

Curso de posgrado:

Monitoring and Assessment to Support Freshwater Management

14 al 18 de setiembre - Facultad de Ciencias, UdelaR

Docente invitada: **Dra. Amina Pollard**, Environmental Protection Agency, USA

Docente responsable: **Dra. Mariana Meerhoff**, CURE-Facultad de Ciencias, UDELAR; Instituto SARAS²

Inscripciones: PEDECIBA Geociencias

Deadline: **23 de agosto**

Consultas: cursos@saras-institute.org

Organizan: **Instituto SARAS², CURE-UDELAR**

Financian: **Embajada USA y PEDECIBA Geociencias**

El curso está dirigido a estudiantes de Maestría y Doctorado, con cursos de Ecología, Limnología y/o formación equivalente, e interés en monitoreo y evaluación de calidad del agua y funcionamiento de los ecosistemas. Se dictará en idioma inglés, por lo que se espera amplio dominio del mismo a nivel de comprensión y conversación.

This course is designed to provide an overview for understanding water quality monitoring and assessment in freshwater ecosystems. The course takes a broad approach. We will discuss freshwater management objectives and focus on aspects of monitoring and assessment programs that can meet those objectives. The course should provide a good foundation for students wishing to work on water quality management and pollution control. The course should also be useful for students whose career paths are directed toward other areas of resource management.

Day 1 - Introduction

- Overview of water quality issues and management strategies in Uruguay
- Overview of water quality issues and management strategies in United States
- Small group exercise and report out to the class

Day 2 - Developing a monitoring and assessment program

- Identifying questions
- Sample design
- Indicator selection
- Small group exercise and discussion

Day 3 - Implementation

- Sampling
- Data management and quality assurance
- Analysis
- Small group exercise and discussion

Day 4 - Application

- Communicating results
- Stressor identification for unknown causes of degradation
- Small group exercise and discussion

Day 5 - Outreach

- Small group presentations: Using the discussions covered in the course, present a monitoring and assessment plan for a water quality issue
- Conclusions

Bibliografía

- Beaver, J.R., E.E. Manis, K.A. Loftin, J.L. Graham, A.I. Pollard and R.M. Mitchell. 2014. Land use patterns, ecoregion, and microcystin relationships in U.S. lakes and reservoirs: A preliminary evaluation. *Harmful Algae*, 36: 57-62.
- Culp J.M., D.G. Armanini, M.J. Dunbar, J.M. Orlofske, N.L. Poff, A.I. Pollard, A.G. Yates and G.C. Hose. 2011. Incorporating traits in aquatic biomonitoring to enhance causal diagnosis and prediction. *Integrated Environmental Assessment and Management* 7: 187-197.
- U.S. EPA. 2009. National Lakes Assessment- A Collaborative Survey of the Nation's Lakes EPA 841/R-09/001. U.S. Environmental Protection Agency, Office of Water and Office of Research and Development, Washington, D.C. April 2010
- Yuan, L.L. and A.I. Pollard. 2014. Classifying lakes to quantify relationships between epilimnetic chlorophyll a and hypoxia. *Environmental Management* 1-10.
- Yuan, L.L., A.I. Pollard, S. Pather, J.L. Oliver and L. D'Anglada. 2014. Managing microcystin: identifying national-scale thresholds for total nitrogen and chlorophyll a. *Freshwater Biology* 59: 1970–1981.