

Undergraduate Pipeline Challenge

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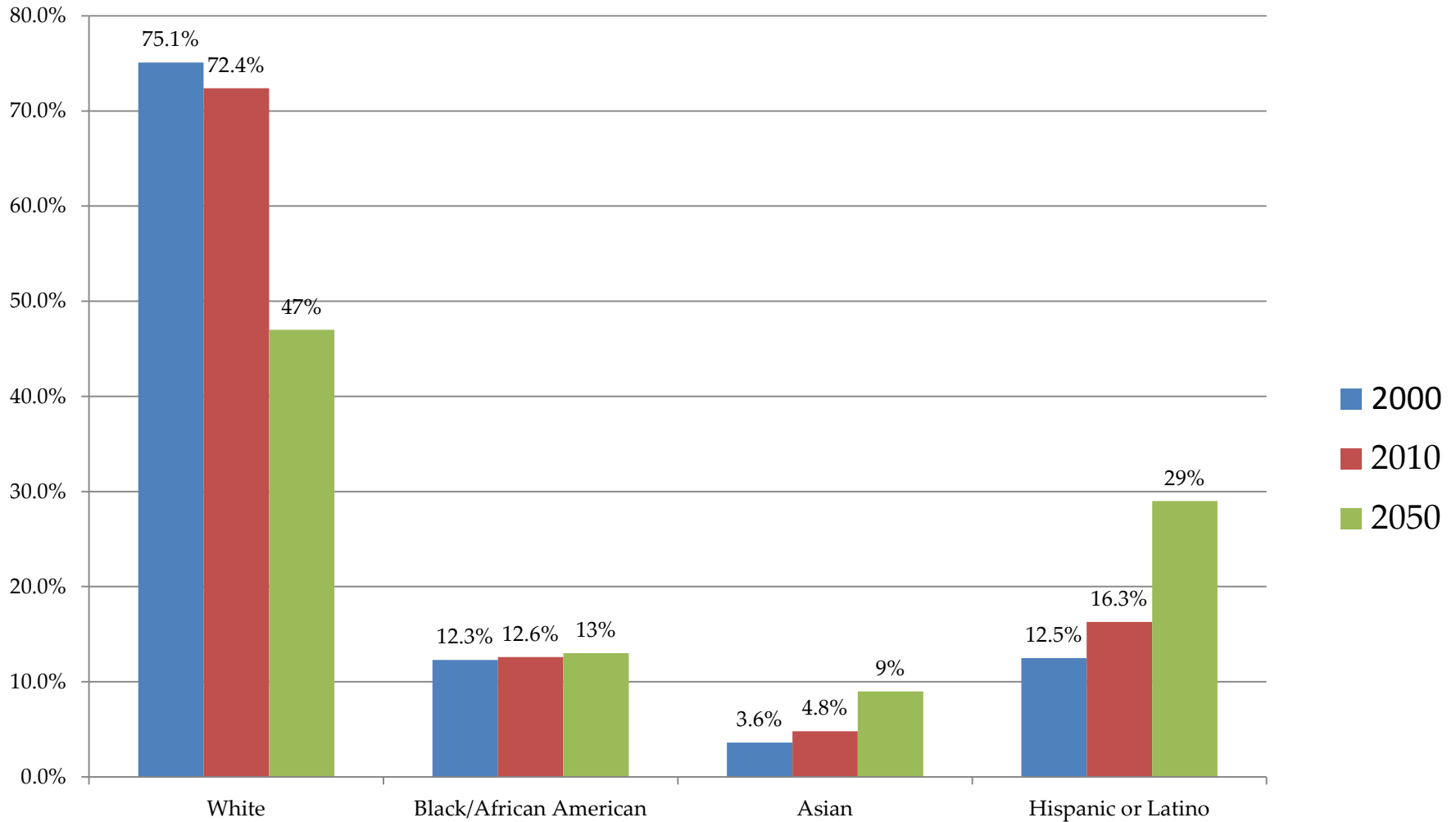
Betsy East
Associate Dean, Student Services

March 31, 2017

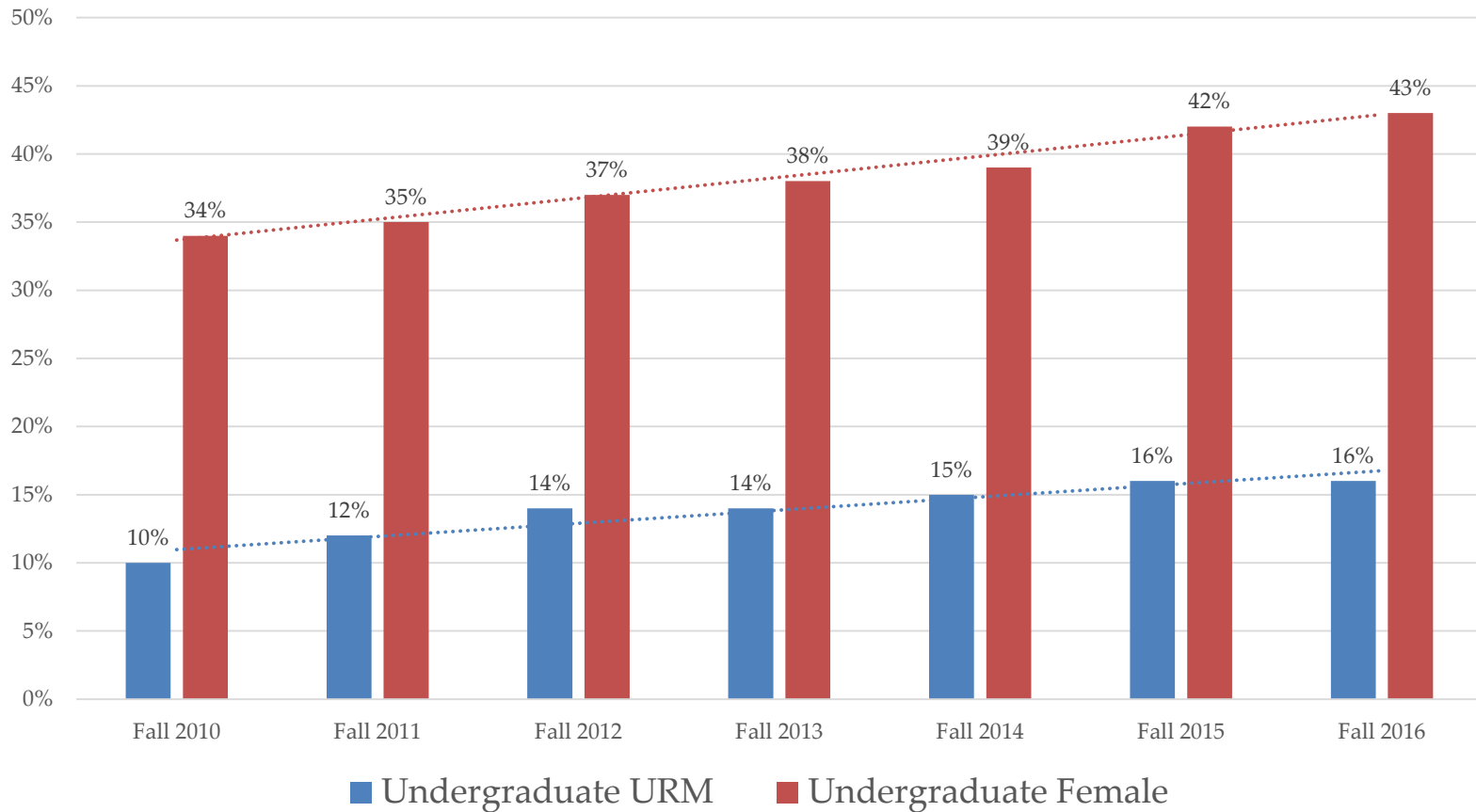
Outline

- Context
 - Current situation
 - Admissions Cycle
 - Recruitment/Yield
 - Selection
- Data
 - Perspective
 - Quality Indicators – Objective
- Summary

US Racial Composition: Census 2000, 2010, Projected 2050 (Projection by Pew)

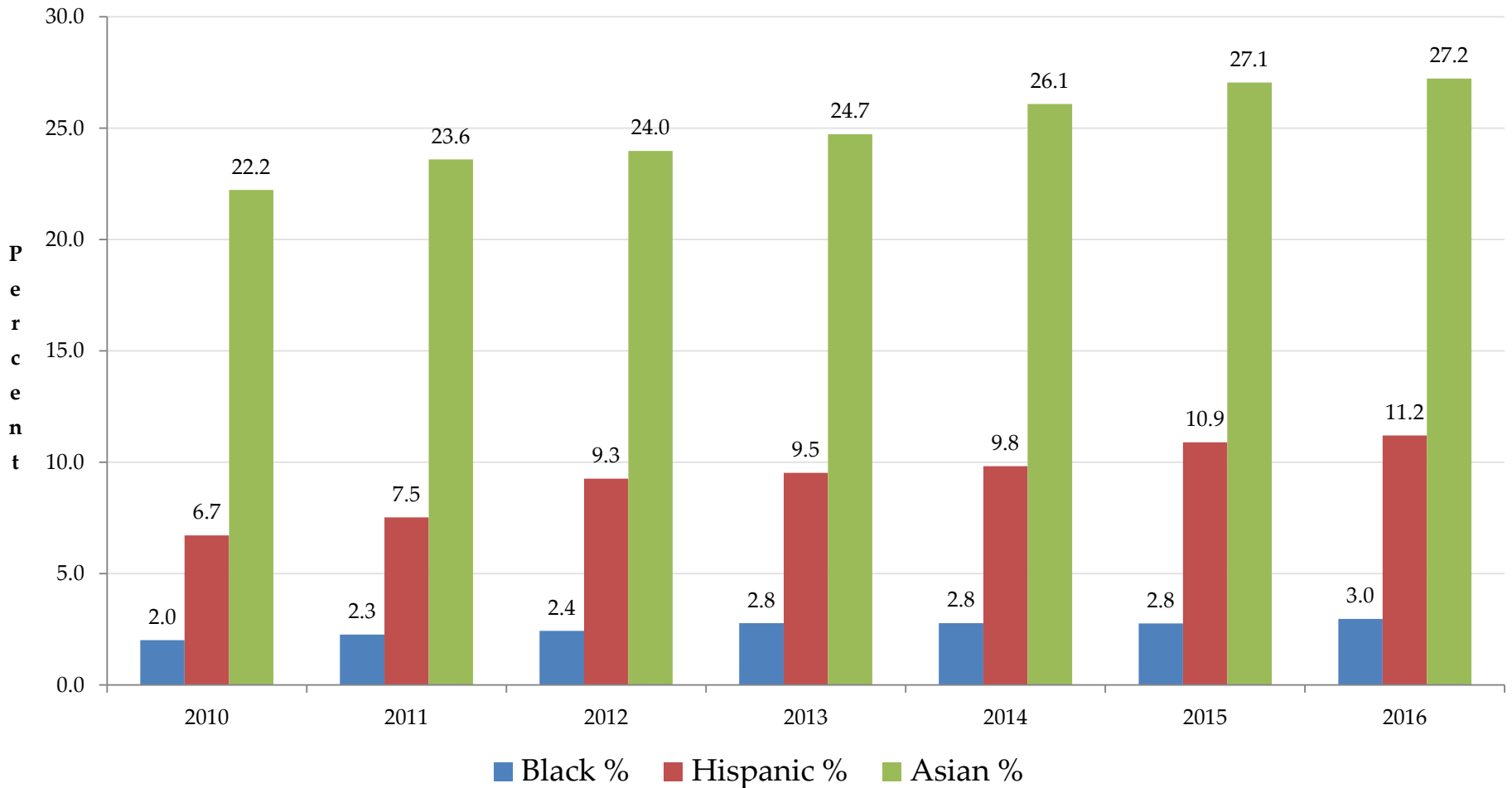


Enrollment – URM, Women



National (Fall 2015): Female 21.4%, URM 16.4%, Source ASEE

Enrollment by Ethnicity



How Did We Get Here - 20 Years of Effort

- Commitment from the top
 - College
 - University
- Collaboration
 - Diversity Programs in Engineering
 - University Admissions
 - Departments
- Faculty Assistance in recruitment and yield activities

A Year in Admissions

Cycle 1: Recruitment

May

June

July

August

September

October

Cycle 2: Selection

November

December

January

February

March

Cycle 3: Yield

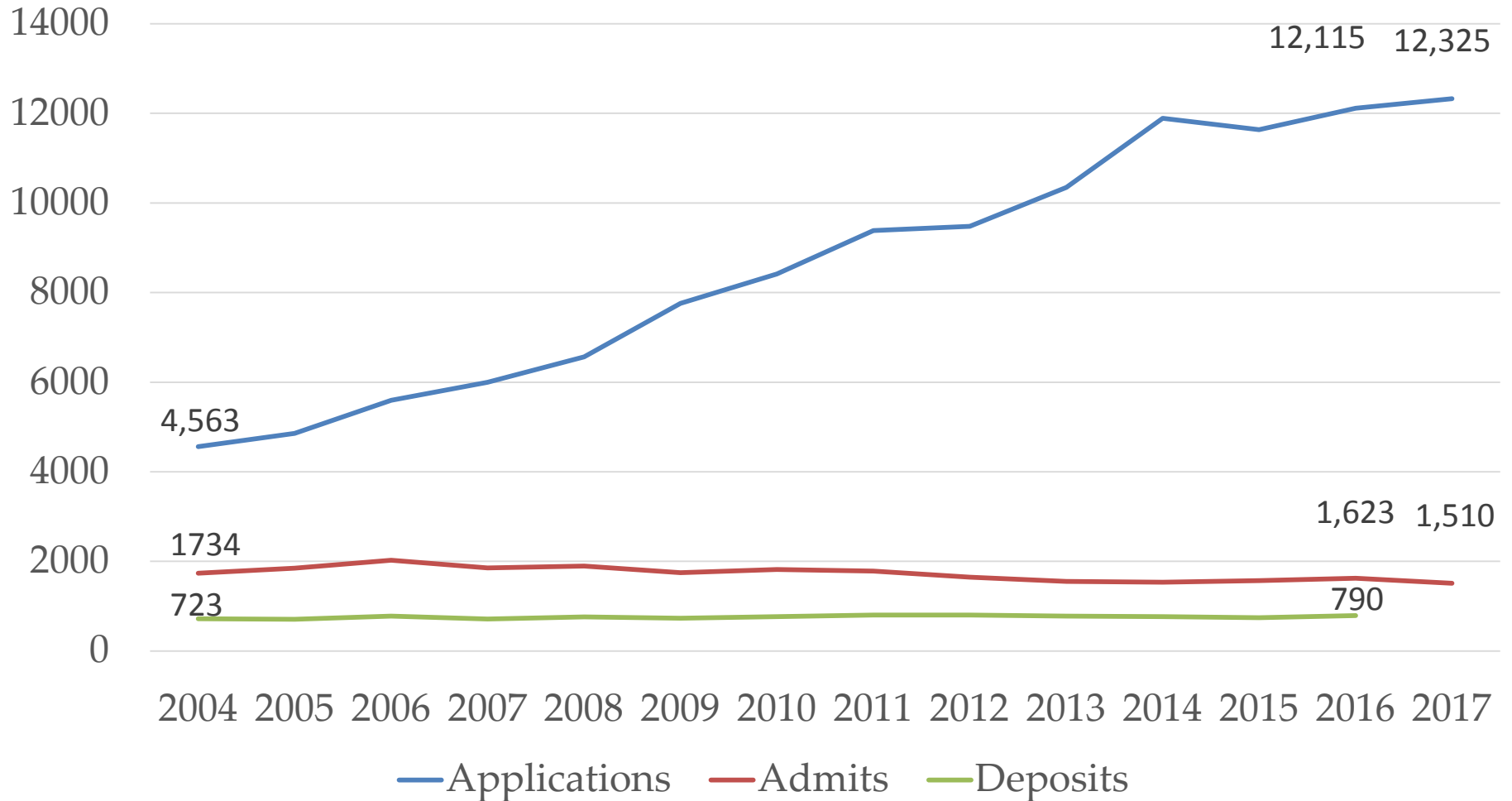
April

May

Recruitment and Yield

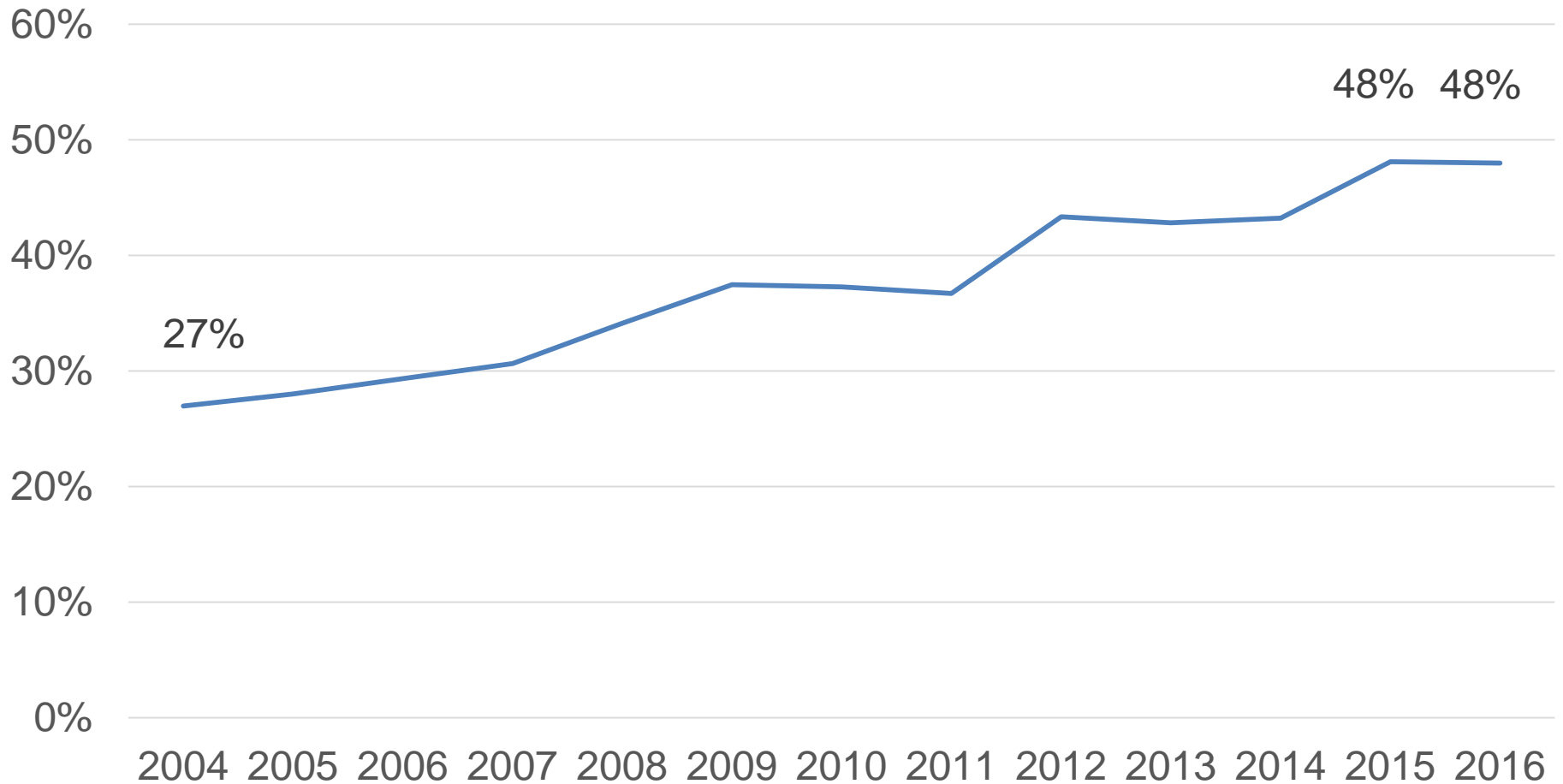
- Integrated communications plan
- AP and SAT – Prequalify the prospect pool
 - 84,170 prospective students in 2016
 - 1,348,847 emails delivered to prospects in 2016
- Multiple marketing mechanisms from paper publications to short, two-minute videos
- On campus information sessions and engineering tours
- Target high school math and science teachers, principals and guidance counselors in schools with priority populations
- Emails and videos to likely admits – focus on women, URM, and HEOP applicants
- Hosting programs for priority populations (EDHW, WIE, and DHM)

Results: The Total Class



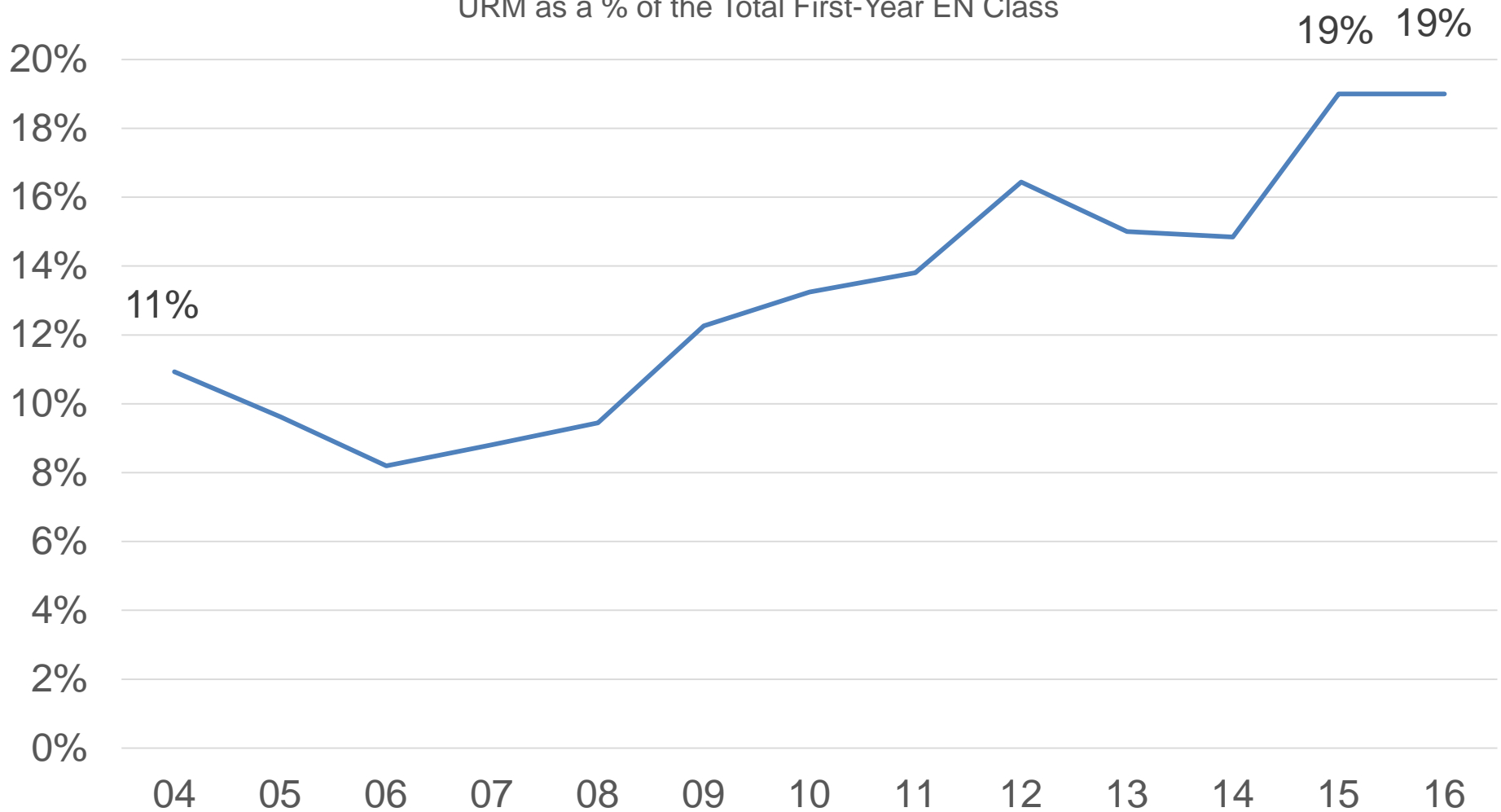
Results: Women

Women as a % of the Total First-Year EN Class



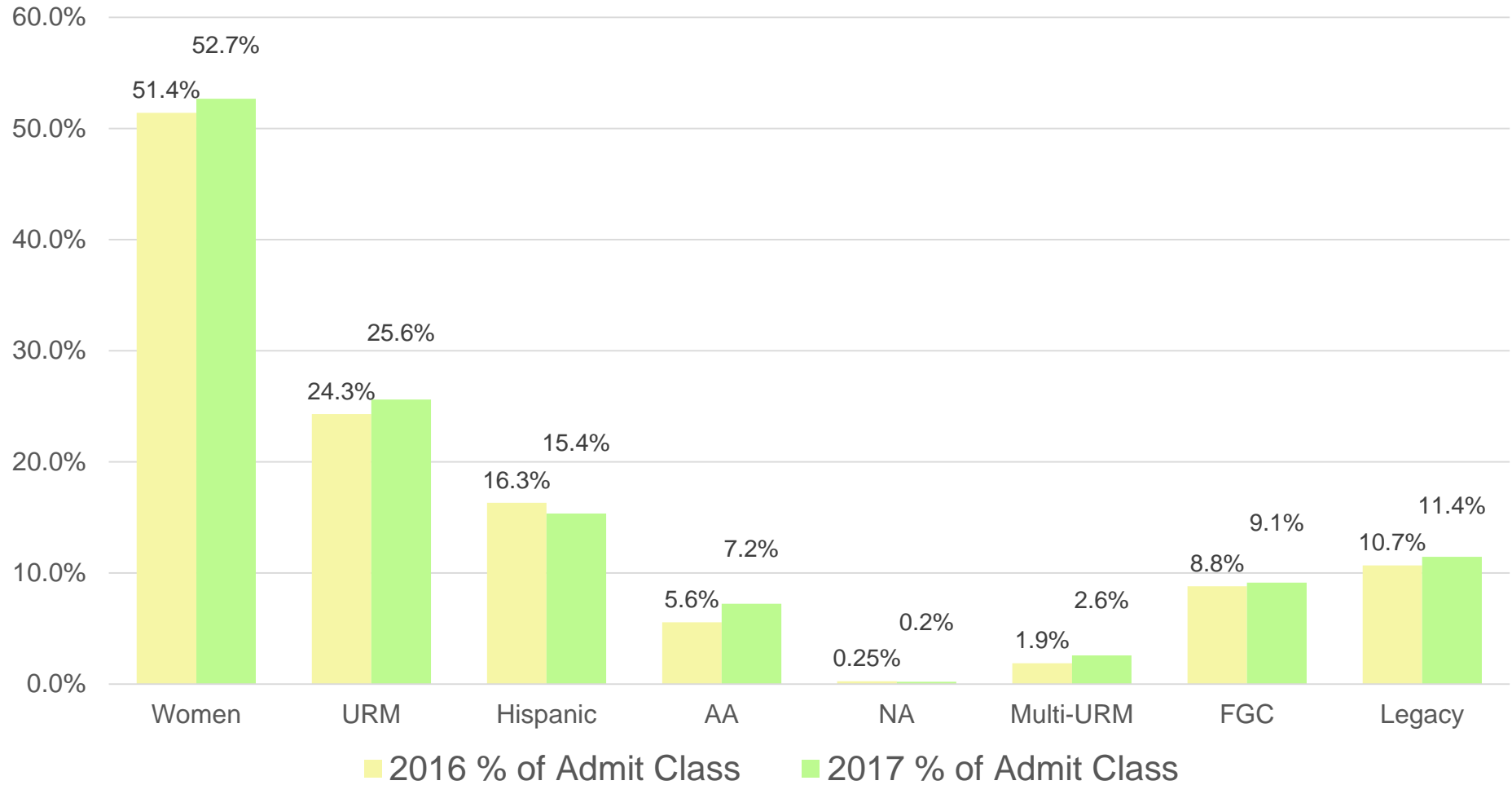
The Results: URM

URM as a % of the Total First-Year EN Class



Results

% of Total CoE Admitted Class by Group: 2016 and 2017



Selection – November to March

First-Year Students - 2017

- Applicants = 12,325 (1998 = 4,216)
- Admits 1,510,
- Enrollment target 780
- Team of 25 review the applicant pool

Transfer Students - 2016

- Applicants = 718 (1998 = 319)
- Admits = 54,
- Enrollees = 38
- EN Admissions pre-screen, EN departments select

Selection Criteria

- Academic Record
 - Grades
 - Strength of curriculum
 - Strength of school
 - Level of courses – challenged themselves with curriculum
 - Standardized test scores
- Depth of Engagement in community
 - Activities in school and community
 - Leadership
- Evidence of Engineering Interest
 - Content of interest statement
 - Participation in any kind of engineering or technical course, research, workshop, team
- Recommendations
- Content and depth of writing

Quality Indicators - Objective Data

Required for Application

- SAT 1
 - Math, Critical Reading
- SAT 2 Subject Tests
 - Math 1 or 2 and a Science

Optional

- AP Test Scores

SATs and College Success

- SAT scores most highly correlated with socio-economic status ($r=.42$)
- Moving up one income category is associated with a 12 point increase on any section of the SAT 1
- Take that into account during selection

Sources: New York Times: College Board Research Report No. 2009-1, *Socioeconomic Status and the Relationship Between the SAT® and Freshman GPA: An Analysis of Data from 41 Colleges and Universities*
SAT Scores and Family Income(2009)

Data

- Availability of prospects with selected score ranges
 - SAT 1 - Math
 - SAT 2 - Physics
 - AP Scores
- Women
- URM
 - African American

Data Sources:

SAT - College Board SAT Search via Cornell's institutional membership

AP Data: The College Board, Advanced Placement Program, National Summary Reports, 1997 – 2015

Will present proprietary data at meeting

Women - Summary

- Women taking advanced courses in math and science increased substantially
- Applicant pool increased substantially
 - Recruiting and availability
- Quality of applicants increased
- Critical Mass – as more women came, more women came
 - *Heard last week from woman in CS – “the reason I came to Cornell is because of the high percentage of women in the class”*

Underrepresented Minority - Summary

- Numbers taking advanced courses in math/science increased substantially but still low numbers
- Applicant pool increased
- Quality of applicants increased
- Very small pool of students – every engineering college is recruiting them heavily

Takeaways

- Recruiting efforts have increased substantially
- Prospect pool has skyrocketed over 20 years
- Applicant pool has tripled in 13 years
 - Women applications up substantially
 - URM applications expanded at slower rate
 - Quality of both pools gone up substantially
- Selection is complex
- Made a tremendous impact on the representation of women
- Less impact on URM, and particularly African American student representation
- Prospect pool for underrepresented minorities is very small