

Majors Program



Class of 2012

Majors Briefing – Class of 2012

0800 - Prof. Frederic I. Davis

1000 - Prof. James M. D'Archangelo

1300 - Prof. Mark D. Meyerson

+

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:
 - Get acquainted with majors
- Over next week:
 - Indicate preliminary choices
- January – February:
 - Explore programs
 - Assess personal interests and abilities
- March:
 - Choose major

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 137 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

What major?

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	Physics	
Systems Eng	Quant Econ	

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 daily “lifestyle” for three more years at the Naval Academy
 - 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	EE1	EE2		
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	EE1	EE2		
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	EE1	EE2		
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
- Department web pages
- MIDS
- Plebe company academic advisers
- 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



Registrar

Mid Personnel Office

Midshipmen

MISO

OPS Schedules

Physical Education

ProDev



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

Maintenance Schedule

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



Midshipmen

[MIDS HOME](#)

[ABOUT MIDS](#)

[GENERAL ACADEMICS](#)

[AD HOC QUERIES](#)

[CHANGE PASSWORD](#)

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

- [360 Feedback - Query Results \(Midshipmen\)](#)
- [360 Feedback - Record](#)
- [Absences and Excuses - Query](#)
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- [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.

Major Code: 

Class Year: 

- EAS
- EASA
- ECE
- EEE
- EGE
- EME
- ENA



Matrices - Query Major Requirements

A Major Code or a Class Year MUST be selected.

Major Code:	ECE	▼
Class Year:	2012	▼

Find Clear

Major Matrix

Class: 2012 Major: ECE COMPUTER ENGINEERING

Total Matrix Credit Hours: 139

NS101.2	NN101.2	NE203.3	NN200.2	NS300.1	NL310.3	NL400.2	
CHEM1.4	CHEM2.4	SP211.4	SP212.4			ES300.3	HH216.3
CALC1.4	CALC2.4	SM221.4					NS42X.1
HE111.3	HE112.3					ES360.1	
HH104.3	FP130.3			HH2XY.3		HM SS1.3	HM SS2.3
	NL110.2		SM212.4				
				SM313.3	SM342.3	EM319.3	EM318.3
			SI204.4		SI221.3		
		EE221.4	EE241.4	EE322.4	EE354.4	EE411.3	EE415.2
		EE242.4		EE361.4	EE362.4	MJ EL1.3	MJ EL2.3
				EE320.3			
[16]	[18]	[19]	[18]	[18]	[17]	[18]	[15]



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Matrices - Query Current Midshipman

Alpha: [REDACTED]
Name: [REDACTED]
Class Year: 2012
Assigned Major:

Format for Current Major:

Major for Temporary Change:



Matrices - Query Current Midshipman

Alpha: [REDACTED]
Name: [REDACTED]
Class Year: 2012
Assigned Major:

Format for Current Major: MATRIX

Major for Temporary Change: ECE



Midshipmen Matrices

Group = MRT Format = MATRIX Temporary Major/Year: ECE/2012

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

Alpha: [REDACTED] Mid: [REDACTED] Co: [REDACTED] Maj: ECE MajQPR: 0.00 Mtx Hrs: 44

CQPR: 4.00 Projected CQPR: 4.00 #Courses: 14/11 HM/SS: 6/8 #300/400: 1/1 Adv: [REDACTED]

Projected Graduation Date: MAY-2012 Status: ACTIVE

Deficiencies:

	Fourth Class		Third Class		Second Class		First Class		
Core	NS101	A	NN101	* NE203--	NN200--	NS300--	NL310--	NL400--	
	SC111	V	SC112	* SP211--	SP212--			ES300--	HH216--
	SM121	V	SM122	A SM221	*				NS42X--
	HE111	A	HE112	*				ES360--	
	HH104	A	FP130	*		HH2XY--		FC201V V	FC401 A
Division		NL110	A		SM212--				
Major						SM313--	SM342--	EM319--	EM318--
					SI204--		SI221--		
				EE221--	EE241--	EE322--	EE354--	EE411--	EE415--
				EE242--		EE361--	EE362--	MJ EL1--	MJ EL2--
						EE320--			

FC101V V FC102V V FC202V V FC402 *

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)



- Effective for midshipmen entering fall 2009 as members of the Class of 2013, 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.
- For past decade, about 63% of plebes chose technical majors and about 60% of each class graduated with technical majors.
- USNA goal is to increase plebe selection of technical majors to about 70% to assure USN goal of 65% at graduation.

Major Policy at NROTC

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

Major Policy at USNA

- The Superintendent has stated that, for the Class of 2012, a midshipman's major will be considered at the time of service assignment. Details have not yet been formulated.

Remarks on major selection

- While it is expected that most midshipmen in the Class of 2012 will be assigned to their first choices of major, the needs of the Naval Service and the resources of this institution are paramount.
- Each plebe will be required to include at least one STEM major among his/her top two 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 Service

Don't select a Div 1, 2 major ...

- simply for the prestige of a STEM degree
- if you don't like 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 weaker than your quantitative reasoning skills
- if you prefer to work with your hands

Remarks on selecting a major

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

Remarks on selecting a major

- *Caution*: Typically, about 100 3/C midshipmen change their major within the very first semester of selecting it. Another 30 will follow before 1/C. Most of these changes are accompanied by poor 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

- Process

- Indicate major preferences

- 0700 Wed 07 Jan – 1200 Mon 12 Jan
 - MIDS | Midshipmen | Major – Enter Preliminary Preference

- Select major

- 0700 Mon 09 Mar – 1800 Thu 12 Mar
 - MIDS | Midshipmen | Major – Declare

- Preregister for fall 3/C

- 0700 Tue 24 Mar – 1200 Fri 27 Mar
 - See new adviser and preregister

What next?

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

Major – Enter Preliminary Preferences

- Select 2 - 4 (non-binding) choices

At least 1 of top 2 choices must be a STEM major

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Majors - Preliminary Preferences

Up to four preliminary majors may be selected but a first and second choice major **MUST** be entered. At least one of these **MUST** be a major in science, technology, engineering or mathematics. Once records are inserted, no changes can be made.

Major Code	Major Name	Preference Rank	Insert?
<input type="text"/>	<input type="text"/>	1	<input type="button" value="Clear"/>
<input type="text"/>	<input type="text"/>	2	<input type="button" value="Clear"/>
<input type="text"/>	<input type="text"/>	3	<input type="button" value="Clear"/>
<input type="text"/>	<input type="text"/>	4	<input type="button" value="Clear"/>



List Of Values: Major Code





Search criterion for Major Code:

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
SOC	OCEANOGRAPHY
SPH	PHYSICS
SQE	QUANTITATIVE ECONOMICS



Majors - Preliminary Preferences





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Major Code	Major Name	Preference Rank	Insert?
SMA 	MATHEMATICS	1	<input checked="" type="checkbox"/> <input type="button" value="Clear"/>
		2	<input type="button" value="Clear"/>
		3	<input type="button" value="Clear"/>
		4	<input type="button" value="Clear"/>



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Major Code	Major Name	Preference Rank	Insert?
SMA 	MATHEMATICS	1	<input checked="" type="checkbox"/> <input type="button" value="Clear"/>
EME 	MECHANICAL ENGINEERIN	2	<input checked="" type="checkbox"/> <input type="button" value="Clear"/>
HHS 	HISTORY	3	<input checked="" type="checkbox"/> <input type="button" value="Clear"/>
FPS 	POLITICAL SCIENCE	4	<input checked="" type="checkbox"/> <input type="button" value="Clear"/>



Majors - Preliminary Preferences

Up to four preliminary majors may be selected but a first and second choice major **MUST** be entered. At least one of these **MUST** be a major in science, technology, engineering or mathematics. Once records are inserted, no changes can be made.

Success!

Rows inserted successfully: 4

Major Code	Major Name	Preference Rank
SMA	MATHEMATICS	1
EME	MECHANICAL ENGINEERING	2
HHS	HISTORY	3
FPS	POLITICAL SCIENCE	4



Special notes

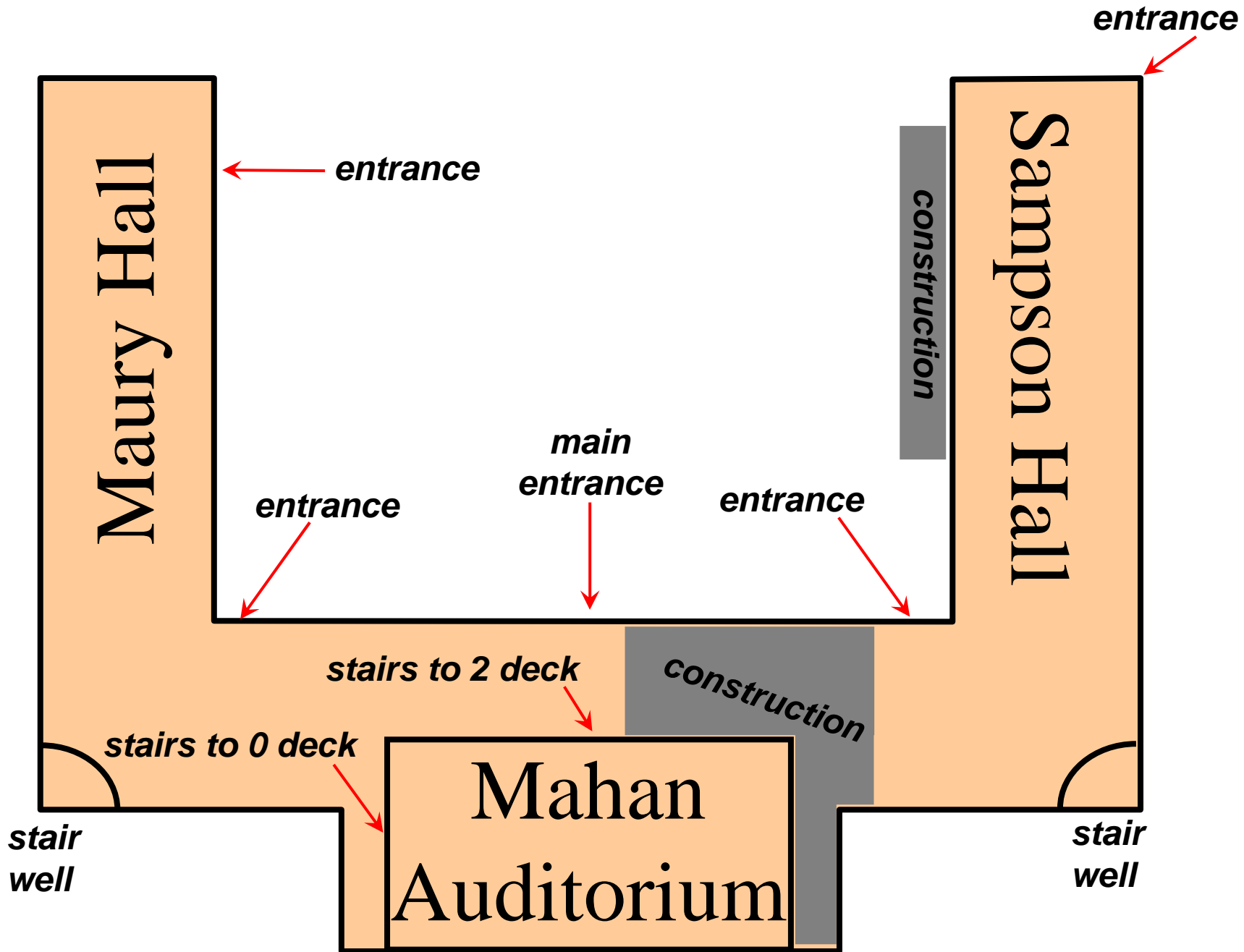
- Language Study and Minors
 - French, German, Spanish
 - Arabic, Chinese, Japanese, Russian
- Medical and Dental Corps
 - Quota: 20 total for each Class
 - Highly selective: CQPR >> 3.2
 - Major: Chemistry?

Special notes

- Preparation for Nuclear Power (Subs, Nuc Surface)
 - Mathematics, science and engineering preparation is critical
- International Programs
 - 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	Physics	
Systems Eng	Quant Econ	



Maury Hall

Sampson Hall

Aerospace Eng	107,108	Arabic	116
Chemistry	112	Chinese	116
Computer Science	104	Economics	104
Elec, Comp Eng	115,117	English	113
General Eng	116	History	111
Mechanical Eng	101,102	Info Techn	104
Naval Architect	123	Intntl Progs	101
Ocean Eng	122,124	Lang Minors	118
Physics	110	Mathematics	115
PreMed, PreDent	114	Oceanography	102,103
Systems Eng	111,113	Political Sci	014
		Quant Econ	105

Ex Scientia Tridens



Maury Hall

Sampson Hall

Aerospace Eng	107,108	Arabic	116
Chemistry	112	Chinese	116
Computer Science	104	Economics	104
Elec, Comp Eng	115,117	English	113
General Eng	116	History	111
Mechanical Eng	101,102	Info Techn	104
Naval Architect	123	Intntl Progs	101
Ocean Eng	122,124	Lang Minors	118
Physics	110	Mathematics	115
PreMed, PreDent	114	Oceanography	102,103
Systems Eng	111,113	Political Sci	014
		Quant Econ	105