

Seymour & Esther Padnos College of Engineering & Computing

Action Area 1: Access and Equity - Recruitment and Retention (faculty, staff, students)					
University Goal	University Strategy	PCEC Objectives	PCEC Implementation Initiatives	Measures	Progress
Increase the presence of faculty from underrepresented groups (Latino, Native American, African American), LGBT, international and faculty with disabilities	<p>Utilize university Affirmative Action Plan to identify under-utilization of minorities and women</p> <p>Network with diverse professional associates.</p> <p>Advertise in diverse publications</p>	<p><i>Continue to enrich an already diverse faculty (focus = female participation/based upon university data)</i></p> <p>2009 Baseline: - PCEC Female = 12.5% (19% - 20% avail.) (U) - PCEC URE = 30.4% (6.1% - 6.4% avail.) - GVSU URE = 15%</p> <p>Note: Affiliates are included in PCEC data</p> <p>Note: URE = Under-represented ethnicity</p> <p>Note: U = Under-represented</p>	<p>Utilize university data (O)</p> <p>Advertise in diverse publications and online resources (O)</p> <p>Maintain & expand visibility within diverse organizations including NSBE, SWE, etc. (O) -SWE Conf activities -NSBE Conf activities -ASEE MIND Division -WIC Conf</p> <p>Utilize NSF Advance Project materials, lessons learned, techniques, etc.</p> <p>Train Inclusion Advocates for Search and Personnel</p>	<p>PCEC demographics -vs- available population per I&E reports</p> <p>Trends in under-represented populations in applicant pools</p>	<p>For the 2011-2012 AY, added one tenure track female faculty member and one tenured international faculty member in the School of Engineering.</p> <p>Add two international inclusion advocates in the School of Engineering.</p> <p>Attended the SWE national conference to recruit female students.</p>

			Committees and for School Inclusion mentoring (O)		
Increase the presence of students from historically underrepresented groups (Latino, native American, African American)	<p>Focus additional recruitment efforts in diverse local areas such as Holland, Grand Rapids, Muskegon, Benton Harbor, Flint, Wyoming, etc.</p> <p>Provide information and consultation in support of individual college recruitment efforts as requested.</p>	<p><i>Exceed GVSU ethnic diversity demographics</i></p> <p><i>Close gap with national averages for discipline are diversity demographics</i></p> <p>2009 Baseline: - GVSU = 11.8% URE - PCEC = 12.0% URE - National Avg EGR=17.6% - National Avg CIS=29.1%</p> <p><i>Increase female participation and retention (counter to national trends of decreasing female participation).</i></p> <p>2009 Baseline: -PCEC female=10% -PCEC fr-</p>	<p>Collaborate with and leverage university initiatives (O) -OMA Activities -Facilitate student visitation & tours (O)</p> <p>Pipeline Activities (see below) (O)</p> <p>Support and leverage student sections of professional societies (O)</p> <p>Appropriately expand curricular offerings in areas that attract female students such as biomedical engineering (O)</p> <p>Partner with other GVSU colleges on external funding</p>	<p>PCEC statistics - vs- GVSU statistics and national statistics per I&E and national reports</p> <p>Track trends of PCEC statistics and national trends</p> <p>PCEC statistics - vs- national averages</p> <p>Track trends of PCEC statistics and national trends</p>	<p>One out of every six students (16%) majoring in a PCEC undergraduate degree program is non-white.</p> <p>Four out of seven (57%) of graduate students in PCEC are non-white.</p> <p>One out of every twelve students (8%) majoring in a PCEC undergraduate degree program is female.</p> <p>One out of seven (14%) of</p>

		female=13.5% -National female EGR=16.7% -National female CIS=18%	opportunities that support female students such as NSF- PRISM (O) Collaborate with and leverage university initiatives (particularly RMSC) (O) Pipeline Activities (see below) (O) Support and leverage student sections of professional societies including SWE and S. Fleischmann ladies tea program (do we currently include CIS students?) (O) Utilize faculty from under-represented groups as mentors and role models (N?)		graduate students in PCEC are female
Increase the presence of international students		<i>Continue to expand the number of international students and to exceed GVSU international demographic</i>	Collaborate with and leverage university initiatives (particularly PICS) (O)	PCEC statistics - vs- GVSU data per I&E reports	About 1 in 50 (2%) of undergraduate students in PCEC are international;

	<p>Develop a community college initiative that follows students through their 2 years and supports successful transitions to GVSU.</p> <p>Identify/address barriers to access for transfer students</p> <p>Formalize support to guidance counselors who can provide support to</p>	<p>2009 Baseline: GVSU = 1.26% Intl. PCEC = 30 Intl. Students PCEC = 2.6% Intl.</p> <p><i>Enhance College Interaction & Transfer Clarity</i></p> <p>2009 Baseline: Fall '09 EGR X-fer = 51 Fall '09 CIS X-fer = 25</p>	<p>Faculty alma mater visitation & partnering program (O)</p> <p>Increase GA opportunities (O)</p> <p>Highlight current successful international stuents.</p> <p>Leverage MECCA activities (O)</p> <p>Enhance web based advising resources (E)</p> <p>Collaborate with Admissions re: Community College liaison activities (briefing luncheons, campus visits) (O,E)</p>	<p>Annual review of number of GA positions (base and project funded)</p> <p>Track trend of transfer students of PCEC each year</p>	<p>about one in six (17%) of graduate students are international.</p> <p>The number of GA positions has increased steadily via base funding (total needed) and externally funded projects. Graduate students to support externally funded projects have been recruited from the Bangladesh University of Engineering and Technology (BUET).</p>
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	<p>students aspiring to GVSU</p> <p>Develop pipeline programs for middle school students to cultivate interest/enhance preparation for specific disciplines.</p>	<p><i>Continue to enhance & expand our extensive pipeline activities</i></p> <p><i>Regularly review & evaluate efficacy of each pipeline program</i></p> <p>2008/09 Baseline: Number of programs = ? Number of student participants = 1,300 2009 STEPS Study results indicate? Mathcounts scholarship redemptions = ? FIRST Scholarships Applicants = 1 + direct admits, Award = 1 Renewals = 3 Note: 1 FIRST award each year 2006-2009. All students still on track in engineering.</p>	<p>Pipeline activities (O):</p> <ul style="list-style-type: none"> - Sibley Elementary partnership - STEPS Camp - Get-with-the-program Camp - MathCounts competition (regional and state) & scholarship - Science Olympiad competition - FIRST Robotics competition, Lego League and scholarships - AIME project (SME funded effort to enhance K-16, GRCC, GVSU planning & articulation) - GRAPCEP (GRPS) STEM Consortium support & involvement including curriculum and teacher development, 	<p>Long term STEPS Study</p> <p>Student use of MathCounts scholarship</p> <p>Number of applicants and awards of FIRST scholarship</p>	
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			curriculum involvement and support, etc. - HS Internship component to NSF Nano-tech grant - MS and HS Visitation Program - Engineering Projects Days - A World in Motion - Electrathon		
Develop plan for recruitment/admissions process for graduate students	Identify financial resources to support the effort Facilitate recruitment of under-represented minority representation required for federal grants across the institution	<p><i>Expand graduate enrollment to a level that populates existing offerings and supports expanding offerings to meet student and community need</i></p> <p>Baseline: Fall 2009 MS enrollment = 17 2008/09 #Gas = 25 semester appointments Fall 2009 grad schol. = 1 (4 apps, 3 approved, 1 redeemed)</p>	Expand GA Positions (O) Graduate scholarship program (O) Faculty alma mater program (O) Updated web and print materials (O) Programmatic additions that leverage existing offerings: courses, certificates, emphasis, new PSM? (N) Partner with internship employers	Graduate enrollment data: number of majors; credit hour production	Added the industry based GA program. Increased the focus on the combined B.S.E. / M.S.E. program. Added programs in emerging technologies: biomedical engineering and energy (forthcoming).

			to increase awareness of our opportunities (E)		
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Action Area 1: Access and Equity - Policy/Administration Initiatives					
University Goal	University Strategy	PCEC Objectives	PCEC Implementation Initiatives	Measures	Progress
Reconfigure Intercultural Advisory Council (IAC) to better support the work of the Division of Inclusion and Equity	Establish a university committee to advise Division of Inclusion and Equity (University Inclusion Excellence Team - possible new name) Solicit participation of a representative from each college, administration division, undergrad and grad students representatives	<i>Support Division of Inclusion & Equity efforts and maximize communication with PCEC</i>	Identify and appoint representative to UIET when established (N)	Feedback from OIE	Respond as required.
Improve quality of research from a diversity/inclusion perspective	Develop a plan to diversify human research subjects	<i>Improve quality of research from diversity/inclusion perspective, particularly in providing improved data for longitudinal studies</i>	Created and filled Sebastian Endowed Chair who assists with this effort (O) Coordinate with appropriate units across	Annual review of research reports and publications	Review performed during the annual review cycle.

		Baseline: 2008/09 publications with this element = ?	GVSU (O) Identify potential students for collaboration through under-represented faculty mentors.		
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Action Area 2: Campus Climate					
University Goal	University Strategy	PCEC Objectives	PCEC Implementation Initiatives	Measures	Progress
Conduct climate study of faculty, staff, and students utilizing internal and external consultation	<p>Promote broad campus consultation in process due to mixed/negative perceptions from campus community regarding validity and methods utilized for 2005 climate study</p> <p>Include a focus on issues of collegiality</p>	<p><i>Improve the climate within PCEC with regard to respect for all and improved collegiality</i></p> <p>Baseline - see last climate study results</p>	<p>Encourage participation of faculty and staff within PCEC.</p> <p>Ask faculty and staff to encourage participation by students</p> <p>Build upon results of survey to improve climate within PCEC</p>		<p>Dean's open office hours.</p> <p>Dean's take a faculty to lunch program.</p>

			Gather specific recommendations for projects within our Schools based on the climate survey (N)		
Design and implement schedule of “Opportunities to Dialogue about Race” and other inclusion related topics such as disability, class, religion, sexual orientation, etc.	Monthly breakfast dialogues on inclusion topics Consider small faculty and/or staff discussion groups	<i>Leverage GVSU efforts to expand these dialogues</i> Baseline = ?	Encourage faculty, staff, and students to participate in these opportunities Integrate topics as appropriate to course content (O)	Annual review of faculty, staff, and student participation	Reviewed as a part of the annual cycle.

Action Area 3: Diversity in Curriculum/Co-curriculum					
University Goal	University Strategy	PCEC Objectives	PCEC Implementation Initiatives	Measures	Progress
Reward and value course content that integrates culturally diverse perspectives (race, class, disability, sexual orientation, religion, etc.) where appropriate	Develop local community connections with diverse cultural groups	<i>Provide students, faculty, and staff with opportunities to experience the integration of culturally diverse perspectives, particularly as they pertain to technology and society</i>	Involvement with west Side Community organizations such as The Other Way Ministries and Westtown Jubilee Housing (O) Involvement with west Michigan professional	Annual review of course offerings, co-curricular activities, and participation	Increase course and capstone projects in assistive technologies via the biomedical engineering minor and

		<p>Baseline: 2008/09 # organizations involved</p> <p>Baseline: 2008/09 # courses and students in these courses and/or activities = ?</p>	<p>chapter of NSBE (O)</p> <p>Other regional organizations appear to fit well with PCEC - SWAN, etc?</p> <p>Development and offering of Urban Sustainability course (O)</p> <p>Provide diverse service learning opportunities via course offerings including EGR 468 - Heat Transfer (housing projects) and CS 463 - IS Project (not-for- profit service projects) (O)</p> <p>Provide diverse service learning opportunities via student organizations such as ASME Bikes for Kids, etc. (O,E)</p> <p>Conduct capstone projects in diverse</p>		<p>M.S.E emphasis.</p> <p>Continue to support courses offerings in general education such as Urban Sustainability.</p> <p>Support activities of student organizations such as SWE and NSBE.</p>
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			environments whenever possible (O/N?)		
Develop/implement diversity/inclusion campus-wide training/education workshops/programs	New Director of Intercultural Training to collaborate with partners	<i>Utilize university wide programs to enhance PCEC climate and effectiveness</i> Baseline: # Trained Advocates for 2008/09 = 6	Utilize Inclusion Advocate program (O) Initiate Personnel Process Advocate program (N)	Annual review of participation	Increased number of inclusion advocates by 2.
Co-sponsor Inclusion and Equity related conferences/programs across campus	Raise awareness and understanding of inclusion issues	<i>Assist in making equity related activities available to faculty, staff and students in PCEC and across the university</i> Baseline: 2008/09 - 3 program supported	Co-sponsorship of various programs including: Hispanic Heritage Month, People of Color Network, OMA Programs, Women's Center (O)	Annual review of sponsorships and prioritization of next year sponsorships List specific co- sponsorships for 2011	Reviewed annually.

Action Area 4: Organizational Learning - Internal					
University Goal	University Strategy	PCEC Objectives	PCEC Implementation Initiatives	Measures	Progress
<p>Training and organizational development</p> <p>Provide consultation and intervention to departments/units to ameliorate workplace conflict</p>	<p>Provide training on a variety of inclusion related topics including effective interviewing, unconscious bias, cultural competence*, ADA, Proposition 2, etc.</p> <p>Utilize professional theatre groups and “train the trainer” concept</p> <p>Review/revise Diversity Workshops called “On Demand”</p> <p>Enhance training for multicultural assistants and academic advisors</p>	<p><i>Provide enhanced training for all faculty and staff to improve topics identified in associated University Strategy</i></p> <p>Baseline:</p> <p>2008/09 - # events for which we provide instructors = 2</p> <p>2008/09 - #faculty and staff participation = 5</p>	<p>Use of NSF Advance project tools including STRIDE training and U/M CRLT Players (O)</p> <p>Support STRIDE Committee via faculty and staff participation including as instructors (O)</p>	<p>Annual review of offerings and faculty and staff participation</p> <p>Results of university climate studies</p>	<p>Reviewed annually.</p>

Action Area 4: Organizational Learning - Community Outreach					
University Goal	University Strategy	PCEC Objectives	PCEC Implementation Initiatives	Measures	Progress
Facilitate and sustain an effective university-wide	Superintendent of GRPS's: areas of interest	<i>Enhance the preparation of a diverse population of students and provide opportunities for professional careers,</i>		Annual review of activities, participation, and mid-long term	Continue and expand pipeline activities such

<p>mechanism for establishing partnerships and collaborations with Grand Rapids Public Schools: do the same for other districts with diverse populations (i.e. Muskegon, Holland, etc.)</p>	<p>Centers of innovation</p> <p>Mentoring/tutoring programs for high school students</p> <p>High School reform/opportunities for students to accelerate completion of high school/dual enrollment programs in senior year</p> <p>Cultural competence training for GRPS teachers</p> <p>Helping teachers work with affluence</p> <p>Study teachers' fear of students and the impact that fear on their expectations of students</p> <p>Teach pedagogy of creating a culture of optimism</p>	<p><i>particularly in engineering and computing.</i></p> <p><i>Expand the pipeline talent for the engineering and computing professions.</i></p> <p>2008/09 Baseline: Number of programs = ? Number of student participants = 1,300 2009 STEPS Study results indicate? MathCounts scholarship redemptions = 1 FIRST Scholarship Applicants = 1 + direct admits, Awards = 1 Renewals = 3</p>	<p>Pipeline activities</p> <ul style="list-style-type: none"> - STEPS Camp - MathCounts competition (regional and state) & scholarship - Science Olympiad competition - FIRST Robotics competition and scholarships - AIME project (SME funded effort to enhance K-16, GRCC, GVSU planning & articulation) - MS and HS Visitation Program - Engineering Projects Days - A World in Motion - Get-with-the-program Camp - Sibley Elementary partnership - GRAPCEP (GRPS) STEM Consortium support & involvement 	<p>impact (where feasible, i.e. STEPS, GRAPCEP, etc. data)</p>	<p>as STEPS with a target non-white participation of 30%, assign a GA to support GRAPCEP, continue working with the TRiO program, add programming for the Hispanic Center</p>
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	Create/prepare pool of teachers who want to work in urban schools		including & involvement including curriculum and teacher development, curriculum involvement and support, etc. - HS Internship component to NSF Nano-tech grant (O)		
Develop and nurture key partnerships and relationships with community entities doing (or interested in doing) similar inclusion work	Maintain active membership in Grand Rapids Chamber of Commerce Cultural Competency Council Institute for Healing Racism Partners for a Racism Free Community, etc. Create a list of organizations outside of campus that we as an institution can/should support	<i>Leverage the resources of GVSU and the community groups to mutual benefit and for greater impact</i> Baseline: 2008/09 - # organizations and engagements = 10	Involvement with The Other Way Ministries (O) Involvement with Westtown Jubilee Housing (O) Involvement with many NPOs via the IS Capstone Project course (O) Other organizations to be engaged? - SWAN	Annual review of partnerships, participation, and feedback	Add a partnership with the Hispanic Center
Enhance faculty, staff, student involvement in	Identify and publicize volunteer opportunities	<i>Leverage these programs to expand the pipeline for students</i>	Publicize opportunities among faculty, staff, and students	Annual review of participation and feedback	Reviewed Annually.

TRiO and Upward Bound Program		<p><i>interested in engineering and computing</i></p> <p><i>Expand opportunities for collaborative student/faculty scholarship</i></p> <p>2008/09 Baseline:</p> <ul style="list-style-type: none"> - 1 McNair Scholarship mentorship - # TRiO tours, etc. = 2 <p>Other participation?</p>	Create a mechanism for faculty to use outreach instruction and seminars targeted at under-represented high-school students as part of their workload.		
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