



# **Marine Biology Research Program**

## **Professional Advisory Committee 2016**

12/07/16

### **Greetings Professional Advisory Committee (PAC),**

Welcome to the 2016-2017 PAC meeting. I thank you for taking the time from your busy schedule to further support the Marine Biology Research Program (MBRP) and our Career and Technical Education Program (CTE) in the New York Harbor School (NYHS).

Since the program was certified over three years ago the MBRP accomplished the following with your support:

01. 32 MBRP scholars have received the State's CTE seal – a school high by far,
02. 98% of all students who took the NOCTI Natural Resources Systems assessment passed,
03. 154 college credits were awarded through SUNY Albany's UHS program in Science Research Methods and the NOCTI assessment,
04. Over 88 paid internships have been completed,
05. Nicolle Martinez was the recipient of the Gates Millenium Scholarship and was a runner up to represent NYC in the International Science and Engineering Fair – ISEF,
06. We ran our 5<sup>th</sup> annual NYHS Science Symposium with over 206 projects and running, among other accomplishments.

Today we will work on the following two main questions:

01. Are the Program's curriculum sequence and assessments adequate? (See attachments)
02. Can the Program's proposed projects pass an SCR/IRB and completed projects fulfill basic college paper requirements?

If we run out of time again, I ask that you to take this packet with you and provide additional comments at your leisure and send it to me as a scan or in an envelope I'll provide you. I thank you immensely for your support and look forward to improving the Marine Biology Research Program with your ideas and comments.

Wishing you all the best for the Holiday Season,

**Mauricio Gonzalez**

Director Marine Biology Research Program

Name \_\_\_\_\_ Organization \_\_\_\_\_ e-mail \_\_\_\_\_

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## Program Description



**Lead Instructor:** Mauricio González, M.Sc. (mgonzalez@nyharborschool.org; website: [www.harborseals.org](http://www.harborseals.org))

### About the Instructor:

Mauricio joined NYHS in 2010. He pursued a degree in Marine Biology in the Colombian Caribbean with a full scholarship. While working as park scientist at the Tayrona National Park he conducted research, wrote a thesis book on coral reefs, cured sick sea turtles, defended turtle eggs from poachers, and conducted environmental workshops with local fishermen. With this experience, he returned to New York in 2001 and immediately began to work at schools with underrepresented youth to instill marine conservation values through serious scientific inquiry. He is currently an adjunct professor of research through SUNY Stony Brook and SUNY Albany, lives in Harlem with his wonderful wife, and, when not working, practices martial arts and listens to 80s punk from Chicago's finest forges.

### Program Overview:

The MBRP is a three-year program that will jump start you in core marine science topics employing hands-on, problem-based learning strategies. In these challenging college level courses, you'll begin by creating Aquatic Ecosystem Models to learn the basics in biology, ecology, and oceanography. As an intermediate student you'll acquire college level reading, writing, and statistics skills while creating a project. As an advanced student, you'll finish your research project with the help of a scientist and, ultimately, use your own data to propose resource management solutions for the Hudson-Raritan Estuary. Along the way, you'll learn how to manage projects, submit professional reports, and present at national and international conferences. You'll also be given important career development opportunities such as career exploration techniques, ePortfolio development, and internships with scientists. Throughout the program you'll be eligible for college credit and various certifications that will give you a competitive advantage in college and industry. Research scholars in this program have gone on to universities such as Fordham, Columbia, MIT, Carnegie Mellon, Vanderbilt, Brown, and the University of Pennsylvania with full scholarships to pursue careers in Marine Biology, Environmental & Mechanical Engineering, Finance, Medicine, Veterinary Medicine, and other challenging careers. They have also won 1st and 2nd prize in the NYC Science and Engineering fair over all public and private schools in the city.

### College and Career Ready Credentials and Skills:

- 18 college credits that can be transferred to most colleges,
- Map making (ArcGIS SPACE - Geographic Information Systems certificate),
- Resource management and conservation (NOCTI Natural Resources certificate),
- Financial Management (EverFi certificate),
- Research project management (NYCSEF & UBP certificate),
- Rigorous foundation in marine science (i.e. aquatic chemistry, ecology, genetics, microbiology, etc.),
- Rigorous foundation in professional research (i.e. technical reading & writing, and applied statistics),
- 21st Century skills: grit, problem solving, leadership, team work, information technology, creativity, etc.

Name \_\_\_\_\_ Organization \_\_\_\_\_ e-mail \_\_\_\_\_

## Research Project Brainstorm

**Directions.** In the Chart below, please indicate what types of research topics should be explored by students in the MBRP. Also, please indicate whether you or someone you know would be accessible to advise students on the ideas you provide.

Topic Brainstorm	Comments	Can you be a potential Mentor/Advisor? Yes / No

Name \_\_\_\_\_ Organization \_\_\_\_\_ e-mail \_\_\_\_\_

## Professional Guest Visits

**Directions.** A very important component to the program is professional guest visits. They serve to put college and industry into focus for MBRP students and serve as promotional pieces to your career and places of work. In the chart below please indicate whether you or a designee would be willing to visit our Program, topics you would consider presenting about, and potential dates of visits. When asked, I usually tell guests to speak about the college process, expectations, and rewards. I also ask guests to speak about the research process. To finish off a visit, I would ask guests to speak about their research passion or specific area of work. There is no commitment if you decide to schedule a visit and need to cancel.

Name _____ Organization _____ e-mail _____	
I am interested in scheduling a visit to the NYHS	Yes _____ No _____
Proposed date(s):	
Proposed date(s):	
I know someone who may be interested	Yes _____ No _____
Add Name(s) + Organization + e-mail	
Add Name(s) + Organization + e-mail	
Add Name(s) + Organization + e-mail	

Name \_\_\_\_\_ Organization \_\_\_\_\_ e-mail \_\_\_\_\_

## Curriculum and Assessment Support Letter Draft

[Organization Letter Head]

mm/dd/yy

**Mauricio Gonzalez**

**Marine Biology Research Program**

Urban Assembly New York Harbor School

Battery Maritime Building

10 South Street

Slip 7

New York, NY 10004

Dear Mauricio Gonzalez and UA New York Harbor School,

I am aware that the Marine Biology Research Program (MBRP) is currently looking for NY State recertification as a Career and Technical Education Program. I have reviewed the curriculum scope and sequence as well as the NOCTI Natural Resources Systems and Digital Quest's Geographic Information Systems "SPACE/STARS" assessments. I confirm that the curriculum and the assessments align with the MBRP course of study and the expectations of a college level course in the area of Natural Resources, Ecology, and Geospatial Technology. I therefore endorse and support the curriculum and the assessments used in the UA New York Harbor School's Marine Biology Research Program.

[Signature of director/manager/administrator of sponsoring institution/program]



Name \_\_\_\_\_ Organization \_\_\_\_\_ e-mail \_\_\_\_\_

## Internship Opportunity Letter

[Organization Letter Head]

Mm/dd/yy

**Mauricio Gonzalez**  
**Marine Biology Research Program**  
Urban Assembly New York Harbor School  
Battery Maritime Building  
10 South Street  
Slip 7  
New York, NY 10004

Dear Mauricio Gonzalez and UA New York Harbor School,

The skills that students receive in the Marine Biology Research Program at NY Harbor School align with those taught/required by [your lab/organization]. We are pleased to announce internship positions as [title] with [sponsoring institution/program], [mailing and web address]. The qualifications for the position are:

[list of qualifications - optional]

Duties and responsibilities may include:

[list of duties and responsibilities]

The period of this internship is [time period if available]. The position will require [number of hours per week] and the hourly wage is [stipend]. OR: This is an unpaid position and requires [number of hours per week].

[Signature of director/manager/administrator of sponsoring institution/program]





Name \_\_\_\_\_ Organization \_\_\_\_\_ e-mail \_\_\_\_\_

## MBRP PAC Checklist

**Directions.** Please check off the items that you have completed and/or will be able to support with. Also, please detach this form and leave it with Mauricio before you leave on December 5<sup>th</sup>.

ITEM	
Research Project Brainstorm (p. 4)	Completed    yes _____ no _____ Will be able to support yes _____ no _____
Professional Guests Visits (p. 5)	Completed    yes _____ no _____ Will be able to support yes _____ no _____
Curriculum and Assessment Support Letter (p. 6)	Will be able to support yes _____ no _____
Internship Brainstorm (p. 7)	Completed    yes _____ no _____ Will be able to support yes _____ no _____
Internship Opportunity Letter (p. 8)	Will be able to support yes _____ no _____
College/Industry Needs (p. 9)	Completed    yes _____ no _____ Will be able to support yes _____ no _____

**THANK YOU!!!**