

MST 218, Electronic Aids to Navigation and Collision Avoidance

Session	Date	Lecture	Lab
All	All	Reading assignments will be posted on the web no later than one week in advance. Students are expected to have read the assigned material by the next class meeting where it will be discussed.	All days are broken up into four 50 minute segments with 10 minute breaks. This includes labs. Each week is one or two hours of lecture and two to four hours of lab. The long labs come toward the end of the semester aboard ships.
1	08/28/08	Introduction. Intro to readings Intro to website. Basic concepts of navigation and collision avoidance.	Identification of student experience and resources. Nautical chart exploration. Intro to rules of the road.
2	09/04/08	More on navigation. Piloting. Discussion of readings (this will take place every class). Time-distance-speed.	Team formation. Further nautical chart exploration. time-distance speed exercises. Distribution of loaner GPS receivers if needed. Extra lecture hour on Navigation.
3	09/11/08	Collision avoidance. Intro to GPS receivers.	Collision avoidance exercises. GPS help for beginners within teams.
4	09/18/08	The GPS system: How it works. Geocaching. Review of acronyms.	Programming GPS receivers. Geocaching assignments. Geocaching exercise may be homework. Quiz on navigation, collision avoidance.
5	09/25/08	Geocaching. Plotting courses. Problems with GPS	Geocache Lab test in the field. Test results.
6	10/02/08	Computer navigation software.	Evolutions with plotting software and GPS simulators. GPS skill review as needed
7	10/09/08	Chartplotter: combined electronic charts and GPS	Experiment with Chartplotter computer simulations. Examine a real Chartplotter.
8	10/16/08	Sounders. Communication between devices. NMEA 0183, Seatalk, Robnet. Review.	Sounder simulations. Hardware review. NMEA-0183 Communication experiments. Extra Lecture hour – midterm exam.
9	10/23/08	Intro to Radar. Radar horizon. Radar theory.	Radar equipment introduction. Radar operation videos. Intro to radar simulators.
10	10/30/08	Radar operation. Radar plotting.	Teams will be rotated through radar and chartplotter simulators.
11	11/06/08	Automatic Identification Systems. Automatic Radar Plotting Assistance.	Radar and navigation software simulators. Prep for field trips. Integrated bridge basics.
12	11/13/08	No Lecture	Field trip on a larger ship which will accommodate the entire class. The ship will have an integrated bridge.
13	11/20/08	Discussion of ship field trip. The Integrated bridge.	Radar and Chartplotter simulator individual skill demonstration.
none	11/27/08	Thanksgiving recess	Thanksgiving recess
14	12/04/08	No Lecture	Field trip – small boats with instruments and radar. Navigation, radar, collision avoidance. Following benthic curves.
15	12/11/08	Review of boating sessions. Lessons learned. How it all fit together.	Review for final
16	12/18/08	Final Exam	Final Exam