as other interested students, will benefit from 4 non-degree courses taught by Continuing Education teachers and SCORE instructors. Students will enhance their competencies by learning extra skills and gaining credentials. This course will also increase their employability by receiving extra badges/certificates that will benefit them significantly. Students will learn to think critically and

to apply this knowledge to new situations by analyzing information, effectively communicating with clients, collaborating to solve problems, and making decisions that will help enhance small businesses.

Course subjects include:

(March 14 – August 8)

- Selling to Government (March 14th & 21st), 6 hours (2 sessions) SBDC/SCORE
- Web Development (March 28th-May 2nd), 15 hours (5 sessions) Ariel Maduro
- Marketing, Social Media (May 9th-May 30), 12 hours (4 sessions) Daphne Leblanc
  
- Excel and Power Point (June 6th-August 8th), 27 hours (9 sessions) CE Teachers (12 hours PPT + 15 hours Excel).

Total training: 60 hours

### Lehman's Department of Economics and Business:

The mission of the Department of Economics and Business is to serve the Bronx and surrounding region. The Department achieves this by providing the highest quality education in business, economics and accounting while also educating our students on how to become successful and socially responsible leaders. Lehman provides students with an academic environment that embraces diversity and fosters personal growth and development.

(Chair: Dr. Dene Hurley)

Students will be recruited for the SBCP program from Lehman's Department of Economics and Business, as well as the Computer Information Science Department and others during Part One of the program.

## **2.2. Part Two: Forming the “Small Business Consulting Practice”**

### Experiential Learning:

Selected students from Part One (training) will form the Small Business Consulting Practice Group and will be housed inside Lehman’s CUNY on the Concourse (COTC) Innovation Lab - Technology Incubator. The students will support local businesses by providing technological and business consulting services in collaboration with business advisors from the Small Business Development Center.

### Innovation Lab and Technology Incubator:

\_SCPS is administering programs that help entrepreneurs launch technology products and businesses through the use of the City funded tech Incubator. The incubator space will be given to Lehman students for the duration of one year, to operate from and implement the Consulting Practice.

Lehman’s Career Exploration & Development Center (CEDC): The CEDC assists Lehman students with their transition from college to career and all phases of their career development. CEDC services include counseling and career exploration, deciding on a major, developing connections with employers and assisting in the acquisition of internships. CEDC will lead the student recruitment process during the part two phase (forming the “Small Business Consulting Practice”).

Students will receive stipends of \$12.50 per hour, for up to 19 hours per week, for 12 weeks (\$2,850) or a one-time fee of \$750 if they

cannot make the internship commitment but still want to be part of the Practice. Students will be expected to sign an agreement/contract to complete the workshops and the internship/consulting project before they will be given a stipend.

### **2.3. Part three: Recruitment of Bronx Small Businesses**

#### **Small Business Development Center (SBDC):**

Lehman College has operated a Small Business Development Center since 2000. It annually counsels an average of 700 business owners and aspiring entrepreneurs and provides training to 850 people. SBDC will recruit small businesses and startups interested in receiving free consulting services in the areas technology and business for the “Small Business Consulting Practice”. SBDC will continue to support their business growth through counseling people on government contract procurement, access to capital and MWBE certification where appropriate. We expect 200 small businesses will be impacted by this resource in year one.

#### **Bronx Business Incubator:**

The Bronx Business Incubator offers services for startups and businesses expanding in the Bronx. Funded by the city council, the Business Incubator space enables entrepreneurs to bridge the gap between plans and execution. The services provided by the Small Business Consulting Practice and SBDC will include a full suite of free business management support, technological services, and access to loan programs and early stage capital for eligible businesses. SCPS and SBDC will recruit and incubate 10 Bronx Startups after series of screenings and interviews.

### **3. Timeline**

#### **Cohort 1**

February 21st: Open house for recruitment of undergraduate business students who have completed BBA 204, ACC 171, ACC 272, ECO 166 and ECO167.

Mid-March-August: Accepted students (30) will be trained through four non-credit workshop/courses on marketing & technology, social media, selling to government, Excel and Power Point which will be delivered by SCPS faculty and SCORE consultants. At the same time local small businesses will be recruited by the Small Business Development Center.

Summer 2018: Students begin internships with SBDC or start consulting with small businesses under the supervision of the Small Business Development Center in SCPS.

#### **Cohort 2**

An optional second cohort can begin in summer 2018 and follow the same schedule as above. This is to accommodate the total of 30 students if the cap was not achieved in Cohort 1.

### **4. Eligibility criteria**

Students must have completed:

BBA 204, ACC 171, ACC 272, BBA 204, ECO 166, and ECO 167.

Small business must:

- M/WBE - certified or looking to become certified [optional]

- Start-up or existing
- Credit worthy and Ready to launch or looking to expand

## **5. Benefits for the students in the Department of Economics and Business**

This initiative bridges classroom learning with hands-on experience in various business functions. It also will provide business and accounting students with opportunities to not only develop and deepen their business skillset and knowledge, but will also give them an edge in the job market by having practical business experience.

As part of its long-term commitment to this initiative, in *Spring 2018*, the Department of Economics and Business has researched and proposed two "experiential courses. They are made up of training material, similar to those developed by SCPS faculty and SCORE consultants, to prepare students to get ready for internships or consulting. These courses need to get the approval through the formal channels which include the department, the Lehman Undergraduate Curriculum Committee (UCC), Lehman Senate etc. Thus, the experiential learning courses may not be available for students until fall 2018 at the earliest.

## **6. Benefits for businesses**

Businesses will be able to access valuable information and skills for marketing and promoting their businesses. They will also have access to additional manpower at no charge, while using the facilities at the Tech Center (Bronx Business Incubator and Innovation lab -- IT Incubator).

## 7. Open House pictures



## 8. Student Recruitment Process

See (Appendix K) for Student Recruitment Flyer and Student application templates.

See (Appendix L) for Student completed applications.



### **Small Business Consulting Practice**

**Background:** The Small Business Consulting Practice project is a CUNY New York City funded project involving a collaboration between the Department of Economics and Business and School of Continuing and Professional Studies (SCPC). The goal of this project is to provide business students with applied business training and experience. A total of 30 students will be selected for the project in two cohorts of 15 students each, with the first cohort starting in Spring 2018 and the second cohort in Fall 2018. Students who are selected will **commit by signing a contract** to attend training workshops once per week during the first five months followed by 6 weeks of internships with Small Business Development Center (SBDC) or working as consultants with a small business in the business incubator under the supervision of the Small Business Development Center consultants. This initiative, which bridges classroom learning with hands-on experience in various business functions, provides business, economics, and accounting students with opportunities to not only develop and deepen business knowledge and skills, but also will give them an edge in the job market through acquiring of business experience.

#### **Time Line**

##### **Spring 2018 cohort**

**March 14 – August 8:** Attend 4 training workshops on Wednesdays afternoon as follows:

- Selling to Government (March 14 & 21), 6 hours ..... (2 sessions)
- Web Development (March 28 - May 2), 15 hours ..... (5 sessions)
- Marketing & Social Media (May 9 - May 30), 12 hours ..... (4 sessions)
- Excel and Power Point (June 6 - August 8), 27 hours ..... (9 sessions)
- Total: ..... 60 hours

**July 23 - end of August:** Internship or consulting with small businesses and complete a paid internship course

##### **Fall 2018 cohort (tentative dates)**

**September 5, 2018 - Jan 2, 2019:** Attend 4 training workshops on Wednesdays afternoon as listed above.

**January 7, 2019-February 11, 2019:** Internship or consulting with small businesses and complete a paid internship course

**Who qualifies?** Students who (1) **have completed** ACC 171, ACC 272, BBA 204, ECO 166, and ECO 167, and (2) **can commit to attend workshop** on above Wednesday dates for training and work for 6 weeks from July 18-end of August.

**What do you gain?** Applied business experience **PLUS** stipends **PLUS** 3 credits from a fully paid internship course.

**How do I apply?** You must complete and sign the application form, provide typed written answers to questions on the form and a resume. **These documents must be scanned and submitted by email to Ms. Deirdre Constant, not later than 5PM on February 24<sup>th</sup>.** Selected students will be notified by email February 27<sup>th</sup> and will be **REQUIRED** to attend an orientation session at 3:30PM-5PM on February 28<sup>th</sup>. Location of this meeting to be provided by email.



## Small Business Consulting Practice

### Application Form

**Instructions:** Complete this application form. The completed and signed form, answers to the questions provided below, and your resume must be scanned and submitted by email to Ms. Deirdre Constant ([Deirdre.Constant@lehman.cuny.edu](mailto:Deirdre.Constant@lehman.cuny.edu)) by 5PM on February 24<sup>th</sup>.

FULL NAME (print): \_\_\_\_\_ Emplid: \_\_\_\_\_

EMAIL: \_\_\_\_\_ PHONE: \_\_\_\_\_

INTERESTED IN (select one):  Spring 2018 Cohort  Fall 2018 Cohort

MAJOR: \_\_\_\_\_

CHECK COMPLETED COURSES:  ACC 171  ACC 272

BBA 204  ECO 166  ECO 167

**Use a separate sheet to type the answers to the following questions:**

1. Why are you interested in participating in this project? (200 words max)
2. What will you contribute to this project? (200 words max)

If selected

1. I agree to attend ALL Wednesday afternoon training sessions,
2. I commit to 6 weeks of internship/consulting.
3. I also agree to sign a contract to this effect.

Print name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 9. Student Contracts

See Student Contract template below and refer to (Appendix M) for Students Signed Contracts.

*February 28, 2018*

**Small Business Consulting Practice Agreement**

**Spring 2018-Summer 2018**

The Small Business Consulting Practice project is a New York City funded project involving a collaboration between the Department of Economics and Business and the School of Continuing and Professional Studies (SCPS). The goal of this project is to provide business students with applied business training and experience. Students who elect to accept the offer to participate in the Small Business Consulting Practice program agree to the following:

**THE AGREEMENT**

By signing below, I agree to participate in and commit to complete the Small Business Consulting Practice Program which runs from February 28-August 25, 2018.

I agree to accept and satisfy the following specific terms:

- Attend all the following training workshops covering four topics on Wednesdays afternoons as follows:
  - Selling to Government (March 14 & 21), 6 hours ..... (2 sessions)  
No class April 4
  - Web Development (March 28 - May 2), 15 hours..... (5 sessions)
  - Marketing & Social Media (May 9 - May 30), 12 hours ..... (4 sessions)
  - Excel and Power Point (June 6 - August 8), 27 hours..... (9 sessions)  
No class July 4

Total:..... 60 hours
- Between July 23- August 25, work as an intern or consult with a small business under the supervision of the Small Business Development Center advisors.
- Register for and successfully complete a paid internship course (BBA 370) between July 11 and August 18.
- Meet with and report regularly to the Small Business Practice Coordinator upon starting the internship/consulting project.

School of Continuing and Professional Studies will make good faith effort to provide the following:

- at the end of the program in August for a student who satisfies and completes the above stated terms:
  - A stipend of \$12.50 per hours for up to 19 hours per week for up to 12 weeks of consulting/internship (\$2,850) or a one-time fee of \$750 if the student can not make the internship commitment but is a part of the Practice.
- Pay tuition for the student to take the internship course during Summer Session E (July 11-August 18, 2018)

**In signing this form, I also acknowledge that I understand and agree to the commitment outlined above.**

Print Name: \_\_\_\_\_ Emplid: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 10. Credit Course

Below is the 4 credit course description/curriculum change request to earn credits for the 60 hours workshop as developed by the Department of Economics and Business? Students in the 2<sup>nd</sup> Cohort are expected to earn these credits.

Department(s)	Economics and Business
Career	<input checked="" type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate
Academic Level	<input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial
Subject Area	Business
Course Prefix & Number	BBA 466
Course Title	Business Consulting
Description	Promote understanding of theory and practice of providing management consulting to businesses through a framework for understanding the art and science of providing management counsel to businesses. Instruction incorporates use of technology to support and enable business functions. <b>NOTE:</b> Upon completion of this course, students will spend XX hours at a field placement.
Pre Requisites	ACC 171, ACC 272, ECO 166, ECO 167. Departmental permission required
Credits	4
Liberal Arts	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Course Attribute (e.g. Writing Intensive, WAC, etc.)	
General Education Component	<input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input type="checkbox"/> Science  <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

## **Rationale:**

The course promotes an understanding of business consulting and its various aspects while allowing students to acquire necessary skills in strategic planning, marketing and social media, technology, and financing and financial analysis, needed to assist, develop, and grow businesses. Unlike other business courses that concentrate narrowly on a particular function of the business, this course encompasses a spectrum of business and management. Additionally, it provides the opportunity for students to gain hands-on experience and application of various tools used in areas of marketing, sales and web development with the goal of providing a valuable service to businesses in both private and public sectors.

This course is designed specifically for students who upon of the course will work with Bronx-based businesses, as part of the Small Business Consulting Practice program, collaboration between Department of Economics & Business and School of Continuing and Professional Studies.

## **Learning Outcomes (By the end of the course students will be expected to):**

- Demonstrate understanding of the business consulting process including the ability to explain what business consultants do, who they work for and how they create value.
- Develop techniques and utilize skills for effective consulting, including in strategic planning, marketing and social media, technology and financing, and creating, presenting, and implementing recommendations.
- Conduct a field consulting project.

- Prepare and deliver written and oral presentations.
- Work collaboratively and effectively in teams.

Departmental Approval is required and currently in-process, second cohort students are expected to receive the 4 credits.

## **11. Online Course**

Department of Economics and Business will offer an online course For credit for the summer internship with the goal to reflect critically and constructively on academic internship to build upon the work experience in order to advance student's careers. This includes figuring how the coursework relates to job and career plan, and what additional skills students may need. See (Appendix N) for the Online Course syllabus.

## D. Virtual Reality Training Academy- EON



As a result of City Council funding which made possible the renovation and development of CUNY on the Concourse Lehman College has been able to create an Information Technology Hub in the Bronx. The business incubators are part of Lehman's multi-year vision which now includes a Virtual Reality Training Academy and Development Lab to train the borough's growing sector of technology professionals. As industries continue to be disrupted by technological advances, new fields are emerging and workers will need retraining to adapt and stay competitive. Augmented and Virtual Reality are some of the fastest growing sectors of our economy. These technologies are spreading far beyond the gaming world and into business and education, where its being used to train employees and better educate students. The Virtual Reality Training Academy and Development Lab at Lehman College (CUNY) teaches the skills needed to create Virtual Reality and Augmented Reality applications for industry and education covering many diverse fields, including: architecture, product visualization, game creation,

multimedia design, and broadcast media. In this fast-track program, students receive 10 months of training, including 6 months working directly on real-life projects in different market segments.

While training exists for many parts of AR and VR, there are very few programs that cover the multidisciplinary nature of the industry. Fewer still incorporate project-based learning. Through a comprehensive curriculum that targets the key areas of AR and VR, we will educate the content creators that will shape the future of education, training, and entertainment.

Following are Virtual Reality Innovation Academy achievements in 2017-2018:

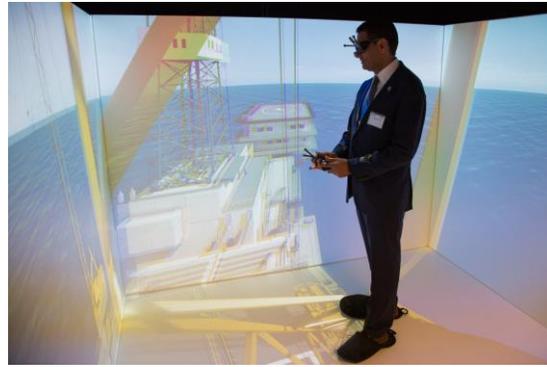
### **1. VR/AR Grand Opening**

The official launch of Virtual Reality Training Center was on May 17, 2017 at CUNY on the Concourse. Ribbon cutting and inauguration speeches kicked-off with President J.L. Cruz's welcome note and introduction to Bronx Borough elected officials, entrepreneurs and alumni. Mats W. Johansson, President, EON Reality was among guest speakers.

The new Academy and Lab focuses on training students to become AR and VR developers and on developing new AR and VR knowledge transfer applications. These efforts directly benefit Lehman's students as the focus of the Academy is on core areas of interest for Lehman College. Students from the Academy also leverage EON Reality's AVR Platform developing content for the Virtual Trainer, AR Knowledge Injection, and EON Creator AVR.

According to the Chairman of EON Reality: “By bringing our experience in development and training together with Lehman College’s subject matter expertise in continuing education, we hope that together we can help prepare students, new and old, for their dream careers. While initially focused on the needs of Lehman College’s students, we intend for the applications developed here will help students in the CUNY system and in the greater region.” “This vital partnership with EON Reality is a great example of how Lehman is cementing its place as the most important, mission-critical senior college of The City University of New York,” said José Luis Cruz, President of Lehman College. “This effort will provide our students with invaluable, state-of-the-art experiential training and position them for career opportunities in the burgeoning VR/AR industry.”

As established industries continue to be disrupted by technological advances, workers who have been displaced will need retraining to find a new trade. This along with the increasing amount of knowledge needed and shrinking budgets necessitates a faster knowledge transfer solution, such as VR and AR, to teach more with less time and less money. The Virtual and Augmented Reality industries are quickly growing and require an infusion of talent to meet the market’s demands.



## 2. Graduation, EON Reality Certified AR/VR Developers

Eighteen students at Lehman College VR/AR Training Academy completed Training Phase 1 (Coding and animation).

They continued their training during the second half of the program by working on various projects collaboratively to build their portfolios. Phase 2 (project phase) will concluded on April 21<sup>st</sup>.

Students will receive the Certificate of Completion and become EON Reality Certified AR/VR Developer Level 2. EON is committed to hire

3 students after this phase. The selected students will be housed inside the IT incubator for duration of one year.



### 3. Media and News broadcasts

Lehman College VR/AR Training Academy was visited by various media and news channels. Below are some of the links to the reports from CUNY TV, CNBC, NBR, Bronxnet and News 12.

#### a) CUNY TV

<https://youtu.be/Xh5sU5jmC60?t=453>

<https://youtu.be/-cNKiygQ0D0?t=1232>

#### b) CNBC

<https://www.cnbc.com/2017/12/08/virtual-reality-continues-to-grow--but-supply-of-workers-is-limited.html>

<https://www.cnbc.com/video/2017/12/08/virtual-and-augmented-reality-industry-creates-demand-for-real-jobs.html>

<https://www.cnbc.com/video/2017/12/08/new-york-city-to-open-another-training-facility-for-cuny-lehman-college.html>

<http://nbc.com/2017/12/08/nightly-business-report-december-8-2017/>

### c) BronxNet

<https://www.bronxnet.org/watch/videos/462/>

### d) News12

<http://bronx.news12.com/clip/13338720/lehman-college-opens-virtual-reality-lab>



## 4. Career Panel, breaking into the VR/AR industry in collaboration with NYC Media and Entertainment

The "Made in NY" Talks Series presents a variety of free programs exploring multiple topics within the media and entertainment industry.

Mayor's Office of Media and Entertainment and Lehman College collaborated for yet another innovative Career Panel Presented on December 5, 2017.

Program was focused on the goals of career development, networking, training and jobs.

Links to the venue's video:

<https://youtu.be/qGHho4IrVtU>



## 5. City of Science Bronx

City of Science returned to the Bronx, Lehman College VR class 2017 joined the World Science Festival of science, technology, engineering, and math collide. Filled with interactive demonstrations, hands-on activities.



## 6. NYVR Expo 2017

Lehman College VR/AR Training Academy was the single VR training program to participate at NYVR Expo 2017 on October 27-28 at Jacob Javits Center NYC. Students attended and presented their projects to industry professionals.



## E. Scholarships to Computer Information Systems majors

Scholarships for A+ technician and Certified Networking Academy were offered to 21 Lehman College students during summer, fall 2017 and spring 2018. The selection and evaluation was based on CIS major students' number of credits and GPA within the required courses. Below is a list of students who received the scholarships.

The number one criterion for selection was that students should have completed the course, taken and passed the certification.

1st and second cohorts in CIP120 and CIP225 were concluded in fall 2017. All students passed the class except Jackeline Rosero who dropped due to a family emergency. Please refer to the (Appendix O) for reference to the completion letters and registration receipts.

### Summer 2017:

A+ CIP120:

1. Mohammad Rahman C
2. Raphy Gutierrez A+ certified
3. Christopher Fitzpatrick A
4. O'Neill Fulcott A+ certified
5. Jackeline Rosero W

### Fall 2017:

A+ CIP120:

- 1) Xabiel Castillo A
- 2) Riguel Rodriguez A
- 3) Jose Bueso Alfaro A
- 4) Andy Lorenzo A-

CCNA1 CIP225:

- 1) Raphy Gutierrez A-

- 2) Julian Marin-Jiminez A-
- 3) Alisa Hamilton A-
- 4) Garrett Banks B+
- 5) Daniel Mejia C+
- 6) Joseph Xavier A-

**Spring 2018:**

## A+ CIP120:

- 1) Samuel Asiedu Dropped
- 2) Christian Adonbisono (continuing)
- 3) Ronald Espinal “
- 4) Ana Davis “

## CCNA1 CIP225:

- 1) Orlando Roche (continuing)
- 2) Indira Castillo “
- 3) Lourdes Rodriguez “
- 4) Xabiel Castillo “
- 5) Riguel Rodrigiez “
- 6) Joe Bueso Alfaro “
- 7) Andy Lorenzo “

## CCNA2 CIP226:

- 1) Raphy Gutierrez (continuing)
- 2) Julian Marin-Jiminez “
- 3) Alisa Hamilton “
- 4) Garrett Banks “
- 5) Daniel Mejia “
- 6) Joseph Xavier “

## F. Overall Budget (April 2017-April 2018)

<b>IT Incubator Budget, Estimated cost FY 18</b>		<b>\$450,000.00</b>
<b>Personnel</b>		<b>\$</b>
1	Computer Science After-School at Lehman High School	\$99,000.00
2	Small Business Consulting Practice	\$282,450.00
3	Virtual Reality Training Academy	\$15,188.00
4	Scholarships to Computer Information Systems majors	\$28,362.00
<b>Total Personnel</b>		<b>\$425,000.00</b>
<b>OTPS</b>		
1	Food and snacks	\$5,000.00
3	Badges and certificates	\$5,000.00
4	IT incubator website	\$10,000.00
5	Maintenance	\$5,000.00
<b>Total OTPS</b>		<b>\$25,000.00</b>
<b>Grand Total</b>		<b>\$450,000.00</b>