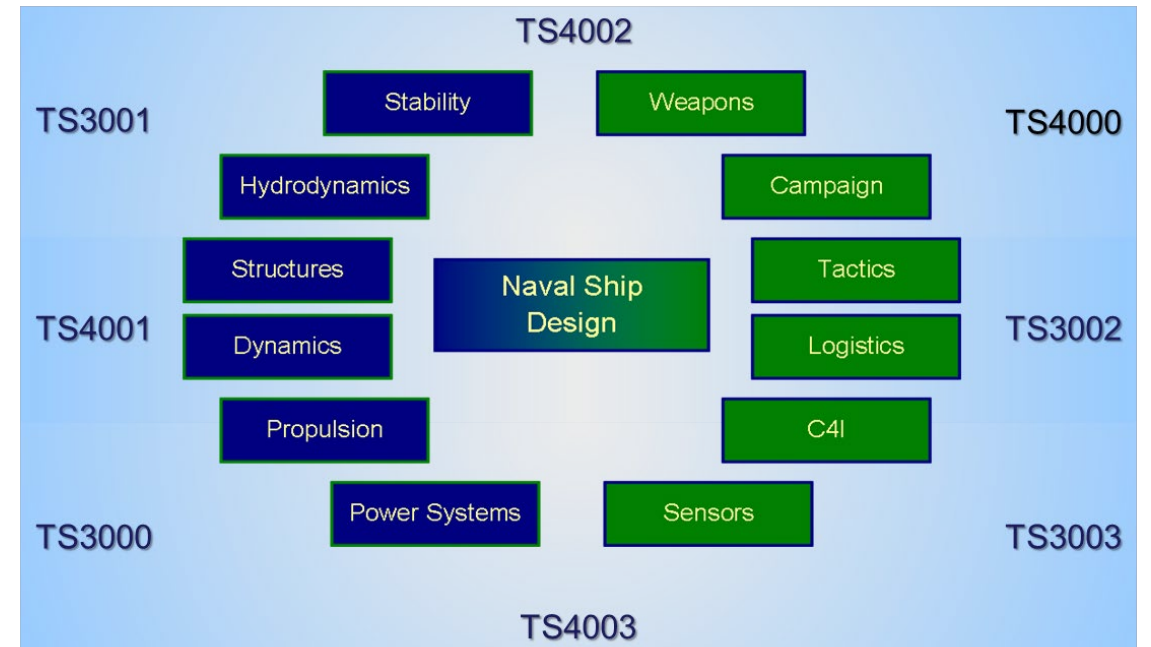
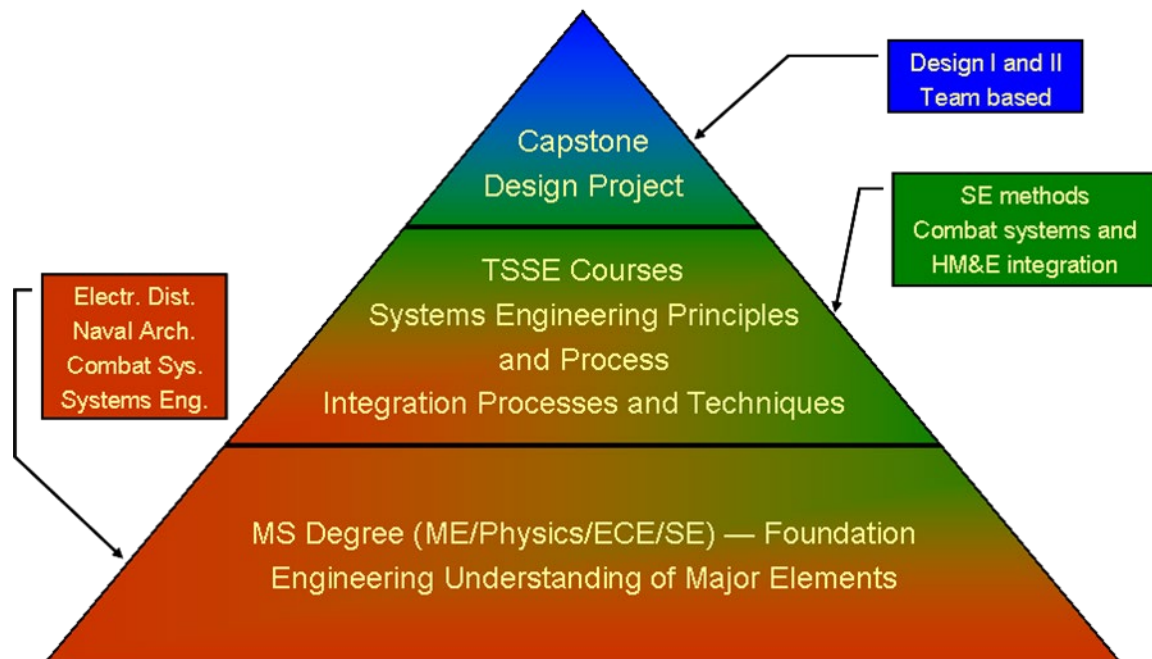


TSSE Course Sequence

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TSSE Program Outline

- A primary goal of the TSSE program is for [primarily] EDO students who are not necessarily naval architects to gain experience in naval engineering through a broad-based, systems engineering and design-oriented program focusing on the warship as a total engineering system.
- The capstone design project starts with stakeholder requirements, evaluates preliminary alternatives through detailed analysis, and culminates in a conceptual ship design using the classic naval architecture ship design spiral, set-based design, and other design strategies as applicable.



Core TSSE Courses

- All students participating in the TSSE program from MAE, SE, ECE, and PH take the following courses, and/or approved alternate courses to fulfill the multi-disciplinary intent of the TSSE program design team experience.
 - TS3000 Electrical Power Engineering (3-2)
 - TS3001 Fundamental Principles of Naval Architecture (3-2)
 - TS3002 Principles of Ship Design and Case Studies (3-2)
 - TS3003 Naval Combat Systems Elements (3-2)
 - TS4000 Naval Combat Systems Engineering (3-2)
 - TS4001 Integration of Naval Engineering Systems (3-2)
 - TS4002 Ship Design Integration (2-4)
 - TS4003 Total Ship Systems Engineering (2-4)

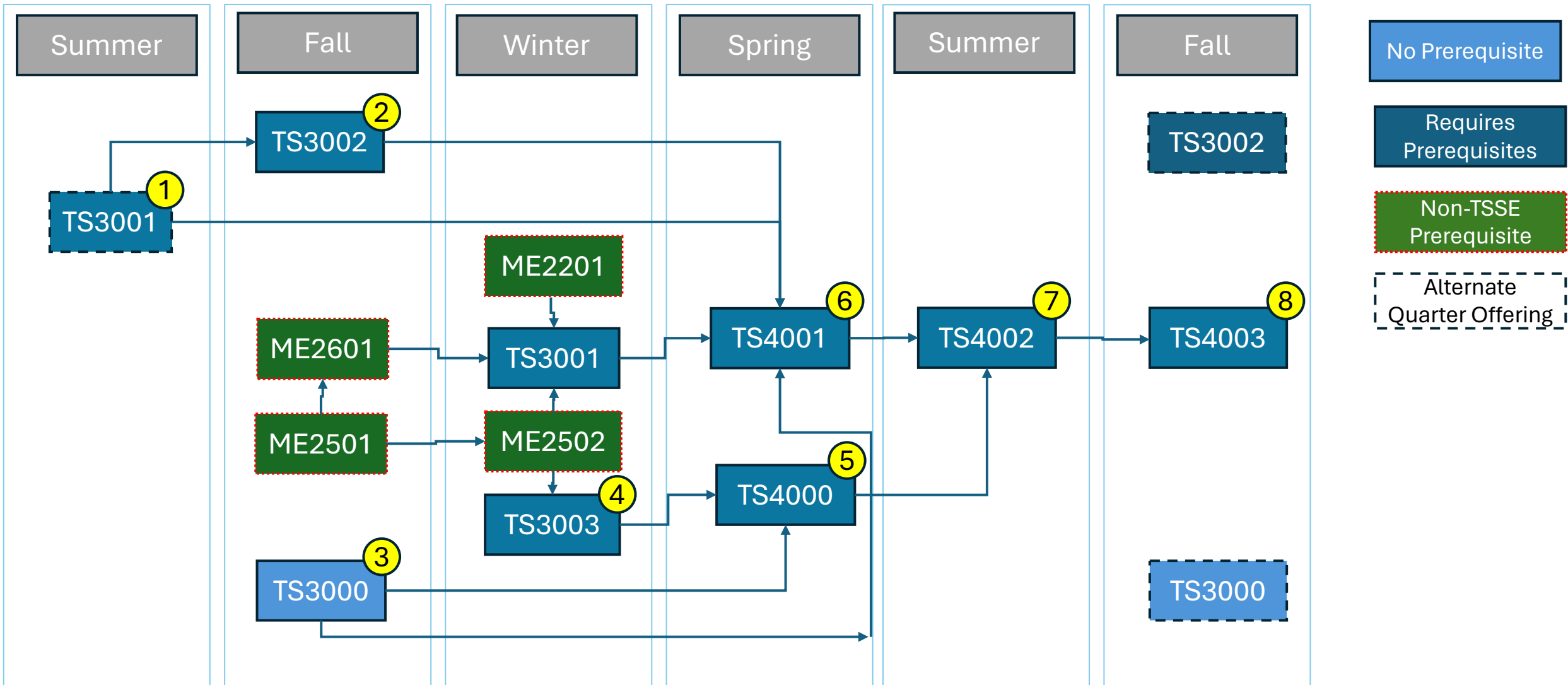
Alternate Courses for in lieu of TS Courses

- TS3000 approved equivalents for TSSE program
 - EC3150 – Power Electronics
- TS3001 equivalents for TSSE program
- TS3002 equivalents for TSSE program
 - SE3100 – Introduction to Systems Engineering + SE4150- System Architecture and Design
- TS3003 Naval Combat Systems Elements (3-2)
 - SE3112-Intro to Sensors + SE3113 – Conventional Weapons; or as arranged with TSSE Program Director
- TS4000 Naval Combat Systems Engineering (3-2)
 - SE4112- Combat Systems Engineering III + SE4115-Combat System Integration; or as arranged with TSSE Program Director
- TS4001 Integration of Naval Engineering Systems (3-2)
- TS4002 Ship Design Integration (2-4)
- TS4003 Total Ship Systems Engineering (2-4)

P-code

- TSSE program was designed to provide a P-code with a distinct 4th digit to signify “Parent degree w/ Total Ship Systems” which is relevant to EDOs for senior officer billet assignments.
- This is outlined in the U.S. Navy Subspecialty Codes Manual, Vol 1, Part B and controlled by the parent curriculum sponsors annotated here.
 - [Manual_1_83_PTB_SSP_Apr23.pdf \(navy.mil\)](#), current version dtd Apr 2023
 - ME – (NAVSEA05)
 - 5602 – Naval Mechanical Engineering with Total Ship Systems
 - SE – (SSP)
 - 5801 – SE Ship Systems
 - EE – (NAVWAR)
 - 5308 – EE Total Ship Systems
 - PH-(PEO IWS)
 - 5705 – Combat Systems – Total Ship Systems

Current TSSE Course Sequence



TSSE Courses – ECE Power Systems

- ~~TS3000~~ ~~Electrical Power Engineering (3-2)~~ **EC3150**
- TS3001 Fundamental Principles of Naval Architecture (3-2)
- TS3002 Principles of Ship Design and Case Studies (3-2)
- TS3003 Naval Combat Systems Elements (3-2)
- TS4000 Naval Combat Systems Engineering (3-2)
- TS4001 Integration of Naval Engineering Systems (3-2)
- TS4002 Ship Design Integration (2-4)
- TS4003 Total Ship Systems Engineering (2-4)

TSSE Courses – SE Ship Systems

- TS3000 Electrical Power Engineering (3-2)
- TS3001 Fundamental Principles of Naval Architecture (3-2)
- TS3002 ~~Principles of Ship Design and Case Studies (3-2)~~ SE3100+SE4151
- TS3003 ~~Naval Combat Systems Elements (3-2)~~ SE3112+SE3113
- TS4000 ~~Naval Combat Systems Engineering (3-2)~~ SE4112+SE4115
- TS4001 Integration of Naval Engineering Systems (3-2)
- TS4002 Ship Design Integration (2-4)
- TS4003 Total Ship Systems Engineering (2-4)