AVTEC's Maritime Simulator

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Alaska Vocational Technical Center
Alaska Maritime Training Center
Alaska Department of Labor

Who uses our simulator?

Maritime Industry

- Oil & Gas
- Freight
- Cruise Lines
- Tug and Barge
- USCG
- Tour Companies
- Research Vessels
- Pilots Associations (SWAPA, SEAPA, AMP)

Engineering Firms

- Port Research

AVTEC

Capabilities

- 3 Interactive Full Mission Bridges
- Meets STCW, IMO, Class A - Det Norske Veritas AS (DNV)
- Harbor Tug
- Tug & Barge Interactions
- Azimuth Controls
- 71 Area Databases
- 43 Ownship Models
- 47 Target Vessels, 16 Flotsum
- Sea Ice
- All Weather
- All Seasons

Capabilities: Area Databases

- 71 Developed Ports and Navigable Waterways
  - Western Alaska (10)
  - Southcentral Alaska (16)
  - Southeast Alaska (23)
  - Outside Alaska (22)
    - WA, CA, NY, NJ, VA, Singapore
- Most areas custom built
- Uses NOAA Chart Data and NASA Topo data
- Can add or modify docks, buildings, land features, buoys, depth, current, wind

Capabilities: Ownship Models

- 43 Ownship Models
  - Liquid Cargo (9)
  - Dry Cargo (9)
  - Passenger (8)
  - Tug & Barge (9)
  - Offshore Supply (3)
  - Other(5)
- Ice Breaker or Ice Capable (3)

AVTEC

Capabilities: Onboard Electronics

- All Bridges:
  - Latest Kongsberg Polaris Software, updated annually
  - 2 VHF Radios
  - RADAR/ARPA
  - ECDIS
  - Doppler
  - Gyro
  - Compass
  - AIS
  - Bow Thruster Controls
  - Pilot Plug
  - Separate Nav Station with Chart Table
  - Anchor Control
  - Winch Control
  - Alarm Fault Display
  - Lights, sound signals
  - Binocular View
  - Internal ship phone

Capabilities

TUG INTERACTIONS

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WARNING

AVTEC

Ice Navigation

- The only Approved Ice Navigation Course in in the US
- Sea Ice accurately modeled in Polaris software
  - Can adjust type of pans, thickness, compression, drag on vessels

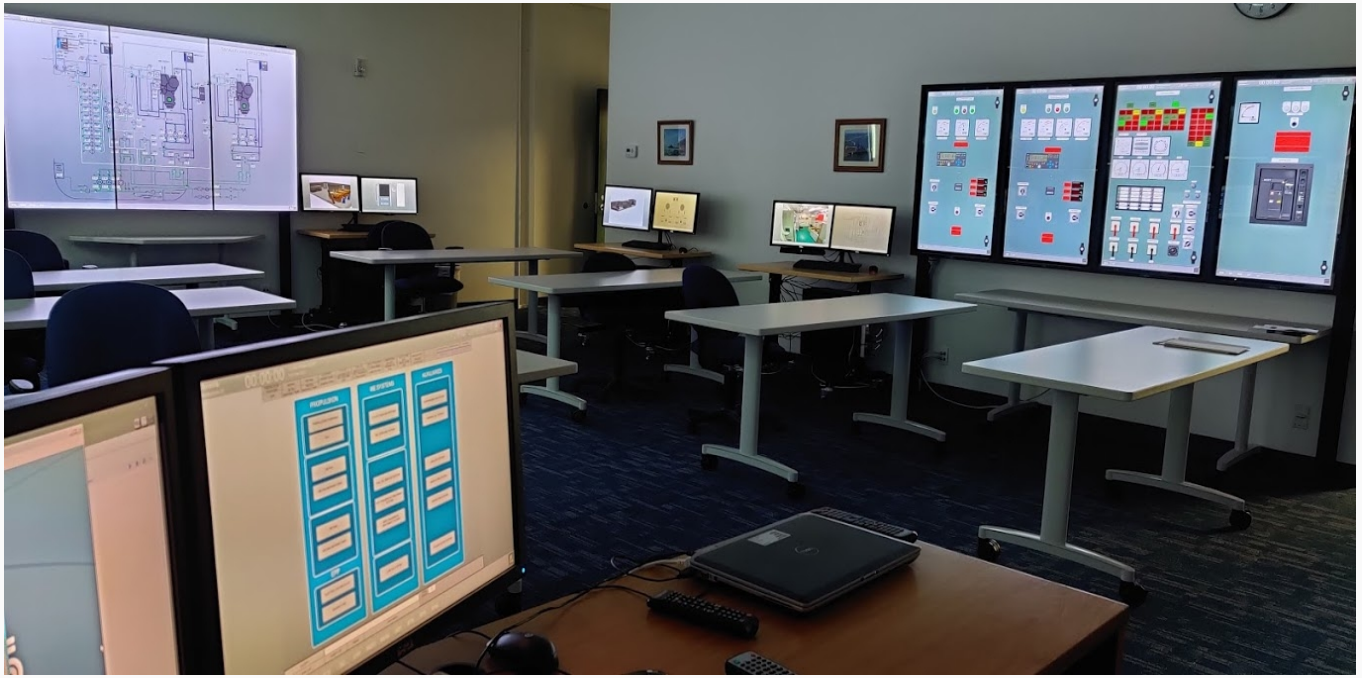
Instructor Station (Control Room)

Digital Horsepower

- 64 Windows PC’s, Dell & HP
  - Image Generators (48)
  - Servers (2)
  - Bridge PC’s (4)
  - Bridge Slaves & Panels (8)
  - Instructor Stations (2)

Other AVTEC Sims

- 6 Bridge Nav Lab
  - Most Area Databases and Ship Models as Full-Mission Bridges
  - DNV Class C
  - Basic Ship Controls
  - Radar, ARPA, ECDIS
  - MF/HF/DSC Radios
  - NBDP/Sitor
  - Navtex
  - Inmarsat
  - GMDSS Trainer
- Engine Room Simulator
  - Power Plant
  - Liquid Cargo
- Crane Simulator



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QUESTIONS?
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