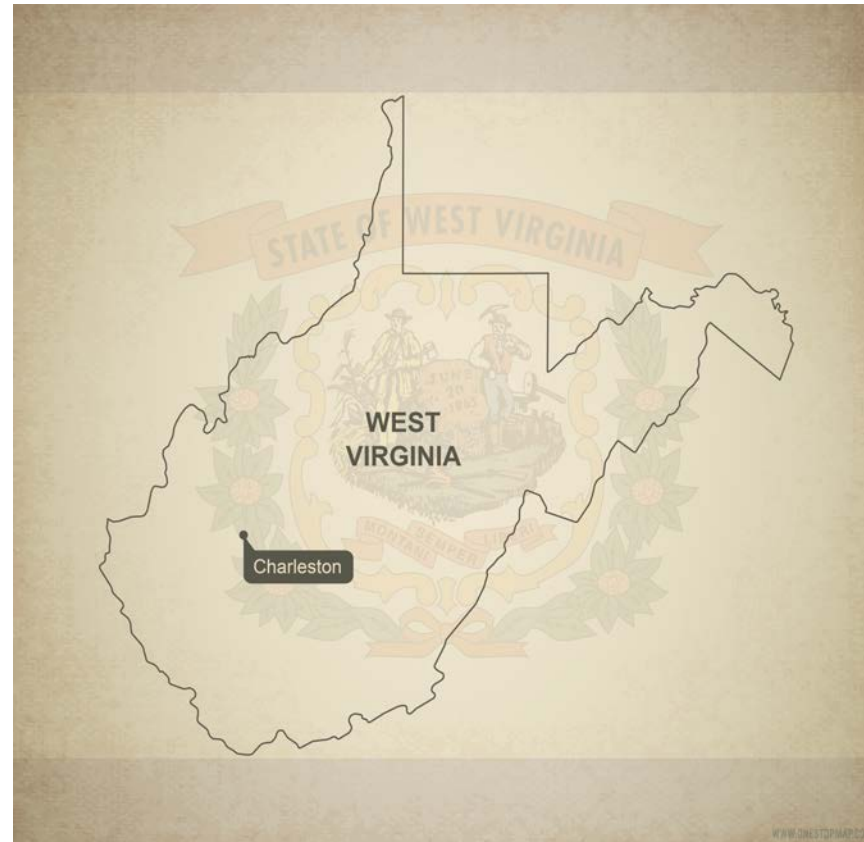# The West Virginia Story: Students and Student Success

CHRIS TREADWAY, SENIOR DIRECTOR OF RESEARCH AND POLICY

CORLEY DENNISON, VICE CHANCELLOR ACADEMIC AFFAIRS

CASEY SACKS, VICE CHANCELLOR COMMUNITY AND TECHNICAL COLLEGES
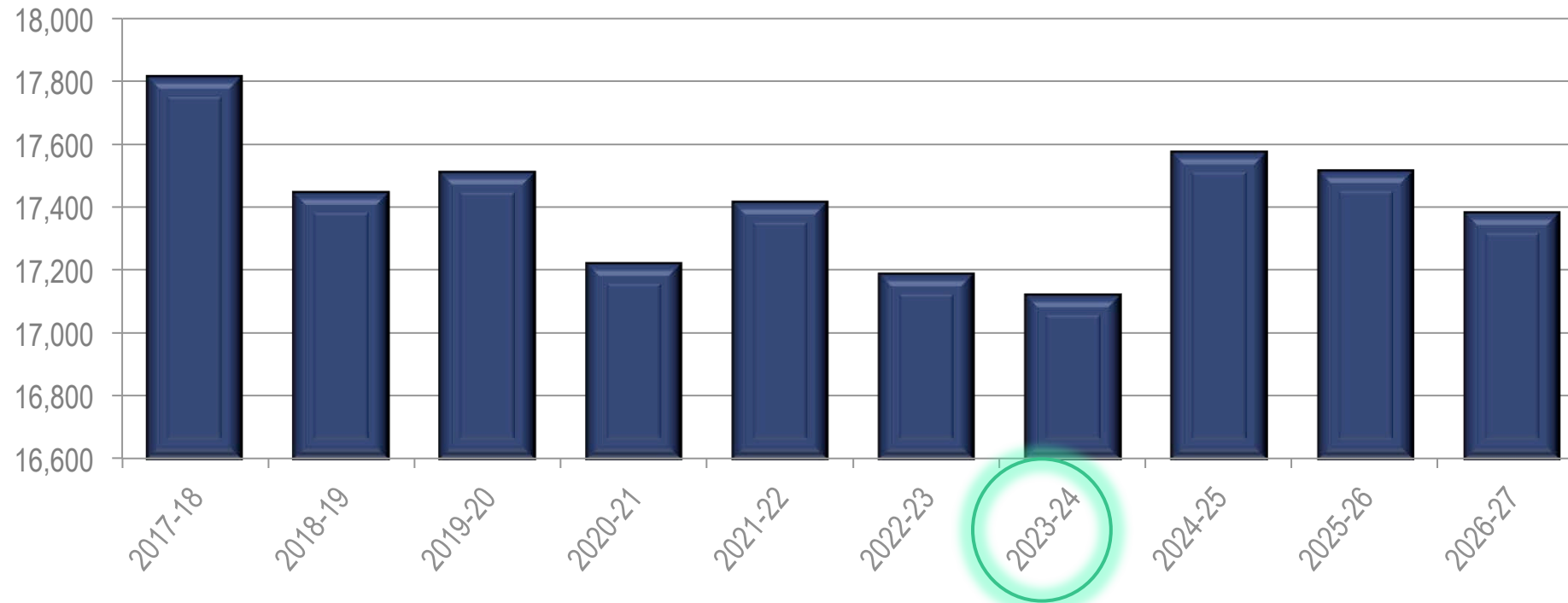
2020-51% of jobs need an associate degree or higher…

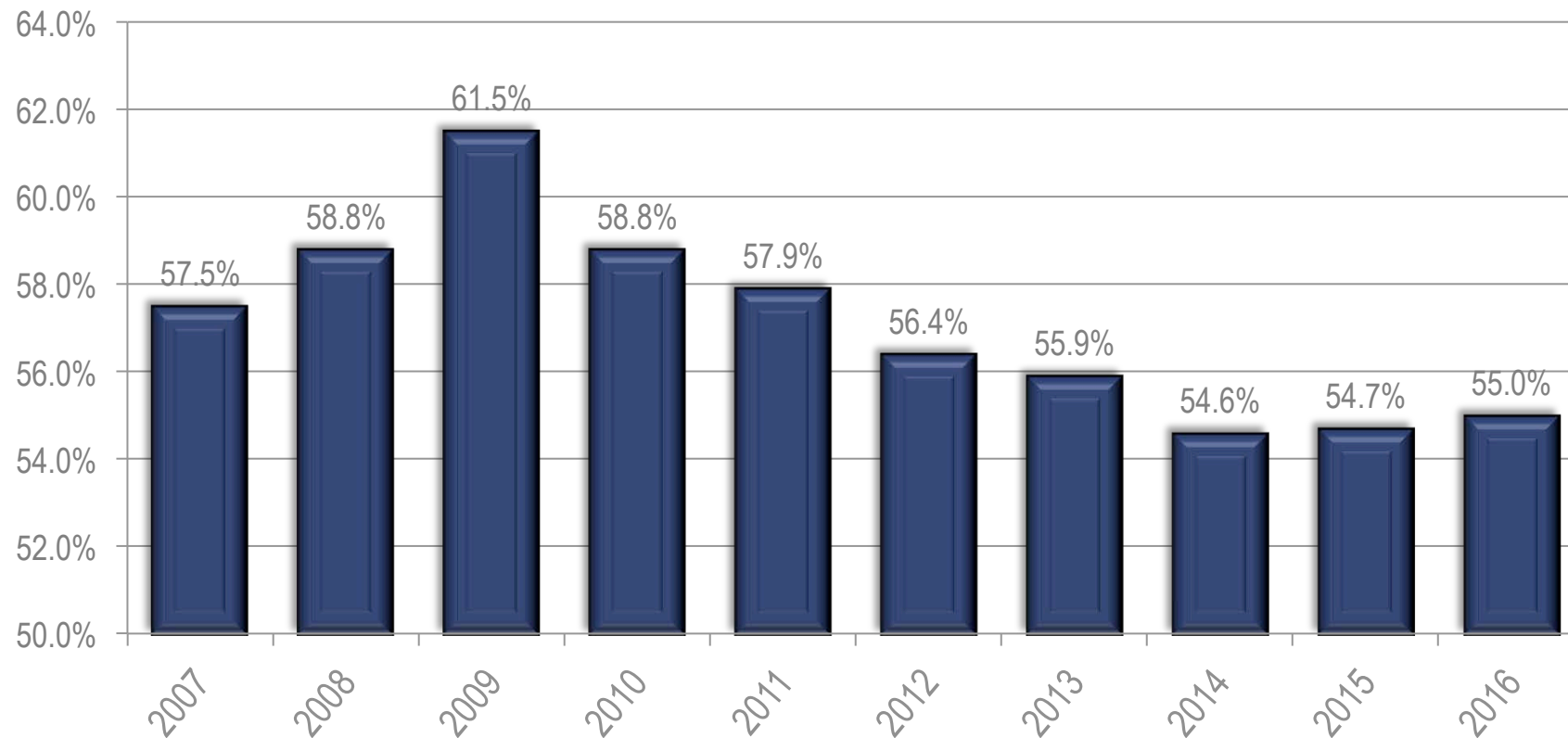# National Trends

High School Graduates

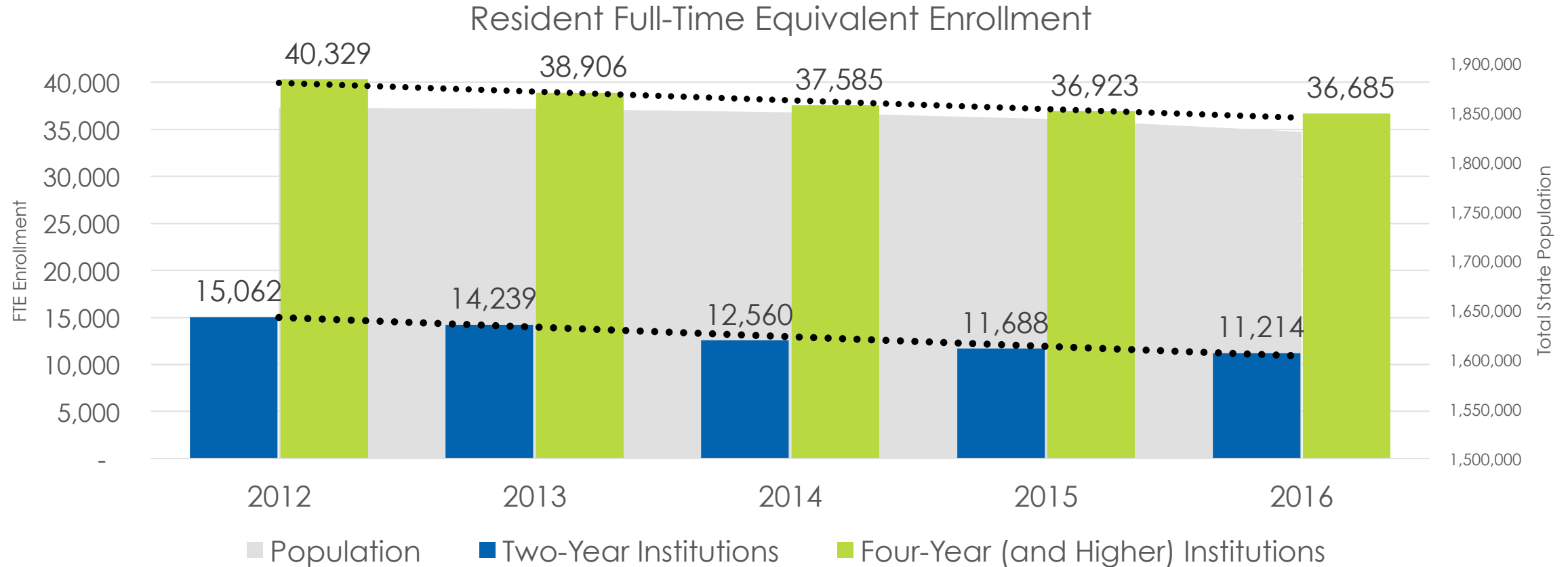**West Virginia High School Graduate Projections**

Source: Western Interstate Commission for Higher Education (WICHE)

College-Going Rate

College-Going Rate Among Recent WV High School Graduates

Year	Rate
2007	57.5%
2008	58.8%
2009	61.5%
2010	58.8%
2011	57.9%
2012	56.4%
2013	55.9%
2014	54.6%
2015	54.7%
2016	55.0%

Enrollment

Resident Full-Time Equivalent Enrollment

Legend: Population, Two-Year Institutions, Four-Year (and Higher) Institutions

Four-Year (and Higher) Institutions: 40,329 (2012), 38,906 (2013), 37,585 (2014), 36,923 (2015), 36,685 (2016)

Two-Year Institutions: 15,062 (2012), 14,239 (2013), 12,560 (2014), 11,688 (2015), 11,214 (2016)

Enrollment

Resident First-Time Freshmen Fall Headcount Enrollment

	2012	2013	2014	2015	2016
Four-Year Institutions	6,939	6,867	6,488	6,673	6,974
Two-Year Institutions	3,886	3,920	3,215	3,144	2,997

Legend: ■ Population ■ Two-Year Institutions ■ Four-Year Institutions
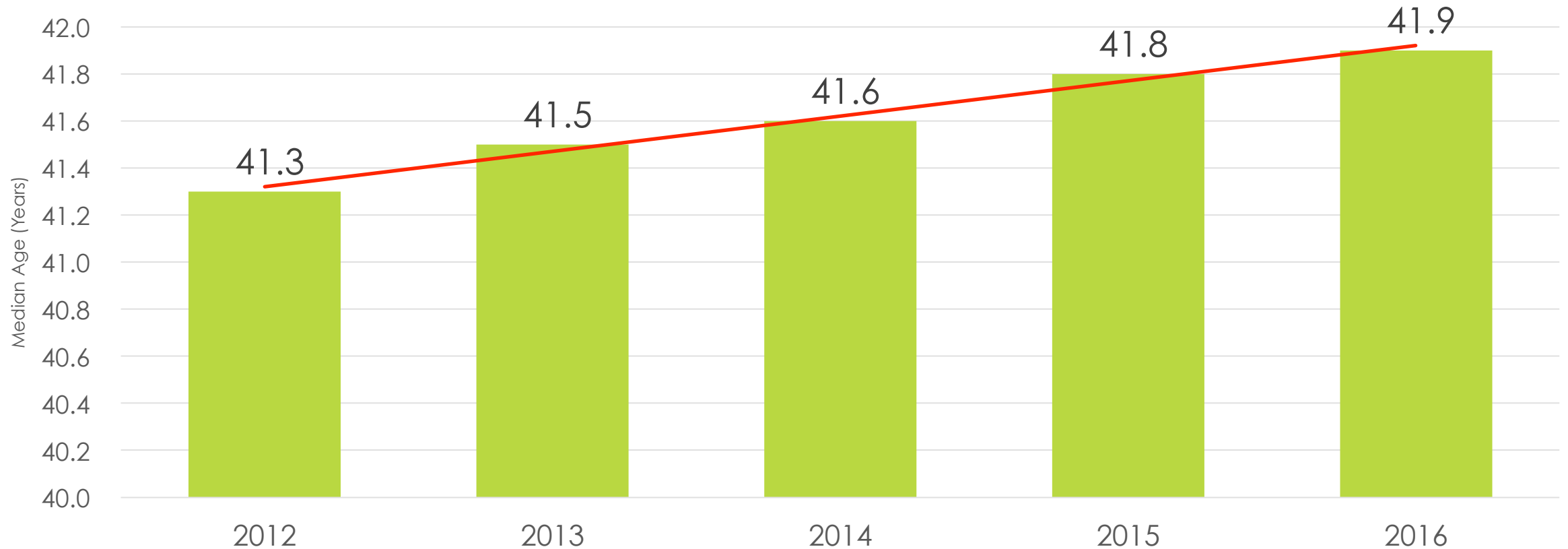
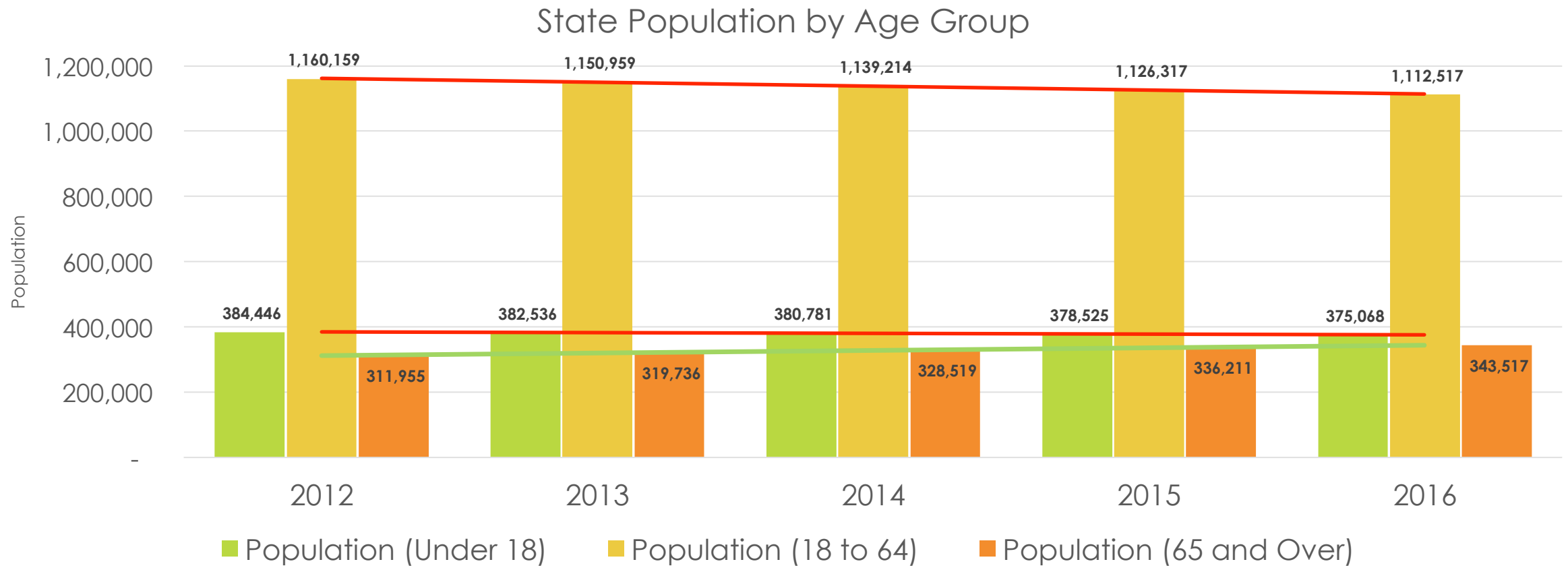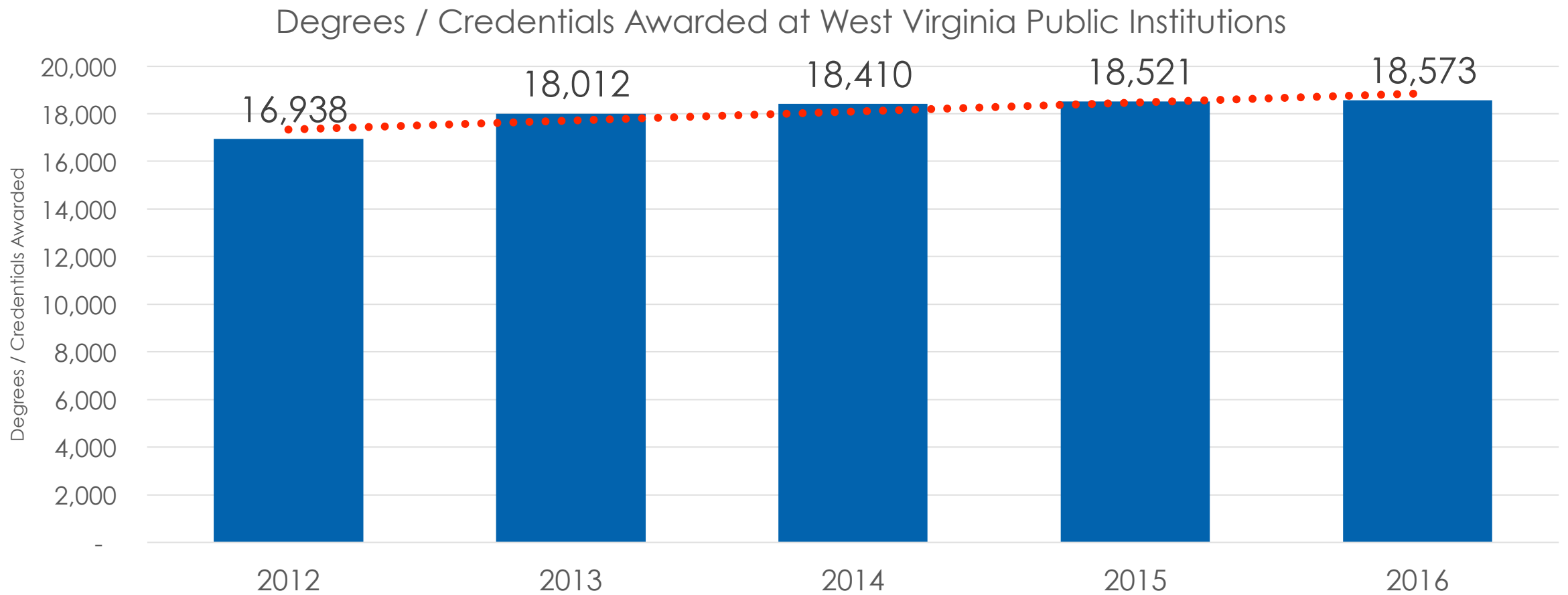# Changing Demographics
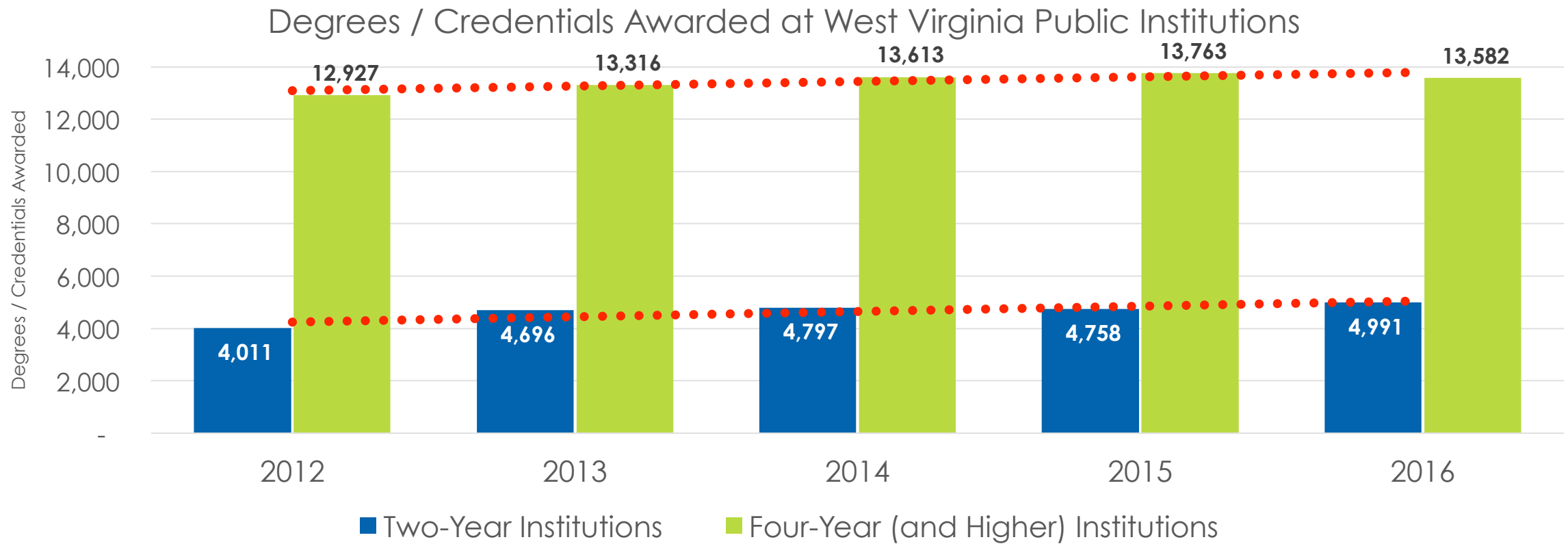
Median Age of West Virginia Population (Years)

Changing Demographics

State Population by Age Group

- Population (Under 18)
- Population (18 to 64)
- Population (65 and Over)

Success

Degrees / Credentials Awarded at West Virginia Public Institutions

Success

Degrees / Credentials Awarded at West Virginia Public Institutions

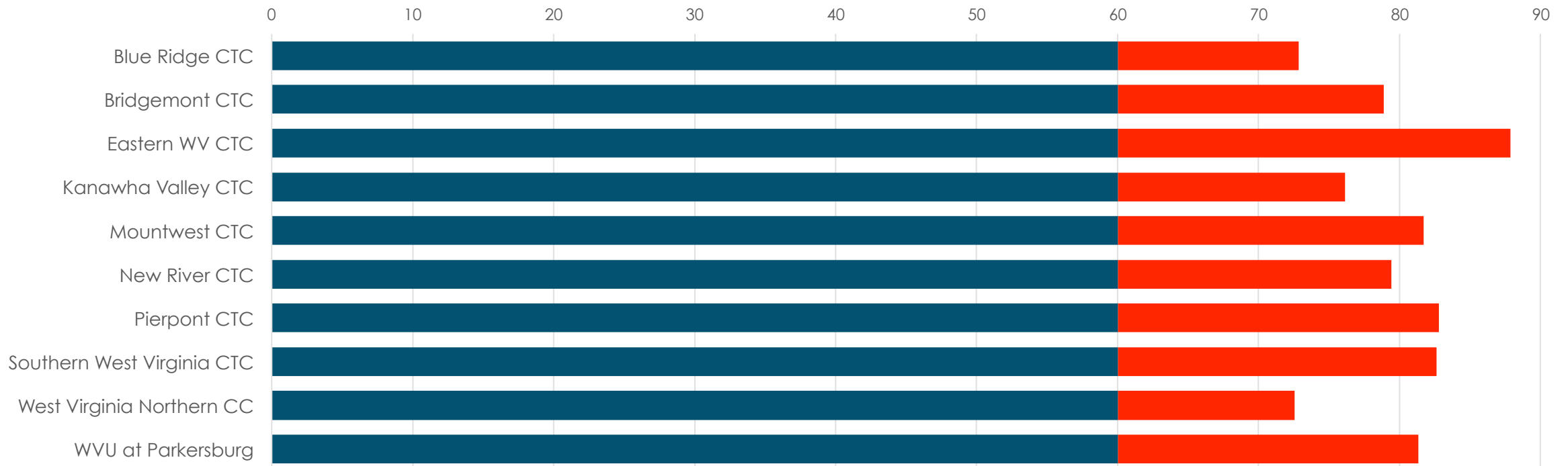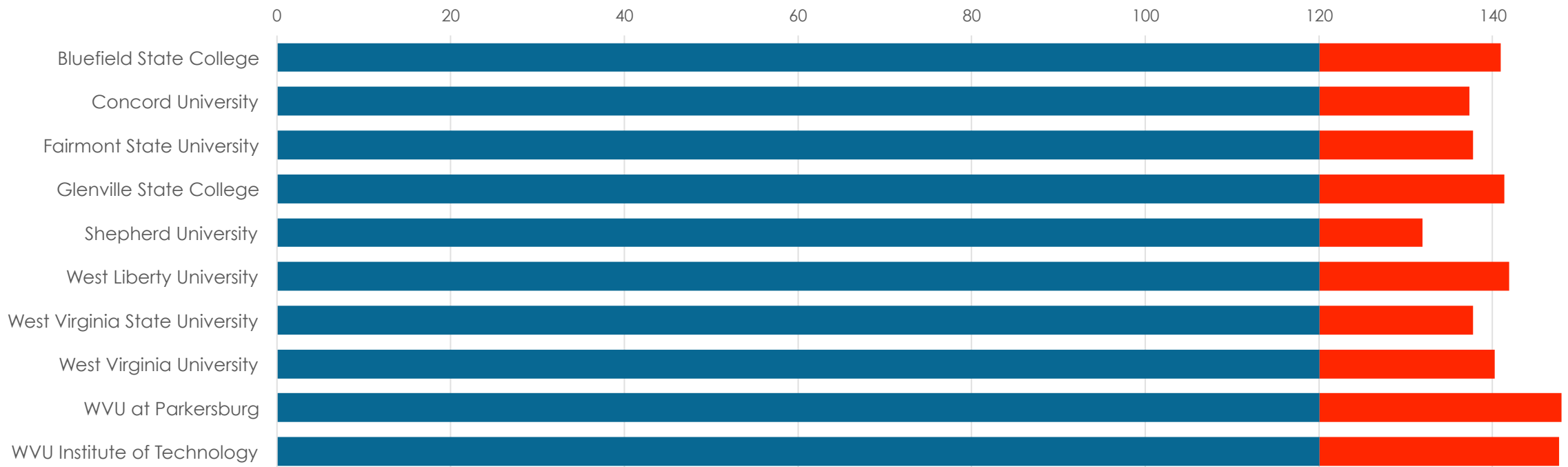| Year	Two-Year Institutions	Four-Year (and Higher) Institutions
2012	4,011	12,927
2013	4,696	13,316
2014	4,797	13,613
2015	4,758	13,763
2016	4,991	13,582

Credit Accumulation

Average Number of Credits for First-Time, Full-Time, Associates Degree-Seeking Freshmen who Completed an Associates Degree within 4 Years
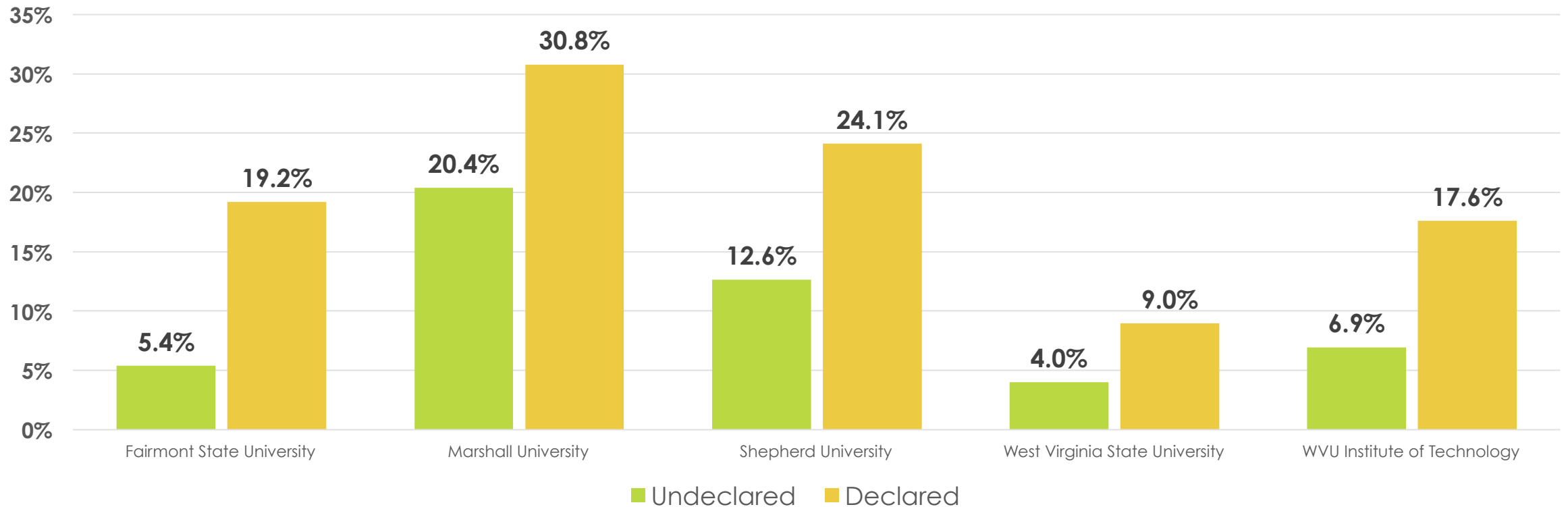
Credit Accumulation

Average Number of Credits for First-Time, Full-Time, Bachelor's Degree-Seeking Freshmen who Completed a Bachelor's Degree within 6 Years

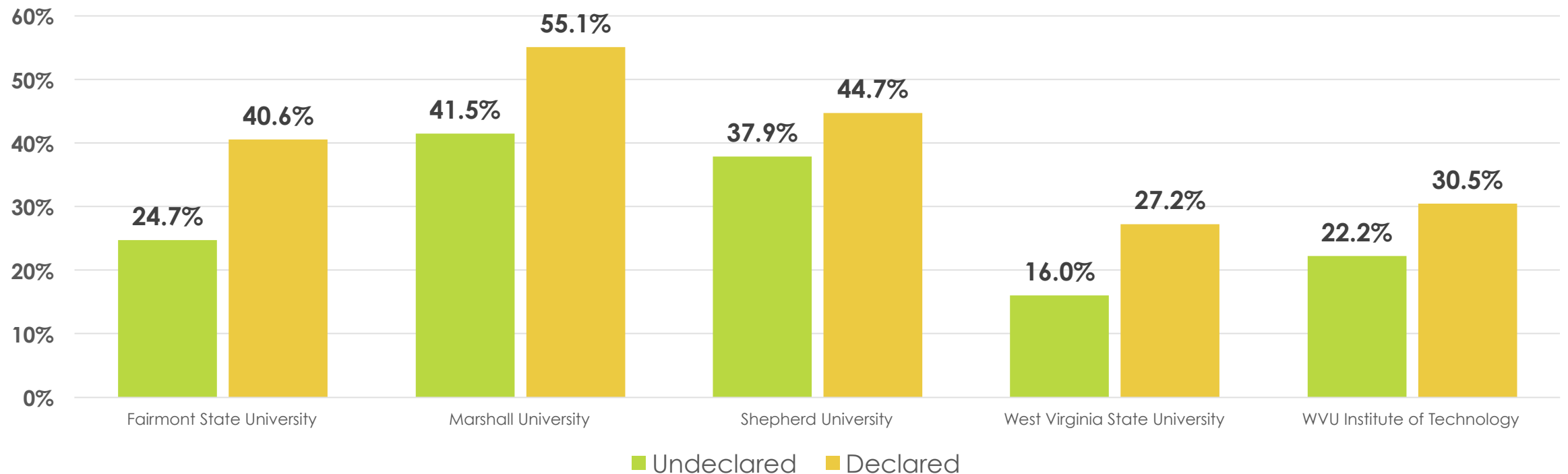|	0	20	40	60	80	100	120	140
Bluefield State College								
Concord University								
Fairmont State University								
Glenville State College								
Shepherd University								
West Liberty University								
West Virginia State University								
West Virginia University								
WVU at Parkersburg								
WVU Institute of Technology								

The Importance of Declaring a Major

Four-Year Graduation Rates of First-Time, Full-Time, Bachelor's Degree-Seeking Freshmen, by First Semester Major Declaration Status

| University	Undeclared	Declared
Fairmont State University	5.4%	19.2%
Marshall University	20.4%	30.8%
Shepherd University	12.6%	24.1%
West Virginia State University	4.0%	9.0%
WVU Institute of Technology	6.9%	17.6%

The Importance of Declaring a Major

Six-Year Graduation Rates of First-Time, Full-Time, Bachelor's Degree-Seeking Freshmen, by First Semester Major Declaration Status

University	Undeclared	Declared
Fairmont State University	24.7%	40.6%
Marshall University	41.5%	55.1%
Shepherd University	37.9%	44.7%
West Virginia State University	16.0%	27.2%
WVU Institute of Technology	22.2%	30.5%

15 to Finish

First Year Credit Hours Attempted by First-Time, Full-Time, Degree-Seeking Freshmen (All Public Institutions)
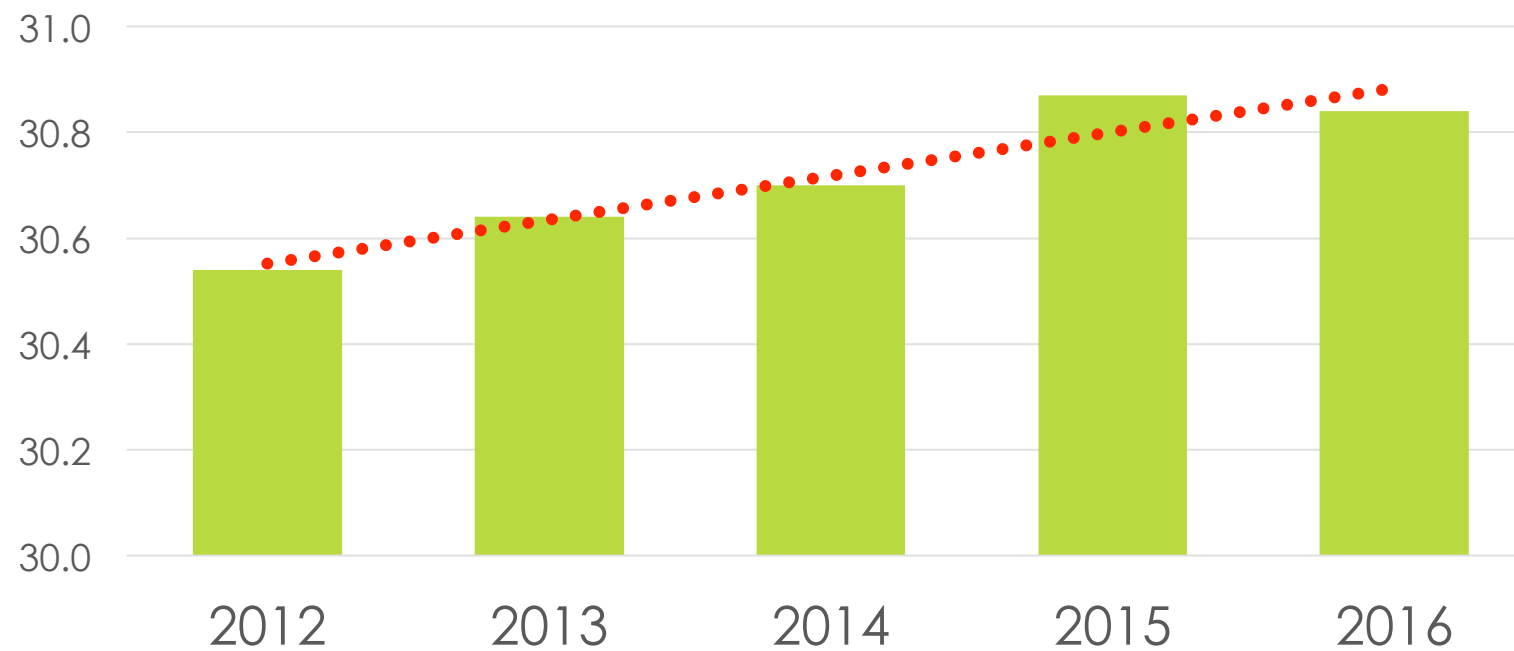
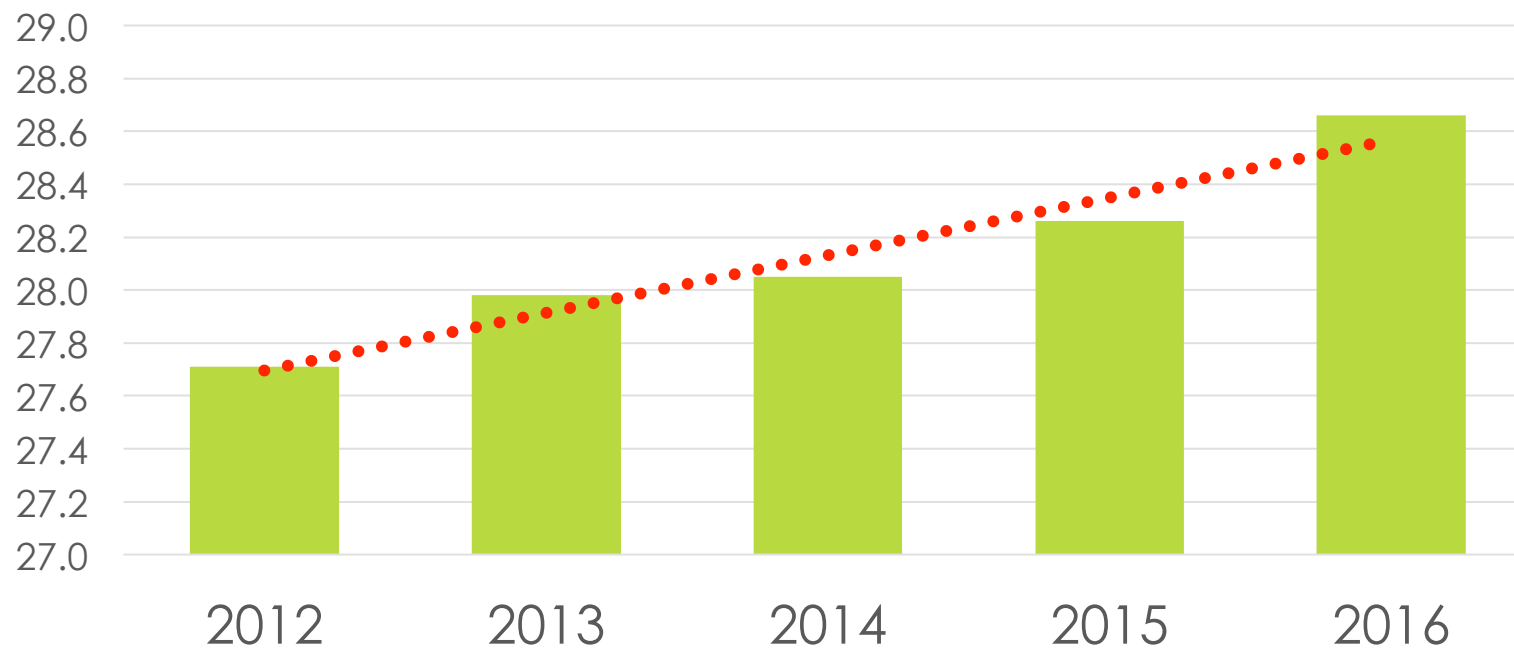| Year	2012	2013	2014	2015	2016

15 to Finish

First Year Credit Hours Attempted by First-Time, Full-Time, Degree-Seeking Freshmen (Public Four-Year Institutions)
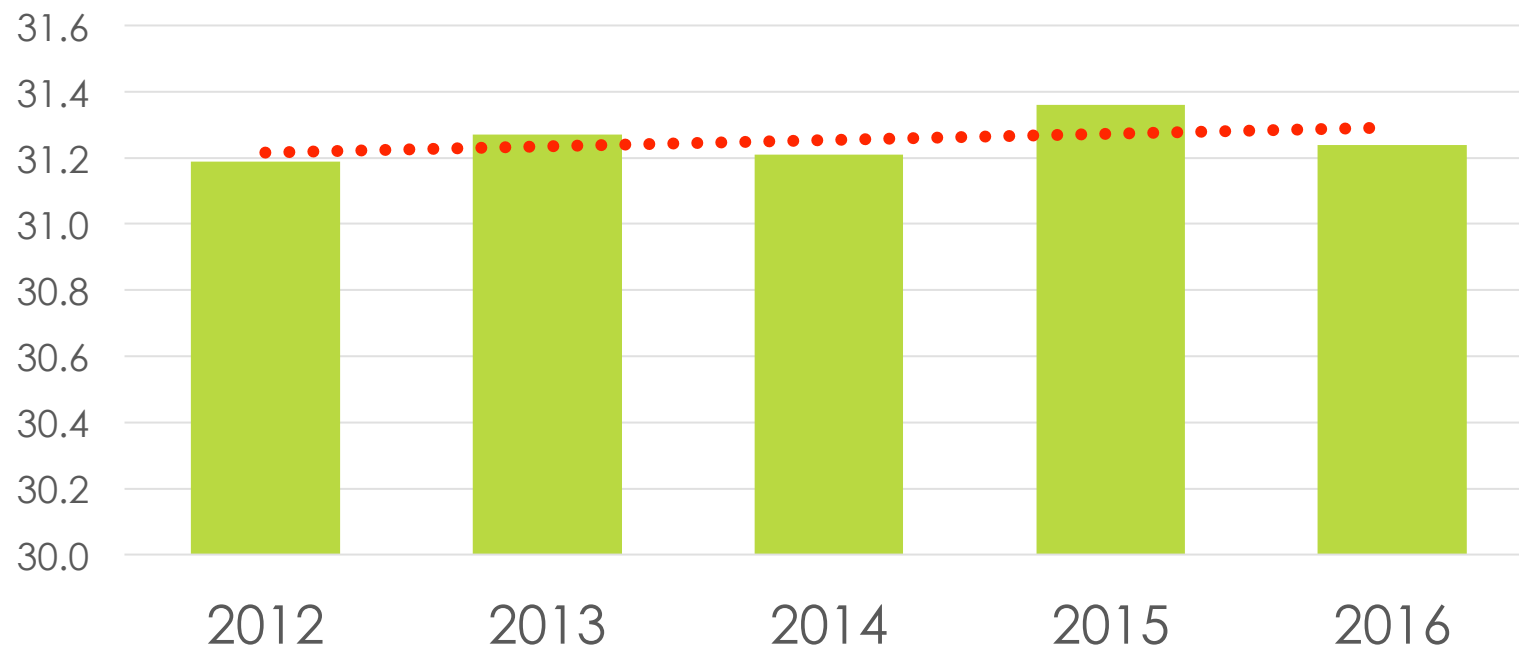
15 to Finish

First Year Credit Hours Attempted by First-Time, Full-Time, Degree-Seeking Freshmen (Public Two-Year Institutions)

Focus on Adults

Number of Former Students, Currently Aged 40 or Younger, with No Graduation Record at a WV Public Institution

Public Four-Year Institutions	131,358	Public Two-Year Institutions	82,867
Bluefield State College	6,153	Blue Ridge Community and Technical College	6,271
Concord University	8,386	BridgeValley Community and Technical College	8,254
Fairmont State College	11,268	Eastern WV Community and Technical College	2,620
Glenville State College	6,139	Mountwest Community and Technical College	8,739
Marshall University	21,126	New River Community College	10,214
Potomac State College of WVU	7,670	Pierpont Community and Technical College	10,912
Shepherd University	8,928	Southern WV Community and Technical College	10,452
West Liberty University	6,127	WV Northern Community and Technical College	12,846
West Virginia University	38,758	WVU AT PARKERSBURG	12,559
West Virginia State University	11,262		
WVU Institute of Technology	5,541		

214,225

Good News:

- A Record Number of Degrees awarded in 2016

- The number of student taking 15 credit hours per semester has increased

- Retention rates are up

- Pass rates are up for college-level math and English

Series 21: The New Language

▶ College-level credit bearing courses with required academic support

▶ Rewrite 21 to match SAT priority language

▶ SAT cut scores for placement: math-500, English (ERW)-480

▶ College Board is retiring ACCU-Placer, January 2019

A WV Snapshot of Remedial Students

▶ Minority students= 12% yet are ¼ of DE population

▶ Pell students are more likely to need remediation (37%)

▶ Males only slightly more than females

▶ Students who had not declared a major are more likely to need remediation

Off the Path

- By the end of the second year….

- Non-DE students have completed 57.08 CH

- DE students have completed only 42.45

- Math only DE completed 46.4 CH

Other Strategies…

- Professional Development for faculty

- Early Declaration of meta-major or major

- Offer gateway and milestone courses in first year

- Require a change of major if the student is "off map"

- Predictable schedules

Degree mapping and proactive advising

Challenges

- Low graduation rate
- Too much time to a degree
- Excess credit hours
- High costs and too much debt

Why students struggle

- Insufficient advising
- Catalogs are difficult to understand
- General Education requirements are confusing
- Cannot enroll in the required class: not offered, time conflicts with other classes...
- Do not understand course prerequisites and/or course sequencing
- Course withdrawals, repeats, and failures
- Changing majors late in academic career

Confusing general education requirements

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), 260(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; HBW 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; NRS 300; PHL 331(D); RLS 131(D); SPA 320(D), TMD 224(D); six credits of a full-semester approved Intercultural Internship in a foreign country through the Office of Internships and Experiential Education

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), 243(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); LAR 202(D); LET 151L(D), 151Q(D), 151R(D); 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
> BUS 111, CSC 101, 201; HPR 108, 201M, 202M; MTH 106, 107, 108, 109, 111, 131, 141; PSC 109; STA 220.

Natural Sciences (N): 6 credits; satisfied by PHY
> AFS 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), 104(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 113(D), 116(D), 274(D), 288; PSY 103(D), 113(D), 232(D), 235(D), 254(D), 255(D); SOC 100(D), 212(D), 230(D), 240(D), 242(D), 274(D); TMD 224(D), WMS 150(D)

Confusing transfer requirements

Business

Business (200), Accounting (201), Business Administration (202), Economics (203), Finance (204), Financial Services (205), Logistics (206), Management (207), Marketing (208), Transportation (209), Fashion Merchandising (210), Applied Management (211, Business Forensics (212), Financial Management (213), Forensic Accounting (214), Human Resource Management (215), Hospitality Management (216), Aviation Management (217), Event Management (218), Risk Management and Insurance (219), Agriculture Business/Operations (220), Supervision and Management (221)

Computer Science and Information Systems

Computer Science and Information Systems (300), Computer Science (301), Computer Engineering (302), Information Science (303), Information Systems (304), Computer Networking (305), Information Technology (306), Management Information Systems (307), Computer Information Systems (308), Computer Systems Networking and Telecommunications (309), Information Technology Management (310)

Education

Education (400), Art Education (401), Elementary Education (402), English Education (403), Exceptional Education (404), Health Education (405), Middle School Education (406), Music Education (407), Physical Education (408) Science Education (409), Secondary Education (410), Social Science Education (411), Mathematics Education (412), Dance Education (413), Child Development (414), Early Childhood Education (415)

Engineering, Architecture and Construction

Engineering, Architecture and Construction (500), Architecture (501), Building Construction Management (502), Civil Engineering (503), Electrical Engineering (504), Interior Design (505), Mechanical Engineering (506), Nuclear Engineering (507), Engineering Technology - General (508), Geomatics (509)

Successful implementation of academic maps required a series of steps to achieve results

Challenge	Solution	Results
▪ Students could not enroll in the courses they needed	▪ Built demand analysis to monitor need and open sections for students	▪ Small improvement in retention and graduation; **little to no reduction** in excess hours
▪ Students lack a clear path to graduation	▪ Introduced maps for all majors	▪ Slight improvement in retention and graduation; **no reduction** in excess hours
▪ Students continued to take courses that were not "on map"	▪ Add milestone courses with hold on registration and required students to select area of interest or major upon entering	▪ **WVUP saw 20%** point increase in retention rate in the first year. Expect to see increase graduation rate and decrease of the number of students with excess credits in coming year

Academic Maps

An academic map is a **term-by-term sequence** of courses required to **complete the degree in two or four years**. This helps students understand how degree requirements **can be translated into a term-by-term registration plan.**
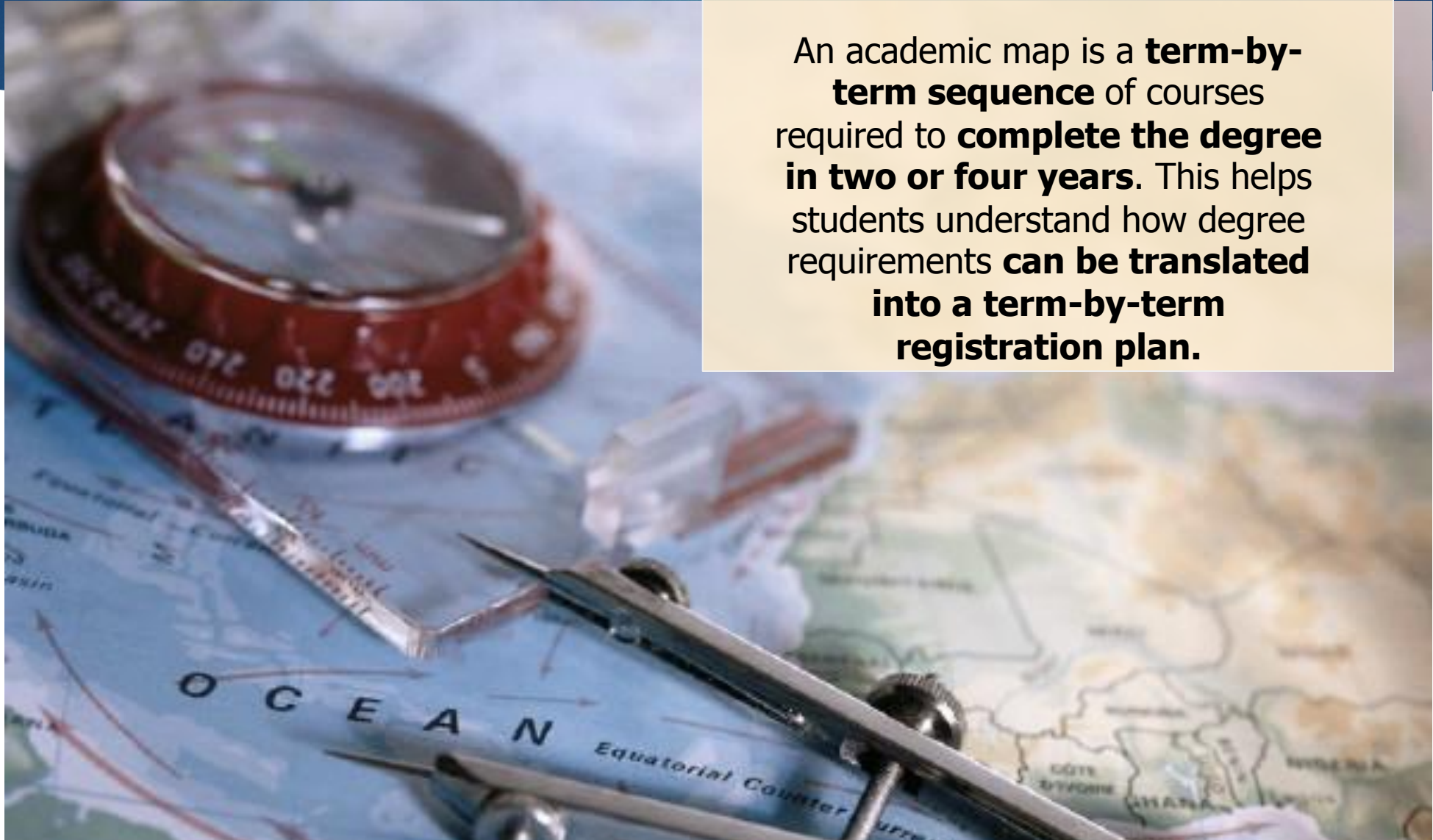
Three important points

1. [If at all possible] Do not ask your faculty to enter the information (they did so when they set the catalog)
2. Send final map to faculty for approval
3. Allow departments to adjust maps once a year

Steps to design maps

1. Don't complicate the process- paper and pencil will work
2. Select a format
3. English and Math are in term 1
4. Complete the requirements for the major
5. Match major requirements with General Education to identify courses that satisfy both requirements
6. Sequence the General Education courses to be completed in two to three terms - for 15 hours include six to nine hours a term
7. Fill in Milestone courses or actions that must be completed in that term
8. Keep a running tally of Milestone courses because many majors will require the same courses as Milestones, particularly in math

Academic maps: four essential components – the narrative, sample schedule, milestones and employment opportunities

Criminology/Criminal Justice is an interdisciplinary field of study. Included are the contributions and approaches of many of the social and behavioral sciences, as well as areas of study such as law and ethics, as they relate to the phenomenon of crime. The criminology/criminal justice major prepares students for employment in a wide variety of criminal justice agencies, under local, state and federal jurisdictions, as well as the private sector. This major can also serve as a foundation for graduate study in criminology, law, social work, sociology, psychology, and government including public administration.

The narrative explains the **use of academic maps** and any specific information about **degree requirements**, including admissions requirements

The sample schedule outlines **which courses** should be taken in **which specific term** in order to **satisfy all requirements**

List of Representative Job Titles and Potential Employers

The **milestones** identify **critical courses** for timely progress and the last semester in which they can be completed for **on-time graduation. Critical grades for Milestone courses may be included.**

Sample Schedule		Hrs.	Milestones
TERM 1			**TERM 1**
ENC1101		3	Complete ENC1101
LS Math		3	GPA ≥ 2.0 and in good academic standing
LS Natural Science w/Lab		4	
Elective/minor		3	
Elective		1	
Total hours		14	
TERM 2		Hrs.	
ENC1102 or other second English		3	
LS Math (STA1013/2122)		3	
LS History/Humanities/Fine Arts		3	GPA ≥ 2.0 and in good academic standing
CGS2060		3	
Elective/minor		3	
Total hours		15	

Bridging the Gap

▶ WV Community and Technical Colleges created strong academic maps in the Bridging the Gap grant project

▶ Created capacity at the college for the process

▶ Challenge now to scale that work to all programs across the colleges

Example: Sinclair Community College presents courses as defaults in their registration system

Students meet with advisors to develop personalized degree maps

Map is loaded into the registration system and courses are presented to student as default courses

Students can opt out and register for other courses, with a warning

http://flashmedia.sinclair.edu/dl/dept/advising/presenter/online_registration/index.htm

Example: UNC Charlotte has progression courses to identify students who are off-track and require them to seek guidance
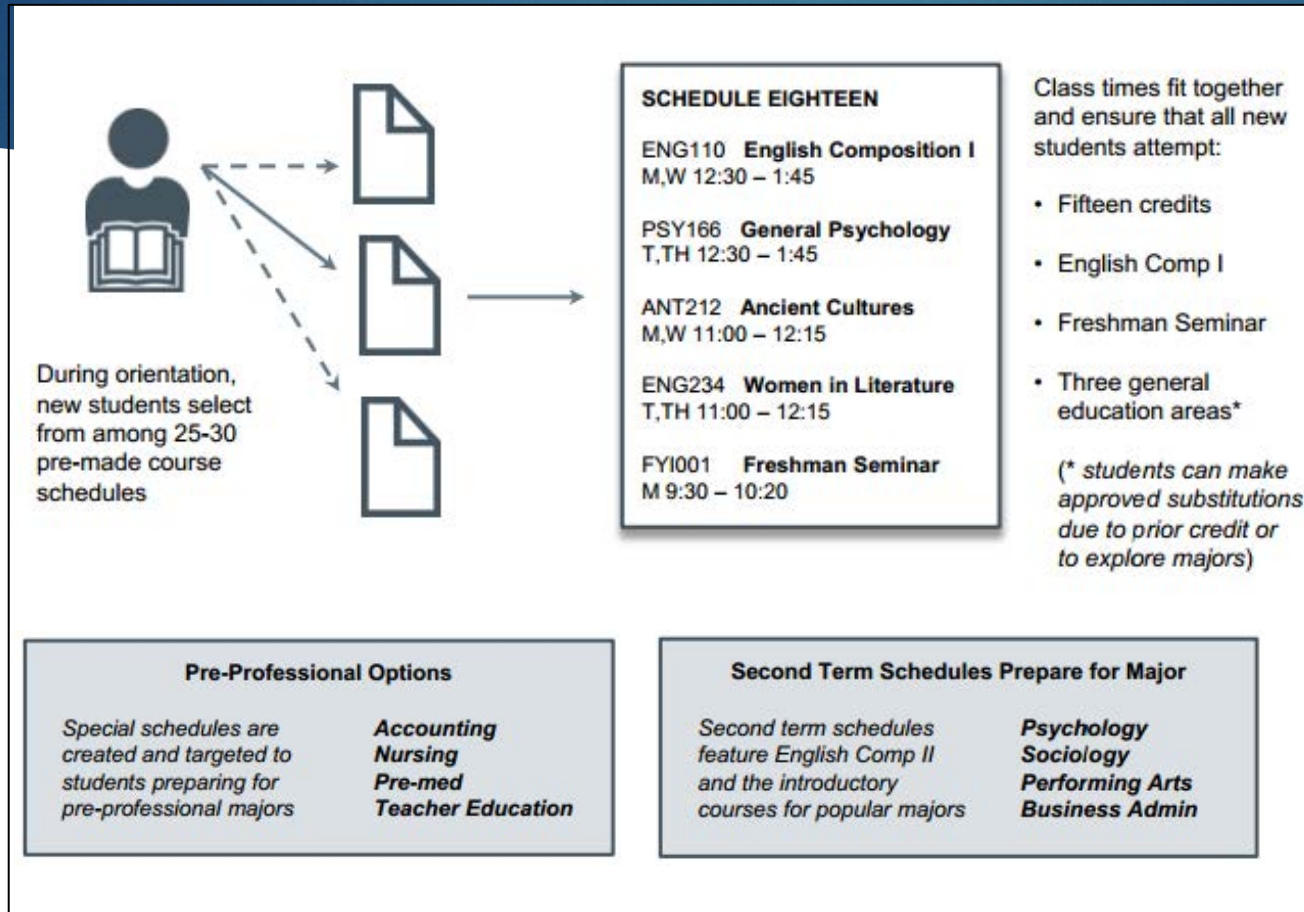
SUGGESTED PLAN OF STUDY

Freshman Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
Fall Semester					
ENGL 1101	Writing and Inquiry in Academic Contexts I	3	X		
MATH 1100	College Algebra and Probability	3	X		
XXXX XXXX	Natural Science w / lab	4	X		
LBST 11XX	LBST 1100 Series: Arts and Society	3	X		
BUSN 1101	Introduction to Business & Professional Development	3			Progression Course
Spring Semester					
ENGL 1102	Writing and Inquiry in Academic Contexts II	3	X		
MATH 1120	Calculus	3	X		Progression Course
INFO 2130	Introduction to Business Computing	3			Progression Course
LBST 2101	Western Cultural and Historical Awareness	3	X		
XXXX XXXX	Non-Business Elective	3			

31 Credit Hours for Year

Sophomore Year

Course Number	Course Title	Credit Hours	General Education	W/O Course	Notes
Fall Semester					
ACCT 2121	Principles of Accounting I	3			Progression Course
ECON 2101	Principles of Economics - Macro	3	X		Progression Course
STAT 1220	Elements of Statistics I	3	X		Progression Course
XXXX XXXX	Natural Science	3	X		
LBST 2102	Global and Intercultural Connections	3	X		
Spring Semester					
ACCT 2122	Principles of Accounting II	3			Progression Course
ECON 2102	Principles of Economics - Micro	3			Progression Course
XXXX XXXX	Writing Intensive Course	3	X	W	
LBST 22XX	LBST 2200 Series: Ethical Issues and Cultural Critique	3	X		
XXXX XXXX	Non-Business Elective	3			

30 Credit Hours for Year

- Academic maps identify milestones—the critical courses/actions for timeline completion
- Registration system flags students who withdraw or do not register for milestone courses
- Students are placed on hold until advisors meet with students

https://academics.uncc.edu/sites/academics.uncc.edu/files/media/Accounting-APS-Jan-2013.pdf

Example: At CUNY Lehman College, entering students are required to choose from pre-built course schedules

During orientation, new students select from among 25-30 pre-made course schedules

SCHEDULE EIGHTEEN

ENG110   **English Composition I**
M,W 12:30 – 1:45

PSY166   **General Psychology**
T,TH 12:30 – 1:45

ANT212   **Ancient Cultures**
M,W 11:00 – 12:15

ENG234   **Women in Literature**
T,TH 11:00 – 12:15

FYI001   **Freshman Seminar**
M 9:30 – 10:20

Class times fit together and ensure that all new students attempt:

• Fifteen credits

• English Comp I

• Freshman Seminar

• Three general education areas*

(* students can make approved substitutions due to prior credit or to explore majors)

Pre-Professional Options

Special schedules are created and targeted to students preparing for pre-professional majors

Accounting
Nursing
Pre-med
Teacher Education

Second Term Schedules Prepare for Major

Second term schedules feature English Comp II and the introductory courses for popular majors

Psychology
Sociology
Performing Arts
Business Admin

Students register during orientation for a pre-made schedule that satisfies a number of GE requirements

Students continue to enroll in blocks of courses together for the second term

Students can opt out and register for other courses, to explore majors

CUNY Lehman College, "Building Guided Pathways to Success," Education Advisory Board

FIU has developed a comprehensive system for integrating maps into their student advising system

Graduation Success Initiative

The Graduation Success Initiative (GSI) helps students to:

Explore → Focus → Graduate
Find the right major | Stay on track | Finish on time

Choose one

Students | Advisors

https://ugrad.fiu.edu/gsi/index.html

MyMajorMatch (interest inventory)
Students can take an on-line assessment to gauge their interest and skill across areas

MyMajor (academic maps)
Provide admissions criteria, course sequence, and career opportunities for each major
Differentiated maps for two-year transfer vs. 4-year students

My_e_advisor (registration flag)
Provides immediate feedback to students and advisors on progress
Alerts students and advisors if students are off-track

Degree works

- Not comprehensive but a great start
- A number of colleges have already developed four and eight semester plans
- Technology helps check student progress and provide data to take action on (advising, outreach, interventions)

Key academic policies

- ▶ Require early declaration of interest area (a meta-major) or major

- ▶ Require every student without a major to attend a "choosing a major" workshop and have a major selected during their first term

- ▶ Establish Milestones for each term (key courses, factors, or events that must be completed by a specific time in order to stay on track). These courses **must be** offered when needed

- ▶ Rationalize general education requirements

Key advising policies

► Assist students with choosing a major through workshops, the Career Center and web resources, e.g., http://www.bls.gov/ooh/ and http://www.onetonline.org/

► Monitor student registration and grades for milestone courses

► Every student "off-map" **must** meet with an advisor in person (or electronically)

► Students must change majors if they are "off-map" two consecutive terms

Key communication policies

▶ Earning a degree is a two or four year process

▶ Maps must be part of every communication with students, parents, and faculty

▶ Maps must be easy to find online and easy to understand

▶ Maps must be integrated into every aspect of the academic experience

WVUP Responds

- Academic
  - Comprehensive Deployment of Academic Maps
  - Improved, student centered, scheduling
  - Linked to Program requirements and "schedulability"
- Advising
  - Targeted intrusive advising
  - Case management as part of the new student experience
  - Using data to target students
  - 4500+ personal calls to students with data informed outreach to enrollment for fall 2017
- Communication
  - College messaging
  - Professional Advising Center

Maps benefit students

- Save time and money
- Avoid unnecessary courses
- Reduce time to degree
- Always know where they are AND where they are going

Structure benefits colleges

- Departments know the number of students likely to register for courses and their progress toward a degree

- Departments can predict student need for courses

- Classes can be scheduled optimally

- Faculty can plan for the future

- Advisors can be effectively used

WVUP benefits

- Efficient course offerings
- Increased FTE of new enrollment yield
- Increased math and English success
- More students enrolling in and completing 15 credits per semester

Questions?