



STATE OF WISCONSIN
Department of Safety and Professional Services
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Professional Engineer Section
Examining Board of Architects, Landscape Architects,
Professional Engineers, Designers and Land Surveyors
Room 121C, 1400 E. Washington Avenue, Madison
Contact: Denise Aviles - 608-266-2112
February 2, 2012

The following agenda describes the issues that the Board plans to consider at the meeting. At the time of the meeting, items may be removed from the agenda. Please consult the meeting minutes for a description of the actions and deliberations of the Board.

FULL BOARD MEETING
8:30 a.m.

OPEN SESSION – CALL TO ORDER – ROLL CALL

- A. Adoption of Agenda (1-4)**
- B. Approval of Minutes – October 13, 2011 (5-8)**
- C. Secretary Matters
- D. Executive Director Matters**
 - a. **August 16, 2012 – Canceled**
 - b. **Annual Policy Review (9-40)**
 - c. **Board Appointments (41-42)**
- E. Presentation of Proposed Stipulations, Final Decisions and Orders by the Division of Enforcement including any received after printing of the agenda**
 - 1) 10 ENG 014 – Charles J. Lahti (91-96)
 - a) Attorney: Peter McCombs
 - b) Case Advisor: Steven Hook
- F. Board Discussion Items including any received after printing of agenda**
 - 1) **Division of Enforcement Matters**
 - a. Discussion related to Distance Learning Courses on Ethics Offered by Texas Tech (43-48)
 - 2) **Education and Examination Matters**
 - a. Update on Exams Vendor (49-50)
 - 3) **Credentialing Matters**
 - a. Discussion with NCEES Relative to Degree Evaluation, the Washington Accord, , and Pathways to Licensure (51-52)
 - i. Teleconference Appearance – Jerry Carter, Executive Director, NCEES – 9:00a.m. C.S.T.

- b. Discussion relative to the ABET accreditation criteria of Associates and Bachelors degree programs. (53-78)
- c. Discuss Evaluation of 2 Year Degree Pathway to Licensure
 - i. Appearance – Glen R. Schwalbach
- 4) **Practice Question Matters**
 - a. Discussion on whether the Development of Engineering Software Constitutes the Practice of Professional Engineering (79-80)
- 5) **Legislation/Administrative Rule Matters**
 - a. Discuss Change in Rule Verbiage Relative to “ABET accredited” Educational Institutions
 - b. Update related to A-E 13: Continuing Education Rule- Effective January 1, 2012
 - c. Update related to A-E 2.02: Registration Seals (Electronic Seals and Stamps) (81-84)
 - d. Update on rule related to Act 350: Registration Requirements (85-86)
- 6) Liaison/Committee Reports
- 7) **Speaking Engagement, Travel, Public Relation Requests**
 - a. Joint Central/Western Zone Interim Meeting on May 17–19 in Jackson Hole, WY
 - b. 2012 NCEES Annual Meeting on August 22-25 in St. Louis, Missouri

G. Informational Items

- a. Update on the Transition of the NCEES Fundamentals of Engineering (FE) and Fundamentals of Surveying (FS) Exams to Computer-Based Testing (CBT) (87-90)

H. New Business

I. Public Comments

CONVENE TO CLOSED SESSION to deliberate on cases following hearing (s. 19.85(1) (a), Stats.; consider closing disciplinary investigation with administrative warning (s. 19.85(1)(b), Stats. and 440.205, Stats., to consider individual histories or disciplinary data (s. 19.85 (1)(f), Stats.; and, to confer with legal counsel (s. 19.85(1)(g), Stats.)

J. Deliberation of Proposed Stipulations, Final Decisions and Orders including any received after printing of the agenda

- 1) 10 ENG 014 – Charles J. Lahti (91-96)
 - a) Attorney: Peter McCombs
 - b) Case Advisor: Steven Hook

K. Deliberation of other items including any received after printing of agenda

- 1) Case Closings
- 2) Case Status Report
- 3) Proposed Decisions
- 4) Summary Suspensions
- 5) Objections and Responses to Objections
- 6) Complaints
- 7) Administrative Warnings
- 8) Matters Relating to Costs
- 9) Monitoring Cases
- 10) Appearances from Requests Received or Renewed
- 11) **Examination Matters**
 - a) Discussion Regarding Alleged Exam Irregularities (97-98)
- 12) Application Matters
- 13) Professional Assistance Program Cases
- 14) Motions

L. Consulting with Legal Counsel

RECONVENE TO OPEN SESSION IMMEDIATELY FOLLOWING CLOSED SESSION

M. Vote on Items Considered or Deliberated Upon in Closed Session, if Voting is Appropriate

N. Other Board Business

O. Next Meeting Date: April 19, 2012

ADJOURNMENT

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**ENGINEER SECTION
A-E JOINT BOARD
MEETING MINUTES
October 13, 2011**

Present: Joseph Eberle, Steven Hook and Charles Kopplin

Staff: Denise Aviles, Bureau Director; Yolanda McGowan, Legal Counsel; Michelle Solem, Bureau Assistant; and other DRL staff

Charles Kopplin, Board Chair, called the meeting to order at 8:43 a.m. A quorum of 3 members was confirmed.

ADOPTION OF AGENDA

MOTION: Joseph Eberle moved, seconded by Steven Hook, to adopt the agenda as published. Motion carried unanimously.

APPROVAL OF MINUTES

MOTION: Steven Hook moved, seconded by Joseph Eberle, to approve the minutes of September 8, 2011 as published. Motion carried unanimously.

BUREAU DIRECTOR MATTERS

Denise Aviles noted that she had given her report at the Joint Board meeting on October 12, 2011. She noted that there were no additional updates.

Elections

NOMINATION: Joseph Eberle nominated the current slate of officers to serve as officers for the 2012 calendar year. The chair called for additional nominations three times before calling the vote. The current slate of officers was re-elected for the 2012 calendar year.

Chairperson	Charles Kopplin
Vice-Chair Person	Steven Hook
Secretary	Joseph Eberle

**PRESENTATION OF PROPOSED STIPULATIONS, FINAL DECISIONS AND ORDERS
BY THE DIVISION OF ENFORCEMENT**

Attorneys from the Division of Enforcement provide presentations related to the following Stipulations, Final Decisions and Orders:

1. 10 ENG 002 - Stephen P. Maslan

BOARD DISCUSSION

1. **EDUCATION AND EXAMINATION MATTERS**

a. Update on Examination Vendor Procurement

Aaron Knautz reported that there was only one bid. He also indicated that the process is under appeal. There should be a final decision within 10 days.

b. Discussion related to the Washington Accord

The Section discussed the Washington Accord expressing concern related to the validation process for accreditation of educational institutions.

2. CREDENTIALING MATTERS

Appearance for a Class I Hearing – Paul Alf

Paul Alf appeared before the Section to provide additional information regarding the denial of his request to sit for the principles and practice engineering exam.

Appearance for a Class I Hearing – Bhupendra Tailor

Bhupendra Tailor appeared before the Section to provide additional information regarding the denial of his request to sit for the principles and practice engineering exam.

Appearance for a Class I Hearing – Daniel D. Posthuma

Daniel D. Posthuma appeared before the Section to provide additional information regarding the denial of his request to sit for the principles and practice engineering exam.

3. LEGISLATION/ADMINISTRATIVE RULE MATTERS

a. Update Related to Continuing Education Rules

MOTION: Joseph Eberle moved, seconded by Steven Hook, to authorize Charles Kopplin speak in support of the Continuing Education Rule for Professional Engineers on behalf of the Section. Motion carried unanimously.

b. Update Related to Electronic Stamp/Seal Scope

No update was available.

c. Update Related to the Architect Section

The Architect Section recommended that the fines that the Sections of the Examining Board of ... are able to levy should be increased. It was suggested that the minimum fine be increased from \$100 to \$1000 and the maximum be increased from \$500 to \$5000. The Engineer Section agreed with the Architect Section.

MOTION: Joseph Eberle moved, seconded by Steven Hook, to recommend to the Designer Section to increase the maximum fine under 443.18 to be increased from \$500 to \$5000. Motion carried unanimously.

PUBLIC COMMENTS

The Section received comments from Glen Schwalbach regarding the evaluation of 2 year programs.

CLOSED SESSION

MOTION: Joseph Eberle moved, seconded by Steven Hook, to convene to closed session to deliberate on cases following hearing (s. 19.85(1) (a), Stats.; consider closing disciplinary investigation with administrative warning (s. 19.85(1)(b), Stats. and 440.205, Stats., to consider individual histories or disciplinary data (s. 19.85 (1)(f), Stats.; and, to confer with legal counsel (s. 19.85(1)(g), Stats.). Roll Call Vote: Joseph Eberle - yes; Steven Hook - yes; and Charles Kopplin - yes. Motion carried unanimously. Open session recessed at 11:31 a.m.

RECONVENE TO OPEN SESSION

MOTION: Joseph Eberle moved, seconded by Steven Hook, to reconvene in open session at 12:32 p.m. Motion carried unanimously.

VOTING ON ITEMS CONSIDERED/DELIBERATED IN CLOSED SESSION

PROPOSED STIPULATIONS, FINAL DECISIONS AND ORDERS

**10 ENG 002
STEPHEN P. MASLAN**

MOTION: Joseph Eberle moved, seconded by Steven Hook, to adopt the Findings of Fact, Conclusions of Law, Stipulation and Order, in the matter of 10 ENG 002 – Stephen P. Maslan. Motion carried unanimously.

APPLICATION MATTERS

MOTION: Joseph Eberle moved, seconded by Steven Hook, to affirm the Section's previous decision regarding Paul Alf, Bhupendra Tailor and Daniel D. Posthuma. Motion carried unanimously.

MOTION: Joseph Eberle moved, seconded by Steven Hook, to grant reinstatement of licensure to Jeffrey W. Schultz. Motion carried unanimously.

MOTION: Joseph Eberle moved, seconded by Steven Hook, to deny licensure to Charles Eggert. Motion carried unanimously.

MOTION: Steven Hook moved, seconded by Joseph Eberle, to approve issuance of a certificate of authorization to KCI Technologies, Inc. and Baird Hampton and Brown, Inc. Motion carried unanimously.

MOTION: Steven Hook moved, seconded by Joseph Eberle, to act on the applications reviewed for today's meeting as reviewed and signed in the application files. Motion carried.

APPLICATIONS REVIEWED ON OCTOBER 13, 2011

The Section took the following action on applications.

FOR CERTIFICATION AS AN ENGINEER- IN-TRAINING

- a. Approved
 - 1. Qian, Qingyi
- b. Denied
 - 1. Navaratnam, Navaneethan

FOR PROFESSIONAL ENGINEER LICENSURE 16 HOUR EXAM

- a. Denied
 - 1. Eggert, Charles P

FOR PRINCIPLES AND PRACTICE OF ENGINEERING EXAMINATION

- a. Granted
 - 1. Roberts, Kjirstin
 - 2. Mc Nelly, Donald J
 - 3. Zafar, Muhammad

ADJOURNMENT

MOTION: Steven Hook moved, seconded by Joseph Eberle, to adjourn the meeting at 12:37 p.m. Motion carried unanimously.

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Department of Safety and Professional Services



Division of Board Services Board Member Guidebook

Division of Board Services

Board Member

Guidebook

Table of Contents

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Department Information

The Department of Safety and Professional Services

History:

The 2011-13 biennial budget, 2011 Wisconsin Act 32 created the Department of Safety and Professional Services (DSPS) by combining the Department of Regulation and Licensing (DRL) and the Divisions of Safety and Buildings and Environmental and Regulatory Services from the Department of Commerce.

Chapter 75, Laws of 1967, created DRL and attached to it 14 separate examining boards that had been independent agencies. The 1967 reorganization also transferred to the department some direct licensing and registration functions not handled by boards, including those for private detectives and detective agencies, charitable organizations, and professional fund-raisers and solicitors.

DRL's responsibilities changed significantly since its creation. Initially, it performed routine housekeeping functions for the examining boards, which continued to function as independent agencies. Subsequently, a series of laws required the department to assume various substantive administrative functions previously performed by the boards and to provide direct regulation of several professions.

The DSPPS Division of Safety and Buildings traces its roots to 1911 when the Legislature created the Industrial Commission in Chapter 485 to set standards for a safe place of employment. This "safe place" statute was extended in Chapter 588, Laws of 1913, to include public buildings, defined as "any structure used in whole or in part as a place of resort, assemblage, lodging, trade, traffic, occupancy, or use by the public, or by three or more tenants." The commission adopted its first building code in 1914. Programs added over the years include plumbing, heating, ventilation, air conditioning, energy conservation, private on-site waste treatment systems, accessibility for people with disabilities, and electrical inspection and certification. These responsibilities and the job of administering various other laws relating to the promotion of safety in public and private buildings, including enforcing building codes, and the licensure of occupations such as electricians and plumbers, were ultimately assumed by the Department of Commerce.

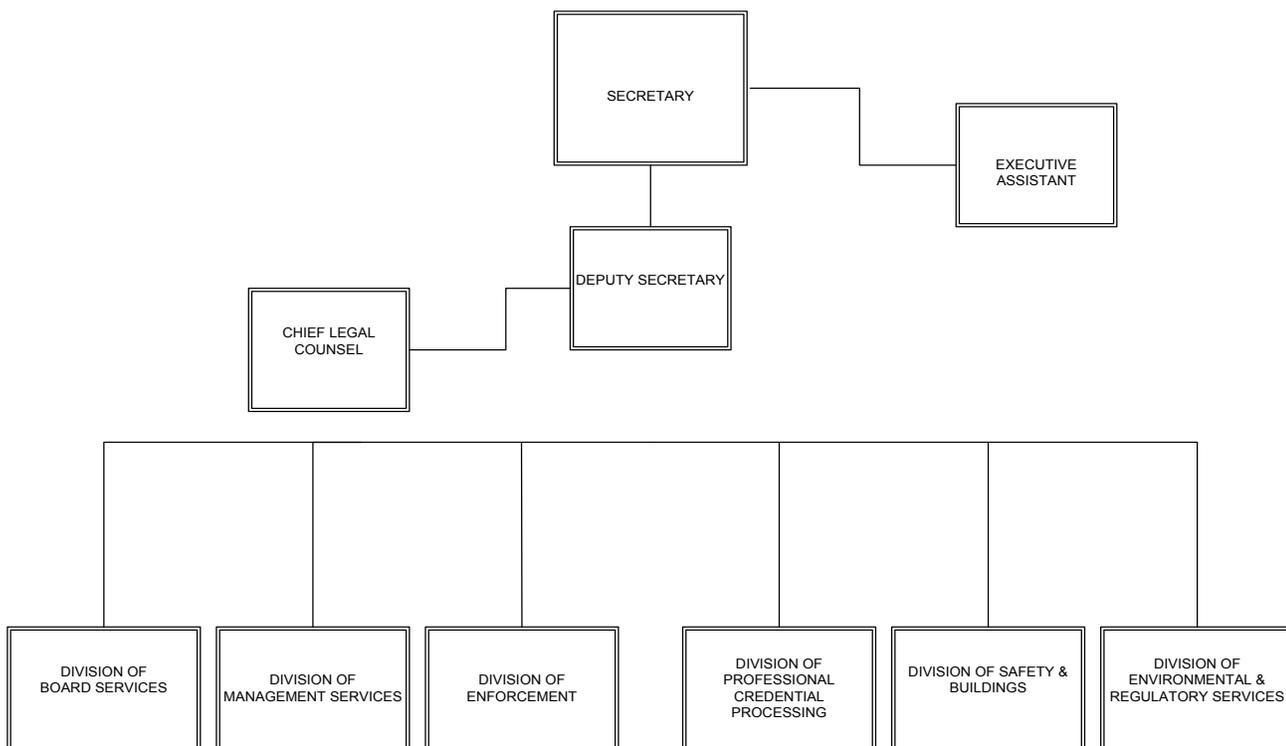
The DSPPS Division of Environmental and Regulatory Services was created by 1995 Wisconsin Act 27 which transferred the PECFA program and the safety and buildings functions from the Department of Industry, Labor and Human Relations to the Department of Commerce.

The Department of Safety and Professional Services

Quick Facts

- Responsible for ensuring the safe and competent practice of licensed professionals in Wisconsin. The department also administers and enforces laws to assure safe and sanitary conditions in public and private buildings and regulates petroleum products and petroleum storage tank systems.
- Provides policy coordination and centralized administrative services for more than 70 boards, sections, councils, advisory committees, and direct licensing professions.
- Oversees the regulation of 200 types of credentials and specialty permits in more than 60 professional fields.
- Issues over 27,500 new credentials and renews more than 430,000 credential holders each biennium.
- Organized into six divisions and two offices:
 - Office of the Secretary
 - Division of Board Services
 - Division of Enforcement
 - Division of Environmental and Regulatory Services
 - Division of Management Services
 - Division of Professional Credential Processing
 - Office of Education and Examinations
 - Division of Safety and Buildings
- 379.6 full-time employees.
- Receives more than 2,500 consumer complaints per year.
- Verifies about 7,000 Wisconsin licenses per year to other states.

The Department of Safety and Professional Services Organizational Structure



Division of Board Services

Mission of DSPS and the Boards

To protect the health, safety and well-being of the citizens of Wisconsin by ensuring the safe and competent practice of licensed professionals at the least cost to the state.

To ensure the availability of safe and competent professional services by:

- fairly administering education, experience and examination requirements;
- establishing professional practice standards;
- ensuring compliance by enforcing occupational licensing laws.

Division of Board Services-Board Staff

17 staff in Board Services

1 Division Administrator

1 Program Assistant Supervisor

4 Executive Directors

4 Legal Counsel

4 Bureau Assistants

1 Adv-Paralegals

2 Paralegal

- There are approximately 300 board, council and committee members.
- A Bureau Director, Legal Counsel, and Bureau Assistant are assigned to each profession.
- The Division averages approximately 15 board, council and committee meetings each month.
- There are about 185 meetings scheduled each year.
- Provide the coordination and facilitation of a number of professional and administrative services to all of the regulatory boards, councils and committees.
- Provide administrative support.
- Coordinate and manage the business of each board, council or committee.
- Assist in facilitating the meetings.
- Provide professional services (analysis, evaluation and research).
- Coordinate drafting and implementation of laws, rules and policies.
- Coordinate board member travel and reimbursement processing.



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DIVISION OF BOARD SERVICES
BOARD ASSIGNMENTS

Tom Ryan, Executive Director Sandy Nowack, Legal Counsel Karen Rude-Evans, Bureau Asst Shawn Leatherwood, Adv Paralegal	Denise Aviles, Executive Director Yolanda McGowan, Legal Counsel Michelle Solem, Bureau Asst Kris Anderson, Paralegal	Dan Williams, Executive Director Colleen Baird, Legal Counsel Kimberly Wood, Bureau Asst Sharon Henes, Paralegal	Berni Mattsson*, Executive Director Lydia Thompson, Legal Counsel David Carlson, Bureau Asst. Kris Anderson/Sharon Henes, Paralegal
<ul style="list-style-type: none"> ▪ Medical Examining Board <ul style="list-style-type: none"> ▫ Athletic Trainers Affiliated Credentialing Board ▫ Council on Physician Assistants ▫ Dietitians Affiliated Credentialing Board ▫ Occupational Therapists Affiliated Credentialing Board ▫ Perfusionists Examining Council ▫ Podiatry Affiliated Credentialing Board ▫ Respiratory Care Practitioners Examining Council ▫ Massage Therapy & Bodywork Therapy Affiliated Credentialing Board ▪ Nursing Home Ad. Ex Bd (Colleen Baird – Legal Counsel) ▪ Physical Therapy Ex. Bd ▪ Radiography Ex. Bd ▪ Veterinary Ex. Bd 	<ul style="list-style-type: none"> ▪ Accounting Examining Bd ▪ Architects, Landscape Architects, Professional Engineers, Designers & Land Surveyors Examining Board <ul style="list-style-type: none"> ▫ Architects Section ▫ Designers Section ▫ Engineers Section ▫ Landscape Architects Section ▫ Land Surveyors Section ▪ Barbering & Cosmetology Examining Board ▪ Chiropractic Examining Bd ▪ Crematory Authority Council ▪ Funeral Directors Ex. Bd ▪ Real Estate Board <ul style="list-style-type: none"> ▫ RE Contractual Forms Advisory Committee ▫ RE Curriculum & Examination Council 	<ul style="list-style-type: none"> ▪ Controlled Substances Board ▪ Geologists, Hydrologists & Soil Scientists Examining Bd. <ul style="list-style-type: none"> ▫ Geologists Section ▫ Hydrologists Section ▫ Soil Scientists Section ▪ Marriage & Family Therapy, Professional Counseling, and Social Work Examining Bd. <ul style="list-style-type: none"> ▫ Marriage & Family Therapist Section ▫ Professional Counselor Section ▫ Social Worker Section ▪ Nursing, Board of <ul style="list-style-type: none"> ▫ Examining Council on Licensed Practical Nurses ▫ Examining Council on Registered Nurses ▪ Pharmacy Examining Board (Lydia Thompson – Legal Counsel) ▪ Psychology Examining Board 	<ul style="list-style-type: none"> ▪ Auctioneer Board ▪ Cemetery Board ▪ Dentistry Examining Board ▪ Hearing & Speech Examining Board <ul style="list-style-type: none"> ▫ Council on Speech-Language Pathology & Audiology (Colleen Baird – Legal Counsel) ▪ Optometry Ex. Board ▪ Real Estate Appr. Board* <ul style="list-style-type: none"> ▫ REA App Adv Com ▪ Sign Language Interp. Council
<p>Direct Licensing:</p> <ul style="list-style-type: none"> ▪ Boxing ▪ Home Inspectors ▪ Interior Designers ▪ Peddlers ▪ Charitable Organizations ▪ Professional Fund Raisers 	<p>Direct Licensing:</p> <ul style="list-style-type: none"> ▪ Athletic Agents Adv. Com. ▪ Private Detectives ▪ Private Security Persons <ul style="list-style-type: none"> ▫ Firearms Permits ▫ Firearms Certifiers 	<p>Direct Licensing:</p> <ul style="list-style-type: none"> ▪ Behavioral Analysts ▪ Sanitarians ▪ Substance Abuse Counselors 	<p>Direct Licensing:</p> <ul style="list-style-type: none"> ▪ Acupuncture ▪ Licensed Midwives Advisory Committee ▪ Music, Art & Dance Therapy ▪ Professional Employer Organizations <p>Where indicated by the following, the Bureau Assistants differ from the staff listing:</p> <ul style="list-style-type: none"> • Lydia – Green • Sandy - Purple • Colleen - Orange • Karen – Red • Michelle - Yellow • Kim – Blue <p>*Berni Mattsson also provides support to the Boards and Councils associated with the Division of Safety & Buildings.</p>

Powers and Responsibilities

Powers of Regulatory Bodies

- **Examining Boards**

Authority:

- Set standards of professional competence and conduct for the professions.
- Prepare, conduct and administer examinations.
- Grant and deny credentials (licenses).
- Impose discipline.

Appointed By: Governor with Senate confirmation.

Reimbursement: Per Diem: \$25

Expenses: Actual and necessary expenses incurred in the performance of Examining Board duties.

- **Affiliated Credentialing Boards**

Bodies that are attached to an Examining Board to regulate professions that do not practice independently of the profession regulated by the Examining Board or that practice in collaboration with the profession regulated by the Examining Board.

Authority: With the advice of the examining board to which it is attached, sets standards of professional competence and conduct for the profession under the Affiliated Credentialing Board's supervision, reviews the qualifications of prospective new practitioners, grants credentials, and takes disciplinary action against credential holders.

Appointed By: Governor with Senate confirmation.

Reimbursement: Per Diem: \$25

Expenses: Actual and necessary expenses incurred in the performance of Board duties.

- **Examining Councils and Councils**

Authority: Serve an Examining Board in an advisory capacity to:

- Formulate rules to be promulgated by the Examining Board or department for the regulation of the specific profession.

Appointed By: Some Councils have members appointed by the Governor and others have members appointed by an Examining Board. Senate confirmation is not required. The Governor has the authority to appoint all public members.

Reimbursement: Per Diem: No compensation

Expenses: Actual and necessary expenses incurred in the performance of Council duties.

- **Auctioneer and Real Estate Appraisers Boards**

Authority: Advisory in all matters, except:

- Screening complaints.
- Imposing discipline.

Appointed By: Governor with Senate confirmation.

Reimbursement: Per Diem: \$25

Expenses: Actual and necessary expenses incurred in the performance of Examining Board duties.

- **Direct Licensing Advisory Committees and Screening Panel;**

- No examining board.
- The Secretary of the Department directly regulates the profession or occupation.
- The Secretary has authority to appoint committee and panel members.
- Committee and panel members serve at the discretion and pleasure of the Secretary.
- The Committee or panel members make recommendations and advise the Secretary on issues relating to the specific profession

Appointed By: Department Secretary

Reimbursement: Per Diem: No compensation

Expenses: Actual and necessary expenses incurred in the

Responsibilities of a Board Member

- You are a public official who is dedicated to public service. You are willing to sacrifice your time and tolerate inconvenience, frustration, and scheduling conflicts to be available for board service.
- You have major responsibilities to the public and credential holders.
- You ARE NOT an advocate for private interest or professional groups.
- You must represent the highest standards of ethical and professional conduct.
- You must strive to avoid any relationship, activity or position that may influence, directly or indirectly, the performance of your official duties as a board member.
- You cannot serve as spokesperson for the board unless properly designated by the board.
- You must make public (and recuse yourself from) any conflict of interest that exists to ensure the integrity of the board and all of its decisions.
- You must comply with the rules of confidentiality, at all times, in dealings outside the board meeting.

Importance of Public Members

- You are the voice of the public.
- You expand the range of perspectives available for higher quality and more creative board action.
- You balance decisions that might otherwise favor one faction of the regulated group over another.
- You make the governing board more responsive to the public it affects.
- You reduce the potential for board decisions to be professionally biased.
- You lend credibility to board accessibility and decisions.
- Public Member Concerns:
 - Being intimidated by professional members' experience in the field.
 - May impede board activity if technical issues are not understood.
 - Afraid to ask questions for fear of slowing down the meeting.
 - Professional members not treating public members as Board peers.

Responsibilities of the Board Chair

- Recognize board members are entitled to speak or propose motions.
- Restate the motion after it has been seconded, then open for discussion.
- Close discussion and put motions to a vote. Restate the motion exactly as it was made or amended before calling for the question.
- Announce the result of the vote immediately. A tie vote defeats a motion requiring a majority of those voting. The chair may vote to make or break a tie.
- Avoid entering into any controversy or interfering with legitimate motions.
- Maintain order and proper procedure by making necessary rulings promptly and clearly.
- Expedite board business in every way compatible with the rights of the board members. You can allow brief remarks on motions, advise board members how to take action (proper motion or form of motion), or order proposed routing action without a formal vote (“If there is no objection, the minutes will stand approved as read. Hearing no objection, so ordered”).
- Protect the board from frivolous motions whose purpose is to obstruct the board’s business. You can refuse to entertain such motions. Never adopt such a course, however, merely to expedite business.
- Guard the board’s time by having board members vote to adopt an agenda at the beginning of the meeting. Follow the agenda faithfully. Do not permit unauthorized interruptions by spectators.

What Makes A Successful Board Member?

- Recognition that the goal of the board is the protection of the public.
- Embracing role as a public servant.
- Common sense and a willingness to ask questions.
- Commitment to attendance.
- Willingness to devote time and effort to the work of the board.
- Open .
- Team player.
- Fairness.
- An orderly approach to decision making.
- Ability to set aside personal/business interests.

Board Members Should Avoid:

- Obsession with a single issue.
- Self-serving by bringing own agenda to the table.
- Always taking the “contrarian” view—just for show.
- Expounding on strongly held opinions that are rarely backed by fact or research.
- Unpredictable participation or attendance.

Disappointments Experienced As Board Members:

- Personal goals for improvement of the profession have not been realized.
- The public has not been served fairly.
- Lack of effort and dedication on the part of other board members.
- The “wheels” of government do not move fast enough.

Dealing With The Volatile World Of Meetings

Some of the ideas are best undertaken by the Chair; however, you should feel free to help any meeting to progress. After all, why should you allow your time to be wasted?

- If a participant strays from the agenda item, call him/her back: “We should deal with that separately, but what do you feel about the issue X?”
- If there is confusion, you might ask: “Do I understand correctly that ...?”
- If you do not understand, say so: “I don’t understand that, would you explain it a little more; or, do you mean X or Y?”
- If a point is too vague ask for greater clarity: “What exactly do you have in mind?”
- If the speaker begins to ramble, wait until an inhalation of breath and jump in: “Yes, I understand that such and such, does anyone disagree?”
- If someone interrupts (someone other than the rambler), you should suggest that: “We can hear your contribution after Phoebe is finished.”
- If people chat, you might either simply state your difficulty in hearing/concentrating on the real speaker or ask them a direct question: “What do you think about that point?”
- If someone gestures disagreement with the speaker (e.g., by a grimace), then make sure they are brought into the discussion next: “What do you think Phoebe?”
- If there is an error, look for a good point first: “I see how that would work if X Y Z, but what would happen if A B C?”
- If you disagree, be *very* specific: “I disagree because

Ethics For Board Members

Public officials must not engage in unethical or the appearance of unethical behavior. Board members should be cognizant of how their actions may be perceived by the public.

If you have questions about certain activities, you are encouraged to consult with the attorney from the Division of Board Services assigned to your Board.

General Standards of Conduct For Board Members

- Board members must not act in an arbitrary or capricious manner in discharging any of their public duties. All Board member decisions whether the individual or collective ones must be based upon a reasoned consideration of facts applied to the correct law.

Primary Duties of All Board Members

- Be knowledgeable about the statutes and rules governing the Board.
- Review and make decisions on all issues presented to the Board in compliance with the law and with the ultimate goal of protecting the public.
- Be aware that Board members are viewed as representatives of the Board when they appear at public meetings and professional gatherings. Board members should not speak for the Board unless specifically authorized to do so.
- Refer public inquiries about Board issues directly to the bureau director for your Board.
- Do not participate in discussion or vote on any matter in which the Board member has a personal or professional conflict of interest.
- Prepare for Board meetings by careful review of materials. Board members shall come to the meetings with preliminary opinions of the issues to be discussed and questions for clarification.
- As a professional member of the Board, remain current in standards of practice through reviewing professional literature and attending educational programming and through actual practice or relationships with colleagues in practice.
- As a public member of the Board, become educated regarding the practice of the profession.
- Maintain absolute confidentiality regarding disciplinary matters, examinations, examination scores and other closed-session issues. The failure to maintain confidentiality could result in loss of immunity Board members enjoy for purposes of their actions as Board members.

Discipline

- The objectives of professional discipline include the following: (1) to promote the rehabilitation of the licensee; (2) to protect the public; and (3) to deter others from engaging in similar conduct.
- Punishment of the licensee is not an appropriate consideration.
- The statutory framework which creates the Board's authority will provide the options available for discipline.
- The goal of a regulatory board is to protect the public.

Standards of Ethical Conduct

■ The Five Commandments

- Do not act in an official capacity in a matter in which you have a private interest.
- Do not use your public position for a private benefit.
- Do not solicit or accept rewards or items or services likely to influence you.
- Do not use confidential information.
- Do not use your public position to obtain unlawful benefits.

■ Bias/ Conflict – Watch for:

- Financial Interests (employer/ employee/ competitor)
- Professional business Interests (have you worked with them in the past)
- Other – friends, non-friends
- Personal knowledge of facts which may not be in the record

Agendas and Meetings

Agendas and Meetings

- New Technologies – Share Point & Live Meeting.
- Agenda packets are mailed, emailed, and/or posted on Share Point about 7 calendar days prior to meeting.
- Agendas include:
 - Approval of the Agenda and Minutes
 - Open Session Items
 - Administrative Report
 - Legislation and Administrative Rules Issues
 - Public Hearings
 - Education and Exam Issues
 - Practice Questions
 - Current Issues Affecting the Profession
 - Closed Session items
 - Stipulations
 - Administrative Warnings
 - Deliberations on Proposed Disciplinary Actions
 - Case Closings
 - Monitoring Issues
 - Credentialing Issues
 - Exam Issues
- Agendas are published for public notice every Wednesday prior to the meeting on the Department's web site
- Meetings must comply with the Open Meetings Law.
- "To-Do" lists are distributed to staff within three (3) days after a meeting.
- Minutes are prepared within five (5) days after the board meeting.
 - Once the board approves the minutes, they are published on the Department's web site.

Expenses and Travel

General Expense Reimbursement Guidelines

- State statutes and Code of Ethics strictly prohibit any board member, his or her family, or co-workers from benefiting personally from free flight plans, lodging, meals, or other promotions which result from travel incurred in connection with board official business and paid from state or federal funds.
- All travel-related expenses are reimbursable within the limitations established by the Department of Employment Relations and the Department of Administration.
- Any board member whose appointment has been confirmed by the Senate or who has been nominated to fill a vacant board position is eligible to receive a per diem. Council and Committee members are not eligible for a per diem.
- Any board, council or committee member whose appointment has been confirmed by the Senate or who has been nominated to fill a vacant position is eligible to receive travel expenses for each day on which he or she has actually and necessarily engaged in the performance of board duties. If you are employed by the State of Wisconsin these requirements do not apply.
- All per diem and travel expense reimbursement vouchers must be submitted to the Department **within a month of the activity** in which payment is being requested.
- Any board member who wishes to attend out-of-state regional or national meetings or conventions must have prior approval by the Board and the Department, if he or she wishes to receive reimbursement for expenses by the Department.
- Employees in travel status are expected to use good judgment when incurring travel costs. Only expenses incurred while conducting official State business will be reimbursed. Reimbursement claims must represent actual, reasonable and necessary expenses.
- Reimbursement for air travel is limited to the lowest appropriate airfare which is defined as coach fare, which provides for not more than a 2-hour window from the traveler's preferred departure or arrival time and may require one plane transfer.
- Benefits from any airline promotion program, such as frequent flier points or credit vouchers, belong to the State and should be turned over to the Department.

Lodging Accommodations

- Hotel arrangements for board meetings are scheduled by the department for all board meetings at the beginning of each year.
- Lodging the night before a board meeting will be reimbursed provided the board member would have to leave home before 6:00 a.m. in order to be at the meeting site by the set meeting time.
- Maximum reimbursement rate for in-state lodging is \$70, except in Milwaukee, Waukesha and Racine counties where the rate is \$80.
- Maximum reimbursement rates for out-of-state lodging are determined by the Office of State Employment Relations. In cases where a board member stays at the conference site, the conference room rate is allowable.

Per Diem Guidelines

\$25 per day

(Only one per diem may be claimed per calendar day.)

Examples:

- Attend board meeting or participate in a board meeting by telephone.
- Attend a Screening Panel Session when held on a day other than a board meeting date, in person or by telephone.
- Senate confirmation hearing.
- Exam administration or test development
- Attend a legislative or other public hearing as an authorized representative of the board on matters directly related to the work of the board. Prior approval from the secretary is required for per diem payments for more than one board-authorized representative at a public hearing.
- Represents the board at a meeting of a governmental body or other organization where attendance is necessary to the performance of the board's official duties.

5-Hour Rule

- \$25 for performing a cumulative minimum of 5 hours engaged in:
 - Duties as a disciplinary case screener or board advisor including reviewing cases, consulting with investigators, etc. (NOTE: You will need to document the exact times performing these duties on your per diem form.
 - Preparation of board correspondence or articles
- Hours can only be claimed in the month the duties were performed. Hours cannot carry over to other months.

Insufficient Basis For Approval of a Per Diem

- Travel days to or from board meetings, conferences, and other events when there is no event business conducted.
- Reading board agendas, meeting packets, minutes or transcripts.
- Attendance at professional association meetings, conferences, seminars, exam administrator or test development if there has not been prior board authorization and approval of the Secretary's office.

Travel and Meal Guidelines

- **Mileage rate --** 48.5 cents per mile
- **Private Airplane--** 48.5 cents per mile
- **Meals** (*Maximum amounts*)

	<u>In-State Travel</u>	<u>Out-of-State Travel</u>
Breakfast	\$8	\$10
You must leave home before 6:00 a.m.		
Lunch	\$9	\$10
You must depart before 10:30 a.m. & return after 2:30 p.m.		
Dinner	\$17	\$20
You must return home after 7:00 p.m.		

NOTE: Alcoholic beverages may not be claimed for any meal.

- **Telephone:** One personal call home is reimbursable up to \$5 for each night in travel status.
- **Hotel Gratuities:** Gratuities to hotel employees are reimbursable up to \$2 on dates of departure and arrival, and up to \$2 per night for a stay at a hotel/motel.
- **Porterage:** Porterage costs at airports or bus terminals will be reimbursed. The claim should not exceed \$1 per piece of luggage.
- **Taxi/Shuttle:** Receipts are required for one-way fares exceeding \$25.

Examples of Non-reimbursable Items

This list is not all-inclusive

- Traffic citations, parking tickets and other fines
- Mileage charges incurred for personal reasons, e.g., sightseeing, side trips, etc.
- Additional charges for late checkout
- Taxi fares to and from restaurants
- Meals included in the cost of registration fees or airfare
- Flight insurance
- Cancellation charges (unless fully justified)
- Alcoholic beverages
- Spouse or family members' travel costs
- Lost/stolen cash or personal property
- Personal items, e.g., toiletries, luggage, clothing, etc.
- Repairs, towing service, etc., for personal vehicle
- Pay-for-view movies in hotel room; personal entertainment
- Child care costs and kennel costs

Forms and Memos

Department of Regulation & Licensing

PER DIEM REPORT

Month January Year 2011

INSTRUCTIONS: Send original (white) and first copy (yellow) to Bureau Director authorized to approve. Approving Bureau Director forwards original and first copy to Deputy Secretary, Department of Regulation and Licensing. Second copy (green) to be retained by claimant. Attach travel voucher if applicable.

NAME OF EXAMINING BOARD OR COUNCIL				BOARD OR COUNCIL MEMBER'S NAME			
Board				John Doe			
Day	Specify Number of Hours	Purpose Code	Where Performed	Day	Specify Number of Hours	Purpose Code	Where Performed
1				17			
2				18			
3				19			
4				20			
5	7	A	DRL- Madison	21			
6				22			
7				23	2	G	Home
8				24			
9				25			
10				26			
11	3	B	Teleconference - Home	27			
12				28			
13				29			
14				30			
15				31			
16							

TOTAL DAYS CLAIMED 2 @ \$ 25.00 = \$50.00

<p>CLAIMANT'S CERTIFICATION The undersigned certifies, in accordance with Sec. 16.53, Wis. Stats., that this account for per diem, amounting to \$25.00, is just and correct; and that this claim is for service necessarily incurred in the performance of duties required by the State, as authorized by law.</p>	<p>APPROVED:</p>
<p>Claimant's Signature _____ Date _____</p>	<p>Bureau Director _____ Date _____</p>
<p>Social Security Number _____</p>	<p>Secretary, Department of Regulation & Licensing</p> <p>Date _____</p>

Purpose Codes:

- A. Attend **Board meetings** in person or via teleconference call.
- B. Attend **Screening Panel** meetings on days other than board meeting days (teleconference calls)
- C. Attend **Hearings**, i.e., legislative, disciplinary or informal settlement conference hearings, on days other than board meeting days.
- D. Attend **Examinations**
- E. Attend **Test Development Sessions**, i.e., test review or analysis sessions, national testing sessions, tour of test facilities, etc.)
- F. Attend Senate Confirmation Hearings
- G. Review DOE cases
- H. Review credentialing applications other than at board meeting.
- G. Other (describe in detail)

Department Policy

Deadline For Submitting Travel Vouchers and Per Diems

Effective: Immediately

Board Members will only be reimbursed for travel upon a motion made by the Board, Council, or Committee designating them as a representative and upon prior approval of the department.

Policy for Submitting Board Meeting Travel Reimbursement

All travel vouchers and per diems must be submitted to the Department after each meeting and no later than the month following the Board meeting.

Policy for Submitting Out-of-State Travel Reimbursement

All travel vouchers and per diem vouchers must be submitted no later than the month following the month in which the out-of-state travel occurred.

Forms Submitted after the Deadline

Due to the Department's budget being an annual appropriation, those vouchers that are not submitted in a timely manner become at risk of not being reimbursed.

Annual Appropriation:

The Department receives authority from the legislature to spend a set amount of money each fiscal year. None of the authorized set amount can be carried forward to the next fiscal year.

Division of Board Services
HOTEL RESERVATIONS POLICY & PROCEDURE

Effective January 1, 2010, the Department has selected the Fairfield Inn & Suites for all future hotel reservations.

Fairfield Inn
2702 Crossroads Dr
Madison, WI 53718
608-661-2700

- If the board member is not going to use the reserved hotel room, it is the responsibility of the board member to cancel the room by calling the hotel themselves.
- If the hotel room is not cancelled, the board member may be responsible to pay the bill.
- If a meeting is cancelled due to a lack of quorum or no business, it is the responsibility of the Department to cancel any room reservations.

QUORUM CONFIRMATION POLICY

- It is every board member's responsibility to ensure there is a quorum to conduct business at all board meetings.
- It is the responsibility of each board member to inform the executive director of any meeting dates in which they will not be able to attend.
- If Division staff does not hear from a board member, they will assume that the board member will be attending the scheduled meeting.
- A quorum check will not be conducted prior to each scheduled board meeting.
- The only time Division staff will conduct a quorum check will be if two or more board members contact the Division indicating they will not be able to attend an upcoming scheduled meeting.
- Every board member will receive a list of all approved meeting dates at the first board meeting of the New Year. Please use this as a reference to assist in planning for the year ahead.

INCLEMENT WEATHER POLICY & PROCEDURE

Quorum Note: For open session you need one more than half of the total board membership. If there is formal discipline you will need 2/3 of the total board membership.

- Teleconference and Live Meeting options should be offered in order to continue with the scheduled meeting.
- Hotel rooms for the night before should be provided for any Board member traveling more than 50 miles from Madison and the meeting starts before 10:00 a.m.
- If a Board member who has a hotel reservation already in place will not attend and/or the meeting is cancelled, the hotel room should be cancelled immediately.

Division of Board Services Board Member Guidebook

This Board Member Guidebook has been prepared for your information and understanding of the policies, expectations, and practices of the Department of Safety & Professional Services and the Division of Board Services. Please read it carefully. Upon completion of your review of this guidebook, sign the statement below, and return it to the Executive Director of your Board, Committee, or Council by the due date. A copy of this acknowledgment appears at the back of the guidebook for your records.

I, _____, have received and read a copy of the Division of Board Services Board Member Guidebook which outlines the policies, expectations, and practices of the Department of Safety & Professional Services and the Division of Board Services, as well as my responsibilities as a member of an attached Board, Council, or Committee.

I have familiarized myself with the contents of this guidebook. By my signature below, I acknowledge, understand, accept and agree to comply with the information contained in the Board Member Guidebook provided to me by the Division of Board Services. I understand this guidebook is not intended to cover every situation which may arise during my term, but is simply a general guide to the goals, policies, practices, and expectations of the Department of Safety & Professional Services.

(Member signature)

Please return by: _____
(put date here)

Division of Board Services Board Member Guidebook

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(Member signature)

Please return by: _____
(put date here)

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**State of Wisconsin
Department of Safety and Professional Services**

AGENDA REQUEST FORM

Name and Title of Person Submitting the Request: Michelle Solem		Date When Request Submitted: 2012	
		Items will be considered late if submitted after 5 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before meeting for all other boards 	
Name of Board, Committee, Council: All Boards			
Board Meeting Date: Various	Attachments: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	How should the item be titled on the agenda page? Board Appointments	
Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	Is an appearance before the Board being scheduled? If yes, by whom? <input type="checkbox"/> Yes by _____ (name) <input checked="" type="checkbox"/> No	Name of Case Advisor(s), if required:	
Describe the issue and action the Board should address: Board appointments will be made by the newly elected chairperson for the 2012 calendar year.			
If this is a "Late Add" provide a justification utilizing the Agenda Request Policy:			
Directions for including supporting documents: 1. This form should be attached to any documents submitted to the agenda. 2. Late Adds must be authorized by a Supervisor, DOE Division Administrator, and Bureau Director. 3. Provide original documents needing Board Chairperson signature to the Bureau Director or Program Assistant prior to the start of a meeting.			
Authorization:			
Signature of person making this request		Date	
Supervisor (if required)		Date	
Division Administrator (if required)		Date	
Bureau Director signature (indicates approval to add late items to agenda)		Date	



STATE OF WISCONSIN
Department of Safety and Professional Services
1400 E Washington Ave.
Madison WI 53703

Mail to:
PO Box 8935
Madison WI 53708-8935

Email: dsps@wisconsin.gov
Web: <http://dsps.wi.gov>

Governor Scott Walker Secretary Dave Ross

Voice: 608-266-2112 • FAX: 608-267-0644 • TTY: 608-267-2416

TO: Engineer Section
FROM: Michelle Solem
DATE: January 20, 2012
RE: Board Appointments

The list below shows the current Board appointments that are being utilized by this Board along with the members currently serving in those positions.

Position	Currently Serving
A-E Joint Board Rules Representative	Steven Hook and Charles Kopplin
CE Liaison	Charles Kopplin
Screening Panel	Joseph Eberle and Steven Hook

**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Joe Eberle, Board Member Denise Aviles, Executive Director		2) Date When Request Submitted: 1/17/2012 Items will be considered late if submitted after 4:30 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others 	
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: Feb. 2, 2012	5) Attachments: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6) How should the item be titled on the agenda page? Enforcement Matters: Discussion related to Distance Learning Courses on Ethics Offered by Texas Tech	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input checked="" type="checkbox"/> No	9) Name of Case Advisor(s), if required: n/a	
10) Describe the issue and action that should be addressed: The distance learning course the Section previously selected is no longer being offered by Texas Tech under the same title as it was last year. We would like to make the Section aware of the change and discuss how to implement the changes for future cases in which licensees may be required to take the courses. For more information please visit TTU's website at: http://www.murdough.ttu.edu/pd.cfm?pt=Murdough , then click on the "Correspondence Courses" under the "Products and Services" heading on the left margin. The documents provided are located on the "Comprehensive Courses in Engineering Ethics Offered by Distance Learning" link.			
11) Authorization			
Denise Aviles		1/17/11	
Signature of person making this request		Date	
Supervisor (if required)		Date	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date	
Directions for including supporting documents: 1. This form should be attached to any documents submitted to the agenda. 2. Post Agenda Deadline items must be authorized by a Supervisor and the Board Services Bureau Director. 3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.			

Information on Comprehensive Levels of Professional Development Hours in Engineering Ethics via Distance Learning

<u>Information</u>	<u>PDF Links</u>	<u>Specific Course Information</u>
<u>Brief Background of Courses</u>	<u>Enrollment Form</u>	<u>BASIC Level Study</u> ¹ 30 Professional Development Hours
<u>Textbook for Courses</u>	<u>Course Syllabus</u>	<u>INTERMEDIATE Level Study</u> ¹ 60 Professional Development Hours
<u>Goals and Objectives</u>		<u>ADVANCED Level Study</u> ¹ 90 Professional Development Hours
<u>Enrollment Information</u>		¹ Other Professional Development Hours options are available - call (806) 742-3525 for information

A Brief Background on Texas Tech's Engineering Ethics Courses by Distance Learning

The Murdough Center at Texas Tech University's *distance learning courses* in engineering ethics, formerly known as *correspondence courses*, have been updated and revised in content and format. The original courses were created by the Murdough Center for Engineering Professionalism in the early 1990s with encouragement and financial support from the Texas Board of Professional Engineers (TBPE) and the National Council of Examiners for Engineering and Surveying (NCEES).

During the early years, the courses were taken by several staff and board members of engineering licensing boards to determine their applicability to and appropriateness for licensed engineers in their jurisdictions who had shown a need for various levels of reminders about the importance of ethics in engineering practice.

Since 1990, over 3,000 licensed engineers from all 50 states have enrolled in our distance learning courses in ethics, approximately 35% have been licensed engineers and 65% have been students at universities taking an academic-credit version of these courses.

Although not required to do so, some enrollees inform us that they are being compelled by their licensing board to take one or more of our courses. Frequently enrollees end up praising our courses and expressing the view that all practicing engineers should take at least one course in engineering ethics.

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Textbook for Engineering Ethics Courses

Engineering Ethics Concepts, Viewpoints, Cases and Codes
2nd Edition © 2008, Edited by Smith, Harper and Burgess

Summary of the Table of Contents

- Principles of Ethics for Engineers
 - Articles on Intuition, Utilitarianism, Respect for Persons and Virtue Ethics
- Engineering Ethics: Applications and Responsibilities
 - 8 articles
- Engineering Ethics: Codes of Ethics

- 9 Codes of Ethics
- Viewpoints by Individual Engineers, Ethicists & Organizations
15 articles
- Description of Major Case Studies Available on DVD
2 cases
- Cases on Critical Thinking, Honesty, and Responsibility
13 cases
- NSPE Board of Ethical Review (BER) Cases – Fully Developed Cases
5 cases
- Facts and Questions from NSPE BER Cases for 2001 – 2007
83 cases
- American Society of Civil Engineers (ASCE) Question of Ethics Cases
3 cases (November, 2005; February 2007; October 2007)
- Applied Ethics in Professional Practice Cases
30 cases
- Appendices
 - Appendix A: References Related to Engineering Ethics
 - Appendix B: Murdough Center for Engineering Professionalism
 - Appendix C: National Institute for Engineering Ethics Executive Board Members
 - Appendix D: NIEE Products and Services

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Goals and Objectives of Courses

The goals are to promote Understanding, Communication, Insight, and Problem Solving Abilities related to ethics in the engineering profession.

Understanding: a clear understanding of professional ethics when practicing engineering

Communication: an increased ability to communicate ethical concerns & potential conflicts

Insight:

- An ability to recognize ethical dilemmas
- A familiarity with various codes of ethical conduct
- An appreciation for the frequency that ethical dilemmas are encountered in professional engineering work experiences
- A better understanding of one's own values, and

Problem Solving: an awareness of ethical problem solving methods including getting the facts, listing options, testing those options, making a decision and acting

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Overall Objectives and Learning Outcomes

The overall objectives of this course are to develop the ability to:

1. Communicate willingly and effectively with others on ethical issues.
2. Differentiate among personal ethics, legally required ethics and ethics based on the engineer's responsibility to protect the public's health, safety and welfare.
3. Recognize and resolve ethical problems by learning about ethics resources available for guidance, considering numerous case studies, understanding the ethical component of the problems by discussion of case studies, and analyzing situations presented by case studies.
4. Formulate solutions to ethical problems by recognizing the consequences of actions taken; apply different perspectives on ethical problem solving such as duties, consequences; distinguish between rules and relationships; analyze what is expected, knowing what's right, and doing what's right; and comprehend, compare, evaluate and act on these solutions.

To accomplish these objectives, enrollees will:

1. Review basic knowledge and fundamental definitions of professionalism and ethics.

2. Develop an understanding of ethics as it relates to the profession by reviewing codes of ethics and other guidelines for decision making.
3. Apply the concepts of ethics codes and other guidelines to simple actions of living and working, complex actions in the workplace, and to case studies of actual and illustrative work situations.
4. Relate consequences resulting from both simple and complex actions to their immediate supervisor, the employees they supervise, and the public.
5. Analyze case study examples and situations in order to distinguish between choosing between right and wrong, and choosing among competing goods.
6. Develop skills to formulate, analyze, and compare solutions to ethical dilemmas encountered in the workplace and relationships with others.
7. Learn to evaluate the value and effect of the various solutions by obtaining all the facts, listing and testing the options, making a decision and knowing when and how to take action...*and having the willingness and courage to do so.*

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BASIC Level Study in Engineering Ethics
(30 Professional Development Hours)

Course Fee: \$600 (includes the textbook and shipping/handling)

Description: A study of three ethical theories; application to cases and engineering Codes of Ethics.

Assignments:

- Assignment 1: Study of Intuitions
- Assignment 2: Study of *Utilitarianism*
- Assignment 3: Study of *Respect for Persons*
- Assignment 4: Study of *Virtue Ethics*
- Assignment 5: Application of an Ethical Theory to a Code of Ethics
- Assignment 6: Position Paper (~1,200 words)
- Assignment 7: Obtaining Guidance from Licensing Board Rules

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INTERMEDIATE Level Studies in Engineering Ethics
(60 Professional Development Hours)

Course Fee: \$900 (includes the textbook and shipping/handling)

Description: A study of viewpoints on ethics, ethics case studies, and codes of ethics applied to actual cases

- Assignment 1: Study of Intuitions
- Assignment 2: Study of *Utilitarianism*
- Assignment 3: Study of *Respect for Persons*
- Assignment 4: Study of *Virtue Ethics*
- Assignment 5: Application of an Ethical Theory to a Code of Ethics
- Assignment 6: Position Paper (~1,200 words)
- Assignment 7: Obtaining Guidance from Licensing Board Rules
- Assignment 8: Viewpoints: Read assigned article(s) on viewpoints in the text
- Assignment 9: Case Analysis: Analysis of 11 specific ethics cases from the text

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ADVANCED Level Study in Engineering Ethics
(90 Professional Development Hours)

Course Fee: \$1,200 (includes the textbook and shipping/handling)

Description: Independent study and research into topics related to ethical responsibilities of engineers to their

clients, the profession, and society

- Assignment 1: Study of Intuitions
- Assignment 2: Study of *Utilitarianism*
- Assignment 3: Study of *Respect for Persons*
- Assignment 4: Study of *Virtue Ethics*
- Assignment 5: Application of an Ethical Theory to a Code of Ethics
- Assignment 6: Position Paper (~1,200 words)
- Assignment 7: Obtaining Guidance from Licensing Board Rules
- Assignment 8: Viewpoints: Read assigned article(s) on viewpoints in the text
- Assignment 9: Case Analysis: Analysis of 11 specific ethics cases from the text
- Assignment 10: Research Proposal
- Assignment 11: Draft Paper (non-penalty based evaluation)
- Assignment 12: Final Paper (~2,000 words)

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Enrollment Information

The course fee may be paid by check or credit card.

If paying by check, please print and complete the enrollment form and mail with your check payable to Texas Tech University to

National Institute for Engineering Ethics
Texas Tech University
Box 41023
Lubbock, TX 79409-1023

If paying by credit card, you may call (806) 742-3525 and give us your information over the phone. Alternatively, you may print and complete the enrollment form and fax the form to (806) 742-0444.

Once payment is received, the textbook will be sent via Fed Ex, and the course website URL, your username and password will be emailed to you.

In addition to these comprehensive courses, the Murdough Center for Engineering Professionalism at Texas Tech University offers other engineering ethics courses resulting in two, three, four, five, seven and ten Professional Development Hours.

Program and Course Director

Jimmy H. Smith, Ph.D., P.E., F.ASCE, F.NSPE, Professor Civil Engineering and Director
Murdough Center for Engineering Professionalism and National Institute for Engineering Ethics

Assisted by

Richard A. Burgess, Deputy Director for Distance Learning
Patricia M. Harper, Deputy Director for Operations
Sylvia G. Bermea, Administrative Business Assistant

Phone: (806) 742-3525

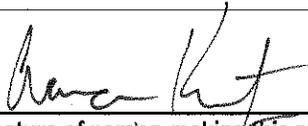
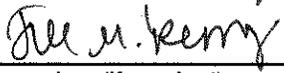
Fax: (806) 742-0444

Email: engineering.ethics@ttu.edu

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**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Aaron Knautz		2) Date When Request Submitted: 1/11/12	
Items will be considered late if submitted after 4:30 p.m. and less than:			
▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others			
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: 2/2/12	5) Attachments: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6) How should the item be titled on the agenda page? Notification of Exam Vendor	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input type="checkbox"/> No	9) Name of Case Advisor(s), if required:	
10) Describe the issue and action that should be addressed: Updating the section that we have selected a vendor for examination services. Aaron will stop in to provide information.			
11) Authorization			
Signature of person making this request 		Date 1/11/12	
Supervisor (if required) 		Date 1/11/2012	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda) Date			
Directions for including supporting documents:			
1. This form should be attached to any documents submitted to the agenda. 2. Post Agenda Deadline items must be authorized by a Supervisor and the Board Services Bureau Director. 3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.			

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**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Denise Aviles, Executive Director		2) Date When Request Submitted: 1/17/2012 Items will be considered late if submitted after 4:30 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others 	
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: Feb. 2, 2012	5) Attachments: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6) How should the item be titled on the agenda page? Credentialing Matters: Discussion with NCEES Relative to the Washington Accord, the Accreditation Process, and Pathways to Licensure	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input checked="" type="checkbox"/> No	9) Name of Case Advisor(s), if required: n/a	
10) Describe the issue and action that should be addressed: Jerry Carter, Executive Director of NCEES, provided a list of states that recognize the Washington Accord for the Section's review. Please review and discuss whether the Engineering Section would like to recognize the Washington Accord as equivalent to the EAC/ABET standard.			
11) Authorization			
Denise Aviles		1/17/11	
Signature of person making this request		Date	
Supervisor (if required)		Date	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date	
Directions for including supporting documents: 1. This form should be attached to any documents submitted to the agenda. 2. Post Agenda Deadline items must be authorized by a Supervisor and the Board Services Bureau Director. 3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.			

NCEES SURVEY

Does your member board recognize graduates of Washington Accord programs as equivalent to EAC/ABET graduates?

Member Boards that recognize a Washington Accord graduate as equivalent to an EAC/ABET Graduate

Arizona
Connecticut
Guam
Idaho
Maine
Maryland (accepts only graduates of WA original signatory countries)
Michigan
Missouri
Nevada
New Hampshire (currently revising rules/will not accept in future)
New Mexico
New York
South Carolina
Texas
Vermont

Member Boards that do not recognize a Washington Accord graduate as equivalent to an EAC/ABET Graduate and an evaluation is required (CEAB programs are exceptions for most)

Alabama	Nebraska
Alaska	New Jersey
Arkansas	North Carolina
California	North Dakota
Colorado	Ohio
Delaware	Oklahoma
District of Columbia	Oregon
Florida	Pennsylvania
Georgia	Puerto Rico
Hawaii	Rhode Island
Illinois PE	South Dakota
Illinois Structural	Tennessee
Indiana	Utah
Iowa	Virginia
Kansas	Virgin Islands
Kentucky	Washington
Louisiana	West Virginia
Massachusetts	Wisconsin
Minnesota	Wyoming
Mississippi	
Montana	

Amended 9/12/11

**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Denise Aviles		2) Date When Request Submitted: 1/20/12 Items will be considered late if submitted after 4:30 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others 	
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: Feb. 2, 2012	5) Attachments: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6) How should the item be titled on the agenda page? Credentialing Matters: Discussion relative to the ABET accreditation criteria of Associates and Bachelors degree programs	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input type="checkbox"/> No	9) Name of Case Advisor(s), if required: n/a	
10) Describe the issue and action that should be addressed: Review, discuss, and take any action deemed appropriate.			
11) Authorization			
Denise Aviles		1/17/2012	
Signature of person making this request		Date	
Supervisor (if required)		Date	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date	
Directions for including supporting documents: 1. This form should be attached to any documents submitted to the agenda. 2. Post Agenda Deadline items must be authorized by a Supervisor and the Board Services Bureau Director. 3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.			

CRITERIA FOR ACCREDITING ENGINEERING PROGRAMS

Effective for Reviews During the
2012-2013 Accreditation Cycle

Incorporates all changes
approved by the
ABET
Board of Directors
as of
October 29, 2011



Engineering Accreditation Commission

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Requests for further information about ABET, its accreditation process, or other activities may be addressed to the Senior Director, Accreditation, ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202 or to accreditation@abet.org.

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Criteria for Accrediting Engineering Programs Effective for Reviews during the 2012-2013 Accreditation Cycle

Definitions

While ABET recognizes and supports the prerogative of institutions to adopt and use the terminology of their choice, it is necessary for ABET volunteers and staff to have a consistent understanding of terminology. With that purpose in mind, the Commissions will use the following basic definitions:

Program Educational Objectives – Program educational objectives are broad statements that describe what graduates are expected to attain within a few years of graduation. Program educational objectives are based on the needs of the program's constituencies.

Student Outcomes – Student outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire as they progress through the program.

Assessment – Assessment is one or more processes that identify, collect, and prepare data to evaluate the attainment of student outcomes and program educational objectives. Effective assessment uses relevant direct, indirect, quantitative and qualitative measures as appropriate to the objective or outcome being measured. Appropriate sampling methods may be used as part of an assessment process.

Evaluation – Evaluation is one or more processes for interpreting the data and evidence accumulated through assessment processes. Evaluation determines the extent to which student outcomes and program educational objectives are being attained. Evaluation results in decisions and actions regarding program improvement.

This document contains three sections:

The first section includes important **definitions** used by all ABET commissions.

The second section contains the **General Criteria for Baccalaureate Level Programs** that must be satisfied by all programs accredited by the Engineering Accreditation Commission of ABET and the **General Criteria for Masters Level Programs** that must be satisfied by those programs seeking advanced level accreditation.

The third section contains the **Program Criteria** that must be satisfied by certain programs. The applicable Program Criteria are determined by the technical specialties indicated by the title of the program. Overlapping requirements need to be satisfied only once.

These criteria are intended to assure quality and to foster the systematic pursuit of improvement in the quality of engineering education that satisfies the needs of constituencies in a dynamic and competitive environment. It is the responsibility of the institution seeking accreditation of an engineering program to demonstrate clearly that the program meets the following criteria.

I. GENERAL CRITERIA FOR BACCALAUREATE LEVEL PROGRAMS

All programs seeking accreditation from the Engineering Accreditation Commission of ABET must demonstrate that they satisfy all of the following General Criteria for Baccalaureate Level Programs.

Criterion 1. Students

Student performance must be evaluated. Student progress must be monitored to foster success in attaining student outcomes, thereby enabling graduates to attain program educational objectives. Students must be advised regarding curriculum and career matters.

The program must have and enforce policies for accepting both new and transfer students, awarding appropriate academic credit for courses taken at other institutions, and awarding appropriate academic credit for work in lieu of courses taken at the institution. The program must have and enforce procedures to ensure and document that students who graduate meet all graduation requirements.

Criterion 2. Program Educational Objectives

The program must have published program educational objectives that are consistent with the mission of the institution, the needs of the program's various constituencies, and these criteria. There must be a documented and effective process, involving program constituencies, for the periodic review and revision of these program educational objectives.

Criterion 3. Student Outcomes

The program must have documented student outcomes that prepare graduates to attain the program educational objectives.

Student outcomes are outcomes (a) through (k) plus any additional outcomes that may be articulated by the program.

- (a) an ability to apply knowledge of mathematics, science, and engineering
- (b) an ability to design and conduct experiments, as well as to analyze and interpret data
- (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) an ability to function on multidisciplinary teams
- (e) an ability to identify, formulate, and solve engineering problems
- (f) an understanding of professional and ethical responsibility
- (g) an ability to communicate effectively
- (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- (i) a recognition of the need for, and an ability to engage in life-long learning
- (j) a knowledge of contemporary issues
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Criterion 4. Continuous Improvement

The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which both the program educational objectives and the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement

of the program. Other available information may also be used to assist in the continuous improvement of the program.

Criterion 5. Curriculum

The curriculum requirements specify subject areas appropriate to engineering but do not prescribe specific courses. The faculty must ensure that the program curriculum devotes adequate attention and time to each component, consistent with the outcomes and objectives of the program and institution. The professional component must include:

- (a) one year of a combination of college level mathematics and basic sciences (some with experimental experience) appropriate to the discipline. Basic sciences are defined as biological, chemical, and physical sciences.
- (b) one and one-half years of engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study. The engineering sciences have their roots in mathematics and basic sciences but carry knowledge further toward creative application. These studies provide a bridge between mathematics and basic sciences on the one hand and engineering practice on the other. Engineering design is the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics, and the engineering sciences are applied to convert resources optimally to meet these stated needs.
- (c) a general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives.

Students must be prepared for engineering practice through a curriculum culminating in a major design experience based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.

One year is the lesser of 32 semester hours (or equivalent) or one-fourth of the total credits required for graduation.

Criterion 6. Faculty

The faculty must be of sufficient number and must have the competencies to cover all of the curricular areas of the program. There must be sufficient faculty to accommodate adequate levels of student-faculty interaction, student advising and counseling, university service activities, professional development, and interactions with industrial and professional practitioners, as well as employers of students.

The program faculty must have appropriate qualifications and must have and demonstrate sufficient authority to ensure the proper guidance of the program and to develop and implement processes for the evaluation, assessment, and continuing improvement of the program, its educational objectives and outcomes. The overall competence of the faculty may be judged by such factors as education, diversity of backgrounds, engineering experience, teaching effectiveness and experience, ability to communicate,

enthusiasm for developing more effective programs, level of scholarship, participation in professional societies, and licensure as Professional Engineers.

Criterion 7. Facilities

Classrooms, offices, laboratories, and associated equipment must be adequate to support attainment of the student outcomes and to provide an atmosphere conducive to learning. Modern tools, equipment, computing resources, and laboratories appropriate to the program must be available, accessible, and systematically maintained and upgraded to enable students to attain the student outcomes and to support program needs. Students must be provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories available to the program.

The library services and the computing and information infrastructure must be adequate to support the scholarly and professional activities of the students and faculty.

Criterion 8. Institutional Support

Institutional support and leadership must be adequate to ensure the quality and continuity of the program.

Resources including institutional services, financial support, and staff (both administrative and technical) provided to the program must be adequate to meet program needs. The resources available to the program must be sufficient to attract, retain, and provide for the continued professional development of a qualified faculty. The resources available to the program must be sufficient to acquire, maintain, and operate infrastructures, facilities, and equipment appropriate for the program, and to provide an environment in which student outcomes can be attained.

II. GENERAL CRITERIA FOR MASTERS LEVEL PROGRAMS

Masters level programs must develop, publish, and periodically review, educational objectives and student outcomes. The criteria for masters level programs are fulfillment of the baccalaureate level general criteria, fulfillment of program criteria appropriate to the masters level specialization area, and one academic year of study beyond the baccalaureate level. The program must demonstrate that graduates have an ability to apply masters level knowledge in a specialized area of engineering related to the program area.

III. PROGRAM CRITERIA

Each program must satisfy applicable Program Criteria (if any). Program Criteria provide the specificity needed for interpretation of the baccalaureate level criteria as applicable to a given discipline.

Requirements stipulated in the Program Criteria are limited to the areas of curricular topics and faculty qualifications. If a program, by virtue of its title, becomes subject to two or more sets of Program Criteria, then that program must satisfy each set of Program Criteria; however, overlapping requirements need to be satisfied only once.

PROGRAM CRITERIA FOR
AEROSPACE
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: American Institute of Aeronautics and Astronautics

These program criteria apply to engineering programs including "aerospace," "aeronautical," "astronautical," and similar modifiers in their titles.

1. Curriculum

Aeronautical engineering programs must prepare graduates to have a knowledge of aerodynamics, aerospace materials, structures, propulsion, flight mechanics, and stability and control. Astronautical engineering programs must prepare graduates to have a knowledge of orbital mechanics, space environment, attitude determination and control, telecommunications, space structures, and rocket propulsion. Aerospace engineering programs or other engineering programs combining aeronautical engineering and astronautical engineering, must prepare graduates to have knowledge covering one of the areas -- aeronautical engineering or astronautical engineering as described above -- and, in addition, knowledge of some topics from the area not emphasized. Programs must also prepare graduates to have design competence that includes integration of aeronautical or astronautical topics.

2. Faculty

Program faculty must have responsibility and sufficient authority to define, revise, implement, and achieve program objectives. The program must demonstrate that faculty teaching upper-division courses have an understanding of current professional practice in the aerospace industry.

PROGRAM CRITERIA FOR
AGRICULTURAL
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: American Society of Agricultural and Biological Engineers

These program criteria apply to engineering programs including "agricultural," "forest," and similar modifiers in their titles.

1. Curriculum

The curriculum must include mathematics through differential equations and biological and engineering sciences consistent with the program educational objectives. The curriculum must prepare graduates to apply engineering to agriculture, aquaculture, forestry, human, or natural resources.

2. Faculty

The program shall demonstrate that those faculty members teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of education and experience or professional licensure.

PROGRAM CRITERIA FOR ARCHITECTURAL AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: American Society of Civil Engineers

Cooperating Society: American Society of Heating, Refrigerating, and Air-Conditioning Engineers

These program criteria apply to engineering programs including "architectural" and similar modifiers in their titles.

1. Curriculum

The program must demonstrate that graduates can apply mathematics through differential equations, calculus-based physics, and chemistry. The four basic architectural engineering curriculum areas are building structures, building mechanical systems, building electrical systems, and construction/construction management. Graduates are expected to reach the synthesis (design) level in one of these areas, the application level in a second area, and the comprehension level in the remaining two areas. The engineering topics required by the general criteria shall support the engineering fundamentals of each of these four areas at the specified level. Graduates are expected to discuss the basic concepts of architecture in a context of architectural design and history.

The design level must be in a context that:

- a. Considers the systems or processes from other architectural engineering curricular areas,
- b. Works within the overall architectural design,
- c. Includes communication and collaboration with other design or construction team members,
- d. Includes computer-based technology and considers applicable codes and standards, and
- e. Considers fundamental attributes of building performance and sustainability.

2. Faculty

The program must demonstrate that faculty teaching courses that are primarily engineering design in content are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience. It must also demonstrate that the majority of the faculty members teaching architectural design courses are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience.

PROGRAM CRITERIA FOR
BIOENGINEERING AND BIOMEDICAL ENGINEERING
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: Biomedical Engineering Society

Cooperating Societies: American Ceramic Society, American Institute of Chemical Engineers,
American Society of Agricultural and Biological Engineers,
American Society of Mechanical Engineers, and
Institute of Electrical and Electronics Engineers

These program criteria apply to engineering programs including “bioengineering,” “biomedical,” and similar modifiers in their titles.

1. Curriculum

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program. The program must prepare graduates to have: an understanding of biology and physiology, and the capability to apply advanced mathematics (including differential equations and statistics), science, and engineering to solve the problems at the interface of engineering and biology; the curriculum must prepare graduates with the ability to make measurements on and interpret data from living systems, addressing the problems associated with the interaction between living and non-living materials and systems.

PROGRAM CRITERIA FOR
BIOLOGICAL
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: American Ceramic Society, American Society of Agricultural and Biological Engineers

Cooperating Societies: American Academy of Environmental Engineers,
American Institute of Chemical Engineers, American Society of Civil Engineers,
American Society of Mechanical Engineers, Biomedical Engineering Society,
CSAB, Institute of Electrical and Electronics Engineers,
Institute of Industrial Engineers, and Minerals, Metals, and Materials Society

These program criteria apply to engineering programs including “biological,” “biological systems,” “food,” and similar modifiers in their titles with the exception of bioengineering and biomedical engineering programs.

1. Curriculum

The curriculum must include mathematics through differential equations, a thorough grounding in chemistry and biology and a working knowledge of advanced biological sciences consistent with the program educational objectives. The curriculum must prepare graduates to apply engineering to biological systems.

2. Faculty

The program shall demonstrate that those faculty members teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of education and experience or professional licensure.

PROGRAM CRITERIA FOR
CERAMIC
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: American Ceramic Society

These program criteria apply to engineering programs including "ceramic," "glass," and other similar modifiers in their titles. All programs in the materials related areas share these criteria, including programs with materials, materials processing, ceramics, glass, polymer, metallurgical, and similar modifiers in their titles.

1. Curriculum

The curriculum must prepare graduates to apply advanced science (such as chemistry and physics) and engineering principles to materials systems; to have an integrated understanding of scientific and engineering principles underlying the four major elements of the field, viz. structure, properties, processing, and performance, related to the material systems appropriate to the field; to apply and integrate knowledge from each of the above four elements of the field to solve material selection and design problems; and to utilize experimental, statistical, and computational methods consistent with the program educational objectives.

2. Faculty

The faculty expertise for the professional area must encompass the above four major elements of the field.

PROGRAM CRITERIA FOR
CHEMICAL, BIOCHEMICAL, BIOMOLECULAR,
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: American Institute of Chemical Engineers

These program criteria apply to engineering programs that include "chemical," "biochemical," "biomolecular," and similar modifiers in their titles.

1. Curriculum

The curriculum must provide a thorough grounding in the basic sciences including chemistry, physics, and biology, with some content at an advanced level, as appropriate to the objectives of the program. The curriculum must include the engineering application of these basic sciences to the design, analysis, and control of chemical, physical, and/or biological processes, including the hazards associated with these processes.

PROGRAM CRITERIA FOR
CIVIL
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: American Society of Civil Engineers

These program criteria apply to engineering programs including "civil" and similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to apply knowledge of mathematics through differential equations, calculus-based physics, chemistry, and at least one additional area of basic science, consistent with the program educational objectives; apply knowledge of four technical areas appropriate to civil engineering; conduct civil engineering experiments and analyze and interpret the resulting data; design a system, component, or process in more than one civil engineering context; explain basic concepts in management, business, public policy, and leadership; and explain the importance of professional licensure.

2. Faculty

The program must demonstrate that faculty teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience. The program must demonstrate that it is not critically dependent on one individual.

PROGRAM CRITERIA FOR
CONSTRUCTION
AND SIMILARLY NAMED
Lead Society: American Society of Civil Engineers

These program criteria apply to engineering programs including "construction" and similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to apply knowledge of mathematics through differential and integral calculus, probability and statistics, general chemistry, and calculus-based physics; to analyze and design construction processes and systems in a construction engineering specialty field, applying knowledge of methods, materials, equipment, planning, scheduling, safety, and cost analysis; to explain basic legal and ethical concepts and the importance of professional engineering licensure in the construction industry; to explain basic concepts of management topics such as economics, business, accounting, communications, leadership, decision and optimization methods, engineering economics, engineering management, and cost control.

2. Faculty

The program must demonstrate that the majority of faculty teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, or by education and design experience. The faculty must include at least one member who has had full-time experience and decision-making responsibilities in the construction industry.

**PROGRAM CRITERIA FOR
ELECTRICAL, COMPUTER,
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: Institute of Electrical and Electronics Engineers
Cooperating Society for Computer Engineering Programs: CSAB

These program criteria apply to engineering programs that include electrical, electronic, computer, or similar modifiers in their titles.

1. Curriculum

The structure of the curriculum must provide both breadth and depth across the range of engineering topics implied by the title of the program.

The curriculum must include probability and statistics, including applications appropriate to the program name; mathematics through differential and integral calculus; sciences (defined as biological, chemical, or physical science); and engineering topics (including computing science) necessary to analyze and design complex electrical and electronic devices, software, and systems containing hardware and software components.

The curriculum for programs containing the modifier “electrical” in the title must include advanced mathematics, such as differential equations, linear algebra, complex variables, and discrete mathematics.

The curriculum for programs containing the modifier “computer” in the title must include discrete mathematics.

**PROGRAM CRITERIA FOR
ENGINEERING, GENERAL ENGINEERING,
ENGINEERING PHYSICS, AND ENGINEERING SCIENCE**
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: American Society for Engineering Education

These program criteria apply to engineering (without modifiers), general engineering, engineering physics, engineering science(s), and similarly named engineering programs.

There are no program-specific criteria beyond the General Criteria.

PROGRAM CRITERIA FOR
ENGINEERING MANAGEMENT
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: Institute of Industrial Engineers

Cooperating Societies: American Institute of Chemical Engineers, American Society of Civil Engineers, American Society of Mechanical Engineers, Institute of Electrical and Electronics Engineers, Society of Manufacturing Engineers, and Society of Petroleum Engineers

These program criteria apply to engineering programs using management or similar modifiers in their titles.

1. Curriculum

The curriculum must prepare graduates to understand the engineering relationships between the management tasks of planning, organization, leadership, control, and the human element introduction, research, and service organizations; to understand and deal with the stochastic nature of management systems. The curriculum must also prepare graduates to integrate management systems into a series of different technological environments.

2. Faculty

The major professional competence of the faculty must be in engineering, and the faculty should be experienced in the management of engineering and/or technical activities.

PROGRAM CRITERIA FOR
ENGINEERING MECHANICS
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: American Society of Mechanical Engineers

These program criteria apply to engineering programs which include mechanics or similar modifiers in their titles.

1. Curriculum

The program curriculum must require students to use mathematical and computational techniques to analyze, model, and design physical systems consisting of solid and fluid components under steady state and transient conditions.

2. Faculty

The program must demonstrate that faculty members responsible for the upper-level professional program are maintaining currency in their specialty area.

**PROGRAM CRITERIA FOR
ENVIRONMENTAL
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: American Academy of Environmental Engineers
Cooperating Societies: American Institute of Chemical Engineers,
American Society of Agricultural and Biological Engineers, American Society of Civil Engineers,
American Society of Heating, Refrigerating and Air-Conditioning Engineers,
American Society of Mechanical Engineers, SAE International,
and Society for Mining, Metallurgy, and Exploration

These program criteria apply to engineering programs including "environmental", "sanitary," or similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to be proficient in mathematics through differential equations, probability and statistics, calculus-based physics, general chemistry; an earth science, e.g., geology, meteorology, soil science, relevant to the program of study; a biological science, e.g., microbiology, aquatic biology, toxicology, relevant to the program of study; fluid mechanics relevant to the program of study; introductory level knowledge of environmental issues associated with air, land, and water systems and associated environmental health impacts; conducting laboratory experiments and critically analyzing and interpreting data in more than one major environmental engineering focus area, e.g., air, water, land, environmental health; performing engineering design by means of design experiences integrated throughout the professional component of the curriculum; to be proficient in advanced principles and practice relevant to the program objectives; understanding of concepts of professional practice and the roles and responsibilities of public institutions and private organizations pertaining to environmental engineering.

2. Faculty

The program must demonstrate that a majority of those faculty teaching courses which are primarily design in content are qualified to teach the subject matter by virtue of professional licensure, or by education and equivalent design experience.

**PROGRAM CRITERIA FOR
FIRE PROTECTION
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: Society for Fire Protection Engineers

These program criteria apply to engineering programs including "fire protection" and similar modifiers in their title.

1. Curriculum

The program must prepare graduates to have proficiency in the application of science and engineering to protect the health, safety, and welfare of the public from the impacts of fire. This includes the ability to apply and incorporate an understanding of the fire dynamics that affect the life safety of occupants and

emergency responders and the protection of property; the hazards associated with processes and building designs; the design of fire protection products, systems, and equipment; the human response and behavior in fire emergencies; and the prevention, control, and extinguishment of fire.

2. Faculty

The program must demonstrate that faculty members maintain currency in fire protection engineering practice.

**PROGRAM CRITERIA FOR
GEOLOGICAL
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: Society for Mining, Metallurgy, and Exploration

These program criteria apply to engineering programs that include "geological" and similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to have:

(1) the ability to apply mathematics including differential equations, calculus-based physics, and chemistry, to geological engineering problems;

(2) proficiency in geological science topics that emphasize geologic processes and the identification of minerals and rocks;

(3) the ability to visualize and solve geological problems in three and four dimensions;

(4) proficiency in the engineering sciences including statics, properties/strength of materials, and geomechanics;

(5) the ability to apply principles of geology, elements of geophysics, geological and engineering field methods; and

(6) engineering knowledge to design solutions to geological engineering problems, which will include one or more of the following considerations: the distribution of physical and chemical properties of earth materials, including surface water, ground water (hydrogeology), and fluid hydrocarbons; the effects of surface and near-surface natural processes; the impacts of construction projects; the impacts of exploration, development, and extraction of natural resources, and consequent remediation; disposal of wastes; and other activities of society on these materials and processes, as appropriate to the program objectives.

2. Faculty

Evidence must be provided that the program's faculty members understand professional engineering practice and maintain currency in their respective professional areas. The program's faculty must have responsibility and authority to define, revise, implement, and achieve program objectives.

PROGRAM CRITERIA FOR
INDUSTRIAL
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: Institute of Industrial Engineers

These program criteria apply to engineering programs using industrial or similar modifiers in their titles.

1. Curriculum

The curriculum must prepare graduates to design, develop, implement, and improve integrated systems that include people, materials, information, equipment and energy. The curriculum must include in-depth instruction to accomplish the integration of systems using appropriate analytical, computational, and experimental practices.

2. Faculty

Evidence must be provided that the program faculty understand professional practice and maintain currency in their respective professional areas. Program faculty must have responsibility and sufficient authority to define, revise, implement, and achieve program objectives.

PROGRAM CRITERIA FOR
MANUFACTURING
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: Society of Manufacturing Engineers

These program criteria apply to engineering programs that include "manufacturing" and similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to have proficiency in (a) materials and manufacturing processes: ability to design manufacturing processes that result in products that meet specific material and other requirements; (b) process, assembly and product engineering: ability to design products and the equipment, tooling, and environment necessary for their manufacture; (c) manufacturing competitiveness: ability to create competitive advantage through manufacturing planning, strategy, quality, and control; (d) manufacturing systems design: ability to analyze, synthesize, and control manufacturing operations using statistical methods; and (e) manufacturing laboratory or facility experience: ability to measure manufacturing process variables and develop technical inferences about the process.

2. Faculty

The program must demonstrate that faculty members maintain currency in manufacturing engineering practice.

PROGRAM CRITERIA FOR
MATERIALS¹, METALLURGICAL²,
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: Minerals, Metals & Materials Society

¹Cooperating Societies for Materials Engineering Programs: American Ceramic Society, American Institute of Chemical Engineers, and American Society of Mechanical Engineers

²Cooperating Society for Metallurgical Engineering Programs: Society for Mining, Metallurgy, and Exploration

These program criteria apply to engineering programs including "materials," "metallurgical," "polymer," and similar modifiers in their titles. All programs in the materials related areas share these criteria, including programs with materials, materials processing, ceramics, glass, polymer, metallurgical, and similar modifiers in their titles.

1. Curriculum

The curriculum must prepare graduates to apply advanced science (such as chemistry and physics) and engineering principles to materials systems implied by the program modifier, e.g., ceramics, metals, polymers, composite materials; to integrate the understanding of the scientific and engineering principles underlying the four major elements of the field: structure, properties, processing, and performance related to material systems appropriate to the field; to apply and integrate knowledge from each of the above four elements of the field to solve materials selection and design problems, and; to utilize experimental, statistical, and computational methods consistent with the program educational objectives.

2. Faculty

The faculty expertise for the professional area must encompass the four major elements of the field.

PROGRAM CRITERIA FOR
MECHANICAL
AND SIMILARLY NAMED ENGINEERING PROGRAMS

Lead Society: American Society of Mechanical Engineers

These program criteria will apply to all engineering programs including "mechanical" or similar modifiers in their titles.

1. Curriculum

The curriculum must require students to apply principles of engineering, basic science, and mathematics (including multivariate calculus and differential equations); to model, analyze, design, and realize physical systems, components or processes; and prepare students to work professionally in both thermal and mechanical systems areas.

2. Faculty

The program must demonstrate that faculty members responsible for the upper-level professional program are maintaining currency in their specialty area.

**PROGRAM CRITERIA FOR
MINING
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: Society for Mining, Metallurgy, and Exploration

These program criteria apply to engineering programs including "mining" and similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to apply mathematics through differential equations, calculus-based physics, general chemistry, and probability and statistics as applied to mining engineering problem applications; to have fundamental knowledge in the geological sciences including characterization of mineral deposits, physical geology, structural or engineering geology, and mineral and rock identification and properties; to be proficient in statics, dynamics, strength of materials, fluid mechanics, thermodynamics, and electrical circuits; to be proficient in engineering topics related to both surface and underground mining, including: mining methods, planning and design, ground control and rock mechanics, health and safety, environmental issues, and ventilation; to be proficient in additional engineering topics such as rock fragmentation, materials handling, mineral or coal processing, mine surveying, and valuation and resource/reserve estimation as appropriate to the program objectives. The laboratory experience must prepare graduates to be proficient in geologic concepts, rock mechanics, mine ventilation, and other topics appropriate to the program objectives.

2. Faculty

Evidence must be provided that the program faculty understand professional engineering practice and maintain currency in their respective professional areas. Program faculty must have responsibility and authority to define, revise, implement, and achieve program objectives.

**PROGRAM CRITERIA FOR
NAVAL ARCHITECTURE, MARINE ENGINEERING,
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: Society of Naval Architects and Marine Engineers

These program criteria apply to engineering programs including "naval architecture" and/or "marine engineering" and with similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to apply probability and statistical methods to naval architecture and marine engineering problems; to have basic knowledge of fluid mechanics, dynamics, structural mechanics, materials properties, hydrostatics, and energy/propulsion systems in the context of marine vehicles and; to have familiarity with instrumentation appropriate to naval architecture and/or marine engineering.

2. Faculty

Program faculty must have sufficient curricular and administrative control to accomplish the program objectives. Program faculty must have responsibility and sufficient authority to define, revise, implement and achieve the program objectives.

**PROGRAM CRITERIA FOR
NUCLEAR, RADIOLOGICAL,
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: American Nuclear Society

These program criteria apply to engineering programs including “nuclear,” “radiological,” or similar modifiers in their titles.

1. Curriculum

The program must prepare the students to apply advanced mathematics, science, and engineering science, including atomic and nuclear physics, and the transport and interaction of radiation with matter, to nuclear and radiological systems and processes; to perform nuclear engineering design; to measure nuclear and radiation processes; to work professionally in one or more of the nuclear or radiological fields of specialization identified by the program.

2. Faculty

The program must demonstrate that faculty members primarily committed to the program have current knowledge of nuclear or radiological engineering by education or experience.

**PROGRAM CRITERIA FOR
OCEAN
AND SIMILARLY NAMED ENGINEERING PROGRAMS**
Lead Society: Society of Naval Architects and Marine Engineers
Cooperating Societies: American Society of Civil Engineers
and Institute of Electrical and Electronics Engineers

These program criteria apply to engineering programs including "ocean" and similar modifiers in their titles.

1. Curriculum

The curriculum must prepare graduates to have the knowledge and the skills to apply the principles of fluid and solid mechanics, dynamics, hydrostatics, probability and applied statistics, oceanography, water waves, and underwater acoustics to engineering problems and to work in groups to perform engineering design at the system level, integrating multiple technical areas and addressing design optimization.

2. Faculty

Program faculty must have responsibility and sufficient authority to define, revise, implement, and achieve the program objectives.

PROGRAM CRITERIA FOR
PETROLEUM
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: Society of Petroleum Engineers

These program criteria apply to engineering programs that include "petroleum," "natural gas," and similar modifiers in their titles.

1. Curriculum

The program must prepare graduates to be proficient in mathematics through differential equations, probability and statistics, fluid mechanics, strength of materials, and thermodynamics; design and analysis of well systems and procedures for drilling and completing wells; characterization and evaluation of subsurface geological formations and their resources using geoscientific and engineering methods; design and analysis of systems for producing, injecting, and handling fluids; application of reservoir engineering principles and practices for optimizing resource development and management; the use of project economics and resource valuation methods for design and decision making under conditions of risk and uncertainty.

PROGRAM CRITERIA FOR
SOFTWARE
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: CSAB
Cooperating Society: Institute of Electrical and Electronics Engineers

These program criteria apply to engineering programs that include "software" or similar modifiers in their titles.

1. Curriculum

The curriculum must provide both breadth and depth across the range of engineering and computer science topics implied by the title and objectives of the program.

The curriculum must prepare graduates to analyze, design, verify, validate, implement, apply, and maintain software systems; to appropriately apply discrete mathematics, probability and statistics, and relevant topics in computer science and supporting disciplines to complex software systems; to work in one or more significant application domains; and to manage the development of software systems.

PROGRAM CRITERIA FOR
SURVEYING
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Society: American Congress on Surveying and Mapping
Cooperating Society: American Society of Civil Engineers

These program criteria apply to engineering programs including "surveying" and similar modifiers in their titles.

1. Curriculum

The curriculum must prepare graduates to work competently in one or more of the following areas: boundary and/or land surveying, geographic and/or land information systems, photogrammetry, mapping, geodesy, remote sensing, and other related areas.

2. Faculty

Programs must demonstrate that faculty members teaching courses that are primarily design in content are qualified to teach the subject matter by virtue of professional licensure or by educational and design experience.

PROGRAM CRITERIA FOR
SYSTEMS
AND SIMILARLY NAMED ENGINEERING PROGRAMS
Lead Societies: American Society of Mechanical Engineers, CSAB,
Institute of Electrical and Electronics Engineers, Institute of Industrial Engineers,
ISA, International Council on Systems Engineering, and
SAE International

These program criteria apply to systems engineering programs without modifiers in their title.

There are no program- specific criteria beyond the General Criteria.

PROPOSED CHANGES TO THE CRITERIA

There are no proposed changes to the EAC Criteria for the 2012-2013 accreditation review cycle.

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**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Charles Kopplin Chair		2) Date When Request Submitted: 10/28/11 Items will be considered late if submitted after 4:30 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others 	
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: 2/2/2012	5) Attachments: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6) How should the item be titled on the agenda page? Practice Question: Whether the development of engineering software constitutes the practice of professional engineering	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input type="checkbox"/> No	9) Name of Case Advisor(s), if required:	
10) Describe the issue and action that should be addressed: Review, discuss and take any action deemed appropriate.			
11) Authorization			
Signature of person making this request		Date	
Supervisor (if required)		Date	
Denise Aviles		10/25/11	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date	
Directions for including supporting documents: 1. This form should be attached to any documents submitted to the agenda. 2. Post Agenda Deadline items must be authorized by a Supervisor and the Board Services Bureau Director. 3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.			

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**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Yolanda McGowan, Legal Counsel Denise Aviles, Executive Director		2) Date When Request Submitted: 1/17/2012 Items will be considered late if submitted after 4:30 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others 	
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: Feb. 2, 2012	5) Attachments: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6) How should the item be titled on the agenda page? Legislation/Administrative Rule Matters: Update related to A-E 2.02: Registration Seals (Electronic Seals and Stamps)	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input checked="" type="checkbox"/> No	9) Name of Case Advisor(s), if required: n/a	
10) Describe the issue and action that should be addressed: This is the scope statement that was published, and it's provided for informational purposes to refresh our recollection.			
11) Authorization			
Denise Aviles		1/17/11	
Signature of person making this request		Date	
Supervisor (if required)		Date	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date	
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State of Wisconsin
DEPARTMENT OF REGULATION AND LICENSING
Scope Statement - Examining Board of
Architects, Landscape Architects, Professional
Engineers, Designers and Land Surveyors

December, 2006

***Examining Board of Architects, Landscape Architects, Professional Engineers,
Designers and Land Surveyors.***

Subject.

Creating rule changes to s. A-E 2.02 relating to registration seals for architects, landscape architects, professional engineers, designers and land surveyors. Section A-E 2.02 specifies the requirements for registration seals and signatures. Registration seals and signatures must be utilized in the production of plans, drawings, documents, specifications and reports within these professions. This rule change would allow for credential holders' documents to be signed, sealed, or stamped by electronic means.

POLICY ISSUES.

Objective of the Rule.

To update the rules to reflect new technology that permits documents to be signed, sealed, or stamped by electronic means.

Existing Policies Relevant to the Rule, New Policies Proposed and Analysis of Policy Alternatives.

Existing rules relating to registration seals for architects, landscape architects, professional engineers, designers and land surveyors can be found in s. A-E 2.02. Section A-E 2.02 requires plans, drawings, documents, specifications, and reports to be signed and sealed by the registrant. These registration seals and stamps must meet specific requirements that are specified in s. A-E 2.02.

Summary of and Preliminary Comparison with any Existing or Proposed Federal Regulation intended to address activities regulated by the proposed Rule.

This is not an area which is regulated by federal law or is subject to any proposed federal legislation. The standards for state licensure are regulated by each state.

Statutory authority.

Sections 15.08 (5) (b) and 227.11 (2), Stats.

Entities affected by the rule.

Architects, landscape architects, professional engineers, designers and land surveyor licensees.

Estimate the amount of state employee time and any other resources will be necessary to develop the rule.

30 hours.

A-E 2.02 (Registration seals) Scope Statement 12-11-06

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**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Yolanda McGowan, Legal Counsel Denise Aviles, Executive Director		2) Date When Request Submitted: 1/17/2012 Items will be considered late if submitted after 4:30 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others 	
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: Feb. 2, 2012	5) Attachments: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6) How should the item be titled on the agenda page? Legislation/Administrative Rule Matters: Update on rule related to Act 350: Registration Requirements	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input checked="" type="checkbox"/> No	9) Name of Case Advisor(s), if required: n/a	
10) Describe the issue and action that should be addressed: This is the scope statement that was published, and it's provided for informational purposes to refresh our recollection.			
11) Authorization			
Denise Aviles		1/17/11	
Signature of person making this request		Date	
Supervisor (if required)		Date	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date	
Directions for including supporting documents: 1. This form should be attached to any documents submitted to the agenda. 2. Post Agenda Deadline items must be authorized by a Supervisor and the Board Services Bureau Director. 3. If necessary, Provide original documents needing Board Chairperson signature to the Bureau Assistant prior to the start of a meeting.			

State of Wisconsin
DEPARTMENT OF REGULATION AND LICENSING
(Examining Board of Architects, Landscape Architects,
Professional Engineers, Designers and Land Surveyors-
Professional Engineers Section) Scope Statement

November, 2010

Subject

This scope statement creates the promulgation of administrative rules by the Professional Engineers Section pursuant to 2009 Wisconsin Act 350 and implemented under chapter 443 of the Wisconsin Statutes.

POLICY ISSUES.

Objective of the Rule.

2009 Wisconsin Act 350 has amended and created new education and work experience requirements for registration as a professional engineer and examinations for professional engineering standards. The promulgation of administrative rules pursuant to the changes that have been established in 2009 Wisconsin Act 350 will be necessary to implement standards for applications for registration as a professional engineer, engineering experience, education as an experience equivalent for registration, examinations and any additional provisions authorized under chapter 443 of the Wisconsin Statutes deemed necessary by the Professional Engineers Section.

Existing Policies Relevant to the Rules, New Policies Proposed and Analysis of Policy Alternatives.

None

Statutory authority.

Wis. Stats. §§ 443.04, 443.09

Existing or Proposed Federal Legislation.

There is no existing or proposed federal regulation that is intended to address the activities to be regulated by this rule.

Entities affected by the rule.

Professional Engineer applicants that apply for a professional engineering credential after May 27, 2010 (the effective date of the new law).

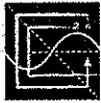
Estimate the amount of state employee time and any other resources that will be necessary to develop the rule.

Total hours: 120. This estimate is based on the time spent by staff and possibly an advisory committee to prepare documents, coordinate public hearings, prepare fiscal estimates and conduct other work related to the promulgation of the administrative rules for this profession.

**State of Wisconsin
Department of Safety & Professional Services**

AGENDA REQUEST FORM

1) Name and Title of Person Submitting the Request: Denise Aviles, Executive Director		2) Date When Request Submitted: 1/17/2012 Items will be considered late if submitted after 4:30 p.m. and less than: <ul style="list-style-type: none"> ▪ 10 work days before the meeting for Medical Board ▪ 14 work days before the meeting for all others 	
3) Name of Board, Committee, Council, Sections: Engineers Section			
4) Meeting Date: Feb. 2, 2012	5) Attachments: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6) How should the item be titled on the agenda page? Informational Items: Update on the Transition of the NCEES Fundamentals of Engineering (FE) and Fundamentals of Surveying (FS) Exams to Computer-Based Testing (CBT)	
7) Place Item in: <input checked="" type="checkbox"/> Open Session <input type="checkbox"/> Closed Session <input type="checkbox"/> Both	8) Is an appearance before the Board being scheduled? If yes, who is appearing? <input type="checkbox"/> Yes by _____ (name) <input checked="" type="checkbox"/> No	9) Name of Case Advisor(s), if required: n/a	
10) Describe the issue and action that should be addressed: For your information only.			
11) Authorization			
Denise Aviles		1/17/11	
Signature of person making this request		Date	
Supervisor (if required)		Date	
Bureau Director signature (indicates approval to add post agenda deadline item to agenda)		Date	
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To: NCEES Members and Associate Members
From: Jerry Carter, Executive Director *Jerry T. Carter*
Re: Computer-Based Testing Update
Date: December 22, 2011

As we wind down the year, I thought it appropriate to provide you with an update on the transition of the NCEES Fundamentals of Engineering (FE) and Fundamentals of Surveying (FS) exams to computer-based testing (CBT). The goal is to launch the new format in January 2014.

Both the Committee on Examinations for Professional Engineers (EPE) and the Committee on Examinations for Professional Surveyors (EPS) have been hard at work developing and issuing surveys for content reviews for the FE and FS exams. Thousands of licensed practitioners and educators have participated in surveys that will help determine the future form and structure of these exams. The results from the surveys and recommendations for the new specifications will be submitted to the exam development committees for adoption in early 2012. Once the new exam specifications have been approved, we will conduct standard-setting studies that will help determine the appropriate length for each examination. The plan is to complete this process by early fall 2012.

The Committee on Examination Policy and Procedures (EPP) has been reviewing existing NCEES exam-related policies and will propose any needed policy changes to govern the administration of NCEES exams via CBT. Revisions to exam policies will require action by the full Council, and we anticipate the EPP Committee offering a number of related motions during the 2012 NCEES annual meeting.

The CBT Implementation Task Force met in early November and will meet again in March 2012. The task force has been charged with reviewing activities of NCEES committees, staff, and the NCEES test vendor (Pearson VUE) related to CBT implementation and with providing recommendations for any additional actions required to begin the administration of the FE and FS exams via computer within the proposed timeline. The task force was also charged to consider the potential transition of the Principles and Practice of Engineering (PE) and Principles and Practice of Surveying (PS) exams to CBT, to evaluate and recommend which PE exams could be transitioned to CBT, and to recommend the proposed frequency for offering each exam.

The first meeting of the CBT Implementation Task Force resulted in the following actions and recommendations:

- The task force will propose a 2012 annual meeting motion to transition the PS exam to CBT as soon as feasible. This motion will be contingent upon the endorsement of the EPS Committee, with the possibility of it being a joint motion. Still to be determined is whether state-specific surveying exams will be included in the motion.
- The task force discussed PE references at length. It has requested additional information from Pearson VUE and exam development committees regarding a potential list of required reference books, the availability of electronic versions of texts, and the different embedding and display methods available for reference materials using CBT.

- The task force developed criteria to aid in the selection of the 20 additional examination sites Pearson VUE has contractually agreed to provide in the transition of the FE and FS to CBT. These sites will be in addition to the 275+ sites that Pearson VUE already has throughout the country. NCEES staff will provide further evaluation and feedback.
- The task force discussed at length how to protect exam items when candidates are allowed to take breaks. It discussed several options, including one in which exam sections would be grouped in relation to breaks. This would prevent a candidate from reviewing already completed sections of an exam after taking a break. The task force has requested additional information from Pearson VUE on methodology used for similar examinations. It acknowledged that the number and length of breaks will depend on the actual length of the exams, which will be determined through the standard-setting studies.
- The task force requested NCEES staff to provide it with an overall plan and timeline for major items and dependencies, as well as a plan for coordinating committee/task force involvement.
- The task force agreed that all exam candidates will be required to pay NCEES directly for all exam-related fees at the time of registration. It noted that with the nearly continuous offering of the FE and FS exams as of 2014, it will be impossible for NCEES to accurately invoice member boards after a candidate takes an exam.

The last point noted by the task force concerning payment of exam fees is one that the NCEES management team has reviewed and discussed at length. Although the vast majority of NCEES member boards currently require candidates to pay NCEES directly for the exams and exam administration, several member boards still collect all exam-related fees. NCEES then invoices them after each exam administration. Moving the exams to CBT will allow candidates to select a time and location to take the NCEES exams. This means there will be additional complications for the accounting of exam-related fees. Pearson VUE will bill NCEES monthly for candidates who have taken the FE or FS exam. NCEES will also work directly with Pearson VUE concerning fees associated with a candidate canceling or rescheduling an exam.

For these reasons, the NCEES Board of Directors has approved an action by the CBT Implementation Task Force to require all candidates to pay NCEES directly for all exam-related fees effective with the transition to CBT. Member boards will continue to collect application fees required for their respective jurisdiction. However, once approved to take the FE or FS exams, candidates will be required to pay the \$250 exam fee directly to NCEES as a part of the online exam registration process. Member boards that currently collect exam fees from candidates or have exam fees collected by a third-party vendor should institute necessary actions to modify statutes, administrative regulations, processes, or contracts to account for this future change.

We are also aware that several member boards subsidize the cost of the FE exam through various methods. Based on the future change of having candidates pay NCEES directly for all exam-related fees, NCEES will no longer be able to account for these subsidies through special invoicing provisions. We encourage member boards to continue to subsidize the costs of the FE for their candidates when possible. To that end,

we are evaluating potential options that NCEES can offer to promote this effort. One possibility is to provide member boards with the ability to purchase vouchers that can be distributed to FE candidates per criteria established by the board. We will continue to evaluate this and other opportunities as potential options to be incorporated into the process.

As you can tell, NCEES committees, task forces, and staff are devoting a great deal of attention to CBT and are working hard to make the transition a success. We will also be increasing the level of communication to keep everyone abreast of the CBT effort and actions as they are taken. We are scheduling a CBT workshop during the 2012 NCEES annual meeting to provide an opportunity to discuss CBT-related motions that will be offered for action by the Council. We look forward to the challenge and the opportunity to provide enhancements to the exam process.

From the NCEES leadership and staff, we wish each of you a happy and safe holiday season.