

## **USPS® 2014 Release of Electronic Navigation course by Canadian Power and Sail Squadrons**

Effective in August, 2014, United States Power Squadrons® (USPS) Electro-Mechanical Systems Committee offers the Electronic Navigation course produced and copyrighted by Canadian Power and Sail Squadrons (CPS) as an interim course to be taught during the completion phase of USPS' Marine Navigation Systems course. Successful completion of the interim course will earn the student credit for Marine Navigation Systems until it's made available.

The committee owes its gratitude to a small group of USPS students and instructors who alpha-tested the course and provided feedback. They concluded that the course is a good introduction to navigation using electronic tools and is suitable for the novice boater. The following overall caveats were noted:

1. As compared with the goals of USPS' Marine Navigation Systems the Electronic Navigation course is clearly not intended to cover the same material, and does not logically follow the Marine Electrical Systems and Marine Communication Systems courses now existing: the interim course focuses on navigating with electronic tools, rather than on navigation systems hardware.
2. For students to get the benefit of the course, knowledge of latitude, longitude, the compass, plotting, and time/distance calculation are needed. Instructors may consider providing supplemental material on basic charting for novice students before teaching this course.
3. Certain points of Canadian law and regulation are stressed in the course but don't apply in US waters. These topics, and references to metric units, are avoided in the final exams issued by USPS HQ.
4. The course treats certain terms inconsistently, namely Bearing, Course, Heading, and Track. This is partly from inconsistent terminology among manufacturers of the electronic equipment covered in the course, and also from an apparent lack of continuity between chapters penned by various authors. The instructor is urged to establish the boater's meaning for each term, and point out when the manufacturers' or the course materials' meanings differ.
5. The course omits Radar and Depth Sounder topics completely, with the recommendation that the student pursue other CPS courses that cover these topics. While not requirements for Marine Navigation Systems credit, both courses are available for order from USPS HQ.
6. The course omits the topic of NMEA data bus inter-connectivity of disparate components; this topic is deferred to the Marine Navigation Systems course release.
7. The Automatic Identification System (AIS) topic is in the course text as Appendix 8. In the US release, the topic of AIS in Appendix 8 is to be covered by the instructor, and will be included in the final exams from USPS HQ.
8. The chart plotter emulator on the course CD is a Standard Horizon model long obsolete as of this writing and difficult to use. The chapter devoted to it is omitted from USPS final exams.
9. The course presents electronic charting using Maptech Chart Navigator software, which is no longer supported by the developer.

Students have access to all the power point presentations; for the US release, these presentations are updated and improved, and a section presentation ("Chapter 16") is added for the AIS topic covered in Appendix 8 of the text.

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Under Homework on the main menu, students access review questions on each chapter. The question set for each chapter is presented in random order and with randomly arranged answers. In response to a wrong answer, the program provides the correct one, and an explanation excerpted from the text. And certain interactive exercises on a simulation tool that CPS developed in-house illustrate for students to experiment with hands-on. These are several ways in which the course incorporates new electronic learning techniques like those being adopted in schools and colleges.

Student materials also contain an Errata document and a Glossary of terms. We suggest that students go through the errata and make needed corrections directly in the course text before starting to read the text.

We welcome your comments and suggestions. Happy navigating!

Respectfully submitted,

R/C George A. Hallenbeck, AP

Electro-Mechanical Systems Chair