EFB 326: DIVERSITY OF PLANTS

Instructor:	Danny Fernando 461 Illick Hall	Tel: 470-6746 E-mail: fernando@esf.edu
Office hours:	10:30 am to 12:00 pm Mondays and	Wednesdays or by appointment
Schedule:	Lecture: 9:30 to 10:25 am MW (Bal Laboratory: 1:50-4:50 MW; 12:30-3	ker 146) :20 TTh (Illick 313)
Textbook:	Raven PH, Evert RF and Eichhorn S 7 th Edition. W.H. Freeman and Con	E. 2005. Biology of Plants, npany, NY.
Internet material:	www.whfreeman.com/raven	

Course description: This course offers an evolutionary survey of the origin and diversification of plants. The course will build up from photosynthetic prokaryotes (particularly the cyanobacteria) and then to the green algae, bryophytes, ferns and fern allies, fossil plants, gymnosperms and eventually, the angiosperms. Lectures will emphasize on life histories, anatomical and morphological adaptations, evolution, geology, systematics, ecology, economic importance and conservation strategies of representative taxa. The laboratory will provide ample opportunities for detailed analysis of plant structures, reproductive mechanisms, evolutionary adaptations, as well as identification and characterization of a variety of living and preserved plants.

Course requirements: Lecture (60%): 4 lecture exams (15% each) Laboratory (40%): 4 lab exams (8-12% each)

Graduate TAs:

Mon/Tue: Christina Quinn (crquinn@gmail.com); Office: 457 Illick; Phone: x6786 Wed/Thu: Thomas Brumbelow (trbrumbe@syr.edu); Office: 401 Illick; Phone: x4823

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Date	Topics	Readings
Jan 19	Introduction and Importance of Plant Diversity No laboratory	-
Jan 24 Jan 26	Biological Diversity and the Domains of Life Importance of Cyanobacteria Lab 1 – Keys, Taxonomy and Cladistics	219-235 238-247
Jan 31 Feb 02	Protista: The Catchall Assemblage of Organisms Origin of Multicellularity Lab 2 – Survey of the Cyanobacteria	296-316 316-325

Lecture Schedule and Outline for Spring 2011

Feb 07 Feb 09	The Ancestors of Plants: Green Algae The Early Transition to Land Environment Lab 3 – Chlorophyta: The Plant-like Protist	327-339 Supplement
Feb 14 Feb 16	First Lecture Exam Liverworts and Hornworts First Laboratory Exam	345-358
Feb 21 Feb 23	Mosses Evolution and Organization of the Vascular Plant Body Lab 4 – Bryophyta: The First Land Plants?	358-367 368-378
Feb 28 Mar 02	Early Land Plants: Rhyniophyta to Lycopodiophyta Pteridophyta Lab 5 – Early Vascular Plants and Lycopodiophyta	378-389 389-407
Mar 07 Mar 09	Pteridophyta Second Lecture Exam Second Laboratory Exam	389-407
Mar 14 & 16	Spring Break	
Mar 21 Mar 23	Fossil Plants and Evolution of the Seed Seed Plants: The Extinct Gymnosperms Lab 6 – Pteridophyta: Ferns and Fern Allies	408-414 408-414
Mar 28 Mar 30	Innovations of Gymnosperms The Extant Gymnosperms Lab 7 – Major Innovations of Seed Plants	414-427 427-433
Apr 04 Apr 06	Some Interesting Conifers Third Lecture Exam Third Laboratory Exam; Lab 8 – Survey of Gymnosper	Supplement
Apr 11 Apr 13	Diversity of Angiosperms The Basal Angiosperms Lab 9 – Angiosperms: The Most Successful Group of Plan	Supplement Supplement nts
Apr 18 Apr 20	Innovations of the Angiosperms Co-Evolution of Flowers and Pollinators Lab 10 – Angiosperms: Pollination and Seed Dispersal M	435-450 456-465 echanisms
Apr 25 Apr 27	Hypotheses on the Origin of Angiosperms Hypotheses on the Origin of Angiosperms Fourth Laboratory Exam	453-456 453-456
May 02	Adaptive Radiation of Angiosperms	Supplement
	Fourth Lecture Exam will be during Finals Week	