



Data & Statistics at Cal State Fullerton

HR Professional Development Workshop

March 7, 2017

Sunny Moon

Institutional Research & Analytical Studies

Role of Institutional Research and Analytical Studies?

Mission

- Institutional self-understanding through research and analysis.
- Data and analyses on
 - enrollment trends and forecasting,
 - student and faculty demography
 - student learning outcomes such as retention/graduation, grade report.
 - any other topic relevant to documenting and improving institutional effectiveness, information essential to campus policy formulation, academic planning, resource allocation, assessment and quality

The Office of IR&AS is an all-university, central resource for institutional facts and figures, methodological advice and problem solving, and is also the chief source of official statistics for the campus.

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- ▶ Retention and Graduation Rates
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- ▶ Bottleneck / Gateway Courses

Frequently Used Abbreviations

- ▶ FTES – Full-time Equivalent Student
 - Resident FTES – FTES generated by students that pay CA Resident Tuition
 - NRT FTES – FTES generated by students that pay per unit Non-Resident Tuition
 - 1 rbFTES
 - 15 units for UG/PB students
 - 12 units for MS/Doctoral students.
- ▶ FTEF – Full-time Equivalent Faculty
- ▶ SFR – Student Faculty Ratio
 - = FTES/FTEF
 - Different from average class size
- ▶ CY – College Year
(Summer, Fall, Spring)
- ▶ AY – Academic Year
(Fall, Spring)
- ▶ YRO – State Supported Summer
(Year Round Operation)

- ▶ Example #1: BIOL101-2 (3 units course) – 20 UG students
- ▶ Example #2: ENGL300-5 (3 units course) – 19 UG students, 1 Post-Bac Cred
- ▶ Example #3: MATH475-1 (4 units course) – 15 UG students, 3 master’s student

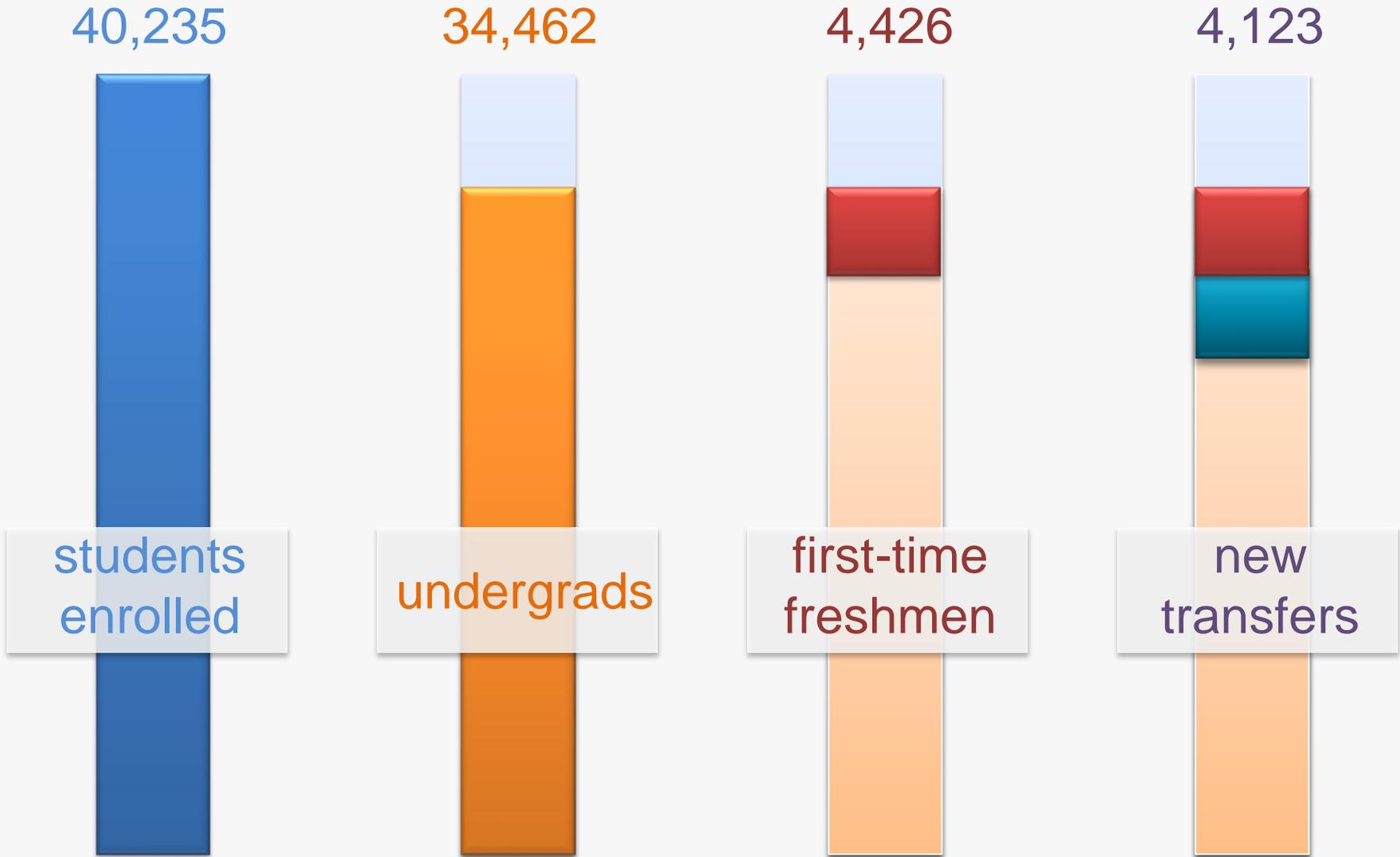
Frequently Used Abbreviations

- ▶ Different Definition of SFR (Student Faculty Ratio)
 - Ratio of fulltime equivalent students (fulltime plus 1/3 part time) to fulltime equivalent instructional faculty (full time plus 1/3 part time)
 - US News & World Report, IPEDS

Frequently Used Abbreviations

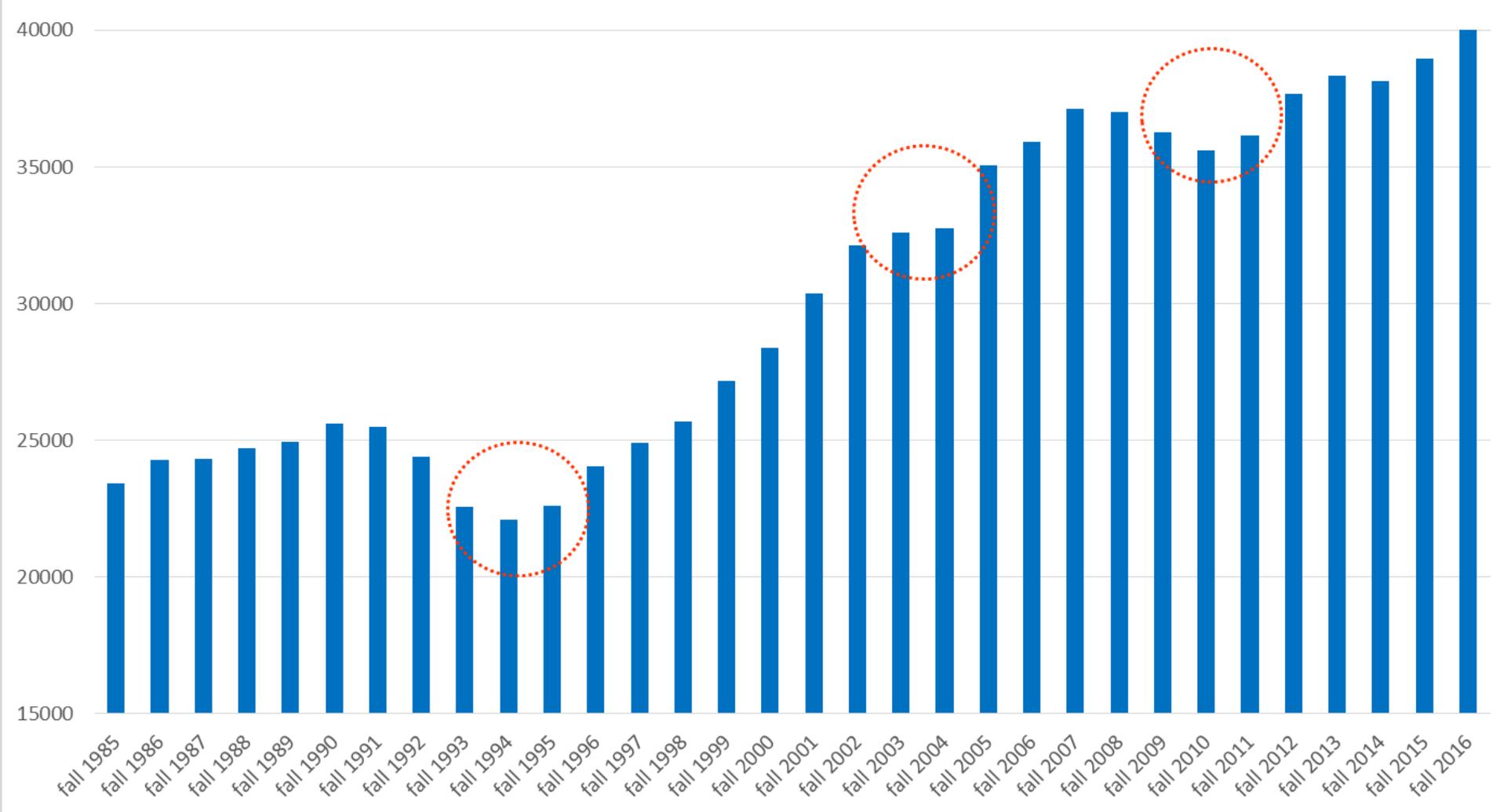
- ▶ Cohort – Group with shared entry traits based on a common entry point
- ▶ EI – CSU Eligibility Index for first-time freshman admission
- ▶ New FTF – New First-time Freshman
- ▶ FTF – First-Time Full-Time
- ▶ New UG Transfer – New undergraduate transfer
- ▶ New UDT – New Upper division transfer
- ▶ New CCC transfer – New California Community College transfer
- ▶ Underrepresented Students
 - Native American/Alaskan,
 - Black, or
 - Hispanic Students
- ▶ Non-Underrepresented Students
 - Asian, White (Non-Hispanic),
 - International (including undocumented),
 - Multi-Race (non-Hispanic), or
 - Unknown Race (non-Hispanic) students.

Quick Facts of Cal State Fullerton



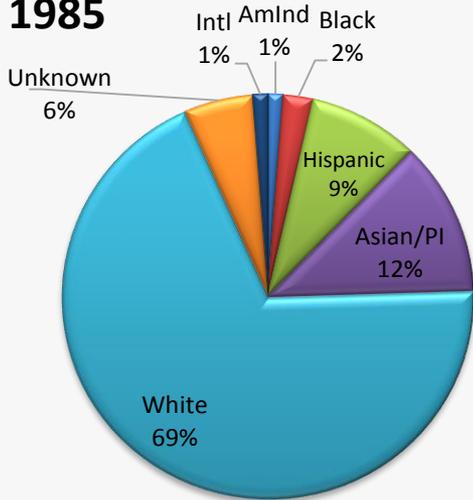
Data as of Fall 2016

Enrollment History since 1985

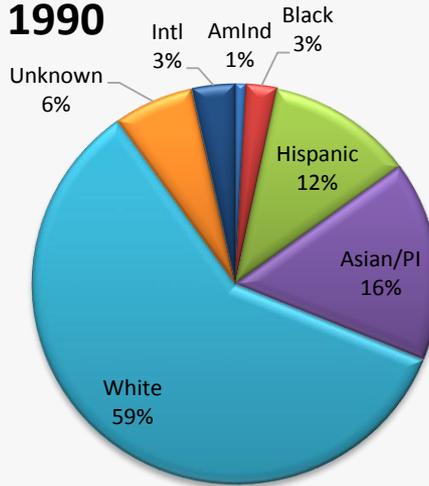


Demographic Changes

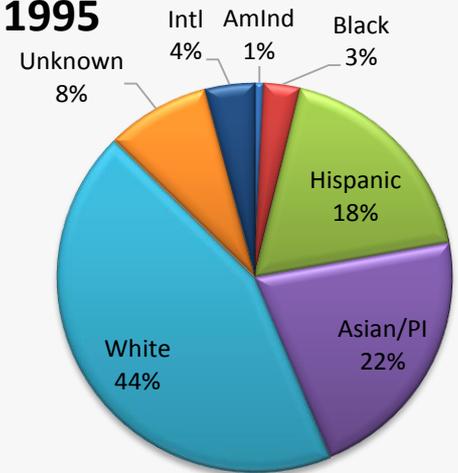
Fall 1985



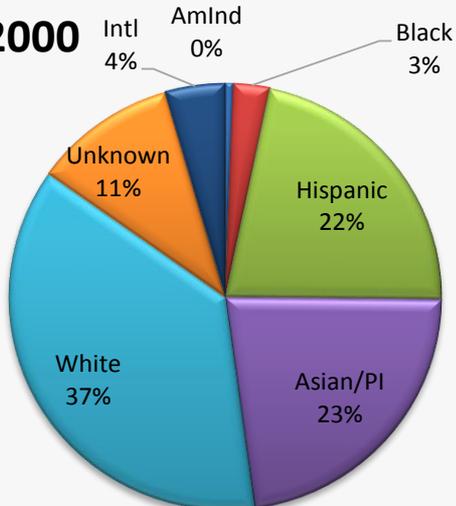
Fall 1990



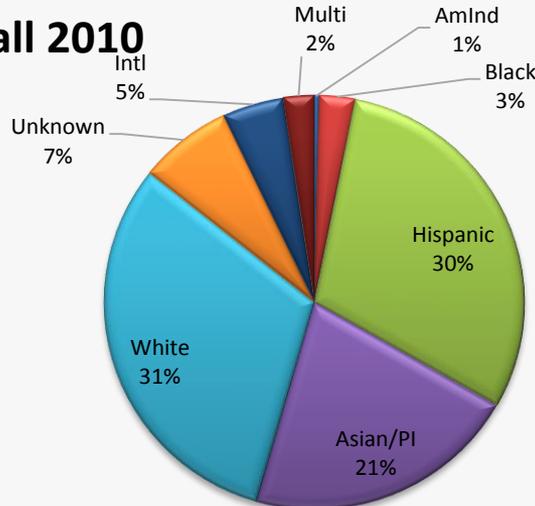
Fall 1995



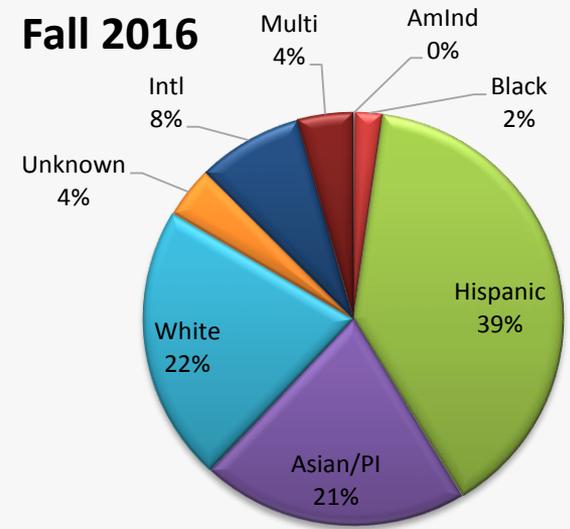
Fall 2000



Fall 2010

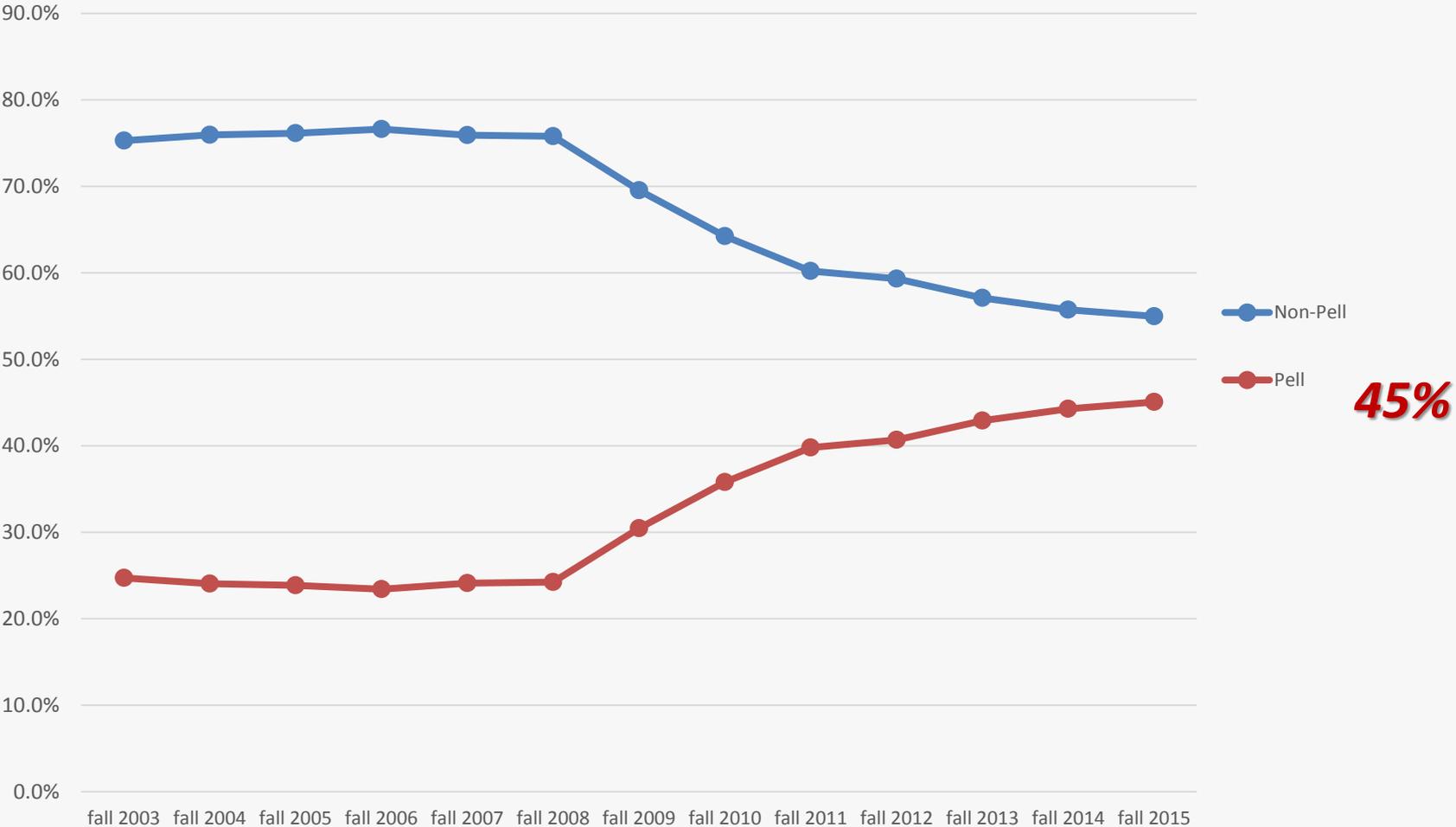


Fall 2016



Low Income Students

Pell Recipients



Definition of *1st Generation* College Students

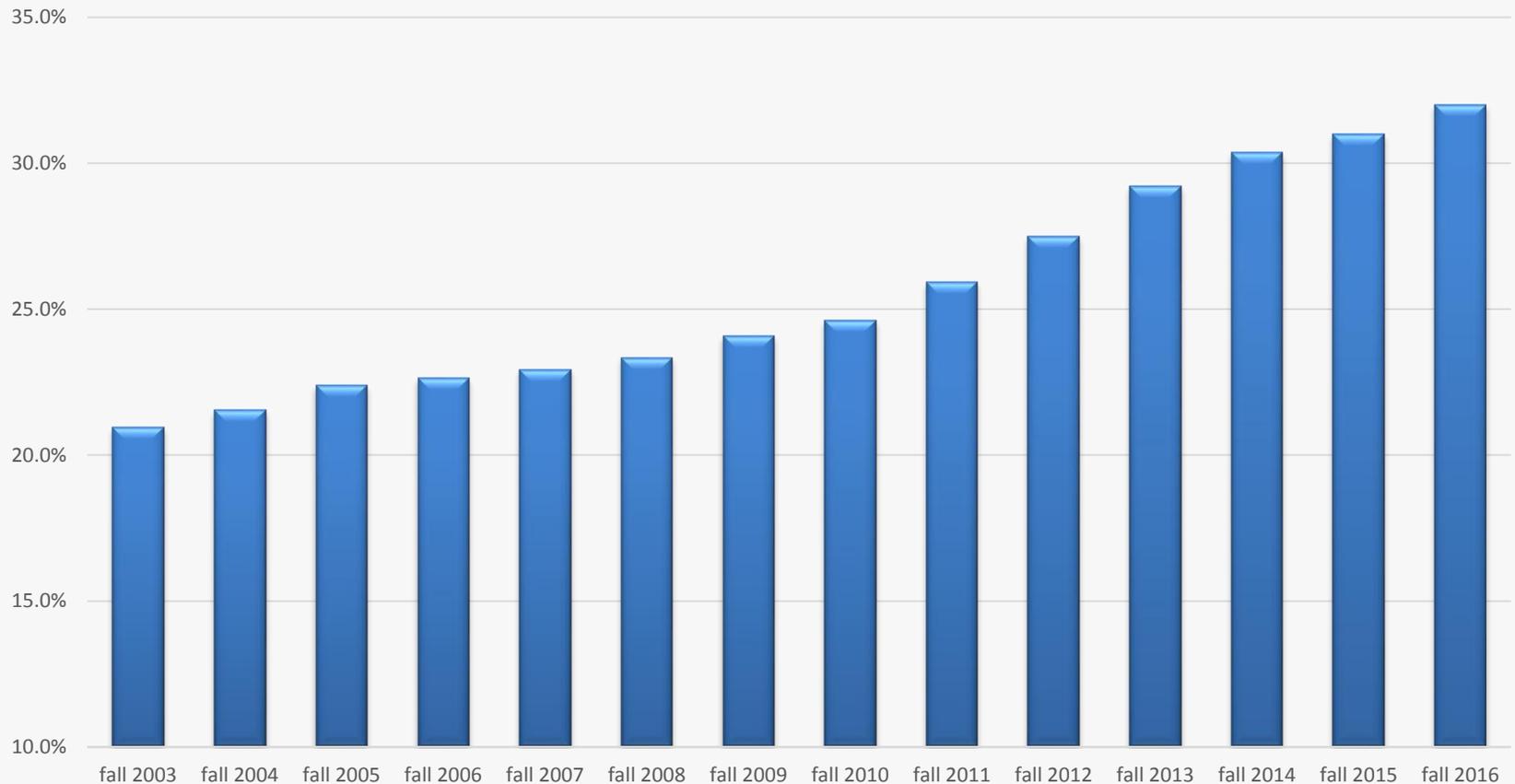
Definition #1: Neither parents attended any college AT ALL.

- None of their parents have any college experience.
- **32%** of undergraduate students as of fall 2016 are *1st in the family attending college*

Definition #2: Neither parents graduated 4-year colleges (No bachelor's degree at all)

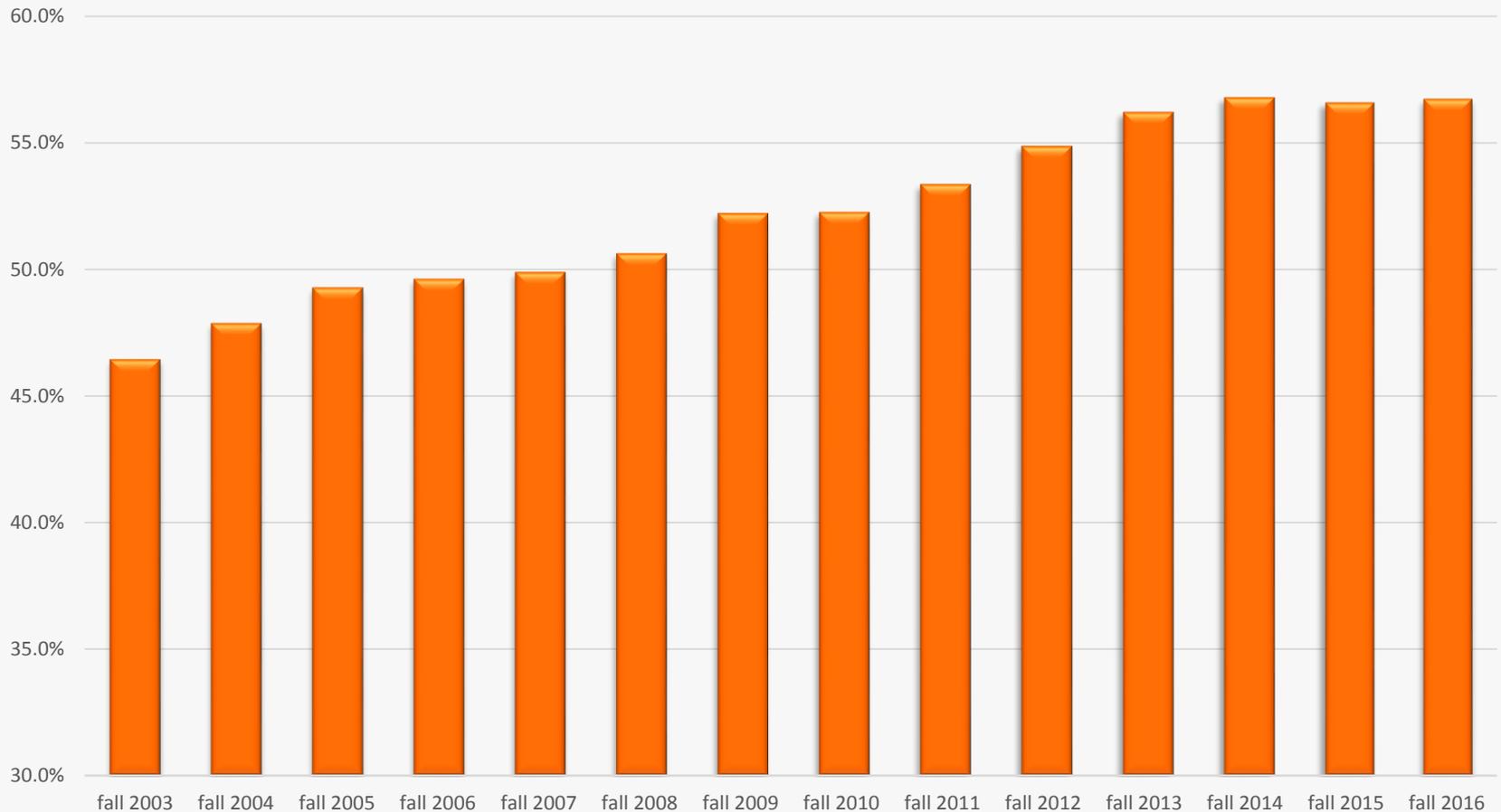
- The students whose parents attended some 4-year colleges but dropped out of the colleges are still defined as 1st generation if we apply this definition.
- Even if the parents have community college degrees, the students are still 1st generation students.
- **57%** of CSUF undergraduate population are 1st generation students who will be the *1st in their family to complete 4-year college & earn bachelor's degree upon their graduation.*

First Generation College Students



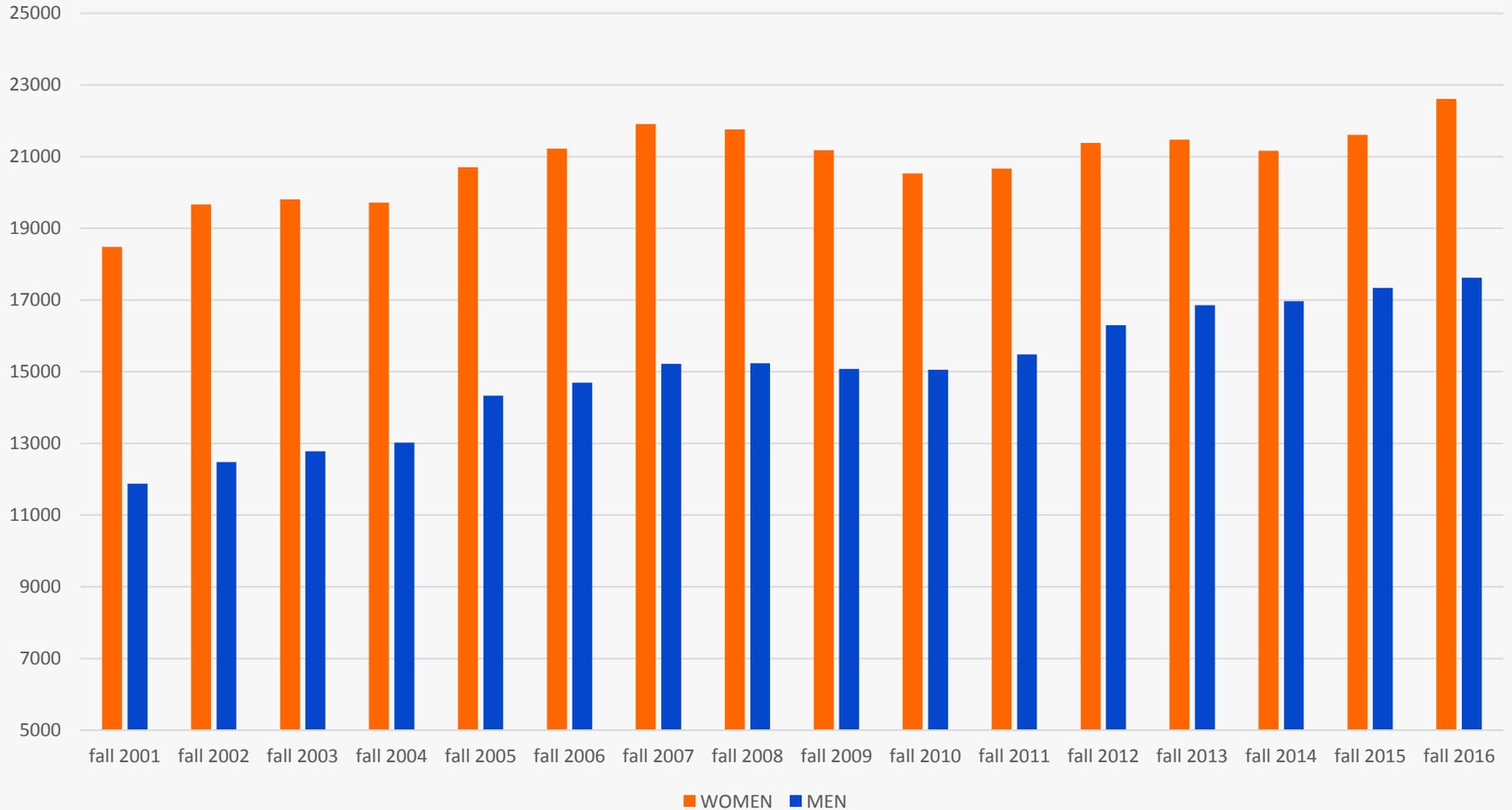
Definition #1: Neither parents attended any college AT ALL.

First Generation College Students



Definition #2: Neither parents graduated 4-year colleges.

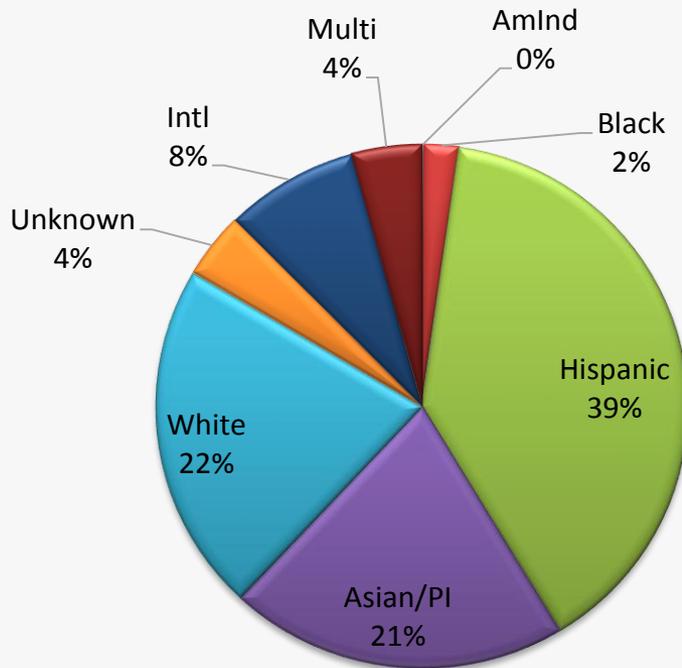
Men vs. Women (44% vs. 56% in Fall 2016)



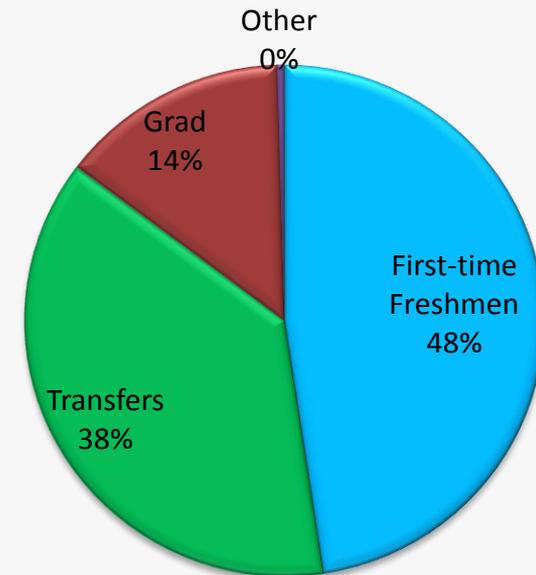
Cal State Fullerton at a Glance

Fall 2016

Ethnic Composition



Entering Characteristics Composition



We have been the # 1 destination for California Community College transfers among all California public universities for 15 of the last 18 years

	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
CSU FULLERTON	4,126	4,318	4,436	4,761	4,877	4,280	6,094	5,113	5,412	5,495	5,351	3,521	5,975	4,581	4,363	5,027	5,119	6,167
CSU LONG BEACH	3,264	3,789	3,438	4,079	4,156	3,479	4,047	3,529	4,373	4,272	3,027	1,907	3,959	3,382	3,697	4,166	4,642	4,587
CSU NORTHRIDGE	3,388	3,915	4,299	4,562	4,312	3,991	4,360	4,750	4,820	4,861	4,524	3,437	4,677	5,429	3,614	4,903	5,581	5,835
CSU SACRAMENTO	3,664	3,929	3,970	4,074	3,841	3,771	4,398	3,986	4,249	4,109	4,172	3,249	4,788	4,368	3,429	5,205	4,530	4,396
SAN DIEGO STATE	3,746	3,666	4,150	3,565	3,414	3,347	3,360	4,648	4,324	4,382	2,854	2,408	4,688	1,980	3,176	3,301	3,036	3,343
SAN FRANCISCO STATE	3,508	3,498	3,212	3,289	3,786	3,979	4,040	3,901	4,103	3,906	3,721	2,868	4,493	4,034	3,281	4,237	3,836	4,241
SAN JOSE STATE	3,681	3,555	3,243	3,409	3,506	3,225	3,212	3,525	3,618	4,000	3,563	1,939	3,626	3,308	2,954	3,913	3,863	3,427
UC BERKELEY	1,653	1,682	1,548	1,745	1,851	1,767	1,870	2,024	2,018	2,080	2,097	2,274	2,333	2,462	2,310	2,356	2,324	2,019
UC LOS ANGELES	2,054	2,430	2,488	2,780	2,555	2,965	2,847	2,951	3,065	3,048	2,967	2,934	2,977	2,897	2,953	2,617	2,934	2,879
UC SAN DIEGO	1,108	1,253	1,333	1,445	1,690	1,767	1,645	1,760	1,797	1,979	2,226	2,359	2,460	2,643	2,010	2,502	2,197	2,423

Note: Calendar-year new CCC transfer enrollments as of 9-20-16; 2015-16 UC data not finalized

Sources: 1998-99 to 2009-10 Data: CPEC Transfer Pathways <http://www.cpec.ca.gov/OnLineData/TransferPathway.asp>

2010-11 to 2015-16 CSU Data: CSU Analytical Studies <http://asd.calstate.edu/ccct/2015-2016/index.asp>

2010-11 to 2015-16 UC Data: UC Infocenter <http://universityofcalifornia.edu/infocenter/admissions-residency-and-ethnicity>

Fall Enrollment Trend (Seven large CSUs)

We have been the Largest CSU campus for five of the last nine years

Campus	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fullerton	36,996	36,262	35,590	36,156	37,677	38,325	38,128	38,948	40,235
Long Beach	37,891	35,557	33,416	34,870	36,279	35,586	36,809	37,446	37,776
Northridge	36,208	35,198	35,272	36,911	36,164	38,310	40,131	41,548	39,916
San Diego	35,832	33,790	29,187	30,541	31,597	32,759	33,483	34,254	34,688
San Jose	32,746	31,280	29,076	30,236	30,448	31,278	32,713	32,773	32,154
San Francisco	30,014	30,469	29,718	29,541	30,500	29,905	29,465	30,256	29,045
Sacramento	29,011	29,241	27,033	28,016	28,539	28,811	29,349	30,284	30,510

Retention and Graduation Rates

(outcomes for an entering group tracked over a fixed number of years)

Why Freshman Graduation Rates are Measured after Six Years

- ▶ In 1990, Congress passed the Student Right-to-Know Act, which requires colleges to disclose information on graduation rates and serious crimes.
 - In particular, the law requires colleges to report the proportion of students “completing their program within 150 percent of the normal time to completion.” For four-year colleges, that means the proportion of students who earn bachelor’s degrees within six years. In 1997 the federal government began to systematically collect those numbers through its Integrated Postsecondary Education Data System, commonly known as IPEDS.

from: <http://chronicle.com/blogs/measuring/6-year-graduation-rates-a-6-minute-primer/27573>

4 years times 150% = 6 years

Frequently Used Phrases/Computations

▶ Retention Rates

- 1-yr rate = Number of Initial Cohort Members Enrolled for the Fall of Year 2 *divided by* Number of Initial Cohort Members
- 2-yr rate = Number of Initial Cohort Members Enrolled for the Fall of Year 3 *divided by* Number of Initial Cohort Members

▶ Graduation Rates

- 4-yr rate = Number of Initial Cohort Members Graduating by the Summer of the 4th year of study *divided by* Number of Initial Cohort Members
- 6-yr rate = Number of Initial Cohort Members Graduating by the Summer of the 6th year of study *divided by* Number of Initial Cohort Members

- Gap – Percentage point difference in rates between two or more groups

FRESHMEN: RETENTION /GRADUATION RATES

ONE-YEAR RETENTION RATE TREND

	First-Time Full-Time Freshmen								
Ethnic Grouping	Fa07	Fa08	Fa09	Fa10	Fa11	Fa12	Fa13	Fa14	Fa15
Non-Underrepresented	81%	83%	86%	86%	89%	90%	89%	88%	91%
Underrepresented	77%	77%	81%	83%	88%	87%	88%	89%	87%
Total	79%	80%	84%	85%	88%	89%	89%	88%	89%

SIX-YEAR GRADUATION RATE TREND

	First-Time Full-Time Freshmen							
Ethnic Grouping	Fa03	Fa04	Fa05	Fa06	Fa07	Fa08	Fa09	Fa10
Non-Underrepresented	55%	55%	52%	56%	56%	61%	65%	66%
Underrepresented	45%	45%	46%	44%	49%	49%	57%	59%
Total	52%	51%	50%	51%	53%	56%	62%	63%

TRANSFER: RETENTION /GRADUATION RATES

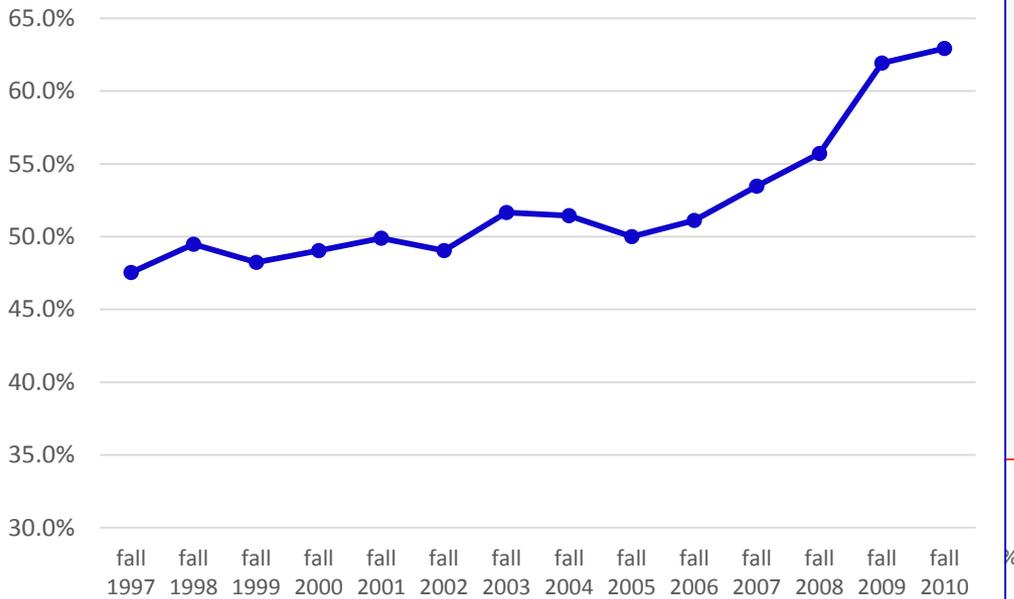
ONE-YEAR RETENTION RATE TREND

	Transfers								
Ethnic Grouping	Fa07	Fa08	Fa09	Fa10	Fa11	Fa12	Fa13	Fa14	Fa15
Non-Underrepresented	80%	84%	86%	84%	87%	86%	85%	89%	88%
Underrepresented	80%	80%	84%	82%	86%	86%	86%	90%	89%
Total	80%	83%	85%	84%	87%	86%	86%	89%	88%

FOUR-YEAR GRADUATION RATE TREND

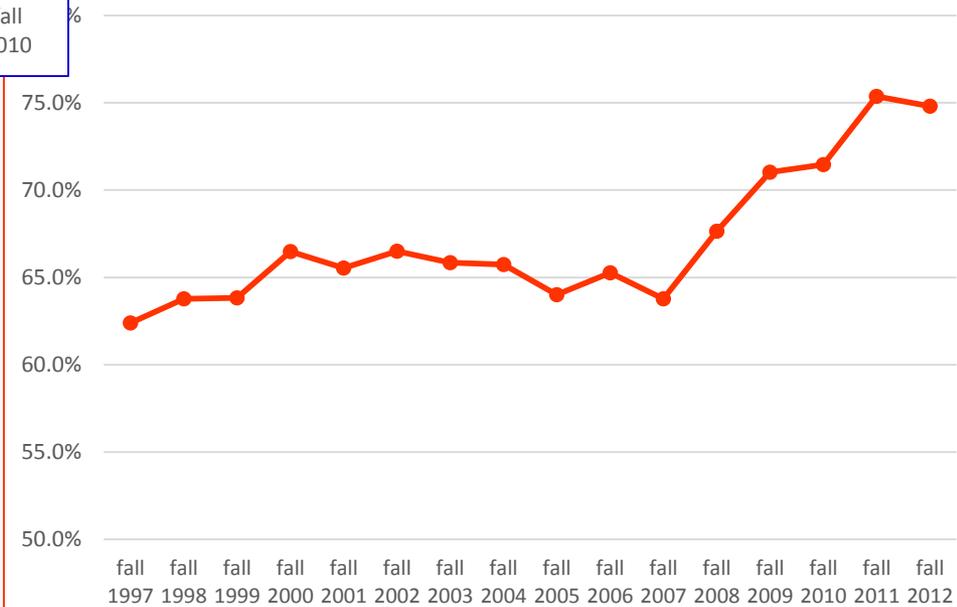
	Transfers							
Ethnic Grouping	Fa05	Fa06	Fa07	Fa08	Fa09	Fa10	Fa11	Fa12
Non-Underrepresented	65%	66%	64%	69%	73%	72%	76%	75%
Underrepresented	62%	63%	63%	64%	67%	69%	65%	75%
Total	64%	65%	64%	68%	71%	72%	75%	75%

6-year Graduation Rates of First-Time Freshmen



6-Year Graduation Rates of First-Time Freshmen (Fall 1997 thru Fall 2010 Cohorts)

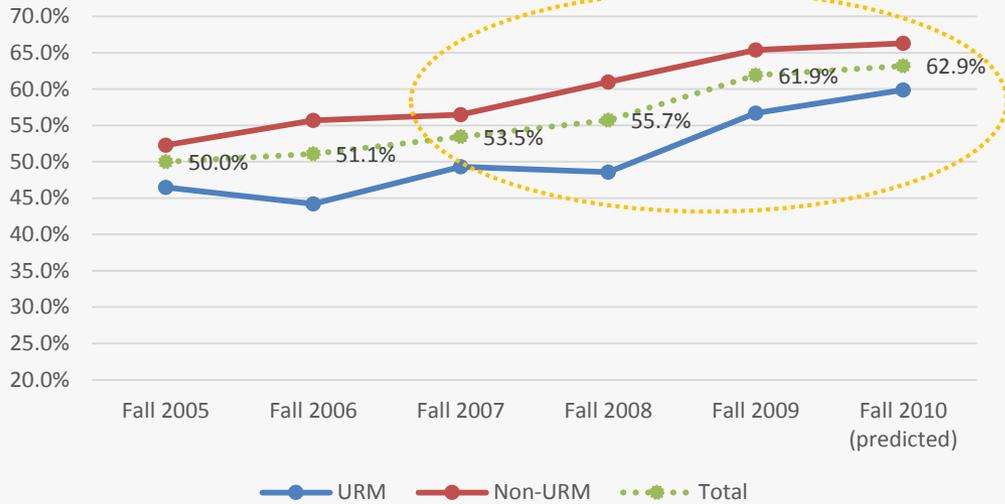
4-Year Graduation Rates of Transfers



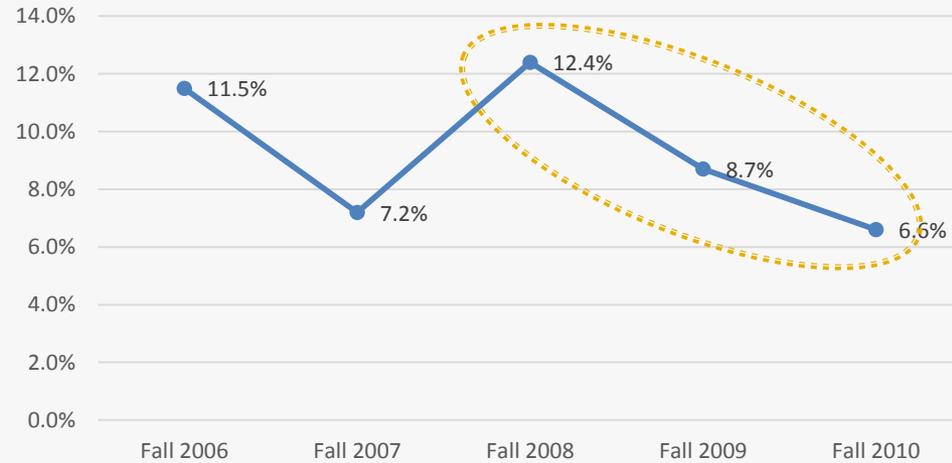
4-Year Graduation Rates of Transfers (fall 1997 thru Fall 2012 Cohorts)



6-Year Grad Rates for First-Time Freshmen

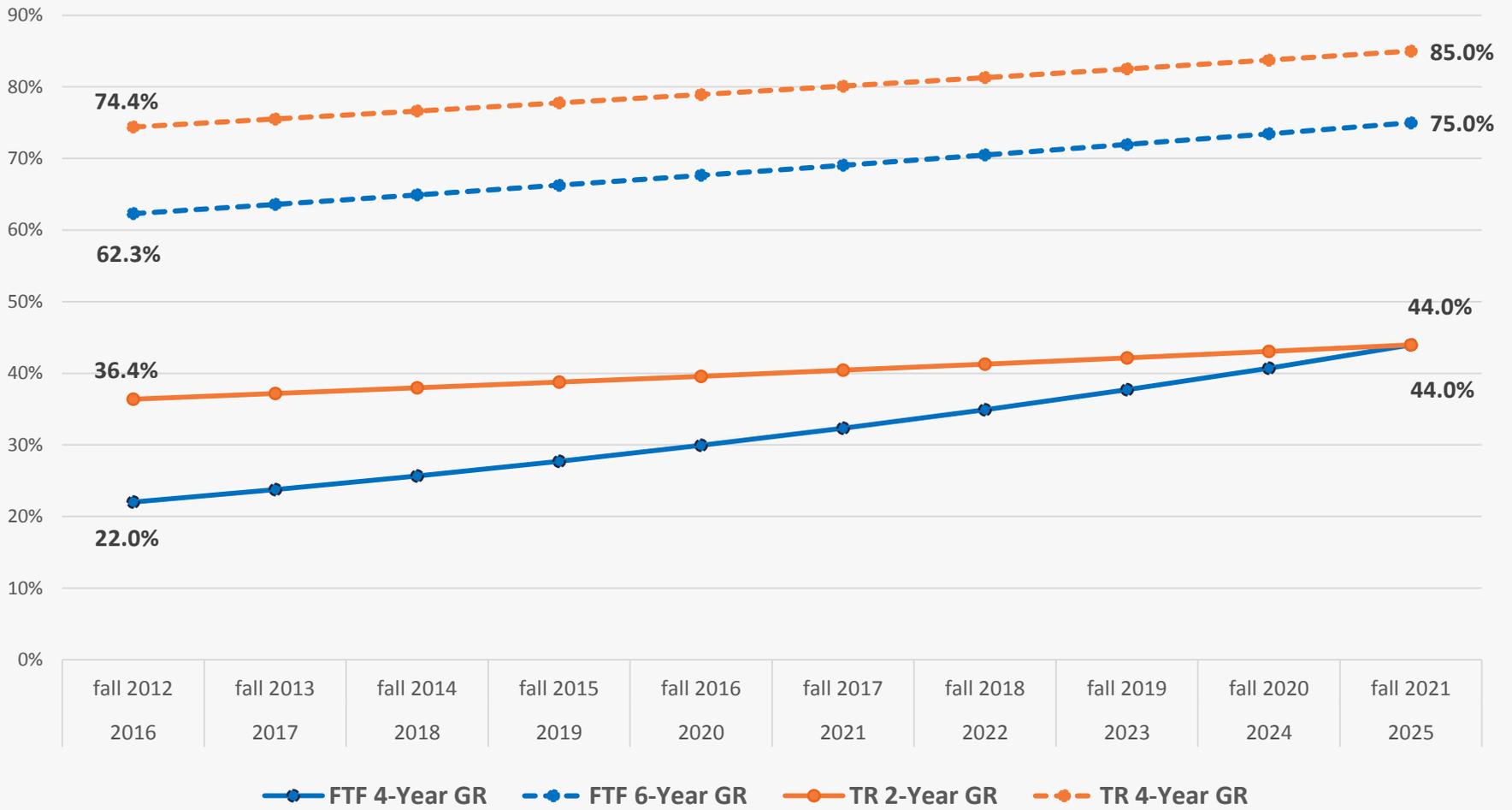


Gap in 6-Year Grad Rates



Graduation Initiative 2025: Our Goals

<https://www2.calstate.edu/csu-system/why-the-csu-matters/graduation-initiative-2025/Pages/campus-plans-and-goals.aspx>



Dashboard on *Freshmen* RETENTION / GRADUATION RATES

<http://www.fullerton.edu/analyticalstudies/student/graduationrates/freshman.asp>



Dashboard on *Transfer* RETENTION / GRADUATION RATES

<http://www.fullerton.edu/analyticalstudies/student/graduationrates/transfer.asp>



Degrees Awarded (1959 – 2016)

Degrees Earned 2015-16

Bachelor's Degrees Earned	Master's Degrees Earned	EDD/DNP Degrees Earned	Total Degrees Earned
8,397	1,868	47	10,312



Bachelors degrees by admitted as:

41% first-time freshmen, 58 % UG transfer, and < 1% 2nd BA.

55% were among the first generation of their families to earn a Bachelor's degree

CALIFORNIA STATE UNIVERSITY, FULLERTON
 INSTITUTIONAL RESEARCH AND ANALYTICAL STUDIES
 TRENDS IN DEGREES AWARDED BY LEVEL: 1959 TO PRESENT

YEAR	BACHELOR'S DEGREES	MASTER'S DEGREES	DOCTORAL DEGREES	TOTAL DEGREES
2015-2016	8397	1868	47	10312
2014-2015	7725	1667	62	9454
2013-2014	7451	1476	59	8986
2012-2013	7472	1566	26	9064
2011-2012	6724	1563	19	8306
2010-2011	6875	1562	11	8448
2009-2010	6481	1394	7	7882
2008-2009	6580	1421		8001
2007-2008	6344	1328		7672

1970-1971	2273	477		2750
1969-1970	1750	419		2169
1968-1969	1465	297		1762
1967-1968	1182	223		1405
1966-1967	860	166		1026
1965-1966	652	124		776
1964-1965	517	47		564
1963-1964	401	8		409
1962-1963	301	0		301
1961-1962	220	0		220
1960-1961	65	0		65

Degrees Earned 1959 to Present

Bachelor's Degrees Earned	Master's Degrees Earned	EDD / DNP Degrees Earned	Total Degrees Earned
215,160	44,894	231	260,285

Degrees Earned

CSU Fullerton Rank	Source: National Center for Education Statistics IPEDS Data Center (Based on 2014-2015 Degree Completion Survey) (Data extracted – Nov 1, 2017)		
	In CSU	In CA	In USA
Bachelor's Degrees Earned – (7,790)	1	2	18
Bachelor's Degrees Earned by Hispanic Students – (2,532)	1	1	2

Enrollment Management Utilizing Data

Types of CSU Admissions Impaction

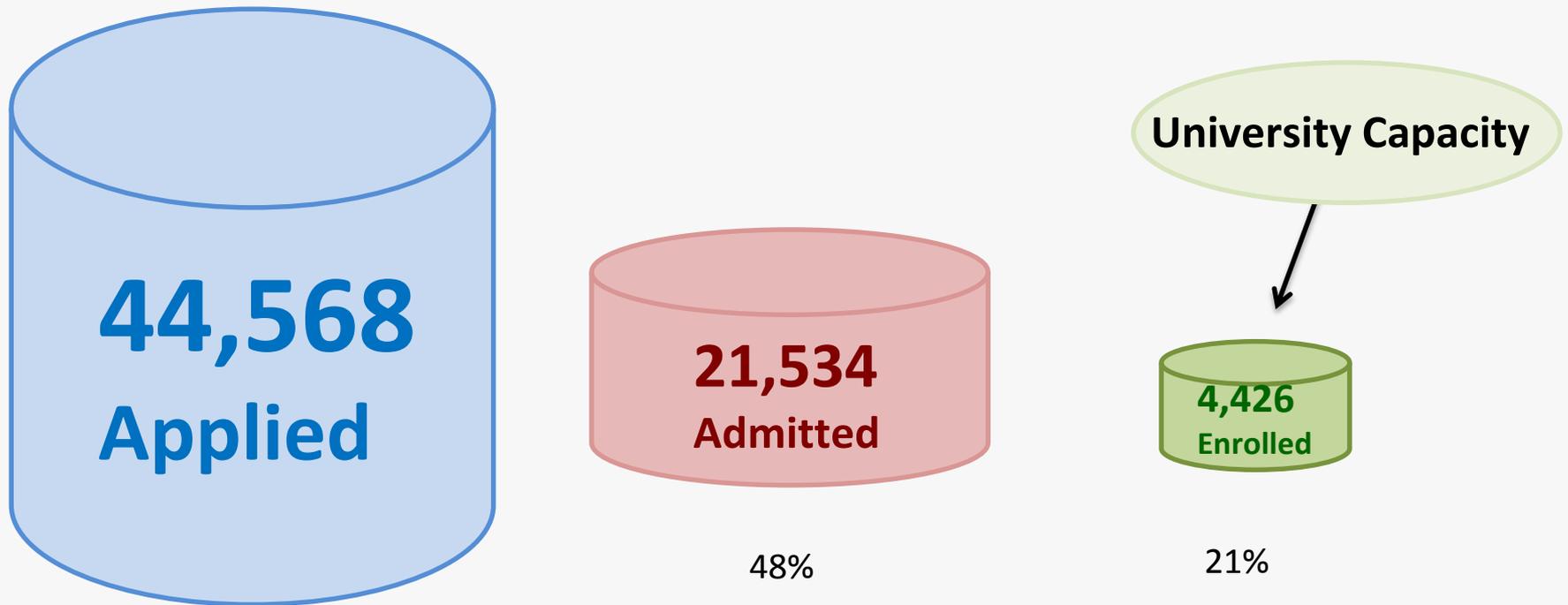
▶ Campus impaction

- A local area is established;
- Applicants from outside that area must meet supplemental admissions criteria
- Usually criteria are implemented by "level", e.g., first-time freshmen, transfers

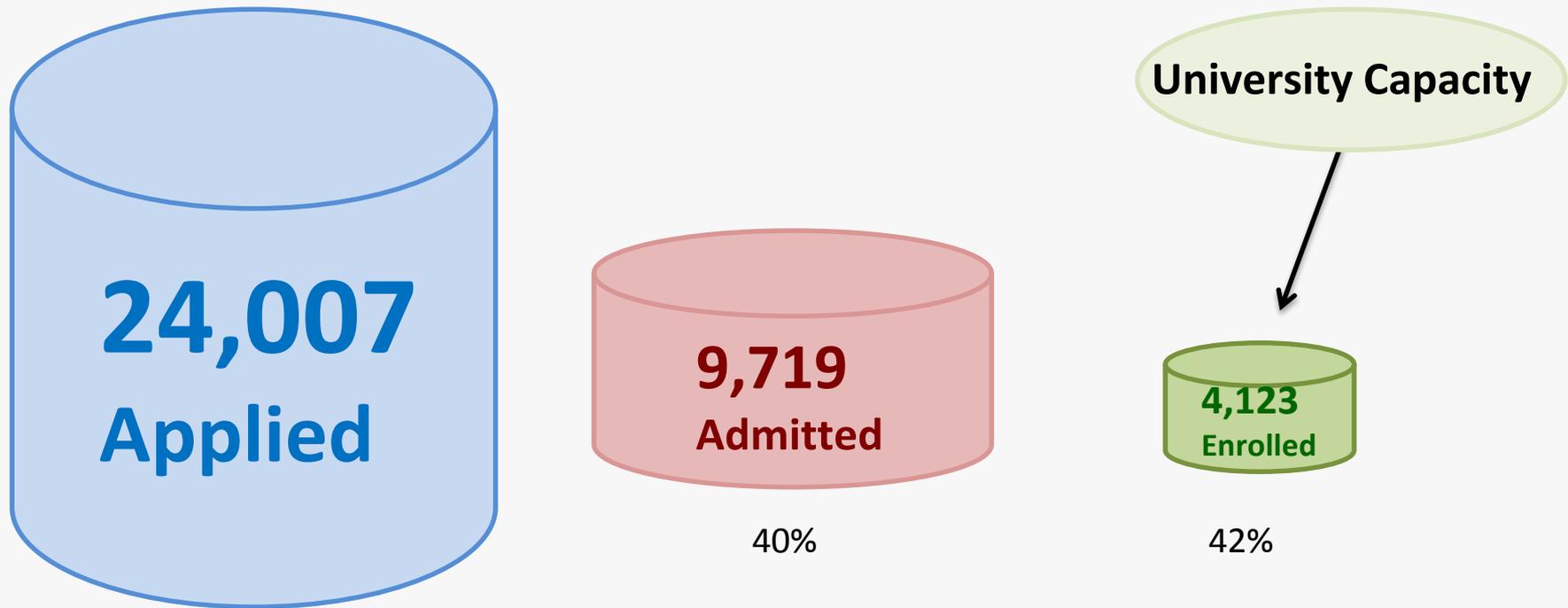
▶ Program impaction

- Supplemental admissions criteria such as competitive admissions may be required of all applicants for specified (or all) *majors/programs*

FRESHMAN: FALL 2016 ADMISSIONS OUTCOMES

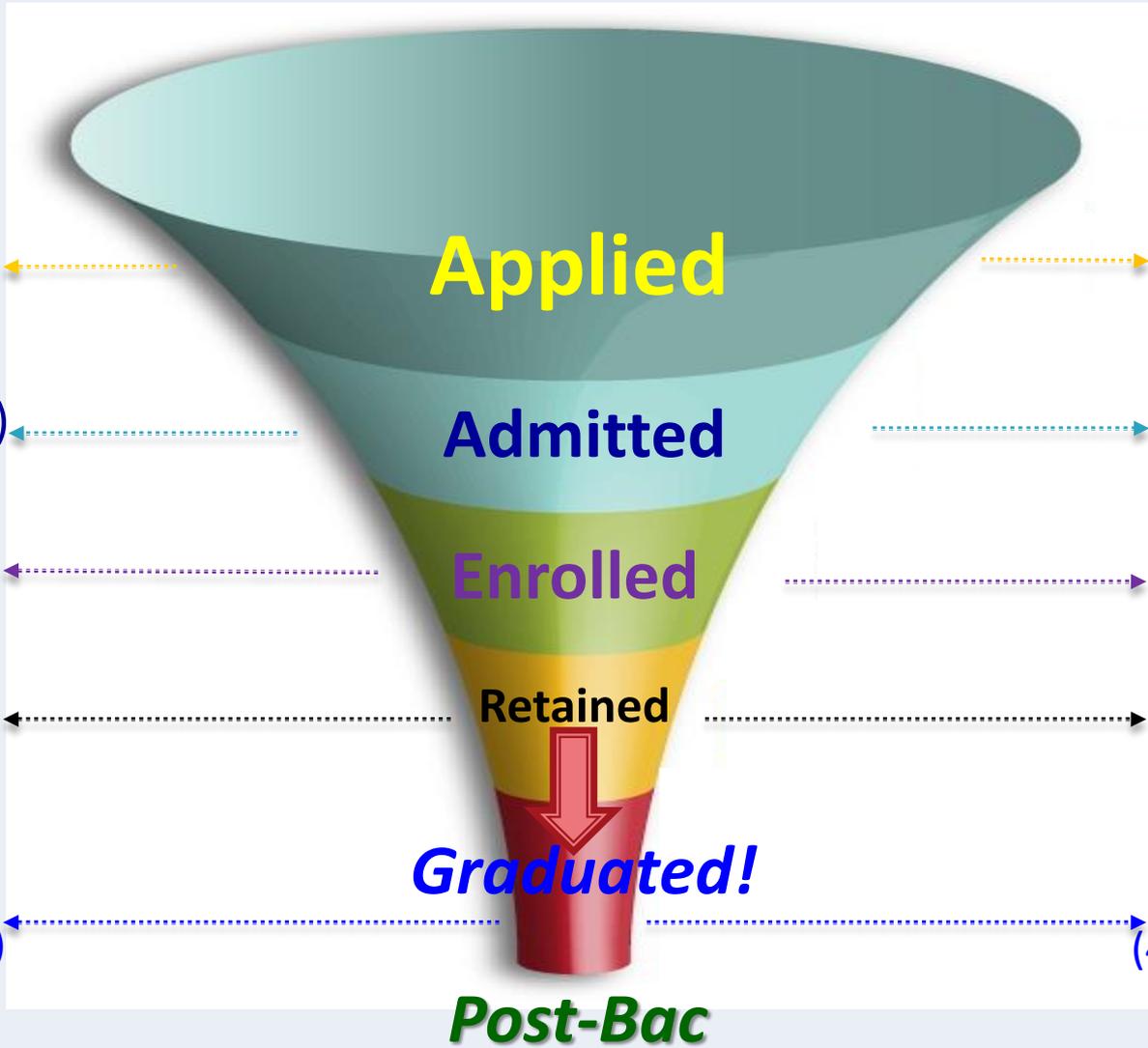


TRANSFER: FALL 2016 ADMISSIONS OUTCOMES



Freshmen Admission
 (EI: 3450/3700)

Transfers Admission
 (GPA: 2.70/3.35)



44,568

Applied

24,007

21,534 (48%)

Admitted

9,719 (40%)

4,426 (21%)

Enrolled

4,123 (42%)

89%
 (retention rates)

Retained

88%
 (retention rates)

62%
 (6-yr Grad Rates)

Graduated!

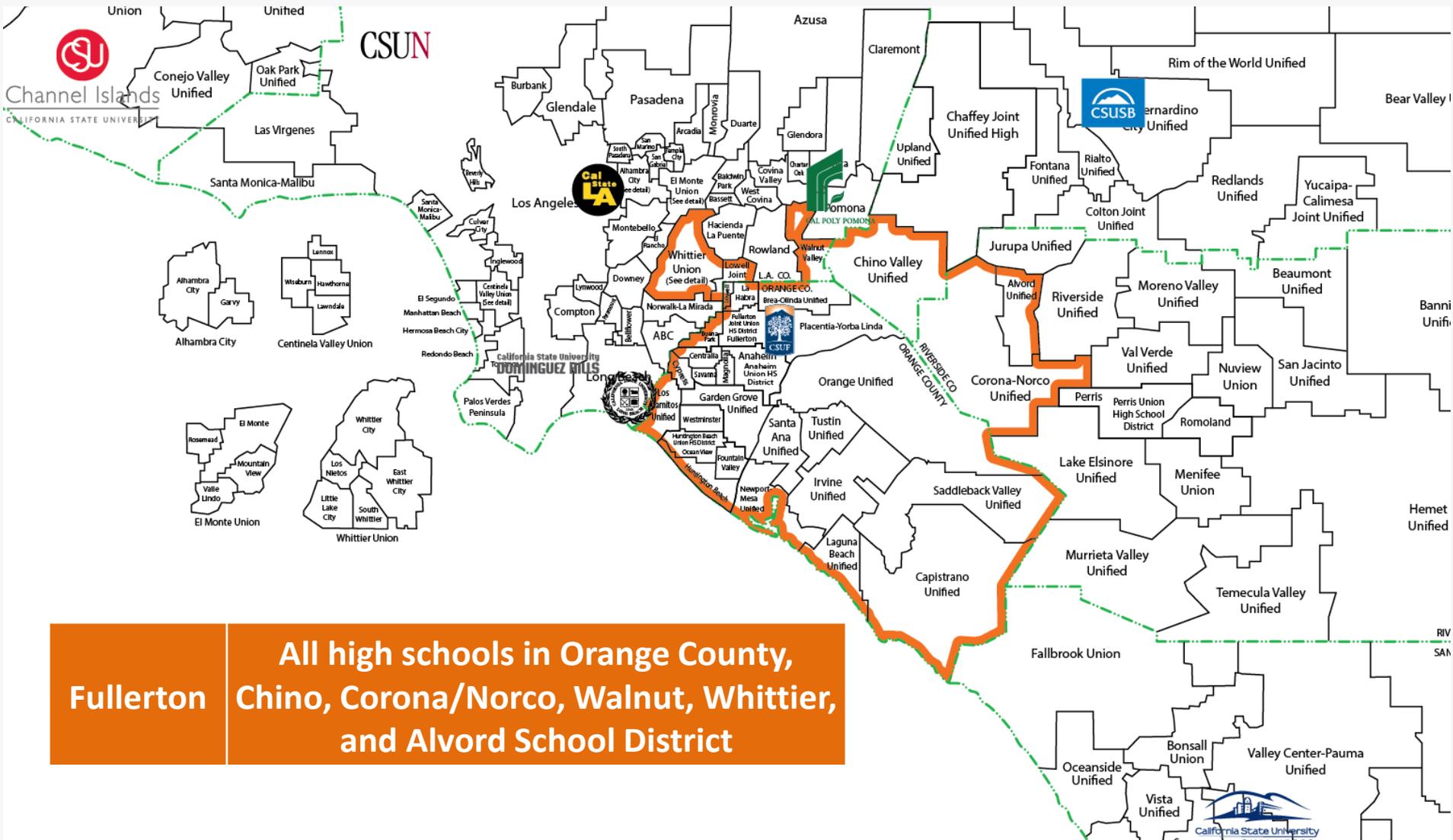
74%
 (4-year Grad Rates)

Post-Bac

LA BASIN CSU CAMPUS LOCAL ADMISSION AREA

Campus	First-Time Freshman	Upper-Division Transfer
Dominguez Hills	State of California	State of California
Fullerton	All high schools in Orange County, Chino, Corona/Norco, Walnut, Whittier, and Alvard School District	Majority of courses from or in combination with each of the community colleges in Orange County
Long Beach	The following school districts: ABC, Anaheim (Cypress and Oxford only) , Bellflower, Compton, Downey, Huntington Beach , Long Beach, Los Alamitos , and Paramount	30 units of coursework from Long Beach City College and/or Orange Coast, Golden West or Coast Community College
Los Angeles	All high schools located East to 605 freeway and the Los Angeles County Line, West to 405 freeway, South to Highway 42 (Firestone Blvd.), and North to LA County Line	Majority of coursework from or in combination with these community colleges: East LA College, Glendale City College, Los Angeles CC, Los Angeles Trade Tech, Pasadena City College, Rio Hondo College, Santa Monica College, Los Angeles Southwest College, and West Los Angeles College
Northridge	All high schools from main portion of Los Angeles County and all of Ventura County	State of California → now changing
Pomona	All high schools west of the 15 Freeway, north of the 60 Freeway, east of the 605 Freeway and south of the 210 Freeway (Walnut)	Majority of courses from Mt. San Antonio College or Citrus College or both
San Bernardino	The following school districts in San Bernardino County: Apple Valley, Chaffey, Colton, Fontana, Hesperia, Morongo, Redlands, Rialto, Rim of the World, San Bernardino City, Victor Valley, and Yucaipa. Riverside County: Banning, Beaumont, Coachella Valley, Desert Sands, Jurupa Valley, Moreno Valley, Palm Springs, and Riverside.	At least one unit from California Community Colleges in San Bernardino and Riverside Counties

***Bold Green denotes overlap with CSU Fullerton Local Admissions Area**



**All high schools in Orange County,
 Fullerton, Chino, Corona/Norco, Walnut, Whittier,
 and Alvard School District**





Upper-Division Transfers Local Admission Area

Majority of courses from or in combination with each of the community colleges in Orange County

FALL 2016 FIRST-TIME FRESHMEN MATRICULATED

TOP 30 HIGH SCHOOLS

Institution of Origin	# of Freshmen	Institution of Origin	# of Freshmen
La Quinta High	78	Valencia High	36
Hector G. Godinez	62	Sunny Hills High	35
Santiago High (Riverside Co.)	51	Santiago High (Orange Co.)	34
Diamond Bar High	48	John F. Kennedy High	33
Troy High	46	Santa Fe High	32
Ayala (Ruben S.) High	46	Brea-Olinda High	32
Garden Grove High	43	Rancho Alamitos High	32
Bolsa Grande High	41	Fullerton Union High	31
Walnut High	40	Esperanza High	30
Katella High	40	Loara High	30
Segerstrom High School	39	Santa Ana High	29
California High	38	Yorba Linda High	29
Canyon High	38	Savanna High	28
La Serna High	37	Chino Hills High	28
Buena Park High	36	El Dorado High	27

FALL 2016 TRANSFERS ARTICULATED

TOP 20 COMMUNITY COLLEGES

Institution of Origin	# of Transfers	Institution of Origin	# of Transfers
Fullerton College	675	Citrus Community College	64
Orange Coast College	485	Rio Hondo Community College	64
Santa Ana College	408	Cerritos Community College	52
Saddleback College	406	Riverside Community College	50
Santiago Canyon College	313	Pasadena City College	37
Irvine Valley College	302	East Los Angeles College	32
Cypress College	255	El Camino College	31
Golden West College	223	Long Beach City College	29
Mount San Antonio College	140	Coastline Community College	27
Chaffey Community College	69	Norco College	26

Bottleneck & Gateway Courses

Definition of Bottleneck:

Anything that limits a California State University (CSU) student's ability to make progress toward a degree and graduate in a timely manner can be called a bottleneck

(<http://www.calstate.edu/BOT/Agendas/sep13/EdPol.pdf>)

Type of Bottlenecks:

1. Student Readiness and Curricular Bottlenecks : low-success / high-enrollment bottleneck

Criteria:

- (i) % of Repeatable Grades ('C-', 'D+', 'D', 'D-', 'F', 'NC', 'WU')
- (ii) Course Enrollment Size

<http://www.fullerton.edu/analyticalstudies/student/grades/RepeatableCourseGrades.asp>

Type of Bottlenecks:

2. Place-bound Bottlenecks

Students are sometimes place-bound and have to wait for their campuses to schedule particular courses. These bottlenecks can be especially significant for students at smaller CSU campuses where diversity of course requirements compete for significantly limited resources.

CourseMatch (Inter-Campus Enrollment) offerings approved by Chancellor's Office to help other CSU students take courses online and complete degree requirements as follows:

*Spring 2015: **8** Course Sections approved by CO*

*Fall 2015: **5** Course Sections approved by CO*

*Spring 2016: **28** Course Sections approved by CO*

*Fall 2016: **5** Course Sections approved by CO*

*Spring 2017: **40** Course Sections approved by CO*

CourseMatch Winter / Spring 2016

***CourseMatch Funding from
Chancellor's Office
for Fullerton***



Campus	Amount
Bakersfield	\$ 10,200
East Bay	\$ 20,400
Los Angeles	\$ 20,400
Pomona	\$ 35,700
San Bernardino	\$ 20,400
Chico	\$ 10,200
Fullerton	\$ 91,800
Long Beach	\$ 5,100
San Francisco	\$ 20,400
San Jose	\$ 25,500
San Marcos	\$ -
Total	\$ 260,100

Type of Bottlenecks:

3. Advising Bottlenecks

Students may not graduate on time if they do not receive timely and accurate information on course requirements. To alleviate this bottleneck, the university has increased the number of advisors including *retention and graduation specialists* (17 total increase).

- Student Success Dashboard
- EAB Dashboard

Type of Bottlenecks:

4. High-Demand / Waiting-list Bottlenecks

IRAS analyzed scheduling database to identify waitlisted courses once registration by appointment for all student levels is completed.

- Waiting List Classes: SSI Funding
- Room Cap / Enrollment Cap Adjustment

How to relieve Bottlenecks

- ***Faculty Involvement*** (e.g. Faculty Development)
- ***Proactive Advising***
- ***Course Redesign***
- ***HIPS*** (High Impact Practices)
- ***Culturally-Responsive practices***
 - e.g. Supplemental Instruction, Learning Community
- ***Data-Driven Process***
 - : Course Analysis Dashboard developed by IRAS
 - : CourseMatch (Online Inter-Campus Enrollment) analysis
investigating effectiveness of online courses in comparison to
traditional face-to-face courses
 - : Identify waitlist courses with high-demand

Faculty Data

Faculty Data Dashboard:

<http://www.fullerton.edu/analyticalstudies/faculty/>

Tenured and Tenure-Track Faculty Headcount: 826 T/TT in fall 2015

<http://www.fullerton.edu/analyticalstudies/faculty/tenure.asp>

Tenured / Tenure-Track Faculty / Lecturer FTEF: 1302 FTEF in fall 2015

<http://www.fullerton.edu/analyticalstudies/faculty/FTEF.asp>

Faculty Diversity:

<http://www.fullerton.edu/analyticalstudies/faculty/demographics.asp>

T/TT Faculty Density:

<http://www.fullerton.edu/analyticalstudies/faculty/TTbyCollege.asp>

▶ **Our Goal**

- *“Higher Education Institutions are ultimately responsible for student retention” (Tinto, 2002)*

▶ **Faculty**

- *“What faculty think and value makes a difference” (Kuh, 2009)*



GOAL → Fostering Student Success

Q & A

CALIFORNIA STATE UNIVERSITY, FULLERTON › A

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Acayear	Headcount	Fall rb-FTES
2016-2017	40,235	32,306
2015-2016	38,948	31,405
2014-2015	38,128	30,819
2013-2014	38,325	30,777
2012-2013	37,677	30,287

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