



CHARTING A COURSE for STUDENT SUCCESS

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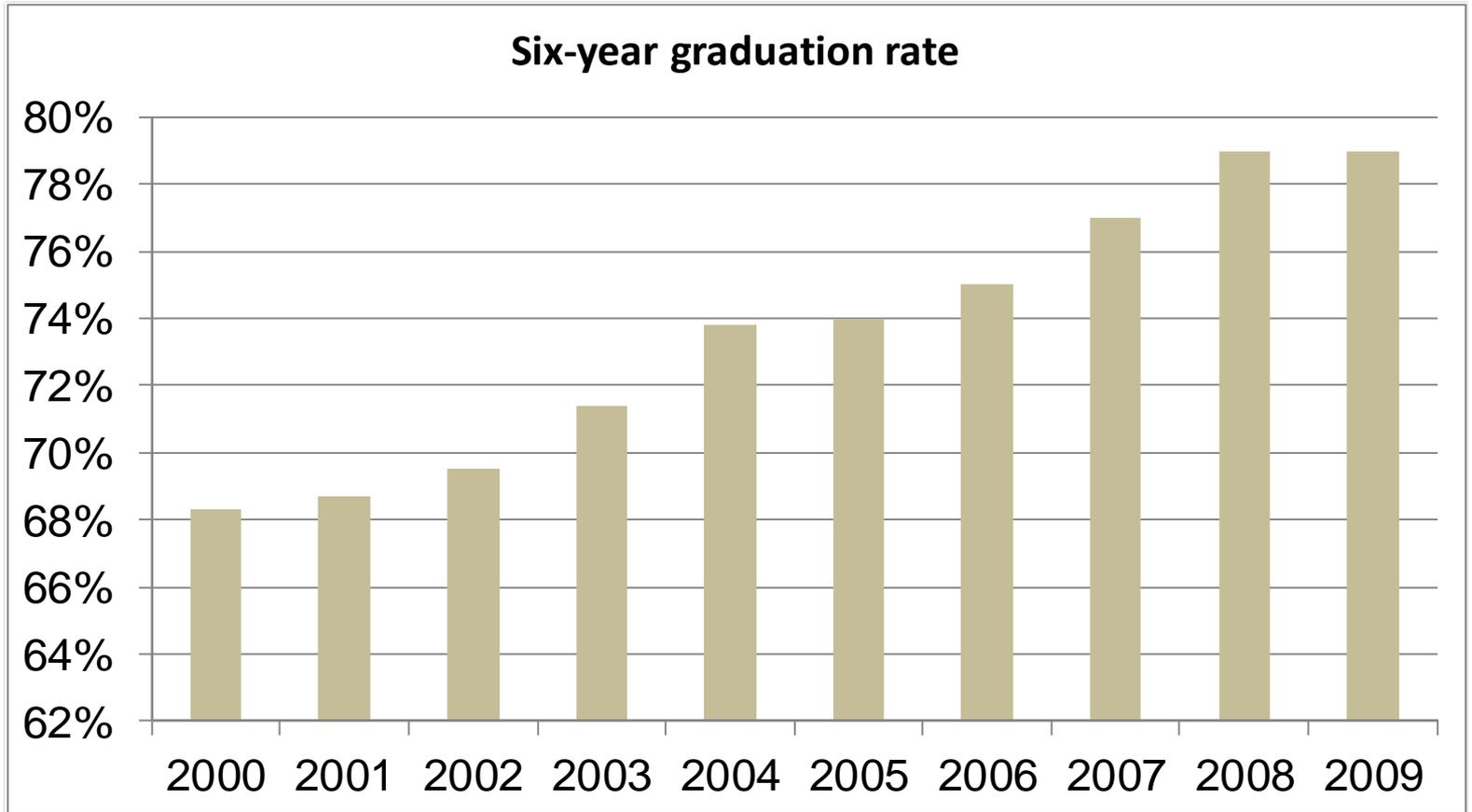
Bridges to Success Awardee Convening
December 2, 2016



Division of 
UNDERGRADUATE
Studies

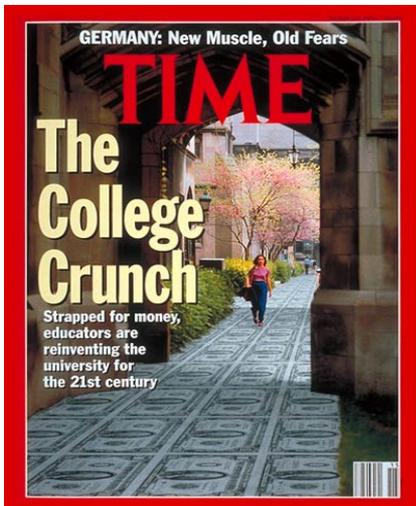


FSU's 10-Year Graduation Trend

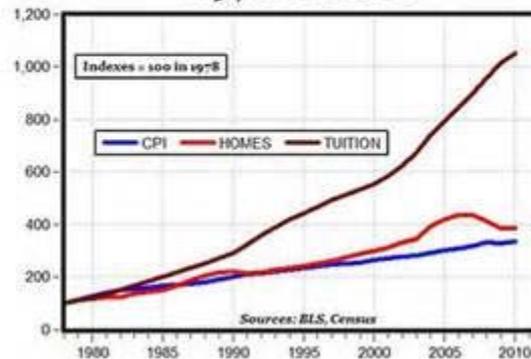




Reframing the Definition of Student Success



College Tuition CPI vs. U.S. Home Prices vs. CPI 1978 to 2010





Postsecondary Enrollment Rates of High School Graduates by Family Income

College Board, Education Pays 2013 – The Benefits of Higher Education for Individuals and Society

Income Quintile	1987	1992	1997	2002	2007	2012	Percent age Point Change Between 1987 and 2012
Lowest	37%	42%	47%	50%	54%	52%	+ 15
2nd	35%	46%	43%	52%	55%	58%	+ 23
3rd	47%	53%	62%	55%	62%	65%	+ 18
4th	60%	65%	68%	65%	69%	71%	+ 11
Highest	73%	78%	81%	78%	80%	82%	+ 9



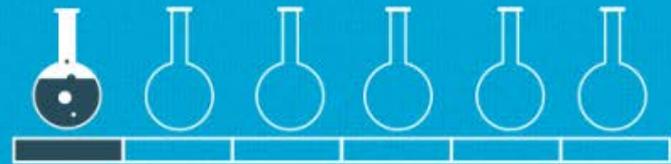
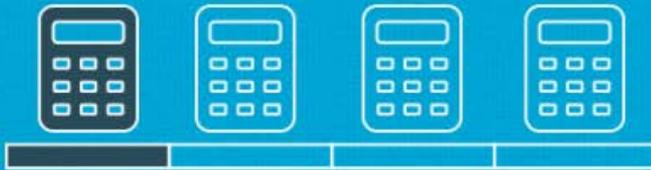
Concern About Overwhelming Choices





Increased Emphasis on STEM Degrees

Just **1 in 4** fourth graders from low-income backgrounds **are proficient in math**, and just **1 in 6** are **proficient in science**.



8,000,000
STEM JOBS BY 2018

By 2018, eight million STEM jobs will be available in the United States, **but the vast majority of U.S. students will be unprepared to fill them.**

Teach for America, Science, Technology, Engineering, and Math (STEM) Initiative
https://www.teachforamerica.org/about-us/our-initiatives/stem-initiative?utm_source=bing&utm_medium=cpc&utm_campaign=Initiatives&utm_term=stem%20graduates&utm_content=Stem



Student Success Goals



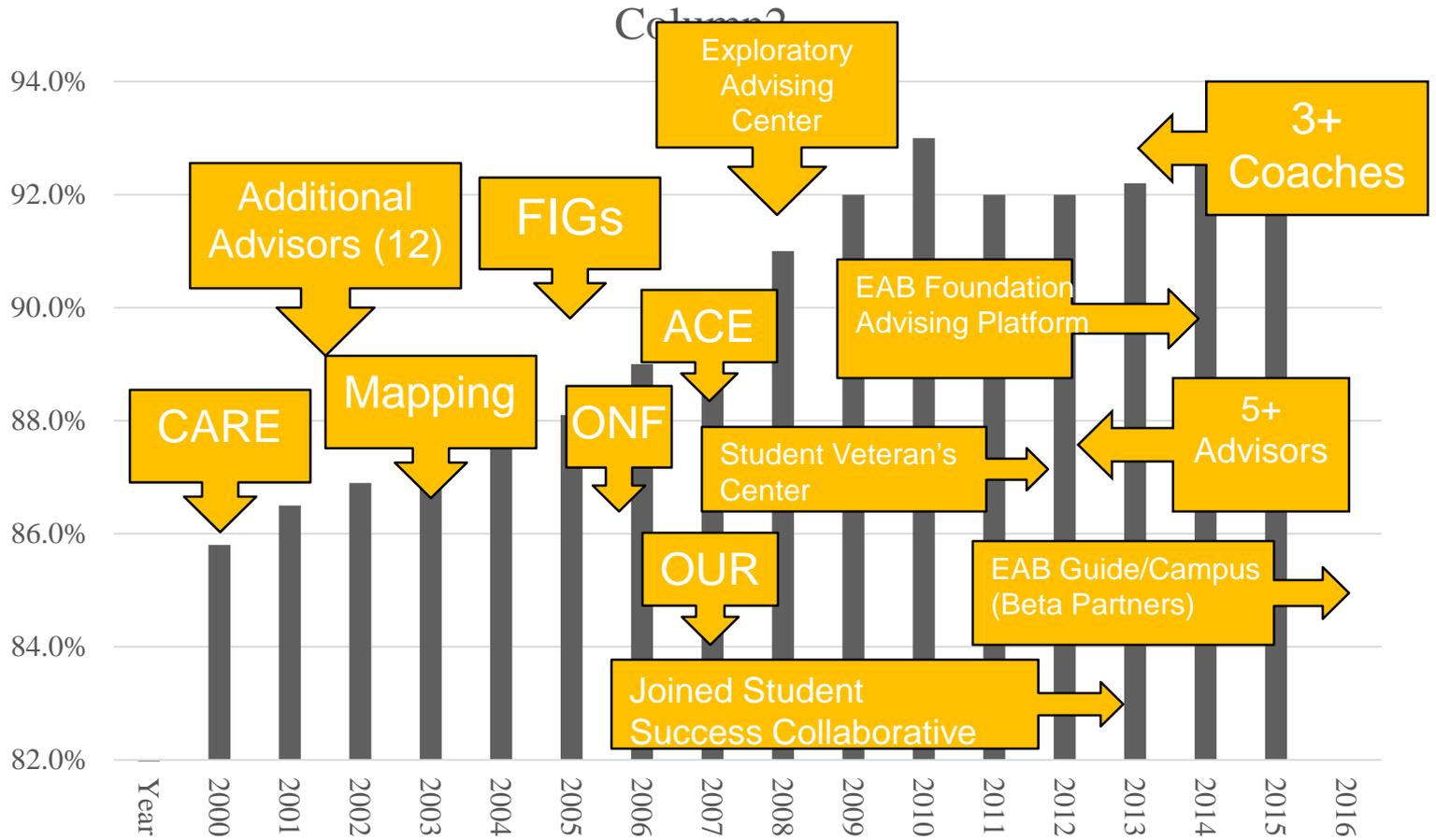
- Plug the leaky STEM pipeline
- Help more students (of all backgrounds) graduate—with a rich college experience
- Reduce the time to degree
 - Reduce/eliminate “churn”
 - Help students find useful pathways



Fewer semesters in college mean less tuition, reduced living expenses and a faster route to employment



How Have We Approached this at Florida State University?





Academic Advisors Play a Pivotal (and Evolving) Role

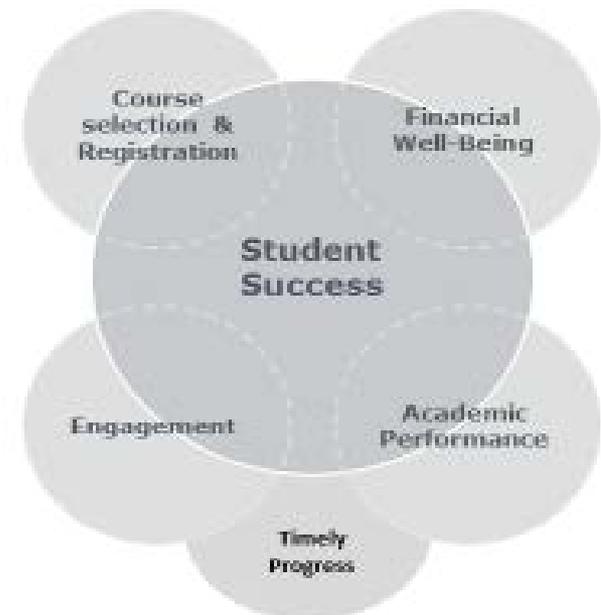
The Evolving Role of the Advisor

Moving Beyond Registration to Put Student Success at the Core

How Many Advisors View Their Role...
Student success often seen by advisors as an add-on responsibility to course selection and registration



...And How That Role is Evolving
Advisors increasingly asked to play many roles, with student success at the center





Clustering Majors at FSU



Undergraduate Academic Program Guide

[Minors](#) [Certificates/Specialized Studies](#) [Bachelors/Masters Programs](#) [Liberal Studies](#) [View All](#)



Creative Arts



Business & Administration



Communication & Media



Computing & Mathematics



Education & Teaching



Engineering & Technology



Entrepreneurship



Exploratory



Global, Area & Ethnic Studies



Health & Wellness



Human Services



Humanities & Liberal Arts



Interdisciplinary Studies



Law & Justice



Science



Social Science & Policy



STEM
(Science, Technology,
Engineering, Mathematics)



Sustainability & the Environment



Trending Majors



Descriptions for Each Cluster & Term by Term Academic Maps

[Undergraduate Academic Program Guide](#)

STEM (Science, Technology, Engineering, Mathematics)

Do you like identifying and solving complex problems? Do you like to stay informed about the latest technologies? Does the use of innovative technology for building and researching interest you? Jobs requiring science and engineering skills are growing at a rate nearly four times greater than jobs in the rest of the labor force. FSU offers a variety of programs that advance science, technology, engineering and mathematics on both the national and global scale and prepare students for a successful STEM career.

* Majors also offered at Panama City campus

Applied Mathematics

- [Program Description](#)
- [Academic Map](#)
- [Department Page](#)
- [Learning Compact](#)

Athletic Training

- [Program Description](#)
- [Academic Map](#)
- [Department Page](#)
- [Learning Compact](#)

Biochemistry

- [Program Description](#)
- [Academic Map](#)
- [Department Page](#)
- [Learning Compact](#)

Biological Science

- [Program Description](#)
- [Academic Map](#)
- [Department Page](#)
- [Learning Compact](#)



FSU Academic Maps

FSU | Academic Program Guide

undergrad1.lits.fsu.edu/academic_guide

FLORIDA STATE UNIVERSITY

ACADEMIC PROGRAM GUIDE

HOME MINORS CERTIFICATES/SPECIALIZED STUDIES BACHELORS/MASTERS PROGRAMS LIBERAL STUDIES

VIEW ALL

Biochemistry

ACADEMIC MAP (Effective Summer 2016 and after)

This map is a term-by-term sample course schedule. The milestones listed to the right of each term are designed to keep you on course to graduate in four years. The Sample Schedule serves as a general guideline to help you build a full schedule each term. The General Education and Elective courses must be selected to satisfy all area and multicultural requirements, unless your program meets these requirements with major courses. Milestones are courses and special requirements necessary for timely progress to complete a major. Missing milestones will result in one of two types of map registration stops. The first level (Degree Map Offtrack) is placed following grade posting if the student has missed a milestone (course and/or GPA) for the first time in the major. If a student is in non-compliance with milestones for two (2) consecutive semesters (excluding summers), a Major Change Required stop is placed on the student's registration.

Biochemistry, as a science, attempts to understand the chemical basis for all life processes. It draws information from, and has an impact on many fields: chemistry, zoology, botany, microbiology, virology, physiology, pharmacology, genetics, medicine, agriculture, and even ecology. The major is intended to provide the student with a strong background in chemistry, in physics, and in math, together with a broad introduction to biochemistry and biology, which will equip him or her with the tools needed for more specific applications or for advanced, more specialized study.

Mapping Coordinator: Shellie Camp
Email: scamp@fsu.edu

Sample Schedule

Term 1	hrs	Milestones 1
ENC1101	3	Complete ENC1101 (≥ C minus)
CHM1045 and CHM1045 Lab	3	Completed MAC1105 (≥ C minus)
MAC1140	3	
GE Core Social Science	3	
(MAC1114 or BSC2010/L)	2-4	



Computer and Technology Majors at FSU

COMPUTER ENGINEERING

What is it?

The study of hardware and software.

What will I study?

How microprocessors function and are designed; how integrated electronic components are designed and operate; how software is written, compiled, and optimized

What is the prerequisite coursework?

Calculus I
Calculus II
Calculus III
Differential Equations or
Engineering Math I
General Chemistry I w/ Lab
General Physics A w/ Lab
General Physics B w/ Lab

Who can I contact for more information?

Tracie Watson
ttwatson@fsu.edu

COMPUTER SCIENCE

What is it?

The study of software development and engineering.

What will I study?

How data and instructions are processed; how to use and develop algorithms for processing data and software; mobile app development; programming languages including C++ and Python

What is the prerequisite coursework?

BA degree option:
Precalculus
Applied Statistics or Business Statistics

BS degree option:
Introductory Programming
Science course for science majors

Calculus I
Calculus II

Who can I contact for more information?

• Kimberly Pack,
advisor@cs.fsu.edu

INFORMATION TECHNOLOGY

What is it?

• Designing, creating, and managing information systems to meet the needs of an organization.

What will I study?

• Technical communication, research and data analysis, information science, information systems and services

What is the prerequisite coursework?

• Precalculus or Discrete Math
• Statistics
• General Ethics
• General Psychology
• Principles of Macroeconomics
• Database
• Programming
• Object-Oriented Programming

Who can I contact for more information?

• CCI Advising Center
advising@cci.fsu.edu

COMPUTATIONAL SCIENCE

What is it?

A discipline that provides the tools necessary to solve natural and social science and engineering problems on computers, largely Computer modeling.

What will I study?

Algorithms for science applications, symbolic and numerical computations

What is the prerequisite coursework?

Calculus I
Calculus II
Introduction to Scientific Computing or Introductory Programming
Science course for science major

Who can I contact for more information?

• Karen Heine
advising@sc.fsu.edu



Maps are not enough

- Effective degree completion programs require a robust program of advising/support
 - For students who fail to meet mapping milestones
 - For effective major selection
 - For transfer students & special populations





Advising First: “Centralized Decentralization”





Advantages of This Structure



- Consistent training
- Full-time dedication to advising
- Collaboration within AF and across campus
- Links to faculty/departmental advisors
- Centralized implementation of policy decisions
- Shared advising notes, available across campus
- Professional development and career ladder



Includes Exploratory: The New Undecided

Empowering students to make informed academic and career decisions.

- Time-limited (3 terms or less)
- Mandatory Advising
- Structured Program
- Classes align with General Education and Mapping Milestones

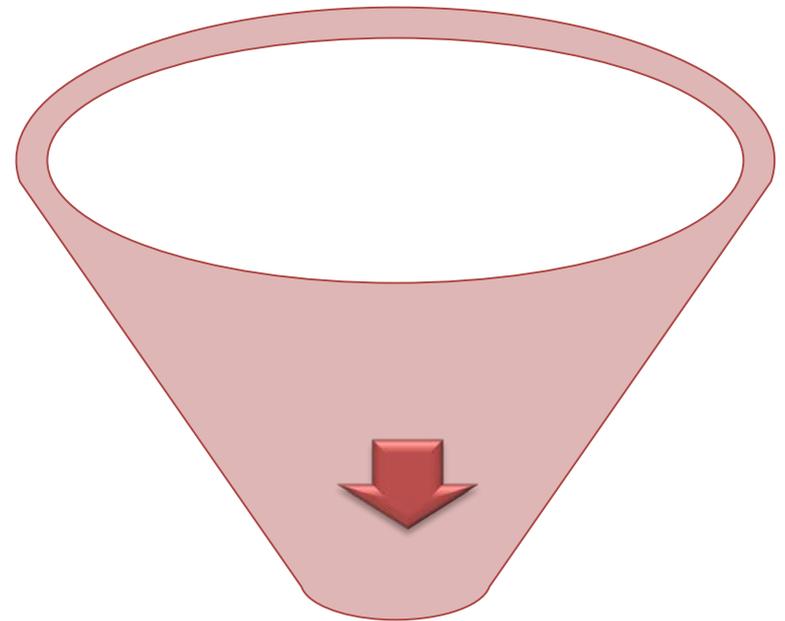


The Exploratory Approach

Three Phases:

- Self Exploration
- Major Exploration
- Career Exploration

Institutional Offerings



Academic Major



Exploratory Advising “Zones”

- **Are You Interested In...?**
- **Business:** Accounting, Entrepreneurship, Economics, Finance, General Management, Global Club Management, Hospitality Administration, Human Resource Management, International Affairs (Economics Focus), Language with a Concentration in Business, Management Information Systems (MIS), Marketing, Management, Professional Sales, Real Estate, Retail Management, Retail Merchandising & Product Development, Risk Management & Insurance, Sport Management
- **Computers:** Computational Biology, Computational Science, Computer Criminology, Computer Engineering, Computer Science (BS/BA), Information Technology (IT), Management Information Systems (MIS), Information Communication & Technology (ICT)
- **Education/Teaching:** Early Childhood Education, Elementary Education, English Education, Family & Child Science, FSU-Teach (Applied Geosciences, Biology, Chemical Science, Mathematics, Physical Science), Music Education, Social Science Education, Special Education: Exceptional Student Education/Visual Disabilities
- **Engineering:** Chemical, Chemical-Biomedical, Civil, Computer, Electrical, Environmental, Industrial, Mechanical
- **Environment:** Biological Science, Environmental Chemistry, Environmental Engineering, Environmental Science (BS), Environmental Science and Policy (BA), Environmental Studies, Geography, Meteorology



DECLARING A MAJOR WITH CONFIDENCE: WORKING WITH SOPHOMORE EXPLORATORY STUDENTS

PROGRAM EVOLUTION

PROFILE OF CAP

- Staff: 1 Program Manager, 1 Full-Time Professional Advisor, 1 Graduate Assistant
- Student Population: Map Term 3+ (second year students and beyond)

2013 - 2015

- Advising rosters divided numerically;
- Mandatory advising once per term (fall/spring)

2015 - 2016

- Advising rosters divided strategically
- Mandatory advising (minimum once per term)
- Piloted multiple meetings per semester approach
- Reviewed schedules in summer term to determine students ability to declare major
- Registration holds placed on term 5 students mid-summer

2016 - 2017

- Major Re-Selection Form
- Exploratory Student Agreement Form
- Monthly meetings with structured outcomes that address:
 - Utilization of exploratory resources, on-going academic progress discussions to determine strengths and areas for improvement, and the development of a major declaration plan

ADVISOR RESOURCES

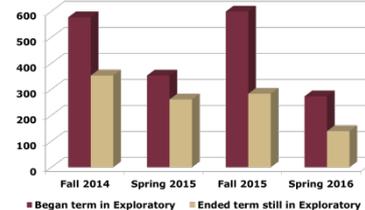
MAJOR RE-SELECTION ADVISING INFORMATION FORM

This form is used to document the advising process for students who are considering a change in their major. It includes sections for student information, advisor information, and a list of advising activities.

Exploratory Student Agreement Form

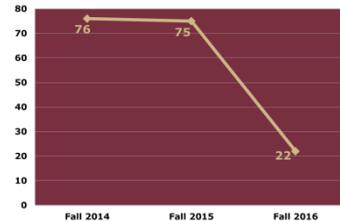
This agreement is between the student and the advisor. It outlines the student's commitment to the exploratory process and the advisor's role in providing guidance and resources.

CAP Population Size: Beginning vs. End of Term



DATA OUTCOMES

Map Term 5+ CAP Students at Start of the Term





Transfer Students: College-Based Mapping Coordinators Play a Key Role

- Review all transfer applications that meet basic admissions requirements
- Must meet milestones for desired major
- If not, coordinators will advise students to remain at current institution to complete needed course work and/or achieve necessary GPA
- If so, coordinators will set map term and provide initial advising



Meta-Majors at TCC

The Meta-Major academic pathways at TCC are as follows:

1. Click on one of the eight meta-majors below to view a list of TCC programs offered within that area.
2. Click on one of the programs to view a PRE-Fall 2015 Academic Map for each program.

▶ Arts, Humanities, Communication and Design

▶ Business

▶ Education

▶ Health Sciences

▶ Industry, Manufacturing and Construction

▶ Public Safety

▶ Science, Technology, Engineering and Math

▶ Social and Behavioral Sciences and Human Services



Meta-Majors Include AA Transfer Options

▾ Science, Technology, Engineering and Math

- [Science, Technology, Engineering and Math, A.A. Map](#) (General transfer to college/university 4-year degree program)
- [Computer Programming and Analysis-Computer Game Design & Logic, A.S. Map](#)
- [Computer Programming Specialist Certificate \(6338\)](#)
- [Computer Programming and Analysis Certificate \(6302\)](#)
- [Help Desk/Technical Support Certificate \(6323\)](#)
- [Help Desk/Technical Support, A.S. Map](#)
- [Web Technologies Certificate \(6317\)](#)
- [Web Technologies, A.S. Map](#)
- [Network Systems Technology, A.S. Map](#) (Spring 2015)
- [Network Infrastructure Certificate \(6359\)](#) (Spring 2015)
- [Network Support Technician Certificate \(6358\)](#) (Spring 2015)
- [Network Virtualization Certificate\(6357\)](#) (Spring 2015)
- [Engineering Technology, A.S. Map](#)
- [Engineering Technologies Support Specialist Certificate \(6350\)](#)
- [Pneumatics, Hydraulics and Motors for Manufacturing Certificate \(6349\)](#)
- [Graphic Design Technology, A.S. Map](#)
- [Water Quality Technician Certificate \(6356\)](#)
- [Environmental Science Technology, A.S.](#)

▸ Social and Behavioral Sciences and Human Services



Resemble FSU Maps



2014 – 2015



SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) META-MAJOR ASSOCIATE IN ARTS (AA) DEGREE MAP

Meta-majors are academic pathways to help you meet your occupations and educational goals. Included below is a sample schedule for a full-time college student on an Associate in Arts degree track who intends to transfer to a four-year college or university with a major related to Science, Technology, Engineering, and Mathematics. While you may not be a full-time student, you are responsible for completing the "Mandatory Hourly Requirements" on the right. Registration holds will be placed on students who do not meet the "Mandatory Hourly Requirements" and those students will be required to see an advisor. Summer semesters are not included in this plan but are an option for taking courses. Please be advised that not all types of financial aid will cover the cost of summer semester courses.

COURSE RECOMMENDATIONS ARE BASED ON GENERAL COURSE REQUIREMENTS. PLEASE REFER TO SPECIFIC TRANSFER MAJOR INFORMATION FOR ADVISING ON SPECIFIC AND ADDITIONAL COURSE REQUIREMENTS.

SAMPLE FULLTIME SCHEDULE

1 st SEMESTER SAMPLE SCHEDULE	Suggested Courses
First Gen Ed Communications Course	ENC1101
First Mathematics Course	MAC1105
Personal Development Course	*
General Education History Course	*
US Constitution Requirement	*
TOTAL SEMESTER HOURS	13 to 15 HOURS
COMPLETED HOURS	13 to 15 HOURS

2 nd SEMESTER SAMPLE SCHEDULE	Suggested Courses
Second Gen Ed Communications	ENC1102/ENC1141/MMC1100
Second Mathematics Course	MAC1140 & MAC1114/MAC1147
General Education History Course	*
General Education Science Course	CHM1045 & CHM1045L
Elective/Transfer Major Prerequisite	
TOTAL SEMESTER HOURS	16 HOURS
COMPLETED HOURS	28 to 31 HOURS

3 rd SEMESTER SAMPLE SCHEDULE	Suggested Courses
General Education Science Course	CHM1046 & CHM1046L
General Education Humanities Course	*
Elective/Transfer Major Prerequisite	MAC2311
Elective/Transfer Major Prerequisite	BSC2010 & BSC2010L
Elective/Transfer Major Prerequisite/Computer Literacy/Foreign Language	*
TOTAL SEMESTER HOURS	18 HOURS
COMPLETED HOURS	43 to 47 HOURS

4 th SEMESTER SAMPLE SCHEDULE	Suggested Courses
General Education Social Science	*
Elective/Transfer Major Prerequisite	PHY2048 & PHY2048L
Elective/Transfer Major Prerequisite	CHM2210 & CHM2210L
Elective/Transfer Major Prerequisite	Additional Mathematics Course
Elective/Transfer Major Prerequisite/Computer Literacy/Foreign Language	*
TOTAL SEMESTER HOURS	17 HOURS
COMPLETED HOURS	60 HOURS TO GRADUATE

MANDATORY HOURLY REQUIREMENT

Before 15 Completed Credit Hours
ENC1101
MAC1105
Attend First Semester Advising Workshop
Meet with an Advisor
Declare a Meta-Major
Overall 2.0 TCC GPA or higher to graduate
Check transfer major courses & required GPA

Before 18 Completed Credit Hours
Declare a Transfer Major in TCC Passport
Declare a Transfer Institution in TCC Passport
Overall 2.0 TCC GPA or higher to graduate
Check transfer major courses & required GPA

Before 30 Completed Credit Hours
ENC1102/ENC1141/MMC1100
MAC1140 & MAC1114/MAC1147
Apply to Transfer Institution two semesters early
Overall 2.0 TCC GPA or higher to graduate
Check transfer major courses & required GPA

Before 45 Completed Credit Hours
Attend Graduation Check Workshop
Overall 2.0 TCC GPA or higher to graduate
Check transfer major courses & required GPA

LAST SEMESTER
*** Apply for Graduation!***
Overall 2.0 TCC GPA or higher to graduate

*Please refer to the [TCC Catalog](#) for specific courses that meet this requirement.



Career Information Included

MAJORS & OCCUPATIONS IN THE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM) META-MAJOR

MAJOR	OCCUPATION(S)	SUGGESTED ACADEMIC DEGREE(S)/LEVELS
Food and Nutrition Science	Nutritionist	B, M
	Food Editor	B, M
	Food Scientist	B, M
	Product Development Researcher	B, M
	Quality Control Analyst	B, M
Exercise Science	Activities Director	B, M
	Health and Fitness Advisor	B, M
	Exercise Physiologist	B, M
	Fitness Instructor/Consultant	B, M
	Corporate Fitness Manager	B, M
Biological Science	Laboratory Assistant/Technician	B, M
	Biotechnologist	B, M
	Crime Laboratory Analyst	B, M
	Wildlife Biologist/Zoo Keeper	B, M
	Biology Professor	B, M
Computer Programming	Database Administrator	A, B, M
	Software designer/Engineer	A, B, M
	Software Quality Assurance Engineer	A, B, M
	Systems Analyst/Designer	A, B, M
	Web Developer	A, B, M
Help Desk/Technical Support	User Support Technician	A, B, M
	Help Desk Assistant	A, B, M
	Computer Support Specialist	A, B, M
	Troubleshooting Specialist	A, B, M
	Technical Support Staff	A, B, M
Web Technologies	Web Master	A, B, M
	Web Server Administrator	A, B, M
	Web Technician	A, B, M
	HTML Author	A, B, M
	Site Designer	A, B, M
Cybersecurity	Computer Security Investigators	C, A, B, M
	Information Security Specialist/Manager	C, A, B, M
	Information Technology Security Analyst	C, A, B, M
	Data Security Administrator	C, A, B, M
	Security Research Analyst	C, A, B, M
Graphic Design Technology, AS	Graphic Artist	A
	Graphic Design Assistant	C, A
	Marketing Assistant	A
	Web page Designer	A
	Associate Art Director	A
Civil Engineering	Structural Engineer	A, B, M
	Transportation and Pipeline Engineer	A, B, M
	Highway Engineer	A, B, M
	Construction Engineer	A, B, M
	Geotechnical Engineer	A, B, M
Mathematics	Mathematician	B, M
	Teacher/Professor	B, M
	Economist	B, M
	Operations Research Analyst	B, M
	Statistician	B, M

C Certificate
 A Associate's Degree
 B Bachelor's Degree
 M Master's Degree
 D Doctorate



More Recent FSU Initiatives

- Take 15

Myth:
Because I came in with AP, IB or dual enrollment credit I can take 12 hours and still graduate in four years.

Reality:
Students who take 12 hours in their first Fall are 12% less likely to graduate in four years and 60% of the students who dropped out did not take a 15 hour load during their Freshman year.

THINK 15
YOUR PATH TO SUCCESS

FLORIDA STATE UNIVERSITY | Registration Now Open for Juniors and Seniors
Registration for Sophomores Starts Monday

- Graduation Specialists





Lessons Learned: Institution Level



- Improving student persistence and degree progress demands a broad-based strategy and commitment
- Strategies should be data-driven (which means asking the right questions)
- Strong community college-university partnerships set students up for success
- Academic advisors are critical players in student success efforts



Lessons Learned: Student/Advisor Level

- “Choice” and “Opportunity to Explore” are not necessarily positives
- Guided pathways can still make for a rich experience
- Understandable pathways help students navigate choice, but guidance and support for changes are also critical
- Understanding the high costs of “churn” can help both students and advisors embrace these efforts
- Strong mentoring, assessment, and professional development make for efficient, effective, and satisfying advising





Thank You!

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(850)644-2740

<http://undergrad.fsu.edu/>

