

## CEAS Alumnus Commands New US Navy Submarine

By: Ashley Duvelius

**Commander Dan Caldwell, '94 CEAS electrical engineering alumnus, is currently commanding officer of the US Navy's newest submarine, PCU John Warner (SSN 785).**



**Commander Dan Caldwell**

The UC College of Engineering and Applied Science (CEAS) not only equips graduates with the best engineering education possible but also with the skills necessary to enhance any career path of their choosing. For CEAS electrical engineering '94 alumnus **Dan Caldwell**, this career was with the US Navy. Caldwell was recently selected to serve as the commanding officer of the US Navy's newest submarine, PCU (Pre-Commissioning Unit, as the United States Navy ship has not yet been commissioned into service) John Warner (SSN 785).

Cmdr. Caldwell was born and raised in Milford, OH. He joined the Navy after graduating from the electrical engineering program with his Bachelor of Science in 1994. To prepare for his first submarine, Cmdr. Caldwell underwent a year and a half of nuclear power and submarine training. He completed five strategic deterrent patrols on board a ballistic missile submarine (a

submarine equipped with a missile that follows a flightpath with the objective of delivering one or more warheads to a predetermined target), United States Ship (USS) Rhode Island. The ship was awarded the Squadron TWENTY Battle Efficiency 'E,' awarded to units that win the Battle Efficiency Competition.

The Battle Efficiency Award denotes the overall readiness of the command to carry out its assigned wartime tasks, and is based on a year-long evaluation. The competition for the award has always been extremely keen—in order to win, a ship or unit must demonstrate the highest state of battle readiness.

Cmdr. Caldwell gained extensive experience between April 1996 and June 1999, working in numerous naval positions ranging from the Main Propulsion Assistant and Reactor Control Assistant to the Communications Officer and the Damage Control Assistant. From July 1999 to June 2002, he served as a shift engineer and also as the Chemistry and Radiological Controls Assistant at the Nuclear Power Training Unit in Charleston, SC. During his tour, he earned a Masters of Business Administration from the Citadel.

Upon completion of the Submarine Officer's Advanced Course, Cmdr. Caldwell acted as the engineer officer on board USS Wyoming (SSBN 742) from December 2002 to

October 2005. USS Wyoming completed four strategic deterrent patrols and was also awarded the Squadron TWENTY Battle Efficiency 'E.' Cmdr. Caldwell was then assigned to the Division of Naval Reactors in Washington, DC as the S8G Line Locker Technical Assistant from October 2005 to November 2007.

Cmdr. Caldwell was deployed to the Central Command Area of Responsibility on USS Scranton where he served as executive officer from March 2008 to January 2010. The ship completed a CENTCOM (US Central Command) deployment and was awarded the 2009 Squadron SIX Battle Efficiency 'E.' Cmdr. Caldwell then served on the staff of Commander, Submarine Forces in the Warfare Development and Requirements division (N8).

Currently, Cmdr. Caldwell is the commanding officer of PCU John Warner (SSN 785). PCU John Warner is a new construction fast-attack submarine that will deliver to the Navy in 2015.

The ship is presently under construction at the Newport News Shipbuilding company in Newport News, VA. Newport News Shipbuilding is the sole designer, builder and refueler of US Navy aircraft carriers and one of two providers of US Navy submarines. With more than 22,000 employees, they are the largest industrial employer in Virginia and the largest shipbuilding company in the US. Specializing in nuclear propulsion, naval design and manufacturing, they build some of the most advanced ships in the world.



**The bow of PCU John Warner during the construction process.**

PCU John Warner was designed for a broad spectrum of open-ocean and littoral zone (close-to-shore) missions around the world. A few of its capabilities include:

- Launching Tomahawk Land Attack Cruise Missiles (TLAM) and Mk48 Advanced Capability heavyweight torpedoes
- Conducting covert long-term surveillance of land areas, littoral waters or other sea forces
- Anti-submarine and anti-ship warfare
- Special Forces delivery and support
- Mine delivery and minefield mapping
- Enhanced communication connectivity allow important support of Carrier Strike Groups

Cmdr. Caldwell asserts, “As I step into the role of commanding officer, I hope to build a team of sailors that are capable of safely and effectively employing the full spectrum of this submarine’s capabilities. Submarines have unique capabilities that keep them in high demand by our military’s Combatant Commanders. I wish to deliver a fully combat-capable warship to the fleet commanders on time or ahead of schedule.

It is a real privilege and an honor to have the opportunity to command one of our Navy’s submarines and work with some of the brightest, hardest working, most dedicated people in the country.”

For Cmdr. Caldwell, leadership and engineering runs in the blood—his mother, Laura Caldwell, is a respected CEAS professor who’s been teaching in the Mechanical Engineering Technology Department for over 30 years. This, paired with the fact that he’s always had a fascination for computers and electronics, made the electrical engineering program a natural fit for him. Cmdr. Caldwell fully credits his CEAS education for preparing him for his career.



**The keel laying ceremony, a tradition signifying the initial step in ship construction, with (From left to Right): Commander Caldwell; one of the ship’s welders and the president of Newport News Shipbuilding, Matt Mulherin; as well as Senator and Mrs. John Warner (the namesake and sponsor of PCU John Warner).**

He explains, “Submarines are complex machines employing inertial and GPS navigation systems, satellite communications, and both active and passive sonar systems. We make our own oxygen and pure water and are capable of independent deployed operations, the duration of which is only limited by the amount of food that can be carried on board. My degree gave me the engineering foundation needed to operate the ship and supervise the technicians who maintain the submarine’s vast array of technical systems.

My UC degree also outfitted me for my naval training as it taught me to be competitive with my peers, many of whom graduated from top engineering schools across the nation.

The co-op program gave me a diverse skillset of work experience that many of my peers, who joined the military directly out of college, never had an opportunity to experience.”

Cmdr. Caldwell will be eligible for promotion to captain at the conclusion of his tour on board PCU John Warner. If selected, he will have the opportunity to serve the Navy in roles that are even more challenging.

Cmdr. Caldwell reflects, “I’m very proud of the education that I received at UC CEAS. In hindsight, my degree gave me the ability to choose what I wanted to do with my career. Although my job does have some technical aspects to it, being a naval officer is a great example of the limitless career possibilities that are available to CEAS engineering graduates.

My career with the Navy has been a great experience for me. I’ve had the opportunity to travel all over the world while performing a job that has given me overwhelming personal satisfaction. The best part of my career, and the part that I will remember most fondly, is the people with whom I serve. They truly are some of the brightest, most selfless, and hardest working people this nation has to offer.”