

# Class of 2011



# Academic Program

Associate Dean  
for  
Academic Affairs  
(ADAA)

Professor Frederic I. Davis  
(fid)

# A quick mathematics lesson ...

Prime integers are positive integers greater than 1 that are exactly divisible only by themselves and 1.

Examples: 2, 3, 5, 7, 11, ..., 67, ...

Integers factor uniquely into primes.

$$\text{Example: } 60 = 2 \times 2 \times 3 \times 5$$

## A few more examples . . .

$$2008 = 2 \times 2 \times 2 \times 251$$

$$2009 = 7 \times 7 \times 41$$

$$2010 = 2 \times 3 \times 3 \times 67$$

$$2012 = 2 \times 2 \times 503$$

$$2013 = 3 \times 11 \times 61$$

$$2014 = 2 \times 19 \times 53$$

A final important example

2011

is

*Prime !*

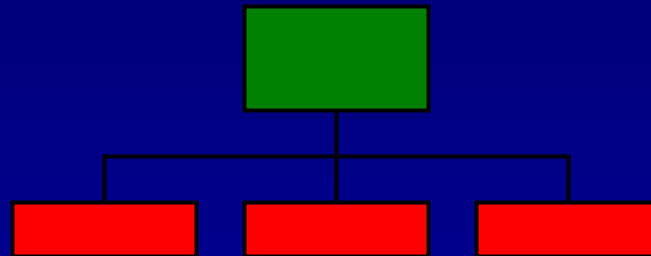
# Outline of this briefing

- Academic Organization
  - Chain of Command
  - Divisions and Departments
  - Majors and Minors
  - Faculty
- Graduation Requirements
  - Commission and Degree
  - Academic Requirements
  - Grades and Credits

# Outline of this briefing (cont'd)

- Academic Calendar
  - A tour from I-Day to Christmas
- Miscellany
  - Calculator
  - Computer
  - Validation
  - The academic adventure ahead
- Questions and Answers

# Academic Organization





# Superintendent

VADM Jeffrey L. Fowler, USN  
USNA, '78

## Academic Dean and Provost

Dr. William C. Miller  
RADM, USN (Ret)  
USNA, '62

## Commandant of Midshipmen

CAPT Margaret D. Klein, USN  
USNA, '81

**Academic Dean  
and Provost**

Dr. William C. Miller

**Vice Academic Dean**

Dr. Michael C. Halbig

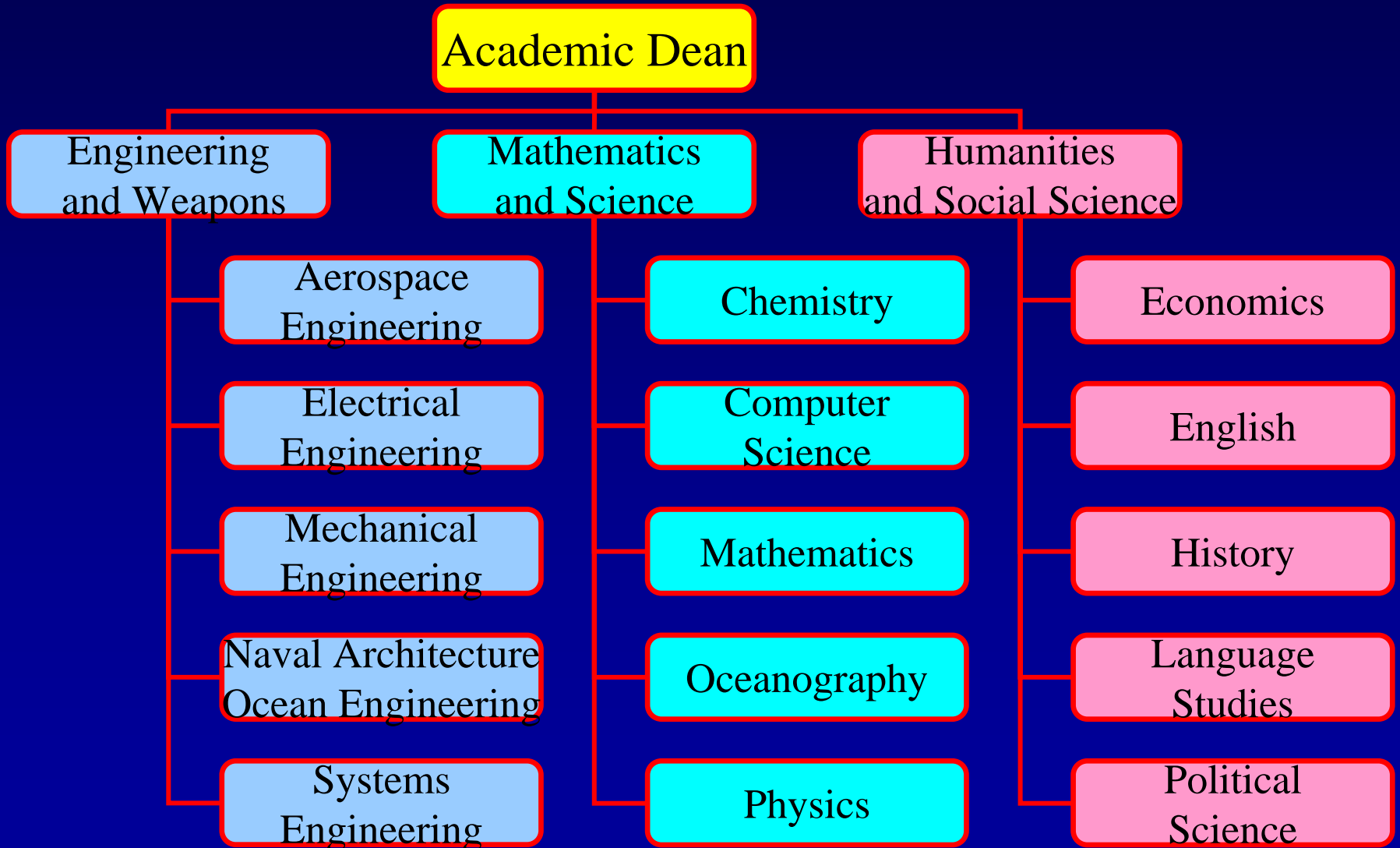
**Associate Dean  
for Faculty**

Dr. Boyd A. Waite

**Associate Dean  
for Academic Affairs**

Dr. Frederic I. Davis

# Divisions and Departments



# Divisions and Departments

Commandant

```
graph TD; Commandant[Commandant] --> Professional[Professional Development]; Commandant --> Officer[Officer Development]; Professional --> Seamanship[Seamanship & Navigation]; Officer --> Leadership[Leadership, Ethics, & Law];
```

Professional  
Development

Officer  
Development

Seamanship  
& Navigation

Leadership,  
Ethics, & Law

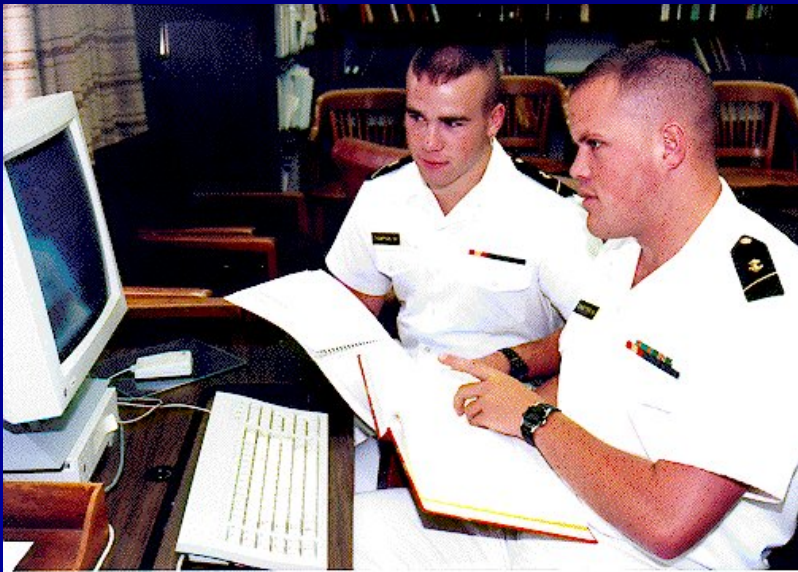
# I. Division of Engineering and Weapons



# I. Division of Engineering & Weapons

<b>Departments</b>	<b>Majors</b>
Aerospace Engineering	Aerospace Engineering
Electrical Engineering	Electrical Engineering
Mechanical Engineering	General Engineering
	Mechanical Engineering
Naval Architecture and Ocean Engineering	Naval Architecture
	Ocean Engineering
Weapons and Systems Engineering	Systems Engineering

## II. Division of Mathematics and Science



## II. Division of Mathematics & Science

Departments	Majors
Chemistry	Chemistry
Computer Science	Computer Science
	Information Technology
Mathematics	General Science
	Mathematics
	Quantitative Economics
Oceanography	Oceanography
Physics	Physics



# III. Division of Humanities and Social Sciences



# III. Division of Humanities and Social Sciences

Department	Major
Economics	Economics
English	English
History	History
Political Science	Political Science
Language Studies	Arabic, Chinese
	Arabic, Chinese, French, German, Japanese, Russian, Spanish

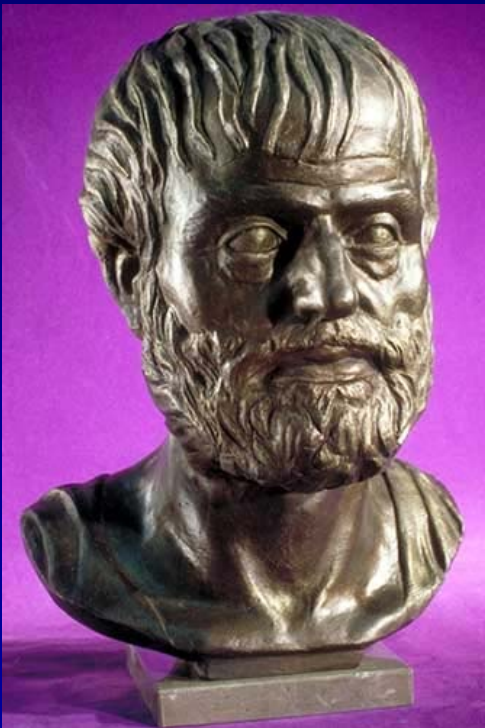
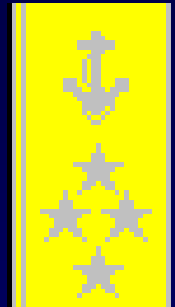
# IV. Division of Professional Development



# IV. Division of Professional Development

<b>Department</b>	<b>Major/Minor</b>
Seamanship and Navigation	None
Professional Programs	Non-teaching None

# V. Division of Officer Development



# IV. Division of Officer Development

<b>Department</b>	<b>Major/Minor</b>
Leadership, Ethics and Law	None
Character Development	Non-teaching None

# Faculty

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

Officer  
faculty:  
military role  
model,  
recent  
operational  
experience,  
masters  
degree +



Civilian  
faculty:  
academic  
expertise,  
program  
continuity,  
doctoral  
degree

# Requirements





# Commission and Degree

- Academic
  - Complete core courses.
  - Complete required courses in a major.
  - Achieve an overall GPA of 2.00.
  - Complete 137 credit hours.
  - Achieve a 2.00 in major to earn *designated* degree.
- Physical education
  - Complete all PE courses and PRTs.

- Achieve standards in summer training each year.
- Achieve standards in
  - Military performance,
  - Honor, and
  - Conduct.
- Accept a commission, if offered.

meet these requirements and  
you get to do this ...



and you, too, may lead and serve ...




# Academic Requirements

- Core courses
  - Plebe year
  - Upper class years
- Majors program

# “Standard” plebe year

Fall	Spring
<b>Calculus I</b>	<b>Calculus II</b>
<b>Chemistry I</b>	<b>Chemistry II</b>
<b>English I</b>	<b>English II</b>
<b>Naval History</b> ↔	<b>Government</b>
<b>Seamanship</b>	<b>Intro. to Navigation</b>
<b>Leadership I</b> ↔	

# Early start - “critical” language

Fall	Spring
<b>Calculus I</b>	<b>Calculus II</b>
<b>Chemistry I</b>	<b>Chemistry II</b>
<b>English I</b>	<b>English II</b>
<i>Language I</i>	<i>Language II</i>
<b>Seamanship</b>	<b>Intro. to Navigation</b>
<b>Leadership I</b> 	

# A “typical” schedule

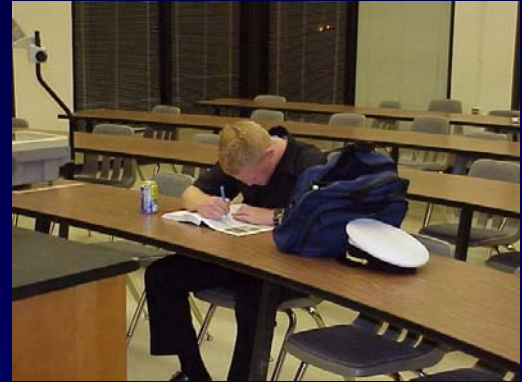




# Daily Periods

Pd	Duration	Pd	Duration
1	0755-0845	8	0755-0910
2	0855-0945		
3	0955-1045	9	0955-1110
4	1055-1145		
5	1330-1420	10	1330-1445
6	1430-1520		
7	1530-1620	periods: 50 or 75 min	

	<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>	<b>Fri</b>
<b>1</b>	<b>Chem</b>		<b>Chem</b>	<b>Chem</b>	<b>Chem</b>
<b>2</b>	<b>Gov't</b>	<b>PE</b>	<b>Gov't</b>	<b>Chem</b>	<b>Gov't</b>
<b>3</b>				<b>Smnshp</b>	
<b>4</b>	<b>English</b>	<b>Smnshp</b>	<b>English</b>	<b>Smnshp</b>	<b>English</b>
<b>5</b>	<b>Ldrshp</b>		<b>Ldrshp</b>		
<b>6</b>	<b>Calc</b>	<b>Calc</b>	<b>Calc</b>		<b>Calc</b>



# Common Courses – Core (70%)

Calculus [3]	English [2]	Leadership [2]
Diff Eqns [1] or Prob & Stats [1]	Gov't [1]	Ethics [1]
	History [3]	Law [1]
Chemistry [2]*	Electives [2]	Seamanship [1]*
Physics [2]*		Navigation [2]*
Electrical E [1]*	Language [4]	Naval Warfare [1]*
Wpns Syst E [1]*		JO Practicum [1]*
Info Techn [1]*		
Ship Perform E [1]*		Physical Ed [8]
Ship Propuls E [1]*	<i>* with lab</i>	

# An Engineering Major

Third Class		Second Class		First Class	
Fall	Spring	Fall	Spring	Fall	Spring
Nav	Ethics	Nav War	Leadership	Law	JO Practic
Calculus	Diff Eqns	EE	EE	Wpns	Control Sys
Physics	Physics				
W Civiliz	W Civiliz		H&SS Elec		H&SS Elec
Major	Major	Major	Major	Major	Major
	Major	Major	Major	Major	Major
		Major	Major	Major	Major
				Major	

# A Mathematics-Science Major

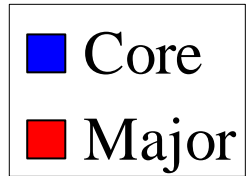
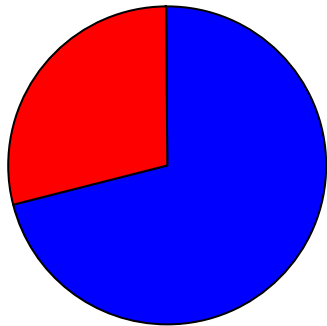
Third Class		Second Class		First Class	
Fall	Spring	Fall	Spring	Fall	Spring
Nav	Ethics	Nav War	Leadership	Law	JO Practic
Calculus	Diff Eqns	EE	EE	Wpns	Elective
Physics	Physics				
W Civiliz	W Civiliz		H&SS Elec		H&SS Elec
			Ship Propul	Ship Perfor	
Major	Major	Major	Major	Major	Major
	Major	Major	Major	Major	Major
		Major		Major	Major

# A Humanities-Social Science Major

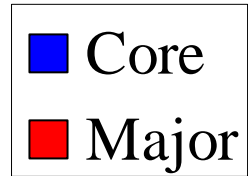
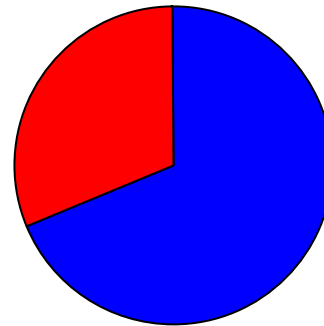
Third Class		Second Class		First Class	
Fall	Spring	Fall	Spring	Fall	Spring
Nav	Ethics	Nav War	Leadership	Law	JO Practic
Calculus	Diff Eqns	EE	EE	Wpns	Elective
Physics	Physics				
W Civiliz	W Civiliz	H&SS Elec			H&SS Elec
			Ship Propul	Ship Perfor	
Language	Language	Language	Language		
Major	Major	Major	Major	Major	Major
		Major	Major	Major	Major

# Core and Major Courses

Courses



Credits





# Grades and Credits

Grade	Value or meaning
<b>A</b>	<b>4</b>
<b>B</b>	<b>3</b>
<b>C</b>	<b>2</b>
<b>D</b>	<b>1</b>
<b>F</b>	<b>0</b>
<b>I</b>	<b>Incomplete</b>
<b>V</b>	<b>Validated</b>

# Grades and Credits

<b>R</b>	Recitation, lecture, discussion class hours/week
<b>L</b>	Laboratory class hours/week
<b>C</b>	Credits

Generally,  $C = R + L / 2$

# Grades and Credits

Course	R	L	C
Calculus I	4	0	4
Chemistry I	3	2	4
English I	3	0	3
US Gov't and Constitution	3	0	3
Leadership I	2	0	2
Seamanship	1	2	2
Physical Education I	0	1	0

# Grades and Credits

Calc I		Chem I		Engl I		Gov't		Smnshp		
B		A		C		B		A		
4 x 3	+	4 x 4	+	3 x 2	+	3 x 3	+	2 x 4	=	51
4	+	4	+	3	+	3	+	2	=	16

$$\text{QPR} = 51 / 16 = 3.19$$

# Academic Calendar

A plebe's eye-view from  
Induction Day to Christmas.

# Induction Day '11 – 27 June 2007



<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>	<b>Fri</b>	<b>Sat</b>
		<b>Jun 27</b> Induction Day 11	28	29	30
<b>Jul 02</b>	03	04 Independence Day	05	06	07
09	10	11	12	13	14
16	17 ACR	18 ACR	19 ACR	20 ACR	21
23	24	25	26	27	28
30	31	<b>Aug 01</b>	02	03	04
06	07	08	09	10	11 Parent's Weekend

<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>	<b>Fri</b>	<b>Sat</b>
13	14	15	16 Reform	17 Reform	18
20 Classes begin	21	22	23	24	25
27	28	29	30	31	<b>Sep 01</b>
03 Labor Day	04 Monday	05	06	07 Prereg	08
10 Prereg	11 Prereg	12 Prereg	13 Prereg	14 Prereg	15
17	18	19	20	21	22
24 ARP	25 ARP	26 ARP	27 ARP	28 ARP	29
<b>Oct 01</b>	02 Grades	03	04	05	06 USAFA
08 Columbus Day	09	10	11	12	13
15	16	17	18	19	20





<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>	<b>Fri</b>	<b>Sat</b>
22	23	24	25	26	27
29 ARP	30 ARP	31 ARP	<b>Nov 01</b> ARP	02 ARP	03
05	06 Grades	07	08	09	10
12 Veterans Day	13 Registration	14 Registration Early	15 Registration	16 Registration	17
19 Registration	20 Registration	21 Registration	22 Thanksgiving	23	24
26 Registration	27 Registration	28 Registration	29 Registration	30 Registration	<b>Dec 01</b> USMA
03	04	05 Classes end	06 Review and Study	07 Exams	08 Exams
10 Exams	11 Exams	12 Exams	13 Exams	14 Exams	15
17	18	19	20 Grades	21	22
24	25	26	27	28	29



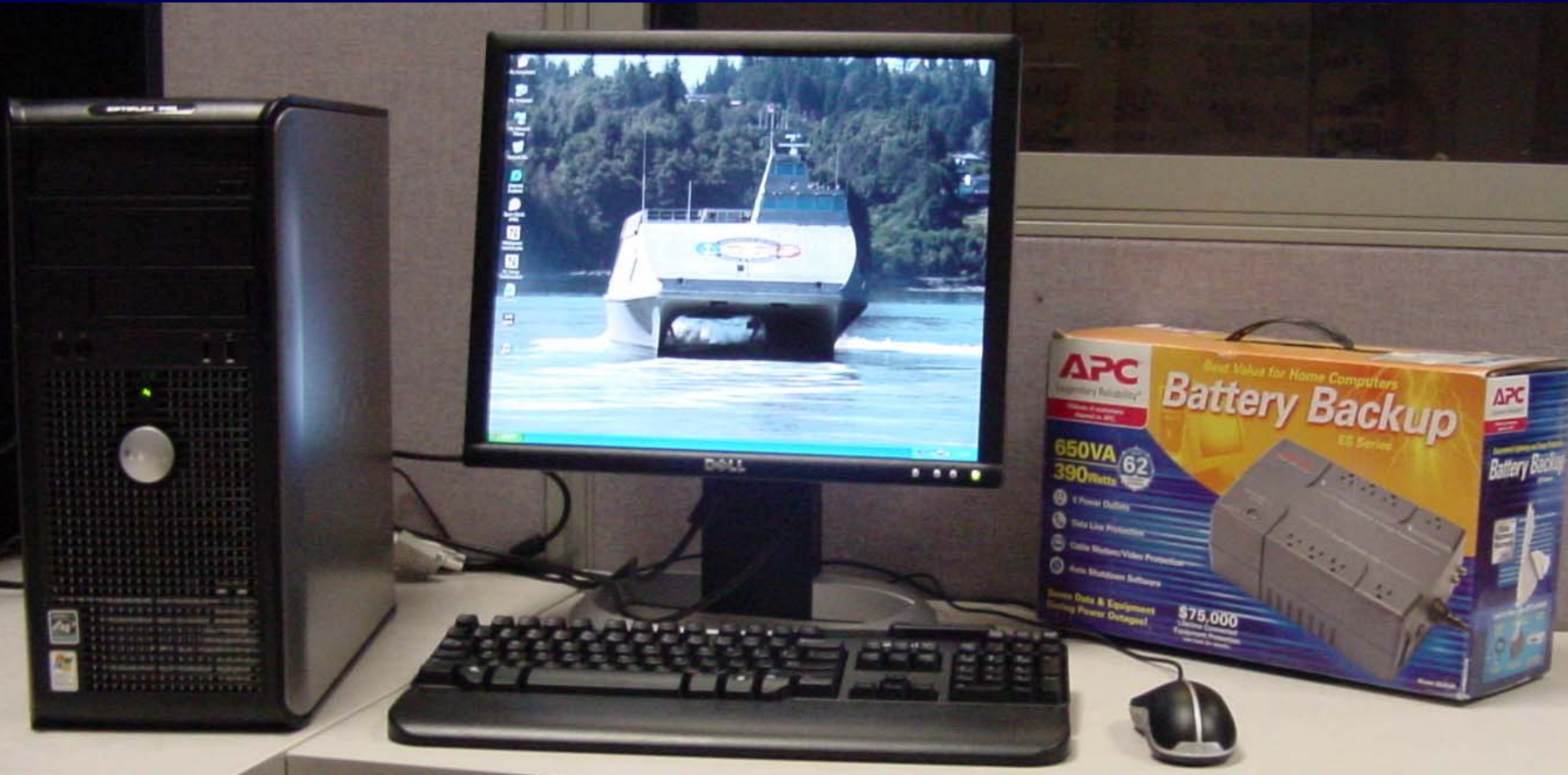
# Miscellaneous Remarks

# Calculator



TI Voyage 200

# Computer



# Validation

<b>Subjects</b>	<b>Number of Validations</b>
<b>Engineering</b>	<b>5</b>
<b>Economics</b>	<b>15</b>
<b>Languages</b>	<b>1400</b>
<b>Political Science</b>	<b>15</b>
<b>English</b>	<b>75</b>
<b>History</b>	<b>15</b>
<b>Leadership, Ethics, Law, Psychology</b>	<b>3</b>
<b>Seamanship, Navigation</b>	<b>0</b>
<b>Biology</b>	<b>5</b>
<b>Chemistry</b>	<b>90</b>
<b>Computer Science</b>	<b>10</b>
<b>Mathematics</b>	<b>500</b>
<b>Physics</b>	<b>25</b>

# The Academic Adventure Ahead

- What would you like to learn about?
  - forces that make things move
  - history of civilization
  - forms of government
  - great authors
  - how the economy works
  - military strategy and tactics
  - philosophy



- navigation by the stars
- leadership
- the composition of things
- how people think
- the environment
- robots
- computers
- religion
- logic
- decision-making
- net-centric warfare

- Chinese
- abstract algebra
- Civil War
- Islam
- principles of flight
- foreign cultures
- group behaviors
- building ships
- asteroids
- stock market
- rockets

- communications
- justification for warfare
- Russian
- artificial intelligence
- chaos
- flight
- probability and risk
- nuclear power
- terrorism
- asymmetrical warfare
- Arabic

- biometric identification
- Russian
- American Revolution
- Japanese
- General Relativity
- environmental politics
- poetry
- AIDS
- tracking near-Earth asteroids
- 
-

# What kind of educational opportunities interest you?

- original research with a faculty mentor
- attend graduate school in 1/C, finish master's degree by December 2011
- intern at the Maryland legislature
- complete two or more majors
- achieve a minor in a language
- earn honors in a major

- summer internship at a Navy or Defense Department laboratory
- study in a foreign country during the summer
- spend a semester abroad
- prepare for Rhodes, Marshall, Gates, or Truman Scholarships
- develop engineering solutions to naval problems
- 
-

- All these subjects and all these educational opportunities and more are made available to you by an absolutely outstanding faculty committed to your academic success.
- Take advantage of these next four years.
- Let the adventure begin ...

# *Ex Scientia Tridens*





Questions ?