Redesigning College for Student Success
A Clearer Path

CASSL Colloquium
August 16, 2017

Davis Jenkins
Community College Research Center
Teachers College, Columbia University

@CommunityCCRC
#RedesigningCCs
New Students **Want to Know**

- What are my career options?
- What are the education paths to those careers?
- What will I need to take?
- How long will it take and how much will it cost?
- Will my credits transfer?
- Who can I talk with to get good information?
Career? Degree?
Dev Ed Sorting System

Student Progression Through the Developmental Math Sequence

100% (63,650) Referred to 3+ Levels of Remediation

Level 3+ Course

26% Did Not Enroll in Next Course

15% Level 2 Course

7% Level 1 Course

4% Did Not Pass/Complete Course

2% Gatekeeper

11% Passed Gatekeeper Math

Dev Ed Sorting System

Student Progression Through the Developmental Reading Sequence

100% (11,210) Referred to 3+ Levels of Remediation

Level 3+ Course
- Did Not Enroll in Next Course: 29%
- Did Not Pass/Complete Course: 17%

Level 2 Course
- Did Not Enroll in Next Course: 9%
- Did Not Pass/Complete Course: 4%

Level 1 Course
- Did Not Enroll in Next Course: 4%
- Did Not Pass/Complete Course: 2%

Gatekeeper
- Passed Gatekeeper English: 29%

High attrition is a big concern

Math cohort progression by starting level

- Four levels below
- Three levels below
- Two levels below
- One level below
Latino, African American, and low-income students are overrepresented in developmental education.
GENERAL EDUCATION REQUIREMENTS
(Select 12 courses from this list of more than 300)

Basic Liberal Studies Requirements: [2 courses must include the Diversity (D) overlay]

English Communication: 6 credits; 3 credits must be in a writing course
- Writing (ECw): ELS 112, 122 (nonnative speakers); HPR 326; WRT 104, 105, 106, 201, 227, 235, 302, 303, 304(D), 305(D), 333.
- General (EC): COM 100(D), 110(D); LIB 120; PHL 101.

Fine Arts and Literature (A): 6 credits; 3 credits in Fine Arts and 3 credits in Literature
- Fine Arts: ARH 120(D), 251(D), 252(D); ART 101, 207; FLM 101(D), 203(D), 204(D), 205(D); HPR 105, 124, 201A, 202A, 324; LAR 201; MUS 101(D), 106(D), 111, 292(D), 293(D); PLS 233; SPA 320(D); THE 100, 181, 351(D), 352(D), 381, 382, 383.
- Literature: AAF 247(D), 248(D); CLA 391(D), 395(D), 396(D), 397(D); CLS 160(D); ENG 110(D), 160(D), 241(D), 242(D), 243(D), 247(D), 248(D), 251(D), 252(D), 256(D), 262(D), 263(D), 264(D), 265(D), 280(D), 300(D), 302(D), 303(D), 304(D), 317(D), 355(D), 357(D), 358(D); FRN 309(D), 310(D), 320(D), 391(D), 392(D), 393(D); HPR 105, 125, 201A, 202A; RUS 391(D), 392(D); SPA 305(D), 306(D), 307(D), 308(D); WMS 317(D).

Language/Culture (FC): 6 credits
- Demonstration of competence through the intermediate level by examination or successfully completing through 104 (living language) or 302 (classical language)
- Two-course sequence (or one course at the 113 level) in a previously studied language through at the appropriate level (all D): ARB 103, 104; CHN 103, 104; FRN 103, 104; GER 103, 104; GRK 301, 302; HBW 103, 104; ITL 103, 104, 111; JPN 103, 104; LAN 193, 194; LAT 301, 302; POR 103, 104; RUS 103, 104; SPA 103, 104, 111, 113, 210.
- Two-course sequence (or one course at the 111 level) in a language not previously studied (or studied for less than two years in high school) through the beginning level: ARB 101, 102; CHN 101, 102; FRN 101, 102; GER 101, 102; GRK 101, 102; HBB 101, 102; ITL 101, 102; JPN 101, 102; LAN 191, 192; LAT 101, 102; POR 101, 102; RUS 101, 102; SPA 101, 102.
- Study abroad in an approved program for one semester
- Major in a foreign language
- Formerly registered international students, students with recognized immigrant status, or naturalized citizens (at Dean’s discretion)
- Two courses in Cross-Cultural Competence: CPL 300(D); FRN 309(D), 310(D), 320(D), 391(D), 392(D), 393(D); HIS 132(D), 171(D), 172(D), 180(D), 311(D), 327(D), 374(D), 375(D); HPR 201F, 202F; LET 151L(D), 151Q(D), 151R; NUR 360(D); PHL 101, 103, 204, 210(D), 212(D), 215, 217(D), 235, 314, 316(D), 321, 322, 323(D), 325(D), 328(D), 331(D), 346, 355; PSC 341, 342, PSY 310; RLS 111(D); 125, 126, 131(D); WMS 220(D), 315(D), 320(D)

Letters(L): 6 credits
- AAF 150(D), 201(D), 355(D), 356(D); APG 327; BGS 392(D); CLS 160(D), 235; EGR 316(D); ENG 110(D), 160(D), 241(D), 251(D), 252(D), 280(D), 355(D), 356(D); FRN 391(D), 392(D), 393(D); HIS 111, 112, 113(D), 114(D), 116, 117, 118(D), 130(D), 132(D), 141(D), 142(D), 145(D), 146(D), 150(D), 160(D), 171(D), 172(D), 180(D), 304, 305, 310(D), 311(D), 314, 323(D), 327(D), 332(D), 333(D), 340(D), 341(D), 346(D), 351(D), 355(D), 356(D), 374(D), 375(D); HPR 107, 201L, 202L, 307; JOR 110(D); LAS 202(D); LET 151L(D), 151Q(D), 151R; NUR 360(D); PHL 101, 103, 204, 210(D), 212(D), 215, 217(D), 235, 314, 316(D), 321, 322, 323(D), 325(D), 328(D), 331(D), 346, 355; PSC 341, 342, PSY 310; RLS 111(D); 125, 126, 131(D); WMS 220(D), 315(D), 320(D)

Mathematics(MQ): 3 credits satisfied by MTH 141

Natural Sciences(N): 6 credits; satisfied by PHY
- APS 190, 210, 211; APG 201(D); AST 108, 118; AVS 101(D); BCH 190; BIO 101, 102, 105, 106, 286(D); BPS 201; CHM 100, 101, 103, 112; GEO 100, 102, 103, 110, 113, 120; HPR 109, 201N, 202N; MIC 190; NFS 207; NRS 190; OCG 110, 123, 131; PHY 109, 111, 112, 140, 185, 186, 203, 204, 205, 273, 274, 275; PLS 150, 190; TMD 113

Social Sciences(S): 6 credits
- APG 200(D), 202, 203(D), 301(D); CPL 202(D); ECN 100(D), 201, 202, 306, 381(D); EDC 102(D); EEC 105, 310, 356; GEG 101(D), 102(D), 202(D); HDF 225; HPR 110(D), 201S, 202S; HSS 130; JOR 110(D); KIN 123(D); LIN 200(D); MAF 100; NUR 150(D); PSC 115(D), 116(D), 274(D), 288; PSY 103(D), 113(D), 232(D), 235(D), 254(D), 255(D); SOC 100(D), 212(D), 250(D), 240(D), 242(D), 274(D); TMD 224(D), WMS 150(D)
Graduation Requirements

A. Satisfactory completion of 60 units of collegiate work: Must earn an overall C (2.0 grade point average) or better in a curriculum which CRCCD accepts toward the degree & meet Graduation Competency Requirements (see Table 1 below). At least 11 units must be earned at College of the River.

B. Majors: Complete one of the degree programs listed in this catalog with a minimum of a 'C' grade in each course for the CRC major.

C. Demonstrate Graduation Competencies, as listed in Table 1 below.

Table 1: Graduation Competency Requirements

<table>
<thead>
<tr>
<th>Demonstrate college-level competence in reading, in written expression and in mathematics by completing the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reading Competency - a. Completion with a grade of 'C' or better in ENGRD 200, 310 or 312 or an equivalent college reading course at a regionally accredited college OR obtain a satisfactory score on a college level reading examination administered in the Los Rios District. OR b. Complete either CSU-GE Breadth or IGETC. OR c. Students who possess an AA/AS degree or higher shall be deemed competent in reading.</td>
</tr>
<tr>
<td>2. Written Expression Competency: Completion with a grade of 'C' or better in ENGWR 200, 480, ESWR 340, HONOR 375, or BUS 210 or an equivalent course at an accredited college.</td>
</tr>
<tr>
<td>3. Mathematics Competency: a. Completion with a grade of 'C' or better in MATH 110, 120, 125, 141, OR designated higher level mathematics/statistics course, OR ECON 210, OR PSYC 330, OR college math course at a regionally accredited college. OR b. Obtain a satisfactory score on a mathematics competency examination used district-wide for graduation.</td>
</tr>
</tbody>
</table>

Note: Effective beginning summer 2004, students who possess a BA/BS or higher degree from a regionally accredited college or university in the United States are deemed to have met the General Education and Graduation Competency Requirements for an AA/AS degree.

Table 2: General Education Requirements for AA/AS Degrees

| Humanities - One course from the following (3 units minimum) |
| b. Communication and Analytical Thinking (3 units minimum) |
| c. Languages and Rhetoric - To include at least one course from ‘a’ and one course from ‘b’ (total of 6 units minimum) |
| A- English Composition (3 units minimum) BUS 301, ENGWG 300, 341, 480, ESWR 340, HONOR 375 |
| b. Communication and Analytical Thinking (3 units minimum) |
| h. Living Skills - To include at least one course from ‘a’, and one course from ‘b’ (total of 3 units minimum) |
| a. One course (minimum) from any of the following designators (physical education activity courses)** ADAP, DANCE, FITNS, PACT, SPORT, TRMCT |
| b. One course (minimum) from Life Development Skills (2 units minimum) |
| BUS/EC 300, 306, CSCI 332, 310, COMM 311, 315, 322, 330, 340, 345, ENGWG 320, 322, 324, 325, ENGWG 392, HED 300, 320, HGER 302, IND 313, OUR 230, NNESS 300, 301, 336, 410, LDR 310, 325; MATH 353; NUTR 302, 303, 333, 337; PSYC 340, 356, 371; SCV 300, 315, 350, 370; Work Experience Courses Any courses numbered 198, 298, or 498 |
| Note: The 3-unit requirement for this category, Living Skills, can also be fulfilled by Military Service Credit (Honorable discharge) with a minimum of one (1) year active duty service. Please submit a copy of form D2214 to the Admissions Office as verification. |
| II. Natural Sciences - To include at least one course from the following (3 units minimum) |
| ANSC 300, 301, ANTH 300, 309, 374, ASTR 306, 310, 100, 102, 300, 307, 310, 342, 363, 361, 362, 480, 410, 420, 430 |
Simplified Partition Tree:
State A, 2-year Entrants, Excess Credits Attempted

510 students, $M = 28.8$, $SD = 20.6$

$>71\%$ of credits attempted after 60 credits were 300+ level
284 students, $M = 19.3$, $SD = 14.5$

Placed into 0-1 deved areas
210 students, $M = 15.4$, $SD = 13.1$

$<3\%$ of credits earned after 60 credits were STEM
85 students, $M = 10.2$, $SD = 10.4$

$>57\%$ of credits earned in first two terms after transfer were in 300+ level courses
69 students, $M = 7.7$, $SD = 7.6$

$>57\%$ of credits earned in first two terms after transfer were in 300+ level courses
16 students, $M = 21.1$, $SD = 13.6$

$>15\%$ of credits attempted before 60 credits were 300+ level
12 students, $M = 12.8$, $SD = 14.7$

$<48\%$ of credits attempted in the two terms after transferring were 100 level
152 students, $M = 38.2$, $SD = 17.5$

$>48\%$ of credits attempted in the two terms after transferring were 100 level
62 students, $M = 52.2$, $SD = 22.6$

$<71\%$ of credits attempted after 60 credits were 300+ level
226 students, $M = 40.7$, $SD = 20.9$

Placed into 2-3 deved areas
74 students, $M = 23.1$, $SD = 10.1$

$>3\%$ of credits earned after 60 credits were STEM
85 students, $M = 10.2$, $SD = 10.4$

$<15\%$ of credits attempted before 60 credits were 300+ level
203 students, $M = 42.3$, $SD = 20.1$

$>3\%$ of credits attempted after 60 credits were STEM
120 students, $M = 18.9$, $SD = 13.6$

$<48\%$ of credits attempted in the two terms after transferring were 100 level
152 students, $M = 38.2$, $SD = 17.5$

$>48\%$ of credits attempted in the two terms after transferring were 100 level
62 students, $M = 52.2$, $SD = 22.6$

Median credits earned by associate degree completers
20 CCC programs with the most completers in 2015-16

Data. Analysis of CCC student records courtesy of Education Results Partnership
Momentum Works for CC Students

Figure 1. Credits Accumulated by Semester
Community College Students

TBR data, fall 2008 cohort.

Source: Belfield, Jenkins, Lahr, 2016.
## Momentum Pays for CC Students

Effects* of Momentum on Six-Year Outcomes
Tennessee Community Colleges, FTEIC Fall 2008 Cohort

<table>
<thead>
<tr>
<th></th>
<th>1st semester momentum</th>
<th>1st year momentum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional credits earned</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>Probability of degree attainment</td>
<td>7pp  (27% vs. 34%)</td>
<td>18pp   (25% vs. 43%)</td>
</tr>
<tr>
<td>Tuition and fees per degree</td>
<td>-9%</td>
<td>-20%</td>
</tr>
<tr>
<td>Expenditures per degree</td>
<td>-9%</td>
<td>-14%</td>
</tr>
<tr>
<td>Tuition and fees avg.</td>
<td>+$620</td>
<td>+$1,740</td>
</tr>
</tbody>
</table>

*Adjusted results, controlling for student characteristics

Source: Belfield, Jenkins, Lahr, 2016.
Ideal CC Student Pathways

Source: Crosta, 2013.
Actual CC Student Pathways

Source: Crosta, 2013.
Six-Year Outcomes, Fall 2010 Community College Entrants

Completed Any College Credential

Completed a CC Award

CC Award at Starting CC

CC Award at Other CC

Completed a Bachelor’s Degree

Source: NSC Signature Report 12, State Supplement
Six-Year Outcomes, Fall 2010 Community College Entrants

Completed Any College Credential

Completed a CC Award

Completed a Bachelor's Degree

Source: NSC Signature Report 12, State Supplement
THE STUDENT EXPERIENCE
Cafeteria College

Paths to career goals unclear

Intake sorts, diverts students

Students’ progress not monitored

Learning outcomes not defined and assessed across programs

Churning

Early transfer

Completion

Excess credits

Time to degree

Skill building
Guided Pathways College

- Clear roadmaps to career goals
- Intake redesigned as an on-ramp
- Students’ progress closely tracked
- Learning outcomes/assessments aligned across programs

Churning
Early transfer
Completion
Excess credits
Time to degree
Skill building
Start with the End in Mind

- Market program paths
- Build bridges from high school and adult ed. into program streams (e.g., strategic dual enrollment, I-BEST)
- Require exploratory or “meta-majors” for undecided students
- Integrate basic skills instruction into introductory college courses
- Clearly map out program paths
- Rethink advising around maps
- Use “eAdvising” to monitor student progress, provide feedback and support as needed
- Align program outcomes with requirements for success in further education and the labor market
Guided Pathways: Planning, Implementation, Evaluation

Creating guided pathways requires managing and sustaining large-scale transformational change. The work begins with thorough planning, continues through consistent implementation, and depends on ongoing evaluation. The goals are to improve rates of college completion, transfer, and attainment of jobs with value in the labor market — and to achieve equity in those outcomes.

PLANNING

ESSENTIAL CONDITIONS
Make sure the following conditions are in place — prepared, mobilized, and adequately resourced — to support the college’s large-scale transformational change:
- Strong change leadership throughout the institution
- Faculty and staff engagement
- Commitment to using data
- Capacity to use data
- Technology infrastructure
- Professional development
- Favorable policy (state, system, and institutional levels) and board support
- Commitment to student success and equity

PREPARATION/AWARENESS
Understand where you are, prepare for change, and build awareness by:
- Engaging stakeholders and making the case for change
- Establishing a baseline for key performance indicators
- Building partnerships with K-12, universities, and employers
- Developing flowcharts of how students choose, enter, and complete programs
- Developing an implementation plan with roles and deadlines

SUSTAINABILITY
Commit to pathways for the long term and make sure they are implemented for all students by:
- Determining barriers to sustainability (state, system, and institutional levels)
- Redefining the roles of faculty, staff, and administrators as needed
- Identifying needs for professional development and technical assistance
- Revamping technology to support the redesigned student experience
- Reallocation of resources as needed
- Continuing to engage key stakeholders, especially students
- Integrating pathways into hiring and evaluation practices

IMPLEMENTATION

CLARIFY THE PATHS
Map all programs to transfer and career and include these features:
- Detailed information on target career and transfer outcomes
- Course sequences, critical courses, embedded credentials, and progress milestones
- Math and other core coursework aligned to each program of study

HELP STUDENTS GET ON A PATH
Require these supports to make sure students get the best start:
- Use of multiple measures to assess students’ needs
- First-year experiences to help students explore the field and choose a major
- Full program plans based on required career transfer exploration
- Contextualized, integrated academic support to help students pass program gateway courses
- K-12 partnerships focused on college program exploration

HELP STUDENTS STAY ON THEIR PATH
Keep students on track with these supports:
- Ongoing, intuitive advising
- Systems for students to easily track their progress
- Systems/procedures to identify students at risk and provide needed supports
- A structure to redirect students who are not progressing in a program to a more viable path

ENSURE STUDENTS ARE LEARNING
Use these practices to assess and enrich student learning:
- Program-specific learning outcomes
- Project-based, collaborative learning
- Applied learning experiences
- Inescapable student engagement
- Faculty-led improvement of teaching practices
- Systems/procedures for the college and students to track mastery of learning outcomes that lead to credentials, transfer, and/or employment

EARLY OUTCOMES
Measure key performance indicators, including:
- Number of college credits earned in first term
- Number of college credits earned in first year
- Completion of gateway math and English courses in the student's first year
- Number of college credits earned in the program of study in first year
- Persistence from term 1 to term 2
- Rates of college-level course completion in students’ first academic year
- Equity in outcomes

EVALUATION

Revisit conditions, sustainability, and implementation. Continuously improve pathways by building on elements that work and adjusting or discarding elements that are not serving all students well.

Contributors to this model for Guided Pathways are: American Association of Community Colleges (AACC), Achieving the Dream (ATD), The Aspen Institute, Center for Community College Student Engagement (CCCSSE), Community College Research Center (CCRC), Complete College America, The Charles A. Dana Center, Jobs for the Future (JFF), National Center for Inquiry and Improvement (NCII), and Public Agenda.
Research Methods

- Colleges filled out CCRC “Scale of Adoption Assessment” (spring and fall 2016)
- Follow-up calls with all 30 colleges (spring and fall 2016)
- 2-day site visits to 6 colleges (fall 2016)
  - Individual interviews & focus groups

<table>
<thead>
<tr>
<th>College</th>
<th>Interviews</th>
<th>Faculty</th>
<th>Advisors</th>
<th>Students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cleveland State Community College</td>
<td>7</td>
<td>5</td>
<td>0(^a)</td>
<td>15</td>
<td>27</td>
</tr>
<tr>
<td>Community College of Philadelphia</td>
<td>18</td>
<td>6</td>
<td>6</td>
<td>7</td>
<td>37</td>
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<tr>
<td>Front Range Community College</td>
<td>27</td>
<td>7</td>
<td>4</td>
<td>8</td>
<td>46</td>
</tr>
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<td>Indian River State College</td>
<td>23</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>42</td>
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<td>Jackson College</td>
<td>17</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>36</td>
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<tr>
<td>San Jacinto College</td>
<td>38</td>
<td>9</td>
<td>6</td>
<td>7</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>130</strong></td>
<td><strong>40</strong></td>
<td><strong>30</strong></td>
<td><strong>48</strong></td>
<td><strong>248</strong></td>
</tr>
</tbody>
</table>

\(^a\) At Cleveland State, faculty serve as academic advisors.
Guided Pathways Scale of Adoption

<table>
<thead>
<tr>
<th>Guided Pathways Essential Practices</th>
<th>Scale of Adoption at Our College</th>
<th>Steps Needed to Implement Practice at Scale</th>
</tr>
</thead>
</table>
| 4. ENSURING THAT STUDENTS ARE LEARNING | Learning outcomes are clearly defined for each of the college's programs (not just courses). | ☐ Not following  
☐ Not systematic  
☐ Planning to scale  
☐ Scaling in progress  
☐ At scale | * |
| b. Learning outcomes are aligned with the requirements for success in the further education and employment outcomes targeted by each program. | ☐ Not following  
☐ Not systematic  
☐ Planning to scale  
☐ Scaling in progress  
☐ At scale | * |
| c. Faculty assess whether students are mastering learning outcomes and building skills across each program. | ☐ Not following  
☐ Not systematic  
☐ Planning to scale  
☐ Scaling in progress  
☐ At scale | * |
| d. Faculty use the results of learning outcomes assessments to improve the effectiveness of instruction in their programs. | ☐ Not following  
☐ Not systematic  
☐ Planning to scale  
☐ Scaling in progress  
☐ At scale | * |
| e. The college tracks mastery of learning outcomes by individual students, and that information is easily accessible to students and faculty. | ☐ Not following  
☐ Not systematic  
☐ Planning to scale  
☐ Scaling in progress  
☐ At scale | * |

Average Scale of Adoption Assessment Ratings

<table>
<thead>
<tr>
<th></th>
<th>March 2016 Assessment</th>
<th>September 2016 Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mapping pathways to student end goals</td>
<td>2.67</td>
<td>3.29</td>
</tr>
<tr>
<td>Helping students enter a pathway</td>
<td>2.74</td>
<td>3.25</td>
</tr>
<tr>
<td>Keeping students on a path</td>
<td>2.17</td>
<td>2.97</td>
</tr>
<tr>
<td>Ensuring that students are learning</td>
<td>3.03</td>
<td>3.58</td>
</tr>
</tbody>
</table>

Average Scale of Adoption Assessment Ratings

1A. Every program is well-designed to guide and prepare students to enter employment and further education in fields of importance to the college’s service area.

1B. Detailed information is provided on the college’s website on the employment and further education opportunities targeted by each program.

1C. Programs are clearly mapped out for students. Students know which courses they should take and in what sequence. Courses critical for success in each program and other key progress milestones are clearly identified. This information is easily accessible.

2A. Every new student is helped to explore career/college options, choose a program of study and develop a full-program plan as soon as possible.

2B. Special supports are provided to help academically unprepared students to succeed in the “gateway” courses for the college’s major program areas—not just in college-level math and English.

2C. Required math courses are appropriately aligned with the student’s field of study.

2D. Intensive support is provided to help very poorly prepared students to succeed in college-level courses as soon as possible.

2E. College works with high schools and other feeders to motivate and prepare students to enter college-level coursework in a program of study when they enroll in college.

3A. The college monitors which program every student is in and how far along he/she is toward completing their program plan.

3B. Students can easily see how far they have come and what they need to do to complete their program.

3C. The college is able to identify when students are at risk of falling off their program plans and has policies and supports in place to intervene in ways...

3D. Assistance is provided to students who are unlikely to be accepted into limited access programs such as nursing to redirect to another more viable...

3E. The college schedules courses to ensure students can take the courses they need when they need them, can plan their lives around school from one...

4A. Learning outcomes are clearly defined for each of our programs (not just courses).

4B. Learning outcomes are aligned with the requirements for success in the further education and employment outcomes targeted by each program.

4C. Faculty assess whether students are mastering learning outcomes and building skills across each program.

4D. Faculty use the results of learning outcomes assessment to improve the effectiveness of instruction in their programs.

4E. The college tracks mastery of learning outcomes by individual students and that information is easily accessible to students and faculty.

4F. The college assesses effectiveness of educational practice (e.g., using CCSSE or SENSE, etc.) and uses results to create targeted professional development.
Mapping Paths to Student End Goals
Rethinking Mapping Programs

From:

- Alphabetical program list
- A lá carte courses (distribution requirements and electives)
- Algebra as default math path
- Certificates vs. degrees
- Connections to careers & transfer unclear

To:

- Academic / career communities ("meta-majors")
- Program maps with course sequences, critical courses, co-curricular requirements
- Program/field-specific math paths
- Degree pathways with embedded certificates/certifications
- Career & transfer opportunities/requirements clearly specified
LIST OF PROGRAMS

We make it easy for you to explore the programs we offer! Each of our programs has been assigned to an Area of Interest, 10 total. You can compare those with similar characteristics and find the one that’s right for you. Get started now!

Accounting
Administrative Assistant Professional Certificate#
Advanced Processes-CNC
Anthropology
Applied Technology and Apprenticeship
Arabic Language and Culture
Architectural Technology - Civil Construction
Architectural Technology - Commercial Design
Art
Astronomy
Automated Systems Technology - Mechatronics
Automotive Technology
Basic Computer Skills Certificate Program#
Behavioral Sciences
Biological Sciences
Business Communications
Business Management
Certified Medical Reimbursement Specialist#
Certified Nurse Assistant#
Certified Personal Fitness Trainer#
Certified Professional Coders#
Chemistry
Chinese Language and Culture
Civil Technology
Climate Control Technology
College Success Skills
Community Leadership Certificate Program
Computer Aided Design
Construction: Builder's Pre-License (Segment 1&2) Certificate Program#
Construction Technology
Construction Technology - Renewable Energy Specialist
Court Reporting Certificate Program#
Culinary Arts
Diagnostic Medical Sonography Reciprocal Drafting and Design Economics

Education
• Education: Early Childhood Studies

Electrical Engineering Technology
Emergency Medical Services - Emergency Medical Technician-
Paramedic
Emergency Medical Services - Paramedic/Firefighter
English*
English for Academic Purposes
Entrepreneurship Certificate Program#
Entrepreneurship Innovation
Entrepreneurship & Small Business Entertainment Arts Program#
Environmental Horticulture Certificate Program#
Environmental Science
Finance
Fire Science
Fire Science with Fire Academy
Floral Design Certificate Program#
Fluid Power Technology
French Language
General Business
Geography
German Language
Global Supply Chain Management
Health Information Technology
History
Home Care Assistant Certificate Program#
Home Inspections Certificate Program#

International & Global Studies
• Europe
• International Studies

Italian Language
Jewelry Trades Certificate Program#
Journalism
Laboratory Assistant#
Landscape Design Certificate Program#
Land Surveying Technology Office Technician
Law Enforcement
Law Enforcement with Police Academy
Legal Assistant
Life Career Development
Maintenance Technology
Manufacturing Engineering
Manufacturing Engineering Technology Marketing
Mathematics

Media and Communication Arts
• Collaborative Media
• Creative Imaging & Illustration
• Design & Layout
• Interactive Web Media
• Motion Design
• Photographic Technology
• Video Production
• 3D Animation

Medical Assistant
Molecular Biotechnology
Music Performance
Nursing
Occupational Therapy Assistant
Pastry Arts
Pharmacy Technician#
Phlebotomy#
Philosophy
Photographic Arts Certificate Program#
Physical Science
Physical Therapist Assistant
Physics
Plumbing and Pipe Fitting
Police Academy
Political Science
Pre-Engineering
Pre-Social Work
Product Development
Product Development - Digital Sculptor
Project Management Certificate Program#
Psychology
Radiologic Technology
Radiologic Technology - Reciprocal Programs
Reading
Renewable Energy Technology
Respiratory Therapy
Restaurant Management
Robotics
Social Media Certificate Program#
Social Science
Sign Language
Sociology
Spanish Language

Speech Communications Arts
• Interpersonal and Interpersonal Communication
What careers are in my future?

- How do I get started in this program?
- What will I learn?

Where can your credits take you?

Select a program from the filter below to see where your NWTC credits can transfer.

**NWTC Programs**

- Supply Chain Management

**UW Green Bay**

- NWTC Program: Supply Chain Management
- Partner Program: BAS Individual Leadership Studies

**UW Green Bay**

- NWTC Program: Supply Chain Management
- Partner Program: BAS Individual Leadership Studies

**UW Oshkosh**

- NWTC Program: Supply Chain Management
- Partner Program: BAS Leadership & Organizational Studies-Organizational Studies

- 10-182-127 Purchasing
- 10-182-160 Global Supply Chain Mgmt
- 10-801-196 Oral/Interpersonal Comm

**SEMESTER TOTAL**

- 18
Science, Technology, Engineering, and Mathematics

This major is known as STEM and represents some of the fastest-growing high-tech fields. This is the major you should choose if you want to pursue a career as an engineer.

INDIAN RIVER STATE COLLEGE
PROGRAM: AA - Information Technology Management & Cybersecurity Track
Meta Major: Science, Technology, Engineering, and Mathematics
2016-2017 Guided Pathway
11510 Credit Hours 74

**First Semester**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Credit Hours</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Third Semester**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Credit Hours</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PH1210</td>
<td>Introduction to Logic</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Foreign Language I*</td>
<td>Foreign Language - Level I</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>STA2023</td>
<td>Elementary Statistics I</td>
<td>3</td>
<td>NAT1033 (C) or higher</td>
</tr>
<tr>
<td>CTS1334</td>
<td>Windows Server</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AST1002</td>
<td>General Astronomy</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Fourth Semester**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Title</th>
<th>Credit Hours</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSC1121</td>
<td>Survey of Physical Science</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PH1010</td>
<td>Introduction to Philosophy</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ECO2023</td>
<td>Principles of Economics Micro</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>AMH2020</td>
<td>American History: Reconstruction to the Present</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Semester Credit Hours 16

* If student took 2 years of Foreign Language in High School, not required to take foreign language in college
Information Technology Management and Cyber Security — BS (1)

All career data is set to your current geographical area: up to 100 miles away from 34981

- **Computer and Information Systems Manager**
  - **$61.41 Hourly Wage**
  - **6,706 Currently Employed**
  - Plan, direct, or coordinate activities in such fields as electronic data processing, information systems, systems analysis, and computer programming.

- **Computer Operator**
  - **$19.22 Hourly Wage**
  - **1,329 Currently Employed**
  - Monitor and control electronic computer and peripheral electronic data processing equipment to process business, scientific, engineering, and other data according to operating...

- **Document Management Specialist**
  - **$34.70 Hourly Wage**
  - **4,171 Currently Employed**
  - Implement and administer enterprise-wide document management systems and related procedures that allow organizations to capture, store, retrieve, share, and destroy electronic...

- **Information Technology Project Manager**
  - **$34.70 Hourly Wage**
  - **4,171 Currently Employed**
  - Plan, initiate, and manage information technology (IT) projects. Lead and guide the work of technical staff. Serve as liaison between business and technical aspects of projects...
It will be the convergence of evolutionary biology, developmental biology and cancer biology that the answer will lie.

— Paul Davies, Physicist, Astrobiologist and Arizona State University Professor

What are the Biological Sciences?

Finding a cure for cancer is just one of the important scientific breakthroughs that the Biological Sciences are uniquely poised to make. Involved in the study of living organisms, the Biological Sciences include neurobiology, ecology, astrobiology, microbiology, botany and zoology among many branches. Through laboratory and field research, the Biological Sciences help us better understand and adapt to the natural world.

The Biological Sciences Program at Macomb

The Biological Sciences Program at Macomb provides you with the basic competencies, knowledge and skills necessary to transfer to a Bachelor's Degree Program in Biological Sciences.

Biological Sciences Courses at Macomb

In Macomb's Biological Sciences Program, your required courses will include:

- General Biology 1 & 2
- General Chemistry 1 & 2
- Analytic Geometry & Calculus
- General Microbiology
- College Physics 1 & 2
- Organic Chemistry 1 & 2

Career Opportunities with an Associate of Science Degree in Biological Sciences

With an Associate of Science Degree in Biological Sciences, you will be qualified for positions that include biotechnologist, medical & clinical laboratory technician and environmental technician.

Transfer Pathways to Advanced Degrees in Biological Sciences

Transfer opportunities in the Biological Sciences increase at every level of education you complete, with a doctoral degree required for work as a Biological Scientist engaged in independent research. The credits earned in Macomb’s Program transfer to many colleges and universities in Michigan.

If you intend to transfer and pursue advanced degrees in Biological Sciences, speak with a Macomb counselor or academic advisor as soon as possible after you have applied to Macomb to plan the best pathway.

How do I find out more about Macomb's Biological Sciences Program?

For more information about the Biological Sciences Program at Macomb, contact the Associate Dean at Center Campus: 586.285.2147 or AandinS@center.macomb.edu, or at South Campus: 586.445.7354 or AandinS@south.macomb.edu.

Looking for a job?

Contact Career Services 586.445.7321
careerservices@macomb.edu

Transferring is easy

Talk to a Macomb counselor or academic advisor before registering for classes. Center Campus: 586.285.2226
South Campus: 586.445.7211
Email: answer@macomb.edu

For more information

For the most current information on the Science Program, or any program at Macomb Community College, visit the College’s website: www.macomb.edu or call 888.Macomb1 (866.622.0021).
Exploring Your Pathways to Success

Your career choice is among the most important decisions you will make. Your career will affect your:
- Earning potential
- Lifestyle
- Quality of life
- Self-esteem

Choosing a career is a process. Learning the steps of this process, and the tools that can support you, will allow you to make an informed career decision with confidence.

Taking the necessary steps and allowing sufficient time to work through these steps are crucial to making a satisfying decision.

Your Macomb counselor can guide you through this process by introducing a variety of tools to assist you along the way.

Make an appointment with one of Macomb’s licensed professional counselors. Let us help you explore your career options.

Counseling & Academic Advising Services
South Campus J100
Center Campus H103
Phone: 586.445.7099
(Choose the “Counseling and Academic Advising” option)
Email: answer@macomb.edu

Career Services
South Campus S147
Center Campus H109
Phone: 586.445.7321
Email: careerservices@macomb.edu

Your Future Career
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)

- **CAREER CERTIFICATE**: $34,210
- **ASSOCIATE OF SCIENCE DEGREE**: $43,876
- **BACHELOR'S DEGREES**: $41,420

**ALL FLORIDA PUBLIC COLLEGES**:
- **ST. PETERSBURG COLLEGE**: $47,480

* 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

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

**Total program credits: 67**

(Indicates 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
San Jacinto College: Math R&D Team

Business Administration
Recommendation: MATH 1324 (Math for Business Administration)
Rationale: This course transfers and applies to upper division.
Comments: Results of the survey indicated that a blend of MATH 1322 (Math for Liberal Arts) would not serve students well in transfer.

Business Management
Recommendation: MATH 1324 (Math for Business Management)
Rationale: This course transfers and applies to upper division.
Comments: Results of the survey indicated that a blend of MATH 1322 (Math for Liberal Arts) would not serve students well in transfer.

Business Office Technology
Recommendation: MATH 1332 (Math for Business Office Technology)
Rationale: This course was overwhelmingly favored.
Comments: These are terminal technical credentials, specifically.

Chemistry
Recommendation: MATH 1314 (College Algebra)
Rationale: Students must take physics as part of their major.
Comments: According to survey, faculty in this program do not recommend Elementary Statistics and Math for Liberal Arts.

Computer Information Technology
Recommendation: MATH 1332 (Math for Liberal Arts)
Rationale: Program faculty identified skills in MATH 1332 as the most appropriate prerequisites for their program. These credentials are terminal so transfer is not an issue.
Comments: None

Computer Programming
Recommendation: MATH 1332 (Math for Liberal Arts)
Rationale: Program faculty identified skills in MATH 1332 as the most appropriate prerequisites for their program. This is a terminal credential, so transfer is not an issue.
Comments: None

Computer Science
Recommendation: MATH 1314 (College Algebra)
Rationale: Bachelor’s degrees in this subject in UH system require Calculus. Program faculty are in agreement that MATH 1314 is the most appropriate mathematics course.
Comments: None

Early Childhood – 6 Education
Recommendation: MATH 1314 (College Algebra)
Rationale: MATH 1314 is a prerequisite for other mathematics courses in this program—specifically, MATH 1350 and MATH 1351. Additionally, both UHD and UHCL require MATH 1314 for EC-6 education degrees.
Comments: Students seeking a bachelor’s degree in related fields should take MATH 1314.

Engineering
Recommendation: MATH 1314 (College Algebra)
Rationale: This program requires Calculus, etc.
Comments: None

Engineering Graphics Design
Recommendation: MATH 1332 (Math for Liberal Arts)
Rationale: Program faculty identified skills in MATH 1332 as the most appropriate prerequisites for their program. These credentials are terminal so transfer is not an issue.
Comments: None

Geology
Recommendation: MATH 1314 (Math for Liberal Arts)
Rationale: MATH 1314 is a prerequisite for mathematics requirements for this program.
Comments: Students seeking a bachelor’s degree in related fields should take MATH 1314.

Mathematical Skills Recommendation
Use this form to select the mathematics content MOST APPROPRIATE to the demands of your program. You may focus on content, setting aside transfer considerations. Please complete this survey FOR EACH PROGRAM.

* Required
For which program are you completing the survey? *

* Your answer

Email address of "point of contact":

* Your answer

Campus:

North
Central
South
Maritime Training Facility

* Required
Which of the following best describes your institution?

No significant mathematics.*

Summarize and interpret data.

Graph a large variety of algebraic problems.

Apply logic and reasoning to solve problems.

Model the real world, especially in science.

Apply common probability distributions.

Apply the theory of functions.

Reason using ratio and proportion.

Use functions to model real world data.

Create and interpret graphical/tabular representations of data.

Source: San Jacinto College
Helping Students Choose and Plan a Program
Rethinking Student On-boarding

**From:**
- Job/transfer support for near completers
- Current semester schedule
- Academic assessment
- Pre-requisite remediation
- Algebra and English comp
- A lá carte dual HS credit

**To:**
- Career/college exploration and planning for all from the start
- Full-program plan
- Holistic assessment
- Co-requisite academic support
- Critical program courses
- Exploration of program pathways beginning in HS
# Jackson College Pathways with Michigan Career Pathways Information

## Business and Computer Technology
CAREERS IN THIS PATH ARE RELATED TO THE BUSINESS ENVIRONMENT AND THE BUSINESS ECONOMY. THESE OCCUPATIONAL AREAS REQUIRE THE USE OF SKILLS IN MARKETING, SALES, MANAGEMENT, ACCOUNTING, FINANCE, AND OFFICE OPERATIONS.

<table>
<thead>
<tr>
<th>Liberal Arts</th>
<th>Is This Career Path for You?</th>
<th>Career Categories</th>
<th>Courses in School</th>
<th>Sample Careers and Levels of Education Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you a creative thinker? Are you imaginative, innovative and original? Do you like to communicate ideas? Do you like making crafts, drawing, playing a musical instrument, taking photos, or writing stories? This may be the career path for you!</td>
<td>Advertising and Public Relations</td>
<td>Journalism, Graphic Arts, Language Arts, Film Production, Foreign Languages</td>
<td>English, Journalism, Radio and TV Broadcasting</td>
<td>Public Relations, Executive UG, Accountant D, Film Producer HS, Fashion Designer UG, Journalist UG, Radio and TV Broadcaster HS</td>
</tr>
</tbody>
</table>

## Health Sciences
CAREERS IN THIS PATH ARE RELATED TO THE PROMOTION OF HEALTH AND THE TREATMENT OF DISEASE. THESE OCCUPATIONAL AREAS REQUIRE THE USE OF SKILLS IN MEDICAL ASSISTANTING, NURSING, HOME HEALTH, AND OTHER HEALTH-RELATED OCCUPATIONS.

## Science, Engineering, and Math (STEM)
CAREERS IN THIS PATH ARE RELATED TO THE USE OF SCIENCE AND TECHNOLOGY IN DESIGN, DEVELOPMENT, INSTALLATION, AND MAINTENANCE OF PHYSICAL SYSTEMS. THESE OCCUPATIONAL AREAS REQUIRE THE USE OF SKILLS IN ENGINEERING, MANUFACTURING, CONSTRUCTION, SERVICE, AND RELATED TECHNOLOGIES.

<table>
<thead>
<tr>
<th>Skilled Trades and Agriculture</th>
<th>Is This Career Path for You?</th>
<th>Career Categories</th>
<th>Courses in School</th>
<th>Sample Careers and Levels of Education Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you mechanically inclined and persistent? Do you like reading diagrams and blueprints, and drawing building structures? Are you curious about how things work? Would you enjoy painting a house, repairing cars, wiring electrical circuits, or woodworking? Do you like to garden or mow the lawn? This may be the career path for you!</td>
<td>Precision Production Manufacturing, Machine Tools</td>
<td>Manufacturing Technology, Drafting, Construction Agriculture</td>
<td>Drafting, Science Robotics, Machine Tools, Physical Science/Physics, Industrial/Mechanical Drafting, Math Electronics Agriculture</td>
<td>Plumber HS, Electrician HS, Air Traffic Controller HS, Auto Mechanic HS, Draftsman HS, Surveyor HS, Geographer UG, Farmer HS, Landscape D</td>
</tr>
</tbody>
</table>

## Human Services
CAREERS IN THIS PATH ARE RELATED TO SOCIAL SYSTEMS, INCLUDING FAMILY, COMMUNITY, AND SOCIAL SERVICES. THESE OCCUPATIONAL AREAS REQUIRE THE USE OF SKILLS IN SOCIETY, COMMUNITY, AND SOCIAL SERVICES, INCLUDING OCCUPATIONS SUCH AS NURSING, SOCIAL WORK, AND EDUCATION.

## Education Level Key:
- High School Diploma: D
- 1 to 2 Years Past High School: HS
- Undergraduate Degree: UG
- Graduate Degree: G

**Source:** [https://www.michigan.gov/documents/pathways_8310_7.html](https://www.michigan.gov/documents/pathways_8310_7.html)
Jackson College Student Planning

Using JetSTREAM to customize plan
What makes for a good plan?

✓ Covers *entire* program based on default program maps
✓ Customized for each student to account for:
  • *prior credits* (dual enrollment, transfer, AP, etc.)
  • educational *goals* and *personal interests*
  • *transfer* destination and major
  • *timeline* to completion
✓ Contains at least 1 *program course in first term*, and 3 *program courses in first year*
✓ Easily accessible by student, advisor, faculty
✓ Tied to scheduling/registration process and locked into student information system
All of the AACC Pathways colleges are experimenting with new and promising approaches to developmental education…

…but with a couple of notable exceptions, they have not yet connected these efforts to their guided pathways reforms at scale.

• Examples:
  – Cleveland State Community College (TN)
  – Stanly Community College (NC)
  – Wallace State Community College (AL)
Early evidence of impacts

Cleveland State Community College (TN):
Completion of Gateway Courses by FTEIC Students in 1 Year

- Gateway math:
  - 2012-2013: 16%
  - 2015-2016: 30%

- Gateway English:
  - 2012-2013: 48%
  - 2015-2016: 57%

- Gateway math & English:
  - 2012-2013: 13%
  - 2015-2016: 28%
AACC colleges are beginning to build pathways down into high schools, starting with dual enrollment students

• Examples:
  – Indian River State College (FL)
    • “Great Explorations”
    • Required SLS 1000
    • Build an academic plan
  – Columbus State Community College (OH)
    • College Credit Plus
  – Pierce College (WA)
    • Career cruising
    • Washington Career Pathways
Keeping Students On Path
Rethinking Student Advising

From:

- Info “dump” at orientation
- Scheduling available courses to suit college schedule
- Full-time vs. part-time
- Advising vs. teaching

To:

- JIT support for major decisions along the path
- Scheduling courses on the student’s plan to fit their schedule
- On-plan vs. off-plan
- Advisors teach and faculty advise
Major Decisions Along the Path

**CONNECTION**
From interest to application

- What are my career options?
- Which college offers programs in my field of interest?
- How much will it cost and how will I pay?

**ENTRY**
From entry to passing program gatekeeper courses

- What are my program options?
- What are program requirements?
- Which program is a good fit?
- What will I take?
- Will credits transfer?
- How much time and money to finish?
- What if I change my mind about a major?

**PROGRESS**
From program entry to completion of program requirements

- Am I making progress?
- How do I get related work experience?
- What if I want to change majors?
- What if I am struggling academically?
- How much time and money to complete?
- How do I balance my other obligations?

**COMPLETION / TRANSITION**
From program completion to career advancement and further education

- How do I transfer?
- How do I get a job in my field of interest?
Approaches to Redesigning Advising

**Jackson College (MI)**

**Navigators** (case managers liaise with academic departments, financial aid)

Academic Departments & Financial Aid
### Connection: Welcome/Advising Centers
- Provide enrollment guidance to prospective students through cross-college website including:
  - Steps to Enrollment Checklist
  - Open Modules
  - Ready, Set, Apply
  - Intro to College and Alamo INSTITUTES
  - Financing Your Future
  - Test 101
  - Resources/Computer labs
- Alamo INSTITUTES: Provide advising information regarding career pathways
  - Health & Biosciences
  - Advanced Manufacturing & Logistics
  - Science & Technology
  - Public Service
  - Creative & Communication Arts
  - Business & Entrepreneurship
- Early Colleges/Academies: Course enrollment in Fr/Sr year through assigned advisor.
- Dual Credit: Course enrollment in Jr/Sr year through assigned Advisor.
- College Connection: Guide through enrollment process, including completion of ApplyTexas, FAFSA Application, TSI and Alamo ENROLL modules.
- Grad Guru downloaded

### Entry: College Success
- Initial Enrollment—1st Semester
  - New Student Orientation/Convocation—Orientation
    - Provide Academic Advising Syllabus (0-31 hours)
    - Assist with scheduling & registering for courses
    - Orient students to Degree Plans via Alamo INSTITUTES
    - Online Web Registration assistance available
    - Alamo INSTITUTES / major course of study
    - Identify ACOL/PLA
  - Post Assessment Advising—TSI score interpreted
  - Academic Refresher—INRW and math
  - Post Refresher Advising

  **1ST SEMESTER**
  - Instruction on College Success [SDEV Courses]
  - Advisor utilizes Canvas to connect with student
  - Assist students in choosing their major using MyAlamoCareer.org and Career Coach
  - Alamo INSTITUTES utilized
  - Provide students with a plan to earn a certificate
    - Complete ISP via Alamo GPS
  - Advise and register students into appropriate courses
  - Early Alert & Smart Start utilized
  - Advisor determines Faculty integration (12-15 hours)

  **2ND SEMESTER**
  - Confirm students' plan to earn a certificate
  - Advise and register students into appropriate courses
  - Early Alert & Smart Start utilized

### Progress: Faculty Assigned with Major
- 2nd Year—Graduation
  - Faculty teamed with an advisor through Degree or Certificate completion via GPS
  - Provide Academic Advising Syllabus (31+ hours)
  - Advising regarding course selection is offered through Group or Individual Sessions to understand the requirements of chosen major at transfer university.
  - Major Mixers/Major Mania Events
  - Provide positive feedback at primary success points.
  - Graduation and Transfer Initiative—Experiential/Career Centers & Faculty Mentors work in tandem to advise, graduate students and proclaim their transfer university (review their degree plan/ISP, and consider transferring to a university)

### Completion: Career & Grad. Centers
- 2nd Year—Graduation
  - Assist students [42+ Hours/ Core Complete] in Degree Audits via Alamo GPS
  - Faculty advise students during semester on how to be successful in classes.
  - Coordinate the Academic Achievement Events, Career/Scholarship Fairs, Transfer Fairs, and Graduation Event/Festival.
  - Graduation Survey
  - Reverse Transfer

### Metrics
<table>
<thead>
<tr>
<th>Connection</th>
<th>Entry</th>
<th>Progress</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actions:</strong> Assign Connection Advisor</td>
<td>Certified Advisor Assigned/PIN Given, Institute</td>
<td>Faculty Mentor Assigned</td>
<td>Core Complete</td>
</tr>
<tr>
<td><strong>Metrics:</strong> Number of Apply Texas Submitted</td>
<td>FTICS Enrolled</td>
<td>Productive Grade Rate [PGR]</td>
<td>Cert., Degree, Alum</td>
</tr>
<tr>
<td>(Analyst) Number of DC/EC Enrolled</td>
<td>DC/EC Term Retention</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Badges
- Welcome
- College Ready, 15 Hours, 30 Hours
- Core Complete
- Cert., Degree, Alum
## Advising Checkpoints for Success

### Associate Degree

#### "Getting to Know You" - First Advising Session with Assigned Advisor

- Discuss transition into college life, which may include exploring skills, interests, goals, time management, and personal responsibility
- Establish a program objective that aligns with career goals and transfer plans (or explore meta majors if undecided) and review degree requirements (log transfer major and institution)
- Determine eligibility for SB1720 exemption, use Academic Profile to advise of developmental education options (make and log recommendations)
- Advise of accelerated credit options: Career Pathways, CLEP, AP, IB, AICE
- Create a personalized Guided Pathway (verify Foreign Language requirement)
- Discuss financial aid options, scholarship opportunities, and payment plan alternatives
- Familiarize student with IRSC technology, i.e. MyIRSC, Rivermail, and Blackboard
- Review other IRSC resources and services, i.e. Academic Support Center (ASC), RiverSupport Resources, Smarthinking, The River Shop, and RiverLife
- Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

#### Checkpoint: 25-49% Benchmark

- Confirm program objective selection is current and still applicable to goals
- Explore overall experience, inside and outside of the classroom, including the use of IRSC technology, resources, and services
- Follow-up on any pending discussion points from previous meeting
- Review degree audit and modify Guided Pathway if necessary
- Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

#### Checkpoint: 50-74% Benchmark

- Assist with making plans for transfer or continuation of studies at IRSC
- Follow-up on any pending discussion points from previous meeting
- Review degree audit and modify Guided Pathway if necessary
- Check RiverSupport status and address any concerns regarding ReachOuts, if applicable

#### Checkpoint: 75%+ Benchmark

- Review remaining degree requirements to ensure that student is on track for graduation
- Finalize plans for transfer or continuation of studies at IRSC
- Refer to Career and Transition Services for resume development and mock interviewing
- Check RiverSupport status and address any concerns regarding ReachOuts, if applicable
- Discuss barrier-free graduation and advise of commencement opportunity
COMMUNITY COLLEGE RESEARCH CENTER

STUDENT VIEW OF STUDENT INFORMATION

Student Dashboard

Quick Links
- Registration Status and Orientation
- Add/Drop Classes
- Pay for PERT Exam
- Class Schedule
- Financial Aid
- Application Status
- Financial Aid Awards
- Guided Pathways
- Transcripts
- Limited Access Application Status
- Apply for IRSC Scholarships

My Details
- Student ID: 512-34-9678
- Name: S.A. Student
- Mailing Address: 2444 West Drive
- Port Saint Lucie, FL 34981
- Academic Status: Clear Academic Standard
- Primary Objective: 11080 - Associates in Arts
- Security Question: Entered
- Transfer Status: Accounting at Indian River State College

UPDATE YOUR EMERGENCY INFORMATION

To receive announcements of campus emergencies and school closings

Cell Phone:
- Home Phone:
- Work Phone:
- Email Address:
- RiverMail:

My Degree Progress
- Primary Objective: 10600 - Business Administration
- Required: 60.0 hours
- Completed: 40.0 hours
- Remaining: 20.0 hours
- % Complete: 66.67%

The chart below indicates your degree progress, assuming that you successfully complete all currently enrolled classes.

My Assigned Advisor
- Sherone M. Hobson
- Phone: 772-462-7072
- Email Address: shobson@irsc.edu

Well my webpage book an appointment

My Class Schedule
- Fall Term 2016

Source: Indian River State College
Advising Redesign **Key Features**

- **Personal contacts early on**, so students feel welcomed and valued

- **Case management approach**, so that every student ideally has one advisor who is overseeing his or her progress throughout

- **Connection with faculty and others in their field of interest** to provide guidance and networking support

- **Responsibility for guiding students into and through program paths shared by all faculty and staff**, regardless of whether they have formal roles as advisors
Ensuring that Students are Learning
Rethinking Teaching and Learning

From:

- Gen ed learning outcomes
- Generic gen eds
- In-class learning
- Student transcripts

To:

- Meta-major learning outcomes
- Contextualized gen eds
- Curricular + co-curricular learning
- Portfolios
Ensuring that students are learning

A handful of colleges are considering how to customize general education learning outcomes for broad meta-major fields.

• “Pathways can’t just be sequences of courses. They have to fit together to create an educationally coherent program...[Therefore] you need program learning outcomes for pathways in particular fields.” – Associate dean, IRSC.

• Contextualizing general education courses for career and academic communities (St. Pete College)

• Challenge: Measuring and documenting learning outcomes mastery by individual students.
Program ePortfolios: Education

Amy Monte
Major: Childhood Education

Angela Roque
Major: Childhood Education

Jessica Guzman
Major: Bilingual Education

Jonathan Melgar
Major: Secondary Education

Kenya Barahona
Major: Childhood Education

Mayra Cabrera
Major: Education
Early Evidence:
Tennessee GPS
Incoming Freshmen Who Successfully Completed at Least 9 hours in Their Focus Area During Their 1st Academic Year

Community College Freshmen

Community College Minority Freshmen

Source: Denley, TBR, 2016
Community College Graduation Rates

- 1st yr - Did not attempt 9hrs in focus area: 16%
- 1st yr - Attempted 9hrs in focus area: 34%
- 1st yr - Earned 9hrs in focus area: 40%
Completion of Gateway Math by ACT Sub-score

Community College Pre-requisite Model vs. Co-requisite Model

Pre-requisite Model AY 2012-13

<table>
<thead>
<tr>
<th>ACT Math Subscore</th>
<th>Completion Rate</th>
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<tbody>
<tr>
<td>&lt;14</td>
<td>2.7%</td>
</tr>
<tr>
<td>14</td>
<td>3.8%</td>
</tr>
<tr>
<td>15</td>
<td>6.8%</td>
</tr>
<tr>
<td>16</td>
<td>11.5%</td>
</tr>
<tr>
<td>17</td>
<td>19.7%</td>
</tr>
<tr>
<td>18</td>
<td>25.6%</td>
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<tr>
<td>No ACT</td>
<td>13.1%</td>
</tr>
<tr>
<td>Total</td>
<td>55%</td>
</tr>
</tbody>
</table>

<14 14 15 16 17 18 No ACT Total
Accelerating College Entry

College Math Taken by Students in Tennessee Community Colleges Co-Requisite Scale Implementation, Fall 2015

- 64% Probability and Statistics
- 21% Algebra
- 14% Math for Liberal Arts

Source: Belfield, Jenkins, Lahr (2016).
Completion of Gateway Writing by ACT Sub-score
Community College Pre-requisite Model vs. Co-requisite Model

Pre-requisite Model AY 2012-13

ACT Writing Subscore

<table>
<thead>
<tr>
<th>ACT Writing Subscore</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>No ACT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>54%</td>
<td>27.8%</td>
<td>33.2%</td>
<td>36.9%</td>
<td>37.8%</td>
<td>25.1%</td>
<td>30.9%</td>
</tr>
</tbody>
</table>

www.tn.gov/thec
Disaggregation by Student Group

- Fail Both: 36%
- Fail LS: 3%
- Fail Credit: 9%
- Pass Both: 52%

Earned Hour %

ACT Math Score:
- Fail Both
- Fail LS
- Fail Credit
- Pass Both
Productive Academic Mindset

- Perceived purpose of coursework
- Feel connected to their institution and that they belong...
- Believe they are capable of learning the material...
- Confidence interacting with Faculty and Staff
- GRIT and Perseverance

+15% GPA
+12pp URM Retention
+19pp Earned SCHr %
+6pp Earned SCHr %
+9pp Math CoReq Success
Early Evidence: Sinclair CC Career Communities
Career Communities

Why Career Communities?

Career Communities will give you opportunities to:

1. EXPLORE and CONNECT with your career and academic goals
2. MEET students with similar interests
3. ENGAGE with faculty members and employers in your career area
4. CONSULT with an advisor who specializes in the programs in a particular career community
5. UNDERSTAND the resources at Sinclair

FALL 2016: CAREER COMMUNITY EVENTS

Sinclair has 6 Career Communities:

- Business & IT
- Creative Arts
- Health Sciences
- Liberal Arts & Social Sciences
- Public Safety & Justice
- Science, Technology, Engineering & Math (STEM)

Browse Programs by Career Community
Promising Evidence from Ohio

Sinclair CC 6-year Completion Rate: Fall Term New Students

- **Completed < 9 program credits in Yr. 1**
  - AY 2010-11: 9%
  - AY 2011-12: 8%

- **Completed 9+ program credits in Yr. 1**
  - AY 2010-11: 40%
  - AY 2011-12: 41%

Source: Sinclair Community College.
Promising Evidence from Ohio

Percentage of students who completed at least nine credit hours in a program declared in their first year – Sinclair Community College

Source: Sinclair Community College.
A National Movement
Guided Pathways: Planning, Implementation, Evaluation

Creating guided pathways requires managing and sustaining large-scale transformational change. The work begins with thorough planning, continues through consistent implementation, and depends on ongoing evaluation. The goals are to improve rates of college completion, transfer, and attainment of jobs with value in the labor market — and to achieve equity in those outcomes.

PLANNING

ESSENTIAL CONDITIONS
Make sure the following conditions are in place – prepared, mobilized, and adequately resourced – to support the college’s large-scale transformational change:

- Strong change leadership throughout the institution
- Faculty and staff engagement
- Commitment to using data
- Capacity to use data
- Technology infrastructure
- Professional development
- Favorable policy (state, system, and institutional levels) and board support
- Commitment to student success and equity

PREPARATION/ AWARENESS
Understand where you are, prepare for change, and build awareness by:

- Engaging stakeholders and making the case for change
- Establishing a baseline for key performance indicators
- Building partnerships with K-12, universities, and employers
- Developing flowcharts of how students choose, enter, and complete programs
- Developing an implementation plan with roles and deadlines

SUSTAINABILITY
Commit to pathways for the long term and make sure they are implemented for all students by:

- Determining barriers to sustainability (state, system, and institutional levels)
- Redefining the roles of faculty, staff, and administrators as needed
- Identifying needs for professional development and technical assistance
- Revisiting technology to support the redesigned student experience
- Reallocating resources as needed
- Continuing to engage key stakeholders, especially students
- Integrating pathways into hiring and evaluation practices

IMPLEMENTATION

CLARIFY THE PATHS
Map all programs to transfer and career and include these features:

- Detailed information on target career and transfer outcomes
- Course sequences, critical courses, embedded credentials, and progress milestones
- Math and other core coursework aligned to each program of study

HELP STUDENTS GET ON A PATH
Require these supports to make sure students get the best start:

- Use of multiple measures to assess students’ needs
- First-year experiences to help students explore the field and choose a major
- Full program plans based on required career/transfer exploration
- Contextualized, integrated academic support to help students pass program gateway courses
- K-12 partnerships focused on career/college program exploration

HELP STUDENTS STAY ON THEIR PATH
Keep students on track with these supports:

- Ongoing, intuitive advising
- Systems for students to easily track their progress
- Programs/procedures to identify students at risk and provide needed supports
- A structure to redirect students who are not progressing in a program to a more viable path

ENSURE STUDENTS ARE LEARNING
Use these practices to assess and enrich student learning:

- Program-specific learning outcomes
- Project-based, collaborative learning
- Applied learning experiences
- Inescapable student engagement
- Faculty-led improvement of teaching practices
- Programs/procedures for the college and students to track mastery of learning outcomes that lead to credentials, transfer, and/or employment

EARLY OUTCOMES
Measure key performance indicators, including:

- Number of college credits earned in first term
- Number of college credits earned in first year
- Completion of gateway math and English courses in the student’s first year
- Number of college credits earned in the program of study in first year
- Persistence from term 1 to term 2
- Rates of college-level course completion in students’ first academic year
- Equity in outcomes

EVALUATION
Revisit conditions, sustainability, and implementation. Continuously improve pathways by building on elements that work and adjusting or discarding elements that are not serving all students well.

Contributors to this model for Guided Pathways are: American Association of Community Colleges (AACC), Achieving the Dream (ATD), The Aspen Institute, Center for Community College Student Engagement (CCCCSE), Community College Research Center (CCRC), Complete College America, The Charles A. Dana Center, Jobs for the Future (JFF), National Center for In Quality and Improvement (NCI), and Public Agenda.
Pathway Discussion Starters

- How well aligned are our programs with career and transfer opportunities in our region?
- How do we help students explore options and develop career, academic & financial plans?
- How well do we monitor student progress to ensure they are “on-plan”?
- How do we ensure that students are building needed skills across programs?
For more information

Please visit us on the web at

http://ccrc.tc.columbia.edu

where you can download presentations, reports, and briefs, and sign-up for news announcements. We’re also on Facebook and Twitter.

Community College Research Center
Teachers College, Columbia University
525 West 120th Street, Box 174, New York, NY 10027
E-mail: ccrc@columbia.edu Telephone: 212.678.3091
Exercise: Students by Program

- Does every one of these “programs” have clear job and transfer outcomes?
- How accurately does this reflect students’ goals?
- Do we know how far along each student is toward program completion? Do students know?
- How well do we track when students change?
- Who is responsible for students in each “program”?
- Are there students whose progress is not monitored?
**Guided Pathways Scale of Adoption**

<table>
<thead>
<tr>
<th>Guided Pathways Essential Practices</th>
<th>Scale of Adoption at Our College</th>
<th>Steps Needed to Implement Practice at Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. ENSURING THAT STUDENTS ARE LEARNING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Learning outcomes are clearly defined for each of the college’s programs (not just courses).</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>b. Learning outcomes are aligned with the requirements for success in the further education and employment outcomes targeted by each program.</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>c. Faculty assess whether students are mastering learning outcomes and building skills across each program.</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>d. Faculty use the results of learning outcomes assessments to improve the effectiveness of instruction in their programs.</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>e. The college tracks mastery of learning outcomes by individual students, and that information is easily accessible to students and faculty.</td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>
A K-16 Systemic Approach

• 12,000+ students...
• 55 high schools in 8 school systems...
• 6 NOVA campuses...
• George Mason University...
• All working toward 1 common vision.
Program Philosophy

• Collective Impact Model
• Shared Funding & Governance
• Seamless K-16 Pipeline
• Career Pathways Framework
• Common Outcomes & Data-Sharing
Participant Demographics

- From Minority Backgrounds: 79%
- From Immigrant Families: 77%
- First Generation in College: 71%
- With a Disability: 26%
- FAFSA/Pell-Eligible: 86%
Access: High School-Based Services

- Comprehensive Intake
- Individualized College Transition Plan
- On-Site Counseling, Workshops & Events
- Financial Aid & Domicile Support
- Placement Test Preparation & Onsite Testing
- Early Advising & Priority Registration
- Summer Bridge & Bootcamp Programs
- Optional Parent Programming
Success: NOVA-Based Services

- Intrusive Advising Model
- Retention Case Managers
- Transfer-Focused Student Community
- Service-Learning & Student Leadership
- Early Alert & Intervention
- Early Access to George Mason University
Completion: Mason-Based Services

• Guest Matriculation
• Guaranteed Admissions Addendum
• On-Site Retention Advisor
• Ongoing Academic Monitoring
• Mastery/Fading Support Model
Program Outcomes: A Snapshot

• 98% On-time high school graduation.
• 88% Transition to post-secondary ed.
• 90% First-to-second term persistence.
• 83% First-to-second year persistence.
• Participants are 7% of NOVA population & 14% of credential completers.
• 60% transfer to George Mason University
NOVA Students Transferring to George Mason University: 2005–2012

Source: SCHEV 2014
<table>
<thead>
<tr>
<th>2005</th>
<th>VS</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total UG enrollment: 17,529</td>
<td>Total UG enrollment: 23,812</td>
<td></td>
</tr>
<tr>
<td>Fall: Enrolled 951 NVCC transfers</td>
<td>Fall: Enrolled 1,928 NVCC transfers and 200 were PW students</td>
<td></td>
</tr>
</tbody>
</table>

- 1 in every 10 transfer students at Mason comes from the PW program
- We remain the **largest university in VA** serving the largest transfer population in the state.
83% of Pathway students who transfer to Mason earn their Bachelor’s degrees in three years.
For more information

Please visit us on the web at

http://ccrc.tc.columbia.edu

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California Community College Transfer Student Outcomes
Transfer-In Bachelor's Completion Rates at Public Four-Year Institutions

Transfer-In Bachelor's Completion Rates at Private Nonprofit Four-Year Institutions
Community College Cohort Bachelor’s Completion Rates by State

U.S. average: 14%

States with lower completion rates include:
- WA, CA, NY, VA, MS, TX, TN, IA, KS, FL, NJ, OK, IL, MD, MT, WY.
Community College Cohort Bachelor’s Completion Rates by State

The chart shows the completion rates for community college cohorts in various states, with some states having completion rates above the U.S. average of 15%, while others fall below it. The state abbreviations are used to represent each state for clarity.
CC Cohort Bachelor's Completion Rates for Lower and Higher Income Students

- Lower income students
- Higher income students

States: WY, MT, OK, MS, FL, IA, TN, KS, ND, AL, ID, NY, IL, OR, TX, MO, VA, WA, NE, MI, NH, MN, PA, LA, AZ, MA, CA, KY, NJ, NV, MD, NC, HI, SC, AR, WV, GA, CO, WI, NM, CT, OH, ME, SD
CC Cohort Bachelor's Completion Rates for Lower and Higher Income Students

- Lower income students
- Higher income students

U.S. average:
- Lower income: 10%
- Higher income: 16%

California:
- Lower income: 9%
- Higher income: 17%
California Community College Dual Enrollment Student Outcomes
Percent of Community College Entrants who are in High School Dual Enrollment, by State

- CC Entrants: 17 or younger
- CC Entrants: 18 or older
Percent of Community College Entrants who are in High School Dual Enrollment, by State

US Overall: 15%

CC Entrants: 17 or younger

CC Entrants: 18 or older
Former Dual Enrollment Students' First College Matriculations at Ages 18-20, by State
Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a community college at ages 18-20, by state and income

Highest Degree in Six Years
- Earned Bachelors
- Earned AA or Cert

Any Degree in Six Years
- Lower-income Students
- Higher-income Students
Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a community college at ages 18-20, by state and income

**Highest Degree in Six Years**
- Earned Bachelors
- Earned AA or Cert

**Any Degree in Six Years**
- Lower-income Students
- Higher-income Students
Figure 7. Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a **four-year college** at ages 18-20, by state and income
Figure 7. Degree Completion Rates among Former Dual Enrolled 17 year-olds who first matriculated at a **four-year college** at ages 18-20, by state and income.
Begin with your CAREER in mind...

- Business and Entrepreneurship
- Communication and Creative Arts
- Culinary and Hospitality
- Education
- Engineering and Manufacturing
- Health Care
- Human and Social Services
- Information Technologies
- Sciences
- Personal / Professional Development
- Public Safety
- Sports and Fitness

A-Z List of Programs

[Click on Health Care]
## Save 80% of the cost

<table>
<thead>
<tr>
<th>College/University</th>
<th>University Costs 4 Years With Room &amp; Board</th>
<th>Bachelor’s Degree Completion Cost through MyUniversity</th>
<th>Savings!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashland University</td>
<td>$157,416</td>
<td>$32,798</td>
<td>79%</td>
</tr>
<tr>
<td>B.S. in Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bowling Green State University</td>
<td>$75,400</td>
<td>$11,745</td>
<td>84%</td>
</tr>
<tr>
<td>B.S. in Biology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleveland State University</td>
<td>$85,227</td>
<td>$12,525</td>
<td>85%</td>
</tr>
<tr>
<td>B.A. in Psychology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hiram College</td>
<td>$160,600</td>
<td>$24,554</td>
<td>85%</td>
</tr>
<tr>
<td>B.A. in Accounting &amp; Fin. Mgmt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kent State University</td>
<td>$77,408</td>
<td>$12,893</td>
<td>83%</td>
</tr>
<tr>
<td>Bachelor of Bus. Admin.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Akron</td>
<td>$80,578</td>
<td>$12,811</td>
<td>84%</td>
</tr>
<tr>
<td>B.S. in Sport Studies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Toledo</td>
<td>$83,177</td>
<td>$15,726</td>
<td>81%</td>
</tr>
<tr>
<td>B.S. in Computer Science &amp; Eng.</td>
<td></td>
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</tr>
</tbody>
</table>

**LCCC’s in county tuition is $3,077 per year for a full-time student**

Percent savings based on Bachelor’s Degree with LCCC’s *MyUniversity Guarantee* versus all 4 years at the university rates and incurring room & board.