

Mines and Metallurgy Academy Meeting
Thursday April 20, 2017
Missouri Ozark in Havener

CALL TO ORDER:

Gregory Skannal, Academy Chair called the meeting to order at 8:30 A.M. He welcomed everyone, brought to attention that we had a few of the Inductees attending. Greg asked for the Department Chairs to introduce the Inductees of their disciplines then asked everyone to introduce themselves around the room. Greg had announced that at the end of this 2017 Spring meeting it will be turned over to John Borthwick, Vice Chair moves up to Academy Chair.

Those attending were:

Greg Skannal, Academy Chair
John Borthwick, Vice Chair
Terry Donze
Dan Scott
Matt O'Keefe
Kevin Renfro
Larry Britt
Perrin Roller
Keith Wedge
Ken Gielow
Mike Moats
Terry Palisch

Dianna Tickner
Linda Harrell
Jim Humphrey
Bill Martin
Steve Rector
Wayne Huebner
Dick Bullock
Delbert Day
Chris Ramsay
Scott Sehlin
Lee Powell

Guest Inductees: Matt Hinson, Greg Sutton, Genevieve Sutton, Gary Pennell, Dane Cantwell, Braden Lusk, and Hans Schmoltd.

Representative of Missouri S&T attending:

Dr. Richard Brow, Interim VP and Dean of Engineering and Computing
John Held, Director of Planned Giving, University Advancement, Development
Matt Lehmann, Sr. Development Officer, Development
Shannon Bishop, Sr. Development Officer, Development
Braden Lusk, Chairman, Mining and Nuclear Engineering
Francisca Oboh-Ikuenobe, Interim Chairman, Geosciences and Geological and Petroleum Engineering
Matt O'Keefe, Chairman, Materials Science and Engineering
Jordan Chervinko – Drillbotics Design Team – Representative
Tri-Tris Nguyen – Drillbotics Design Team - Representative
Dr. Mingzhen Wei, Assistant Professor in Geosciences and Geological and Petroleum Engineering –
Junior Faculty Member Honoree
Dr. Paul Worsley, Professor in Mining and Nuclear Engineering –
Senior Faculty Member Honoree
Judy Russell, Office Support Assistant IV (Administrative Assistant), Mining and Engineering

Greg Skannal spoke briefly – the academy has come a long way, 31 attending this meeting. We will be inducting eleven new members this evening. One of the largest class for this Academy. We want to keep everyone involved it is not about the numbers. Greg announced the Induction Ceremony will be held in the McNutt Hall Commons. This is a change from the past two years. Induction Ceremony brought back home in McNutt. Lab Tours for those who want to see different labs after this meeting.

Greg announce that Drillbotics was very successful with raising the money that they asked for from the Mines and Metallurgy Academy at the 2016 Homecoming meeting. They had asked for \$3,000 but actually received \$7,300. Will be fund raising again this 2017 Homecoming meeting.

Mines and Metallurgy Academy Meeting
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Ted Ruppert's brother did reach out by email to let us know that Ted is with us. Ted wishes to be removed from any of the committees that he was on.

Larry Britt did an excellent job with some homework. A question that has been asked in the past on the Nominating Committee: What are the breakdown of the seven disciplines within the Academy? Here are the raw numbers going back to 1874. Are we getting a record of nominees from the program areas? Larry took on this assignment starting with going back to 1975 then found out that there was more data from 1874. What are the pool of graduates in our different programs and does the Academy reflect this?

Excel sheet was provided by Larry. Greg created a pie chart for the visual.

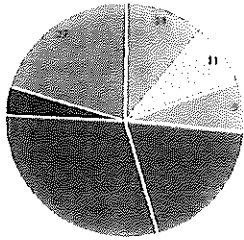
Academic Plan With Certificates	Total Degree	Degree > 1941*	Academy Membership
Ceramic Engineering	1425	1367	14 (1.02%)
Explosive Engineering	205	205	
Geological Engineering	2596	2596	11 (0.42%)
Geology & Geophysics	902	902	9 (1.00%)
Geotechnical	165	165	
Material Science*	87	87	
Mining Engineering	3456	2593	25 (0.96%)
Material Engineering	2669	2435	39 (1.55%)
Nuclear Engineering	861	861	5 (0.58%)
Petroleum Engineering	1365	1365	27 (1.98%)
Totals	13731	12576	130 (0.95-1.0%)

Academic Plan Without Certificates	Total Degree	Degree > 1941*	Academy Membership
Ceramic Engineering	1425	1367	14 (1.02%)
Explosive Engineering	169	169	
Geological Engineering	2117	2117	11 (0.52%)
Geology & Geophysics	902	902	9 (1.00%)
Geotechnical	63	63	
Material Science	87	87	
Mining Engineering	3434	2571	25 (0.97%)
Material Engineering	2669	2435	39 (1.55%)
Nuclear Engineering	861	861	5 (0.58%)
Petroleum Engineering	1365	1365	27 (1.98%)
Totals	13092	11937	130 (0.99-1.09%)

Mines and Metallurgy Academy Meeting
 Thursday April 20, 2017
 Missouri Ozark In Havener

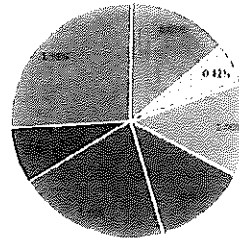
Academy Membership

Academy Membership



Chemical Engineering Metallurgical Engineering Other
 Geological Engineering Mining Engineering Metallurgical Engineering
 Metallurgical Engineering Metallurgical Engineering Metallurgical Engineering

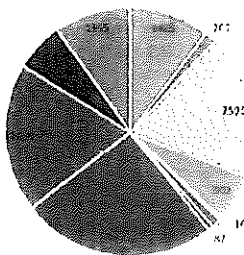
Academy Membership



Chemical Engineering Metallurgical Engineering Other
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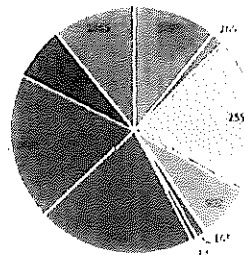
RGRAD DEGREE AWARDED Since 1874

Total Degrees



Chemical Engineering Metallurgical Engineering Other
 Geological Engineering Mining Engineering Metallurgical Engineering
 Metallurgical Engineering Metallurgical Engineering Metallurgical Engineering

Degree > 1941



Chemical Engineering Metallurgical Engineering Other
 Geological Engineering Mining Engineering Metallurgical Engineering
 Metallurgical Engineering Metallurgical Engineering Metallurgical Engineering

Oldest Degree in Academy

Larry gave the summary of his findings. He started with 1941 for the senior degree that was issued. Per Greg, we do not want to exclude nominees; but, we want include extra focus on obtaining nominations for new members from the Geological Engineering and Nuclear Engineering programs. Will need the assistance from the faculty and Alumni Associations.

Greg opened discussion of the October Homecoming 2016 minutes. Delbert Day made motion to approve the minutes; Chris Ramsay seconded. The minutes were approved unanimously without change.

Executive Committee Reports:

Financial report:

Mines and Metallurgy Academy Meeting
Thursday April 20, 2017
Missouri Ozark in Havener

Greg Skannal gave summary of the financial reports. Mines and Metallurgy Academy Scholarship currently shows the balance of \$145,267.61. As has been previous noted in past meetings; this particular data sheet goes back to 12/31/2008, which indicates a start balance of \$89,325.73. Through this span of time, it shows various deposits that members have contributed payouts of scholarships and of course the MST 5% manage fee. The general operating account which is housed within the Mining Department shows the current balance of \$18,004.64. This account reflects the money that you contribute from your academy dues or employers matched fund. \$250 put in place to offset the operating expenses, awards, statues and banquet expenses.

It has been suggested to give a broader snapshot of the history on how the financials fluctuate over the Spring and Fall meetings over the past years.

Scholarship Committee-Student Affairs/Scholar Awards/Faculty Awards:

Wayne Huebner, Committee Chair, explained how the selection of the Academy Scholar had been elected in the past years. Candidates are chosen by their peers, and then the candidates supply information for the Scholarship Committee to review. Once the Academy Scholar Candidates are selected it is always so nice to be able to visit with proud scholars and families on the night of the awards.

When the Scholarship Award was first put in place it was mentioned within the meeting room that they did not want the GPA to be a factor. Still to this day most all these students that are selected have high GPA's with their course/work load. They work hard and in most cases, do not have that extra time to be involved with the different groups. It can be a struggle for them to make the ends meet. With this option of the extra funds of the Scholarship Funds, possible we can come up with something regarding; the need, work ethic combo.

Candidates are selected. After meeting with each candidate with the essay plus the importance of the other documentation that would need to be supplied by each of the Academy Scholar selected is given a \$300 voucher to Kent's Jewelry to purchase a watch with is covered by the Mines and Metallurgy Academy. If the cost of the watch goes over the voucher amount then the Academy Scholar needs to pay the difference.

Strategic Planning Committee:

Tim Bradley – Committee Chairman currently attending a Board meeting. Tim did supply a report, Greg Skannal gave an overview of where we are currently at with our 5-year Strategic Plan. In review of the October Homecoming meeting, we currently have four points with a fifth one added: Area of Influence. It had been suggested that we may want to entertain the idea to have a facilitator to assist with working through this process. Kurt Oakes was given the floor stating that Dr. Lusk and himself both sit on the board meeting for International Society of Explosive Engineering (ISEE) was also working with the structure for their Strategic Planning Committee. The professional Strategic Planning Facilitator that ISEE reached out to was Kordell Norton. Kordell engages the members for a 6-8-hour meeting. After they meet, Kordell would be able to put together the pillars/ capstones for what the group is all about. Laying out all the items in its proper places; it is then easy enough to completely build the Strategic Plan for the group. Per Kurt, Kordell is willing to work for us. Just need to tell him the time / day for a price. The cost would be approximately \$4000 for the day plus, travel, lodging, meals, any charts that he brings in for the meeting. Greg stated that we do have one Academy member that is willing to assist with the offset of the cost of the facilitator. What we would do; share with Kordell all the information that we have pooled together. This way he would be able to see where we came from. Also, this would give a good starting point so that with his assistance then we would be able to put together the tactical pieces. Normally it is a single meeting; but, if there is a need to follow up, that would be an additional cost. He

Mines and Metallurgy Academy Meeting
Thursday April 20, 2017
Missouri Ozark in Havener

does not do the how he just builds the frame work. It would be up to the members to add the pieces to make it their own. The meeting time could be possible 4 hours or more.

The October Homecoming meeting is known as the deep dive meeting. This would need to be approved by the Executive Board for if it will be thumbs up or thumbs down.

Jackling Committee:

Chris Ramsay – Committee Chair reports.

The Jackling endowment continues to fund the following programs annually:

Mining Engineering Explosives Camp - \$15,000
Jackling Introduction to Engineering Summer Program - \$10,000
Materials Summer Camp - \$15,000

The FY17 distribution totals \$42,478.08.

As of February 28, 2017, the balance in each of the three accounts is:

Loan net assets:
Amount available for loans \$50,650.16
Outstanding loans \$31,675.50
Net Assets (Loan Fund) \$82,325.66
Available spendable - \$ 51,252.71
Endowment corpus - \$1,024,636.31

Approximately \$20,000 remains in the spendable account each year. The remaining funds have been purposely set aside to provide immediate funding to projects deemed critical to Missouri S&T's success. Each of these projects must meet the criteria outlined in the endowment agreement.

No student loans have been issued this academic year. The committee is fairly liberal in approving loans as long as the department chair personally requests and approves. The loan fund is well known to faculty within the Mines and Metallurgy department but is not publicized on campus.

Nominating Committee:

Ralph Flori, Chair was unable to attend this meeting. A report was supplied.

MEMO TO: Mines and Metallurgy Academy Members

FROM: Ralph E. Flori

Chairman, Nominating Committee

Re: Nominating Committee Report: New Members and Elections

The Academy extended invitations for membership to the following individuals, and all were able to attend the April 20, 2017 induction ceremony:

(They were nominated in Fall 2016, approved by the Nomination Committee and the Executive Committee and ultimately the Academy membership, to be inducted in Spring 2017).

Mines and Metallurgy Academy Meeting
 Thursday April 20, 2017
 Missouri Ozark in Havener

Nominees from 2016-17 Cycle		
Name	Major	Nominated
Hans Schmoltdt	G&G	2016
Steve Wunning	Met Eng	2016
Dr. Scott Morrison	Met Eng	2016
Laura Agee	Cer Eng	2016
Dr. Braden Lusk	Min Eng	2016
Gen Sutton	Min Eng	2016
Greg Sutton	Min Eng	2016
Matt Hinson	Min Eng	2016
Kevin Edwards	Nuc Eng	2016
Patrick Wagner	Pet Eng	2016
Dane Cantwell	Pet Eng	2016

Many of these are at today's meeting, even though their induction is tonight.

At this time, I would ask their department chairs...

*Dr. Matt O'Keefe from MSE,
 Dr. Franca Oboh-Ikuenobe from GGPE,
 and*

Dr. Braden Lusk from MNE

to briefly introduce each new inductee who is present now to the Academy.

(And to introduce the four carryovers from the previous year below).

This is a record number of new inductees, in part due to the Academy's recent shift toward recognizing mid-career leaders with outstanding career trajectories so they can serve the Academy and campus during their strongest leadership years.

The following individuals were nominated and approved during the 2015-16 year but were unable to attend the Spring 2016 induction. They will attend this year's ceremony and will be inducted:

Four Carryovers from Spring 2016:		
Robert Duenckel	Pet Eng	2015
Bryan Galll	Min Eng	2015
Ron Tyson	GE	2015
Gary Pennell	Met Eng	2015

An Update from after this Nominating Committee report was submitted:

Those who were unable to attend due conflicts in schedules

Laura Agee, Kevin Edwards, Scott Morrison, and Bryan Galll. Bryan Galll will be coming up on his final opportunity to join the Academy in 2018.

Greg Skannal brought it to everyone's attention that in the packet there is a chart on how the history of the voting has been done over the past five years. As we gain more members the voting numbers should grow. But as you see in the chart below the averages are getting lower. We need to exercise our rights to vote.

Year (April)	Total member in Academy	Total that voted	Percentage that participates
2012	95	48	0.51
2013	101	51	0.50
2014	119	60	0.50
2015	107	44	0.41
2016	112	51	0.46
2017	113	40	0.35

Presentations by Development

Mines and Metallurgy Academy Meeting
Thursday April 20, 2017
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Matt Lehmann, Sr. Development Officer

Campus Overview:

- Welcome Dr. Mun Choi
- Leading the Way – Rolla Rising
- Anchor for Innovation
 - New construction
- Breaking New Ground
- Changing Lives Around the World
- MyMINERBOARD
- Celebrating 40 Years of OGS

John Held, Director of Planned Giving

Spring 2017 Development

- Mines and Metallurgy Academy
 - Three departments- 7 academic programs
- McNutt Hall
 - 19,000 additional sq. ft.
 - 9 new labs
 - 3 classrooms
 - 4 student dedicated spaces
 - 3 faculty offices
- Classroom Enhancement
 - 5 classrooms / Global

Presentation by Faculty Recognition Awardee:

Dr. Paul Worsey (Senior Faculty Member Honoree)
Dr. Mingzhen Wei (Junior Faculty Member Honoree)

Presentations by Departments

Dr. Matt O'Keefe, Chairman, Materials Science & Engineering

Dr. Francisca Oboh-Ikuenobe, Interim Chairman, Geosciences and Geological and Petroleum Engineering

Dr. Braden Lusk, Chairman, Mining and Nuclear Engineering

College of Engineering and Computing – Overview

Dr. Brow Interim VP and Dean

- The college is in a year of transition:
 - New, Permanent Dean this summer
 - Computer Science Chair (Interviews finished)
 - EMSE Chair (permanent chair in negotiations)
 - GGPE Chair (on campus interviews approved)
 - MSE (Internal search underway)
- Sixteen New T/TT/NTT teaching faculty hired since August 2016
- Twenty faculty searches are underway (Including 9 BIC hires)
- Missouri S&T CEC Fall 2016 Snapshot
 - 185 T/TT faculty, 24 NTT faculty, 5 lecturers, 34 researchers, 73 staff
 - 5842 Undergrads, 1633 grad students (518 PhD's)
- We are nine departments (and FEP) with sixteen accredited UG degree programs.
- The average CEC teaching load is up 20% since 2012

Mines and Metallurgy Academy Meeting
Thursday April 20, 2017
Missouri Ozark in Havener

- CEC Graduate Student Enrollment Trends
- We did \$24.9M in sponsored research last year
- Our Strategic Vision
 - Missouri S&T will be the leading public technological research university for discovery, creativity and innovation.
 - The S&T College of Engineering and Computing will become the top – 50 graduate engineering program in five years.
- S&T has embarked in a plan that includes strategic hiring in select areas of expertise to support best-in-class achievements
 - Advanced Materials for Sustainable Infrastructure
 - Enabling Materials for Extreme Environments
 - Advanced Manufacturing
 - Smart Living
- 2017 NSF Career Award Winners in CEC
 - Dr. Jie Gao
 - Dr. Edward Kinzel
 - Dr. Caizhil Zhou
- Missouri S&T leads the world in borate bio-glass research
- Missouri S&T CEC has had great success with the GAANN program
- If we want to be top 50 graduate engineering program, we need to become more productive researchers
 - Increased expenditures
 - More and better, PhDs
 - More and better, publications
- To maintain our position as Missouri's technological university, we need to recruit and retain the very best faculty.
 - Emphasize endowed and named professorships
 - Expand research center opportunities
 - Invest in "ERC level" proposals
 - Invest in our research infrastructure
- So, Academy members, how can you help us?
 - Be **advocates** for S&T Engineering and Computing
 - Be **supporters** of S&T Engineering and Computing
 - Be **advisors** for S&T Engineering and Computing

Old Business: GGPE Search committee members Keith Wedge, Larry Britt, Perrin Roller

Search is still on going. Started out with 19 original candidates now down to 3 candidates. Suggestion for a couple of the Academy members to have dinner with the three candidates.

New Business:

Continuation of Nominating Report that was supplied by Ralph Flori
Two At Large positions on the Executive Committee are opening as the terms of Perrin Roller and Larry Britt are ending. We received two nominations for these At Large positions, and they were approved by the Nominating Committee:

*Bill Martin
Scott Sehlin*

With John Borthwick stepping up to the Chair position, this opens the two-year Vice Chair position. We asked for nominations and received two:

*Kurt Oakes
Chris Ramsay*

Mines and Metallurgy Academy Meeting
Thursday April 20, 2017
Missouri Ozark in Havener

I would like to thank Perrin Roller and Larry Britt for their service on the Executive Committee.

I also would like to thank the Nominating Committee and all Academy members for helping to nominate and select such an outstanding set of new members and officers. Serving on the Nominating Committee are: Keith Wedge, Kent Weisenstein, Dianna Tickner, Mike McCall and Jim Humphrey.

Sometime, during the meeting- It was decided that we would not be casting votes since Kurt Oakes had elected to not pursue the VP position. Chris Ramsay is the new Vice Chairman of the Mines and Metallurgy Academy. None opposed

Next Mines & Metallurgy Academy meeting will be Homecoming – Friday, October 27, 2017.

Discussion/Adjournment

The meeting was adjourned at 3:30 PM.

Different members went to the different lab tours that was previously scheduled.

Lab tours that had been arranged: Distance Classroom Lab. McNutt Lab stops will include the Drill Core Examination Laboratory for visual examinations and sampling (McNutt 257), the Rock & Mineral Processing Laboratory for rock cutting, crushing and mineral separation (McNutt 259-A), the Microscopy Preparation Laboratory for the preparation of polished ore samples (McNutt 257-A), the Leica DMV 6 digital research microscope for petrographic examinations (McNutt B23) and the cutting-edge laser ablation ICP-MS laboratory for mineral trace element analyses (McNutt 263).

