

JORDAN COURSE SCHEDULE

BIOL 4970/7070 Red Sea Biology, Auburn University
June 1-27, 2008, at Marine Science Station (MSS), Aqaba, Jordan
Instructors: Nanette Chadwick, Maroof Khalaf, Fuad Al-Horani

First Week: June 1-7

Sunday June 1

17:00 Arrive to Tel Aviv from Atlanta
19:00 Sherut taxi to Jerusalem youth hostel: check-in and dinner

Monday June 2 (Guest lecturer Dr. Goffredo arrives to MSS in the afternoon)

10:00 Tour Jerusalem old city by foot, lunch in old city
13:00 Return to youth hostel, pick up luggage
14:00 Bus from Jerusalem to Eilat by way of Dead Sea, Masada, Negev Desert
18:30 Arrive to Eilat and cross border to Aqaba (border closes at 20:00)
20:00 Arrive to MSS dormitories, dinner onsite, settle into dorms

Tuesday June 3

10:00 Introduction to the MSS: guidelines, staff, and tour of facilities (Khalaf)
11:00 Lecture: Introduction to Red Sea coral reefs (Chadwick)
13:00 Checkout dives and gear assignment at the dive locker (MSS diving officer)
20:00 Welcome barbeque on the beach (MSS staff and students invited)

Wednesday June 4

9:00 Lecture: Ecophysiology of coral reef cnidarians (Al-Horani)
10:30 Workshop: Methods to measure oxygen flux in cnidarians (Al-Horani)
13:00 Work on individual research projects
Evening: Excursion into Aqaba for dinner and shopping

Thursday June 5

9:00 Lecture: Population dynamics of Red and Med Sea cnidarians (Goffredo)
10:30 Workshop: Computer modeling of age-based population dynamics (Goffredo)
13:00 Work on individual research projects
Evening: Roundtable discussion of student research projects (Chadwick)

Friday June 6

Morning: free time, work on individual projects
Afternoon: Depart for Wadi Rum by minibus, sunset tour by camel or jeep, dinner and campfire Bedouin style

Saturday June 7 (Guest lecturer Dr. Goffredo departs)

Morning: hiking tour of petroglyphs and geology of Wadi Rum
Afternoon: Return to MSS by minibus

Second Week: June 8-14

Sunday June 8 (Guest lecturer Mr. Modi Roopin arrives for the day)

9:00 Lecture: Nutrient cycling in anemonefish symbioses (Roopin)

10:30 Workshop: Assessment of zooxanthella parameters in cnidarians (Roopin)

13:00 Work on individual projects

Monday June 9 (Guest lecturers Dr. Arvedlund and Dr. Duris arrive mid-morning)

9:00 Lecture: Coral reef fishes of the Gulf of Aqaba, Red Sea (Khalaf)

10:30 Snorkel exercise on coral reef fish habitats and behavior

13:00 Work on individual projects

Tuesday June 10

9:00 Lecture: Olfaction in reef fishes and impacts on symbioses (Arvedlund)

10:30 Lecture: Photosynthesis and calcification in reef cnidarians (Al-Horani)

13:00 Work on individual projects

19:00 Excursion into Aqaba for dinner and shopping

Wednesday June 11 (Guest lecturer Dr. Denis Goulet arrives for the day)

9:00 Lecture: Anemonefish larval ecology and recruitment to host anemones (Arvedlund)

10:30 Lecture: Patterns of reproduction in Red Sea damselfishes (Goulet)

13:00 Work on individual projects

Thursday June 12

9:00 Lecture: Common corals and sea anemones of the northern Red Sea (Chadwick)

10:30 Field exercise: Identification and zonation patterns of corals and sea anemones

13:00 Work on individual projects

Evening: Prepare student presentations on mid-course progress for Sunday morning

Friday June 13

Morning: free time, work on individual projects

Afternoon: departure for Petra by minibus, check-in to hostel/hotel, evening at Turkish Baths or other cultural activity

Saturday June 14

Early morning: walk in to Petra and explore archaeological sites

Afternoon: ride camels / donkey carts out of Petra, minibus return to MSS

Third Week: June 15-21

Sunday June 15

9:00 Student presentations on mid-course progress on projects (15 mins each)

13:00 Work on individual projects

20:00 Lecture: Introduction to experimental statistics (Chadwick)

Monday June 16 (Guest lecturer Dr. Arvedlund departs in morning)

9:00 Lecture: Taxonomy and ecology of anemoneshrimp symbioses (Duris)

10:30 Field exercise: Identification and distributional patterns of symbiotic shrimps on reefs

13:00 Work on individual projects

Tuesday June 17

9:00 Lecture: Application of statistics to ecological research data (Chadwick)

10:30 Workshop: Computer programs for statistical analysis (Morrow, Nelsen)

13:00 Work on individual projects

17:00 Excursion into Aqaba for dinner and shopping

Wednesday June 18

9:00 Lecture: Damselfish ecology on coral reefs (Khalaf)

10:30 Diel cycles on coral reefs (Chadwick)

13:00 Work on individual projects

21:00 Field exercise: Night dive on the coral reef (Chadwick)

Thursday June 19

9:00 Lecture: Demographic modeling of populations using stage-based models (Nelsen)

10:30 Workshop: Computer modeling of stage-based population dynamics (Nelsen)

13:00 Work on individual projects

Friday June 20

Morning: Free time

Afternoon: Visit cultural sites in Aqaba (mosque, crusader fort, etc.)

Evening: Catered dinner at MSS

Saturday June 21

Morning: Free time

Afternoon: visit additional sites in Aqaba per student interest

Evening: work on individual projects

Fourth Week: June 22-28

Sunday June 22

- 9:00 Lecture: Microbiology and biomechanics of corals (Morrow)
- 10:30 Workshop: Assessment of flow around cnidarians (Morrow)
- 13:00 Work on individual projects

Monday June 23

- 9:00 Lecture: Fish classification and biodiversity (Khalaf)
- 10:30 Workshop: Data analysis, presentations, and final report (Chadwick)
- 13:00 Work on individual projects
- 19:00 Final excursion into Aqaba for dinner and shopping

Tuesday June 24

- 10:00 Lecture and discussion: Coral reef conservation issues in Aqaba (Dr. Salim Al-Moghrabi, ASEZA)
- 13:00 Finish collection of all data for field and laboratory projects
- Evening: Analyze data and prepare oral presentations

Wednesday June 25

- 9:00 Lecture and discussion: Coastal Development in Aqaba (Dr. Bilal, Environmental Commissioner, ASEZA)
- 11:00 Course evaluation forms and discussion
- 13:00 Analyze data and prepare oral presentations

Thursday June 26

- 9:00 Cleanup laboratories and field sites, return all laboratory and diving gear
- 13:00 Symposium: Faculty and student presentations on research projects (open to the public)
- 20:00 Farewell beach barbeque (MSS staff and students invited)

Friday June 27 (Guest lecturer Dr. Duris remains until June 28)

- 9:00 Dormitory inspection, checkout
- 10:00 Cross border to Eilat, Israel (border opens at 9:00)
- 11:00 Tour of Interuniversity Institute for Marine Science
- 13:00 Depart for bus to Jerusalem and connection to Atlanta