The National Academies of SCIENCES ENGINEERING MEDICINE

Ocean Technology Field Academy

Empowering Ocean Stakeholders for a Sustainable Future

Hans VanSumeren[1] , Ed Bailey[1], Jason Slade[1], Liesl Hotaling[2]
1. Northwestern Michigan College 2. Eidos Education

The Ocean Technology Field Academy will support ocean focused communities and advance ocean understanding by providing competency driven microcredentials representing a participant's ability to exploit, enhance and promote sensors, sensor platforms, sensor networks, crewed and uncrewed underwater vehicles, sonar systems and data processing capabilities through:

- **Offering hands-on applications and collaborative projects focused on local needs;**
- **Collecting and processing baseline environmental data;**
- **Providing readily adaptable training modules;**
- **Providing a credentialing mechanism to accelerate the education of participants;**
- **Creating a network of industry support for technology and training opportunities.**

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To globally scale the Academy, the implementation will incorporate a "train-the-trainer" program in collaboration with partner institutions and include three rounds of training:

1. **Introduce and educate**
2. **Development of competency**
3. **Delivery of a local training regime.**

Ocean Technology Field Academy staff will create an industrial partners network to provide support through loaning equipment and training opportunities. This collaboration will also generate awareness of the program and add value to the microcredentials awarded.

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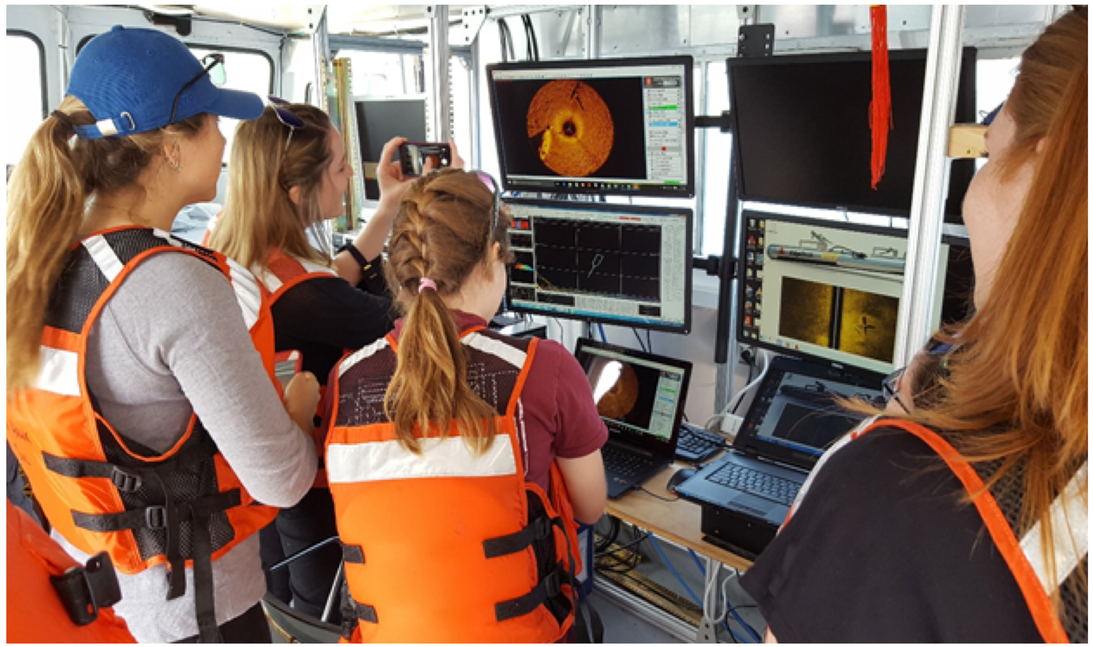
The goal of the Ocean Technology Field Academy is to democratize access to ocean exploration technologies including ROV, UAS, scanning sonar, ADCP, Lidar and use of supporting software in critical regions around the globe.

Participants in the Ocean Technology Field Academy will earn microcredentials in:

- **Applied Ocean Sciences**
- **Hydrography and Acoustics**
- **Sensors and Platforms**
- **Electronics and Programming**
- **Data Management**

To support and grow the program, the Academy staff will continue to seek collaborations with industrial partners, governmental agencies, academic partners and professional societies.



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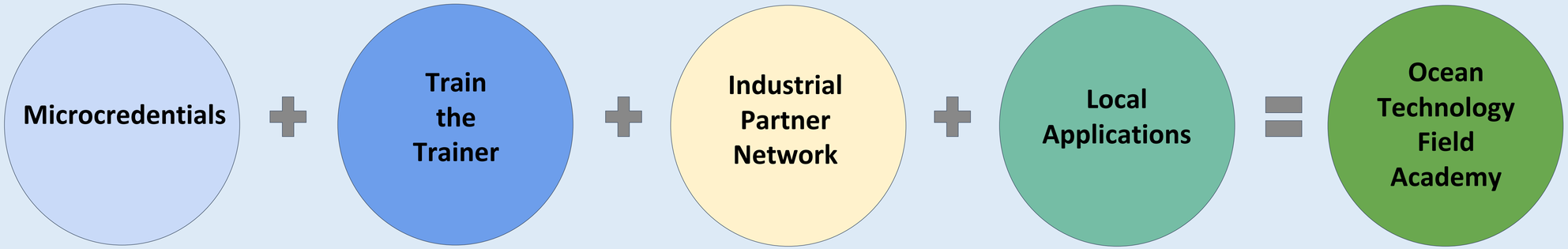
The skills focused program will provide hands-on access to the tools and information needed for capacity development of a local skillsforce prepared to address needs identified by The Decade:

- **Pollutants** (chemical, microplastics, nutrient loading, turbidity)
- **Ecosystems** (habitat/substrate, fisheries, acidification, invasive species)
- **Economy** (shipping, tourism, energy)
- **Climate** (sea level rise, increasing storm intensity, acidification, increasing temperatures)
- **Observing** (platform installation, data management, storm events, archeology)
- **Risk, Safety and Enforcement** (coastal infrastructure, marine protected areas, impact assessment)

This new skillsforce could assist scientists, engineers and the local government with continued monitoring, developing strategies, new capabilities and applications.



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