Welcome!

Jennifer K. Waters, PhD, PE
Associate Dean for
Academic Affairs
Purpose of USNA is in its Mission:

To develop Midshipmen **moral**, **mentally** and **physically**
and to imbue them with the highest ideals of duty, honor and loyalty
in order to graduate leaders who are dedicated to a career of naval service and have potential for future development in mind and character to assume the highest responsibilities of command, citizenship and government.
Naval Academy Vision

To be the premier educational institution for developing future naval officers from across the Nation to serve and lead in an increasingly interdependent and volatile world.
USNA Academic Program

- 4 years (8 semesters)
- 25+ academic majors
- ~1,000 graduates per year
  - U.S. Navy & U.S. Marine Corps
  - ~15 international midshipmen per year
- ~88% graduation rate in 4 years
Faculty

Since 1845 about 1/2 officer, 1/2 civilian

Officer faculty:
- Masters or doctoral degree
- Military role model
- Recent operational experience
- Mentors

Civilian faculty:
- Doctoral degree
- Academic expertise
- Program continuity
- Mentors
## Academic Majors

### Engineering & Weapons
- EAS – Aerospace Engineering+
- EAS – Aeronautical Engineering
- EASA – Astronautical Engg
- ECE – Computer Engineering+
- EEE – Electrical Engineering+
- EGE – General Engineering+
- EME – Mechanical Engineering+
- ENM – Naval Architecture & Marine Engineering*+
- ENR – Nuclear Engineering+
- EOE – Ocean Engineering*+
- ESE – Systems (Controls) Engineering*+

### Mathematics & Science
- SCH – Chemistry+
- SC – Chemistry
- SCB – Biochemistry
- SCY – Cyber Operations+
- SCS – Computer Science+
- SIT – Information Technology+
- SGS – General Science+
- SMA – Mathematics*+
  - SMA – Mathematics (Pure)
  - SMP – Applied Mathematics
- SMO – Operations Research+
- SOC – Oceanography*+
- SPH – Physics+
  - SPH – Physics
  - SPA – Applied Physics
  - SPAA – Astrophysics
- SQE – Quantitative Economics+

### Humanities & Social Sciences
- FLA – Arabic
- FLC – Chinese
- FEQ – Economics**
- FPS – Political Science*
- HEG – English*
- HHS – History*

### Language Minors
- FA – Arabic
- FC – Chinese
- FJ – Japanese
- FR – Russian
- FF – French
- FG – German
- FS – Spanish

* = honors program offered  
+ = STEM major
Academic Courses: Core & Majors

- Required course work ~ 2/3 of total
- In-depth study in one of our academic majors
- For some, at least 4 semesters of foreign language training (chosen from among 7 languages)

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<tr>
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<th>NON-TECHNICAL</th>
<th>PROFESSIONAL</th>
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<td>History (3)</td>
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<td>Government (1)</td>
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Courses

Credits
## Core Academic Courses

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# A Mathematics-Science Major

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A Humanities-Social Science Major

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Validation

- Validation “checks off a course” that is normally required at USNA
  - Based on work completed elsewhere
  - Some ways to validate include
    - AP Scores, IB (others considered)
    - Other College Coursework – need transcript
    - Exam taken at USNA
- Validation allows a midshipman to “get ahead” of requirements
  - Participate in other special programs
  - Lighter academic load
- Validation for a specific course is dependent on dept criteria: http://www.usna.edu/Academics/Candidate-Information/Course-Validation-Policy.php
- Validations occur
  - Prior to (ABS) / during plebe summer (exams)
  - Near the end of plebe summer (e.g., AP scores)
  - After Plebe summer
  - ... anytime
A Typical Academic Schedule
## Daily Periods

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<tr>
<th>Pd</th>
<th>Duration</th>
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<th>Duration</th>
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<td>8</td>
<td>0755-0910</td>
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<tr>
<td>2</td>
<td>0855-0945</td>
<td>9</td>
<td>0955-1110</td>
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<td>4</td>
<td>1055-1145</td>
<td>10</td>
<td>1330-1445</td>
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<td>5</td>
<td>1330-1420</td>
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<td>6</td>
<td>1430-1520</td>
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<tr>
<td>7</td>
<td>1530-1620</td>
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*periods: 50 or 75 min*
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<th>Tue</th>
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<td>Chem</td>
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<tr>
<td>4 English</td>
<td>English</td>
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<tr>
<td>5 Ldrshp</td>
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<tr>
<td>6 Calc</td>
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Annual Calendar Overview

Jan  
Feb  
Mar  
Apr  
May  
Jun  
Jul  
Aug  
Sep  
Oct  
Nov  
Dec
What’s Special About USNA’s Academic Program?

At USNA: The Learning Environment

• Small Class Sizes (<=18 students per class) ... Dynamic, Interactive Classroom Environment

• Professors/Instructors
  – Teaching is #1!
  – Profs Teach Class (No Grad Students)

• World-Class Facilities – for the undergraduate program (compare to other schools)

• Lots of Additional Help Available – Positive, Supportive Environment
  – All resources are available to all midshipmen
Frequent Interaction with Faculty
Active/Collaborative Learning
Learning Inside the Classroom
**Academic Support**

- **Extra Instruction (EI) / Extra Help**
  - Profs have open-door policy
  - Every student has a faculty academic adviser/mentor

- **Center for Academic Excellence (“AcCenter”)**
  - Supplemental Instruction
  - MGSP (peer tutoring)
  - Study Skills
  - Writing Center

- **Math Lab, Chem Lab, Engineering Lab**
Internships

• Summers – 3 Blocks
  – 2 blocks are training
  – 1 block is leave

• Internships opportunities
  – Navy and other DoD labs
  – Civilian organizations
  – Domestic, International

• Some internships count for training
  Some are fully funded, some partially funded
Special Academic Opportunities

• Research and Special Course Opportunities in All Fields / All Majors
• Competitions between other schools
• Academic Travel (Local / Long Distance / International)
  – Conferences
  – Special Events
  – Volunteer
• Study a Semester Elsewhere
  – USAFA, USCGA, USMA
  – Study Abroad
• Graduate School
• ...and More!
International Program Opportunities

- USNA Goal is for majority of midshipmen to have an international experience ...

- **Short-Term (~1-2 weeks)**
  - Faculty-led
  - Spring break, other times

- **Moderate Length (~4+ weeks)**
  - Summer Internship
  - Some have pre- (and possibly post-) coursework

- **Longer Term (one semester)**
  - Semester Study Abroad
  - No prior language study required if STEM major
International Program Opportunities
Beyond USNA: Graduate Education

- There are several graduate education opportunities available to USNA graduates
- USNA grads perform very well in graduate school

- Grad Education does extend typical service obligations; note also that Navy and Marine Corps have different policies. See http://intranet.usna.edu/GraduateEducation/additionalserviceobligation.php
Graduate Education Opportunities

• **VGEP** = Voluntary Grad Ed Program
  (Master’s Degree complete by December of Grad Year –
  aka Bachelor + Master Degrees in 4 ½ years!)

• **Immediate Grad Ed Programs**
  – **NPS, Civilian** and/or **International** Immediate Grad School
  – **Bowman Scholarship Program**
  – **PPAC** = Premedical/Predental Advisory Committee
    (~10-15 midshipmen commission into MedCorps or DentalCorps)

• **“Delayed” Grad Ed Programs** (MC/Navy Burke)

• More info: [http://intranet.usna.edu/GraduateEducation/index.php](http://intranet.usna.edu/GraduateEducation/index.php)
• Requirements
  – Academic [GPA ≥ 2.0 (“C”) ] incl Completion of Core & Major courses
  – Physical Education
  – Summer Training
  – Honor, Conduct, Aptitude for Commissioning

• >87% Graduation Rate in 4 years!
  – Compare Harvard (86%), MIT (84%), Penn State (65%), Princeton (88%), U of Md (67%)
Accreditation

• Institutional Accreditation:
  Middle States Commission on Higher Education

• Specific Majors:
  – Each Engineering Major:
    Engineering Accreditation Commission (EAC) of ABET, Inc. [www.abet.org](http://www.abet.org)
  – Computer Science & IT:
    Computing Accreditation Commission (CAC) of ABET, Inc. [www.abet.org](http://www.abet.org)
  – Chemistry:
    American Chemical Society (ACS)
College Rankings

America's Best Colleges

PayScale

America's 50 Best Colleges

Forbes

The Best Schools
Dean Waters’ Top 10 Reasons
USNA’s Academic Program is So Special!

1. Small, Personalized, Interactive Classes
2. Outstanding Faculty
3. Outstanding Facilities
4. Academic Programs on par with other highly-respected U.S. and international programs
5. Academic Support that is second-to-none – Advising/Mentoring by faculty – Extra Help – many types
6. Extensive International Opportunities – avail to all
7. Extensive Summer Internship Opportunities
8. Extensive Research and Special Academic Opportunities
9. Outstanding Grad Ed Opportunities and Support
10. >87% Graduation Rate in 4 years
U.S. Naval Academy

Ex Scientia Tridens

From Knowledge, Sea Power