MICHIGAN TECH
center for pre-college outreach

2014
YEAR IN REVIEW
OUR STORY
Something about us that you should see.

See: https://animoto.com/play/sQjLXzwQYft5Qo4vWHO1bA
OUR AGENDA
Hold on tight, we’ve got a lot to cover.

CPCO Overview
Department At-a-Glance
People
Places
Partnerships
Progress
Challenges

College Access
By-the-Numbers
Events at-a-glance
Programs at-a-glance
Testimonial: Jesse Kentala

Mind Trekkers
By-the-Numbers
Video: Dow-USASEF 2014
Events at-a-glance
Data
Testimonial

SYP
By-the-Numbers
Highlights at-a-glance
Video: Welcome to SYP
Testimonial: Rachel Kloc

Longitudinal Data
Digging Deeper: SYP
SYP Alumni at-a-glance
Inside access: First-Year Students
Big picture: All Matriculants

2015 & Beyond
New Initiatives on the Horizon
College Access
Mind Trekkers
Summer Youth Programs
Keweenaw Science & Engineering Festival
Where’s Steve?

From August 2008-August 2014, the CPCO experienced growth beyond anyone’s wildest dreams. Mr. P was the driving force behind the movement. We wish him all the best as the new Director of Career Services. He truly is a rock star.
CPCO Overview
What a year it has been.

- people
- places
- partnerships
- progress
New faces. Same purpose.

Three personnel changes + New leadership = Fresh perspectives.
MEET OUR CREW

Meet the crazy staff of CPCO
MEET OUR CREW
The CPCO Staff

Liz Fujita
Coordinator, College Access
Joined CPCO: Winter ’13

Rose Martell
Administrative Aide, CPCO
Joined CPCO: Summer ’00

Cody Kangas
Director, CPCO
Joined CPCO: Summer ’08

Kevin Merritt
Coordinator, SYP
Joined CPCO: Fall ‘14

Tom Maynard
Coordinator, Mind Trekkers
Joined CPCO: Winter ‘13
CPCO is a family

What we do is important, and who we are is bigger than a staff of five. Between a student crew of seven, an SYP staff of 60+, a Mind Trekkers team of over 150 active, and countless other volunteers, the CPCO family is over 1100 strong!
OUR JOURNEY
The Places CPCO has traveled to.

February - New Orleans

March - Iron River

April - Washington DC

May - Harrison

May - Sheboygan

September - Midland

November - Gull Lake

February - Chicago

March - Munising

April - Delaware

May - Ludington

May - Alpena

May - Tennessee

October - Minnesota

December - Detroit
How do we get there?

We get a bus!
OUR PARTNERS

Key Industry Sponsors of CPCO Projects

3M
- $25,000 (Women in Engineering)

Dow Corning
- $20,000 (Engineering Scholars Program)

Dow
- $75,000 (Mind Trekkers)

Kohler
- $10,000 (Mind Trekkers)

AT&T
- $15,000 (Mind Trekkers)

State Farm
- $80,000 (College Access)

USA Science + Engineering Festival
- $25,000 (Mind Trekkers)

Chevron
- $15,000 (Mind Trekkers)
OUR PROGRESS
Review of Original 2013-2014 Strategic Plan

NSF-AISL SUBMISSION
After original proposal not awarded, commenced pursuit of creating a dynamic team and drafting a competitive proposal. Decision moved to table efforts at this time.

REVAMP SOCIAL MEDIA
Hired social media consultant, HubSpot, to provide guidance and expertise on developing new social media strategies for CPCO projects. Initial changes have been made, and more are on the way.

RECONNECT WITH SYP ALUMNI
There are so many stories and talents on campus that arrive and stay from which we haven’t made much effort to leverage. We began with directly recruiting SYP alumni for SYP staff positions, as well as Mind Trekkers—and found much success.

PURSUE NATIONAL PARKS
Original plan was to begin initiating collaborations with both national and state park services to engage in mutually beneficial partnerships with SYP outdoor programming. Due to personnel changes, decision moved to table efforts at this time.

DEVELOP CAMPS-TO-GO
Create mobile SYP programming, focusing on WIE/ESP model. Take to rural and urban markets, and infuse leadership components. Due to personnel changes, decision moved to table efforts at this time.

CREATE K-5 DAY CAMPS
Efforts to shift SYP focus from primarily on high school to younger ages did begin. However instead of an elementary approach, resources were put into a 4-day middle school week, which saw success.
KEY CHALLENGES

In lieu reviewing the original goals established for 2013-14, it is worth identifying where obstacles reside for CPCO efforts and initiatives.

COMMON THEME
LIMITED RESOURCES

As Mind Trekkers continues to grow in popularity and demand increases, the prominent liability to delivery is student time and availability.

With demand for quality summer academic programs growing and evolving, the need for dynamic instructors who can commit to SYP becomes increasingly important—and they’re difficult to find.
SPOTLIGHT: COLLEGE ACCESS

Local Events & Outreach Programs
Get WISE
February 25
Participants: 247
Schools Invited: CCISD, GOISD
Sponsors & Partners: WUPCSMEE, COE, CSA
Purpose: Hands-on STEM activities

TiViTz Tournament
March 24
Participants: 207
Schools Invited: CCISD
Sponsors & Partners: WUPCSMEE, Mathematical Sciences
Purpose: Fast-paced math challenges

Engineering Olympics
March 25
Participants: 92
Schools Invited: Entire Upper Peninsula
Sponsors & Partners: Engineering Fundamentals
Purpose: Project-based engineering competition
**STATE FARM AFTER SCHOOL CLUBS**

Partnered with Mind Trekkers

Participants: 165  
Schools Invited: Lake Linden, Calumet, Hancock, L’Anse  
Sponsor: State Farm Youth Advisory Board  
Purpose: Regular hands-on STEM activities & lessons  
Highlights: Met with SPIE to learn about photonics; Met with NECi to learn about nitrate elimination; Met with MSU Science Theatre; Actively researched and purchased demos for own school; Learned STEM skills from lasers to dissections, chemical reactions to properties of sound.

**STATE FARM STEM Festival**

May 15

Participants: 967  
Schools Invited: CCISD Elementary students  
Sponsor: State Farm Youth Advisory Board  
Purpose: STEM festival facilitated by high schoolers
OUR PROGRAMS
College Access

GEAR UP

SCHOOLS: Baraga, Calumet, Chassell, Dollar Bay, Hancock, Houghton, Lake Linden, L’Anse

STUDENTS: 380 - Class of 2017

LEADERSHIP: Eight teachers; 1 per school

HIGHLIGHTS
Some examples of last year’s programs:
Meeting head coach Tom Kearly about student athletics
Attending Athletics events for free
Spending a day with GU students from LSSU
Michigan Tech department and campus tours
Tutoring / mentoring
Working with CDI on an MLK Day project / contest
Meeting spoken word artist Michael Reyes
Northern Michigan University campus visits
Financial literacy workshops
Receiving scholarships to attend SYP
TESTIMONIAL
A Few Words from a GEAR UP Lead

JESSE KENTALA
GU Lead, Dollar Bay
SPOTLIGHT: MIND TREKKERS

Events. Data. Proof.
OUR STORY
Dow partnership @ USASEF

See: http://youtu.be/b38h_AHpULI?list=UUVr65LanJ9vEfiRu4OKxNsFA
OUR FOOTPRINT

Event Manifest

February - New Orleans
NBA All Star Jam Session - 30000

March - Iron River
Science Fair - 70

April - Washington DC
USA Science & Engineering Festival - 30000

May - Harrison
AT&T Roadshow - 1500

May - Sheboygan
Sheboygan Science Festival - 1700

September - Midland
Dow GLBR Science Festival - 5500

November - Gull Lake
Gull Lake Science Festival - 9000

February - Chicago
AAAS Family Days - 36500

March - Munising
Family Fun Night - 135

April - Delaware
Independence School District - 800

May - Ludington
AT&T Roadshow - 750

May - Alpena
AT&T Roadshow - 600

May - Tennessee
Destination ImagiNation - 20000

October - Minnesota
Iron Range STEM Showcase - 3000

December - Detroit
2008
Mind Trekkers Footprint

Note:
Pre-Mind Trekkers
2009
Mind Trekkers Footprint

Note:
Pre-Mind Trekkers
Note:
Mind Trekkers “born” at FIRST Robotics tournament in Minnesota.
2011
Mind Trekkers Footprint

Note:
First multi-festival tour - AT&T
Student organization born
Note:
Year of the celebrity - Senator Levin, Olympic athletes, NCIS LA cast
2013
Mind Trekkers Footprint

Note:
First trip taken via plane with supplies sent via cargo crate (San Francisco)
2014
Mind Trekkers Footprint

Note:
First dual-team simultaneous trips (Chicago/New Orleans; Washington, DC)
2015
Mind Trekkers Footprint

Note:
First Spring Break trip (Houston)
OUR DATA
Pre & Post Tests from recent Mind Trekkers events

AT&T + SHEBOYGAN SCIENCE & ENGINEERING FESTIVAL
Event Dates: May 5-10 - Collected by CPCO - Pre-Survey: N = 2154 // Post-Survey: N = 1689

Percent of Students Interested by Subject
OUR DATA
Pre & Post Tests from recent Mind Trekkers events

AT&T + SHEBOYGAN SCIENCE & ENGINEERING FESTIVAL
Event Dates: May 5-10 - Collected by CPCO - Pre-Survey: N = 2154 // Post-Survey: N = 1689

PERCENT INCREASE: DURING EVENT

- Science: 12.3%
- Technology: 4.4%
- Math: 3.3%
- Engineering: 9.9%
- Attending College: 3.9%
OUR DATA
Pre & Post Tests from recent Mind Trekkers events

AT&T + SHEBOYGAN SCIENCE & ENGINEERING FESTIVAL
Event Dates: May 5-10 - Collected by CPCO - Pre-Survey: N = 2154 // Post-Survey: N = 1689

SUBSET: Students with parents who did not attend college
OUR PROOF
Directly from the volunteers

http://youtu.be/cGOKmJufwVM?list=UUVr65LanJ9vEfRu4OKxNsFA
SPOTLIGHT: SYP

HIGHLIGHTS. FEEDBACK. TESTIMONY.
**SYP HIGHLIGHTS**

**Participants:**
1020
- Total participant weeks, an increase of 20 students from 2013.

**Explorations:**
56
- Total SYP explorations, including WIE, ESP, WICS, NSTI, and Rail competitive scholarship programs.

**WIE GPA:**
3.90
- 2013 = 3.93

**ESP GPA:**
3.88
- 2013 = 3.85

**Total Reach:**
44 states
- A increase of 21 states over 2013. Additionally, 6 nations represented.
SYP Highlights
86.3% say SYP increased confidence in college ability
96.2% would recommend the program to others
92.3% rated hands-on experience as good or excellent

WIE Highlights
151 participants
90.9% felt more likely to have a future in engineering
94.4% would recommend program to others
88.8% rated hands-on experience as good or excellent

ESP Highlights
148 participants
92.9% felt more likely to have a future in engineering
96.9% would recommend program to others
91% rated hands-on experience as good or excellent
OUR HOME
Welcome to SYP!

http://youtu.be/NMTwsDxaonI?list=UUVr65LanJ9vEfRu4OKxNsFA
A Few Words from an SYP alum

Rachel Kloc
SYP Alum (and more!)
Over the past several years, Michigan Tech has begun taking a closer look at the matriculation data of SYP alumni who return to Michigan Tech.
MINING THE DATA
Digging Deep

SYP-MICHIGAN TECH STUDENT MATRICULATION DATA

SYP ALUMNI: FIVE YEAR SCOPE

SYP Alumni enrolled at Michigan Tech - Academic Year 2010-2014 - Collected by CPCO

SYP ALUMNI: FIVE YEAR SCOPE
# MINING THE DATA

## SYP-MICHIGAN TECH STUDENT MATRICULATION DATA

SYP Alumni enrolled at Michigan Tech - Academic Year 2010-2014 - Collected by CPCO

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SYP</th>
<th>MTU</th>
<th>SYP % of MTU</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>402</td>
<td>6957</td>
<td>5.7</td>
</tr>
<tr>
<td>2011</td>
<td>444</td>
<td>7034</td>
<td>6.3</td>
</tr>
<tr>
<td>2012</td>
<td>466</td>
<td>6947</td>
<td>6.7</td>
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<tr>
<td>2013</td>
<td>499</td>
<td>6979</td>
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<tr>
<td>2014</td>
<td>558</td>
<td>7104</td>
<td>7.8</td>
</tr>
<tr>
<td>GROWTH</td>
<td>39%</td>
<td>2.11%</td>
<td>2.1</td>
</tr>
</tbody>
</table>
“Attending SYP made Michigan Tech the only school I wanted to go.”

558
7.9% of student body
39% increase in 5 years

TOTAL SYP ALUMNI ON CAMPUS

241
FEMALE

81%
FROM MICHIGAN

505
MAJOR IN STEM

24%
ENROLLED IN MEEM
WIE confirmed Michigan Tech was the only place for me.

**TOTAL SYP 1st YEAR STUDENTS**

161

20% increase over 2013

FEMALE: 71 (19%)

AVERAGE ACT: 27.7

MAJOR IN STEM: 93%

OF 2014 CLASS: 13.4%
NEW INITIATIVES

2015 AND BEYOND
NEW INITIATIVES
2015 and Beyond

College Access: Events scheduled; Superior Ideas
Mind Trekkers: Houston; St. Louis; 2016
SYP: Bahrain-WIE; HOP; WICS funded; We’re LIVE!
KSEF: Sun, Sand & Science!

At-a-Glance

CPCO: 2015
OUR HOME

Keweenaw Science & Engineering Festival - August 5-8, 2015

“Until you try, you don’t know what you can do.”
THANK YOU!
- CPCO