The Nippon Foundation and POGO

Centre of Excellence in Observational Oceanography at the Bermuda Institute of Ocean Sciences
NF-POGO Centre of Excellence in Observational Oceanography

The goals of the C of E are to:

• **expand** the world-wide capacity to observe the oceans,

• **develop** human resources in developing countries, and

• **enhance** international networking in ocean sciences, with an emphasis on training young scientists from developing countries.
CofE
Scientific Themes
CofE Scientific Themes

Observational Oceanography / Nearshore Programs:

1. Hydrostation “S”, the longest, year-round database at one point in the open ocean;
2. Bermuda Atlantic Time-series Study (BATS);
3. Oceanic Flux Program (OFP); deep sea moorings
4. Bermuda Microbial Observatory;
5. Bermuda Bio-Optics Program (satellite oceanography);
6. Bermuda Atmospheric Monitoring Programs;
7. Global CO$_2$/Ocean Acidification Programme;
8. Marine Environment Program (nearshore research);
9. Bermuda Environmental Quality Program (local and global water /atmospheric systems).
CofE Facilities

- 22 science berths
- Dedicated student lab
- Rapid deepwater turn around
- Enthusiastic/helpful crew
Development of Core Skills
Workshops and on-going activities designed for students entering a graduate programme in oceanography.

Modules in Observational Oceanography and Scientific Ethics and Policy
Trainees are expected to take all modules, in all fields of expertise.

Training aboard the R/V Atlantic Explorer
Each trainee will spend as much time as possible at sea; other assignments modified according to the ship’s schedule.

Independent Research Projects
Each trainee will conduct an 'MS-equivalent' research project, submit written manuscript-style report, and final oral presentation to BIOS
Centre of Excellence – Format of Training:
• Ten students
• Ten months

Eligibility and Prospects:
• Trainees must have at least a first degree in science
• Applicants should currently hold a position in a research or academic institution in a developing country and anticipate returning to the country after completion of training
• Candidates should demonstrate immediate relevance of their training to on-going or planned ocean observations in their home country
• Students should have a history of working as part of a team
• The activities of the trainees will be monitored for years after completion of the course
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<tr>
<th>Year</th>
<th>Number of Applicants</th>
<th>Countries Represented</th>
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<tr>
<td>Year 1</td>
<td>69</td>
<td>36</td>
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<tr>
<td>Year 2</td>
<td>102</td>
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<td>Year 3 (in residence at BIOS)</td>
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<td>Year 4 (selected this week)</td>
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Selection Process:

Stage One

- BIOS Committee provides initial evaluation of applications
  - Pool reduced to 25 – 40 very high scoring applicants

Stage Two

- Input solicited from:
  - POGO Advisory Committee Members
  - POGO members from specific regions (e.g., Africa, South America)

Stage Three

- POGO Advisory Committee meeting (e.g., just after POGO-12 meeting in Korea)
- A list of finalists and alternates created and submitted to NF for review/approval
- Students invited to attend
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20 Countries
NF-POGO CofE
Hands-on, At-sea Educational Experiences
Centre of Excellence Programme Content:

Training promotes excellence in integrated, multidisciplinary oceanography on a global scale, with an emphasis on team building. The syllabus includes:

• Ship-board training on the R/V Atlantic Explorer

• Core skills
  (written and oral communication; numeracy; info/data tech; science management);

• Observational oceanography training with state-of-the art instrumentation
  (BIOS faculty/staff involved in the time-series/observatory programs);

• Course work
  (emphasis on theoretical & applied ocean observatories and operational oceanography);

• Workshops in Developing Counties led by NF-POGO Visiting Professors
  (e.g., Robert Frouin & Milton Kampel – Brazil 2010);

• Guest lectures/workshops
  (led by the numerous scientists who visit BIOS each year to work on the R/V Atlantic Explorer – and others)