Majors Program

Class of 2015

Majors Briefing – Class of 2015

Associate Dean for Academic Affairs
Dr. Frederic I. Davis
+
Faculty of
15 Academic Departments
and Special Programs

This Briefing

- Why major?
- What major?
- Sources of information.
- Advice on major selection.
- Special notes.
- Begin exploration of majors.

Major Selection Process

- Today:
  - Learn more about majors
- Remainder of this week:
  - Indicate preliminary major choices
- January – February:
  - Explore programs
  - Assess personal interests and abilities
- March:
  - Choose major before spring break

Why major?

- Educational philosophy common at most colleges in the United States. Combine:
  - breadth (core and divisional program)
  - depth (major program)

- Because we (USN, USMC, USNA) say so … it is a requirement for graduation.

Degree Requirements

- To be commissioned ***and*** receive a degree a midshipman must meet academic and other requirements.

- Academic requirements
  - complete or validate core, divisional, and major courses specified in matrix for assigned major
  - complete or validate 138 credits (minimum) with CQPR of at least 2.00

  [*for diploma with major designated on it*: *earn CQPR of at least 2.00 in major*]

- Other requirements
  - Physical education
  - Summer training
  - Aptitude for commissioning
  - Honor
  - Conduct
  - Accept a commission in the United States Navy or the United States Marine Corps

Majors at USNA

1: Eng & Wpns	2: Math & Sci	3: Hum & SS
Aerospace Eng	Chemistry	Arabic
Computer Eng	Computer Sci	Chinese
Electrical Eng	General Sci	Economics
General Eng	Info Tech	English
Mechanical Eng	Mathematics	History
Naval Arch	Oceanography	Political Sci
Ocean Eng	Operations Rsrch	
Systems Eng	Physics	
	Quant Economics	

Choosing a major means …

- Selecting …
  - a menu of courses (a matrix) for study
  - a faculty with whom you wish to learn
  - facilities that will provide the environment for your learning experiences
  - A “lifestyle” for three upper class years
  - opportunities for future learning and growth

Structure of majors

- "Typical" matrices for the three divisions
  - **I. Engineering and Weapons**
  - **II. Mathematics and Science**
  - **III. Humanities and Social Sciences**

Nav II		N War			
	Ethics		Ldrshp	Law	
Physics1	Physics2	EE	Cyber2		
Calc3			WpnSys		
	History of West in Mod World				
	DiffEqn			CtrlsSys	JO Pract
Cultural/Regional History		Hum/SS			Hum/SS
Major	Major	Major	Major	Major	Major
Major	Major	Major	Major	Major	Major
I. Engineering and Weapons		Major	Major	Major	Major
				Major	

Nav II		N War			
	Ethics		Ldrshp	Law	
Physics1	Physics2	EE	Cyber2		
Calc3			WpnSys		
	History of West in Mod World				
	Math4			CtrlsLab	JO Pract
Cultural/Regional History		Hum/SS	Hum/SS	ShpProp	WarEng
Major	Major	Major	Major	Major	Major
Major	Major	Major	Major	Major	Major
II. Mathematics and Science		Major		Major	

Nav II		N War			
	Ethics		Ldrshp	Law	
Physics1	Physics2	EE	Cyber2		
Calc3			WpnSys		
	History of West in Mod World				
Cultural/Regional History	Math4	Hum/SS	Hum/SS	CtrlsLab	JO Pract
Lang1	Lang2	Lang3	Lang4	ShpProp	WarEng
Major	Major	Major	Major	Major	Major
		Major	Major	Major	Major
III. Humanities and Social Science					

Sources of information

- These briefings, department open houses
- Plebe Advisers
- Department web pages
- MIDS
- Faculty
- Chain of command
- Upper class midshipmen ?
- Friends, classmates, and relatives ??

Sources of information

- On the Web

UNITED STATES NAVAL ACADEMY INTRANET

OFFICE OF THE ACADEMIC DEAN AND PROVOST

Information about:

- Academic Program
- Academic Spaces
- Alumni Information
- Candidate Information
- Departments & Divisions
- Faculty Information
- Honor Lists
- International Programs
- Middle States Self Study
- Museum
- Nimitz Library
- Officer Faculty Opportunities
- Organization
- Parent Information
- Rules & Regulations
- Schedules, Calendars & Events
- Superintendent's Academic Program Review
- Talks
- USNA Homepage

Sources of information

- On MIDS

UNITED STATES NAVAL ACADEMY

Midshipmen Information System (MIDS)

- ABOUT MIDS
- GENERAL ACADEMICS
- AD HOC QUERIES
- CHANGE PASSWORD
- LOG OFF

- ITSD ADMINISTRATION

- Academic Center
- Academic Dean
- Commandant's Staff
- Department Chair
- Faculty
- Logistics

- Mid Personnel Office
- Midshipmen
- MISO
- OPS Schedules
- Physical Education
- ProDev

- Registrar

Warning: For security purposes, please exit the browser when PC is unattended.

Maintenance Schedule

- **Sundays:** Unavailable from 0300 to 0500 for Weekly Backups

UNITED STATES NAVAL ACADEMY

Midshipmen Information System (MIDS)

MIDS HOME

ABOUT MIDS

GENERAL ACADEMICS

AD HOC QUERIES

CHANGE PASSWORD

LOG OFF

Midshipmen

Warning: For security purposes, please exit the browser when PC is unattended.

- 360 Feedback - Query Results (Midshipmen)
- 360 Feedback - Record
- Absences and Excuses - Query
- Academic Information - Query
- Access Dates (for Midshipmen) - Query
- Aptitude for Commission - Midshipmen Ranking
- Aviation Physiology - Apply
- COMAPs - Query
- Character Development Seminar - Register
- Conduct (1/C Mids Only) - Record Offenses
- Conduct - Acknowledge Conduct Record (Form 1)
- Conduct - Enter Plea
- Conduct - Query Demerits and Standings
- Conduct - Query Offenses
- Courses - Preregister
- Courses - Query Preregistration
- Courses - Register
- ECAs - Maintain Rosters
- Excuses - Enter
- Honor - Query Offenses
- Leave Addresses - Maintain
- MAPR (Midshipman Academic Performance Report) - Query
- Major - Declare
- Major - Enter Preliminary Preferences
- Matrices - Query Current Midshipman
- Matrices - Query Major Requirements
- Midshipmen (1/C Only) - Query Restrictions, LOL, LOP

- Courses - Register
- ECAs - Maintain Rosters
- Excuses - Enter
- Honor - Query Offenses
- Intramurals - Record Game Results
- Intramurals - Sign-up
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- Midshipmen - Performance Record
- NASS Candidate Fitness Assessment (CFA) Application - Enter
- NASS Evaluations - Enter
- OPINFO - Register and Approvals
- PE Course and PRT Scores - Query
- PE Mark - Query
- Personal Computer Information - Maintain
- Personal Information - Maintain
- Religious Preferences - Maintain
- Schedules - Query Midn Schedule for Summer School
- Schedules - Query Midshipmen
- Schedules - Query Potential Mid Schedules
- Schedules - Query Schedule for Next Semester
- Service Assignment - Career Interest Survey
- Service Assignment - Career Preferences (Final)

Matrices - Query Major Requirements

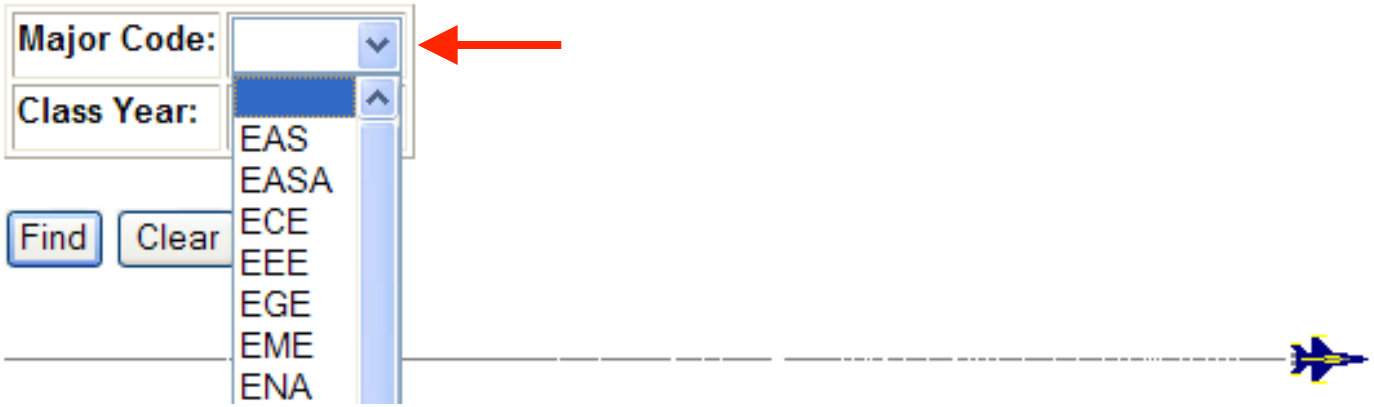
A Major Code or a Class Year MUST be selected.

Major Code:	
Class Year:	

Find Clear

Matrices - Query Major Requirements

A Major Code or a Class Year MUST be selected.



Matrices - Query Major Requirements

A Major Code or a Class Year MUST be selected.

Major Code:	EME
Class Year:	2015

Find Clear

Major Matrix

Class: 2015 Major: EME MECHANICAL ENGINEERING

Total Matrix Credit Hours: 144

NS101, 2	SI110, 3	NN210, 2	NE203, 3	NN310, 2	NL310, 3		NS43X, 2
NL110, 2							NL400, 2
CHEM1, 4	CHEM2, 4	SP211, 4	SP212, 4	ES300, 3		ES410, 4	
CALC1, 4	CALC2, 4	SM221, 4	SM212, 4	EE331, 4	EE334, 4		
HE111, 3	HE112, 3	HH2XY, 3	HH216, 3			HM SS1, 3	HM SS2, 3
FP130, 3	HH104, 3						
		EM211, 3	EM232, 3	EM319, 3	EM324, 4		
		EM215, 3	EM217, 4	EM371, 3	EM320, 3	EM415, 4	EM472, 3
				EM313, 4	EM375, 3	MJ EL1, 3	MJ EL2, 3
						EM471, 3	MJ EL3, 3
[18]	[17]	[19]	[21]	[19]	[17]	[17]	[16]

- Courses - Register
- ECAs - Maintain Rosters
- Excuses - Enter
- Honor - Query Offenses
- Intramurals - Record Game Results
- Intramurals - Sign-up
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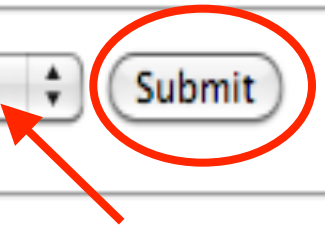
Matrices - Query Current Midshipman

Alpha: [redacted]
Name:
Class Year: 2015
Assigned Major:

Format for Current Major: MATRIX Submit

Major for Temporary Change: EAS Submit



Midshipmen Matrices

Group = MRT Format = MATRIX Temporary Major/Year: EAS/2015

Matrix Symbols: * Registered + Preregistered -- Major Requirement $ Summer School

Alpha: [redacted]	Mid: [redacted]	Co: [redacted]	Maj: EAS	MajQPR: 0.00	Mtx Hrs: 42
CQPR: 4.00	Projected CQPR: 4.00	#Courses: 13/11	HM/SS: 5/8	#300/400: 0/1	Adv: [redacted]

Projected Graduation Date: MAY-2015	Status: ACTIVE

Deficiencies:

	Fourth Class		Third Class		Second Class		First Class	
Core	NS101 *	SI110 A	NN210--		NL310--			NS43X--
	NL110 *		NE203--		NN310--			NL400--
	SC111 A	SC112 *	SP211--	SP212--		ES300--	ES410--	
	SM121 V	SM122 A	SM221 *	SM212--		EE331--	EE334--	
	HE111 A	HE112 *		HH2XY--	HH216--		FS201V V	HM SS2--
Division	FP130 A	HH104 *						
Major			EM211--	EM232--	EM321--	EA322--		
					EM319--	EA332--		
			EA203--	EA204--	EA301--	EA304--	EA401--	EA440--
				EA308--	EA303--		EA413--	MJ EL1--
							EA429--	MJ EL2--

FS103V V FS104V V FS202V V

Viewing matrix 1 of 1

Midshipmen Matrices

Group = MRT Format = MATRIX Temporary Major/Year: SPH/2015

Matrix Symbols: * Registered + Preregistered -- Major Requirement $ Summer School

Alpha: [redacted]	Mid: [redacted]	Co: [redacted]	Maj: SPH	MajQPR: 0.00	Mtx Hrs: 45
CQPR: 4.00	Projected CQPR: 4.00	#Courses: 14/11	HM/SS: 5/8	#300/400: 0/1	Adv: [redacted]

Projected Graduation Date: MAY-2015	Status: ACTIVE

Deficiencies:

	Fourth Class		Third Class		Second Class		First Class	
Core	NS101 *	SI110 A	NN210--		NL310--	NN310--		NS43X--
	NL110 *		NE203--					NL400--
	SC111 A	SC112 *		FS201V V	ES360--	ES300--		
	SM121 V	SM122 A	SM221 *	SM212--	EE301--	EE310--		
	HE111 A	HE112 *	HH2XY--	HH216--			HM SS2--	
Division	FP130 A	HH104 *					EM300--	FS202V V
							EA/N4XY--	
Major					SP327--	SP324--	SP425--	
			SP221--	SP222--	SP333--	SP342--		SP444--
				SP226--			MJ EL1--	MJ EL2--
					SP351--	SP352--		MSE EL--

FS103V V FS104V V

Viewing matrix 1 of 1

Midshipmen Matrices

Group = MRT Format = MATRIX Temporary Major/Year: HHS/2015

Matrix Symbols: * Registered + Preregistered -- Major Requirement $ Summer School

Alpha: [redacted]	Mid: [redacted]	Co: [redacted]	Maj: HHS	MajQPR: 0.00	Mtx Hrs: 51
CQPR: 4.00	Projected CQPR: 4.00	#Courses: 16/11	HM/SS: 4/8	#300/400: 0/1	Adv: [redacted]

Projected Graduation Date: MAY-2015	Status: ACTIVE

Deficiencies:

	Fourth Class		Third Class		Second Class		First Class	
Core	NS101 *	SI110 A		NE203--	NL310--	NN310--	NL400--	NS43X--
	NL110 *			NN210--				
	SC111 A	SC112 *	SP211--	SP212--	SM2XY--		ES300--	ES360--
	SM121 V	SM122 A	SM221 *		EE310--	EE301--		
	HE111 A	HE112 *	HH2XY--	HH216--		HM SS1--		HM SS2--
Division	FP130 A	HH104 *					EM300--	EA/N4XY--
			FS103V V	FS104V V	FS201V V	FS202V V	FR EL--	
Major								
				HH262--	EL1 AM--	EL3 RE--	HH462--	MJ EL7--
					EL2 EU--	EL4 TH--	EL5 ML--	MJ EL8--
			MJ EL6--					

Viewing matrix 1 of 1

Remarks on major selection

- What is the connection between

major selection

and

service selection

???

Major ??

Chief of Naval Personnel:

(VADM J. C. Harvey, Jr., 19 Oct 07)

- USNA will ensure a minimum of 65% complete a technical degree program before receiving a Navy commission.

Major Policy at USNA

- CNP Policy applies to USN, not USMC.
- USNA goal is a plebe selection of at least 70% STEM majors to assure USN goal of 65% at graduation.
- Transfers from STEM to non-STEM majors may be restricted.

Major Policy at NROTC

- Navy's goal of increasing mathematics, science and engineering knowledge and skills of its officer corps applies to NROTC Navy Option programs--not just USNA.
- NROTC scholarships are available on a priority basis to those who select and remain in STEM majors.

Remarks on major selection

- It is expected that most midshipmen in the Class of 2015 will be assigned to their first choices of major. However, the needs of the Naval Service and USNA resources are paramount.
- Each plebe will be required to include at least one STEM major among his/her top three choices.

Remarks on major selection

- There are two principal components to your Naval Academy education:
  - Core/Divisional Requirements (about 2/3)
  - Major Requirements (about 1/3)

Remarks on major selection

- Core and divisional requirements
  - essential to Naval Service
  - foundation of general education
  - about 2/3 of overall program
  - provides breadth
  - strong component of mathematics, science, and engineering

Remarks on major selection

- Major
  - provides an opportunity to study, in some depth, a subject of value to the Naval Service that matches the interests and talents of the individual midshipman
  - a starting point for further development and a stepping stone for graduate education

Select a Div 1, 2 major if …

- you have the interest and ability
- your calculus and chemistry grades are good
- you enjoy working with mathematical and scientific principles and concepts
- you enjoy working with your hands
- you are ambivalent about technical vs non-technical majors but want to take into account the needs of the Naval Service

Don't select a Div 1, 2 major …

- simply for the prestige of a STEM degree
- if you are not fond of mathematics
- if your average in calculus and chemistry is not a "C" or better – *these two plebe courses are the best predictors for success in a STEM major*

Select a Div III major if …

- you enjoy reading, writing, history, literature, economics, government, law
- you have a greater interest in people and their interactions than in things and their interactions
- you don't have a strong interest in STEM
- you want to study a foreign language
- your verbal skills are much better than your mathematical skills

Don't select a Div III major …

- if your verbal skills are weak relative to your quantitative reasoning skills
- if you prefer to work with your hands

Remarks on selecting a major

- Investigate majors for special future opportunities
  - in upper class years
  - for graduate work
  - in the Naval Service
  - in civilian life

Remarks on selecting a major

- ***Caution***: Typically, about 90 3/C midshipmen change majors during the very first semester in that major. Another 20 will follow before 1/C. Most of these changes are accompanied by weak grades and discontent.
- Principal reasons are a failure to:
  - investigate major sufficiently, or
  - suitably match interests/talents to the major, or
  - appreciate nature of very first course in the major

Remarks on selecting a major

- Major Selection Process – Spring 2012
  - Indicate major preferences
    - 0700 Tue 10 Jan – 2100 Fri 13 Jan
    - MIDS | Midshipmen | Major – Enter Preliminary Preference
  - Select major
    - 0700 Mon 05 Mar – 1800 Thu 08 Mar
    - MIDS | Midshipmen | Major – Declare
  - Preregister for fall 3/C
    - 0700 Tue 20 Mar – 1800 Fri 23 Mar
    - See new adviser and preregister

What next?

- By end of the next period, visit with at least **3** departments in Sampson and Maury Halls from at least **2** divisions.
- Between Tuesday and Friday, run program

  Major – Enter Preliminary Preferences
- Select 3 (non-binding) choices

At least 1 of top 3 choices must be STEM

- Courses - Register
- ECAs - Maintain Rosters
- Excuses - Enter
- Honor - Query Offenses
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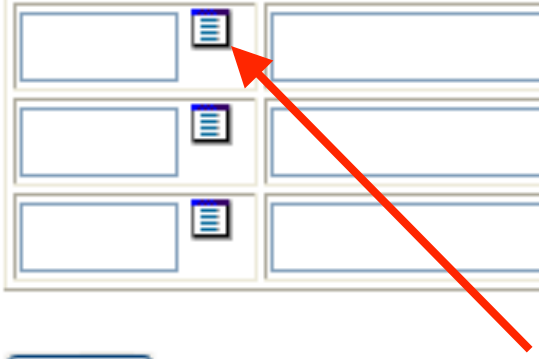
Major - Enter Preliminary Preferences

[redacted]

Three preliminary majors must be selected. At least one of these MUST be a major in Science, Technology, Engineering, or Mathematics (STEM). Once the preliminary majors are inserted, no changes can be made.

Major Code	Major Name	Preference Rank	Insert?
		1	Clear
		2	Clear
		3	Clear



Insert

List Of Values: Major Code

Search criterion for Major Code:

% Find Close

Major Code	Major Name
EAS	AEROSPACE ENGR (AERO)
ECE	COMPUTER ENGINEERING
EEE	ELECTRICAL ENGINEERING
EGE	GENERAL ENGINEERING
EME	MECHANICAL ENGINEERING
ENA	NAVAL ARCHITECTURE
EOE	OCEAN ENGINEERING
ESE	SYSTEMS ENGINEERING
FEC	ECONOMICS
FLA	ARABIC
FLC	CHINESE
FPS	POLITICAL SCIENCE
HEG	ENGLISH
HHS	HISTORY
SCH	CHEMISTRY
SCS	COMPUTER SCIENCE
SGS	GENERAL SCIENCE
SIT	INFORMATION TECHNOLOGY
SMA	MATHEMATICS
SMO	OPERATIONS RESEARCH
SOC	OCEANOGRAPHY
SPH	PHYSICS
SQE	QUANTITATIVE ECONOMICS

Major - Enter Preliminary Preferences

[redacted]

Three preliminary majors must be selected. At least one of these MUST be a major in Science, Technology, Engineering, or Mathematics (STEM). Once the preliminary majors are inserted, no changes can be made.

Major Code	Major Name	Preference Rank	Insert?
SMA	MATHEMATICS	1	✔ Clear
		2	Clear
		3	Clear

Insert

Major - Enter Preliminary Preferences

[redacted]

Three preliminary majors must be selected. At least one of these MUST be a major in Science, Technology, Engineering, or Mathematics (STEM). Once the preliminary majors are inserted, no changes can be made.

Major Code	Major Name	Preference Rank	Insert?
SMA	MATHEMATICS	1	✓ Clear
EME	MECHANICAL ENGINEERIN	2	✓ Clear
HHS	HISTORY	3	✓ Clear

Insert

Major - Enter Preliminary Preferences

[redacted]

Three preliminary majors must be selected. At least one of these MUST be a major in Science, Technology, Engineering, or Mathematics (STEM). Once the preliminary majors are inserted, no changes can be made.

Success!

Rows inserted successfully: 3

Major Code	Major Name	Preference Rank
SMA	MATHEMATICS	1
EME	MECHANICAL ENGINEERING	2
HHS	HISTORY	3

Special notes

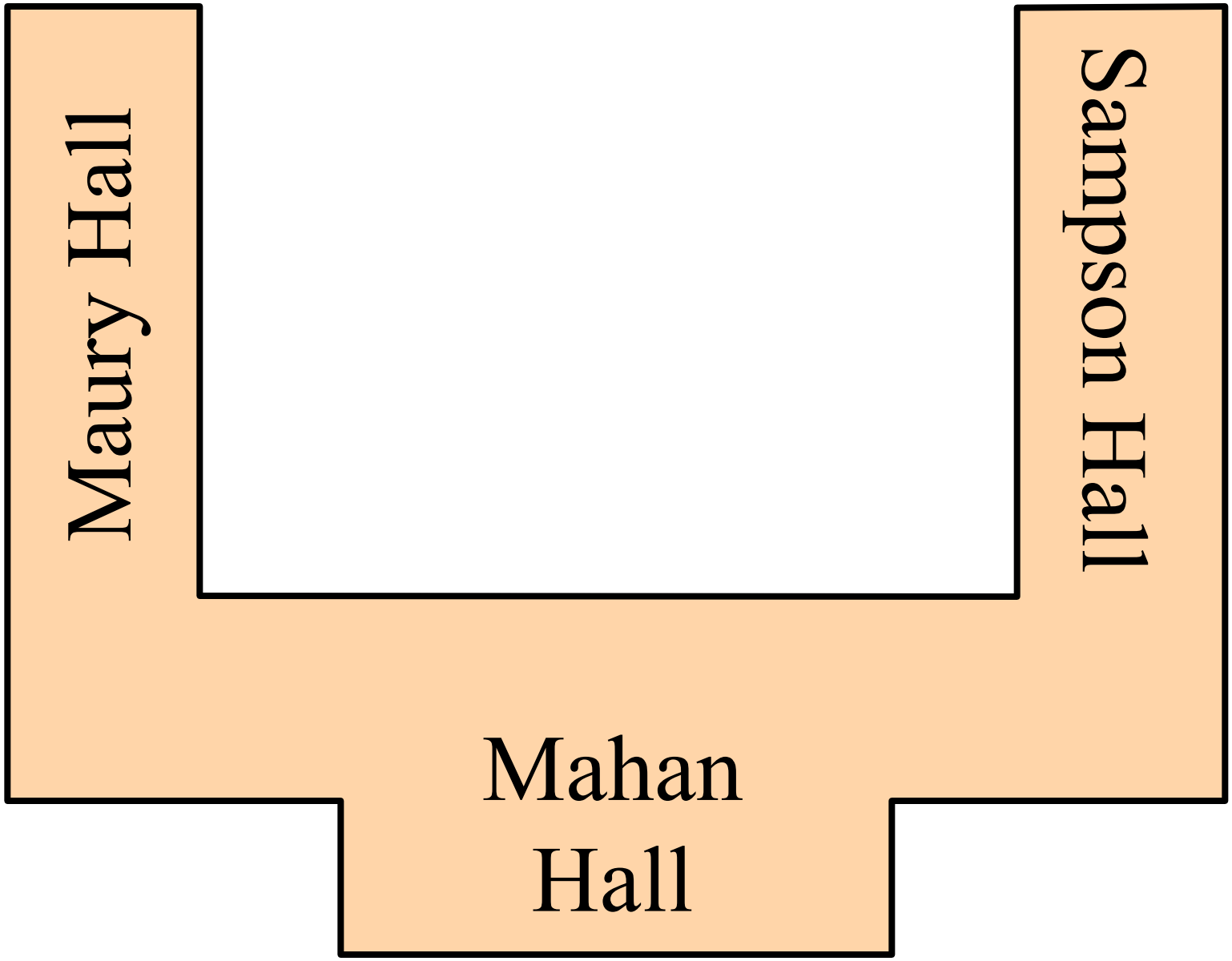
- Language and Cultures
  Language Minors
  - French, German, Spanish
  - Arabic, Chinese, Japanese, Russian
- Medical and Dental Corps
  - Quota: 10-15 total for each Class
  - Highly selective: CQPR >> 3.2
  - Major: Chemistry?

Special notes

- Preparation for Nuclear Power (Subs, Nuclear Surface)
  - Mathematics, science and engineering preparation is critical
- International Programs Office
  - Travel and study abroad opportunities

Majors at USNA

1: Eng & Wpns	2: Math & Sci	3: Hum & SS
Aerospace Eng	Chemistry	Arabic
Computer Eng	Computer Sci	Chinese
Electrical Eng	General Sci	Economics
General Eng	Info Tech	English
Mechanical Eng	Mathematics	History
Naval Arch	Oceanography	Political Sci
Ocean Eng	Operations Rsrch	
Systems Eng	Physics	
	Quant Economics	


Maury Hall
Sampson Hall
Mahan
Hall

Maury Hall	
Aerospace Engineering	107, 108
Chemistry	112
Computer Science	104
Electrical & Computer E	115, 117
General Engineering	116
Mechanical Engineering	101, 102
Naval Architecture	123
Ocean Engineering	122, 124
Physics	110
PreMedical & PreDental	112
Systems Engineering	111, 113

Sampson Hall	
Economics	104
English	113
General Science	114
History	111
Information Technology	115
International Programs	002
Languages & Cultures	001
Mathematics	116
Oceanography	102, 103
Operations Research	117
Political Science	014
Quantitative Economics	105

Ex Scientia Tridens

Maury Hall	
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