

Choose Ohio First

“Simply put, the Choose Ohio First Scholarship Program is the reason I made it to college.” – Ashley Ruple, BWC COF

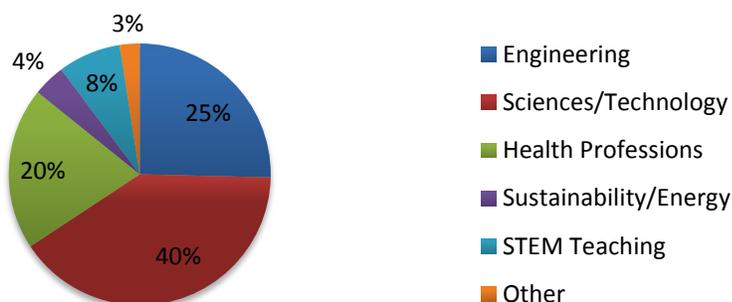
The 2009 academic year was the inaugural year of the Choose Ohio First (COF) scholarship program—the state's premier model for recruiting and retaining talented students in science, technology, engineering, mathematics and medicine (STEMM) and STEMM education fields. The primary objectives of the Choose 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.

The Chancellor selected **17 Choose Ohio First programs** for awards in two rounds during the 2009-10 academic year. Final selections were made based on the recommendations provided by national experts in the STEMM disciplines. The programs selected were determined to be innovative and rigorous and to have the most potential for advancing Ohio's position in the world markets including information technology, healthcare, sustainable energy, engineering, teacher education and science.

This year nearly **\$3.5 million dollars** was awarded to more than **1250 students** attending an Ohio college or university in a COF scholarship program. The institutions where the students are enrolled have contributed **\$6.3 million dollars in cost-shared funds**. 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. In FY2008, the year prior to Choose Ohio First, campuses reported granting 25,752 STEMM and STEMM-related degrees. In FY2009, campuses granted 26,637 STEMM and STEMM-related degrees. Choose Ohio First is a major strategy of the Chancellor's Strategic Plan for Higher Education in Ohio to ensure that degree attainment continues to rise.

Demographic data, including race/ethnicity, age, gender, first-generation status, and information about laid-off/displaced workforce involvement in Choose Ohio First, is being collected from all of the campuses. Early results suggest that 41% of the Choose Ohio First Scholars are female, and several programs have the sole focus of increasing the number of ethnic minorities in the STEMM fields.

Choose Ohio First Student Majors¹



¹ Data as reported from Choose Ohio First campuses, November 2009

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

- The DO-STEM program led by Central State University partners with urban, at-risk school districts such as Dayton Public Schools and Springfield City Schools. Targeting students who typically do not choose STEM careers, including minority students, results in additional students in the STEM pipeline – many of whom may have felt college was not an option at all. The DO-STEM program has graduated or retained 84% of the Choose Ohio First Scholarship recipients from the first year.
- More than 55% of the students in the *Bioscience* program at Baldwin-Wallace College are first generation college students. In the *Engineering Across the Pipeline* project at Baldwin-Wallace, 100% of students in the program are underrepresented in higher education or their field.
- The University of Cincinnati through the *Ohio House of Science and Engineering* project reaches back to the secondary level by interacting with high school students through visits, tours of the science facilities on campus, and presentations. UC also engages students in the summer before their freshman year with an on campus bridge program that solidifies the learning communities the students will be involved in for the remainder of their tenure.

Other 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:

- Students in the bioscience and healthcare Choose Ohio First program at Cleveland State University are gaining significant research experience, with awardees presenting their research at scientific meetings and symposia.
- 70% of Clark State Community College Choose Ohio First students participated in a co-op or internship, due to the *Growing STEMM in the Dayton Region* Choose Ohio First project. Many of these co-ops and internships are in the field of aviation technology.
- The Ohio University *Bioinformatics* Choose Ohio First project has worked to organize multi-institutional certificate programs in bioinformatics so that the various institutions in the project can share courses and offer those courses statewide. Because of flexible course offerings, students are able to attend seminars and meetings required by the Bioscience project, and present their research at various conferences.
- With the Governor’s goal of making Ohio a “green” state, several COF programs are preparing students for green jobs and making sure they have exposure to the field long before graduation. Hocking College and the University of Rio Grande have awarded students in the fields of conservation and management, environmental science, and power plant management.

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.

- Non-traditional students, including veterans, students who are working full time, and students who are returning to school after being away for several years, comprise 13% of the University of Akron's *Innovation Alliance Choose Ohio First Scholarship Program*. Another 38% of the students in the program are low-income as indicated by Pell-eligibility or are participants in TRiO, a program aimed at educational opportunity.

Nearly 24% of the Choose Ohio First students spent the 2008-2009 academic year at a community or technical college. Displaced workers often have to make tough choices about their education and the feasibility of entering careers that require additional training. Choose Ohio First's presence 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 an example:

- At Sinclair Community College displaced workers are being given the opportunity to train in STEMM disciplines, primarily engineering, science, technology, and mathematics, to be competitive for one of the over 1200 jobs that will be relocated to Wright-Patterson Air Force Base in Dayton by 2011. By starting their education at Sinclair these members of the returning workforce will be able to take the classes they need affordably and flexibly, and will be given the opportunity to complete their bachelor's degree through Wright State University, the University of Dayton, or Central State University.
- The Kent State University project involves creating a pipeline into Kent from four community colleges, Cuyahoga Community College, Lakeland Community College, Stark State College of Technology, and Lorain Community College. With community college enrollment booming, the partnership is built upon existing relationships the colleges have with local industry and creates a clear pathway for students to begin their education at the two-year campus, move into a baccalaureate degree program at Kent State, and ultimately enter the biomedical and biotechnological workforce.

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:

- The University of Rio Grande has the unique position of being a private institution that shares its campus with a public community college, Rio Grande Community College. In addition, the University also partners with Hocking College and Ohio University for its initiative, *URG Choose Ohio First STEM Scholarship Program*. The program addresses the specific workforce needs of the rural, Appalachian area of southeastern Ohio, and is working to ensure that the students of this region are given the opportunity for an affordable education by encouraging students to

complete a two-year degree at either Rio Grande Community College or Hocking College, and then completing a baccalaureate or graduate degree at the University of Rio Grande or Ohio University.

- A partnership between Case Western Reserve University and Cleveland State will combat the nursing shortage present in northeast Ohio by increasing the number of talented nursing students who are committed to completing the advanced degrees needed to become nursing faculty. The students, known as Nursing Fellows, are assigned mentors, attend seminars, and present at industry workshops. The program will graduate 40 additional nursing faculty prepared to teach at Ohio's institutions of higher education.

Graduate students comprise 17.5% 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 one example:

- The Choose Ohio First Scholarship at Miami University offers scholarships to students interested in pursuing graduate degrees in STEM disciplines. The Miami University students, pursuing graduate degrees in Environmental Science and Chemistry, are preparing to pursue careers in research and ultimately the professoriate. These graduate students are drawn from a predominately minority population, and will meet Ohio's future workforce needs of individuals who are prepared to teach the STEM graduates of the future at the college level.
- While the *Science and Math Education in Action* project encourages student success by a summer bridge program at Bowling Green State University for incoming Choose Ohio First freshman, the program also links students to the University of Findlay, which offers graduate students co-op and practicum experiences, including internships at Marathon-Ashland Petroleum, Cooper Tire and Rubber, and Plumblin Solutions. This will shape the real world applications of their work in math and science in their future careers as teachers.

Challenges Identified in the First Year

While the Scholars who have been awarded are a testament to the program's success, several administrative challenges were identified in the first year. A delay in the dispersal of funds and the subsequent ability of campuses to award scholarships resulted in many students not being identified until the Winter or Spring quarter/semester. The state fiscal year does not match the academic year, resulting in some campuses hesitating to make official awards to students. With the core of the problem identified, the process has been streamlined for future years. Campuses will be given official notification of their award amounts earlier in the year, and will allow recruitment efforts for Choose Ohio First Scholars to occur prior to students making final decisions on where to attend.

Choose Ohio First campuses submitted data about STEM degree attainment. While the numbers are promising and show an increase in the number of STEM degrees granted at Choose Ohio First institutions, the data regarding impact, retention, and the net addition of students to the STEM disciplines will not be fully realized until the data for the 2009-10 academic year is submitted. The 2009-10 academic year is the first year where all three rounds of the program will be serving students in 41 public and private colleges and universities around the state.

Another challenge arose in the difficulty of marketing the unique and varied Choose Ohio First programs implemented around the state. Despite the shared overall goal of increasing the number of STEM graduates in Ohio, sharing the innovations in each program would result in 28 different project descriptions. Going forward, the staff at the Ohio Board of Regents will ensure that Choose Ohio First is marketed to highlight the number of students being supported, the amount of cost share being committed by the Ohio's public and private institutions of higher education, and the quality of the academic programs the Choose Ohio First Scholars are enrolled in. The funded projects will move into the second year with the intent of recruiting more students, identifying new and innovative internships for their students, and a focus on ensuring that the public and the scholars are aware that the degree programs involved with Choose Ohio First are not only the most rigorous in Ohio, but are among the most rigorous and innovative in the country.

COF 2009-2010 and Beyond

In the 2009-10 academic year, the Choose Ohio First Scholarship Program is poised for growth. All three rounds of awarded projects will be serving students around the state. With the first two rounds of Choose Ohio First projects having produced more than 1200 scholars, programs starting their first year or entering their second year in the fall of 2009 **will award nearly 1000 additional students close to \$4 million in scholarship funding during the 2010 academic year.** The data from the Choose Ohio First campuses in 2010 will also become more robust and meaningful. The FY2010 data will include a cohort of Choose Ohio First Scholars that have had the advantage of a full year of study within the program. With some students planning to graduate by the end of the 2010 academic year, Choose Ohio First 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.

"On my most difficult days, I am reminded often by the STEM (Choose Ohio First) program that my goals are not unattainable and that it is vitally important for myself and my community that I become the new face of what it means to be a science scholar." -Leanne Woods, UofA COF Scholar

Choose Ohio First has encouraged the institutions that house the Scholars to be innovative and forward-thinking in their efforts to develop models of recruiting and retaining high quality students in the STEM disciplines. The Choose Ohio First Scholarship allows students who have the access to preparation and the ability to excel the opportunity focus on their studies and not on the limitation of financial resources.

In the 2009-2010 Choose Ohio First academic year, campuses are prepared to highlight the various collaborations and partnerships occurring throughout the state. Bringing together Choose Ohio First programs by region will allow the partnerships to make connections between the students and faculty, STEM business and industry, and other local organizations that are working to better the economic vitality of the area, while still highlighting the diversity that makes each project unique. Programs ranging from such innovative education strategies as ensuring the success of students with disabilities to preparing students for the green jobs of tomorrow are sure to assist the state of Ohio in reaching the Governor's goal of enrolling 230,000 more students and put those enrollees on the path to being successful in their chosen field of STEM and STEM education.

Another facet of the Choose Ohio First Scholarship Program is the introduction of Choose Ohio First Woodrow Wilson Fellows. Many students who are engaged in the STEMM disciplines have not thought about teaching as a profession. Individuals who obtained their degree in a STEMM discipline with the hopes of a career in the private sector have a passion for the subject that would be an added benefit as a teacher in a secondary classroom. **The Choose Ohio First Woodrow Wilson STEM Teaching Fellows Program will recruit high-potential individuals with backgrounds in science, technology, engineering, and mathematics into graduate programs that will prepare them to serve as teachers for Ohio's high need urban and rural school districts.** 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.