

**Moore, Marsha M.**

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**From:** Justice, George  
**Sent:** Saturday, June 16, 2012 1:20 PM  
**To:** Dean, Kenneth D.  
**Subject:** NSEI

Are we on the same page regarding my messages to Tushar and his messages back to me? I can explain in further detail if either you or Brian aren't sure.

George

**Moore, Marsha M.**

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**From:** Foster, Brian L. (Provost)  
**Sent:** Sunday, June 17, 2012 6:22 PM  
**To:** Justice, George  
**Subject:** RE: NSEI--what next?

George, sorry. I don't know how I got on that message—didn't notice that it was from 6 weeks ago! Sigh.  
Brian

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**From:** Justice, George  
**Sent:** Sunday, June 17, 2012 4:49 PM  
**To:** Foster, Brian L. (Provost)  
**Subject:** Re: NSEI--what next?

Thanks, Brian. A lot has happened since I originally sent that message a month and a half ago--that was before the Ameren meeting, etc. I think we need to sit down and figure out what might be next. Let's sit down with Ken and try to figure out what might be next.

Best,  
George

On Jun 17, 2012, at 2:18 PM, Foster, Brian L. (Provost) wrote:

Yes, I agree that we need to talk about this and get on a clear track. I'm inclined to say we should go back to where we were before the Engineering discussion...we can always go back to that if they are willing. In fact, I guess I'd say that that is where we are by default. Need to get Ken in the conversation for process reasons.  
Brian

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**From:** Justice, George  
**Sent:** Tuesday, May 01, 2012 8:42 AM  
**To:** Foster, Brian L. (Provost)  
**Subject:** NSEI--what next?

Brian,

We have to figure out what to do next.

Do we want to ask the faculty to come back to agreeing to the "big vision" document that was put on hold as we explored the move to engineering (which no longer seems feasible)?

Do we want to edit that document in light of the seeming intransigence of the faculty to move forward productively?

Or do we want to scrap that document and start over from where we were with the original "reorganization" memos that you and I sent out?

I think there are several reasons we need to think about this sooner rather than later.

One of the points in the document is the naming of a director. REDACTED  
REDACTED

I understand from the Collected Rules that, officially, chairs are named by the Chancellor. In practice, of course, deans make the call. Of course, the NSEI was established as a "center," but the rules for a "center" prescribe, for the "director," a role "much like that of a department chairperson," and since there are tenure lines in NSEI, the role is exactly like that of the chair.

[http://www.umsystem.edu/ums/rules/collected\\_rules/administration/ch20/20.110\\_department\\_chair](http://www.umsystem.edu/ums/rules/collected_rules/administration/ch20/20.110_department_chair)

Since we raised that issue in the pending large document, I am sure the faculty are going to pounce on it, since Sudarshan has been talking about the need of an official director REDACTED for a long time. If REDACTED they will ask for the additional financial help that comes with a department chair (as stated in the rules and regulations). Naming a director, even for a two-year term, will make it more difficult to make transitions as we need to make them in the next two years.

I still lean toward taking the "hard line" and going back to the reorganization documents as a starting point. But we should talk about it.

Best,  
George

--  
George Justice  
Dean of the Graduate School  
Vice Provost for Advanced Studies  
210 Jesse Hall  
University of Missouri  
Columbia, MO 65211  
573-884-1402  
[JusticeG@missouri.edu](mailto:JusticeG@missouri.edu)

**Moore, Marsha M.**

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**From:** Erwin, Ruth A.  
**Sent:** Monday, June 18, 2012 10:47 AM  
**To:** Justice, George  
**Subject:** did you ever?  
**Attachments:** GFS 032012.doc

**Importance:** High

Did you ever update these GFS minutes so we can posted them?

*Ruth*

Ruth Erwin, CPS  
Business Manager  
Graduate School  
210 Jesse Hall  
University of Missouri-Columbia  
Columbia, MO 65211  
(573) 882-9578  
Fax (573) 884-5454

Minutes of the Graduate Faculty Senate  
March 20, 2012

The meeting was called to order by President Charles Nilon at 3:30 pm in 2205 A&B MU Student Center. The Senators introduced themselves to the guests attending the meeting.

Senators and administrative representatives attending: Lloyd Barrow, James Endersby, Sanda Erdelez, Pat Friedrichsen, Lynda Kraxberger, Charles Nilon, Carol Snively, Peter Vallentyne, Adam Marx (Graduate Student Association), George Justice, Mannie Liscum, Ashley Siebenaler, and Ruth Erwin (Graduate School), Haskell Taub, Rose-Marie Muzika and Mark Ryan (visitors).

Senators and administrative representatives absent: Jane Bostick, Jere Gilles, Sanjeev Khanna, Marty Townsend, Patrick Wheeler, John Wigger, and Lisa Zanetti.

A motion and second were made to approve the minutes of the February 28, 2012. The motion was approved.

### **Graduate School Report**

Dr. Justice gave a report on the recent reorganization of the Graduate School. Under the reorganization the Truman School of Public Affairs became an independent School with Director Barton Wechsler named as Dean. The transition is going smoothly. The moving of TSPA from the Graduate School will allow them to create broader collaborate programs. The separation of the Nuclear Science and Engineering Institute from the Graduate School is not going as smoothly. Approximately 10 years ago NSEI was established as a home to four faculty members and it is felt that broad campus participation would occur if the unit became a Big-C Center and would allow collaborative work with a broad range of units. The Graduate School cannot provide the administrative support for the unit. The program will remain the same and allow the students to receive the degree that was in place when they entered the program. The faculty will need to determine what degree they would like if they wish to change the degree, i.e., Nuclear Engineering or Nuclear Science or something different. Any new degree program that the faculty would propose would need to go through the Senate. Dr. Justice indicated that the students have concerns related to changes in courses, curriculum, advisors, financial support, future classes, and a fear that future applicants may or may not be admitted into the program. Dr. Justice indicated that he could not stay for the entire GFS meeting because he needed to attend the remainder of the GFS meeting due to a conflict with another meeting related to concerns related to the NSEI separation from the Graduate School.

### **New Business**

#### **School of Natural Resources Degree Consolidation**

Dr. Mark Ryan presented the plan from the School of Natural Resources to consolidate the masters and doctoral degrees within the School of Natural Resources departments into one masters and one doctoral degree under Natural Resources with emphasis areas. The plan will eliminate the M.S. and Ph.D. degrees in Fisheries and Wildlife; the M.S. and Ph.D. degrees in Soil, Environmental and Atmospheric Sciences and the M.S in Park, Recreation and Tourism and would change the name of the M.S and Ph.D. in Forestry to Natural Resources. Under the consolidation the School would have the following emphasis under the M.S. and Ph.D. degrees in Natural Resources: Agroforestry (M.S. only, Interdisciplinary); Fisheries and Wildlife (M.S. and Ph.D.); Forestry (M.S. and Ph.D.); Human Dimensions of Natural Resources (M.S. and Ph.D.; Interdisciplinary); Parks, Recreation and Tourism (M.S. only); Soil, Environmental, and Atmospheric Sciences (M.S. and Ph.D.); and Water Resources (M.S. and Ph.D., Interdisciplinary).

### Presentation on Forestry's USDA NAA Award

Dr. Rose-Marie Muzika gave the Senate an overview on the National Needs Award that the Forestry Department had received. The award is for training of masters and doctoral students in Agriculture and Forestry resources. This award is due to the expertise in these fields will be missing in the future and the US Department of Agriculture has identified shortages that will need future expertise. Drs. Muzika and Francisco Aguilar submitted a proposal that will give two masters and two doctoral student expertise in forestry subdisciplines when they graduate. These students have become student leaders in forestry department and conduct brown bag meetings, etc. with others as part of their training. There is also funding for international research program. The four students have had staggered admissions times into the training program with one beginning Spring 2011, two in Fall 2011, and the last one in Spring 2012.

### Physics IGERT Proposal

Dr. Haskell Taub gave an overview on the IGERT @ MU-Neutron Scattering for the Sciences and Engineering of the 21<sup>st</sup> Century proposal. He indicated that national need is driving this project. He indicated that MU had tried previously for the award. It is a \$3 million award partnered with 3 other institutions – Indiana University, Fisk University, and North Carolina State-- and Oak Ridge National Laboratory, and the National Institute of Standards and Technology. The award has traineeships of \$30,000 for stipend, \$10,000 tuition and fees, internships at National Institute of Standards and Technology or at Oak Ridge Spallation Neutron Source; equipment at the MU Research Reactor; materials and supplies, travel to the national laboratories; and curriculum development. There are five departments involved with this proposal – Biochemistry, Physics, Electrical and Computer Engineering, Mechanical and Aerospace Engineering and Biological Sciences. Students will hold the traineeships for two years.

### **New Business**

#### School of Natural Resource Degree Consolidation

A motion and second were made to drop the M.S. and Ph.D. degrees in Fisheries and Wildlife Sciences, and Soil, Environmental and Atmospheric Sciences, and the M.S. degree in Park, Recreation and Tourism and change the name of the M.S. and Ph.D. degrees in Forestry to M.S. and Ph.D. degrees in Natural Resources with transcribed emphasis areas: Agroforestry (M.S. only; Interdisciplinary); Fisheries and Wildlife Sciences (M.S. and Ph.D.); Forestry (M.S. and Ph.D.); Human Dimensions of Natural Resources (M.S. and Ph.D.; Interdisciplinary); Parks, Recreation, and Tourism (M.S. only); Soil, Environmental, and Atmospheric Sciences (M.S. and Ph.D.); and Water Resources (M.S. and Ph.D.; Interdisciplinary). The motion was approved.

#### Commencement Faculty Marshall

A request was made for a Faculty Marshall for the Spring 2012 Graduate School Commencement ceremony. Dr. Nilon volunteered.

### **Graduate Student Association**

Mr. Marx indicated that GSA had a new website. He announced that the GFS would be receiving an invitation to the GSA banquet on April 18 at Bambino's. The guest speaker for the event will be Dr. Liscum. The GSA is expecting 30 nominations for their awards that will be given that evening. The GSA travel awards will be due March 30. In the fall GSA is doing a call for

representatives from the departments to see if they can get more departments interested in GSA. The GSA sponsored a Mocktails hour last weekend and it went well.

### **Committee Reports**

Academic Affairs - Dr. Snively indicated that she had emailed her report prior to the meeting.

Elections - Dr. Friedrichsen announced that she has been contacting individuals to get nominees for upcoming elections. She would like to see two or three names for each election with the nominees providing a bio and then information sent to the departments for balloting.

### **Old Business**

In order for individuals to review and make comments on the White Paper Dr. Justice is writing it may need to be emailed to the GFS Senators.

### **Graduate School report continued**

Dr. Liscum announced that he held a meeting with Directors of Graduate Studies and staff on fellowships. The meeting ran for one hour and forty five minutes and went over how applications were chosen; what a good application is; and how and what fellowships should be used for. He hopes to have another discussion with the DGS on recruitment.

The meeting adjourned at 5:02 pm with Dr. Nilon indicated that items/individuals at the next meeting will include Pat Okker, Athletics Department and the elections and then everyone was welcome to attend an end of year event at the Heidelberg.

Submitted by

Ruth Erwin  
Graduate School

**Moore, Marsha M.**

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**From:** Butler, Ralph  
**Sent:** Monday, June 18, 2012 3:17 PM  
**To:** Attebery, Jeffrey R.  
**Subject:** RE: Two fiscal items for your awareness.

Jeff

In regards to item 2, I understand you Rob Hall wanted to see all of the information and he would investigate? I recall you stating that you might arrange for a OSPA to establish a mocode for us to charge against?

Ralph

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**From:** Attebery, Jeffrey R.  
**Sent:** Wednesday, June 13, 2012 3:56 PM  
**To:** Butler, Ralph  
**Subject:** Two fiscal items for your awareness.

Ralph,

1. Redacted - Not Responsive

2. I met with Barb Breen last week to review the NSEI NEUP grant. I recall you asking me to schedule a meeting with the Office of Research, however, I thought it would be best for me to inquire one-on-one with Barb first. Barb and I examined all of the financial details. She completely understands and agrees that the funding for this project needs further review before proceeding any further. With her on our side, we are ready to take the next step. I'd like to get with you to discuss what that should be.

Jeff



**Moore, Marsha M.**

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**From:** Tzou, Robert D.  
**Sent:** Monday, June 18, 2012 3:37 PM  
**To:** Butler, Ralph  
**Cc:** Thompson, James E.; Kovalski, Scott; Gahl, John M.; Islam, Naz  
**Subject:** NEP in Engineering  
**Attachments:** NEP NUCLEAR ENGINEERING PROGRAM in College of Engineering.docx

Dear Ralph,

Thank you for working with us for planning the Nuclear Engineering Program (NEP) to be offered by the College of Engineering. Engineering faculty has developed a curricular draft, as attached, in support of the MS/PhD program. It is a draft from the engineering faculty alone for the time being, with possible changes to be made should input from the NSEI faculty arrive later.

We are instructed to designate the emphasis areas in our degrees to distinguish our degrees from those offered by NSEI. While identifying possible faculty candidates to teach these core/elective courses, we are wondering if we could have your help in identifying possible instructors from MURR when these courses are offered in the future. Please note that CHEM 4600/8600 Radiation Detection and Measurement has been offered by Dr. David Robertson, and will continue to be one of the five core courses in the planned NEP in Engineering. We want to do everything possible to integrate our activities with MURR, so that an ABET accredited nuclear engineering program would be resulted from our joint effort.

Thank you in advance for your advice.

Bob Tzou

## DRAFT: GRADUATE DEGREE PROGRAMS OF NUCLEAR ENGINEERING

In

College of Engineering

Nuclear engineering program (NEP) in the College of Engineering has three program emphasis areas: Genral, Materials, Environmental, and Thermo-Hydraulics. There are five core courses that are required by all emphasis areas, which give 15 credit hours. Two to three courses (6-9 credit hours, contingent upon the recommendation of the program study committees) will be chosen from the technical electives in each emphasis area. The rest of 6-9 credit hours are required for the Master Degree in Nuclear Engineering. The PhD degree in Nuclear Engineering will require additional 18 credit hours on the 8000-level.

### **Core Courses (required for all emphasis areas):**

NE 4000/7000 Introduction to Nuclear Physics

NE 4000/7000 Nuclear Reactor Engineering/Reactor Theory (Sabiha, or UEA: Nuclear Reactor Engineering; Nuclear Reactor Theory)

CHEM 4600/8600 Radiation Detection and Measurement (Robertson)

NE 4000/7000 Nuclear Systems/Thermal Management of Nuclear Power Plant (Ma)

NE 4000/7000 Materials in Extreme Environments/Nuclear Materials (Pinhero)

### **(I) General**

A combination of 2-3 electives (6-9 credit hours) taken from Materials Emphasis, Environmental Emphasis, and Thermo-hydraulic Emphasis.

### **(II) Material Emphasis**

ECE 4550/7550 Introduction to Plasmas (Kovaleski)

NE 4000/7000/8000 Nuclear Fuel Cycles (Islam)

NE 4000/7000/8000 Reactor Shielding and Safety (Islam, or UEA: Radiation Protection and Shielding)

MAE 8290 Fracture and Fatigue Prevention (Khanna)

NE 4000/7000 Diffraction Methods in Materials Sciences (Winholtz)

NE 4000/7000 Basic Biology and Radiochemistry for Nuclear Engineers (Raghu Radiology)

**(III) Environmental Emphasis**

NE 4000/7000/8000 Nuclear Waste Management (Islam)

CEE 4220/7220/ChE 7220 Hazardous Waste Management (CEE)

CEE 4250/7250 Environmental Regulation and Compliance (Trauth)

NE 8000 Regulation of Radioactive Materials (Trauth)

**(IV) Thermo-hydraulic Emphasis**

MAE 4320/7320 Design of Thermal Systems (Solbrekken)

MAE 8311 Heat Transfer – Convection (Yuwen Zhang)

MAE 8315 Multiphase heat Transfer (Yuwen Zhang)

MAE 8420 Computational Heat Transfer and Fluid Dynamics (Solbrekken)

**Moore, Marsha M.**

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**From:** Butler, Ralph  
**Sent:** Monday, June 18, 2012 3:52 PM  
**To:** Tzou, Robert D.  
**Cc:** Thompson, James E.; Kovaleski, Scott; Gahl, John M.; Islam, Naz  
**Subject:** RE: NEP in Engineering

I will take a look and respond. Ralph

---

**From:** Tzou, Robert D.  
**Sent:** Monday, June 18, 2012 3:37 PM  
**To:** Butler, Ralph  
**Cc:** Thompson, James E.; Kovaleski, Scott; Gahl, John M.; Islam, Naz  
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Bob Tzou

**Moore, Marsha M.**

---

**From:** Butler, Ralph  
**Sent:** Monday, June 18, 2012 3:52 PM  
**To:** Foyto, Leslie P.; Fruits, John L.  
**Subject:** FW: NEP in Engineering  
**Attachments:** NEP NUCLEAR ENGINEERING PROGRAM in College of Engineering.docx  
REDACTED

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**From:** Tzou, Robert D.  
**Sent:** Monday, June 18, 2012 3:37 PM  
**To:** Butler, Ralph  
**Cc:** Thompson, James E.; Kovaleski, Scott; Gahl, John M.; Islam, Naz  
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Bob Tzou

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MAE 8315 Multiphase heat Transfer (Yuwen Zhang)

MAE 8420 Computational Heat Transfer and Fluid Dynamics (Solbrekken)

**Moore, Marsha M.**

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**From:** Justice, George  
**Sent:** Tuesday, June 19, 2012 8:54 AM  
**To:** Erwin, Ruth A.  
**Subject:** Re: did you ever?  
**Attachments:** updatedgradschoolreportmarch2012.docx  
  
**Importance:** High

I did Ruth, and I sent it to you in early May, I think. Here it is again.

Thanks,  
George

--

George Justice  
Dean of the Graduate School  
Vice Provost for Advanced Studies  
210 Jesse Hall  
University of Missouri  
Columbia, MO 65211  
573-884-1402  
[JusticeG@missouri.edu](mailto:JusticeG@missouri.edu)

On Jun 18, 2012, at 10:47 AM, Erwin, Ruth A. wrote:

Did you ever update these GFS minutes so we can posted them?

*Ruth*

Ruth Erwin, CPS  
Business Manager  
Graduate School  
210 Jesse Hall  
University of Missouri-Columbia  
Columbia, MO 65211  
(573) 882-9578  
Fax (573) 884-5454

<GFS 032012.doc>



Dr. Justice gave a report on the recent reorganization of the Graduate School. Under the reorganization the Truman School of Public Affairs has become an independent School with Director Barton Wechsler named as Dean. The transition is going smoothly. The moving of TSPA from the Graduate School will allow them to create broader and more collaborative programs. The separation of the Nuclear Science and Engineering Institute from the Graduate School is not going as smoothly. Approximately 10 years ago NSEI was established as an interdisciplinary center that also became a tenure home to five faculty members. The campus's vision for NSEI as a broad program with faculty participation from many units has not succeeded. Furthermore, the Graduate School is not set up to provide administrative support for faculty lines. Under reorganization, the academic degree program will remain the same and allow the students to receive the degree that was in place when they entered the program with the same curriculum and the same faculty advisors. In relation to the future of the academic program, the Graduate Faculty Senate provides the appropriate shared governance for graduate curricula, and any major changes to the Nuclear Engineering curriculum will be examined and approved by the senate. These changes include name changes—for example, whether the College of Engineering or other units on campus offer, in the future, Nuclear Engineering, Nuclear Science or other programs in the area. Dr. Justice indicated that the students have concerns related to changes in courses, curriculum, advisors, financial support, future classes, and the admission of students to nuclear science and engineering programs in the future. The Graduate School and Provost Foster are both committed to continuing to serve students as fully as possible, and changes are being made to enhance rather than restrict our education and research in nuclear science and engineering. Dr. Justice indicated that he could not stay for the entire GFS meeting because he needed to attend the remainder of the GFS meeting due to a conflict with another meeting related to concerns related to the NSEI separation from the Graduate School.

**Moore, Marsha M.**

---

**From:** Grus, Terrence M.  
**Sent:** Thursday, June 21, 2012 6:13 AM  
**To:** Justice, George  
**Subject:** Re: PhD Medical Physics

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

**Categories:** Orange Category

Yes- I got your note yesterday and have followed up.

Terrence Grus

iPhone

On Jun 21, 2012, at 5:56 AM, "Justice, George" <[justiceg@missouri.edu](mailto:justiceg@missouri.edu)> wrote:

Can you work with this student and see which term he is applying for? If its 2013 tell him to check back later in the fall and take down his contact nformation. George

Begin forwarded message:

**From:** REDACTED  
**Date:** June 21, 2012 1:06:48 AM CDT  
**To:** "[GrusT@missouri.edu](mailto:GrusT@missouri.edu)" <[GrusT@missouri.edu](mailto:GrusT@missouri.edu)>  
**Cc:** "[justiceg@missouri.edu](mailto:justiceg@missouri.edu)" <[justiceg@missouri.edu](mailto:justiceg@missouri.edu)>  
**Subject:** Re: Fwd: PhD Medical Physics  
**Reply-To:** REDACTED

Hello sir,  
I have been asked to contact you on the navigation process of my application in choosing nuclear engineering - medical physics option as my choice of program. Thank you for your anticipated cooperation and assistance.

Sincerely,

REDACTED

----- Original Message -----

**From:** "Justice, George" <[justiceg@missouri.edu](mailto:justiceg@missouri.edu)>  
**To:** REDACTED  
**Cc:** "Grus, Terrence M." <[GrusT@missouri.edu](mailto:GrusT@missouri.edu)>; "Ghosh, Tushar K." <[GhoshT@missouri.edu](mailto:GhoshT@missouri.edu)>  
**Sent:** Tuesday, 19 June 2012, 21:08  
**Subject:** Fwd: PhD Medical Physics

Dear Mr. **REDACTED**

We are currently in the process of updating administrative processes related to our Nuclear Engineering degrees, including Medical Physics. If you are interested in applying for the Fall 2012 term, Mr. Terrence Grus in Graduate Admissions will help you navigate our application system.

If you are, instead, interested in applying for the fall of 2013 or later, please return to the application system later this fall. Mr. Grus will keep track of your interest and alert you to when you will be able to begin the application process. Please don't hesitate to ask Mr. Grus for assistance with the application system--he and his staff are here to help.

Dr. Ghosh is the expert on the medical physics program--he is the right person to ask about our Nuclear Engineering degrees.

Sincerely,

George Justice

--

George Justice

Dean of the Graduate School

Vice Provost for Advanced Studies

210 Jesse Hall

University of Missouri

Columbia, MO 65211

573-884-1402

[JusticeG@missouri.edu](mailto:JusticeG@missouri.edu)<mailto:JusticeG@missouri.edu>

Begin forwarded message:

From: "Ghosh, Tushar K."

<[GhoshT@missouri.edu](mailto:GhoshT@missouri.edu)<mailto:GhoshT@missouri.edu>>

Subject: FW: PhD Medical Physics

Date: June 19, 2012 2:55:17 PM CDT

To: "Justice, George" <[justiceg@missouri.edu](mailto:justiceg@missouri.edu)<mailto:justiceg@missouri.edu>>

George:

Please instruct the student how to proceed.

Thanks

Tushar

-----  
Tushar K Ghosh, PhD

Professor and Director of Graduate Studies

Nuclear Science and Engineering Institute

E 2438 Lafferre Hall

Columbia, Missouri, 65211

Ph: (573) 882-9736; Fax: (573) 884-4801

Website: <http://nsei.missouri.edu>

From: REDACTED  
Sent: Monday, June 18, 2012 10:44 PM  
To: Ghosh, Tushar K.  
Subject: Re: PhD Medical Physics

Please sir, I am still awaiting your reply.

From: REDACTED  
To: "Ghosh, Tushar K."  
<[GhoshT@missouri.edu](mailto:GhoshT@missouri.edu)<mailto:[GhoshT@missouri.edu](mailto:GhoshT@missouri.edu)>>  
Sent: Thursday, 14 June 2012, 12:33  
Subject: Re: PhD Medical Physics

Thank you sir,  
I logged in to my account but couldn't find nuclear engineering as a program.  
Sir, you can inquire about this please.  
Thank you sir.

From: "Ghosh, Tushar K."  
<[GhoshT@missouri.edu](mailto:GhoshT@missouri.edu)<mailto:[GhoshT@missouri.edu](mailto:GhoshT@missouri.edu)>>  
To: REDACTED  
Sent: Wednesday, 13 June 2012, 22:19  
Subject: RE: PhD Medical Physics

Use nuclear engineering. In your personal statement, indicate you are interested in Medical Physics.

Ghosh

-----  
-----  
Tushar K Ghosh, PhD  
Professor and Director of Graduate Studies  
Nuclear Science and Engineering Institute  
E 2438 Lafferre Hall  
Columbia, Missouri, 65211  
Ph: (573) 882-9736; Fax: (573) 884-4801  
Website: <http://nsei.missouri.edu>

From: REDACTED  
Sent: Wednesday, June 13, 2012 3:37 PM  
To: Ghosh, Tushar K.  
Subject: PhD Medical Physics

Dear Sir,

I am a prospective student.  
I started filling an online form for admission into your nuclear

engineering/medical physics program but  
unfortunately I could not see medical physics/nuclear engineering as a program  
among all the available programs.  
Please sir kindly assist.

Best regards

REDACTED

**Moore, Marsha M.**

---

**From:** Juengermann, Cecilia A.  
**Sent:** Thursday, June 21, 2012 3:37 PM  
**To:** Butler, Ralph  
**Subject:** RE: Research RIF?

Okay. Of course, the balance will just transfer forward so we can always do it next fiscal year if we need to.

---

**From:** Butler, Ralph  
**Sent:** Thursday, June 21, 2012 3:36 PM  
**To:** Juengermann, Cecilia A.  
**Subject:** Re: Research RIF?

I am waiting to see what happens to the NSEI.

Sent from my iPhone

On Jun 21, 2012, at 2:42 PM, "Juengermann, Cecilia A." <[JuengermannC@missouri.edu](mailto:JuengermannC@missouri.edu)> wrote:

Ralph,

I'm in the process of setting up my spreadsheets for closing entries and I noticed that we haven't transferred any of the RIF allocation to the Research RIF. Are we going to be doing an entry prior to June 30?

Hope you are having fun in Minnesota! ☺

Cecilia

## Moore, Marsha M.

---

**From:** Justice, George  
**Sent:** Thursday, June 21, 2012 3:47 PM  
**To:** Dean, Kenneth D.  
**Subject:** Fwd: NSEI

No comment.

Begin forwarded message:

**From:** "Piper, Karen L." <[PiperK@MISSOURI.EDU](mailto:PiperK@MISSOURI.EDU)>  
**Subject:** NSEI  
**Date:** June 21, 2012 3:32:12 PM CDT  
**To:** <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>  
**Reply-To:** AAUP-MU <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>

Just caught up on NSEI news. How depressing. Shutting down a top-ranking program in the country just as they were about to score a huge grant? I have to wonder if Thompson wanted control of the AmerenUE money rather than NSEI getting it.

Now I can certainly understand if Justice, a new dean, didn't want to be involved in P&T issues. But is that enough reason to shut down a program in 4 days with no input from the faculty involved? I certainly hope administrators apologized for their "4-day closure" announcement. What a mess.

And with so many problems and lawsuits in engineering, does some want to explain to me why Thompson is still Dean? Forcing NSEI to work under him when they were obviously doing great on their own sounds like it could easily turn into a "hostile work environment" situation. This whole thing must have already hurt the NSEI professors professionally. Karen

## Moore, Marsha M.

---

**From:** AAUP-MU <AAUP-MU@PO.MISSOURI.EDU> on behalf of Edward Adelstein  
<eddieadelstein@GMAIL.COM>  
**Sent:** Thursday, June 21, 2012 4:19 PM  
**To:** AAUP-MU@PO.MISSOURI.EDU  
**Subject:** Re: NSEI

to steal a quote from a county and western song "cause in the real world they are shutting Detroit down, while the boss man takes his bonus and jets on out of town"

We have developed a dangerous dishonest culture as evidenced by the hiring of a second President with no training and education in the art or learning, shutting down a superior nuclear engineering program to create an inferior counter program with lower standards developed to encourage foreign students to attend, the medicare fraud in the school of medicine and shutting down the intellectual heart of the university by closing the in-house publishing. There are more, the concept of education, honesty and experience have been over ridden by self-serving protectiveness at the highest level. eddie

On 6/21/12, Piper, Karen L. <PiperK@missouri.edu> wrote:

> Just caught up on NSEI news. How depressing. Shutting down a  
> top-ranking program in the country just as they were about to score a  
> huge grant? I have to wonder if Thompson wanted control of the  
> AmerenUE money rather than NSEI getting it.  
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> under him when they were obviously doing great on their own sounds  
> like it could easily turn into a "hostile work environment" situation.  
> This whole thing must have already hurt the NSEI professors  
> professionally. Karen  
>



**Moore, Marsha M.**

---

**From:** Justice, George  
**Sent:** Friday, June 22, 2012 5:09 PM  
**To:** Dean, Kenneth D.  
**Subject:** Fwd: Next meeting of AAUP-MU

Begin forwarded message:

**From:** Stephen Montgomery-Smith <[stephen@MISSOURI.EDU](mailto:stephen@MISSOURI.EDU)>  
**Subject:** Next meeting of AAUP-MU  
**Date:** June 22, 2012 5:07:07 PM CDT  
**To:** <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>  
**Reply-To:** AAUP-MU <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>

The next meeting of the MU Chapter of AAUP will be tomorrow, Saturday June 23th, 10am-12noon, in Memorial Union S304.

Possible Agenda Items:

1. Items to be placed on agenda for July 24th meeting with President Wolfe. (On July 24th, three of four of us will meet with President Wolfe. His secretary has asked us for an agenda for the meeting.)
2. Closure of the University Press.
3. Discussion of "AAUP Principles & Practices to Guide Academy-Industry Relationships"  
<http://www.aaup.org/AAUP/comm/rep/industry>.
4. Updates on NSEI issues, and ECE/COE issues.

Stephen

**Moore, Marsha M.**

---

**From:** Grus, Terrence M.  
**Sent:** Saturday, June 23, 2012 12:15 PM  
**To:** Justice, George  
**Subject:** FYI -kudos for "your" faculty!

**Categories:** Orange Category

**<http://www.columbiatribune.com/news/2012/jun/23/top-drawer/>**

**Tushar Ghosh and Mark Prelas**, professors of nuclear engineering at the University of Missouri, were awarded with a 2012 Texty Award. The award recognizes excellence in textbooks and learning materials. Prelas and Ghosh's book, "Energy Resources and Systems," was published by Springer Science and Business Media.

.....for their file of course!

Terrence Grus  
Director, Graduate Admissions and Records  
University of Missouri- Graduate School  
Columbia, MO 65211  
573-882-9573

Sent from my iPad

## Moore, Marsha M.

---

**From:** Weston, Katherine Amanda  
**Sent:** Monday, June 25, 2012 11:31 AM  
**To:** Thompson, James E.  
**Subject:** FW: NSEI Response to Dean Thompson  
**Attachments:** NSEIResponse to DeanThompson..pdf  
  
**Categories:** Orange Category

### **Kathy Weston**

Project Specialist  
University of Missouri  
College of Engineering-Dean's Office  
W1025 Thomas & Nell Lafferre Hall  
Columbia, MO 65211-2200  
Phone: (573) 882-0948  
Fax: (573) 882-2490  
[westonk@missouri.edu](mailto:westonk@missouri.edu)

---

**From:** Loyalka, Sudarshan K.  
**Sent:** Friday, June 08, 2012 10:28 AM  
**To:** Thompson, James E.  
**Cc:** Ghosh, Tushar K.; Prelas, Mark A.; Tompson Jr, Robert V.  
**Subject:** NSEI Response to Dean Thompson

Dear Jim:

Thanks for the reminder this morning. We have given considerable thought to the subject since your memo of May 18, and our response is attached. We look forward to hearing from you-

Sudarshan

**Moore, Marsha M.**

---

**From:** Justice, George  
**Sent:** Monday, June 25, 2012 12:58 PM  
**To:** Dean, Kenneth D.  
**Subject:** Fwd: Next meeting of AAUP-MU

Begin forwarded message:

**From:** "Engel, Thomas G." <[EngelT@MISSOURI.EDU](mailto:EngelT@MISSOURI.EDU)>  
**Date:** June 25, 2012 12:38:35 PM CDT  
**To:** <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>  
**Subject:** **Re: Next meeting of AAUP-MU**  
**Reply-To:** AAUP-MU <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>

Dr. Tyrer,

Matter's like this are obviously a "daunting" task, but I believe it's important for FC to consider the implications of this report. Since you don't seem interested in presenting this to the committee, please invite me to the next FC meeting so that I may present it to the Committee.

I'm also interested in learning which principles you think have been adopted into the CRR?

Kind Regards,

-----Original Message-----

**From:** Tyrer Jr, Harry W.  
**Sent:** Monday, June 25, 2012 11:54 AM  
**To:** Engel, Thomas G.  
**Subject:** RE: Next meeting of AAUP-MU

Dr. Engel, thank you for your email. I have in fact examined the document when came to me as a mailing from AAUP. I am confident that several of the principles have been adopted in the CRR. Nevertheless its adoption in whole or part requires a vote of the faculty of each campus on the University System. Truly a daunting task. I don't see this as something we can adopt this year.

Cordially

Harry W. Tyrer PhD  
Chair MU faculty Council for University Policy

Professor Department of Electrical and Computer Engineering  
305 Engineering Building West

University of Missouri - Columbia  
Columbia, Missouri 65211  
voice 573-882 6489  
fax 573-882 0397

-----Original Message-----

From: Engel, Thomas G.  
Sent: Saturday, June 23, 2012 12:59 PM  
To: Tyrer Jr, Harry W.  
Cc: 'AAUP-MU'  
Subject: RE: Next meeting of AAUP-MU

Dr. Tyrer,

I would encourage you to examine the AAUP report on Academy-Industry relations, referenced below in #3. The report contains much case history, is well-researched and presents 56 principles that could be incorporated into the CRR related to IP. Part III (IP Management) was particularly informative and could easily address many of the concerns that have arisen here at MU, e.g., the Suppes case in the COE. The other parts of the report regarding medical and clinical research seem to be equally useful but need to be examined by suitably qualified faculty.

I am requesting that Faculty Council consider adopting the recommendations contained in this report into the MU Collected Rules and Regulations.

Kind Regards,  
Greg Engel  
Electrical and Computer Engineering

-----Original Message-----

From: AAUP-MU [<mailto:AAUP-MU@PO.MISSOURI.EDU>] On Behalf Of Montgomery-Smith, Stephen  
Sent: Friday, June 22, 2012 5:07 PM  
To: [AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)  
Subject: Next meeting of AAUP-MU

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Possible Agenda Items:

1. Items to be placed on agenda for July 24th meeting with President Wolfe. (On July 24th, three of four of us will meet with President Wolfe. His secretary has asked us for an agenda for the meeting.)
2. Closure of the University Press.
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<http://www.aaup.org/AAUP/comm/rep/industry>.

4. Updates on NSEI issues, and ECE/COE issues.

Stephen

**Moore, Marsha M.**

---

**From:** Justice, George  
**Sent:** Monday, June 25, 2012 12:59 PM  
**To:** Dean, Kenneth D.  
**Subject:** Fwd: Next meeting of AAUP-MU

Begin forwarded message:

**From:** "Suppes, Galen" <[supesg@MISSOURI.EDU](mailto:supesg@MISSOURI.EDU)>  
**Date:** June 25, 2012 12:53:44 PM CDT  
**To:** <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>  
**Subject:** Re: Next meeting of AAUP-MU  
**Reply-To:** AAUP-MU <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>

Also, there is a big difference between what is in the CRR and the practices of TMIR and the System.

The System attorneys (and TMIR) have often suggested that we revise the CRR if we do not like the way IP is handled. The accurate response to that is the following: a) the CRR is fine in what it says, b) TMIR and the System are wrong in their practices that are not a good faith practice of the CRR, and c) any attempt to revise the CRR would likely result in opportunistic System administration to eliminate those favorable/proper items currently in the CRR.

Galen

-----Original Message-----

**From:** AAUP-MU [<mailto:AAUP-MU@PO.MISSOURI.EDU>] On Behalf Of Engel, Thomas G.  
**Sent:** Monday, June 25, 2012 12:39 PM  
**To:** [AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)  
**Subject:** Re: Next meeting of AAUP-MU

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Sent: Monday, June 25, 2012 11:54 AM  
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Professor Department of Electrical and Computer Engineering  
305 Engineering Building West  
University of Missouri - Columbia  
Columbia, Missouri 65211  
voice 573-882 6489  
fax 573-882 0397

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From: Engel, Thomas G.  
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Electrical and Computer Engineering

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Sent: Friday, June 22, 2012 5:07 PM



To: AAUP-MU@PO.MISSOURI.EDU

Subject: Next meeting of AAUP-MU

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Stephen

**Moore, Marsha M.**

---

**From:** Justice, George  
**Sent:** Monday, June 25, 2012 1:52 PM  
**To:** Dean, Kenneth D.  
**Subject:** Fwd: Next meeting of AAUP-MU

Begin forwarded message:

**From:** "Engel, Thomas G." <[EngelT@MISSOURI.EDU](mailto:EngelT@MISSOURI.EDU)>  
**Date:** June 25, 2012 1:25:14 PM CDT  
**To:** <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>  
**Subject:** Re: Next meeting of AAUP-MU  
**Reply-To:** AAUP-MU <[AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)>

Galen - Assuming what you say is correct, then the principles contained in the AAUP report would go a long way toward addressing the discrepancy between IP regulations in the CRR and their implementation. IP and its management in academia is more important than ever before. This report examines many historical cases and their outcomes, presumably from Universities which had "good" IP policy in the their CRR. Properly treated and managed IP has the potential to help "grow" the University, both in terms of new funding sources and in terms of attracting high quality faculty and personnel.

We would be foolish as a faculty to not consider the conclusions and recommendations of this report. At the very least, the CRR should reference this document.

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Also, there is a big difference between what is in the CRR and the practices of TMIR and the System.

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Electrical and Computer Engineering

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To: [AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)

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Stephen

## Moore, Marsha M.

---

**From:** AAUP-MU <AAUP-MU@PO.MISSOURI.EDU> on behalf of Engel, Thomas G.  
**Sent:** Monday, June 25, 2012 2:10 PM  
**To:** AAUP-MU@PO.MISSOURI.EDU  
**Subject:** Re: Next meeting of AAUP-MU

This does not convince me that the policy contained in the CRR is "fine" as you previously stated. I, too, have had several IP related issues here at MU.

-----Original Message-----

**From:** AAUP-MU [mailto:AAUP-MU@PO.MISSOURI.EDU] On Behalf Of Suppes, Galen  
**Sent:** Monday, June 25, 2012 1:46 PM  
**To:** AAUP-MU@PO.MISSOURI.EDU  
**Subject:** Re: Next meeting of AAUP-MU

Here are two examples (there are more) of how the CRR policy is different than the System/TMIR practices:

a) The CRR gives the Patent Committee the authority to prescribe a disclosure form; HOWEVER, the system/TMIR wrote the disclosure form as a "disclosure and assignment" form. Of course the CRR does not give the Patent Committee the authority to prescribe an assignment form. The practice of the system/TMIR has then been to simply sit on most of the disclosures with assignment in hand--the CRR describes the assignment process as a process synonymous with TMIR proceeding with patent and commercial pursuit. At the same time that TMIR has been harassing faculty like myself about not using the assignment aspect of the form, they themselves have not even put their signatures on their signature line on forms they have been pushing the faculty to use.

b) Only one place describes policy when the System/TMIR decides not to proceed with patent, and that procedure is to release the patent back to the inventor. Rather than following this procedure, the System/TMIR calls upon a different part of the CRR on "waiving" patent rights (which was intended for other purposes than those instances when TMIR decides not to proceed with patent). Then, they approach faculty in a style more consistent with the mafia than academia; and basically insists that the faculty member agrees to outrageous licensing terms or TMIR/System will make sure the ability to patent the idea is lost to all.

These two abuses (and others) are well documented. They document the lack of good will (and good faith) that TMIR and the System operate WRT faculty IP rights.

Galen

-----Original Message-----

**From:** AAUP-MU [mailto:AAUP-MU@PO.MISSOURI.EDU] On Behalf Of Engel, Thomas G.  
**Sent:** Monday, June 25, 2012 1:25 PM  
**To:** AAUP-MU@PO.MISSOURI.EDU  
**Subject:** Re: Next meeting of AAUP-MU

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Professor Department of Electrical and Computer Engineering  
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Columbia, Missouri 65211  
voice 573-882 6489  
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Greg Engel  
Electrical and Computer Engineering

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Stephen



## Moore, Marsha M.

---

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**To:** Dean, Kenneth D.  
**Subject:** Fwd: Next meeting of AAUP-MU

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**From:** "Engel, Thomas G." <EngelT@MISSOURI.EDU>  
**Date:** June 25, 2012 2:09:54 PM CDT  
**To:** <AAUP-MU@PO.MISSOURI.EDU>  
**Subject:** Re: Next meeting of AAUP-MU  
**Reply-To:** AAUP-MU <AAUP-MU@PO.MISSOURI.EDU>

This does not convince me that the policy contained in the CRR is "fine" as you previously stated. I, too, have had several IP related issues here at MU.

-----Original Message-----

**From:** AAUP-MU [mailto:AAUP-MU@PO.MISSOURI.EDU] On Behalf Of Suppes, Galen  
**Sent:** Monday, June 25, 2012 1:46 PM  
**To:** AAUP-MU@PO.MISSOURI.EDU  
**Subject:** Re: Next meeting of AAUP-MU

Here are two examples (there are more) of how the CRR policy is different than the System/TMIR practices:

a) The CRR gives the Patent Committee the authority to prescribe a disclosure form; HOWEVER, the system/TMIR wrote the disclosure form as a "disclosure and assignment" form. Of course the CRR does not give the Patent Committee the authority to prescribe an assignment form. The practice of the system/TMIR has then been to simply sit on most of the disclosures with assignment in hand--the CRR describes the assignment process as a process synonymous with TMIR proceeding with patent and commercial pursuit. At the same time that TMIR has been harassing faculty like myself about not using the assignment aspect of the form, they themselves have not even put their signatures on their signature line on forms they have been pushing the faculty to use.

b) Only one place describes policy when the System/TMIR decides not to proceed with patent, and that procedure is to release the patent back to the inventor. Rather than following this procedure, the System/TMIR calls upon a different part of the CRR on "waiving" patent rights (which was intended for other purposes than those instances when TMIR decides not to proceed with patent). Then, they approach faculty in a style more consistent with the mafia than academia; and basically insists that the faculty member agrees to outrageous licensing terms or TMIR/System will make sure the ability to patent the idea is lost to all.

These two abuses (and others) are well documented. They document the lack of good will (and good faith) that TMIR and the System operate WRT faculty IP rights.

Galen

-----Original Message-----

From: AAUP-MU [mailto:AAUP-MU@PO.MISSOURI.EDU] On Behalf Of Engel, Thomas G.  
Sent: Monday, June 25, 2012 1:25 PM  
To: [AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)  
Subject: Re: Next meeting of AAUP-MU

Galen - Assuming what you say is correct, then the principles contained in the AAUP report would go a long way toward addressing the discrepancy between IP regulations in the CRR and their implementation. IP and its management in academia is more important than ever before. This report examines many historical cases and their outcomes, presumably from Universities which had "good" IP policy in their CRR. Properly treated and managed IP has the potential to help "grow" the University, both in terms of new funding sources and in terms of attracting high quality faculty and personnel.

We would be foolish as a faculty to not consider the conclusions and recommendations of this report. At the very least, the CRR should reference this document.

-----Original Message-----

From: AAUP-MU [mailto:AAUP-MU@PO.MISSOURI.EDU] On Behalf Of Suppes, Galen  
Sent: Monday, June 25, 2012 12:54 PM  
To: [AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)  
Subject: Re: Next meeting of AAUP-MU

Also, there is a big difference between what is in the CRR and the practices of TMIR and the System.

The System attorneys (and TMIR) have often suggested that we revise the CRR if we do not like the way IP is handled. The accurate response to that is the following: a) the CRR is fine in what it says, b) TMIR and the System are wrong in their practices that are not a good faith practice of the CRR, and c) any attempt to revise the CRR would likely result in opportunistic System administration to eliminate those favorable/proper items currently in the CRR.

Galen

-----Original Message-----

From: AAUP-MU [mailto:AAUP-MU@PO.MISSOURI.EDU] On Behalf Of Engel, Thomas G.  
Sent: Monday, June 25, 2012 12:39 PM  
To: [AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)  
Subject: Re: Next meeting of AAUP-MU

Dr. Tyrer,

Matter's like this are obviously a "daunting" task, but I believe it's important for FC to consider the implications of this report. Since you don't seem interested in presenting this to the committee, please invite me to the next FC meeting so that I may present it to the Committee.

I'm also interested in learning which principles you think have been adopted into the CRR?

Kind Regards,

-----Original Message-----

From: Tyrer Jr, Harry W.  
Sent: Monday, June 25, 2012 11:54 AM  
To: Engel, Thomas G.  
Subject: RE: Next meeting of AAUP-MU

Dr. Engel, thank you for your email. I have in fact examined the document when came to me as a mailing from AAUP. I am confident that several of the principles have been adopted in the CRR. Nevertheless its adoption in whole or part requires a vote of the faculty of each campus on the University System. Truly a daunting task. I don't see this as something we can adopt this year.

Cordially

Harry W. Tyrer PhD  
Chair MU faculty Council for University Policy

Professor Department of Electrical and Computer Engineering  
305 Engineering Building West  
University of Missouri - Columbia  
Columbia, Missouri 65211  
voice 573-882 6489  
fax 573-882 0397

-----Original Message-----

From: Engel, Thomas G.  
Sent: Saturday, June 23, 2012 12:59 PM  
To: Tyrer Jr, Harry W.  
Cc: 'AAUP-MU'  
Subject: RE: Next meeting of AAUP-MU

Dr. Tyrer,

I would encourage you to examine the AAUP report on Academy-Industry relations, referenced below in #3. The report contains much case history, is well-researched and presents 56 principles that could be incorporated into the CRR related to IP. Part III (IP Management) was particularly informative and could easily address many of the concerns that have arisen here at MU, e.g., the Suppes case in the COE. The other parts of the report regarding medical and clinical research seem to be equally useful but need to be examined by suitably qualified faculty.

I am requesting that Faculty Council consider adopting the recommendations contained in this report into the MU Collected Rules and Regulations.

Kind Regards,  
Greg Engel  
Electrical and Computer Engineering

-----Original Message-----

From: AAUP-MU [mailto:AAUP-MU@PO.MISSOURI.EDU] On Behalf Of Montgomery-Smith, Stephen

Sent: Friday, June 22, 2012 5:07 PM

To: [AAUP-MU@PO.MISSOURI.EDU](mailto:AAUP-MU@PO.MISSOURI.EDU)

Subject: Next meeting of AAUP-MU

The next meeting of the MU Chapter of AAUP will be tomorrow, Saturday June 23th, 10am-12noon, in Memorial Union S304.

Possible Agenda Items:

1. Items to be placed on agenda for July 24th meeting with President Wolfe. (On July 24th, three of four of us will meet with President Wolfe. His secretary has asked us for an agenda for the meeting.)
2. Closure of the University Press.
3. Discussion of "AAUP Principles & Practices to Guide Academy-Industry Relationships"  
<http://www.aaup.org/AAUP/comm/rep/industry>.
4. Updates on NSEI issues, and ECE/COE issues.

Stephen

## Moore, Marsha M.

---

**From:** Justice, George  
**Sent:** Tuesday, June 26, 2012 9:09 AM  
**To:** Dean, Kenneth D.  
**Subject:** FYI

Here's what I think is happening, Ken. (Although I could be off base.) They are negotiating with Churchill about what a move to radiology would mean. Sudarshan might be trying to figure out if he can keep his office space, "retire" officially, and then have radiology hire his replacement while he's still in that lab space. They would then argue for MORE lab space for the new faculty member. Let me know if you want to discuss. I'd prefer we let Bob try to figure things out, but we need to make sure he doesn't make promises we can't keep. And retirees holding on to lab space is something we absolutely CANNOT guarantee.

George

Begin forwarded message:

**From:** George Justice <[justiceg@missouri.edu](mailto:justiceg@missouri.edu)>  
**Subject:** **Re: NSEI**  
**Date:** June 26, 2012 9:06:27 AM CDT  
**To:** "Churchill, Robert" <[ChurchillR@health.missouri.edu](mailto:ChurchillR@health.missouri.edu)>

Yes, the faculty lines would stay in Radiology. I can't promise the same for the research space. Retirees do not, as a matter of course, retain offices, let alone laboratory space. (That goes with the NSEI faculty members' current appointments, too.) Let me know if I can help further, and thanks for trying to figure out how to help this situation....

Best,  
George

--  
George Justice  
Dean of the Graduate School  
Vice Provost for Advanced Studies  
210 Jesse Hall  
University of Missouri  
Columbia, MO 65211  
573-884-1402  
[JusticeG@missouri.edu](mailto:JusticeG@missouri.edu)

On Jun 26, 2012, at 8:33 AM, Churchill, Robert wrote:

A couple of questions. Will all the salary lines remain in radiology even after these guys retire? Do they maintain their current research space even after they start to retire?

## Moore, Marsha M.

---

**From:** Miller, William H.  
**Sent:** Tuesday, June 26, 2012 11:52 AM  
**To:** Justice, George; Liscum, Mannie  
**Cc:** Neumeyer, Gayla M.  
**Subject:** FW: NE 7313 Final report files  
**Attachments:** 2012 PIA Grant Report - MU.pdf; ANS-PIA Final Report, Attachment A Photos.docx

George –

Attached is a final report on our annual Nuclear Science and Engineering Course for Secondary Science Teachers. Thanks again for the support of the Graduate School. And thanks to Mannie for stopping by to welcome the teachers to Campus.

As you likely only have a moment to review this material, please see the last page of the PIA Grant Report .pdf. We get many notes of thanks from the teachers, but this one was especially rewarding and speaks to the influence programs like this can have in projecting a positive image of MU to our state.

Thanks again.

Bill

William H. Miller, Professor Emeritus  
Missouri University Research Reactor (<http://www.murr.missouri.edu>)  
1513 Research Park Drive  
573-884-2332 (Voice)  
573-882-6360 (Fax)  
[MillerW@missouri.edu](mailto:MillerW@missouri.edu)

Nuclear Science and Engineering Institute (<http://nsei.missouri.edu>)  
E2433 Lafferre Hall  
573-882-9692 (Voice)  
573-884-4801 (Fax)  
[MillerW@missouri.edu](mailto:MillerW@missouri.edu)

University of Missouri-Columbia  
Columbia, MO 65211

---

**From:** Miller, William H.  
**Sent:** Monday, June 25, 2012 3:33 PM  
**To:** Graham, Christopher C <[CGraham2@ameren.com](mailto:CGraham2@ameren.com)> ([CGraham2@ameren.com](mailto:CGraham2@ameren.com))  
**Cc:** Neumeyer, Gayla M.  
**Subject:** FW: NE 7313 Final report files

Chris –

FYI only – in particular see the note of thanks from one of the teachers on page 5 of the PIA Grant Report.

Sorry to have missed you this year, but I'm sure you had a wonderful time in Kansas!

Eric is roaming the MURR halls today, trying to patiently wait for all of the paperwork and indoctrination to be over so that he can do real work! Good to see him.

Bill

William H. Miller, Professor Emeritus  
Missouri University Research Reactor (<http://www.murr.missouri.edu>)  
1513 Research Park Drive  
573-884-2332 (Voice)  
573-882-6360 (Fax)  
[MillerW@missouri.edu](mailto:MillerW@missouri.edu)

Nuclear Science and Engineering Institute (<http://nsei.missouri.edu>)  
E2433 Lafferre Hall  
573-882-9692 (Voice)  
573-884-4801 (Fax)  
[MillerW@missouri.edu](mailto:MillerW@missouri.edu)

University of Missouri-Columbia  
Columbia, MO 65211

---

**From:** Neumeyer, Gayla M.  
**Sent:** Monday, June 25, 2012 2:33 PM  
**To:** Miller, William H.  
**Subject:** NE 7313 Final report files

Bill: Attached is the final report for the Summer 2012 NE 7313 class. The note from [REDACTED] is included as page 5 of the PDF file (the last page). Re the photos in the attached file, the ones taken at MURR have been approved for release, and the photos from Callaway were provided by Anne Roselius. I've sent the note from [REDACTED] to Chuck Vincent at ANS.

Do you want to send the files to Anne? Also, have we gotten a check from Ameren for this summer's class yet?

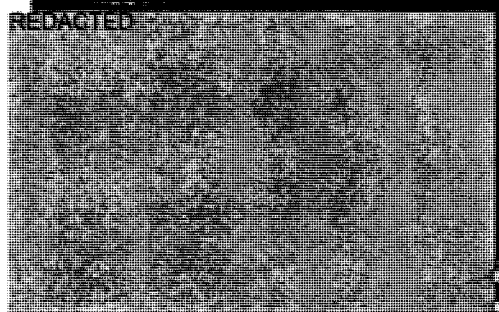
GM Neumeyer  
NS/E Education Group  
MU Research Reactor  
University of Missouri  
Phone: 573-882-8366  
Email: [NeumeyerG@missouri.edu](mailto:NeumeyerG@missouri.edu)

**ANS/PIA Final Report  
Attachment A: Photos from Summer 2012 NE 7313 Class  
University of Missouri**

**Class Tour of MURR Facilities and Laboratory Demonstrations, June 7, 2012:**

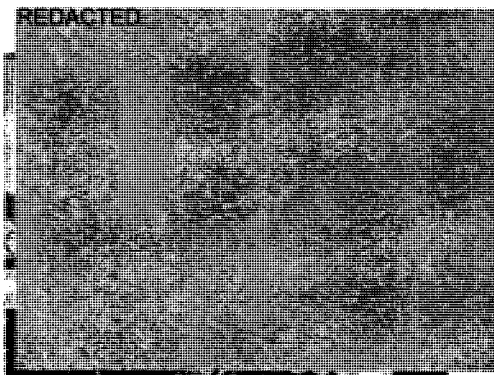
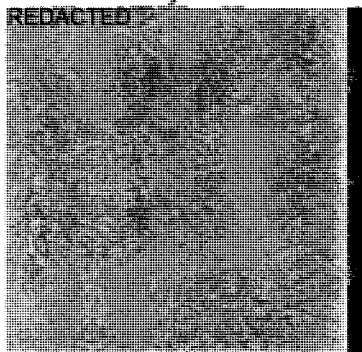


Top Photo: Dr. Bill Miller, Course Director, instructing teachers on use of CD meters (donated by HPS) and exempt quantity source sets (donated by Spectrum Techniques) for use in their home school classrooms. They also received instruction on use of GM kits available through MURR's instructional equipment lending loan program.



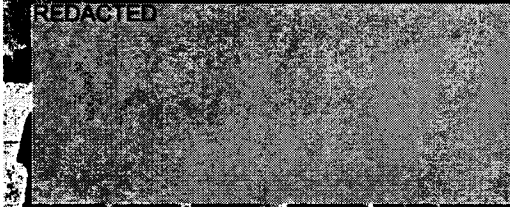
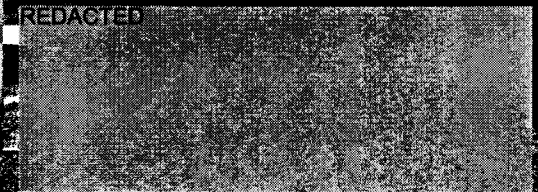
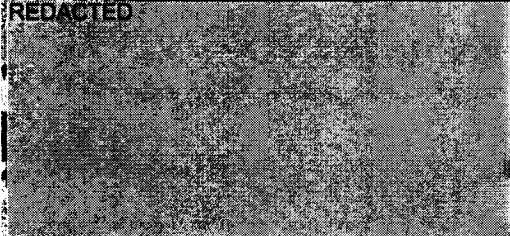
Dr. Jeff Ferguson, MURR Archeometry Scientist, explains use of NAA and XRF techniques in analyzing cultural artifacts.

In the two photos below, teachers are assisted by MURR staff in NAA analysis of their toenails for determining trace element concentrations, focusing on selenium (a nutritional marker).





**Class Tour of Callaway Plant, June 8, 2012:**





## ANS EVENT REPORT FORM\*

Event Name S12 NE7313: NuclearSciandEngrforSecor  Sponsoring Group MU Student Section of the ANS  
 Location University of Missouri Campus (Columbia, MO) Cooperating group(s) / organization(s) HPS, Ameren, et al  
 Date(s) held S2012 Semester (June 4-8 on campus) Length of event One week on campus

Number of attendees 19 Teachers Pre-Service Teachers 18 Presenters  
 Gen. Public 12 Others (explain)

Type of event  Exhibit  Workshop  Other (explain) Summer graduate credit class

Description of event (names and titles of presenters, topics covered, demonstrations, experiments, activities, etc.) Use additional paper if necessary.

A five-day, on-campus course (3 credit hours) followed by submission of a teaching unit for participants' home classroom. Teachers were secondary educators in chemistry, physics, mathematics, biology and earth science. Lecture topics covered: radioactive emissions and measurement, radioactive decay, radiation half-life, interaction of radiation with matter, dose units, population dose, nuclear analysis, industrial uses of radiation, nuclear medicine, nuclear power fuel cycle, radioactive waste disposal, radiation protection, emergency planning. Demonstrations included: half-life, radiation interactions, shielding, and decay. Tours of the MU Research Reactor (MURR), the MU Hospital Nuclear Medicine Clinics, and the Callaway Nuclear Plant were incorporated into the curriculum, along with radiation detection lab experiments at Linn State Technical College's Nuclear Technology labs.

**What evidence do you have that this had an impact?**

Feedback was solicited from teacher participants throughout the course during class sessions, and teachers asked questions of lecturers, in lab sessions, and on facility tours. Responses to the MU evaluation were solicited, with excellent responses received. The most indicative demonstration of the impact of the course will be the teaching units that teachers submit at the end of the S2012 term as the basis of their grade for the NE 7313 class; the units are developed to be integrated into each teacher's home classroom and thus will have an exponential impact on dissemination of nuclear information. One teacher has already requested collaboration to present information on the class and her teaching unit at the February 2012 Interface conference (statewide math and science teachers), which is a good indication of the usefulness of the experience and outcomes of the class.

Prepared by William H. Miller, Course Director

Date prepared June 21, 2012

Contact information MillerW@missouri.edu; 573-884-2332

<p><b>*Items that must be attached:</b></p> <ol style="list-style-type: none"> <li>Copy of your agenda</li> <li>Copy of all promotional materials</li> <li>Evaluation forms (for workshops)</li> <li>List of attendees (completed "coupons" must be submitted for workshops)</li> </ol>	<p><b>*Desired:</b></p> <p>Photos of the event - can be sent as printed photos or digital files</p>
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Return completed form to:  
 ANS Outreach Dept., 555 N. Kensington Ave., La Grange Park, IL 60526  
 Phone: 708-352-6611, Fax: 708-352-0499, E-mail: <outreach@ans.org>

## **COURSE SYLLABUS**

Nuclear Engineering 7313:

Nuclear Science & Engineering for Secondary Science Teachers

(Course #16350)

Summer 2012 Semester

**Prerequisites:** Graduate standing; a minimum of two years teaching experience.

**Course Requirements:** Attendance and participation in scheduled class meetings and nuclear facility tours during the one week, on-campus session (including evening sessions); and post-classroom completion of a teaching unit on nuclear science designed to complement the participant's home classroom curriculum (this should be submitted to Dr. Miller for grading within three weeks of the end of the on-campus part of class).

### **Course Outline:**

#### Unit 1:

- A) Introduction to Radiation Science
- B) Radioactive Emissions and Types of Decay
- C) Rates of Decay
- D) Radiation Detection System Fundamentals
- E) Radiation Counting Statistics
- F) Radiation Detection: Advanced Systems
- G) Dose Units and Population Dose
- H) Nonionizing Radiation
- I) LABS and Supplemental Materials

#### Unit 2:

- A) Industrial Applications of Radiation
- B) Radiation Protection
- C) Medical Applications
- D) LABS

#### Unit 3:

- A) History of Nuclear Science
- B) History of Nuclear Power
- C) Thermal Reactor Physics
- D) Reactor Principles: Thermodynamics and Heat Transfer
- E) Types of Fission Reactors in Operation
- F) Reactor Kinetics and Control
- G) Reactor Safety
- H) Nuclear Waste Disposal
- I) LABS

#### Unit 4:

- A) Next Generation, Small Modular, and Breeder Reactor Designs
- B) Fusion Science and Engineering

#### Appendices:

- A) Glossary of Terms
- B) Constants and Conversion Factors
- C) Periodic Table of the Elements
- D) Table of Radioactive Isotopes
- E) Nuclear Science Web Site Listing

**Academic honesty is fundamental to the activities and principles of a university. The University has specific academic dishonesty administrative procedures, which will be followed in this course.**

**If you have special needs as addressed by the Americans with Disabilities Act (ADA) and need assistance, please notify the course instructor immediately. Reasonable effort will be made to accommodate your special needs.**

## Daily Class Schedule

### NE 7313: Nuclear Science & Engineering for Secondary Science Teachers

	Monday, June 4	Tuesday, June 5	Wednesday, June 6	Thursday, June 7	Friday, June 8
Time / Location:	Old Alumni Center	LSTC RPT Labs	Old Alumni Center	Old Alumni Center	(Transit to Callaway)
8:00 AM	Introduction, Registration, Teaching Unit Review	Transit to ATC - Mexico, MO	Lab Discussions	Radiation Protection	(Please check out from dorm prior to departure)
9:00	Introduction to Radiation Science 9:00 Graduate School Welcome - Liscum Video: "Radiation Naturally"	LAB I: GM tube Plateaus	Population / Math video	Reactor Fundamentals	9:00 Characteristics of Callaway Plant - Eastman
9:30		LAB II: Background Measurement		Waste Management	9:30 a.m. Emergency Preparedness - Bassford
10:30	MU College of Engineering Welcome - Balsler	Break	10:15 Break 10:30 Fusion Science and Engineering R&D- Duncan Adv. Nuclear Plant-Miller	10:00 Introduction to MURR - McKibben	10:00 a.m. Why Fukushima Can't Happen at Callaway - Fortman
10:45	Break 11:00 Radioactive Emissions & Decay-Miller	LAB III: Radiation Half-Life	Dose Units and Population Dose (Miller) Non-Ionizing Radiation		10:30 Callaway Plant Relicensing-Kovaleski
12:00 PM	Lunch - Plaza 900	Lunch Cloud Chamber Demo.	Lunch MIPP Site Information	12:00 GM Kit Training (NOA Teaching Lab)	11:00 a.m. Callaway - Small Modular Reactor Initiative - Bond
1:00	Radioactive Emissions & Types of Decay - Cont.	Radiation Counting Statistics LAB IV: Statistics	Industrial Uses of Radiation	- 1:00 p.m. Tour of MU Research Reactor	12:30 - 2:00 p.m. Callaway Plant Tour
2:00	MU College of Education Welcome - L. Barrow 2:30 Rates of Decay - Miller	Interaction of Radiation with Matter LAB V: Inverse Square	Radioisotopes in Biomedical Research - Hoffman	Group 1: Miller; Stout Group 2: Robertson; Brooks, Nickolaus	2:30 p.m. Course Evaluation / Q&A on Teaching Units / Other Closing Items - Miller
3:00	Chernobyl at 26 Years - Graham	LAB VI: Gamma-Ray Shielding		- 2:00 p.m. - LAB VIII (40 minutes each) Group 1 - NAA of Materials & Nutritional Analysis - Spate	Class Adjourns
3:30	Fund. of Radiation Detection Systems	LAB VII: Beta Attenuation & Thickness Gauging (Miller)	4:00 Tour: Ellis Nuclear Medicine Clinics -Kennedy	Group 2 - Nuclear Methods in Archeometry-Ferguson (Room 259) - 3:30 p.m. Cyclotron Facility Tour - Gahl - 4:00 p.m.: CD Meter Distribution - Miller (NOA)	
6:30	Fundamentals, continued		Energy Industry Fundamentals (Location TBD)	6:00 p.m. Les B. - Dinner w/Nuclear Professionals	

	B	C	D	E	F	G	H
1	6/21/12						
2	<b>Summer 2012 NE 7313 #16350 Class Participant List</b>						
3	<b>Last Name</b>	<b>First Name</b>	<b>School</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>
4	<div style="background-color: #cccccc; padding: 5px;"> <p>REDACTED</p> </div>						
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Nuclear Science staff -

Thank you for making my week at MU such a rewarding experience. I was amazed at the knowledge I obtained in 5 days. I will always remember the glow of the reactor at MURR! What an experience. God bless your organization & attention to

detail was apparent and appreciated. Everything ran so smoothly.

Dr. and Mrs. Miller -

Thank you for opening your beautiful home to us and "adopting us" for most of the week.

I was surprised by the personal attention we received from such a large University. I plan

to refer many educators and even return myself someday

Sincerely,

REDACTED

## Moore, Marsha M.

---

**From:** Dean, Kenneth D.  
**Sent:** Tuesday, June 26, 2012 5:57 PM  
**To:** Justice, George  
**Subject:** RE: NSEI

Meeting lasted until 5, then announcement of 30m gift to athletics.  
A lot of folks showed up on the press issue but no one spoke. However I saw several being interviewed in the hall.

---

**From:** Justice, George  
**Sent:** Tuesday, June 26, 2012 5:55 PM  
**To:** Dean, Kenneth D.  
**Subject:** Re: NSEI

Okay. How did curators go?

On Jun 26, 2012, at 5:46 PM, "Dean, Kenneth D." <[DeanK@missouri.edu](mailto:DeanK@missouri.edu)> wrote:

Let's talk when you get a chance.  
Ken

---

**From:** Justice, George  
**Sent:** Tuesday, June 26, 2012 10:47 AM  
**To:** Dean, Kenneth D.  
**Subject:** Fwd: NSEI  
**Importance:** High

Thoughts? My inclination is to say no--but to say that of course we'd have to secure adequate lab space somewhere, perhaps at the reactor, for new hires. Let me know what you think.

George

Begin forwarded message:

**From:** "Churchill, Robert" <[ChurchillR@health.missouri.edu](mailto:ChurchillR@health.missouri.edu)>  
**Subject:** RE: NSEI  
**Date:** June 26, 2012 10:14:31 AM CDT  
**To:** "Justice, George" <[justiceg@missouri.edu](mailto:justiceg@missouri.edu)>

I did not mean the retiree would keep space, but would their replacement keep the space (same space with new person)?

---

**From:** Justice, George  
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**To:** Churchill, Robert  
**Subject:** Re: NSEI

Yes, the faculty lines would stay in Radiology. I can't promise the same for the research space. Retirees do not, as a matter of course, retain offices, let alone laboratory space. (That goes with the NSEI faculty members' current appointments, too.) Let me know if I can help further, and thanks for trying to figure out how to help this situation....

Best,  
George

--

George Justice  
Dean of the Graduate School  
Vice Provost for Advanced Studies  
210 Jesse Hall  
University of Missouri  
Columbia, MO 65211  
573-884-1402  
[JusticeG@missouri.edu](mailto:JusticeG@missouri.edu)

On Jun 26, 2012, at 8:33 AM, Churchill, Robert wrote:

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## Moore, Marsha M.

---

**From:** Justice, George  
**Sent:** Tuesday, June 26, 2012 6:44 PM  
**To:** Dean, Kenneth D.  
**Subject:** Re: NSEI

30 mil is a lot. Who ponied it up? Does meeting continue tomorrow? I'm "on call" in case I'm needed for NSEI.

On Jun 26, 2012, at 5:57 PM, "Dean, Kenneth D." <[DeanK@missouri.edu](mailto:DeanK@missouri.edu)> wrote:

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Best,  
George

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On Jun 26, 2012, at 8:33 AM, Churchill, Robert wrote:

A couple of questions. Will all the salary lines remain in radiology even after these guys retire? Do they maintain their current research space even after they start to retire?