Vision for Academic Research and Instructional Information Technology

Overarching Goal: A forward looking plan committed to continuous improvement that brings together best practices in IT and education for the strategic use of current and emerging technologies supporting teaching/learning, research, and administrative operations.

Through collaboration between faculty, staff, and highly trained personnel (knowledgeable and supportive of disciplinary needs), we commit to:

Enabling Effective Teaching and Mentoring

Provide state of the art, innovative technology that supports midshipman education in flexible learning and collaboration spaces both on and off the Yard.

Articulate and provide responsive and effective on-demand support to offices, classrooms, and labs

- Ensure support personnel have the IT skills to support assigned areas through their local knowledge and system familiarity
- Establish response and recovery timelines for handling issues in:
  - Classrooms/Labs/Library
  - Offices/Bancroft Hall
  - Remote Systems
- Schedule system, software, and hardware upgrades and maintenance in collaboration with the academic enterprise to ensure minimal impact on midshipman education
- Provide feedback and transparency in addressing problems
  - Transparency in policies and processes
  - Concurrence that resolution is reasonably achieved

Provide IT hardware, software, and support to sustain classrooms and labs that are dynamic, interactive, and engaging.

- Strengthen the midshipman academic program by providing state of the art, innovative technology that promotes current, interactive, engaged learning
- Within academic spaces and guided by academic/educational needs, prototype experimental classrooms and test cutting edge technology to promote innovative teaching and learning strategies
- Based on departmental input, determine appropriate classroom technology and, where appropriate, standard configurations
- Facilitate instructor control of midshipmen IT access by equipping classroom spaces with user friendly interfaces

Collaborate to enable instructor opt-in to use *integrated* courseware, grading, and academic logistics (absences, MAPRs, and similar) that work seamlessly with the Learning/Course Management System.

Deliver solutions for secure, reliable access to USNA information technology resources both on and off the Yard by providing

- Ubiquitous access on campus by tablets or other portable devices to internal and external resources
- Remote access technologies for midshipmen and faculty/staff to use academic and research materials while at USNA or off-site
- Virtual environments as a complement to physical classroom/lab machines for:
  - custom, isolated testing environment, or rapidly reconfigurable system instances that enhance the classroom experience (e.g., Cyber I and II)

Supporting Research and High Caliber Faculty and Midshipmen

Support state of the art, innovative technology that will sustain distinctive and impactful

faculty and midshipman research programs by strengthening the educational experience by enabling leading research programs and engaged learning with innovative technology; e.g.,

- Emerging technologies; e.g., virtual reality, augmented reality, and unmanned systems
- Segmented architecture solution
  - High performance computing, deep learning, and big data
  - An isolated experimentation/ research network for secure, protected experimentation with new systems and technologies
  - Hands-on cyber security activities
- Supporting remote access technologies for midshipmen and faculty/staff to use academic materials at USNA or off-site
- Providing remote access for faculty and midshipmen to research systems, and collaborative access for external researchers

Assuring High Quality Administrative and Logistic Support

Foster partnerships with IT users and providers that are collaborative, transparent, and effectively address the evolving needs of the USNA academic program.

Create and promote streamlined, automated, paperless solutions for organizational processes by

Supporting seamless and proper handling of unique government requirements such as PII and FOIA

- Implementing a framework for automating transparent, internal. workflows; such as, acquisitions (ASDP, ITPR), life cycle management (LCM), purchasing and travel that provides adequate guidance and support for academic partners

Collaborate with stakeholders to facilitate the acquisition and use of information technology that sustains the highest levels of teaching, learning, research and service available on and off the yard through

- Frequent effective and responsive two-way communication with stakeholders.
- Timely, respectful, and professional interactions with technology users
- Easy to locate/visible and responsive support to offices, classrooms, and labs.
- User-friendly, streamlined solutions
- Consultations with departments, as needed and desired, to assist faculty and staff in defining and resolving IT needs in a timely manner

Support evolving needs through

- Training for faculty and staff on use of enterprise systems through just-in-time, high visibility training opportunities
- Opportunities for ITSD and faculty and staff to partner to explore technological developments and policies that support all aspects of the academic program
- Collaborations between faculty and staff in the IT upgrade and testing process, to ensure mission continuity as systems evolve due to security and functionality changes
- Developing and maintaining a user-friendly and secure information technology environment
  - o Provide administrator rights management that balances security with convenience/ease of use
- Continually updating knowledge of the range of new and evolving technologies while taking legacy applications into consideration to ensure that USNA remains state of the art, while also secure, dependable, and useable
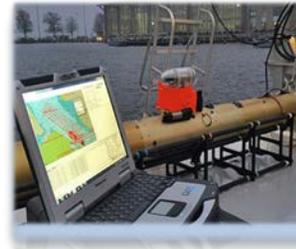
Academic Research and Instructional IT: A Vision for 2020

This guidance was created with contributions from faculty and staff who participated in an Academic Dean and Provost hosted off-site with stakeholders from academic areas and ITSD; department chairs, directors, and division leadership through Academic Assembly meetings; and a request for additional inputs from the Faculty Senate.

www.usna.edu/Academics