

Program Mapping & The Student Experience

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New York Student Success Center
Webinar
January 2020



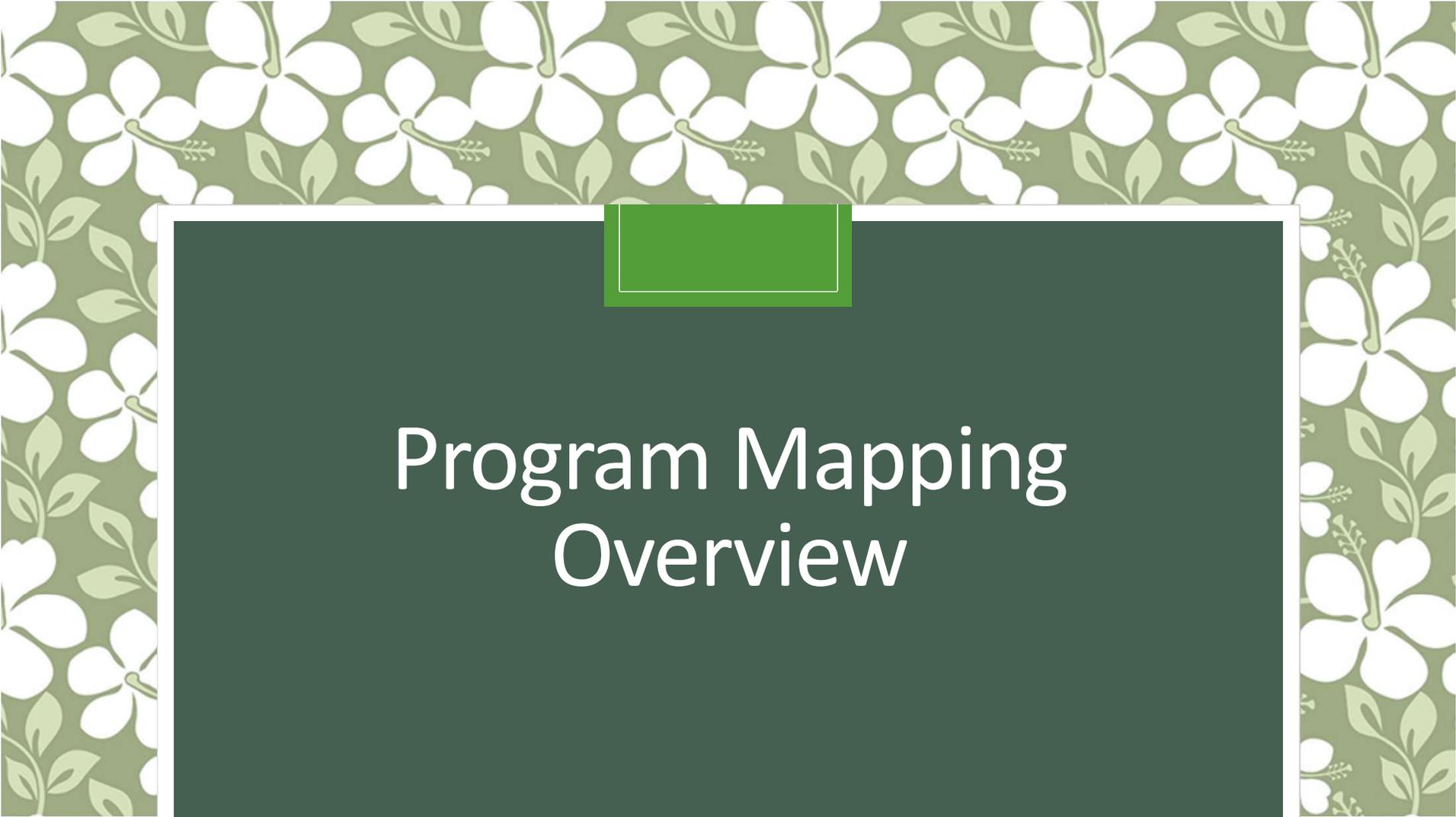
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Session Overview

- Overview of program mapping
- College examples of program mapping
- Evolving the Student Experience Through Program Mapping & Metamajors





Program Mapping Overview



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Metamajors vs. Program Maps: Metamajors

- Other names – career focus areas, career pathways, career & academic communities, guided pathways, institutes, academies
- Student problems to solve:
 - ✓ dizzying array of program choices
 - ✓ Lack of choice architecture to make an informed choice
 - ✓ losing momentum / increased time to degree during choice process



Metamajors vs. Program Maps: Program Maps

- **Definition: the default map for a full-program education plan**
- **Other names – pathways, programs, guided pathways**
- **Student problems to solve:**
 - ✓ **what do students need to take to get to where they want to go?**
 - ✓ **what are milestones – instructional and student services - along the way students need to be aware of?**



Mapping Pathways Things to Consider (1)

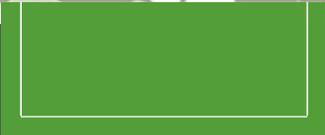
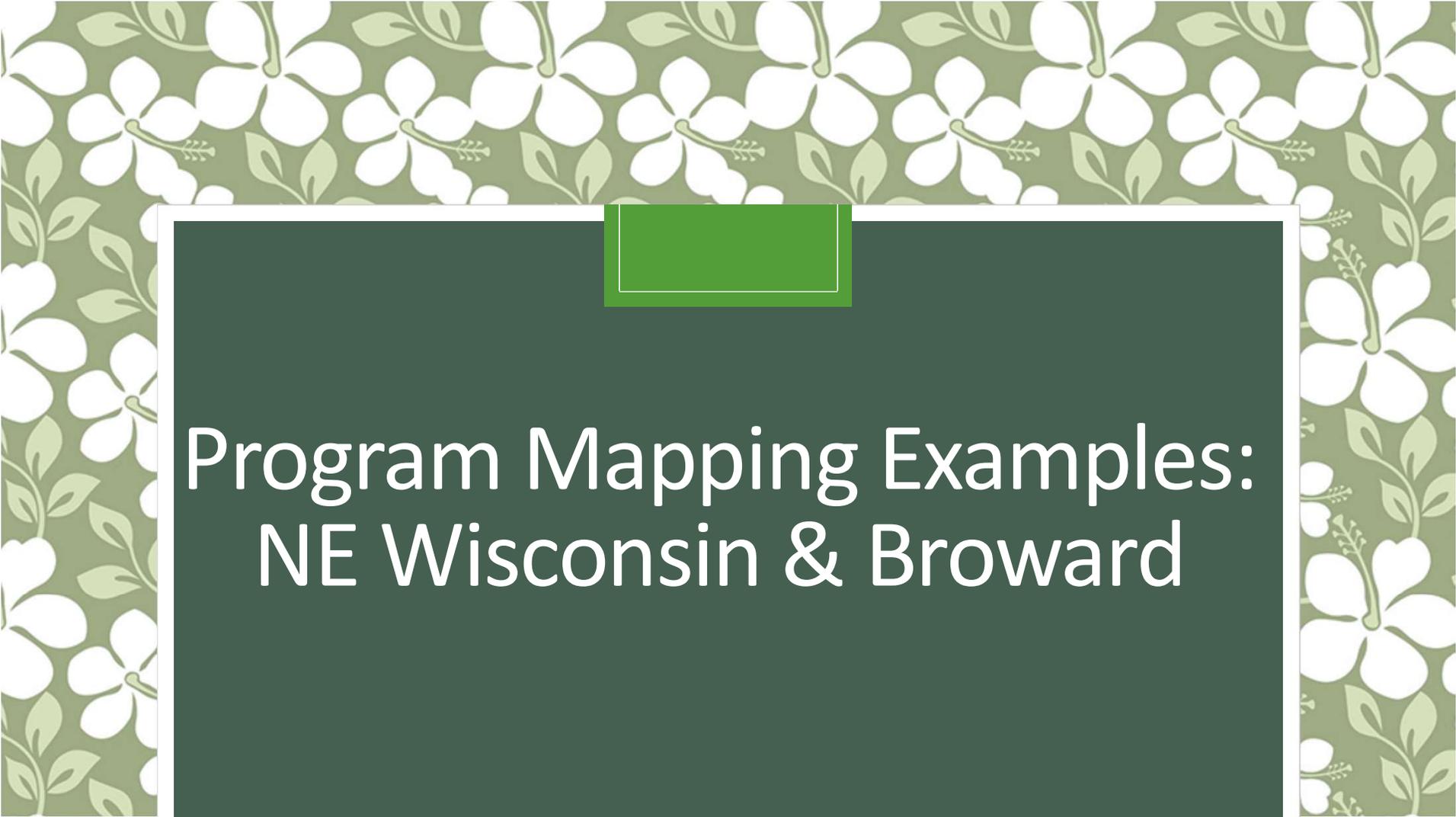
- Holistic design - sequencing of courses within program linked to meta-major is but one component of work
- Design maps to the momentum metrics – proactively building in support services
- Mapping work extends beyond faculty – advisors can be key informants in this work
- Mapping must include both general studies and occupational faculty



Mapping Pathways Things to Consider (2)

- Link mapping work into dual credit, credit for prior learning, and university transfer – associate degree map is middle of the bridge
- Who, how, when will maps be used – prospective through active students
- And Maybe Most Important of All:
HOW WILL THE MAPS BE TRANSLATED INTO
CUSTOMIZED PLANS FOR EVERY STUDENT?





Program Mapping Examples: NE Wisconsin & Broward



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Step 1: Course Dictionary Management

- How many courses are there?
- Do all of them have “homes” in programs?
- Are the General Education or Liberal Arts program courses clearly separated from the CTE program course selection?
- Do you have any courses or programs that have not been reviewed in the last (5 ?) years?



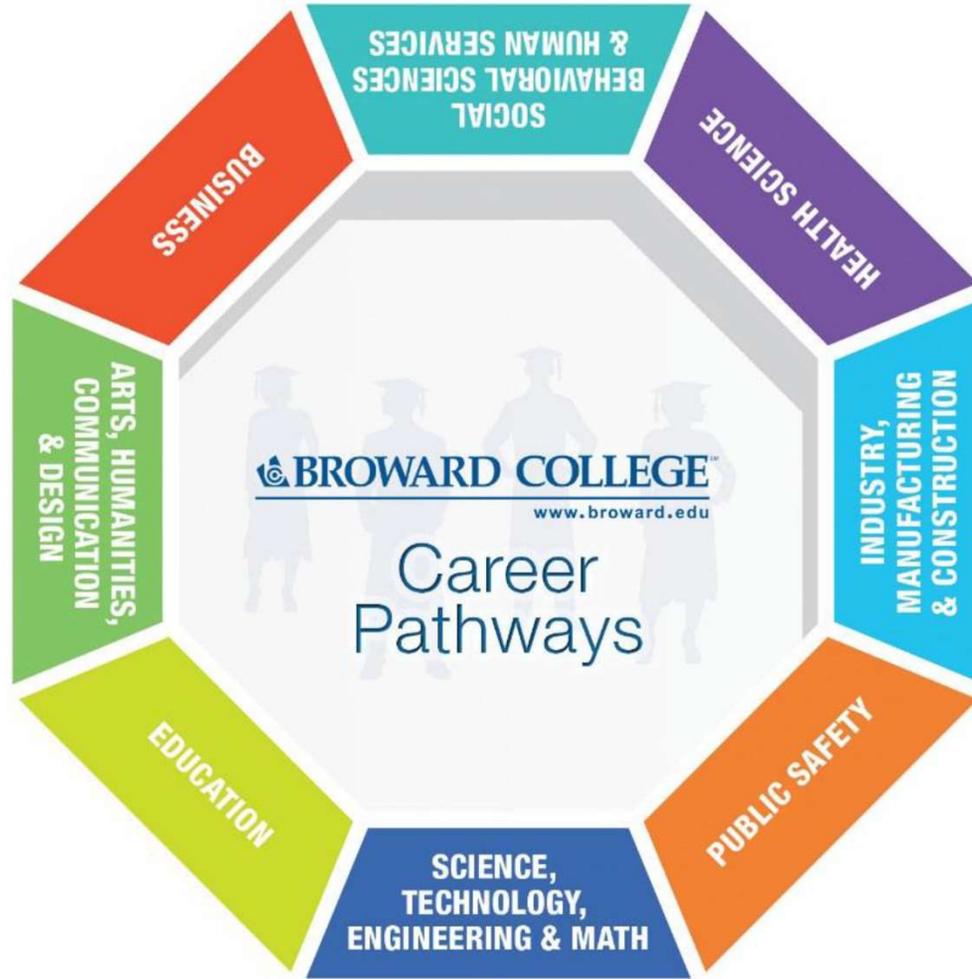
“Take everything out of the closet and begin organizing in a deliberate fashion.”

Step 2: Group “like” programs into Pathways

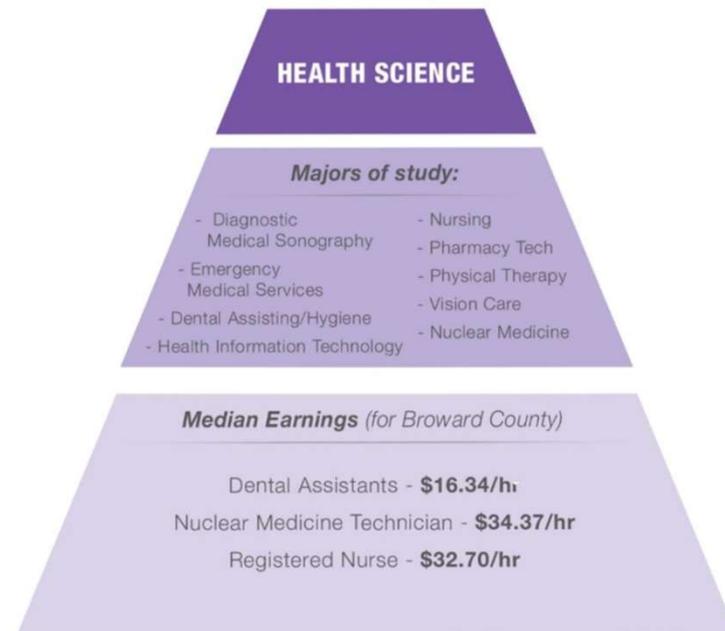
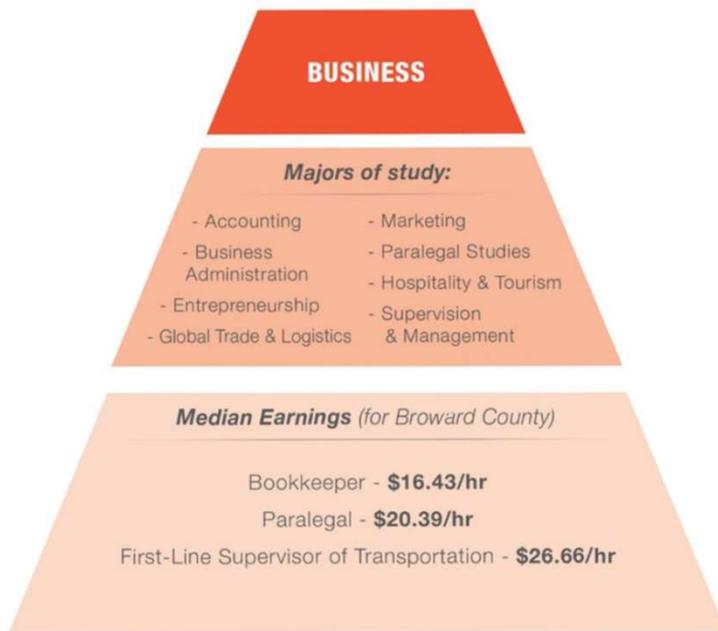
- Some Pathways, like *Healthcare*, will be evident, but others may not depending on the College’s regional offerings
- Recommended number of Pathways between 8-12; more become unmanageable and fewer will not help students decide
- Develop visuals that start with the end in mind



Aim to get about 90% of the programs into one path or another; don't be distracted by outliers, or those that overlap at this point



Consistent color-coding throughout helps students and faculty find their home



Step 3: Work with program managers and faculty discipline experts to build the maps

- Use state curriculum frameworks for AS, AAS and technical diplomas to meet credit hour/content requirements
- “Ladder in” Industry Certifications as appropriate
- Identify the proper number of General Education credits needed in major discipline areas
- Look ahead to “transfer” or “employment”



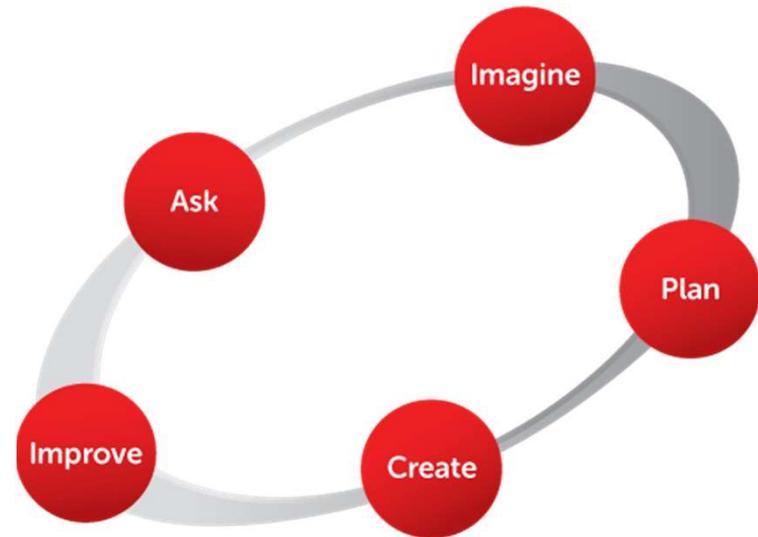
Add an introductory course in each pathway

Recommended Course Sequence Management Specialization

Full Time	Part Time	Course ID	Description	Credits	TC1	TC2	TC3
<i>Term 1</i>	<i>Term 1</i>	CGS1060C	Computer and Internet Literacy	3	X	X	X
		GEB1011	Introduction to Business	3	X	X	X
	<i>Term 2</i>	ACG2001 or APA1111C	Principles of Accounting (Preferred) or Introduction to Accounting	3			
		SPC1024 or SPC1608	Introduction to Speech Communication or Public Speaking	3	X	X	X
<i>Term 2</i>	<i>Term 3</i>	ENC1101	Composition I	3			
		ECO2013	Principles of Macroeconomics	3			
	<i>Term 4</i>	MNA2345	Principles of Supervision	3	TC1	X	X
		MAR1011	Principles of Marketing	3		X	X
<i>Term 3</i>	<i>Term 5</i>	MAC1105 or STA2023	College Algebra or Statistics	3			
		MAN2604	International Business Environment	3		TC2	X

Step 4: Get focus groups together and make adjustments

- Student Affairs
- Faculty
- Program Managers
- Deans
- And especially, STUDENTS!



Resulting Slides from Broward & NE Wisconsin





Agriculture, Food & Natural Resources



Architecture & Construction



Business



Health Sciences



Human Services & Education



Information Technology



Digital Arts



Energy



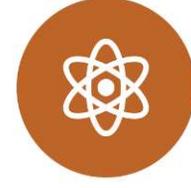
General Studies & Transfer



Law, Public Safety and Security



Manufacturing



Science, Technology, Engineering and Mathematics

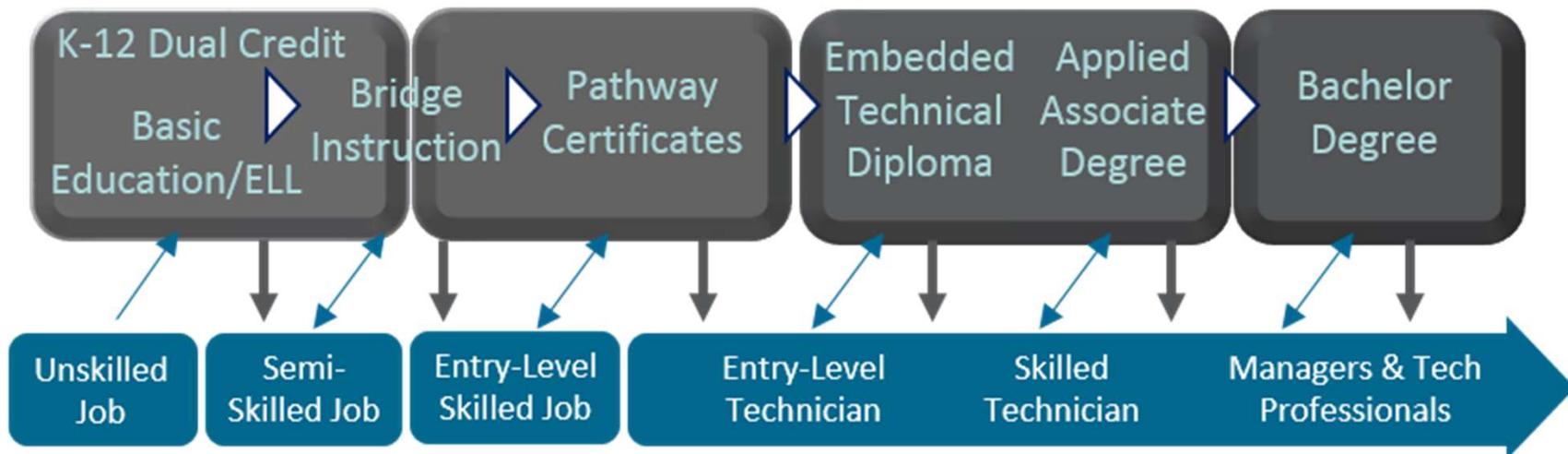


Transportation, Distribution & Logistics

Wisconsin Career Pathway Credential Structure



Career pathways allow students to go from college to **job** to more college to **better job**!



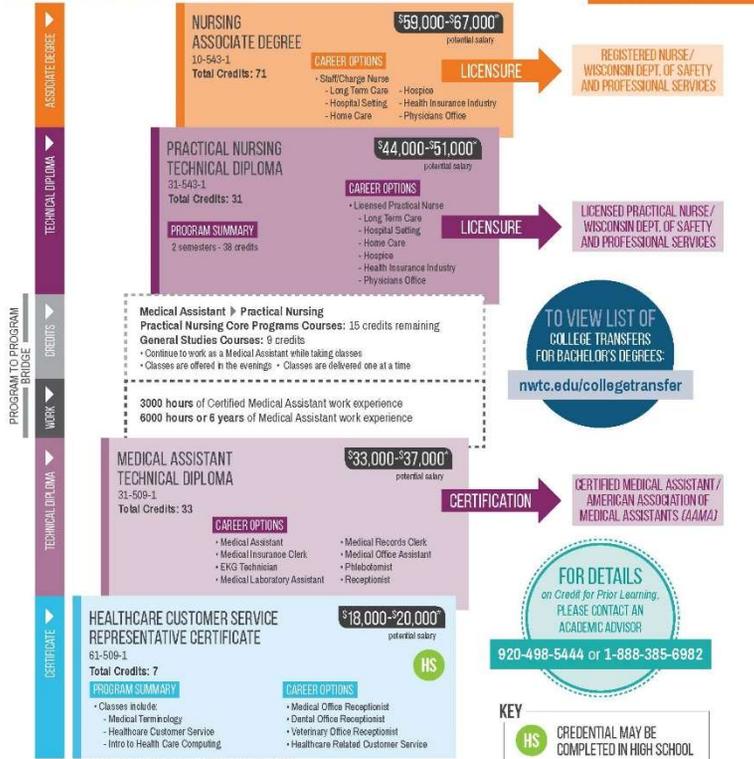
Start here.
GO ANYWHERE.



HEALTH SCIENCES THERAPEUTIC SERVICES



2016-2017



*Source: Salary information found at Indeed.com, March 2016.

GET STARTED ON YOUR NEW PATH TO SUCCESS! **Start here. GO ANYWHERE.**
View our programs at nwtc.edu/pathways

NWTC does not discriminate on the basis of age, race, color, disability, sex, gender, sexual orientation, gender identity, national origin or other protected classes. 99471.SS-p4.2016



Start here. GO ANYWHERE.

MANUFACTURING PRODUCTION



2016-2017



*Source: Salary information found at Indeed.com, March 2016.

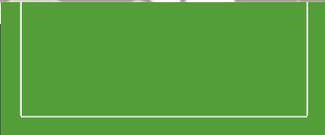
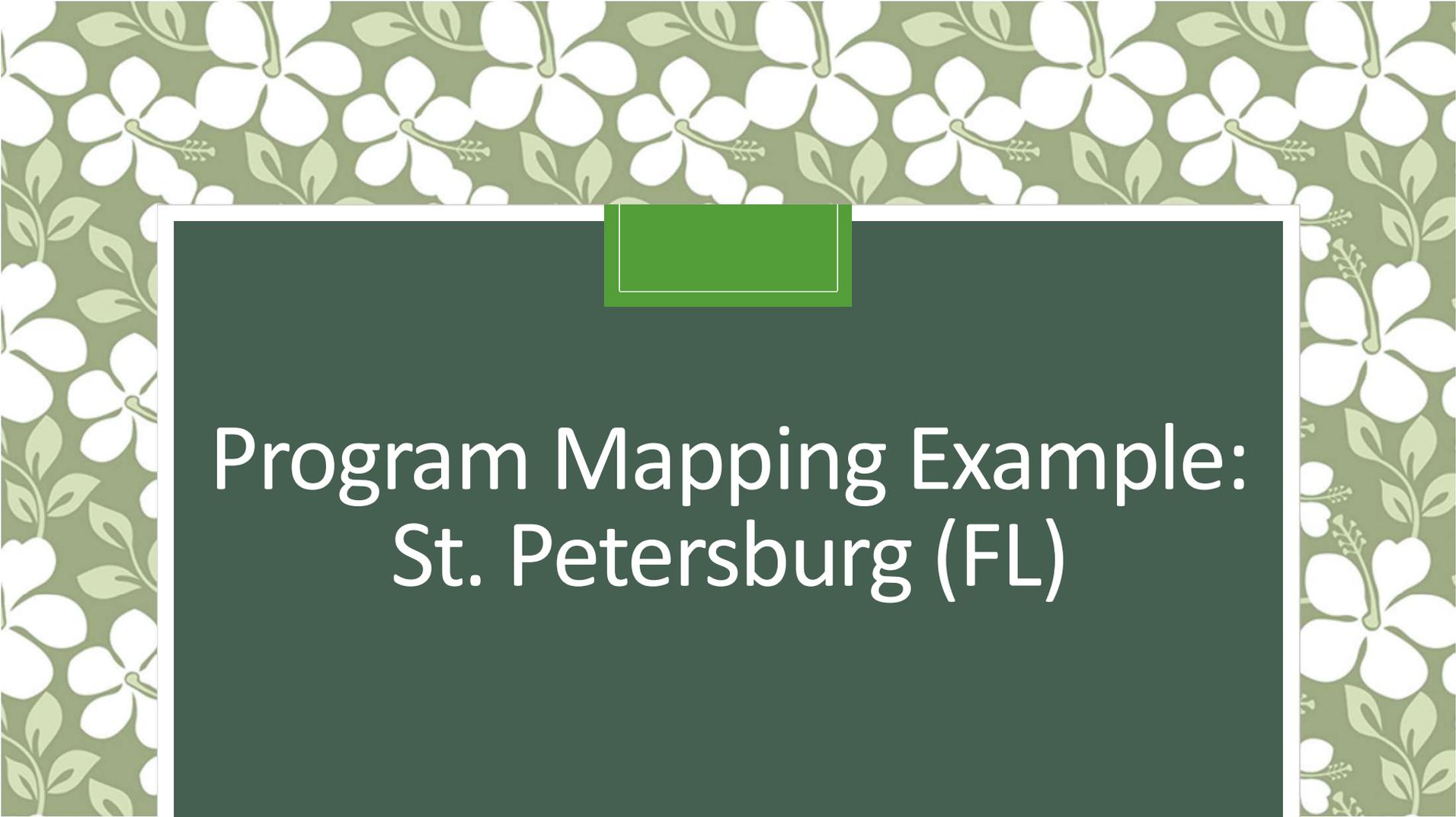
GET STARTED ON YOUR NEW PATH TO SUCCESS! **Start here. GO ANYWHERE.**
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Nursing		Nursing Career Pathways Bridge		
		Nursing Assistant	Practical Nursing	Nursing
		305431	315431	105431
	Program Entry Requirement			
30-543-300	Nursing Assistant	1		
10-890-101	College 101		3	1
10-806-186	Intro to Biochemistry			2
10-801-136	English Composition 1		1	6
10-806-177	Gen Anatomy & Physiology		2	7
10-809-188	Developmental Psychology		4	8
10-543-101	Nursing Fundamentals		5	9
10-543-102	Nursing Skills		7	3
10-543-103	Nursing Pharmacology		6	4
10-543-104	Nsg: Intro Clinical Practice		8	5
10-801-196	Oral/Interpersonal Comm		9	14
10-806-179	Adv Anatomy & Physiology			12
10-543-106	Nursing Health Promotion		11	13
10-543-107	Nsg: Clin Care Across Lifespan		12	15
10-543-105	Nursing Health Alterations		10	10
10-543-108	Nsg: Intro Clinical Care Mgt		13	11
10-806-197	Microbiology			20
10-809-198	Intro to Psychology			18
10-543-112	Nursing Advanced Skills			21
10-543-110	Nsg: Mental Health Comm Con			18
10-543-109	Nsg: Complex Health Alterat 1			16
10-543-111	Nsg: Intermed Clin Practice			17
10-809-196	Intro to Sociology			23
10-543-113	Nsg: Complex Health Alterat 2			25
10-543-115	Nsg: Adv Clinical Practice			24

- College 101
- Gateway Math/English
- K12 Dual Credit Offerings (AY17-18)
- HS-ITV Courses (AY17-18 Fall and/or Spring Offering)
- Service Learning (embedded in curriculum)



Program Mapping Example: St. Petersburg (FL)



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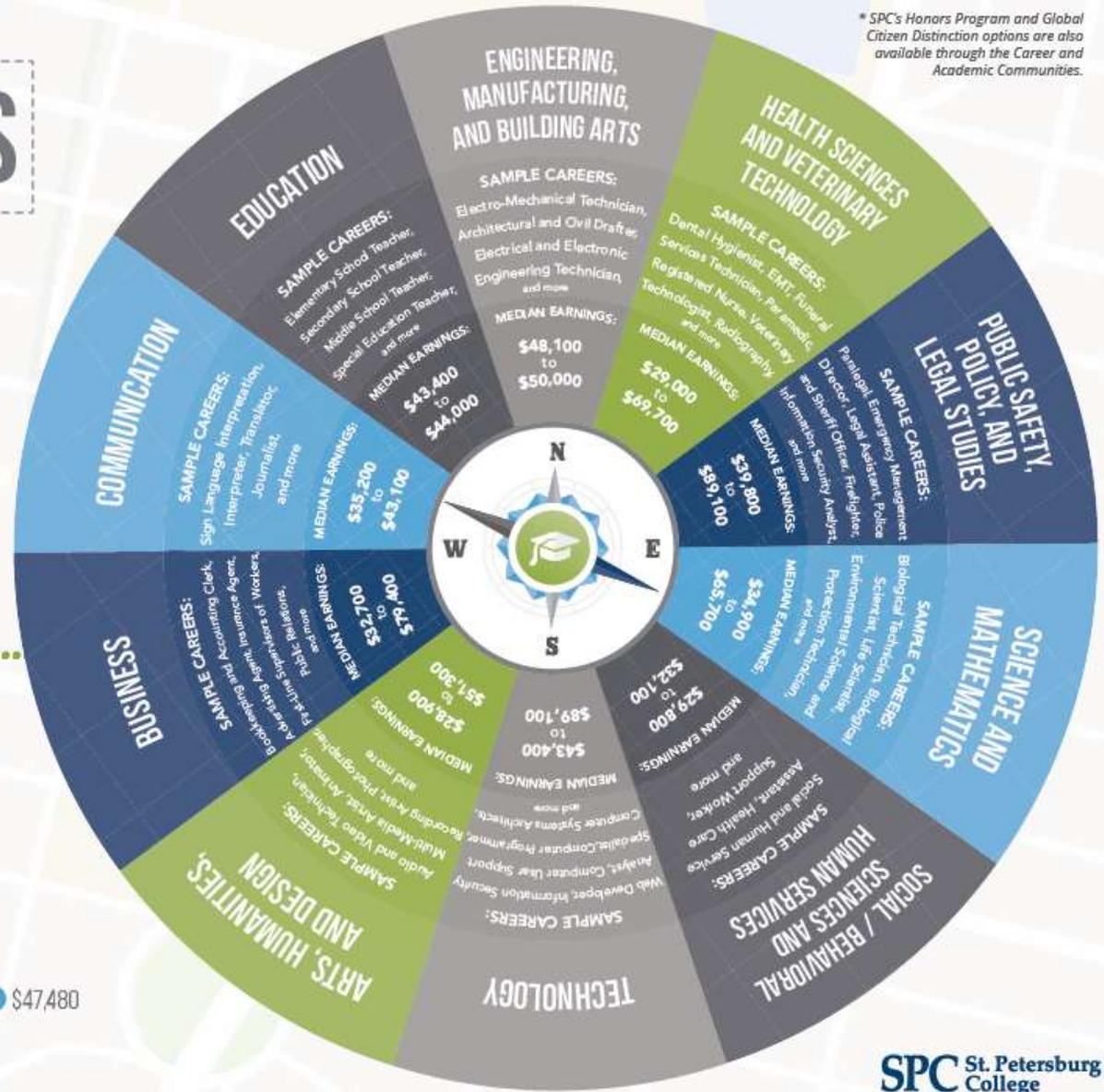
CAREER + ACADEMIC COMMUNITIES

at St. Petersburg College

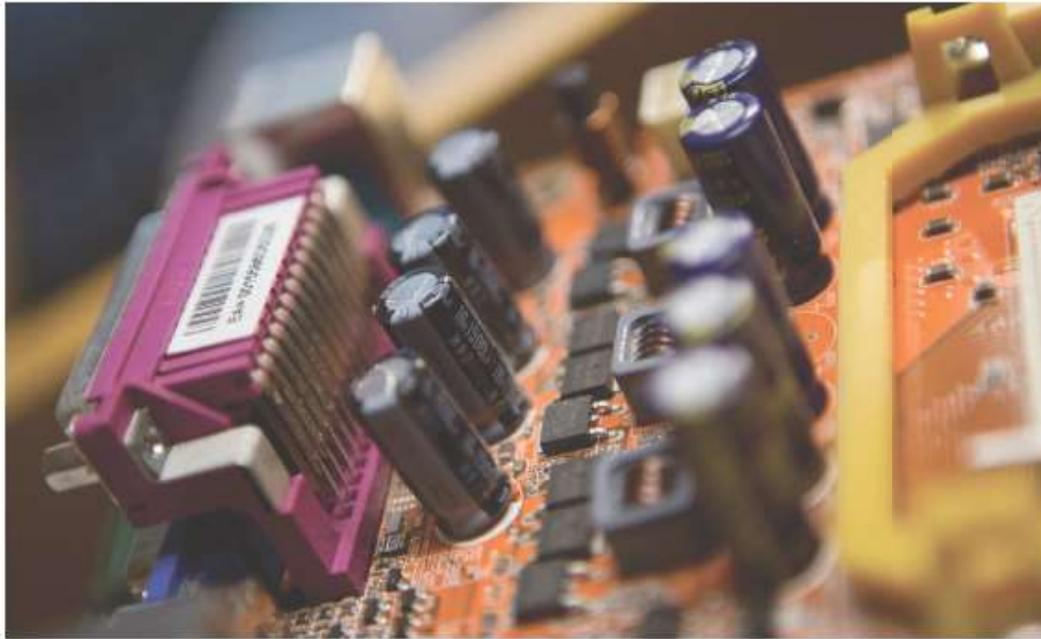
Start your journey today! Choose from one of the ten career and academic communities to see what opportunities await after you graduate. Take the first step now by going to spcollege.edu

CHART YOUR PATH BUILD YOUR FUTURE

MEDIAN FIRST-YEAR EARNINGS (AFTER GRADUATION)



* SPC's Honors Program and Global Citizen Distinction options are also available through the Career and Academic Communities.



TECHNOLOGY

DEGREES AND PROGRAMS

BACHELOR'S DEGREES

Technology Development and Management

ASSOCIATE IN ARTS TRANSFER PLAN

Information Systems Management

ASSOCIATE IN SCIENCE

Computer Information Technology

Cybersecurity

Computer Networking

Computer Programming and Analysis

Web Development

CERTIFICATES

Help Desk Support Specialist

Cybersecurity

Computer Support

Cisco Certified Network Associate

Linux System Administrator

Microsoft Certified Solutions Associate

Computer Programmer

Computer Programming Specialist

Web Development Specialist



ACADEMIC PATHWAY

Computer Networking Associate in Science Degree

Seq #	Course	Course Title	Credit	Type	Term Offered	Pre-Req.	Options Avail.
1	CGS 1070	Basic Computer and Information Literacy	1	Gen Ed	F, Sp, Su		Y
2	PHI 1600	Studies in Applied Ethics	3	Gen Ed	F, Sp, Su		Y
3	COP 1000	Introduction to Computer Programming	3	Core ^{1,2}	F, Sp, Su		
4	MAT 1033	Intermediate Algebra	3	PreReq	F, Sp, Su		
5	CET 1171C	Computer Repair Essentials	3	Core ^{1,2,4}	F, Sp, Su		
6	MAC 1105	College Algebra	3	Gen Ed	F, Sp, Su	Y	
7	CNT 1000	Local Area Network Concepts	3	Subplan ^{1,2,3}	F, Sp, Su	Y	
8	CET 1172C	Computer Support Technician	3	Core ^{1,4}	F, Sp, Su		
PREPARATION FOR COMPTIA A+ INDUSTRY CERTIFICATION COMPLETED							
9	ENC 1101	Composition I	3	Gen Ed	F, Sp, Su		Y
10	SPC 1065	Business and Professional Speaking	3	Gen Ed	F, Sp, Su		Y
11	CTS 1327	Configuring and Administering MS Windows Client	3	Subplan ^{1,2,3}	F, Sp, Su		
12	CTS 1328	Installing and Configuring Windows Server	3	Subplan ^{1,2}	F, Sp, Su	Y	
13	CTS 2106	Fundamentals of the Linux/Unix Operating Environment	3	Subplan ^{1,2,3}	F, Sp, Su	Y	
COMPUTER SUPPORT CERTIFICATE COMPLETED							
14	POS 2041	American National Government	3	Gen Ed	F, Sp, Su		Y
15	CTS 2321	Linux System Administration I	3	Subplan ²	F, Sp	Y	
16	CTS 2322	Linux System Administration II	3	Subplan ²	F, Sp	Y	
LINUX SYSTEM ADMINISTRATOR CERTIFICATE COMPLETED							
17	HUM 2270	Humanities (East-West Synthesis)	3	Gen Ed	F, Sp, Su		Y
18	CTS 1334	Administering Windows Servers	3	Subplan ³	F, Sp	Y	
19	CTS 1303	Configuring Advanced Windows Server Services	3	Subplan ³	F, Sp	Y	
MICROSOFT CERTIFIED IT PROFESSIONAL: SERVER ADMINISTRATOR CERTIFICATE COMPLETED							
20	CIS 2321	Systems Analysis and Design	3	Core	F, Sp, Su	Y	
21	CTS 1411	Fundamentals of Information Storage and Management	3	Core	F, Sp	Y	
22	CTS 2370	Configuring and Managing Virtualization	3	Core	F, Sp	Y	
23	CNT 2940	Computer Networking Internship	3	Core	F, Sp, Su		

Total program credits: 67

(Includes MAT 1033 & Computer Competency)

¹ Part of Computer Support Certificate

² Part of Linux System Administrator Certificate

³ Part of Microsoft Certified IT Professional: Server Administrator Certificate

⁴ Preparation Course for CompTia A+ Industry Certification

Term Offered: **F** - Fall | **SP** - Spring | **SU** - Summer | Type of Course: **Core** - Required for the Program | **Elective** - Options based upon personal interest | **Gen Ed** - General Education | **PreReq** - Prerequisite | **Subplan** - Specific to a particular degree option



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Students completing the following courses and requirements in combination with an AA from St. Petersburg College will have automatically satisfied requirements to begin upper-level coursework at USF.

COLLEGE - ARTS & SCIENCES

Intended Program of Study-B.S. Biomedical Sciences

- Limited Access- No
- College Application Required- No
- Tests Required- None
- (College) Foreign Language Exit Required- No

PRE-REQUISITE COURSES

(Common State Pre-requisites) (C or Higher in all)

USF Courses

- BSC 2010 & BSC 2010L
- BSC 2011 & BSC 2011L
- CHM 2045 & CHM 2045L
- CHM 2210 & CHM 2210L
- CHM 2211 & CHM 2211L
- Select one lecture/lab combo**
 - PHY 2053 & PHY 2053L, or PHY 2048 & PHY 2048L, or BSC 2085 & BSC 2085L, or BSC 2093C
- Select one lecture/lab combo**
 - PHY 2054 & PHY 2054L or PHY 2049 & PHY 2049L, or BSC 2086 & BSC 2086L, or BSC 2094C
- MAC 2241 or 2281 or 2311**
- MAC 2242 or 2282 or 2312 or STA 2023**

Where needed, student must meet required pre-requisites for each course.
**When there is more than one option listed, please consult your advisor.

Start at St. Petersburg College

The following course sequence is purely a suggested semester-by-semester unique plan developed in consultation with an advisor at both institutions.

Note: In order to complete this degree at USF in 2 years, students must complete the following courses at St. Petersburg College.

YEAR 1 SPC

COURSE	CREDITS	REQUIREMENTS
FALL		
PHI 1600 (GE Ethics)	3	S
ENC 1101 (GE Communications)	3	M
MAC 1105	3	C
CHM 1025 & 1025L	4	S
CGS 1170	T	
HUM 1020 (GE Humanities)	3	

TOTAL: 16

YEAR 2 SPC

COURSE	CREDITS	REQUIREMENTS
FALL		
CHM 2046 & 2046L	4	S
PSY 1012	3	R
BSC 2010 & 2010L	4	S
MAC 2311	5	P

TOTAL: 16

Graduate with A.A. from SPC
*It is strongly encouraged for St. Petersburg College students to complete the AA degree on their track for 4 year graduation from USF



USF START

YEAR 3 FALL USE

General Biochemistry (BCH 3053)	3
Upper-level BMS Bio/Chem Lab Elective	
(ex. BCH 3023L Basic Biochemistry Lab)	3
General Physics I with lab (ex. PHY 2053/L)	3
Capstone FKL course	3
Upper-level USF Elective	3

TOTAL: 15

YEAR 3 SPRING USE

General Physics II with lab (ex. PHY 2054/L)	3
Upper-level BMS Biology Elective	
(ex. PCB 3063 General Genetics)	3
Upper-level USF Elective (ex. PCB 3063L Genetics Lab)	3
Writing Intensive FKL course	3
Upper-level USF Elective	3

TOTAL: 15

YEAR 4 FALL USE

Required Biomedical Elective	3
(ex. MCB 3020L General Microbiology with lab)	
Additional BMS Chemistry or Bio Elective	3
(ex. CHM 4300 Biomolecules I)	
Upper-level USF Elective	3
Upper-level USF Elective	3
Upper-level USF Elective	3

TOTAL: 15

YEAR 4 SPRING USE

Upper-level BMS Chemistry Elective	
(ex. CHM 4292 Intro to Medicinal Chemistry)	3
Additional Biomedical Elective	
(ex. PCB 4234 Principles of Immunology)	3
Upper-level USF Elective	3
Upper-level USF Elective	3
Upper-level USF Elective	3

TOTAL: 15

The following is additional information for the College of Arts and Sciences:

Students interested in Biomedical Sciences may email ChemAdvise@usf.edu.

For general transfer advising inquiries please contact transfer-advising@usf.edu

Show Students Their Path

Your pathway to success

Follow this checklist to set and achieve clear career goals

Engineering Technology A.S. (ENG-AS)

Biomedical Systems Subplan with embedded
Medical Quality Systems Certificate (MEDQS-CT) and
Engineering Technology Support Certificate (ENGTECH-CT)



ETI 1030	REGULATORY ENVIRONMENT FOR MEDICAL DEVICES.....	3
ETI 2031	RISK MANAGEMENT AND ASSESSMENT FOR MEDICAL DEVICE.....	3
ETI 2032	CHANGE CONTROL AND DOCUMENTATION.....	3
ETI 2171	QUALITY AUDITING FOR MEDICAL DEVICES.....	3
CGS 1070	BASIC COMPUTER AND INFORMATION LITERACY.....	1
ENC 1101	COMPOSITION I.....	3

0 TO 15 CREDITS

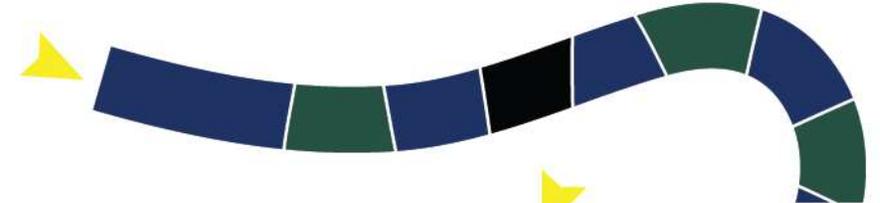
- ✓ Visit Career Services & complete assessments
- ✓ Discover careers & research (using BLS & ONET)
- ✓ Explore degree options & requirements
- ✓ Work with Academic Advising to create a MLP
- ✓ Familiarize yourself with MySPC, MyCourses & SPC Email
- ✓ Volunteer & join Student Government or a club
- ✓ Start a basic resume
- ✓ Locate scholarship opportunities

ETI 1701	INDUSTRIAL SAFETY.....	3
ETI 2041*	MEDICAL DEVICE DESIGN AND MANUFACTURING ...	3
ETI 1622	CONCEPTS OF LEAN AND SIX SIGMA	3
MAT 1033	INTERMEDIATE ALGEBRA.....	3
MAC 1105	COLLEGE ALGEBRA.....	3

16 TO 30 CREDITS

- ✓ Confirm degree plan matches career goals
- ✓ Modify My Learning Plan (MLP) if necessary
- ✓ Add Volunteer Activities & Clubs to resume
- ✓ A.S. Programs: Attend events related to program & prepare for industry certifications & exams
- ✓ A.A. Program: Determine transfer institution
- ✓ Make an advising appointment
- ✓ Visit Career Services to discuss work based learning opportunities

Your pathway to success



ETI 1420	MANUFACTURING PROCESSES AND MATERIALS I	3
ETI 1628	DEVELOPING & COACHING SELF-DIRECTED WORK TEAMS.....	3
EET 2949	CO-OP WORK EXPERIENCE.....	3
EET 1084C	INTRODUCTION TO ELECTRONICS.....	3
ETI 1110	INTRODUCTION TO QUALITY ASSURANCE.....	3

31 TO 45 CREDITS

- ✓ Gain experience in your field (volunteer/internships)
- ✓ Build relationships and practice interviewing
- ✓ Create LinkedIn Profile & clean up your online presence
- ✓ Complete all required courses for credit internship
- ✓ Make plans for transfer or continuing at SPC
- ✓ Complete degree audit with an advisor
- ✓ Update My Learning Plan and resume

SPC 1017	INTRODUCTION TO SPEECH COMMUNICATION.....	3
PHI 1600	STUDIES IN APPLIED ETHICS	3
ETM 1010C	MECHANICAL MEASUREMENT AND INSTRUMENTATION.....	3
ETD 1320C*	INTRODUCTION TO CAD.....	3
POS 2041	AMERICAN NATIONAL GOVERNMENT.....	3
HUM 2270	HUMANITIES (EAST-WEST SYNTHESIS).....	3

46 TO 60 CREDITS

- ✓ Research jobs & companies
- ✓ Get references/letters of recommendation
- ✓ Complete a graduation check with advisor
- ✓ Finalize plans for transfer or continuing with SPC
- ✓ Apply for graduation & order your cap and gown

Total Program Credits 60
Total Pathway Credits 64
GRADUATION



Part of Medical Quality Systems Certificate*
Part of Engineering Technology Support Certificate*
Denotes last course required for Medical Quality Systems Certificate*
Denotes last course required for Engineering Technology Support Certificate*



Key Student Experience Issues to Explore with Program Mapping & Metamajors



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How We Got Here...

In working with 100s of colleges across the country, we have observed:

- While every college's improvement journey is unique there is a lot of similarity in the journeys
- Colleges must wrestle with similar fundamental decisions about how to optimize the student experience
- Colleges must also consider if and what impact their design efforts have on the actual student experience



Reflecting on the Movement...

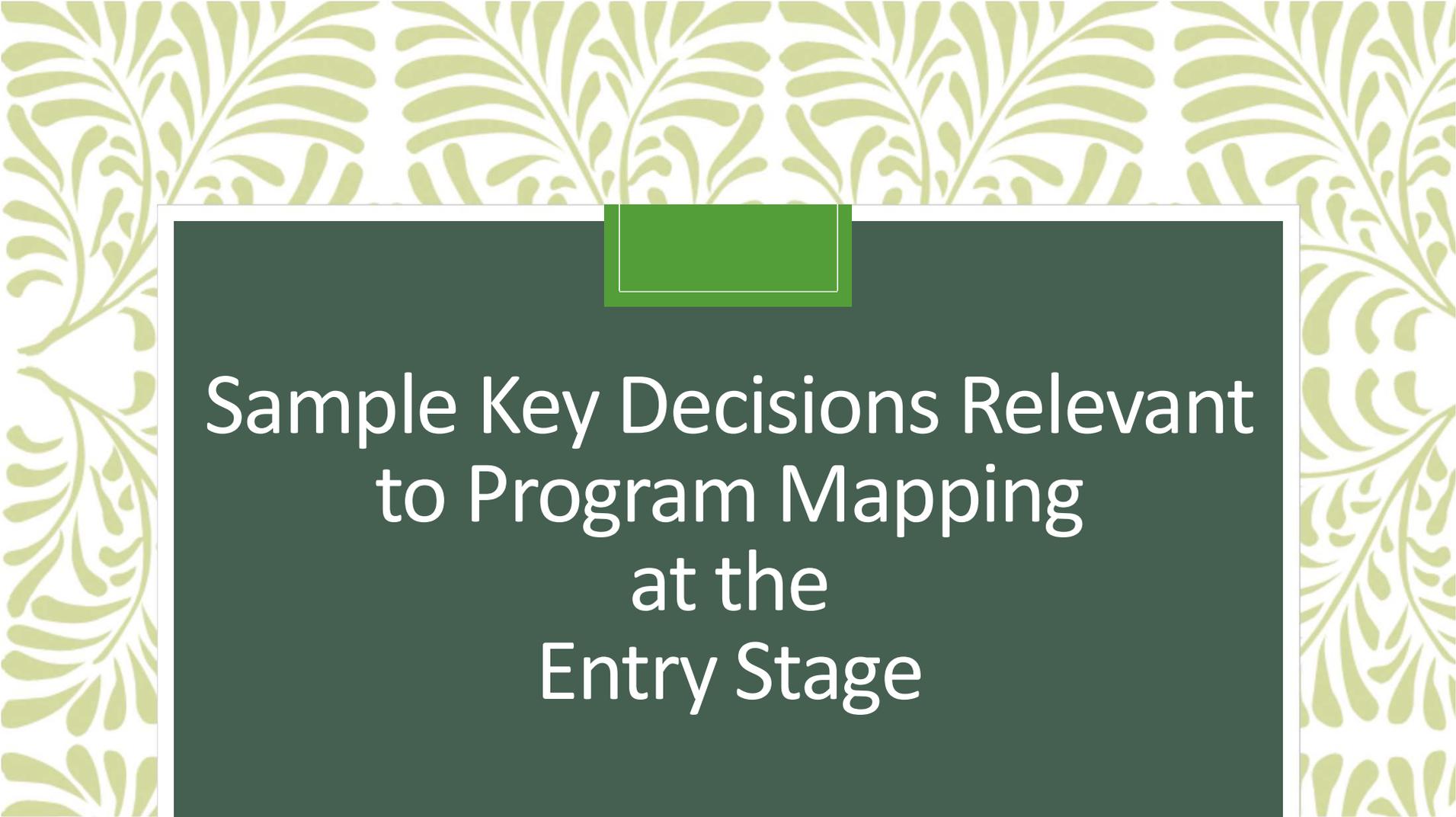
- Further, we have observed that many colleges are engaged in (a) exploring guided pathways, (b) guided pathways design activity, and perhaps even (c) rolling out version 1.0 of guided pathways.
- It's possible that this exploration and design activity has in some cases taken the focus off understanding and optimizing the student experience
- Maps & Metamajors illustrations



Two Resource Guides – GPRS 4 & 5

- **GPRS #4 offers a list of key decisions we see as vital to truly transforming the student experience at scale.**
- **GPRS #5 offers a list of key student experience-focused research questions that would demonstrate the impact of guided pathways design work on the student experience**





Sample Key Decisions Relevant to Program Mapping at the Entry Stage



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GP Decisions: Entry (1)

- How do we expand students' decisions about their metamajor into meaningful participation in a “community of learners” designed to build engagement and community while supporting their ability to make more focused and informed decisions about a specific program of study?
- How do we ensure that students take a well-taught, college-level course relevant to their interests in the first term?



GP Decisions: Entry (2)

- In order to help students make an informed decision about a program of study by the end of the first academic term, how can we assist students in exploring their interests and careers?
- Will we use a first-term course to assist students in making an informed decision about a program of study? Will it be required? For whom?
- How do we ensure that students are taking the "right math course" for their metamajor or program?



GP Decisions: Entry (3a)

- Will we use a first-term course to assist students in making an informed decision about a program of study? If so...
 - ✓ Will this course be required? If so, for whom?
 - ✓ Will the course be 1, 2, or 3 units?
 - ✓ Can the course be offered in a 4-week or 8-week term?
 - ✓ Will the course be credit or non-credit?
 - ✓ Who will teach the course / what will the minimum qualifications be?
 - ✓ Will we offer field-specific sections of the course?



GP Decisions: Entry (3b)

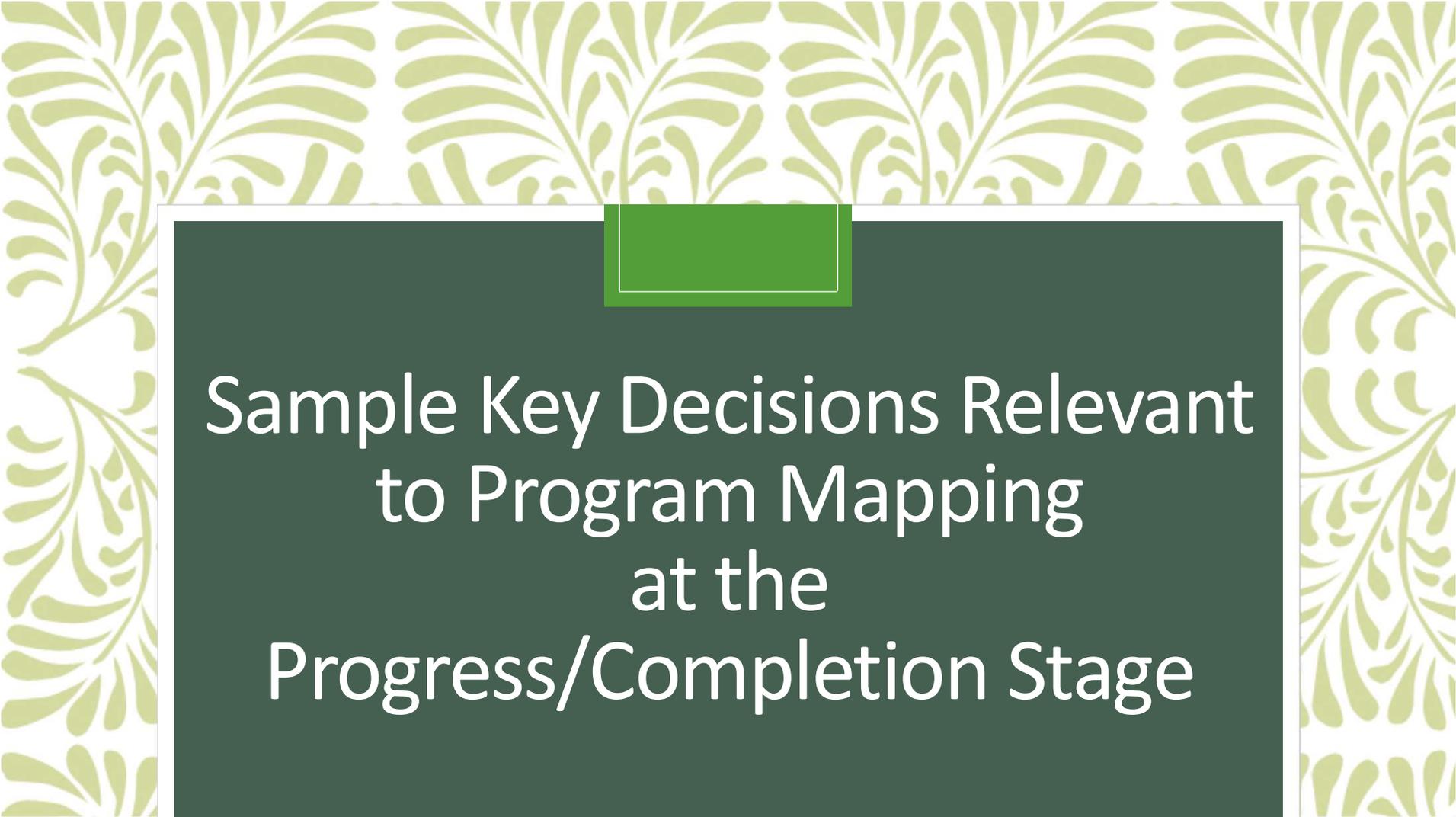
- **More first-term course questions, if applicable:**
 - ✓ What will be the proportional breakdown between a focus on career and academic exploration and planning vs. overall college skills?
 - ✓ What will be the role of the course in helping all students develop an academic plan charting out their full program?
 - ✓ How do we support those teaching this course through relevant and adequate professional development that grounds them in the key outcomes of these efforts?
 - ✓ What role will departments or metamajors have in designing and delivering such courses?



GP Decisions: Entry (4)

- How do we transition the first semester experience into a full, customized program plan that includes a completion date and job and transfer objectives for every student—including part-time students and students starting below college-level?
- Who is exempted from identifying a metamajor and/or developing an academic plan and how does the exemption process work?





Sample Key Decisions Relevant to Program Mapping at the Progress/Completion Stage



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Sample GP Decisions: Progress/Completion

- Who will advise students once they have decided on a program and developed a full-program plan? What will be the primary domains this progress / completion focused advising will cover?
- How will we deal with students who are still undecided or who change their plans after their first term?
- Will students be required to meet with an advisor at “checkpoints” during their journey at the college (e.g. every semester to register, once a year, at completion of 15/30/45 units)?



Sample GP Decisions: Progress / Completion (2)

- How will the college check to see if students have “fallen off” their plan (e.g. advisors, technology, both)? How often will this happen?
- If a student has “fallen off their path,” who from the college will intervene? How will they get the relevant information? What resources will be available to help students get “back on path?”
- How will program and metamajor faculty ensure that courses within a pathway feature active and experiential learning?



Find Out More

- **NCII & CCRC websites:**

www.ncii-improve.com & ccrc.tc.columbia.edu

- **Dr. Davis Jenkins, Sr. Research Fellow, CCRC**

davisjenkins@gmail.com

- **Dr. Rob Johnstone, Founder & President, NCII**

rob@ncii-improve.com

