AGENDA (as amended)

1. Call to order  Professor Raymond A. DeCarlo
2. Approval of Minutes of 26 January 2009
3. Acceptance of Agenda
4. Remarks by the President  President France A. Córdova
5. Report of the Chairperson  Professor Raymond A. DeCarlo
6. Résumé of Items Under Consideration by Various Standing Committees  For Information Professor Joan R. Fulton
7. Question Time
8. University Senate Document 08-5 Nominees for Vice Chairperson of the University Senate  Professor William D. McInerney
9. University Senate Report 08-3 Update from The Vice President for Research Vice President for Research Richard Buckius
10. New Business
11. Memorial Resolutions
12. Adjournment
UNIVERSITY SENATE  
Fifth Meeting, Monday, 16 February 2009, 2:30 p.m.  
Room 302, Stewart Center


Guests: Richard Buckius, Jarret Callahan, Christy Haddock, Andrea Hammer, Valerie O’Brien, Mark Smith, and Cliff Wojtalewicz.

1. The meeting was called to order at 2:35 p.m. by Chairperson Raymond A. DeCarlo.

2. The minutes of the meeting of 26 January 2009 were approved as distributed.

3. Prior to asking for a motion for approval of the agenda, Professor DeCarlo recognized Professor Andrew Luescher, chair of the Educational Policy Committee (EPC). Professor Luescher made a motion to withdraw document 08-4 from the agenda. His motion was seconded. Professor Luescher explained that the committee needed additional time to discuss the document based on concerns expressed by faculty members and academic advisors. The motion to remove the document passed by unanimous voice vote. Professor DeCarlo then made a motion to approve the agenda as amended. His motion was seconded and the amended agenda was approved by unanimous voice vote.

4. President France A. Córdova presented remarks to the Senate (see Appendix A). Following her report Professor D. B. Janes asked President Córdova how Purdue
University was positioned to take advantage of the recently passed federal stimulus bill. President Córdova first noted that the bill had not been signed into law yet, but Purdue has been working diligently to be prepared for the funding once it is released to the states and then by the state government. She remarked that she has had several meetings with her administration and the Deans of the colleges and schools, other university administrators as well as local government officials to create a prioritized list of projects for which the university could use money from the federal stimulus package. President Córdova remarked that she personally handed the list to the governor. One of the top priorities on the list is renovation of Lilly Hall of Life Sciences. Purdue University will now await decisions on the distribution of stimulus package funds.

5. Professor DeCarlo presented the report of the chairperson (see Appendix B).

6. Professor Joan Fulton’s presented, for information, the Résumé of Items under Consideration by Various Standing Committees (see Appendix C).

7. The Secretary of Faculties reported that no questions had been received for “Question Time.”

8. Professor William D. McInerney presented document 08-5, Nominees for Vice-chairperson of the University Senate. He briefly spoke about this document and the duties of the Nominating Committee with respect to populating the Senate standing committees and faculty committees. He urged his Senate colleagues to go to the sign-up link on the Senate web site to sign up for committee service (https://www.ydae.purdue.edu/purdue_senate/).

9. Vice President for Research Richard Buckius presented, for information, his observations of Purdue’s Research enterprise based on his perspective of five months on the job (see Appendix D). Following his presentation he entertained numerous questions from the floor. His responses to the questions focused on the need for Purdue University to enhance the existing life science programs so that they are more competitive for funds with universities that have medical schools such as Indiana University and the University of Wisconsin. Enhancing our own capabilities will not preclude strengthening our relationships with other universities. Vice President Buckius extolled the superb facilities in Discovery Park, but emphasized that other units (departments and colleges) need comparable facilities and resources. For example, the College of Liberal Arts should have facilities for research that are of the same quality as the best facilities on campus. He repeatedly asked for input from the Senators (and other interested parties) including faculty members from the regional campuses. He and President Córdova noted that the regional campuses are making significant contributions in research. For example, Purdue University Calumet is taking the lead in a European Space Agency visualization project. In summary, Vice President Buckius is still learning about the strengths and challenges associated with the system-wide research enterprise.

10. There was no new business.

11. No memorial resolutions had been received.

12. The meeting adjourned at 3:50 p.m.
REMARKS BY PRESIDENT FRANCE A. CÓRDOVA

Thank you, Ray, for that introduction. Special thanks also to Howie, Joan, and Joe – and all who represent the faculty, staff, and graduate student body. Thank you for the great job you do every day.

I appreciate your collaboration with administrators as we discuss budget issues during these lean economic times. You continue to remain focused on students and our strategic goals as you work with Randy Woodson, Jim Almond, and others... and we remain committed to you, to budget transparency and to the other important issues on your agenda.

Earlier this month I updated the faculty, staff and students on the State of the University. I talked about the progress we’ve made working together on implementing our Strategic Plan, and about the challenges still ahead. That speech includes a significant section on quality of life issues, which are of major concern to you. Your leadership on the parental leave policy, for example, makes Purdue an even better employer, so thank you for your work on that front.

You can view the State of the University presentation on the Purdue Web site, and I hope all of you get a chance to see it.

An important part of our Strategic Plan is the development of a Core Curriculum, and you’ve been leaders here as well.

At Friday’s Board of Trustee’s meeting, Ray updated the Trustees on your progress and explained that you may follow a process similar to the one used to develop our Strategic Plan. He also said that more than 50 faculty members have volunteered to work on this initiative! This is another example of our faculty’s dedication to students... and to Purdue. On behalf of the Trustees and my administration... thank you for that.

One of the best parts of assessing our progress on the Strategic Plan is the opportunity to showcase some of our tremendous faculty and their accomplishments.

I just returned from a weekend of highlighting key faculty members for some of Purdue’s biggest supporters during the President’s Council meeting in Naples, Florida.

We held “Back to Class” sessions, in which several of Purdue’s most talented faculty members ... people like Ellen Gruenbaum of the Anthropology Department... explained how the work in their fields can help a global university like Purdue address the challenges of the future. We also heard about advances in the treatment of cancer from Tim Ratliff of our Cancer Center... and Rob Connor, from Civil Engineering, helped us better understand the collapse of the I-35 bridge in Minnesota’s Twin Cities.

We also featured our faculty at the inaugural meeting of the Purdue Foundation Leadership Development Council, an entity that will boost support for Purdue. Randy Woodson helped educate the Foundation about your role in student access, success and retention... as well as the crucial role you play in how the University is perceived worldwide.

We expect great things from the Foundation.
Its 35 members are creative and energetic business and civic leaders who can help us achieve our strategic goals. They share my view that our faculty lift the quality and value of a Purdue education... and that your engagement in research and scholarship are what help to make Purdue a world-class institution.

Last week we saw further evidence of that, when the National Academy of Engineering announced it had elected two Purdue University engineering professors into its society. Mark S. Lundstrom and Doraiswami Ramkrishna are among the 65 new members elected this year. We are proud that the Academy has recognized what we have known for so long ... that these two are among the best in their fields.

Last month, we announced three other very notable research accomplishments by our faculty. Graham Cooks’ chemistry lab developed a test for melamine, a toxic substance found in Chinese food products. Professor Babak Ziaie’s, out of Electrical and Computer Engineering, led a team ... comprised mostly of students ... that heralds the record for how long one can stretch an electrical conductor. These liquid electrodes are being used to study stresses on cardiac cells.

A third announcement, from a team led by Tim Fisher in Mechanical Engineering, concerns a new biosensor made of gold-coated nanocubes tethered to carbon nanotubes; the sensors could, in principle, be used to continuously monitor blood glucose for diabetics. Advances like these require an innovation, creativity and vision that is especially important now.

As our nation looks for solutions to economic uncertainties, we hear much talk about stimulus... but here we live, breathe and teach stimulus. That is the message I have taken to the Indiana statehouse, where I have testified several times in the last few weeks before committees considering funding for Purdue. Ray and Charlene Sullivan braved I-65 in a snowstorm to attend one of the hearings two weeks ago. It was a great show of moral support for Purdue ... and a demonstration of how we are united as we seek support for the University.

We usually do not need to remind legislators that our product is the education that creates a highly qualified workforce – everyone knows that and should appreciate how critical that is for our economy. But we should also always point out that more and more, our university produces discoveries that create new companies and jobs for that workforce.

That is stimulus. The stimulus bill out of Washington contains billions of dollars in support for higher education... including funds to increase student access... research... and infrastructure. We intend to aggressively pursue our share of this stimulus package, so that you, our faculty, can better do your work... and help Purdue to become an even better stimulus for Indiana and the nation. Our faculty is instrumental in all of Purdue’s accomplishments, and in all that draws the world’s attention to this great University. Our faculty will be behind our next big undertaking, the formation of a Public Policy Institute.

My chief of staff... Carolyn Curiel ... is coordinating a task force made up of faculty members who will shape the institute. Faculty... and their expertise and research... will fuel the Institute ... and inform policy-makers, influence national and international agendas and shape history. Shaping history is what Purdue does best... and with your help, we will continue to shape Indiana... the nation... and the world.

Thank you. I’m happy to take your questions.
Appendix B

Report of Chair to PU Senate

February 2009
1. Thank You’s

- Thank you France.

- Thank you Joan for the cookies during the January meeting.
Items of Info etc

1. Would like to introduce Professor Mark Smith, our new Dean of the Graduate School and my former Head in Electrical and Computer Engineering. Congratulations and good luck to Mark.
2. On going discussions with Professor Wei Cui and others on the structure of a One Purdue Website for posting problems for discussion and possible workarounds
Items of Info cont

3. Board of Trustees Meeting
   • Prof Jay Akridge appt. Dean of Ag
   • VP Richard Buckius and Joe Hornett talked about our research competitiveness: grants and tech transfer--we will hear shortly.
   • Profs Lundstrom (ECE) and Ramkrishna (Chem E) --Nat’l Academy of Engineers
VP McCartney reflected that ITAP keeps the buses running, instrumental in HUB technology & specifically the nano-hub for education, & ITAP is visiting a small university that issues hand-helds to incoming freshman...
4. **Great Colleges to Work For???

   - Chronicle of Higher Ed in cooperation with ModernThink LLC has a survey going out to 600 full time faculty, adms, and professionals.

   - Please take time to complete the survey
5. Final Update on DeCarlo18

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<th>Staff Rank</th>
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5. Final Update on DeCarlo18 cont

- To Senators: why is compensation #1 concern:
  - Salary compression
  - Disparity between faculty & admin salaries
  - New faculty salary/packages exceeding veteran compensation
5. Final Update on DeCarlo18 cont

• To Senators: why is compensation #1 concern:
  • Disparity within rank across colleges
  • Disparity with peer institutions
  • Growing medical costs
5. Final Update on DeCarlo18 cont

• To Senators: why is quality of life #3 concern:
  • Faculty asked to do more with less
  • Low support staff salaries with increased work burden, e.g. OnePurdue-affects all.
  • (REC) Reduce overcrowding in classes & on campus: cap enrollment.
5. Final Update on DeCarlo18 cont

• To Senators: why is quality of life #3 concern:

  • (REC) Eliminate cost for faculty staff parking & expand faculty/staff access to exercise facilities & programs.

  • (REC) Increase technology enhanced classrooms in all buildings.
5. Final Update on DeCarlo18 cont

• To Senators: **why is quality of life #3 concern:**
  
  • (REC) Improve building cleanliness and maintenance.

• (REC) More humane perspective as opposed to manufacturing units of Purdue Inc.
5. Final Update on DeCarlo18 cont

- To Senators: why is quality of life #3 concern:
  - (REC) Greater respect for faculty time and expertise.
  - (REC) Better mentoring practices.
  - (REC) Better benefits
6. Final Humor

• Best way to discover the number of one’s friends is to rent a cottage on the beach ( Bits & Pieces, 1983)

• A sense of humor enables us not so much to laugh at the people who provoke us, as to laugh at ourselves for being so easily provoked. (Robert Power)
TO: University Senate  
FROM: Joan R. Fulton, Chairperson, Steering Committee  
SUBJECT: Résumé of Items under Consideration by the Various Standing Committees

STEERING COMMITTEE  
Joan R. Fulton, Chairperson  
fultonj@purdue.edu

The primary responsibility of the Steering Committee is the organization and distribution of the agenda for each meeting of the University Senate. This committee also receives communications from any faculty member or group of members and directs such communications to appropriate committees or officers for attention.

ADVISORY COMMITTEE  
Raymond A. DeCarlo, Chairperson of the Senate  
decarlo@purdue.edu

The responsibility of the University Senate Advisory Committee is to advise the President and/or Board of Trustees on any matter of concern to the faculty.

NOMINATING COMMITTEE  
William D. McInerney, Chairperson  
bmcinerne@purdue.edu

The Nominating Committee is responsible for presenting nominations for the University Senate and University committees. In filling committee vacancies the Nominating Committee seeks to have all interested Senators serve on at least one committee.

EDUCATIONAL POLICY COMMITTEE  
Andrew Luescher, Chairperson  
Luescher@purdue.edu

1. Implementation of +/- grading
2. Implementation of OnePurdue/Banner
3. Forgiveness policy
4. Course repeat policy
5. Internationalization initiative
6. Limit on credits for students on probation
7. Remedial 1-credit course for students on probation
8. Core Curriculum
9. Handling of transfer credits

FACULTY AFFAIRS COMMITTEE  
Charlene A. Sullivan, Chairperson  
sullivaa@purdue.edu

1. Consideration of Fit Purdue Initiative with URPC
2. University Promotions Committee transparency
3. Future of Faculty Scholarship for Staff Program
4. Petition to allow noncontract funds be used for professional expenses
5. Purdue Retirement Plan Task Force
6. Looking at advisory positions for both APSAC and CCSAC

STUDENT AFFAIRS COMMITTEE  
H. Lee Weith, Chairperson  
weith@purdue.edu

1. Review of the Student Bill of Rights
2. Follow-up concerning the Student Conduct Code
3. Follow-up with Student Services Office concerning disciplinary process

UNIVERSITY RESOURCES POLICY COMMITTEE  
Charles R. Santerre, Chairperson  
Santerre@purdue.edu

1. Faculty input into the budgetary process: enhancing excellence in research and graduate education
2. Review of campus energy sufficiency, safety, and other Physical Facilities operations
3. Review of Faculty Committees
### CALENDAR OF STATUS OF LEGISLATION

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<td>Nominee for University Senate Student Affairs Committee</td>
<td>Professor William McInerney</td>
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<td>Change to Section C of the University Code</td>
<td>Professor David J. Williams</td>
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<td>Reapportionment of the University Senate</td>
<td>Professor Joan Fulton</td>
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<td>Reaffirmation of Campus Policies for Appreciating Cultural Diversity and for Free Speech with Respectful Dialogue</td>
<td>Professor Morris Levy</td>
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<td>Nominees for Vice Chairperson of the University Senate</td>
<td>Professor Joan Fulton</td>
<td>Discussion 2/16/09</td>
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*Approved

### SENATE REPORTS

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<td>08-1</td>
<td>Report on Considerations Concerning Plus/Minus Grading</td>
<td>Professor Andrew Luescher</td>
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<td>08-2</td>
<td>Report from <em>ad hoc</em> Committee on Budget Transparency</td>
<td>Professor A. Charlene Sullivan</td>
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<td>08-3</td>
<td>Report on Update from the Vice President for Research</td>
<td>Vice President for Research Richard Buckius</td>
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Discovery with Delivery Observations

Richard O. Buckius
Vice President for Research
Professor of Mechanical Engineering

University Senate
February 16, 2009
Discovery with Delivery

• Discovery highlights
• Research trends
• Research facilities
• Delivery trends
• Technology facilities
• Summary
• Discovery highlights

• Impressive five years in sponsored research – with a record $333.4 million in sponsored programs awards received during the FY2008

• National and international recognitions
  • Professors Lundstrom and Ramkrishna were elected to National Academy of Engineering in 2009

• Graduate programs among the elite universities in the nation in doctoral degree productivity
  • 14th nationally among all universities for doctorate degrees
  • 12th in the physical sciences,
  • 18th in the life sciences, and
  • 5th in engineering.
• Discovery highlights

Indiana Clinical and Translational Science Institute (CTSI)

• NIH-funded partnership between Purdue University and the Indiana University School of Medicine

• $25 million renewable grant from the National Institutes of Health to IU School of Medicine and another $31 million in university and other contributions

• CTSI is improving and accelerating the process for transferring basic science discoveries from the lab to medical treatments and products.
• **Research trends**
  
  • Purdue’s change in total research expenditures over the last five years is more than double the peer average of 17 percent
  
  • Purdue has the largest percentage increase from 2006 to 2007 as compared to our peers

*Preliminary data on expenditures for 2007-08*
• Research trends
  • Strong industry support and over half of external support from NIH, NSF and industry

Awards by Agency FY2008

- National Science Foundation (NIH) 15%
- Dept of Health & Human Services (NIH) 8%
- Dept of Defense 8%
- Dept of Energy 5%
- Dept of Agriculture 5%
- State/Local Governments 13%
- Purdue Research Foundation/ Purdue University 5%
- Industrials and Foundations 25%
- Foreign Governments 8%
- Other Federal <$10M and Foreign Governments 8%
- Purdue University 5%
- Dept of Agriculture 5%
• Research trends
  • Peer comparisons of expenditures from Federal agency support

2007 Federal Agency S&E
(medical disciplines not included)

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• Research trends
• Peer comparisons of expenditures from State and Local support including the medical disciplines

![2007 State & Local Government S&E Expenditures (medical disciplines included)](image)
• **Research trends**
• Peer comparisons of expenditures from institutional support including the medical disciplines

![2007 Institution S&E Expenditures (medical disciplines included)](image_url)
• **Research trends**
  • Industry and Foundation support continues to increase

![Industrial Awards and Expenditures Chart](chart.png)
• Research trends

2007 Industry Expenditures
Science & Engineering Comparisons
(medical disciplines included)

Dollars (thousands)

Institutions

Ohio State  $140
Penn State  $120
Purdue  $100
Georgia Tech  $80
Texas A&M  $60
Michigan  $40
Texas  $20
Minnesota  $10
U.C.A. Berkeley  $0
Wisconsin  $0
Iowa  $0
Illinois  $0
Michigan State  $0
Indiana  $0
• Research facilities

Birck Nanotechnology Center – completed October 2005

Bindley Bioscience Center – completed October 2005

Burton D. Morgan Center for Entrepreneurship – completed Spring 2007

Gerald D. and Edna E. Mann Hall – completed Spring 2007

Discovery Learning Center – to be completed Fall 2009

Wayne T. and Mary T. Hockmeyer Hall – to be completed Fall 2009
• Delivery trends
• PRF commercialization activity
• Delivery trends
  • PRF start-ups and revenue

2007 PRF Start-Ups and Revenue

- Number of Start-Up Companies
- Equity Acquisitions in Start-Ups
- Royalty Income ($M)


Number
- 1997: 1
- 1998: 2
- 1999: 3
- 2000: 4
- 2001: 8
- 2002: 10
- 2003: 12
- 2004: 14
- 2005: 20
- 2006: 40
- 2007: 16

Dollars (millions)
- 1997: 0
- 1998: 0
- 1999: 0
- 2000: 0
- 2001: 0
- 2002: 0
- 2003: 0
- 2004: 0
- 2005: 0
- 2006: 0
- 2007: 0

Equity Acquisitions in Start-Ups
- 1997: 0
- 1998: 0
- 1999: 0
- 2000: 0
- 2001: 0
- 2002: 0
- 2003: 0
- 2004: 0
- 2005: 0
- 2006: 0
- 2007: 0

Royalty Income ($M)
- 1997: 0
- 1998: 0
- 1999: 0
- 2000: 0
- 2001: 0
- 2002: 0
- 2003: 0
- 2004: 0
- 2005: 0
- 2006: 0
- 2007: 0
• Delivery trends
  • Peer comparisons

2007 Peer Institution Standings

- Disclosures
  - Patent Applications Filed
  - Patents Issued
  - Licenses & Options
- Start-Ups
- Research Expenditures

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• Delivery trends
  • Peer comparisons normalized by research expenditures

2007 Peer Institution Commercialization Activity
(per $100M Research Expenditures)

- Patent Applications Filed
- Patents Issued
- Licenses/Options
- Start-Ups

Institution:
- Georgia Tech
- Purdue
- Michigan
- Michigan
- Wisconsin
- Illinois-UC
- Texas at...
- Texas A&M
- Penn State

Number per $10k:
- 0
- 10
- 20
- 30
- 40
- 50
- 60
- 70
### Purdue Research Park (WL): An Economic Pacesetter

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<td>6 buildings</td>
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<tr>
<td>314,400 s.f.</td>
<td>1.5 million s.f.</td>
</tr>
<tr>
<td>30,000 s.f. incubation</td>
<td>259,000 s.f. incubation</td>
</tr>
<tr>
<td>750 employees</td>
<td>3,159 employees</td>
</tr>
</tbody>
</table>
Purdue Technology Centers
I-65 Technology Corridor

Purdue Research Park

Purdue Technology Center of Northwest Indiana

Purdue Technology Center of Southeast Indiana

Purdue Technology Center of Indianapolis
Summary

• Continue to enhance all of our programs
• Increase our efforts with federal agencies
• Enhance our life sciences activities through support of discovery, delivery and people
• All aspects of delivery have important increases and impact – disclosures, patents, licenses, and start-ups
• Research and technology facilities and infrastructure continue to provide significant discovery and delivery impact
Thank You