

Florida Springs Field School

SUMMER 2017 August 13-16, 2018

INSTRUCTOR Robert L. Knight/Howard T. Odum Florida Springs Institute
bknight@floridaspringsinstitute.org
www.floridaspringsinstitute.org
386-454-9369

CLASS SCHEDULE Detailed schedule included separately.

Description

Applied and theoretical aspects of the ecology and management of Florida's artesian springs.

Enrollment

This course is offered through the Howard T. Odum Florida Springs Institute (FSI) and not currently affiliated with any university. It is open to anyone with an interest in studying springs in detail.

Recommended Reading List

- 2008 - **Effects of Nutrients in Springs** (Brown, Knight, et al. - Florida Department of Environmental Protection)
- 2004 - **Springs of Florida** (Florida Geological Survey Bull. No. 66)
- 2002 - **First Magnitude Springs of Florida** (Florida Geological Survey Bull. No. 85)
- 2014 - **Silenced Springs: Moving from Tragedy to Hope** (Robert L. Knight)

Course Description

Florida's artesian (deep groundwater) springs are an important natural resource, providing the basis for extensive wildlife support and human recreation. These springs and the Floridan Aquifer that feeds them are under increasing threats from human activities, including flow reductions, nutrient increases, aquatic weed management activities, recreational impacts, and a variety of water resource development projects. A growing awareness of these problems is leading to a rapid increase in demand for knowledge about the basic chemistry, biology, and ecology of springs to be used for improved resource management. This course provides an overview of the current understanding of how springs are a product of their environmental surroundings and how they respond to management decisions.

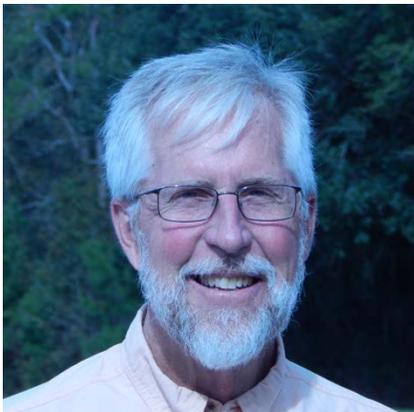
The Florida Springs Field School is scheduled for four days of lectures and field trips. The Springs Field School will be held at the Retreat at Silver Springs, 6455 E Silver Springs Blvd, Silver Springs, FL 34488,

which includes classrooms, a dining facility, air-conditioned cabins, and recreational opportunities, including a hiking trail. The Retreat is conveniently located east of Ocala in the City of Silver Springs, Florida, and is a short walk or drive from Silver Springs State Park entrance on US 40. Field trips are tentatively planned to Silver Glen Springs, Ocklawaha River/Rodman Dam, Silver Springs State Park, and the Ocala Wastewater Treatment Plant. The first day of the school (Monday, August 13th) will start at 10 AM with check-in and a course overview. Each succeeding day will consist of two to four hours of lectures and three to four hours of field trips with breaks for meals. All meals will be provided starting with Monday's lunch. The Springs Field School will end with graduation and check-out at 3:30 PM on Thursday, August 16th.

Who Should Take this Course?

This course is offered to those interested in Florida's water resources from a science, management, or administrative perspective and for those who wish to develop or sharpen their understanding of aquatic ecology in general. Information from all related physical, chemical, biological, and economic disciplines will be integrated to allow an understanding and appreciation of the role that springs play in overall support for Florida's natural and human ecologies. This course should be of interest to ecologists, environmental scientists, water resource engineers, natural resource managers, and those practicing environmental law.

Your Primary Instructor



Dr. Robert L. Knight is an environmental scientist/systems ecologist. He is Director of the Howard T. Odum Florida Springs Institute and has over 38 years of experience as an aquatic and wetland ecologist in Florida. His doctoral work at the University of Florida included an ecological assessment of Silver Springs and Silver River under the direction of Howard T. Odum. He completed ecosystem studies to support establishment of a minimum flow regime for protection of water and human-use resource values (WRVs) in Volusia County Blue Spring; a 50-year retrospective study of the ecological health of Silver Springs; the basis for

establishing pollutant load reduction goals and WRVs for the Wekiva River and Rock Springs Run; and a comparison of the ecology of twelve of Florida's largest artesian springs. Dr. Knight and the Florida Springs Institute have developed restoration action plans for Wekiva River and Springs, Kings Bay/Crystal River Springs, the Lower and Middle Suwannee River Springs, Wakulla Springs, Ichetucknee Springs, Glen Springs, the Santa Fe River springs, Silver Springs, Volusia Blue Spring, and Rainbow Springs.

Guest Lecturers

A number of other experts in Florida springs science and regulation will be invited to present lectures as part of this field school.

Course Topics

- Introduction to Florida's Springs
- Florida Karst Geology and Springs Occurrence
- Introduction to Springs Hydrology
- Springs Flora
- Springs Fauna
- Silver Springs/Ocklawaha River Case History
- Springs Water Physical and Chemical Properties
- Spring Flows – Consumptive Use Permits and Minimum Flows and Levels
- Springs Water Quality Sampling Techniques
- Springs Water Quality Management
- Wastewater Treatment
- Springs Comprehensive Restoration

Preliminary Grading Basis

The FSI will issue a Certificate of Completion to all participants based on attendance and performance on the mid-course and final exams. A minimum of 70 points on a 100-point grading scale will be required for certification.

Registration Fee

Registration for the four-day Florida Springs Field School is \$375 per person for non-FSI members and \$350 per person for FSI members. A non-refundable deposit of \$100 is required to hold your place for the full Springs Field School and the balance is due no later than Wednesday, August 8th. One-day passes to attend the Springs Field School will be available for \$115 per day per person. A non-refundable deposit of \$50 is required to hold your place for the one-day registration option and the balance is due no later than Wednesday, August 8th. Checks should be to the Howard T. Odum Florida Springs Institute and 50% of your course tuition is tax deductible. The minimum enrollment target is 15 persons and the maximum enrollment is 25. If the course is cancelled for any reason FSI will provide a full refund.

