



School of Engineering & Technology

Industrial Advisory Board Fall 2013 Meeting

November 1, 2013

Welcome IAB Members, Faculty & Guests

Today's Agenda

- 8:30 – 9:00 am** **Informal Discussion – All Welcome**
- 9:00 – 9:10 am **Meeting Call to Order – Background on New Chair**– Steven Kars
- IAB UPDATES**
- 9:10 – 9:20 am **Action Item Review / Minutes Approval** – Lynnette Eding
- 9:20 – 9:30 am **Chair's Report** – Steven Kars
- 9:30 – 9:50 am **Recruitment Subcommittee Report** – Trevor Swenson
- 9:50 – 10:30 am **Break & Networking with Students** – Underclassmen Focus
- LAKE SUPERIOR STATE UNIVERSITY UPDATES**
- 10:30 – 11:30 am **School Updates & PDC Update** – Dr. David Finley & Engineering Staff
- 11:30 – 12:15 pm **Focus Forward (Big Picture)** – Dr. David Finley
- LUNCH – Anchor Room**
- 12:15 – 1:15 pm **Lunch** – with Senior Project Scope Presentations (5 min each over lunch)
- IAB/LSSU/STUDENTS**
- 1:15 – 2:00 pm **Board Member Roundtable** with Interested Students
- 2:00 – 2:30 pm **Feedback Session** with SET Students
- 2:30 – 2:50 pm **Report out** on Feedback Session with LSSU Faculty
- 2:50 – 3:00 pm **Closing Remarks / Next Meeting LSSU Campus, May 2, 2014**
- 3:10 – 4:00 pm **SMARTZone Building Tour (optional)**



New Chair - Background

Steven Kars

- ▶ Graduate of LSSU – Class of 2002, BSME
- ▶ **Career Experience**
 - ▶ RV manufacturing – Truck Campers – Production Manager
 - ▶ Cement Roof Tile Manufacturing – Maintenance & Operations Manager
 - ▶ Coated Paper Industry – Reliability & Lubrication Engineer
- ▶ **CanAm Underwater Hockey Gear – President**
 - ▶ What do we do?
 - ▶ Where are we going as a company?





IAB Updates



9:10 – 9:50 a.m.

Spring 2013 Meeting Reviews

- ▶ Action Items
- ▶ Spring 2013 Minutes



Chair's Report

Need the membership to vote during spring meeting for a Secretary to serve for the next two years

IAB Secretary Responsibilities and Term Limits

- It is the responsibility of the secretary to maintain all of the IAB's records. The records are to include:
 - Newsletter
 - Newsletter Supplements
 - Press Releases
 - Publicity
 - Phone lists
 - E-mail lists
 - Meeting minutes
 - Historical information
 - A copy of all records shall be housed at the Engineering office (CASET 202, on campus at LSSU) with production assistance from the LSSU School of Engineering and Technology secretary and administrative assistant.
 - If the Chairman is unable to run a meeting, the secretary will officiate the meeting.
-



IAB Officer Responsibilities Terms & Limits

TERM LIMITS

- The term of each office shall be two calendar years.
- The terms of Chairman and Secretary shall expire on alternate years.
- No more than 2 consecutive terms are allowed.
- There is no limit to the number of non-consecutive terms.
- Election shall be by a majority of the members present at the spring meeting.
- The term shall pass to the successors at the end of the spring meeting.
- Communication of all necessary information is the responsibility of the exiting officer.

Comments:

- The smooth operation of this small organization will depend on communication.
- Forms of correspondence:
 - Phone
 - Fax
 - E-mail
 - Letters
- To facilitate hand-offs, a format should be consented upon for electronic applications.



Nomination Process

- Any existing IAB members are eligible
- Self nominations are acceptable
- If you are nominating another member please be sure that they are willing to participate
- All nominations will be accepted and presented at the spring IAB meeting
- Any Questions: you can contact the existing IAB officers.

The Nominees Are:

- _____
- _____
- _____





LAKE SUPERIOR
STATE UNIVERSITY

Redefining the Classroom



Fall 2013 IAB Recruiting Subcommittee Update

Trevor Swenson

Over the last 6 months ...

- ▶ Meetings with Admissions
- ▶ MACRAO events planning/schedule
- ▶ Webinar discussions
- ▶ Regular Monthly Meetings with committee



Admissions update

- ▶ New Admissions assistant director targeting local area schools (both US/Canada) with on-site visits
- ▶ Fall counselor meeting (Oct 2013)
 - ▶ Low attendance but considered successful event
- ▶ Bus kids from Korah and White Pines to LSSU in Spring 2014
- ▶ 50 students visited from Cheboygan HS

TO-DO

- ▶ LSSU – Sault College Bridge programs
-



Admissions update (from AI Case)

- ▶ Expanded market presence to 6 additional states
- ▶ Increased volume of name purchases to 77K
- ▶ Ahead 9% in overall applications vs last year
- ▶ Ahead 7.1% in applications in the School of Engineering & Technology
- ▶ Our SQI (Student Quality Index) is up compared to previous years, with average admit ACT at 24.134 and GPA at 3.479
- ▶ Participating in digital campaigns and increased social media activity



Webinar Update

- ▶ LSSU GoTo license not renewed in past years
- ▶ A "live" webinar is not a good fit for us at this time
- ▶ Link to videos on our web page would be more suitable
- ▶ Cost / Time
- ▶ Webmaster unavailable

MACRAO Highlights

- ▶ Target list of school
- ▶ 7 IAB members attended 10 MACRAO Events
- ▶ Positive feedback
- ▶ Engineering recruiting cards and visual aids desired and well accepted
- ▶ Recommendation to continue IAB representation at events
- ▶ Future improvement – sign up sheet/follow up

In progress..

- ▶ **Engineering Monthly Newsletter**
 - ▶ Positive Feedback
 - ▶ Expand audience/distribution methods and continue to improve layout/content
 - ▶ Next issue is February 5, 2014
- ▶ **Brochure modifications**
 - ▶ [www.lssu.edu/eng/\[facebook|youtube\]](http://www.lssu.edu/eng/[facebook|youtube])
 - ▶ QR codes seemingly useless (26 hits in 2 years)
- ▶ **Spring MACRAO event planning**
- ▶ **FRL/FLL event planning**

Robotics Event Participation

- ▶ **Need IAB participation at events**
 - ▶ Regional and District events
 - ▶ Michigan FRC State Championship
- ▶ **Need increased visibility at local chapters**
 - ▶ Korah, Sault High, Brimley, Cedarville
 - ▶ We need to find a way to "connect"
- ▶ **FIRST Event Hosting**
 - ▶ Hosting FRC Kick-Off, January 4th, 9 am-1 pm, Cisler
 - ▶ Approx. 12 teams within 100 mile radius
- ▶ **FLL Event Hosting – Six registered teams**
 - ▶ FLL Robot Game practice on Nov. 2nd, 1-4 pm, Cisler
 - ▶ 2013 Movin' U.P. Qualifying Tournament on Nov. 23, Norris Ctr.

To-do list

- ▶ Regular Monthly meetings
- ▶ Ongoing improvements with recruiting card and Web/Video content
 - ▶ Alumni video creation
 - ▶ Campus Tours / Robotic lab demos?
- ▶ New visual aids (3D printer)
- ▶ Soliciting for Fall 2013 MACRAO events

Thoughts / Sharing

- ▶ Senior project short videos – summarize project and scope, value and experience in senior projects
- ▶ Better utilize our regional centers – Dearborn, Escanaba, Gaylord, Petoskey – to better leverage students. Do they have events that we could support?



THANK YOU

- ▶ A Special **THANK YOU** to Adil, Paul and Dan for active support on recruiting subcommittee.
- ▶ A Special **THANK YOU** to Jeanne for the continued help and support.
- ▶ A Special **THANK YOU** to all of the IAB members and LSSU Staff that continue to contribute and support the MACRAO and FIRST robotics events. Your support is greatly appreciated.



School of Engineering & Technology

Break & Networking with LSSU Engineering & Technology Students

9:50-10:30 a.m.

Welcome:

1. **Ray Adams**
2. **Bob Anderson**
3. **Tim Bennett**
4. **Fred Berg**
5. **Paul Blackford**
6. **Lynnette Eding**
7. **Steve Kars**
8. **Ralph Larsen**
9. **Adil Shafi**
10. **Don Stephanic**
11. **Trevor Swenson**
12. **Brian Theriault**
13. **John Tillotson**
14. **John Truckey**



UNIVERSITY UPDATES

PDC and School Updates

Eric Becks, Dean, School Faculty & Staff

PDC Updates

- ▶ Eric Becks





Industrial Advisory Board Meeting

November 1, 2013

David Roland Finley, Ph.D., P.E. Dean, Business & Engineering



2012-13 Engineering & Tech Accomplishments

- ▶ ABET Re-accreditation of ME, EE, CpE!!
- ▶ 7.5% enrollment growth (8% in 2012)
- ▶ Engineering House fully occupied
- ▶ Investment in mobile robotics (Corabot)
- ▶ Added to line to Robotics Lab (~\$0.5 M value)
- ▶ Updates to SET web page/Facebook
- ▶ 100% placement w/in six months



School of Engineering and Technology

Enrollment History 2006-2013

Term code key

			Fall 2006	Fall 2007	Fall 2008	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
CENG	Computer Engineering	BS	38	28	32	18	22	18	26	18
EGEE	Electrical Engineering	BS	36	41	40	30	38	36	37	30
EGET	Electrical Eng Technology	A					1		1	1
		BS				1	3	4	5	13
EGNR	General Engineering	A	17	14	15	22	17	13	10	18
EGNT	General Engineering Technology	A	1			1	1	1		1
EMGT	Engineering Management	BS	7	6	7	9	8	4	4	1
EGME	Mechanical Engineering	BS	62	59	59	67	79	85	85	93
EGMT	Manufacturing Eng Technology	A	1	4	3	4	5	2	3	2
		BS	27	25	19	18	12	9	14	21
INDU	Industrial Technology	BS	1			1	1		1	2
Totals			190	177	175	171	187	172	186	200

1.081 1.075

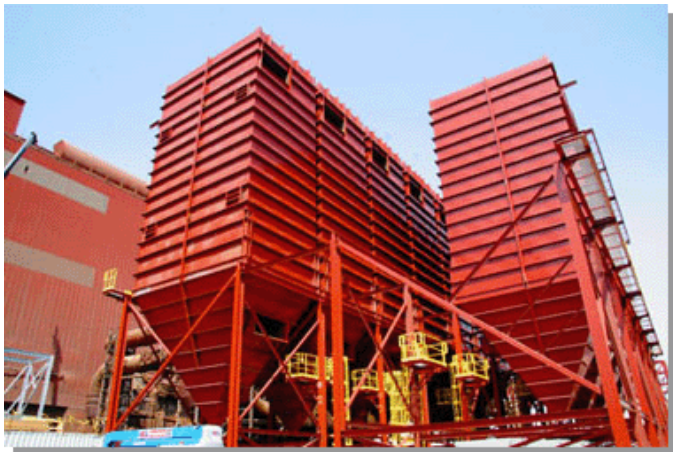


2012-13 Engineering & Tech Matters

- ▶ **ABET Re-accreditation**
 - ▶ **EAC, TAC and pending changes**
 - ▶ **Real story (two weaknesses, and one deficiency)**
 - ▶ **Program-level assessment**
 - ▶ **Thermo-fluid repairs/upgrades**
 - ▶ **Professional Development \$\$**
- ▶ **Hosting First Robotics Competition Kickoff**
- ▶ **Faculty Search**

A NEW PARTNERSHIP –

Moran Iron Works of Onaway, MI enters into an agreement that opens an exchange of academic and industrial projects and educates workers, management, LSSU faculty and students.





University teams up with Michigan Works! for workforce retraining



INTERNATIONAL ENGINEERING – a recent agreement allows Sault College students to transfer electrical engineering technology diploma course work to LSSU to earn full-fledged baccalaureate degrees in electrical engineering technology or mechanical engineering technology



Team Superior Vehicle Testing (SVT) upgraded an existing dynamometer test cell that measures the torque, force, and power of a vehicle's power train.



LSSU summa cum laude graduates receive recognition during a commencement morning breakfast—

Nicole Granger, Jon Spencer, Sarah Becks, Joselyn Coullard

Newest Robotics Line--
http://www.youtube.com/watch?v=vaZkScr2zBE&feature=player_embedded

The Economic Impact of
Lake Superior State University
on
Chippewa County and
Surrounding Region

Prepared By Robert Boston, Instructor, and Katie
Weckesser, Student, Lukenda School of Business,
Lake Superior State University

Edited By David Roland Finley, PhD., P.E.,
Dean, College of Business and Engineering
Lake Superior State University

May 2013

ECONOMIC ENGINE –

LSSU's economic impact to Chippewa County is estimated to be over **\$113M USD per year**, making it responsible for almost **1400 jobs** or **9%** of employment in the region.

Each student brings over **\$45,000 USD per year** in economic activity, corresponding to one-half a job for area residents.





2013 Engineering Senior Design Projects

- ABI: Automated Braking Innovations, Continental, Auburn Hills, MI
- A-VIS: Adexobot-Vision Integration Solution, Advenovation, Rochester Hills, MI
- LCS: Laser Control Solutions, Mactech, Red Wing, MN
- LOCI: Locomotive Onsite Communication Initiative, Essar, Sault Ste Marie, Ontario
- MRC: Marine Refueling Concepts, Moran Iron Works, Onaway, MI
- RAS: Railway Automation Solutions, Pre-tec (Willamette Valley), Eugene, OR
- SFI: Solar Film Innovations, 3M, Maplewood, MN

LSSU Alumni Employed at JR Automation



Pictured from left: Front Row: Chris Romig, Dennis Dodge, Dominick Flasck, Darren Stark, Jimmy D., David Finley , Justin Darga , and Jacob Darga

Back Row: Scot Lindemann, Andrew Dewit , Jonathan Konieczny , Tim Gallaway, Jason Schopp, Michael Stumpo , Ben Garvelink

Not Pictured: Cory Lynch, Wes Moilanen, Rick Northrop, Seth Reenders, Steve Solack, and Mark Stumpo,



Robotics Update

- ▶ Jim Devaprasad



School of Engineering & Technology

Electrical & Computer Engineering Curriculum Updates

Dr. Andrew Jones, ECE Coordinator

Curriculum Changes

- ▶ Change Math prerequisite (from MATH140)
 - ▶ EGEE125 – pre/co of MATH111 and MATH131
 - ▶ EGNR265 – pre of MATH111, MATH131, sophomore
- ▶ Update EE minor to align with University
 - ▶ 3 credits at 300 level



Power Electronics

- ▶ **Power Electronics (EGEE375 → EGEE475)**
 - ▶ Joe Moening spearheading
 - ▶ Focus on power conversion, efficiency
 - ▶ New lab equipment (Arduino, H-bridges, Supplies)
- ▶ **Results**
 - ▶ Students really enjoyed class
 - ▶ Arduino board worked great, allowed inverter circuit
 - ▶ Expand capabilities of board for DC-DC and AC-DC converters





School of Engineering & Technology

Mechanical Engineering

Dr. Robert Hildebrand, ME Coordinator

ME Updates

Curriculum Work

- ▶ Trig prerequisite added (CNC course, GD&T course)
- ▶ CNC course made less expensive
 - ▶ Reduce lab time from 5 hrs/wk to 3 hrs/wk (partially offset by additional 1 hr of lecture)
- ▶ Quality course: removed “Advanced” from title; allow statistics prerequisite to be concurrent



ME Updates

Curriculum Work (cont'd.)

- ▶ **Fluid Mechanics:**
 - ▶ combine 2 partial semester courses into 1 for full semester (full Math prereqs from start – no more rushing the “hard parts” at end of course)
 - ▶ Fire Sci students move to new course
 - ▶ New laboratory (flow regimes, fluid properties)
- ▶ Review tech elective concentrations

ME Search update





FOCUS FORWARD

David Roland Finley, Ph.D., P.E.
Dean, Business & Engineering

Investments in a strong and growing LSSU



SHRP



SOUTH HALL RENOVATION



ADDITIONAL FOCUS FORWARD TOPICS

- ▶ LSSU Presidential Search status
- ▶ Engineering Economics into curricula
- ▶ Proposed Sustainable Energy concentration
- ▶ Tau Beta Pi Engineering Honorary launch
- ▶ Outstanding SET Alumnus Award
- ▶ Proposed Civil Engineering major

Thank You!



Lunch in the Anchor Room
Senior Projects Scope Presentations (5 min. each)

12:15 – 1:15 p.m.

STUDENT SESSIONS

Board Member Roundtable

1:15 – 2:00 p.m.



School of Engineering & Technology

Feedback Session

IAB and Students ONLY

2:00 – 2:30 p.m.



School of Engineering & Technology

Feedback Report

IAB and Faculty

2:30 – 2:50 p.m.

Closing Remarks

Next meeting: May 2, 2014 on campus



School of Engineering & Technology

SSMartZone Building Tour

Located on Meridian Street

3:10 – 4:00 p.m.