

**AC 2010-548: STRENGTHENING THE BODY OF KNOWLEDGE – HOW
INTEGRATION OF PRACTICING ENGINEERS AS ADJUNCT FACULTY CAN
ENHANCE EDUCATIONAL OUTCOMES**

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Strengthening the Body of Knowledge – How Integration of Practicing Engineers as Adjunct Faculty Can Enhance Educational Outcomes

Abstract

Reformation of engineering education has been discussed for many decades in the United States. Noteworthy are the periodic reports, beginning with the Mann Report of 1918, that have emphasized the need for engineering education reform. Since Mann's report there have been many other significant reports published from 1930 to present that stress this need. Two such studies were those completed in recent years by the American Society of Civil Engineers (ASCE)¹ and the U.S. National Academy of Engineering (NAE)². The impetus for both was a realization that major changes in engineering education were needed to meet 21st century challenges. Important conclusions from these studies are that civil engineering education must foster more interdisciplinary collaboration, include more team-based learning, and provide more learning experiences that feature problem solving involving socio-economic challenges as well as the application of engineering skill. Such collaboration, knowledge, experience, and engineering skill are required of effective practitioners.

The purpose of this paper is to describe why the University of Wisconsin-Madison Department of Civil & Environmental Engineering (CEE) has worked to integrate practitioners from multiple disciplines who possess extensive professional practice experience within the faculty team as Adjunct Faculty, how we are doing this, and the unique aspects the Adjunct Faculty are contributing to the educational process. The paper will specifically address how this engagement of Adjunct Professors as collaborative members of the team help the department to achieve the four characteristics of a model faculty described by the ASCE publication, *Body of Knowledge for the 21st Century* (BOK2) Committee³ as: 1) Scholars, 2) Effective Teachers, 3) Having Relevant Practical Experience, and, 4) Providing Positive Role Models. The paper will also describe the deliberative process we have used to develop a formal charter to guide and describe this effort, and the care taken in Adjunct Faculty appointments to adhere to the recommendation of the BOK2 Committee⁴ that "...practitioner participants should meet the same criteria as the full-time faculty as described in this section – namely, scholarship, teaching effectiveness, and positive role modeling."

Adjunct Faculty – Variable Definitions in Practice

The adjective "adjunct" has been defined in various ways, including: "a subordinate or incidental thing⁵," "added or joined as an accompanying object or circumstance⁶," "attached in a subordinate or temporary capacity to a staff⁷," "something added or extra but subordinate⁸," and "attached or belonging without full or permanent status: an adjunct surgeon on the hospital staff⁹." The noun "professor" has also been defined in various ways, including: "a university teacher of the highest rank in a faculty¹⁰," "(loosely) any college or university teacher¹¹," and "one that teaches or professes special knowledge of an art, sport or occupation requiring skill¹²."

With variable usage of the adjective “adjunct” and the noun “professor” it is not surprising that the title Adjunct Professor has variations in meaning and uses at our colleges and universities. Several examples abstracted from policies issued by educational institutions can be found in Appendix A.

It is evident that policies developed for adjunct faculty within various institutions vary considerably concerning defined roles and responsibilities, credential requirements for appointment, compensation, length of appointment, involvement in department policy and curricula planning, etc. Understandably, these variations as well as vagaries in definition, as outlined above, cause considerable confusion and uncertainty in the engineering educator community regarding the general role of adjunct faculty within college and university departments, and their potential contribution to broaden and deepen the knowledge of the collective faculty and to improve the achievement of educational outcomes.

ABET EAC Requirements for Faculty Teaching Design Courses

For Civil Engineering programs, the Engineering Accreditation Commission (EAC) of ABET, Inc. includes specific requirements¹³ for faculty teaching design courses: “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.” Similar criteria¹⁴ are given by the ABET EAC for Environmental Engineering Programs.

An adequate number of licensed engineers having practice experience may be difficult to come by at many engineering colleges. Barry et al¹⁵ researched the value placed on licensure and professional experience on faculties at three Civil Engineering departments and found a trend for less value being placed on these attributes at universities with a relatively high number of doctoral students and extensive research programs. At many research universities today, tenure-track faculty appear to have an increasing research and science focus, and often may not have pursued licensure and lack professional practice experience. Accordingly, augmenting the ranks of the faculty with licensed practitioners having extensive design experience not only can benefit the program by increasing the breadth and depth of expertise in design areas as well as professional practice skills such as communications, teamwork, etc., but can help in meeting specific requirements for accreditation.

ASCE Body of Knowledge Recommendations

The ASCE publication, BOK2, presents a vision for future engineering education containing twenty-four outcomes arranged into three general categories (*foundational, technical, and professional*) with six identified levels of achievement (*knowledge, comprehension, application, analysis, synthesis, and evaluation*). The recommendations presented are that entry into the professional practice of Civil Engineering requires knowledge at the achievement levels prescribed for each of the twenty-four listed outcomes by a combination of education at the bachelor’s level, specialty education at the master’s or equivalent level, and pre-licensure experience¹⁶. Recognizing that engineering is a profession of practice, guidance for faculty include the recommended model faculty possess relevant practical experience in the subject

matter taught so as to provide relevance, knowledge, understanding, and passion for the subject matter¹⁷. One approach (and likely difficult to implement) to satisfying this recommendation would be to institute a program requiring all faculty teaching design courses to be professionally licensed, possess extensive professional experience in the fields being taught, and to maintain contemporary knowledge by ongoing professional practice. Another means of achieving this goal is by effectively integrating practitioners into the faculty and curriculum to provide the necessary practical experience.

Desired Program Outcomes and the Need for Faculty with Professional Practice Expertise

The ABET, Inc. General Criteria for Baccalaureate Level Programs¹⁸ contain eleven (a through k) specific stated program outcomes. Although all apply to professional practice to a degree, several have a clear and direct connection:

- (c) An ability to design...within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- (d) An ability to function on multidisciplinary teams
- (f) An understanding of professional and ethical responsibility
- (g) An ability to communicate effectively
- (k) An ability to use...engineering tools necessary for engineering practice

For undergraduate degrees, the Program Educational Objectives of the University of Wisconsin-Madison Department of Civil and Environmental Engineering¹⁹ include providing students with:

1. The knowledge, tools and understanding of analysis, measurement, and design processes;
2. The ability to work and communicate effectively and efficiently individually and collaboratively; and,
3. An ability to recognize and respond in an appropriate manner to ethical, environmental, economic, legal, political, and social issues.

These departmental Educational Objectives further state that Bachelor of Science in Civil Engineering (BSCE) graduates are to be prepared to contribute to their communities through the following career and professional accomplishments and abilities:

1. To plan, design, construct, and manage both natural and built processes and systems to meet determined needs using technical knowledge, computer skills, and design principles with communication, leadership, and team skills;
2. To utilize measurement and analysis tools along with experimental data in investigating natural and built systems;
3. To understand and incorporate economic, environmental, political, social, safety, and global considerations in design, investigation, and construction of natural and built systems;
4. To enhance analysis and design tools and experience through life long learning; and
5. To serve others through professional responsibility, leadership, and participation in professional and public activities, and good citizenship.

More general goals of the department and college include:

1. Providing a challenging and stimulating academic environment in which creative talents flourish.
2. Making research and instruction relevant to contemporary problems.
3. Offering quality degree programs at the baccalaureate, masters and doctorate level, with excellent grounding in basic sciences and encompassing all major sub-disciplines of practice.
4. Maintaining a leadership position in research and development of knowledge and sustainable technologies to successfully address future societal challenges.
5. Providing effective programs to aid students in their transition to professional practice upon graduation.

As with many institutions having a significant research component to their mission, many of our department's full-time, tenure-track faculty members have, over time, become increasingly focused on the basic research and theoretical aspects of the above objectives and goals.

Recognizing that faculty resources contain the broadest and deepest base of knowledge if they contain well developed expertise in both theoretical and practice areas, the need for faculty with extensive professional practice expertise has become increasingly apparent. Most students, upon graduation, will pursue careers in professional practice. For design and other courses that are primarily intended to impart knowledge in the application of engineering, a faculty with professional practice expertise is essential. Such courses are most relevant to contemporary problems and solutions if taught by faculty possessing innate knowledge gained from actual practice. Instructors possessing such experience are capable of focusing their instruction with examples and emphasis drawn from the real world practice of engineering. In addition, individual faculty members having extensive professional practice experience can broaden the knowledge base of the entire faculty for the better advancement of the above goals in a number of ways, including:

1. Stimulating students by increasing identification with and relevance to professional practice in learning areas.
2. Help students learn how to identify and understand challenges and how to conceive, evaluate and design appropriate engineering solution.
3. Help students learn how to prepare effective plans, specifications and construction contract documents for design projects.
4. Contributing to research by increasing the understanding of future societal challenges and implementation factors for potential solutions.
5. Contributing to curricula and course content by emphasizing challenges and engineering tools from contemporary practice.
6. Providing enhanced connections to the professional practice community to improve student opportunities to gain experience from internships and summer and part-time work.
7. Improving knowledge imparted to students regarding the role of the practicing engineer in society and the skills required by the successful practicing engineer.

It is evident from the above objectives and goals that, for maximization of desired outcomes, an ideal instructional environment is one that includes well developed theoretical and practice aspects. The overall approach taken by our department, therefore, is to enhance the breadth and

depth of knowledge within the collective faculty in both theoretical and practice areas by incorporating adjunct faculty having extensive knowledge and experience in contemporary professional practice including project selection, design, construction, and commissioning, as well as in related areas of teaming and communications.

Adjunct Faculty Charter

With the above goals and benefits in mind, The University of Wisconsin-Madison Department of Civil and Environmental Engineering has developed a charter to help define the purpose of adjunct faculty and their integration to department functions. A copy of the charter is outlined in Appendix B. The charter was formally adopted by the department in the spring of 2009.

As indicated, the focus of the charter is to “broaden the body of knowledge” by promoting an effective partnership between full-time and adjunct faculty consistent with new models for engineering education. Contributions of adjunct faculty are defined in the charter, ranging from mentoring and advising, to guest lecturing, to course evaluation and course teaching, to conducting or student advising in research, and performing outreach activities and making connections with the professional practice community and industry. The expected contribution goes well beyond teaching a class for a faculty member who might have an unavoidable commitment.

The charter also provides for university support to the department’s adjunct faculty including identification, access to information technology systems, building access and office space, parking privileges, and educational opportunities directed at improving teaching skills. This support is vital to enabling the adjunct faculty to efficiently carry out their role.

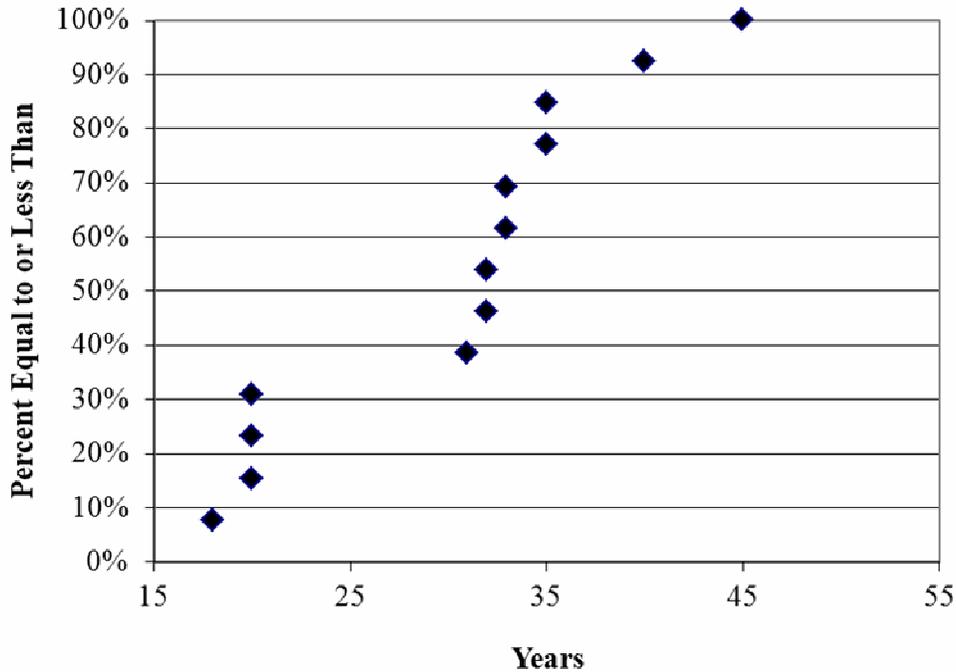
Notably, the charter calls for a high level of commitment, performance, professional responsibility, and scholarship on the part of adjunct faculty of the department. This is in keeping with the recommendations of BOK2²⁰ that “...practitioner participants should meet the same criteria as the full-time faculty as described in this section – namely, scholarship, teaching effectiveness, and positive role modeling.” The adjunct title is therefore not one of courtesy or prestige given to donors to the department or only having a peripheral involvement in department programs, but to an individual having a strong desire and the capability to meet the intent of the charter and the requirements of scholarship, teaching effectiveness, and positive role modeling.

Appointment to the adjunct faculty of the college is a non-salaried honorary appointment. The appointment is for three years and is renewable. Adjunct faculty carrying a substantial instructional course load or involved in other department functions, where monetary compensation is appropriate, receive compensation through another appointment (lecturer, researcher, etc.). The department adjunct faculty is a unique group of individuals that have sufficient time in their professional schedules, are semi-retired, or are retired from business practice yet remain active in the profession. They have a strong desire to remain active and to contribute to the education of the next generation of engineers. Many are graduates of or otherwise have a past affiliation with the university and have a strong desire to assist with maintaining and growing the strength of the CEE department.

Makeup of Current Adjunct Faculty

The current twelve adjunct faculty members possess a wealth of professional experience and practice knowledge. Figure 1 shows the distribution of years of professional practice experience for the adjunct faculty. The median is 32 years, with a range of 18 to 45 years of professional

**Figure 1 - Professional Practice Experience
CEE Department Adjunct Faculty**



practice experience. The individual experience profiles of the adjunct faculty demonstrate success in professional practice as evidenced by members serving as owners, officers, division managers, etc. in their professional practice organizations.

Although the department is continuing to add adjunct faculty to increase the breadth and depth of professional practice experience in the various discipline areas where curricula emphasis is provided, all but one of the disciplines in the CEE core curriculum are covered at the present time with current adjunct faculty. Table 1 shows the number of adjuncts having their main academic training and professional practice experience in each of the listed disciplines. For the adjunct faculty, just as is the case for tenure-track faculty, it is important to recognize that faculty members possess expertise in

<u>Principal Discipline</u>	<u>Number</u>
General Civil	1
Construction Management	1
Building Design-Architectural	3
Transportation	2
Environmental	3
Structural	2
Geotechnical	0
Hydraulics-Water Res	1

areas beyond their core discipline background. Also, many skills span disciplines. For example, several of the adjunct faculty members possess exceptional skills in the area of developing and making public presentations on technical topics, knowledge that can be shared across disciplines. Knowledge of the keys to success in the professional practice arena would be another example. The department’s adjunct faculty are therefore well capable of providing valuable instruction and interaction with students outside of their core discipline and also collectively are connected with an extensive network of practitioners in many areas of the practice that are available to lend instructional assistance to the program. All members of the adjunct faculty hold a professional license (engineering, hydrology, or architecture), and the majority hold secondary certifications for practice in specialty areas.

As indicated in Table 2, most members of the department’s adjunct faculty have earned an advanced degree, and all have received formal training beyond the baccalaureate degree either at the university level or as part of professional development programs.

<u>Degree</u>	<u>Number</u>
Baccalaureate	4
Masters	7
Doctorate	2

Lifelong learning and scholarship are key attributes for a successful professional practice career, and this is exemplified by the makeup of the adjunct faculty. Most adjuncts in the department are active in at least two professional societies and the majority have published a peer-reviewed technical paper in the field. In addition, all of the adjunct faculty members have teaching experience, with the average being nine years.

Table 3 provides a range of teaching and mentoring functions being provided by the adjunct faculty members. Although the implementation of the adjunct faculty initiative is relatively recent, the adjuncts have already engaged in a wide range of teaching and mentoring roles.

Table 3 – Roles and Contributions of the Adjunct Faculty Members

- Guest lecturing in undergraduate and/or graduate classes
- Serving as a judge for a student project presentation
- Serving as a mentor for a senior-level design team
- Leading or co-leading an existing class
- Creating a new class
- Serving on Master’s committees
- Mentoring undergraduate and/or graduate students
- Facilitating the creation of student design projects
- Assisting students in networking for part-time, intern, and full-time employment

Credential Requirements for Adjunct Faculty

The following minimum credential guidelines have been adopted by the department’s Adjunct Faculty Committee.

- Minimum of Bachelor’s degree in Engineering, Architecture, or appropriate related field.

- Minimum 15 years of relevant contemporary professional practice experience. Résumé shows relative strength in engineering practice and application of principles, success in leadership, and evidence of involvement in the educational process.
- Community service experience is desirable.
- History of refreshing professional skills and a willingness to address emerging trends.
- Ability to coach and mentor, and possess a structured instructional experience.
- Possess a broader perspective than just being a guest lecturer, though lecturing may be a core element of the appointment. The principal focus is on professional practice experience and application, coupled with minimum educational credentials, instructional qualifications and commitment.
- Professional Licensure is strongly desired.
- The candidate must have reasonable time available, and be in primary control of their schedule, especially during normal business hours.
- Possess an energy and passion for working with our aspiring professionals, i.e., our students.

As indicated, a terminal degree is not considered a requirement. The focus is on the professional practice expertise of the prospective appointee and the currency of that experience, their ability to add to the breadth and depth of knowledge within the department faculty as a whole, their commitment to the goals of the program and the program charter, their ability to mentor and instruct students and serve as positive role models, and their ability to actively participate.

Adjunct Faculty Committee Operations

To aid in maximizing the benefits provided by the expertise and skills of the adjunct faculty, and their integration within departmental programs, an Adjunct Faculty Committee has been formed. The membership of the committee consists of all adjunct faculty, and the tenure-track faculty member responsible for the undergraduate curriculum. The department chair and other members of the tenure-track faculty are invited to join these meetings when an item of interest to them is discussed. The committee has an elected chair and vice-chair, and meets monthly at a regularly scheduled time following a prepared agenda. Notes are kept of meetings and distributed via email to committee members and others in attendance. The primary focus of the committee is maximizing the input and contribution of the adjunct faculty under the charter including evaluation and making recommendations on department course offerings, encouraging increased integration and coordination of adjunct faculty with department operations and programs, and responding to identified needs for new adjunct faculty appointments. Formal operations of the committee in this manner have been in place since the fall of 2008.

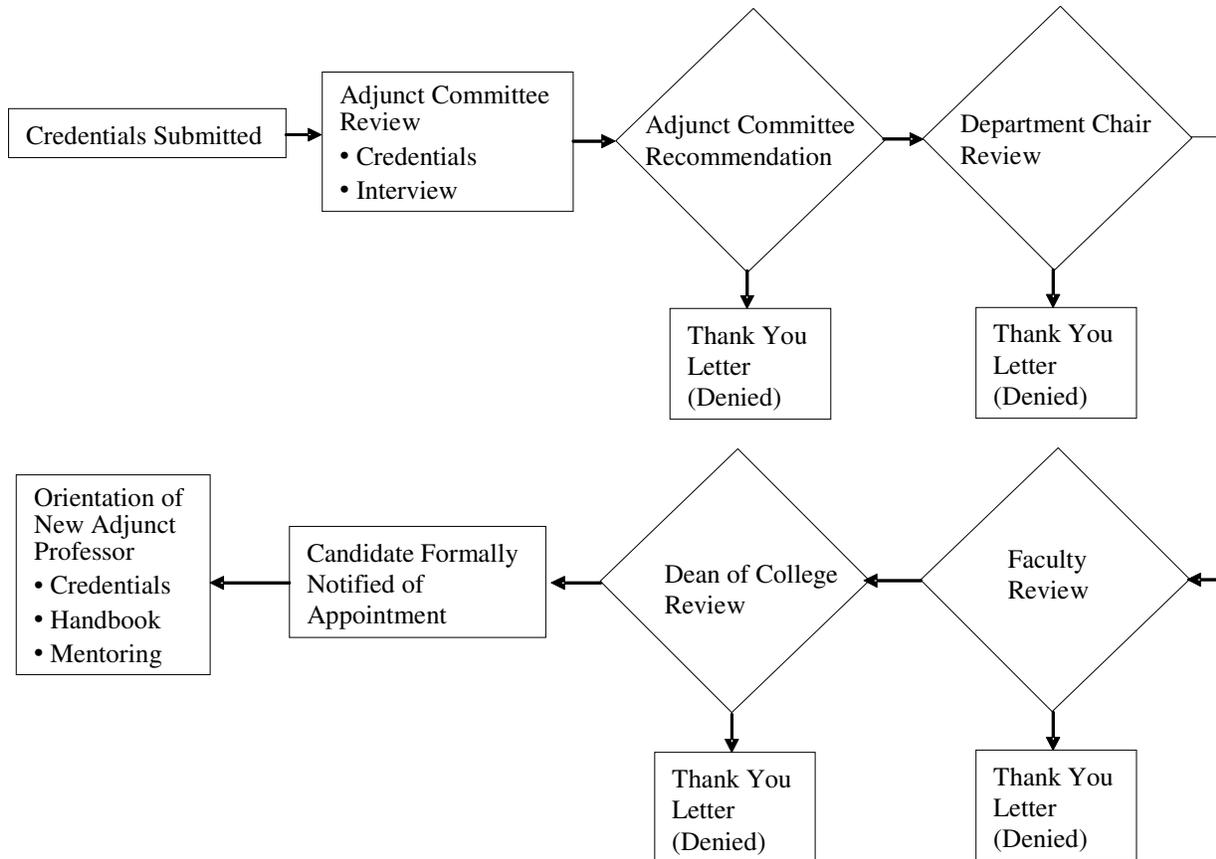
Adjunct Faculty Appointments

A procedure has been formalized for appointment of adjunct faculty within the department. Figure 2 shows a flowchart for this process. The need for a new adjunct faculty appointment must first be recognized. This may come from one or more members of the tenure-track faculty or from the Adjunct Committee. The need for a new adjunct faculty appointment will primarily be identified due to a design area within one of the disciplines seen as benefitting by additional professional practice expertise. Once this need is identified, a candidate is brought forward,

generally by a member of the tenure-track faculty serving as champion for the adjunct professor candidate.

As a first step in the appointment process, the candidate will submit credentials and will be interviewed by a sub-committee of the Adjunct Faculty Committee. The purpose of this process is to ensure that the candidate has the credentials and expertise to enhance the faculty in the

**Figure 2 – Appointment Flowchart
CEE Department Adjunct Faculty**



desired area, and has the desire and capability to meet the intent of the charter, and assist the department in advancing its goals. If the candidate is approved by the Adjunct Faculty Committee, the candidate is recommended to the CEE department faculty executive committee for action on the appointment. Following executive committee approval, a recommendation for appointment is made to the dean of the College of Engineering. Approval by the dean constitutes the formal appointment of the candidate as Adjunct Professor, and initiates the process of credentialing the new adjunct faculty member, providing the member with a handbook of useful information concerning the appointment, and mentoring the new appointee into the department and the Adjunct Faculty Committee, with mentoring provided by both the tenure-track champion, or other tenure-track professor, and an appropriate member of the adjunct faculty.

Integration of Adjunct Faculty

The appointment of adjunct faculty having professional practice expertise in various disciplines and other areas of practice does not assure their effective utilization and integration within the department. Although we have been making great progress at this, we have much further to go. Some potential obstacles have been identified, including:

1. A lack of personal relationships between adjunct and tenure-track faculty members.
2. For a particular course or program, a lack of understanding of how best to start the process.
3. A lack of an adequate understanding of department programs and policies.
4. A reluctance to introduce a new approach.
5. Everyone is very busy; starting something new can take a major effort.
6. A lack of a total understanding of the motivation and goals of those involved; trust, respect and confidence may take time to build.

We believe all of these challenges can be successfully overcome. Furthermore, we believe that the benefits of improving the contributions of the adjunct faculty will be a significant help to the department in achieving its goals and will also better prepare our graduates for professional practice. We are in the process of defining areas to target for improvement and methods to provide improvement on an ongoing basis. Some initial concepts include:

- Adjunct faculty should form strong personal relationships with tenure-track faculty in their areas of interest and expertise.
- Department faculty should hold regular division and department meetings. Adjunct faculty should attend these meetings regularly or from time to time to build recognition, relationships, and trust, and to provide improved communication concerning needs and collaboration to meet goals.
- For courses of a design or professional practice nature, tenure-track faculty should be encouraged to obtain input from the adjunct faculty on the relevance of the subject matter to contemporary and future problems, and the relevancy of technical tools and techniques being taught to contemporary practice.

This is a continuous process going forward, with the goal, over time, to create strong bonds of trust, contribution, and collaboration so that individual faculty, the entire department, and the students will see increasing benefits.

Evaluation and Evolution

Although the program described herein has only formally been in place for less than two years, adjunct faculty and other professional practitioner volunteers have been part of the department's program for many years, and have improved the program by providing student mentoring and guest lectures in numerous professional practice areas. Engineering is the application of principles of basic science using modern tools in an adaptive and evolving context. Of necessity, programs of engineering education must adapt and evolve. Metrics are essential. We cannot tell if we are improving unless we know how we are doing now and can compare that with past

measurements. Our plan for continuous improvement includes individual evaluation, course evaluation, and program and department evaluation.

Individual Evaluation – The integration and participation of adjunct faculty has been documented, beginning 2009, by completion and filing of a standard form documenting annual activity in such areas as student advising and mentoring, lectures presented, courses taught, participation in research at the university or elsewhere, professional practice experience, and training completed. This information, together with input provided by students and other faculty concerning individual performance, will be used as part of an ongoing adjunct faculty mentoring, growth, and improvement process.

Course Evaluation– Over time, and on a regular basis, it is intended that courses having a design or professional practice component be reviewed by members of the Adjunct Faculty Committee for relevancy to contemporary issues and for tools and techniques being taught being consistent with current practice. In addition, end of semester course evaluations completed by students will be reviewed for useful information concerning the relationship of the course to contemporary issues and norms of practice. Where appropriate, written recommendations will be made for areas where change or improvement is warranted.

Program and Department Evaluation – To augment the efforts of the Visiting Committee and periodic ABET visits, the Adjunct Faculty Committee, from time to time, plans to assist in evaluating data related to program effectiveness and making recommendations for program improvement.

Summary

There is recognition nationally that change is needed in the way engineers are educated. Part of the identified necessary change is an increase in the relevance of instruction to contemporary societal concerns and needs as well as aspects of professional practice. The Department of Civil and Environmental Engineering at the University of Wisconsin-Madison is endeavoring to meet this need by integrating selected individuals, possessing extensive professional practice experience, into the department faculty. Their appointment as adjunct faculty is viewed as adding breadth and depth to the collective faculty, enhancing our overall body of knowledge in theoretical and practice areas. The role and responsibility of the adjunct faculty has been identified by a published charter. In our department, policies surrounding adjunct faculty have followed the model of non-tenure track faculty, uncompensated in their role as adjunct faculty, focusing primarily on design and professional practice areas, with the adjunct faculty comprised of dedicated individuals capable of enhancing the attributes of the overall faculty for scholarship, teaching effectiveness, and positive role modeling. Where this program will ultimately lead, and what form it may ultimately take, cannot be known at this time. The size, focus, duties and integration with other department functions will all adapt and evolve. So far we can clearly state that increasing the involvement of adjunct faculty in the programs of the department has been a very positive step. Course offerings have benefited from more consistently explored contemporary issues and techniques taught in design courses have been increasingly modeled on professional practices. Our graduating seniors have gained greater experience in presenting and preparing technical information and documents. The objective is continuous improvement of

goal achievement. In adapting and evolving our program of integrating practicing engineers as adjunct faculty, we will seek continuous improvement, being mindful of the overriding goal of our department and college –being a world leader in engineering education for the 21st century and beyond.

Acknowledgements

The authors would like to thank the CEE faculty and College of Engineering administration for their help and support with this new initiative.

Appendix A: Abstracted Policies Related to Adjunct Faculty

- “Appointments to the rank of "Adjunct Professor of _____" and "Professor of the Practice of _____" are equivalent and made only to practitioners who have developed a high level of expertise in fields of particular importance to the MIT (Massachusetts Institute of Technology) academic program and who also demonstrate a deep commitment to teaching and research. Responsibilities include, but are not limited to, teaching and conducting and supervising research. Each appointee should teach at least the major part of one subject per academic year, may be the instructor in charge of subjects of instruction, may supervise theses with departmental permission, and may be principal investigator on research projects. Adjunct professor and professor of the practice are academic instructional staff positions and may be full or part-time, paid or unpaid²¹.”
- “Sometimes it serves the instructional or research programs of a department and the University to establish a relationship with a person whose professional life is based outside the University or outside the appointing department within the University. This relationship may be established through an adjunct faculty appointment. An adjunct appointment may be with or without compensation. When compensated, fringe benefits applicable to other salaried special faculty appointments will apply²².”
- “The term “adjunct faculty” may be applied either to faculty who are remunerated part-time employees or who are unpaid volunteers with a courtesy title²³.”
- “Adjunct Professors: persons having professional qualifications for regular faculty appointments but who will serve only part-time may be appointed by the President to the staff of instruction and research as adjunct professor, adjunct associate professor or adjunct assistant professor....A person whose title is modified by “adjunct” is one who, although his or her primary responsibility is outside the department (for instance, in another department or outside the university), is willing to contribute part-time to the academic program. The appointment normally involves compensation²⁴.”
- “It is recognized that the University may be enriched by the services of persons in the community whose special knowledge or expertise complements that of the regular University Faculty. Such persons may be appointed as adjunct faculty members for a nominal fee not to exceed one dollar per year²⁵.”
- Visiting and adjunct faculty are established scholars or experts in their fields from other institutions, governments, and/or organizations. They remain under obligation to their employers and may receive financial support from their institutions, governments, and/or

organizations. They do not receive salary or wages from WSU (WashingtonStateUniversity)²⁶.”

- The term "adjunct" indicates that the appointment, whatever the title, is an unpaid position and does not carry tenure. Thus there are adjunct lecturers, adjunct instructors, and various other adjunct faculty who provide important benefits to students by contributing to the research and instructional programs of the University in various ways, including teaching courses. All adjunct appointments may be for up to one year and may be renewed in one year increments without limitation on total service. No formal notice of non-renewal need be given²⁷.”
- “Adjunct titles may be used for persons who are employed elsewhere but have special or unique expertise to take on faculty responsibility at IowaState (IowaStateUniversity). This would include persons currently funded or employed in businesses, government, and other organizations without direct connection to ISU. These appointments are normally part-time, made to recognize the appropriate teaching, extension/professional practice, and/or research responsibilities of these individuals. Any temporary full-time appointments of these individuals would be for a special need and usually last no longer than one-year. Adjunct faculty should be individuals holding a terminal degree in an appropriate field. Under extraordinary circumstances, individuals without the terminal degree but with national or international reputations in their field might be considered for appointment in an adjunct position²⁸.”

Appendix B: Adjunct Professor Charter

Partnering of Adjunct and Full-Time Faculty to Broaden the Body of Knowledge

Adjunct Professors possess extensive practical knowledge and experience in envisioning, planning, designing, constructing and commissioning projects in one or more specialty areas of civil and environmental engineering practice. This includes the economic and financial analyses related to alternative selection and project implementation, as well as identifying and weighing the non-monetary factors essential to sustainability and the development of projects best able to meet public goals and gain public acceptance. Most of our students will ultimately seek careers in professional practice. The adjunct faculty possesses the unique ability to present subject matter to students in a way that is centered in the practical aspects of professional practice, project delivery, and also well-founded in personal experience. These attributes, particularly for subjects having a design or project-delivery facet, will enhance the quality of the learning experience for students and the practical application of knowledge learned. Furthermore, the extensive design experience of the adjunct faculty can help the department satisfy the accreditation requirements of the ABET Engineering Accreditation Commission (EAC). By partnering with the department's permanent faculty members, adjunct faculty enhance the department's ability to prepare engineers for professional practice in the 21st Century. This approach is consistent with new models for engineering education fostered by, among others, the National Academy of Engineering and the American Society of Civil Engineers.

Role of Adjunct Professors

Once appointed, an Adjunct Professor may fulfill the following roles within the department:

1. Mentoring and career advising of students
2. Mentoring student teams in design courses
3. Advising student organizations
4. Guest lecturing
5. Evaluation of course content, including the design element in courses
6. Course teaching
7. Collaborating with or conducting research
8. Advising on student research; serving on thesis examination committees
9. Assisting in outreach activities with the business and professional community, including assisting in bringing ideas developed in research to the marketplace
10. Assisting other department faculty and/or chair in other matters as may be requested

Responsibility and Performance of Adjunct Professors

Adjunct Professors are expected to maintain a high level of commitment to the educational process, be available to their students, and maintain a high level of professionalism and scholarship. The performance of individual Adjunct Professors will be reviewed at least annually, with performance judged in relation to written goals and defined measures.

Adjunct Committee

The department chair will appoint an Adjunct Committee, including Adjunct Professors and full-time faculty, to advise on the effective integration of adjunct faculty into the mission of the department.

University and Departmental Support to Adjunct Professors

Adjunct faculty will be issued an identification and provided with business cards, an email account, library access, computer lab access, access to recreational facilities, keys for access to necessary areas, and office space. The department will also make learning opportunities available to adjunct faculty in areas of improving teaching skills and other areas of importance to their appointment.

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- ¹⁸*Criteria for Accrediting Engineering Programs*, Effective for Evaluations During the 2009-2010 Accreditation Cycle, ABET, Inc., Engineering Accreditation Commission, 111 Market Place, Suite 1050, Baltimore, MD21202, December 2008, page 2.
- ¹⁹*Program Self-Study Report for the degree of Bachelor of Science in Civil Engineering*, College of Engineering, University of Wisconsin-Madison, Submitted to ABET, Inc., June 30, 2006.
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- ²⁴*Cornell University Academic Titles and Appointments Policy*, page 122.
- ²⁵*Policies and Procedures for the Appointment of Adjunct Faculty Members*, California State University-Hayward, page 1.
- ²⁶*Guidelines-Visiting and Adjunct Faculty and Scholars*, WashingtonStateUniversity, October 11, 2006, page 1
- ²⁷*Policy 201-97, Faculty Appointments, Promotion and Tenure*, RiceUniversity, Section 3.d.7.
- ²⁸*Faculty Handbook 3 – Appointment Policies and Procedures*, Section 3.3.2.3, IowaStateUniversity.