

Ferris State University Faculty and Staff Diversity Mini-Grant Application

I. Identification

Primary Applicant Dan Tuuri
 Members of Team Amy Buse – Faculty CIS/CIT
 Barbara Ciaramitaro – Faculty ISI/ISM
 Jennifer Hegenauer – Staff CPTS
 Department or Unit COB - AFIS
 Campus Address IRC-218
 Telephone x-3198 / 989-278-8450
 E-mail address tuur2@ferris.edu

II. Event Title (25 words or less)

Telling your story through ALICE – A new context for middle school girls to learn computer programming.

III. Specific core value, strategic initiative, or goal related to diversity that the event will address. (See the University Strategic Plan and the Diversity Plan)

Strategic Plan

- Goal 1.3 Program participants will find an application to the content in a manner that is fitting towards their individual needs.
- Goal 5.5 Connect an underrepresented female population from the Mecosta Osceola Intermediate School District (MOISD) service district with a viable career option. Offer middle school girls the opportunity to visit the Big Rapids campus and learn about IT career options.
- Goal 6.2 This initiative has been discussed with membership of Ferris First, specifically in regards to an identified deficiency in STEM outreach programming.

Diversity Plan

- Goal 1 The University will provide outreach to an underrepresented population, Women in IT. This population will be provided with an exposure to organic STEM careers as within Information Technology.
- Goal 2 This event while not intended as a recruiting initiative will provide for an exposure to the resources available and career pursuits of our graduates. Efforts will be made to represent possibilities not only within CIS, but the CIT, CNS, ISI, ISM, and DAGD programs.

Goal 4 Misconceptions about the role of women in IT will be discussed with the intent of this barrier being broke down. Through promotion of this initiative it is expected that male students will also become aware of the underrepresentation of women in the field.

IV. Abstract (150-200 word, use additional paper if necessary). If the application is approved the abstract will be posted on the Diversity and Inclusion Office website. This pilot initiative will introduce middle school girls to computer programming through the concept of storytelling. Traditionally this is an under represented population in computer careers nationally.

V. Event Narrative (up to 4 pages single-spaced)

a. The conceptual framework that explains how the event will augment Ferris's long-term commitment to diversity and inclusion.

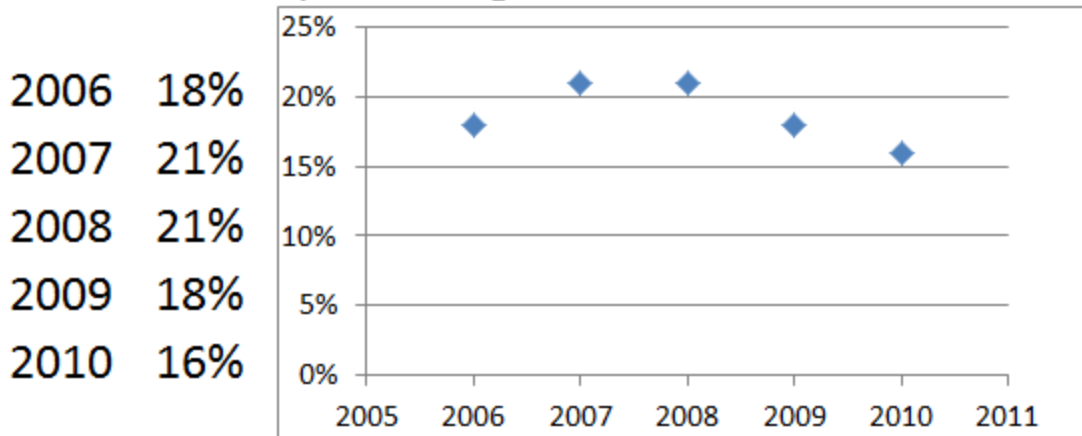
The underrepresentation of women in choosing an IT career is a national trend that must be reversed. According to research from the National Center for Women & Information Technology in 2009 18% of undergraduate Computing and Information Sciences were earned by women, this number is in decline to 1985 data which showed a 37% attainment.

Dr. Caitlin Kelleher while completing her doctoral coursework at Carnegie Mellon University studied the relationship in utilization of the programming language ALICE as applied to a population of female middle school students. Through this initiative and in conjunction with staff at Carnegie Mellon University a revision to ALICE was created. Kelleher produced her dissertation on the relationship between storytelling and engagement of middle school girls in programming. This work will be the cornerstone to the establishment of the proposed initiative. Kelleher expresses the importance of encouraging middle school girls and providing a context in which they produce a product of interest. Her research sites a lack of confidence in STEM fields as a factor in young women choosing other careers.

Research by Dr. David Klappholz of Stevens Institute of Technology presents not only the concern of difficulties in attracting women to IT careers, but also the higher drop rate than their male counterparts. Klappholz references a thirty five year piece of research, Study of Mathematically Precocious Youth (SMPY) which finds women are more likely to choose an organic STEM career. His research supports the idea of trying to engage young women in IT work through the application of a human element.

Currently Ferris is below the average when analyzing enrollment data obtained from the 2011 Administrative Program Review for the Computer Information Systems program. It is important to identify that enrollment data is not indicative of graduation attainment. The data summary provides a disturbing trend in the significant drop of female students as a percentage of total enrolled program members.

Women as a percentage of CIS enrolled students.



This data is despite the University realizing an increase in the percentage of women as part of the total student body population. According to the University Factbook:

In 2006 women represented 48% of the total student population at Ferris State University. By the fall of 2010, the percentage had risen to 51%.

b. The goals and intended outcome(s) of the event.

Six classroom presentations will be made to area middle schools in an attempt to solicit interest for this initiative. Through these sessions young women and middle school educators will be provided awareness as to the outreach initiative and provided opportunities to engage with Ferris State University.

Three outside female speakers who are IT professionals will meet with the young women to discuss their chosen career path and the work they perform.

Three women from the campus community will assist students working on projects.

Four female students from current IT related curriculum will meet with and advise students on their project initiative.

Twenty participants will enroll in the opportunity.

Twenty projects will be presented.

Thirty two participants will attend the final presentation where the young women present their projects and celebrate their successes.

The virtual environments will be uploaded to the Ferris State University YouTube channel where one hundred additional views will be achieved.

Six middle school girls will later attend summer camp opportunities.

Four program participants will pursue further Information Technology education.

c. A statement on how the event relates to the curriculum or a specific discipline, if appropriate.

This program will introduce a programming methodology utilized in the CIS curriculum.

d. A timeline.

January	Connect with area school districts, identify a champion in each district. Host champions and promote event. Visit local schools.
March	Review program applications and register participants.
April 28 th	Event Day 1
May 5 th	Event Day 2
May 12 th	Event Day 3
June	Complete Project Report

e. Description of the target audience, including the estimated number of participants. Middle school women with a demonstrated interest or ability in STEM. 20 Participants, 6 Middle School Faculty, 3 Presenters, 4 Campus Staff, 4 IT related students, 12 Parents

f. The expected impact that the event will have on Ferris.

Ferris will be established as the resource for young women interested in an IT career. IT related programming will have a stronger awareness of perceptions that young women may have. Current Ferris students will be exposed to the issue of gender equality, through awareness activities, these students will become more inclusive. The participants in this initial pilot project will share their experience with others.

g. A specific plan to assess the impact of the event on the University.

The event will not have a measurable impact on additional enrollment for a period of three years. Ideally, there will be additional opportunity to engage the students and their families. Participants will be surveyed again in the fall to assess if they have connected with campus resources such as FLITE and if they have a continued interest in the subject matter. Efforts will be made to monitor subsequent summer camps to assess if any participants have enrolled.

VI. Budget

a. Anticipated expenses (itemize and briefly explain).

Meals and Snacks

Meals - Launch Event	9 * \$8.75
Meals - Event Days	75 * \$8.75
Snacks - Event Days 1, 2, 3	3 * \$125
Presentation / Project Reveal	\$175
	\$1385

Supplies

Text-Virtual World Design and Creation for Teens	24 * \$39
Misc. Supplies (incl. postage)	\$329
	\$1236

Speaker Honorarium

3 * \$150
\$450

Total Request \$3000

b. Funds anticipated from other sources (please list).

A project match is not being solicited. Based on the outcomes and measurements from the first year cycle additional funding models will be reviewed to ensure that the initiative is sustainable.

c. Total amount requested from Faculty and Staff Diversity Mini-Grant.


\$3,000

VII. Final Report

A final report is required and it will appear on the Diversity Office's website. That report is due no later than three months after the funded activity. The final report should address:

- faa: A self-evaluation
- b: Results of the event assessment
- c: Attendance figures
- d: Final budget

Applicants' Signatures:



Submission Date: 16-Nov-11