

ANSEP students go from 8th grade to a STEM BS degree in 5 years.

ANSEP.net





ALASKA NATIVE SCIENCE & ENGINEERING PROGRAM* (ANSEP) LOGIC MODEL

ASSESSING THE NEED INSTITUTIONAL CONTEXT ALASKA K-12 SYSTEM UNIVERSITY OF ALASKA STEM INDUSTRY Preparation for and awareness of STEM educational and career pathways Economic conditions and labor market • Policy and budget climate (K-12 system, University system, and federal, state, and local/village) Historical and social conditions for Alaska Natives STEM workforce interaction with Alaska Native communities Staff diversity and climate for Alaska Natives Teachers - Curriculum - Other resources Faculty and staff - Student social and academic supports Motivation and commitment to STEM search resources - State STEM career preparation Student diversity and climate for Alaska Natives Family and community resources STAFFING AND LEADERSHIP **FACILITIES** FUNDING PARTNERSHIPS **INPUTS** RECRUITMENT AND SELECTION **FUNCTIONAL ACTIVITIES** PARTNERSHIP AND RELATIONSHIP MANAGEMENT FINANCIAL MANAGEMENT FUNDRAISING MARKETING AND COMMUNICATIONS ALUMNI OUTREACH AND ACTIVITIES POLICY WORK AND ADVOCACY PROGRAMMATIC ACTIVITIES (COMPONENTS) K5 ACADEMY MIDDLE SCHOOL ACADEMY CAREER EXPLORATIONS ACCELERATION COMPONENTS SUMMER BRIDGE LINIVERSITY SUCCESS GRADUATE SUCCESS Recurrent component Freshman-veer academic preparation Performance requirements Computer assembly Hands on STEM modules Hands-on STEM modules
Team-bullding work
Academic preparation
Peer study groups
Weekly meetings and employer networking
Supports and advising
Supports and advising
Exposure is Allesta Native and other mentors
Scholarships for college Residential experience on campus Merit-based scholarships Math skill development Residential experience on campus Residential experience on campus Scholarships and financial support Hands-on STEM modules Team-building work Residential experience on campus Team -building work Hands-on STEM modules Supports and advising Paid internship Team-building work Social activities Team-building work Team-building work Supports and advising Paid internship Field trips Social activities Social activities Career awareness and exposure to other Social activities Peer study groups Field trips Fleid trips and other mentors Professionalization and skill-building Weekly meetings and employer networking Team-building work Exposure to Alaska Native and other mentors Exposure to Alaska Native and other mentors Exposure to Alaska Native and other mentors Study/social space and resources Exposure to Alaska Native and other mentors Scholarships for college Supports and advising Job-placement assistance Summer time Acceleration Academy • Residential experience on campus Informal mentoring/networking Teaching and research opportunities Full time Acceleration High School • Regular ANSEP high school Research exposure Exposure to Alaska Native and other mentors **OUTPUTS / SHORT-TERM OUTCOMES** Knowledge of college life Soft skills Leadership development Application to further ANSEP activities Social integration STEM professional identity and socialization ALASKA K-12 SYSTEM UNIVERSITY OF ALASKA STEM INDUSTRY Commitment to complete trigonometry, chemistry, and physics by end of high school Diversity rates - Diverse workforce - Retention rates - Resources Interns' work product - Alaska Native community relations Commitment to complete algebra by the end of 8th grade Retention at university Entry-level STEM employment Higher performing students returning to classroom -College application rates -Contact with university Retention in advanced degree Completion of Career Explorations Reinforcement of Middle School Academy experience Completion of Component, with college credits Completion of Summer Bridge. Completion of STEM major coursework Completion of Academy with college credits Application to university Excitement about STEM - Connection to academically focused peer group - Reinforcement of Alaska Native identity LONG-TERM OUTCOMES Knowledge about STEM education and occupations for parents, social networks, and sending communities ALASKA K-12 SYSTEM UNIVERSITY OF ALASKA STEM INDUSTRY Fool of qualified blastics.

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New of qualified blastics. Personal computer College-readiness for STEM field College enrollment College degree attainment Advanced degree attainment Career advancement and wages Commitment to STEM field Empowerment and leadership Commitment to Alaska Native community and Alaska Alaska Natives in leadership roles
Changing attitudes toward Alaska Natives and minorities
Greater sensitivity to diversity

*Adapted from Urban Institute (2015), Evaluation of the Alaska Native Science & Engineering Program (ANSEP), Research Report, Urban Institute, January 25, 2015



K- 5 Academy

K, 1st, 2nd, 3rd, 4th and 5th grade

Middle School Academy

5th, 6th, 7th and 8th grade

STEM Career Explorations

Returning Middle School Students

Acceleration Academy

9th—12th Grade

Summer Bridge

Incoming 1st year University Students

University Success

Undergraduate & Graduate Students

Alaska Grown PhD

Graduates Earn PhDs & Return as Faculty







K- 5 Academy K, 1st, 2nd, 3rd, 4th and 5th grade







Middle School Academy 5th, 6th, 7th and 8th grade























STEM Career Explorations Returning Middle School Students







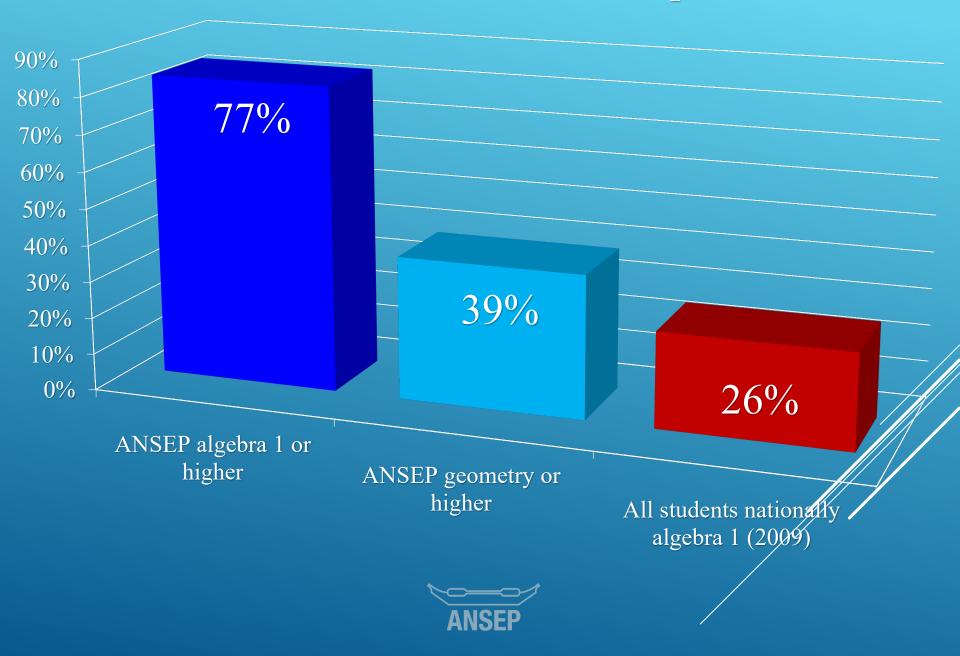








ANSEP 8th Grade Math Completion



Acceleration Academy 9th—12th Grade















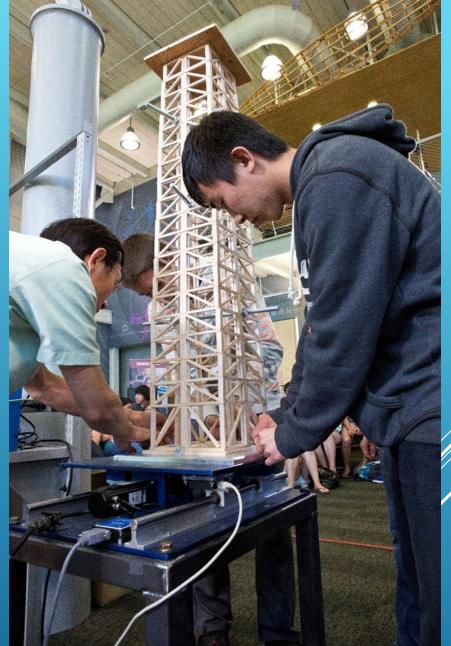














Summer Bridge Incoming 1st year University Students













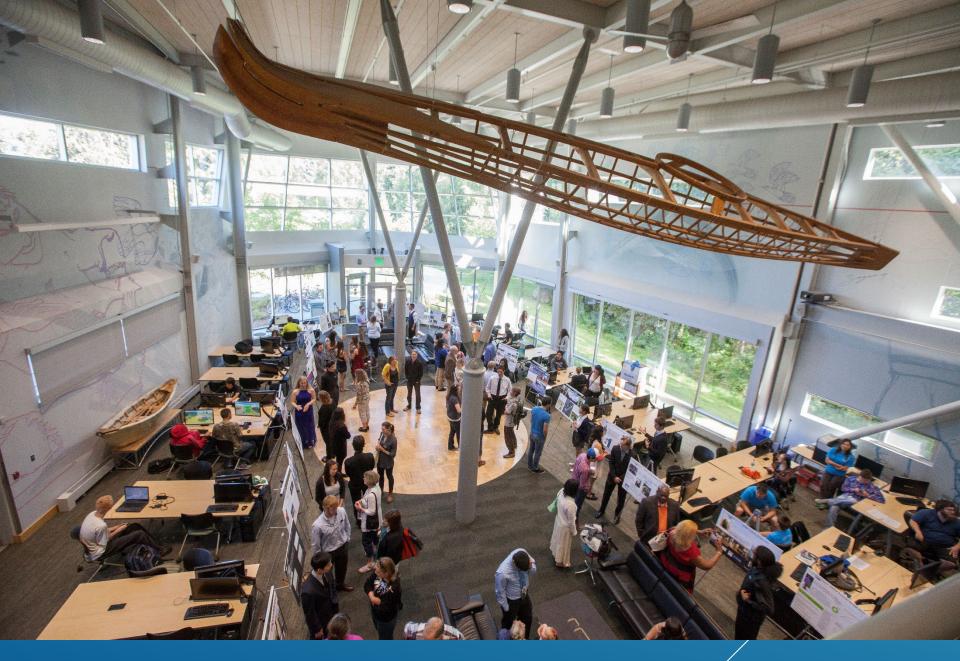














ANSEP Summer Bridge

Building a Strong Foundation for University and Professional Achievement

300 ——

250 ——

200 ——

150 ——

50 ——

95%

of students successfully transition to science or engineering BS degree programs

Participants 1998 - 2014

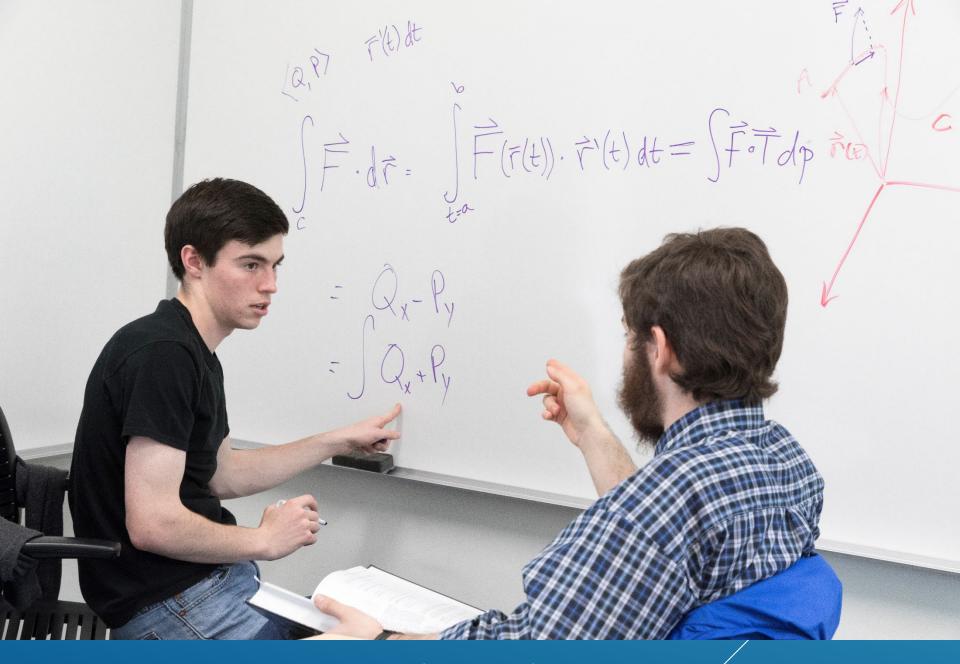


University Success
Undergraduate & Graduate Students











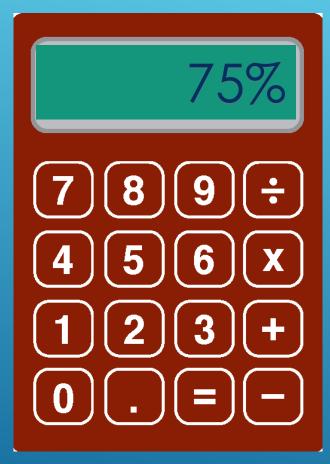








ANSEP University Success



Percentage of ANSEP students who have graduated or are currently enrolled



Grow Our Own PhD
Graduates Earn PhDs & Return as Faculty











Expected Cost to Government per UAA Baccalaureate Degree

Using the Fall 2013 University Cohort \$289,000

ANSEP Acceleration High School \$92,333



