

Scientific Diving
Faculty: Britton-Simmons, Kitaeff, Elahi
Fall 2009
SYLLABUS

Course objectives

- 1) Complete scientific diving certification/requirements (weeks 1-4)**
- 2) Become familiar with common diving science methods**
- 3) Acquire tools/knowledge need to plan and carry out scientific research dives**

All slack times based on Mr. Tides v.3

Week 1 – Intro/CPR/FirstAid/O₂

Reading: Scientific diving manual, Chapter 4&5 PADI encyclopedia

Monday Sep 28

- 1015 – 1030 Introduction to Course (PK & KBS)
- 1045 – 1115 Introduction to Scientific diving & AAUS (PK)
- 1130 – 1215 Ecology of subtidal zone in San Juan Island (KBS)
- 1330 – 1600 Move gear into dive locker
 - Gear clinic – Kurt/Sam/KBS
 - Start diver files - PK
 - Test new gear - can get in water if needed

Wednesday Sep 30

- 1015 – 1200 CPR/FirstAid/O₂
- 1315 – 1500 CPR/FirstAid/O₂
- 1530 – 1700 Go over AAUS exam

Week 2 – AAUS certification

Reading: Boat Smart readings, Weather related story about diving

Monday Oct 5

- 1015 – 1100 Tides & Currents (KBS)
- 1100 – 1130 Tide/Current/Weather resources (PK)
- software/website resource handout*
- 1130 – 1200 FHL SCUBA orientation (How to fill tanks, check out boats, etc...)
- 1330 – 1600 Boat course & practice driving/docking

Wednesday Oct 7

- Checkout dive times announced*
- AAUS Checkout dives (including drysuit checkout for those who need it)

Invert and algae clinic

1015 – 1200

1315 – 1500

1515 – 1700

Homework: Invert/Algae ID lab handout

Students not getting checked out are in lab with KBS for minimum of 3 hours

Week 3 – Rescue Diver

Readings: PADI Rescue manual

Monday Oct 12

1015 – 1200 Rescue Diver Classroom Session I

1315 – 1600 Rescue Diver In water skills

Due: Invert/Algae ID lab handout

Wednesday Oct 14

1015 – 1200 Rescue Diver Classroom Session II (wrap up & exam)

1300 – 1600 Pool rescue session

Week 4 - NITROX

Readings: NITROX manual

Monday Oct 19

1015 – 1200 Practice rescue drills

1315 – 1600 MYSTERY RESCUE SCENARIOS & debrief

Wednesday Oct 21

[Turn Rock current slack = 1550 hrs]

1015 – 1200 Nitrox course content, go over homework, Nitrox exam

1315 – 1600 2 NITROX DIVES

Week 5 – Seastar & Seagrass surveys

Readings: WADNR Seagrass Report, Unit #1: panic and accidents

Monday Oct 26

SACK LUNCH

[Turn Rock current slack = 1320 hrs]

1015 – 1100 Background on *Pycnopodia* project (RE)

1100 – 1330 DIVE: *Pycnopodia* surveys

1500 – 1600 Dive accident discussion #1 (PK & KBS)

Wednesday Oct 28

[Turn Rock current slack = 1429 hrs]

1015 – 1115 Seagrass lecture (SWE or KBS)
 1115 – 1200 Discussion of DNR report
 1315 – 1700 DIVE: Seagrass survey
Homework: Seagrass data assignment

Week 6 – Dock cleanup & Yellow Is. transects

Reading: Unit #2: diving methods, Monitoring paper

Monday Nov 2

Introduce dive presentation assignment (handout)

Due: Seagrass data assignment

[Turn Rock current slack = 1155 & 1543 hrs]

1015 – 1045 *Pycnopodia* data results (RE)

1045 – 1130 Dive logistics lecture Whale recovery story (PK)

1130 – 1215 Students plan how to organize the dock cleanup

1315 – 1600 DIVE: Dock cleanup & lift bag practice

Wednesday Nov 4

SACK LUNCH

[Wasp Passage current slack = 1237 hrs]

1015 – 1045 Review dive plan for the day

1100 – 1400 DIVE: Benthic transects @ Yellow Island

1430 – 1500 Homework assignments described

Fish ID Quiz

How to count/measure fish (KT)

Homework:

1) *Yellow Is. Data exercise*

2) *Design and print out fish data sheet for Monday*

Week 7 - Fishes

Reading: Fish papers

Monday Nov 9

SACK LUNCH

[Turn Rock current slack = 1120 hrs]

Due: Yellow Is. data exercise, Fish data sheet

0900 – 0930 Discuss fish dive plan

0945 Meet on dock (DIVE: Fish surveys)

1030 Depart dock

1400 Dive accident discussion #2 (student led)

Homework: Fish data sheet exercise

Wednesday Nov 11

Veteran's Day – No class

Week 8 – Photo/Video

Reading: Britton-Simmons et al. 2006, Witman et al. 2004

Monday Nov 16

SACK LUNCH

[Turn Rock current slack = 1209 hrs]

PREP PERSONAL GEAR BEFORE CLASS

Due: Fish data sheet exercise

1015 - 1045 How to use still/video cameras (Dive Locker)

1045 Load boats & DIVE: Photo/Video dive

1400 General lecture on photo/video techniques (KBS)

Wednesday Nov 18

SACK LUNCH

[Turn Rock current slack = 1351 hrs]

1015 – 1115 Dive accident discussion #3 (student led)

1115 – 1215 Lunch

1215 – 1600 DIVE: Photo/Video dive

Week 9 - Photo/Video

*Reading: Eckman et al. 1989, Davenport & Anderson 2007
(& work on presentations and homework!)*

Monday Nov 23

1015 - 1200 Photo lab (random point)

1330 – 1500 Video lab (large mobile fauna; count and measure size)

1500 – 1600 Dive accident discussion #4 (student led)

Homework: Photo/Video exercises

Wednesday Nov 25

[Day before Thanksgiving]

EXPLORATION DIVE FOR THOSE WHO ARE HERE

Week 10 – Project

Readings: Sebens et al. 1996, Stewart et al. 2007

Monday Nov 30

Due: Photo/video exercises

[Turn Rock current slack = 1423 hrs]

1015 – 1115 Project introduction (KBS)

1115 – 1200 Prep gear & load boats

1315 – 1600 DIVE (recon)

Tuesday Dec 1

Project day

1015 Meet with instructors to get approval of dive plan

[Turn Rock current slack = 1147 & 1459 hrs]

Wednesday Dec 2

Project day

[Turn Rock current slack = 1239 & 1541 hrs]

Homework: Project debrief

Week 11 – Presentations & wrap up

No assigned reading

Monday Dec 7

No Scientific Diving class, Traded to Sociology for Dec. 1

Wednesday Dec 9

Due: Project debrief

1015 – 1215 Student Scientific Diving presentations

1315 – 1430 Wrap up discussion + evaluations

1430 – 1600 Dive locker cleanup, remove personal gear + clean

GRADING

<i>Assignment</i>	<i>Due date</i>	<i>Percent of Grade</i>
AAUS exam	week 1	5%
Rescue diver exam	week 3	5%
Invert/algae ID worksheet	week 3	5%
Nitrox exam	week 4	5%
Seagrass data assignment	week 6	5%
Yellow Is. data exercise	week 7	5%
Fish data sheet exercise	week 8	5%
Photo/video exercises	week 10	10%
Project debrief	week 11	15%
Scientific Diving presentation	week 11	5%
Discussion leading	various	5%
Participation/effort	weeks 1-11	30%
• Attendance/punctuality (10%)		
• Dive preparedness (10%)		

- Effort/participation (10%)