

# Choose Ohio First

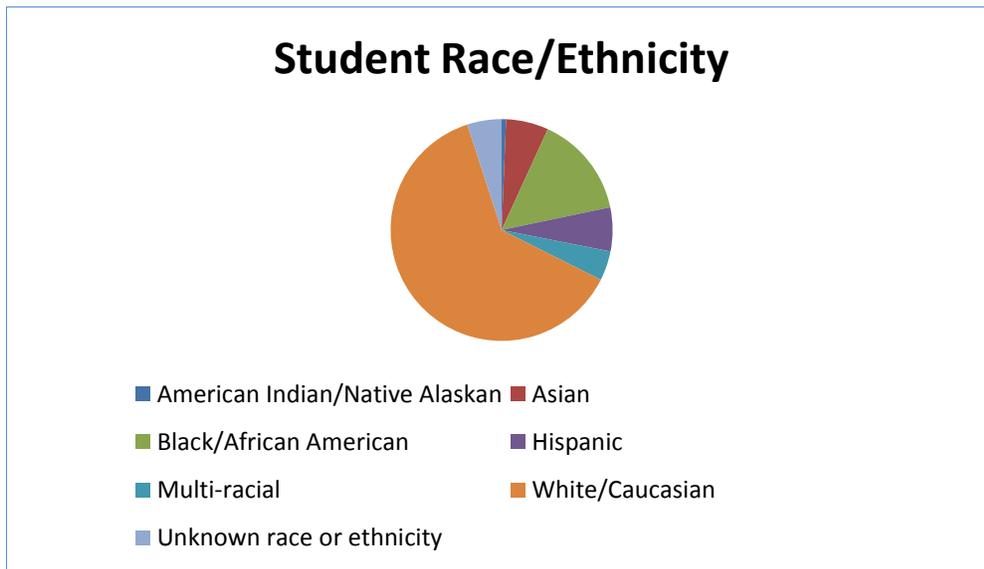
STEMM-related disciplines are critical to the future success of the state of Ohio and the nation. The primary objectives of the Choose Ohio First scholarship program are to support increased participation and retention of students majoring in STEMM and STEMM education fields and, in so doing, to advance the economic growth of each region of the state. Choose Ohio First has become the state's premier model for recruiting and retaining talented students in science, technology, engineering, mathematics and medicine (STEMM) and STEMM education fields.

To date, **nearly \$15 million** has been awarded to nearly **4500 Choose Ohio First Scholars** attending an Ohio college or university. The institutions where the students are enrolled have contributed an additional **\$32.6 million dollars in cost-share**. Matching funds are used to revise and develop new curriculum in the STEMM disciplines awarded COF funds, supplement student travel to industry conferences and research symposia, and leverage the involvement of businesses in the professional development of Ohio's future innovators. Factoring in the Woodrow Wilson Teaching Fellowship campuses, **42 public and private campuses** around the state receive Choose Ohio First funds. **In the spring of 2011, the Chancellor announced that the University of Dayton, the University of Toledo, and Ohio University would become Woodrow Wilson Teaching Fellowship institutions.** In addition to John Carroll University, the University of Akron, the University of Cincinnati, and the Ohio State University, the seven campuses are poised to create **375 highly qualified teachers in mathematics and science**, with a potential impact on the lives of thousands of secondary students. The Choose Ohio First Woodrow Wilson Teaching Fellowship program is made possible through Choose Ohio First, the Race to the Top initiative and **\$2.4 million dollars in support from private foundations**. The COF scholarship program ensures that an increased number of students enter into the STEMM disciplines and graduate from the most innovative and rigorous programs that the state has to offer. As of the last update performed by the Ohio Board of Regents, the total number of STEM degrees awarded at Ohio's public colleges and universities **increased from 25,666 total students in 2007 to 30,875 total students in 2010.** As more students choose STEMM, the number of students graduating with STEMM degrees will continue to increase as well. Choose Ohio First is a major strategy to ensure that degree attainment in STEMM continues to rise.

## **CHOOSE OHIO FIRST 2.0**

In the fall of 2010, a request for application was released to campuses interested in offering Choose Ohio First scholarships. Through the **COF Programs of Innovation**, campuses submitted applications for 87 innovative degree programs in various fields. After a rigorous review and evaluation process, 44 degree programs will be eligible to offer Choose Ohio First Scholarships in the Fall of 2012. The majors include physics, environmental genetics, aeronautics, and geospatial technology. Six additional campuses have also been added to the roster of Choose Ohio First institutions, namely Heidelberg University, North Central State College, Notre Dame College, Ohio Northern University, Washington State Community College, and Zane State College.

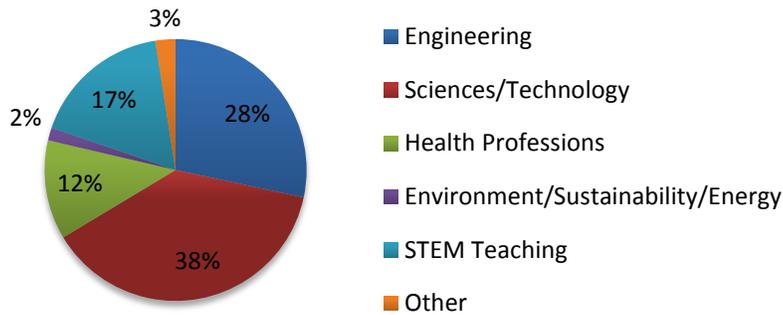
## Choose Ohio First Demographic Data



**Over 32% of Choose Ohio First scholars are from a racial or ethnic minority.** Several programs have the sole focus of increasing the number of ethnic minorities in the STEMM fields, including the DO-STEM project at Central State University. Over 14% of COF Scholars are African American and 6% are Hispanic/Latino. While the American Indian population in COF is still relatively low (n=26), the number of American Indian students has increased by 400% since the start of Choose Ohio First.

Approximately 49% of Choose Ohio First scholars are female and 13% of the male COF scholars choose non-traditional career fields such as nursing. Nearly **10% of COF Scholars are non-traditional students, including those over the age of 25.** The majority (89%) study at Ohio's community and technical colleges (2-year campuses). The Scholars over the age of 25 are predominately laid-off/displaced workers retraining for a new career. Additional questions are being created for an annual student survey that will determine previous job areas and their correlation to the new career fields. A comprehensive external evaluation is also being conducted to assess COF impact on the regional economies touched by the program. **An executive summary accompanies this report, with the full data summary being made available in January.**

## Choose Ohio First Student Majors<sup>1</sup>



<sup>1</sup> Data as reported from Choose Ohio First campuses, August 2011

Two-thirds of Choose Ohio First Scholars are in an engineering discipline, a physical science, or a technological major. Health professions showed a small increase over last year's enrollment, but **STEM teaching enrollments more than doubled**. This can be attributed to the increased focus on the importance of highly trained STEM teachers at the state and national levels. **The Choose Ohio First Woodrow Wilson Teaching Fellowship (WWF)** has now expanded to seven institutions through the support of the Race to the Top federal program (UC, UT, OSU, OU, JCU, UD, & UA). The existing and new fellows produced by the program will comprise nearly 375 new, highly qualified STEM teachers for the state of Ohio, impacting thousands of secondary students in Ohio's high need rural and urban districts each year. The WWF program also positively impacted the number of graduate students, with campuses reporting more scholars enrolling in a STEM graduate or professional program.

## Choose Ohio First Program Descriptions

Several Choose Ohio First programs reach out to secondary students to ensure early exposure to concepts and subjects central to success in the STEM disciplines. This allows middle and high school students, both affluent and at-risk, to see value in a STEM career and to provide them with the tools necessary to succeed is critical to increasing the number of STEM graduates in Ohio. For example:

- **#08.04 - Integrated Science Training for Northeast Ohio's Future Biomedical and Biotechnology Workforce**
  - This project led by Kent State University hopes to increase the number of high school students who choose biology, biotechnology, chemistry, or physics as their major, improve retention in the sciences, and establish new pedagogical initiatives. By providing students with an interdisciplinary learning experience, the project will increase the number of students that participate in research experiences and internships, and positively impact the number of underrepresented students in science. A pathway from a community college setting to a 4-year campus is made clear to students who may be non-traditional.
  - **The institutions work with many middle and high schools to encourage interest and proficiency in STEM fields.** Efforts include the development of inquiry-based continuing education experiences for partnering middle schools' teachers (MSTIK); the donation of equipment and assistance to middle school students; the development of innovative education tools, workshops, & laboratory experiences, through which high school students and community organizations can learn about relevant material; and participation in the Upward Bound program.
  - Enrollment in the COF-related disciplines is up 4.56% over last year and graduation rates are 10% better than what would be predicted based on levels of student preparedness.
  
- **#08.09 - Student Success in Mathematics**
  - The project led by Cleveland State University engages students early on to ensure preparedness for college curriculum.
  - This program's **outreach efforts centers on partnerships and dual-enrollment opportunities with partner high schools, in order to ensure that an increased number of entering college freshmen are proficient in mathematics.** In terms of being awarded a COF scholarship, high priority is given to student who completed the COFSP Summer Bridge program as juniors in high school.
  - Students complement their academic studies with internships and undergraduate research opportunities, both at and outside of their respective institutions. These **opportunities are advertised through presentations by university faculty and local business/industry leaders, who currently employ STEM scholars in internship and/or professional roles,** as well as through corporate tours and career counseling.
  - Numerous community engagement alternatives are given to COFSP scholars, including volunteering with programs offered by the Martha Holden Jennings Foundation, the National Inventors' Hall of Fame, the Igniting Streams of Learning Science (ISLS) Summer Teaching Institute, and the Explore Robotics program.

- **#09.08 – The Cincinnati STEM Hub Partnership: A new model for preparing the next generation of dynamic and innovative secondary STEM educators**
  - The University of Cincinnati works collaboratively with Taft Elementary and Hughes STEM High School, enhancing the quality of STEM instruction by **providing research-based STEM coursework for all teachers in all disciplines.**
  - The program encourages future teachers to consider teaching in an urban area (particularly Cincinnati).
  - Investigates the efficacy of an **innovative model of STEM teaching preparation**, beginning with project-based, real-world STEM learning experiences in K-12.
  
- **#09.38 – Improving Retention and Learning of STEM Students Through Learning Communities**
  - Hiram College and partners main goal is to encourage Igniting Streams of Learning in Science (ISLS) high school alumni to pursue STEM majors in college.
  - The project has awarded 125% of the proposed recruitment goal in only the second year.
  - ISLS offers high school students an opportunity to learn about scientific concepts early on. Once on campus, the COF scholars participate in learning communities to improve learning and outcomes.
  - **The project is using the data collected from the COF scholars to evaluate the effectiveness of the learning community pedagogy as a way to enhance learning.**

**Choose Ohio First projects offer a mechanism for students to be engaged in a rigorous academic curriculum, while gaining real world experience applicable in a STEMM field.**

Offering students flexible class options and diversified learning streams allows students to be focused in the classroom and focused while participating in a cooperative learning opportunity or internship. This early exposure to the real world applicability of their major reduces the likelihood that graduates will choose employment in another field. For instance:

- **#08.29 - Growing the STEMM Pipeline in the Dayton Region – Becoming an International Center of Excellence for Human Effectiveness/Human Performance**
  - Led by Wright State University the partnership **employs a curriculum-sharing model** via the creation of the Dayton Area Undergraduate Studies Institute (DAUSI), modeled after the very successful Dayton Area Graduate Studies Institute (DAGSI), **to provide all Choose Ohio First Scholars**, no matter their home institution, **easy and affordable access to curricula** in targeted STEMM areas.
  - Students are becoming well-rounded STEM scholars through internships and co-ops at various Dayton-area businesses, including WPAFB, Reynolds and Reynolds, Booz Allen Hamilton, Miami Valley Hospital, and many others.
  - COF scholars are engaged in professional-level work, including writing for and being involved with National Science Foundation grants, attending and presenting at national conferences, and taking professional level examinations (e.g., the Fundamentals of Engineering test) prior to graduation.
  
- **#08.27 - Choose Ohio First for Engineering Entrepreneurship (COFEE) Scholarship**

- Led by the University of Toledo, the program equips students with the education necessary to simultaneously work on their engineering or science degrees and learn the entrepreneurial skills necessary to translate their innovations into economic growth for Ohio.
  - **All COFFEE scholars participate in a formal co-op or internship program.**
- **#08.08 - Choose Ohio First Engaged Program in Bioscience and Healthcare**
    - Cleveland State University, along with public and private partners, trains students along interdisciplinary bio-related and healthcare-related STEM pathways for the creation of an entrepreneurial minded workforce. The project also works with industry partners and key stakeholders to increase the preparedness of Ohio's students in addressing complex challenges in bioscience and healthcare. These collaborations create a continuum of educational opportunities that support and accelerate regional economic development priorities.
    - This program has a **strong focus on experiential learning**, requiring that students participate in research, varied entrepreneurship activities/ training, and **co-ops/internships with partnering companies such as Jumpstart, BioEnterprise, & the Cleveland Clinic Foundation.**
    - Out of 45 COF scholars that conducted research, **71% presented their research at scientific symposia.** COF students are also given opportunities to pitch their ideas to relevant business in order to win competitive funding.
- **#08.10 - Science and Math Education in ACTION**
    - Bowling Green State University and partners have created an innovative program that will substantially increase the number of highly effective science and math teachers in Ohio. The curriculum expands on the teacher as researcher philosophy and students participate in a practicum experience during their second year.
    - BGSU's program requires that scholars participate in a bridge program before their freshman year, a group research project during their freshman year, a business/ industry practicum (partners include BioFit, DayMark, Sysco, etc.) during their sophomore year , **and a pedagogical research project during their junior/ senior years**, to ensure continued engagement and practical learning experience throughout their undergraduate career.
    - The Fall 2011 cohort of COF scholars is the most advanced yet when compared to other incoming freshman. At BGSU, the cohort 3 scholars have an average **high school GPA of 4.06 compared to a 3.25 high school GPA** of other incoming freshman. The average ACT composite score of cohort 3 scholars is **27.8 compared to a 22** score for other incoming freshman.
- **#08.15 – Choose Ohio First for Bioinformatics**
    - Ohio University and partners enhance the interaction between departments to positively impact the students' educational experience.

- A pipeline program has been established to allow students to **earn a BS and a Masters in Bioinformatics in 5.5 years.**
  - Students must **actively conduct research** and present their findings at industry conferences every year. Several students are also co-authors on research papers presented at professional conferences.
  - Many students add the experiences from the classroom onto their resumes providing a tangible link from the classroom to the workplace.
- **#08.33 – Building the Nursing Workforce in Northeastern Ohio**
    - Case Western University and Cleveland State aim to increase the number of highly-qualified nursing graduates in the northeastern part of the state.
- **#09.25 – Building Ohio’s Sustainable Energy Future**
    - The University of Toledo and partners aim to increase the number of undergraduates prepared for careers or further graduate training in areas related to renewable energy and the environment.
    - Entering freshman participate in the Academic Investment in Math and Science (AIMS), which has been shown to increase their academic performance during the first year.
    - Students at community colleges in the area (i.e., Owens, Terra, and Northwest State) have access to coordinated program content and advising activities so they can easily enter baccalaureate degree programs at the partner 4-year institutions.
    - The program places emphasis in the selection process on women and minorities, in order to increase the presence of underrepresented and underprivileged groups prepared for careers in renewable energy and the environment.
    - **Students complete research projects that analyze the viability of solar, wind, and biomass energy sources relevant to policymakers in Ohio.** Some students are working on **real-world environmental issues** for organizations and municipalities.
- **#08.03 – Strengthening the STEM Pipeline through Student Preparation, Awareness, Teacher Education, and Building Partnerships with K-12**
    - The University of Cincinnati is dedicated to significantly increasing the higher education participation and success of students entering STEM through the Tech Prep Consortium pathway.
    - The innovative academic supports aim to increase the participation and preparation of students entering PK-8 STEM teaching careers, create highly qualified mathematics and science teachers for grades PK-8, prepare teachers to be expert mentors and coaches in STEM education, and increase the retention of math and science teachers in Ohio.
    - **Resources are provided that expand access to STEM majors, STEM co-op and internships placements, innovative academic support programs, and an ambitious advising and mentoring structure.**
    - Three graduating scholars have accepted STEM teaching positions in Ohio.

**Non-traditional students and those underrepresented in higher education, including low-income or first generation students, are given the opportunity to excel as a result of Choose Ohio First.** Programs offer the financial assistance necessary for challenged students to enroll and remain in postsecondary education, while ensuring students are engaged in a rigorous curriculum that prepares them for employment in the Knowledge Economy. For example:

- **#08.13 – The “Innovation Alliance: STEM Undergraduate Engagement in an Engineering Environment”**
  - The University of Akron, Baldwin Wallace College, Stark State College, and Lorain County Community College have established a system whereby **institutional cost-share dollars are used for administration, advising, facility upgrades, and other important needs of the COFSP.**
  - To date, the Alliance has served **950 unduplicated students** through Choose Ohio First.
  - The scholars are involved in research and design activities that will assist in retention of students to produce additional STEM graduates above and beyond the existing graduation rates of the institutions. A further goal is to graduate at least 70% of participants with a four-year STEM degree and at least 30% of the participants with an associate’s degree.
  - Potential scholars at UA are even given greater consideration if they are socioeconomically disadvantaged, veterans, or transfer students from out-of-state. Because of this and other outreach factors, **this program has a particularly high concentration of first-generation student scholars (56% at UA, 82% at BWC), non-traditional and veteran students (15% at UA), and minority students (28% at UA).** Going forward the program has also had success in enrolling **students from Appalachia (13% at UA).**
  - Baldwin-Wallace College has experienced **a net increase in STEM disciplines from 12.8% of the student body in 2008 to 14.1% in 2011.**
  - The Alliance at University of Akron is one of the few Choose Ohio First programs with full-time, dedicated staff. **The director, educational specialists, and secretary are all full-time.** There are also 10 peer mentors that are part of the team.
  - **In the 2009-2012 academic year, the graduation rate for COF students who were eligible was 100%.**
  
- **#08.20 – “Diversifying Ohio in STEM (DO-STEM)”**
  - Central State University and partners **place significant emphasis on recruitment of minority scholars, particularly African Americans, who comprise the vast majority of this program’s student base (92.5%).**
  - **Central State has retained and graduated 80% of the students that started in the 2008 academic year.**
  - CSU undergraduate scholars are required to participate in both graduate school visits and professional workshops as a condition of their scholarship. Similarly, Sinclair Community College scholars engage in regular meetings, which keep them apprised of the Ohio job market and university opportunities.
  - While this program’s scholars are not required to participate in an internship, a number have done so, both in and out of the state. **Employers include ZIN Technologies, Avetec, Wright Patterson Air Force Base, NASA, and Los Alamos National Laboratories.**

Scholars are also given the opportunity to work at national research laboratories through National Science Foundation and National Nuclear Security Administration grants.

- **#08.02 – “Diversifying Yield and Retention in Engineering, Mathematics, and Science”**
  - The University of Cincinnati’s program was used to leverage a \$2 million NSF Type 1 STEP grant.
  - The significant retention efforts begin with a recommended **7-week bridge program for socioeconomically disadvantaged and first-generation scholars and/or a more targeted virtual program for those whose math placement test scores were low (ALEKS)**. ALL summer bridge student enroll in Supplemental Cooperative Learning Courses in Calculus, Chemistry, and Physics.
  - From the 2009 cohort, there is **100% retention as they enter junior year (n=59)**. The 2010 cohort shows 92% are retained for sophomore year.
  - **All scholars are expected to participate in six quarters of co-op work**, expanding on the strengths of UC’s well-established co-op program. The development of a Corporate Mentoring Program increases the STEM internships available for COF scholars and has resulted in a mentoring practice model that can be used throughout the state.
  - All scholars are required to participate in 10 hours per quarter of volunteer service, **aimed at strengthening ties to the community and gaining greater social/ cultural understanding**.
  - The program has identified **Best Practices** that may aid other programs in attracting, retaining, and graduating STEM scholars. The best practices are: 1) monitor academic progress at regular intervals, 2) first-year and sophomore learning communities (could be living/learning), 3) bridge programming, 4) individual meetings with program coordinator as intervention and support.
  - The comprehensive assessment shows that students feel the programs gives connections and academic preparedness that is not available to other students, but still caution students thinking about entering COF to be prepared to sacrifice and work hard.
  
- **#09.09 – Creating Affordable and Effective Educational Pathways in Information Technology**
  - Wilmington College and partners are working to create seamless pathways between public and private campuses, including 2-year and 4-year institutions, in order to dramatically increase the number of low-income and first-generation students that enter into information technology.
  
- **#09.17 – STEM Degrees and Careers for Ohioans with Disabilities, including Veterans: COF Scholarships in Support of the NSF-Funded Regional Alliance in Disability (OSAA)**
  - Ohio’s population of persons with disabilities is a largely untapped resource for meeting the demand of STEM professionals for the state.

- High school students with disabilities are recruited into STEM majors and transitioned through STEM academies, learning communities, mentoring, and residential experiences on campus to develop independent living skills.
- Ability Advising allows the campus to meet the needs of the student through review of academic progress, arranging technological accommodations, and tutoring assistance. The Ability Advising also fosters tailored opportunities for STEM co-op and internship experiences.
- **#09.28 – Choose Appalachian Teaching (CAT)**
  - The program led by Ohio University aims to strengthen the regional capacity of rural southern and eastern Ohio (Appalachia) by providing scholarship, particularly for first-generation students, to pursue undergraduate degrees.
  - 75% of the CAT scholars have been retained in the program. The majority of the students who left the program have stayed on campus, but in a non-STEM major.
  - A Freshman Learning Community has been established to support CAT scholars.  
**Webinars and videoconferencing have also been used to connect students from the various partner campuses to help close the geographic distances present in rural Ohio.**

**Nearly 20% of the Choose Ohio First students spent the 2010-2011 academic year at a community or technical college, or at a branch campus of a university.** Displaced workers often have to make tough choices about their education and the feasibility of entering careers that require additional training. The presence of Choose Ohio First on a community college campus increases the likelihood that laid-off workers will return to school to either enhance their skills for employment in their current industry or be trained for a different career field altogether. As examples:

- **#08.41 – The “URG Choose Ohio First STEM Scholarship Program”**
  - The University of Rio Grande, Rio Grande Community College, Hocking College, and Ohio University show the median GPA is 3.6 for students in the program.
  - The RGCC Scholars in Nursing, Fine Woodworking, and Power Plant Management programs have **completed internships with local companies, including Holzer, Adena, and American Electric Power.**
  - All COF scholars are required to attend at least 2 seminar/colloquium series presentations.
- **#09.41 – “Future Scientists of Ohio”**
  - The Ohio State University and Columbus State Community College aim to support non-traditional and low-income students in STEM by providing them a pathway to higher education from a two-year to a four-year campus.
  - Approximately **25% of the students are from underrepresented groups. 40% are non-traditional students** returning to college to complete STEM degrees.

- Approximately 80% of the scholars met the requirements to have their scholarships renewed for the second year.
  - All students in this program begin at Columbus State, including a **bridge program** that prepares returning students for the rigor they will soon encounter. The collaboration has also implemented a mandatory **mentoring program** to better address the needs of their unique population.
  - Ohio State offers shared courses to students and research experiences are offered on site for Columbus State's students.
  - **Program was used to leverage a NSF grant.**
- **#09.06 – Enhancing the Success of Future Health Professionals through Synergistic Cross-Collegiate Programming**
    - The University of Cincinnati, primarily through the branch campuses and the collaboration with two community colleges, is positively impacting the number of students with a high academic caliber from diverse and economically disadvantaged backgrounds. First-generation scholars who meet all other requirements are given priority status.
    - The average GPA is 3.63 for a COF scholar. In addition to maintaining academic standards students must also attend workshops, seminars, and presentations.
    - Students participate in clinical experiences at medical and rehabilitation facilities. **ALL students are required to complete presentations as a part of the program.**

**Nearly 12% of COF scholars are housed at Ohio's private colleges and universities.** Partnership and collaboration among the University System of Ohio's public colleges and universities and the private institutions around the state have resulted in more students being served, and more efficient use of Ohio's fiscal and human resources. For instance:

- **#08.33 – “Building the Nursing Workforce in Northeastern Ohio”**
  - Case Western Reserve University and Cleveland State University are addressing a particular workforce need of their region within the state.
  - **This program consists entirely of graduate programs in nursing**, students for which are recruited from the partner institutions' BSN and accelerated degree programs.
  - The aim is to increase not only the number of qualified candidates for nursing positions but also **the future number of individuals qualified to teach such in such degree programs.**
  - COF scholars must engage in a research project, in conjunction with senior researchers and are also encouraged to attend local and regional events related to the field of nursing.
- **#08.35 – “Pharmacy Scholarships”**
  - Ursuline College and the University of Toledo offer scholarships to students entering into the pre-pharmacy program at Ursuline.

- Students enter into the pre-pharmacy program at Ursuline with the understanding that they will be admitted into the pharmacy program at the University of Toledo after their second year.
  - Pharmacy Camps are held for rising high school seniors, with the hope that they will enroll in the program.
  - The recruitment activities focus on students who are from underrepresented backgrounds, including first generation students and those from high schools identified as Continuous Improvement, Academic Watch, or Emergency. **The retention activities include mentoring, entrance into professional organizations, and programs targeted toward the background of the student (first-generation connections, cultural awareness, etc.).**
- **#08.23 – Ohio House of Science and Engineering: Success in STEM through Collaboration Choose Ohio First Scholarships**
    - Muskingum University, along with lead campus Ohio State University and the partner campus University of Cincinnati, has built a strong community of STEM scholars from more than 25 majors (n=176).
    - The **retention rates** for the Choose Ohio First program are notable (**92% at OSU, 85% at MU, and 91% at UC**). The overall retention rate for non-COF students is 81%.
    - Students in this partnership are required to fulfill 40 hours of service each quarter.
    - The **average GPA is 3.36 for a COF scholar**. Furthermore, 21 COF scholars have received their National Mentoring Certifications.
    - Through the mentoring program, the COF scholars have directly impacted the lives of other students throughout the state. Working with 5 elementary schools and 2 high schools, the preliminary feedback from the sites suggest that **90% of the students who participated in the tutoring/mentoring sessions showed an increased interest in attending college.**
  - **#09.36 – Northeast Ohio Biosciences Pathway Initiative**
    - Ashland University and partners will prepare bioscience workers that will sustain regional economic development in agricultural bioscience and research/testing/medical laboratories (RTML).
    - By the end of the first year, COF students are expected to have a GPA of 3.0 or better. By the end of their 2<sup>nd</sup> or 3<sup>rd</sup> year, the expectation is a **3.25 GPA or higher**.
    - COF students are actively engaged by faculty in STEM-related research endeavors.
    - The program works closely with the Office of Disability Student Services, to ensure that students are provided with the resources and guidance to excel.
    - The community college partners make the pathway to a baccalaureate degree clear for all students who enter the program.
    - The program at Ashland has substantially **increased the number of incoming students with a declared major in the in the bioscience areas.**

**Choose Ohio First offers graduate students an opportunity to excel in STEM fields. Graduate students comprise approximately 11% of the total number of Choose Ohio First students, an assurance that individuals seeking to obtain advanced degrees in subjects like engineering,**

science, mathematics, etc., are able to receive financial assistance from this program as well. As examples:

- **#08.12 – “Improving STEM Teacher Preparation: A Long Term Investment (D-STEM)”**
  - Miami University and partners aim to increase the number of highly qualified new STEM teachers.
  - This partnership improves the STEM teaching force by increasing the number of highly qualified new teachers through high caliber undergraduate education, diversifying the STEM teaching pool, and decreasing the attrition rate of STEM teachers through their induction period.
  - Scholars include individuals from minority populations, and will meet Ohio’s future workforce needs of individuals who are prepared to teach the STEMM graduates of the future at the college level. Current students provide tutoring support at the secondary level and **are engaged in activities that cultivate teachers for urban environments**.
  - Students pursuing graduate degrees in Environmental Science and Chemistry **are preparing to pursue careers in research and ultimately the professoriate**. Scholars are involved with learning communities that provide enrichment opportunities, enhanced academic support, and access to innovative courses designed specifically to enhance the STEMM experience.
  - The **UT program centers on a rigorous, field-based program** and it was a key element of the Woodrow Wilson Teaching Fellowship grant awarded in the summer of 2011.
  - The project also provides scholarships to existing STEM teachers who are interested in a Master’s degree and/or endorsements in their subject areas.
  
- **#09.07 – Master Degrees as Conduits to Recruiting, Retaining, and Upgrading the Ohio STEM Workforce**
  - The University of Cincinnati program is designed to attract students into the Master’s program and ultimately medical school.
  - The program actively recruits students to complete a graduate degree, leading to more Ohioans with advanced degrees.
  - With a goal to recruit more underrepresented and economically disadvantaged students into the field of medical physics, the program has established partnerships to identify eligible undergraduates through the active engagement of minority alumnae.
  - Academic advising is key, with students receiving extensive mentoring and professional development along with being required to work on research projects throughout their time in the doctoral program.
  
- **#09.26 – Engineering Across the Pipeline**
  - The goal for Cleveland State University and partners is to increase the number of students entering the engineering profession at the graduate level, particularly through the use of an **accelerated “4+1” model**.
  - Each COF student’s experience is customized, with one-on-one interactions to identify opportunities and connections, incorporate activities, and tailor events toward specific majors.
  - Course enrollments and grades are reviewed mid-semester and at the end of the semester to identify opportunities for additional supports that will increase student success.

- For AY 2010-2011 the overall retention for the program has been 100%.
- #08.01 – Coming Out of the Pipeline: The UC Interdisciplinary Pathway to STEM Professionals
  - The University of Cincinnati has an overarching goal of generating an experiential pathway to a STEM career focusing on students in the mid- to late-collegiate undergraduate years as well as in graduate education.
  - By providing co-op opportunities, students are given direct employment experience in STEM by Ohio companies who donate \$10 million each year in support of UC STEM students, including the COF scholars.

## Moving Ahead

The Choose Ohio First Scholarship program continues to move forward and, when possible, opportunities for the growth and expansion of the program are implemented. A website that will house the information for Choose Ohio First will be constructed by actual Choose Ohio First scholars, and many campuses have made substantial progress in marketing COF using social media and other online materials.

## COF 2.0 and Beyond

In the 2010-11 academic year, the Choose Ohio First Scholarship Program saw tremendous growth. Over 4000 Scholars have been awarded. The 2010-2011 year also saw the expansion of the Choose Ohio First Woodrow Wilson Teaching Fellowship program. The four campuses already selected for hosting the Fellows, were joined by 3 additional campuses in the through the Race to the Top initiative, with the hopes of producing 375 highly qualified STEM teachers for the state. **The Choose Ohio First Woodrow Wilson STEM Teaching Fellows Program has already begun with the inaugural class of fellows, and has begun to recruit high-potential individuals with backgrounds in science, technology, engineering, and mathematics for the new campuses.** The Fellows will be asked to make a three year teaching commitment in Ohio in exchange for graduate level teacher preparation in the STEM fields. Four institutions in Ohio will be chosen to transform their programs of teacher preparation into the strong collaborative and innovative programs necessary to produce these high-quality teachers.

The data from the Choose Ohio First campuses has also become more robust and meaningful. A comprehensive evaluation is being conducted with Choose Ohio First Scholars, with data available soon after the New Year. Both quantitative and qualitative measures will be included in the evaluation and will provide insight into student satisfaction with the Choose Ohio First Scholarship program from a statewide perspective. As we move quickly toward the fourth year of the program and, thus, the first “official” graduating class of Choose Ohio First Scholars will also be able to begin collecting data on the degree attainment of graduates and the retention Choose Ohio First Scholars in the Ohio workforce. Feedback from the campuses also indicated that collecting student GPAs was critical in highlighting the value of the program.

Choose Ohio First is also beginning to move toward an understanding of how the program might work best, in addition to articulating the significance and need for such a program. As the scholarship is available on more campuses, in more disciplines, the goal is to ensure that every student no matter where they want to study can have access to applying for a Choose Ohio First award.