

University Of Washington  
Faculty Council on Teaching and Learning  
9:00 a.m. – 10:30 a.m., October 6, 2011  
142 Gerberding

**Meeting Synopsis:**

- 1) Call To Order
- 2) Approval of minutes from June 2, 2011 meeting
- 3) Welcome / Introduction to Council
- 4) Update: Letter to President regarding use of Technology
- 5) Update from Vice Chair – Student engagement, provost selection
- 6) Agenda for Upcoming Year
- 7) Adjourn

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**1) Call to Order**

The meeting was called to order by Chair Carline at 9:05 a.m.

**2) Approval of the minutes from the June 2, 2011, Meeting**

The minutes from the June 2, 2011 meeting were approved electronically prior to the meeting.

**3) Welcome / Introduction to Council**

Chair Carline welcomed members to the second year of this council, and each member briefly introduced themselves.

**4) Update: Letter to President regarding use of Technology**

Chair Carline gave a quick update on the status of a letter outlining issues and concerns on the use of technology for online courses and programs (attached as Appendix A) that was sent in June by the Faculty Council on Teaching and Learning (FCTL) to Interim President Phyllis Wise. However, the council did not hear back from Wise before she left to serve as Chancellor at the University of Illinois. Though Carline heard nothing further from the President, he has since spoken with Faculty Senate Chair Susan Astley, who had expressed concern and support for FCTL. This information will be presented to the Senate Executive Committee on November 14<sup>th</sup>, and then to the Faculty Senate on December 1<sup>st</sup>. Astley is planning to bring this letter to the Board of Regents, but Carline was unsure of when this would take place. After a brief summary of the letter, Chair Carline went on to talk about an email discussion on doubling online course offerings (Attached as Appendix B).

**5) Update from Vice Chair – Student engagement, provost selection**

Linda Martin-Morris discussed measuring and determining student engagement using the annual National Survey on Student Engagement conducted during Spring 2011. This report is the result of a self-selecting survey of students from only the University of Washington's Seattle campus. The response rate was 24% for first year students, 29% for seniors and included transfer students. Demographics were in line with actual numbers, though female respondents outnumbered males. This allows for UW to be compared to around 25 large research universities, "the Carnegie Class," comparing numbers to 2001 and 2005. Though caution is needed when interpreting significance, overall results were good in the light of budget cuts and shows that over time the University is still improving. Overall, not comparing the University of Washington with its peers but with its past scores, it has been slightly improving in 2011 compared to 2005 and 2002 results, although the questions for such surveys were slightly different. First year students

and seniors improved in nearly all categories over time. There were doubts expressed by council members whether or not comparisons were statistically significant.

The following were the five categories, the University's performance compared to itself and peers, and criteria within each category.

- 1) Level of academic challenge: the University of Washington does fairly well in this category, outperforming peers in both first years and seniors, appearing to improve over time. Criteria:
  - a. Number of texts assigned
  - b. Length of books
  - c. Number of reports required
  - d. Hours spent preparing for class
  - e. Whether course emphasized analysis
  - f. Quantity of time studying
  
- 2) Active and collaborative learning: (exposure to collaborative learning and not effectiveness of). The University of Washington appears behind peers, despite improvement over time. Criteria:
  - a. Required class presentations
  - b. Contributed to class discussions
  - c. Worked with students during or after class
  - d. Provided or received tutoring
  - e. Took part in community- based projects
  - f. Discussed class with others outside of the classroom
  
- 3) Enriching educational experiences: The University of Washington seems to perform well, however the effect size shows that it is not significantly different. Criteria:
  - a. Internships
  - b. Field experience
  - c. Community Service
  - d. Foreign language
  - e. Study abroad
  - f. Independent study
  - g. Serious conversation with diverse student body
  - h. Electronic medium to discuss assignments
  
- 4) Supportive campus climate: The University of Washington seemed to perform under peer institutions in 2005 and 2011, but large questions remain in regards to significance. Criteria:
  - a. Availability of tutoring centers
  - b. Availability of student counselors (non-academic areas)
  - c. Quality of relationships with other students
  - d. Quality of relationships with faculty members
  - e. Quality of relationships with administrators and personnel offices
  
- 5) Student faculty interactions: Here UW scores though improving, are under the comparison group average; once taking into account significance and effects, may not be statistically significant.

### **Questions regarding NSSE results**

There were many clarifying questions, often regarding the scale and comparison of this data, and it was noted that the scale used within this survey was arbitrary, and that measurements could not be used to compare to peer institutions surveyed. Difficulty also seemed to come from interpretability: Nelson brought up the complications arising from "lumping" different criteria together to generate a score in a category. The council seemed to agree that effect size and statistical significance weakened comparability. Martin-Morris was uncertain whether "best practices" within comparison schools would be available. Olavarria was surprised that there were not bigger differences between student teacher interactions between first year students and seniors, due to class size differences. Nelson and Chair

Carline expressed the sole result of such a survey is that the University of Washington is accompanying peer institutions. The cost of such a survey is between \$10 - \$15,000 dollars, and is borne by the university. This data is posted publically; the university should keep this in mind due to potential misinterpretation of the data.

There was a brief question regarding policy changes in this time period, Ed Taylor mentioned that the profile of the student population has changed since 2005 (one out of every five students is currently an international student), and program cuts such as writing centers and afterschool programs due to the current economic crisis. The Undergraduate Experience Report in 2005, written by himself, Jerry Baldasty and Betsy Wilson ([http://www.washington.edu/uaa/ciue/docs/Final\\_Report\\_December\\_5\\_2005.doc](http://www.washington.edu/uaa/ciue/docs/Final_Report_December_5_2005.doc)), provided basis for some policy changes.

### **Actionable items and on-campus survey policies**

The council members agreed that the data in this format would not provide the information needed to build an actionable policy for the University of Washington, and Martin-Morris and McGhee discussed the availability of more granular data for further evaluation. Other surveys conducted on campus were discussed: Office of Educational Assessment alumni survey given one year after graduation, graduate school exit survey. There has not been coordination of surveys across undergraduate departments, and members agreed there was a value of cross-campus alignment for surveys through Deans' offices. The conversation briefly touched on "survey fatigue" by students. Corbett and others agreed that exit surveys would be useful in providing actionable abilities for the University.

Martin-Morris asked council members if there were particular items / questions they would like the group to investigate closer. Starting in November, she will lead the subcommittee in researching the questions about how to measure and interpret such results.

### **6) Yearly activities:**

Chair Carline passed out a list of agenda items in priority order. Three main items are: 1) Follow up with Beth Kalikoff on recommendations regarding faculty development issues; 2) The letter written by FCTL: on Online Learning; 3) Student learning experience, which was presented at this meeting. Chair Carline mentioned the message from Interim Provost Doug Wadden, suggesting that the council work on what does teaching and learning look like in the 21<sup>st</sup> century, and how to support teaching staff.

Suggestions followed:

1. Teacher technology training: provide support for proactive training on new technological tools: three emerging tools will be Lecture Capture, eBooks and a replacement of Catalyst;
2. Classroom quality:
  - a. Need to monitor and ensure that classroom technology is consistent across campus; Taylor brought up that Mary Lidstrom has been monitoring impacts and decisions made by departments.
  - b. Tom Lewis of Classroom Support Systems (CSS) offered to bring in the Development Office to discuss ways to support in class technology, and a recent study of student needs for learning spaces, and there was a faculty and student technology survey. Also suggested was to investigate provision of consistent rather than flexible funds to CSS;
  - c. Ed Taylor discussed the need to clarify issues for student and faculty needs regarding classrooms and learning spaces, and brought up example of Odegaard reform, and experience of Roberta Hopkins (CSS) knows about conditions within classrooms;
3. Development of a mission statement regarding demand for online courses, either for flexibility and accessibility, or because of belief that students prefer online courses over "brick and mortar" lecture halls;
4. Understand more about Western Governor's University concern about the state need grants being granted, and difficulty of translating transfer student credits'
5. Continuing development with online course evaluation systems, integrating paper and online; operating without funding, in putting this forward.

A quick announcement was given on “Food for Thought” event for students to interact with Professors at 1101 Café at 5pm today.

**7) Adjournment**

Chair Carline adjourned the meeting at 10:32 a.m.

*Minutes by Jay Freistadt, Faculty Council Support Analyst. [jayf@u.washington.edu](mailto:jayf@u.washington.edu)*

**Present:**       **Faculty:** Carline (Chair), Kyes, Martin-Morris, Masuda, Nelson, Olavarria, Salehi-Esfahani, Wilkes

**President’s Designee:** Taylor

**Ex-Officio Reps:** Corbett, Smith

**Guests:** Sugatan, Lowell, Lewis, Campion, Gregory, Joakimsen, McGhee

**Absent:**       **Faculty:** Elkahaifi, Zierler, Yeh, Harrison

**Ex Officio Reps:** Hornby

Report to the UW Regents on Online Learning

February 2010

Karen Dowdall-Sandford  
James W. Harrington, Jr.  
Kevin Mihata  
Robert Stacey  
David Szatmary  
Deborah Wiegand

## INTRODUCTION

Online learning has become a ubiquitous part of any discussion about the future of higher education. Provost Wise convened this working group to summarize the key issues surrounding online learning at the University of Washington. To do so, we have reviewed the extensive national literature on online learning; talked with leaders in the private sector and peer universities; and met with faculty and student leadership, through key Faculty Senate Councils (representing all three UW campuses) and ASUW.

### *What is online learning?*

Online learning is a way of delivering most of the course content and instruction of a class using the Web. Though onsite, face-to-face classes at the UW and other institutions use educational technologies to enhance their classroom instruction, online learning courses are taught almost entirely online, and students seldom meet face-to-face with their instructors or their fellow students. Online learning includes a wide range of pedagogical techniques: websites and discussion boards; assigned readings accessible to students through the UW libraries' electronic reserve system; audio or video recordings of class sessions that students can view and/or download; course management systems that accept and immediately grade student assignments submitted electronically; and, at times, virtual worlds in which students take on identities as avatars and interact with their classmates digitally.

Online learning in its various forms has been steadily increasing. Over twenty-five percent of all U.S. higher education students were taking at least one online course in the fall of 2008. Despite the recession, demand for online classes has grown, not decreased; according to the forthcoming Sloan Consortium report, online learning growth continues to outpace overall growth in higher education.

This growth, however, has not been evenly distributed across the higher education landscape. Community colleges have consistently produced a disproportionate share of online enrollments; over half of all online students are currently enrolled by institutions offering associate

degrees. Moreover, while public institutions have increased their online offerings in recent years, there has been an even more significant increase in attendance at for-profit online higher educational institutions. According to new research from the consulting firm Eduventures, for-profits' share of the online sector rose from 39 percent in 2008 to 42 percent in 2009, as the recession drove students back to college and severe budget cuts strained public universities.

Much attention has been paid to “open courseware” efforts from institutions such as MIT (through its OpenCourseWare project) and Carnegie Mellon (through its Open Learning Initiative). The Obama administration, numerous foundations (including the Hewlett, McDonnell, Mellon and Gates Foundations) and the National Science Foundation have all committed significant funding to open courseware initiatives. Indeed, the University of Washington was an early contributor to the open courseware movement; UWEO open courseware includes 13 free courses ranging from *Fluency with Information Technology* to *The American Civil War*.

Notably, however, neither MIT nor Carnegie Mellon offers an online degree program. MIT provides access to its syllabi and course materials, and CMU has developed eleven online courses, which are aimed at students who do not have access to high-quality instruction in these subjects at their home institutions. On the whole, open courseware expands the pool of resources available to instructors, but benefits primarily those institutions that could not otherwise develop such materials.

Fully online degree programs, which may integrate open courseware into its classes to enhance them, tend to succeed with very self-motivated, mature learners, and national growth has generally followed this pattern. Many public and for-profit institutions have successfully launched online degrees, especially master-level degrees, to working adults.

Such online programs and courses may expand access to students not otherwise able to enroll in residential programs, providing time flexibility for students with work and family responsibilities. They lessen the constraints on physical space and somewhat ameliorate the classroom shortage. Totally online courses provide a “green” alternative to driving to class, and may help institutions reach a more diverse population of students. Online education may also appeal to a new generation of students who

have familiarity with technology and offers a learning environment that can be accessed repeatedly rather than once in a live context.

### **ONLINE LEARNING AT THE UNIVERSITY OF WASHINGTON**

Given these benefits, the University of Washington, through UW Educational Outreach (UWEO), has been a national leader in online learning, with 11 degree programs, 31 certificate programs, and more than 12,000 students in 2008. UWEO has been an early adopter of several technological innovations over the past twenty years, with design and technology platforms paralleling many of the most significant trends seen during this period. Today's UW online learning uses Web conferencing, voice-over PowerPoint presentations, Virtual Worlds, UWEO's current learning platform, the fully integrated open-source learning management system known as "Moodle" that integrates blogs and wikis, and various types of social media applications such as Twitter and Facebook.

UW has also taken a leadership role in a number of institutional and corporate partnerships (see Table 1) dealing with online learning. Partnerships encourage sharing of online resources and benchmarks (streamed videos, syllabi, course readers, course resources, best practices, etc.) in a consortial effort, help expand the market for online learning among the collaborators and mitigate risk by spreading the sometimes very expensive costs of program development among a number of institutions. With its partners, the UW has created the first joint online certificate programs in the country.

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**Table 1. University of Washington online partnerships and initiatives.**

- **R1edu.** In 1999, the UW started and continues to manage R1edu, a collaboration between 34 major AAU Research Institutions who offer online learning programs. (See attached for list of members.) Initiatives include:
    - Short Courses on the Environment (UW/Wisconsin/Rutgers)
    - R1edu Award
    - Course Search
  - **Actions, Solutions and Growth (ASG).** In 2005, the UW helped start ASG, a consortium of large prestigious public and for-profit institutions pursuing a variety of partnerships, especially with online learning. (See attached for list of members.) Initiatives include:
    - Biotechnology Project Management (UW/UCSD)
    - Decision making for Climate Change (UW/UBC/UCI/Northwestern)
    - Certificate Program in Web Intelligence (UBC and UC-Irvine)
    - Sustainability Institute (UW/UBC)
  - **Prentice-Hall.** The UW has partnered with Pearson/Prentice Hall, the largest publisher in the world, on several online initiatives, including:
    - LAAP Grant (\$1.5M) dealing with Web-based curricula
    - iPhone Applications Certificate
  - **Other Project Partners:**

Department of Labor (\$1.5M grant)	Apex
Boeing	Heritage University
Chulalongkorn University	Sloan Foundation
WUN	
- 

However, the University of Washington has not developed online versions of most of its courses for its matriculated undergraduate students. As a highly-ranked public research university with particularly heavy investments in high-cost instructional areas such as laboratory sciences, engineering, and medicine, as well as a commitment to growing the residential infrastructure with new dormitories and student union, UW attracts a more residential student population than that of most online degree programs. UW undergraduates are traditionally-aged (18-24), unlike the older, career-oriented, often fully employed students who drive online learning growth. In contrast, Capella University, a large online-only institution, refuses to admit students under 24 years of age to its courses, because in its view, students must be mature to be successful. Many of the community colleges who offer online learning also cater to a more mature population of working students.

For the future, the University of Washington will likely expand its number of online learning classes to supplement, but not replace, the existing onsite classes. These online courses will enable students to have more flexible scheduling options and address the growing classroom shortage on

campus. It will also cater to the UW students who can learn more effectively online and will attract at least a few UW students who could not otherwise attend the University of Washington because they find it hard to juggle family and work responsibilities. In an experiment with seven undergraduate online courses in Autumn, both the students and faculty involved expressed interest in expanded online UW offerings to add to their largely onsite degree programs (though students also express a desire to limit the number of such courses they take over the course of their career at UW).

These online classes and others will add capacity to the UW, which will continue to maximize its physical classroom facilities with onsite courses and offer hands-on courses that cannot be easily transformed into online classes. Given the projected student population at the University of Washington, now in discussion for the 2Y2D (Two Years, Two Decades) UW strategic plan, the majority of onsite courses, some of them already enhanced by different technologies, will be supplemented by these new online offerings.

#### *The costs of online learning*

Surprisingly, no one has done an analysis about the relative costs of online learning versus onsite education in a nonprofit institution. Advocates have naively expected faculty to teach thousands of students as a cost-savings measure, and detractors have cited the million-dollar-a-course development costs of a few high-end online learning projects. Such broad arguments, however, do not help evaluate online learning at UW.

Rather than quote either detractors or supporters of online learning, the UW recently developed a comparative budget about the relative costs of an online versus onsite class, which represents the first comparative cost analysis between onsite and online courses at a nonprofit institution, comparing costs and revenues for a typical state-funded class at the University of Washington with identical enrollment, tuition, and faculty teaching costs for each format. In the end, the costs of the online learning course were slightly higher. Though it had no classroom costs, the online

class had higher course development, technology and staff expenses than the onsite class. The UW has somewhat equalized the cost of online and onsite courses through the partnership model, mentioned above. A detailed budget follows at the end of this report.

## **THE FUTURE OF ONLINE LEARNING AT THE UNIVERSITY OF WASHINGTON**

We expect that UWEO will continue to lead in the development of innovative programs for its target audiences. We need to find the best combination of online and face-to-face learning for traditional, matriculated undergraduate and graduate students at the University of Washington.

Our goal will be to attain maximum pedagogical effectiveness at the lowest possible cost. We have to find the optimum balancing point between cost and instructional effectiveness for the University of Washington at this moment in its history. Striking this balance is not a new challenge. It is an ongoing one, requiring constant readjustment as budgets expand or shrink, our student body changes, and educational technology evolves. The current moment, however, is a particularly dramatic one.

How we strike this balance will depend very much on the strategic decisions we make, beginning with the “Two Years to Two Decades” (2Y2D) conversations now underway. The larger questions raised in connection with these discussions will define the kind of university we want to be and the kind of students we want to teach and graduate. In fact, the topic of online learning emerged independently in multiple focus group sessions of the 2Y2D group on teaching and learning. The cost analysis clarifies the financial impact of online learning. Though we may want to expand our online offerings, lower cost should not be the central reason. We should teach online because it represents the best learning platform for our students.

It is clear that online learning has a role in the future of the University. We see a multi-tiered strategy for online learning at the University of Washington. We expect some increase in the number of fully online courses for matriculated students. The College of Arts and Sciences, for example, has already

invested in the development of several such courses. We will also focus on the growth of hybrid courses, which combine face-to-face instruction with Web-based tools and resources. Finally, we expect an evolution of online learning from the text-based descendents of correspondence courses to new customized forms of learning appropriate to our core mission at UW – in the words of one faculty member, to shape “what teaching and learning will look like 20 years from now” and to be the leader for the “integration of technology in teaching.”

**APPENDIX: COST COMPARISON, ONLINE VS. ONSITE COURSE MODELS**

Analysis and notes by David Szatmary, Vice Provost for Educational Outreach

	ONLINE	ONSITE
Program Name:	300-level class <sup>i</sup>	300-level class <sup>ii</sup>
Degree or Certificate program	degree	degree
Estimated Total Student Headcount:	35 <sup>iii</sup>	35
Resident students	28	28
Nonresident students	7	7
Total budgeted course enrollments	35	35
Number of Credits	5	5
Number of courses budgeted:	1	1
Gross Revenue	45,948 <sup>iv</sup>	45,948 <sup>v</sup>
Licensing Fee	0 <sup>vi</sup>	0
<b>TOTAL REVENUE &amp; CONTRA REVENUE</b>	<b>45,948</b>	<b>45,948</b>
Full-Time Faculty - Instruction	21,702 <sup>vii</sup>	21,702
Full-time Faculty- Course Development	3,883 <sup>viii</sup>	965 <sup>ix</sup>
Auxiliary Faculty	0	0
Auxiliary Faculty - Course Development	0	0
Teaching Assistants	0	0
Teaching Assistant - Course Development	0	0
Research Assistants	0	0
Instructional Designer for Course Development	8,000 <sup>x</sup>	0
Technologist for Troubleshooting Technical Issues	779 <sup>xi</sup>	0
Program Administration	1,112 <sup>xii</sup>	1,112 <sup>xiii</sup>
Technology Trainer	779 <sup>xiv</sup>	0
<b>TOTAL SALARY EXPENSES</b>	<b>35,660</b>	<b>23,778</b>
Educational Facilities Costs	0	4,444 <sup>xv</sup>
Faculty/Instructional Office Costs per Class	1,103 <sup>xvi</sup>	1,103 <sup>xvii</sup>
Staff Office Space Per Class	592 <sup>xviii</sup>	63 <sup>xix</sup>
Faculty/Instructional Costs for Office	186 <sup>xx</sup>	186 <sup>xxi</sup>
Staff Costs for Office	100 <sup>xxii</sup>	11 <sup>xxiii</sup>
Office software for faculty	13 <sup>xxiv</sup>	13 <sup>xxv</sup>
Office software for staff	7 <sup>xxvi</sup>	1 <sup>xxvii</sup>
Faculty Travel - Annual Allocation	250 <sup>xxviii</sup>	250 <sup>xxix</sup>
Supplies & Materials	50 <sup>xxx</sup>	200 <sup>xxxi</sup>
Learning Management System	176 <sup>xxxii</sup>	0
Server time for LMS	58 <sup>xxxiii</sup>	0
Technology for delivery	1,000 <sup>xxxiv</sup>	0

Advising	2,725 <sup>xxxv</sup>	2,725 <sup>xxxvi</sup>
UW Technology Charge for faculty	44 <sup>xxxvii</sup>	44 <sup>xxxviii</sup>
UW Technology Recharge Rate for staff	24 <sup>xxxix</sup>	3 <sup>xl</sup>
Special Library Needs	65 <sup>xli</sup>	0
General Library Resources	100 <sup>xlii</sup>	100 <sup>xliii</sup>
Exam Proctors	35 <sup>xliv</sup>	0
Student Financial Aid	3,446 <sup>xlv</sup>	3,446 <sup>xlvi</sup>
UW Overhead	2,573 <sup>xlvii</sup>	2,573 <sup>xlviii</sup>
<b>TOTAL NON-SALARY EXPENSE</b>	<b>12,546</b>	<b>15,160</b>
<b>TOTAL GAIN/LOSS</b>	<b>-2,850</b>	<b>7,010</b>

## NOTES

## IMPLICATIONS OF DOUBLING ON-LINE COURSE OFFERINGS?

Compilations of March 2011 e-mails

Friday 18 March

**At the 10 March meeting of the Faculty Senate, Senator Janelle Taylor asked about faculty oversight of online courses, in reaction to the recent news articles that UW plans to double online course offerings. I suggested that I would look into this and determine whether I should ask a Faculty Council chair or two (FCTL came immediately to mind) to lead a discussion of this at the 4 April meeting of the Senate Executive Committee.**

**I've since asked Prof. Taylor for more detail on her questions, and she replied: "My questions concern faculty oversight over curriculum standards & content, but also who is teaching these classes (t-t faculty? adjuncts? grad students?), their pay and workload and benefits and protections, and also the possibility that if the university is expanding its online offerings while contracting departments and programs and t-t faculty position, this may represent a real erosion of the tenure system and all it entails."**

This set of concerns opens the matter to the portfolio of more councils, particularly FCFA. Let me try to formulate some specific questions for you:

1. Is there any coordination or centralized support for all online courses? (And here, I'm going to focus on courses that are online only, using any computer- or video-mediated forms, but with no planned face-to-face interaction.) Or can a program offer a new course or an online version of an existing course without any particular help or coordination?

a) John [Schaufelberger], would FCAS know that a new course proposal is for online-only instruction? Would FCAS know that an existing course is to be revised for such a format?

b) David [Szatmary], does UWEO still play a key role in online course offering because of the medium of instruction, or does UWEO focus on the support of "fee-based" courses and programs, regardless of the medium?

c) David [Szatmary], if the answer to the first part of (b) is "yes," does UWEO have a compilation of the number of courses that are offered in an online-only version, and a compilation of the types of instructor appointments?

2. Jan [Carline], has FCTL focused on, or developed a plan to focus on the welter of questions that always crop up around online courses -- adequacy of technical support, student learning outcomes, pedagogical support...? This is the first year of FCTL, so I certainly understand that some of this might be prospective planning for Council activities and review of what earlier councils have done.

3. Rich [Christie], I can't quite formulate a specific question for you, but I'm sure you can infer why I've included you in this message, given the kinds of questions that Prof. Taylor asks.

4. Doug [Wadden], you've had to compile info on related issues over the years. Any responses or other info that might be useful?

Thanks,  
JW

Friday 18 March

In the past, FCIQ was very concerned about the issue of quality and oversight of courses taught in fee based programs. FCIQ was also very concerned with the issues of CAI instruction and quality of educational outcomes, particularly in comparison to in-person versions of the same course. These concerns have continued with the successor council FCTL. **This year, there has been some discussion**

**of issues of CAI use, particularly with the strategy of using CAI to increase capacity without increasing faculty. I have a couple of individuals currently doing literature reviews in this area, and I am sure that there will be further discussions in FCTL on these issues. We have developed our own questions in this area, but now would be an excellent time for modification or addition to these topics.**

--Jan Carline (Chair, Faculty Council on Teaching and Learning)

Friday 18 March

**In order for a department to offer a course online, it must be approved by the University Curriculum Committee, even if it is a course that is currently offered in a classroom. The department submitting the course approval request must include a distance learning supplement with each course request.**

**While UWEO has an online learning staff, an academic department is not required to go through UWEO to offer a course online. Many online instructors are regular teaching faculty who teach online as a part of their normal teaching load. Part-time faculty who teach online should be reviewed by department faculty in the same manner as part-time faculty who are appointed to teach on campus.**

**The policies for review of individual courses were established by FCAS, but FCAS reviews programs and not individual courses. Any course change must be reviewed by department faculty, a college curriculum committee, and the dean before being submitted to the University Curriculum Committee for approval. As far as I know, there is no centralized support for online courses, other than those offered in partnership with UWEO.**

John  
John Schaufelberger, Chair  
Department of Construction Management  
University of Washington  
206-685-4440

Friday 18 March

All --

We're mixing several different issues here. Two in particular: there is DL and online; there is fee-based.

Much has changed since I dealt with DL and online courses and I don't think I can add to the conversation. As for fee-based, I'm in the process of assembling a group to examine all aspects of fee-based policy. I should have it resolved early next week.

I think there are other issues that could be added to the above; the U Curriculum Committee review of the duplication of courses and ABB related revenue / tax issues.

It would be good to focus some of the discussions and determine if and where they intersect.

--Doug

Doug Wadden

Executive Vice Provost for Academic Affairs and Planning

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Tuesday 22 March

Hi JW,

Here are my responses. Please let me know if you need any additional information!

Karen

*David, does UWEO still play a key role in online course offering because of the medium of instruction, or does UWEO focus on the support of "fee-based" courses and programs, regardless of the medium?*

**This is not a clear yes or no. UWEO does focus on support of "fee-based" courses and programs, regardless of the medium. However, UWEO also still plays a key role in online course development because of the medium of instruction. UWEO has an online department that provides the essential services necessary to produce high-quality online courses such as instructional design, multi-media production, LMS hosting of courses and student services.**

Please see the attached document [Attachment A] that summarizes the **services necessary for online education**. The examples in this document pertain to services provided to UW Bothell, however, we provide these services to all departments that we collaborate with on online programs.

Karen Dowdall-Sandford | University of Washington, Educational Outreach

Director, Online Programs | 206.616.7680 | kdsandford@pce.uw.edu

Thursday 31 March

I agree with all of the comments made by John and Doug.

In addition, I might indicate that

**1. UWEO provides the infrastructure support and administration for fee-based online credit and noncredit programs. Because the UW has very little state-supported infrastructure for online classes,**

the vast majority of online classes are fee-based and administered through UWEO. I would also add that the UW does have some central (e.g. Catalyst) and departmentally based educational technology support, though this differs from the infrastructure to develop and offer completely online courses.

2. The pilot to offer online classes to UW matriculated undergraduates through the time schedule has been vetted extensively with the Regents (twice), the Senate Committee on Planning and Budgeting (three times), students, academic units and the administration. Since the autumn of 2009, we have offered 36 online course sections to 3,013 enrollees. As John indicates, ALL of the academic aspects of the classes (faculty, curriculum, scheduling, etc.) are determined by the appropriate academic unit. We have surveyed the faculty and students about their experiences, and the majority in both groups found the courses to be satisfying and worthwhile. I have attached two of the surveys above.

Please let me know if you need any further information.

Dave  
David P. Szatmary  
Vice Provost, UW Educational Outreach  
dszatmar@uw.edu  
206-685-6306

Thursday 31 March

Thanks very much, Dave. Good timing, since I want to provide a brief report in my oral remarks to the Senate Executive Committee on Monday. **Your response and the attachments are valuable in:**

- (1) reminding me that the basis of the "doubling of online courses" publicized in the press may well be our slow but growing movement to allow currently matriculated students to take online courses for a fee when other formats are full or not available. Do you agree that this is what was alluded to in that "doubling" figure in the *Seattle P-I* entry? [See Attachment B]**
- (2) reiterating that it's up to each academic unit (department or non-departmentalized school) to decide whether to offer online courses, and to decide how to staff them, and that the instructors of undergrad online courses I mention above are paid for this work at a rate determined by the academic unit.**
- (3) providing multidimensional assessments of those courses. Jan, had you seen those survey results before? Might be interesting to the Council.**

One more question: Given the basis for the concern expressed by the Senator who prompted my queries, do you know the academic rank of the 10 instructors? (I don't even need to know the department or school, but am interested in the ranks of the folks who volunteered for these pilots).

Thanks, JW

Thursday 31 March

JW:

To answer your questions:

1. The "doubling of online learning enrollments" definitely refers to the additional online classes offered to UW undergraduate matriculated students.
2. I have asked Karen to assemble information about the academic rank of the instructors in these pilot classes. Karen, can you fast track this work so JW can have it for his Monday presentation?

Dave  
David P. Szatmary  
Vice Provost, UW Educational Outreach

dszatmar@uw.edu  
206-685-6306

Friday 1 April

Dave,

Attached please find the summary with information pertaining to instructors in the online pilot courses. The spreadsheet identifies the name of the course, the name of the faculty/instructor/lecturer etc. and rank/faculty title and type of pay. The information includes Autumn 2009, Spring 2010, Autumn 2010 and Winter 2011. [This is excerpted below as Attachment C.]

Please take note of Laura's comment below<sup>1</sup> about payment on a faculty appointment. Let me know if you have any questions.

Karen

Karen Dowdall-Sandford | University of Washington, Educational Outreach Director, Online Programs | 206.616.7680 | kdsandford@pce.uw.edu

### **JWH compilation from Attachment C:**

**35 distinct hirings, 7 of which were for classes that were listed under multiple headings.**

- 15 (43%) Lecturer Part-Time, or should have had that title (see footnotes 1 & 2)**
- 9 (26%) Assistant Professor, Associate Professor, or Professor**
- 7 (20%) Predoctoral Instructor, or should have had that title (see footnotes 1 & 2)**
- 2 ( 6%) Lecturer Full Time**
- 2 ( 6%) Affiliate Assistant Professor**

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<sup>1</sup> Please be sure Dave is aware that for payroll purposes we were unaware that these needed to be paid on a faculty appt as there is no way to identify if courses are designed for matriculated students in EOS. This came up in the middle of last year.

Laura Bohaty  
Fiscal Specialist Supervisor/ Payroll  
UW Professional & Continuing Education  
Educational Outreach

## Attachment A

**Considerations for Online Learning Programs****1. Course Management and Registration**

UWEO provides a course management tool, My Course (hosted by Moodlerooms), to offer instructors and students an easy way to combine their class tools and interactions. We also help integrate registration within this learning management system.

As an example for Autumn Quarter at UW Bothell, UWEO hosts the electrical engineering online courses, and quickly placed these courses online to meet deadlines for Autumn Quarter. We used My Course because the infrastructure was already in place, our instructional designer was familiar with working in that system and we have created instructor training resources for the system. For the Bothell implementation, we integrated student registration with the learning management system.

- Integration services we are performing for Bothell:
  - UWEO online training coordinator is creating course entries in the UWEO student database (EOS) with the necessary affiliate course information to use EOS/My Course enrollment integration. This will create accounts for Bothell students in My Course and enroll them in these courses.
  - Bothell instructors are monitoring drops and will notify the Online Learning support mailbox at UWEO of changes. This process may be automated in the near future.
  - UWEO provides Bothell 40-50 Moodlerooms licenses used in the pilot.

**2. Program Management**

UWEO provides program management support for online courses. This support includes overall project management of online courses. The UWEO Program Manager, in consultation with the academic department, creates a development and implementation plan for the program. This plan addresses curriculum and instructional design as well as the infrastructure and logistical needs necessary to make the program operational. Program evaluation assistance is also provided to assess the efficacy of the program and to ensure continuous improvement.

- For the Bothell electrical engineering program, Karen Dowdall-Sandford has provided program management assistance such as project management and administering contracts for course development under the Sloan grant.

**3. Instructional Design**

UWEO Online Learning instructional designers work directly with faculty on course development projects to define educational needs, design course specifications and analyze various options to meet instructional goals. They participate actively and influence the direction of formal project teams and establish production schedules.

- In collaboration with university and community faculties, they identify audiences and needs, determine learning outcomes, design learning activities, write text, and create simple graphics, and animations. They advise program managers, advisory boards, faculty, and department chairs about the design of online and hybrid degrees, programs, and courses, including technologies to support production and deployment.
- They provide pedagogical and technical assistance to developers and instructors using selected software tools for the creation of online course content.
- They prepare instructional materials for publication on the Web, ensuring consistency of style, design, and learner-centered focus, and they involve others in developing procedures to accommodate changes for new initiatives or improvements.
- They train instructors and other personnel (T.A.s, for example) in the use of and best practices for appropriate technologies.

- They also lead meetings of online course development teams for degrees, programs, and courses.
  - Costs for these services are charged based on the level of service. For example new course development is \$14,000, minor course revisions are \$5,000 and course openings are \$2,000.
- 4. Administrative and Technical Support for Students Taking Online courses and Instructors Teaching Online Courses**
- **For Autumn Bothell pilot UWEO central operations is providing technical support for students.** Students and instructors can contact distance learning technical support (contact info is shown on the My Course site) and their issues will be triaged to appropriate parties for resolution.
  - **Faculty support provided by a student worker** for first day of classes (all courses are using Adobe Connect for synchronous-DL). Online Learning provides student workers for the first two course sessions of all new online courses that use Adobe Connect for synchronous distance learning in programs administered by UWEO. The cost for this service is incorporated into instructional design fees.
  - For Bothell pilot this service will be offered at a cost of \$30 per hour with a minimum of two hours.
- 5. Faculty Training on Teaching Online Courses and Using Online Technologies**
- At UWEO our instructional designers and student workers provide training for new instructors on My Course, teaching online, and Adobe Connect Meeting software.
  - Jason Reep will provide synch-DL training for Bothell faculty and will conduct a session for students if necessary.
- 6. Evaluations – End of Course and Mid-term**
- At UWEO OEA is used for end of course evaluations.
  - Bothell faculty will not conduct midterm evaluations per Arnie Berger. Bothell will determine if they will use OEA Final Evaluations.
- 7. Online Student Handbook**
- UWEO has created a handbook of the many policies and procedures for online learning (shown in [Online Student Handbook](#)).
  - We will be updating course websites and linking to the student handbook at Bothell.
- 8. Other miscellaneous costs**
- For example, for the synchronous distance learning kit we charge a fee for use of the kit.

## Attachment B

**UW wants to double online enrollment**

By AMY ROLPH  
SEATTLEPI.COM STAFF  
February 15, 2011

The University of Washington may have a partial solution for waning state funding: More online classes.

UW officials announced Tuesday they will launch an aggressive campaign to expand online class offerings without any financial support from the state, saying it's "a win-win for everyone."

Dubbed the UW Online Initiative, the plan is to enroll 24,000 students in online courses over the next three years -- twice as many as are enrolled online now.

The university offers 15 master's degrees and 26 certificates through online classes housed in the UW Educational Outreach department. But now UW officials want to expand online classes to undergraduates.

About 50 undergraduate courses will be added during the next two years, according to the plan outlined Tuesday.

The university piloted online classes for undergraduates last year, charging students \$350 instead of the \$1,450 price tag associated with a classroom course. Tuition is reflective of how much it costs to coordinate the class without state funding.

A survey conducted after the pilot program showed 80 percent of students indicated they would recommend the online program to others.

"The UW Online Initiative provides more flexibility to undergraduate students who may be working part-time or living off-campus," said David Szatmary, vice provost for educational outreach. "It also increases access to high-demand courses such as statistics."

The UW is seeking private funding and partnerships to sustain the online initiative. The university of recently awarded a grant from the Sloan Foundation for developing an online electrical engineering program for undergraduates at UW Bothell.

[http://www.seattlepi.com/local/435520\\_uwonline15.html](http://www.seattlepi.com/local/435520_uwonline15.html)

Attachment C

**Online Classes for Matriculated UW Undergraduates,  
via pilot program administered through UWEO**

## Rank / Faculty title

**Autumn 2009**

COM 202 Professor

COM 340 Lecturer Part-Time

COM 389 Lecturer Part-Time

AES 389 Lecturer Part-Time

WOMEN 389 Lecturer Part-Time

ENGL 310 Associate Professor

ENGL 477 Associate Professor

GEOG 102 Predoctoral Research Assoc 2

ESRM 100 Professor

**Spring 2010**COM 389 Hourly extension Lecturer<sup>2</sup>

AES 389 Hourly extension Lecturer

WOMEN 389 Hourly extension Lecturer

COM 440 Hourly extension Lecturer

POL S 461 Hourly extension Lecturer

GEOG 102 Hourly extension Lecturer

ESRM 100 Professor

PSYCH 206 Affliate Assistant Professor

STAT 220 Hourly extension Lecturer

**Autumn 2010**

COM 340 Hourly extension Lecturer

COM 389 Lecturer Part-Time

AES 389 Lecturer Part-Time

WOMEN 389 Lecturer Part-Time

COM 440 Hourly extension Lecturer

POL S 461 Hourly extension Lecturer

DANCE 100 Lecturer Part-Time

ESRM 100 Professor

GEOG 102 Predoctoral Instructor

LING 200 Lecturer Full Time

PSYCH 203 Associate Professor

PSYCH 206 Affliate Assistant Professor

SOC 371 Predoctoral Instructor

STAT 220 Hourly extension Lecturer

## Rank / Faculty title

**Winter 2011**

Cumulative Enrollments

COM 340 Lecturer Part-Time

COM 440 Lecturer Part-Time

POL S 461 Lecturer Part-Time

DANCE 100 Lecturer Part-Time

ESRM 100 Professor

GEOG 102 Predoctoral Instructor

GEOG 123 Extension Lecturer Part Time

<sup>2</sup> This title should not have been used; see fn1.

SIS 123	Extension Lecturer Part Time
LING 200	Lecturer Full Time
PSYCH 101	Lecturer Part-Time
PSYCH 202	Associate Professor
SOC 364	Predoctoral Lecturer
STAT 311	Lecturer Part-Time

<sup>i</sup> Assume that the class will be state- funded.

<sup>ii</sup> Assume that the class will be state- funded.

<sup>iii</sup> Represents the average class size for undergraduate courses at the UW - 35.5 students per class.

<sup>iv</sup> Assume that all students will take approximately a full load of classes, and tuition will be distributed equally among all classes. I also assume that 80% of the students will be residents and 20% will be nonresidents. Special mandatory fees have not been included in this calculation (e.g. student & activities fee, IMA fee and the building fee). I have used only operating fee revenue (2010- 11) for these calculations.

<sup>v</sup> Assume that all students will take approximately a full load of classes, and tuition will be distributed equally among all classes. I also assume that 80% of the students will be residents and 20% will be nonresidents. Special mandatory fees have not been included in this calculation (e.g. student & activities fee, IMA fee and the building fee). I have used only operating fee revenue (2010- 11) for these calculations.

<sup>vi</sup> Some online classes generate license fees but most do not, so I have not included any revenues here.

<sup>vii</sup> Assume that a faculty member making \$70K plus benefits will teach this course as part of a total teaching load of 4 classes per year. Obviously, this workload and salary will vary with the individual faculty member.

<sup>viii</sup> Generally, for the development of an online class, we have paid faculty one month's salary in additional pay. Also we assume that a faculty member will have to revise the class minimally during the next two years at \$1000/year. We have finally assumed that this class will be taught once a year in the three- year period. We pay faculty for the development of these courses (unlike onsite courses in some cases) because the final class results in a product that has more identifiable intellectual property implications and could be licensed.

<sup>ix</sup> For an onsite class, some faculty may receive release time to develop classes. In many cases, faculty do not receive additional time or money to develop a new class for an onsite offering. In this case, we assume that a faculty member receives the equivalent of one month salary to develop a course. Faculty almost never receive additional release time to offer minor refinements to a course. As a result, I have conservatively estimated that the faculty development costs would be amortized over ten years with the class being offered once a year during this time period.

<sup>x</sup> Assume that an instructional designer will help with the user- centered design and provide suggestions for course formats, exit requirements, interactivity tools, etc. The initial development will cost \$14K and minor revisions will be made for \$5K in each of the next two years. The total cost has been amortized over 3 years. In some cases, the course will need major revision sooner, especially in technical areas, and in other cases the course may last up to 5 years without a major revision. These salary figures include the cost of benefits. Assume that the class will be taught once a year.

<sup>xi</sup> Assume that a base level technologist at \$60K/yr. will troubleshoot problems with the courses. Also, assume that each technologist can handle roughly 100 classes per year.

<sup>xii</sup> I have assumed that the program administration costs for these classes would include a mix of professional and classified staff. One FTE would cost approximately \$60,000/year and could handle 70 classes.

<sup>xiii</sup> I have assumed that the program administration costs for these classes would include a mix of professional and classified staff. One FTE would cost approximately \$60,000/year and could handle 70 classes.

<sup>xiv</sup> Online classes need a learning management system to be operated effectively and efficiently. Some of these systems cost a significant amount of money (e.g. Blackboard) while others operate as open source (e.g. Moodle) but require integration into the other administrative systems such as a student database. I

have assumed that the UW would use an open source solution such as Moodle. This cost represents the trainer who will work with faculty to train them on the LMS systems. I have assumed that this trainer could work with 100 faculty per year and would make \$60K plus benefits per year.

<sup>xv</sup> Based upon the rental costs for instructional space in downtown Seattle. This represents the cost for one room per quarter at full usage (8 a.m. to 10 p.m.), obviously a conservative number. With lower room utilization, the cost would increase. This number includes utilities.

<sup>xvi</sup> On an annual basis, the cost of a cubicle for professional staff in UW Tower would be approximately \$4,411. I have divided this number by the number of classes taught by a faculty member.

<sup>xvii</sup> On an annual basis, the cost of a cubicle for professional staff in UW Tower would be approximately \$4,411. I have divided this number by the number of classes taught by a faculty member.

<sup>xviii</sup> This line includes office space for the program administrator, the instructional designer, the trainer and the technologist, assuming that the technologist deals with 100 classes, the program administrator deals with 70 classes, the trainer with 100 classes and the instructional designer deals with 10 courses annually.

<sup>xix</sup> This line includes office space for the program administrator.

<sup>xx</sup> It generally costs \$3,726 to outfit an average faculty office, not including research start-up. We assume that the furniture, computer, file cabinets and other materials will last a total of 5 years and have amortized these costs across the number of courses taught during this time period.

<sup>xxi</sup> It generally costs \$3,726 to outfit an average faculty office, not including research start-up. We assume that the furniture, computer, file cabinets and other materials will last a total of 5 years and have amortized these costs across the number of courses taught during this time period.

<sup>xxii</sup> It costs approximately the same (\$3,726) to outfit a staff office as it does for a faculty office. I have amortized these costs over 5 years and over the number of activities that the instructional designer, the trainer, the technologist and the program administrator perform during this time period.

<sup>xxiii</sup> It costs approximately the same (\$3,726) to outfit a staff office as it does for a faculty office. I have amortized these costs over 5 years and over the number of activities that the instructional designer, the trainer, the technologist and the program administrator perform during this time period.

<sup>xxiv</sup> According to our estimates, it will cost \$50 per person for software and licenses each year. This amount has been multiplied by the number of faculty and then divided by the number of courses offered annually.

<sup>xxv</sup> According to our estimates, it will cost \$50 per person for software and licenses each year. This amount has been multiplied by the number of faculty and then divided by the number of courses offered annually.

<sup>xxvi</sup> According to our estimates, it will cost \$50 per person for software and licenses each year. This amount has been multiplied by the number of staff (program administrator, trainer instructional designer and technologist) and then divided by the number of activities performed annually.

<sup>xxvii</sup> According to our estimates, it will cost \$50 per person for software and licenses each year. This amount has been multiplied by the number of staff (program administrator) and then divided by the number of activities performed annually.

<sup>xxviii</sup> Assume that the average faculty member receives \$1,000 in travel annually divided by the number of courses taught (4).

<sup>xxix</sup> Assume that the average faculty member receives \$1,000 in travel annually divided by the number of courses taught (4).

<sup>xxx</sup> Though the online class can more efficiently distribute printed material (i.e. no xeroxes) and show videos online, it still needs to secure copyright clearance for at least some of its material. Other materials may be free due to their open source nature.

<sup>xxxi</sup> I have assumed that a faculty member will spend about \$200 per course on such materials as xeroxes, films and other instructional aids. This includes copyright clearance.

<sup>xxxii</sup> Online classes need a learning management system to be operated effectively and efficiently. Some of these systems cost a significant amount of money (e.g. Blackboard) while others operate as open source (e.g. Moodle) but require integration into the other administrative systems such as a student database. I have assumed that the UW would use an open source solution such as Moodle. The costs represent an amortized expense of integration and then the ongoing technology costs of support.

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<sup>xxxiii</sup> This cost represents the per course cost of hosting a class on the server of a cost-effective vendor such as Moodle Rooms. It costs approximately \$1.67 per student for this hosting, though the number decreases with an economy of scale.

<sup>xxxiv</sup> This cost will vary widely by the type of technology that a faculty member chooses. For example, the faculty member may choose a print format with some minimal animations, which would incur little additional cost. Likewise, the use of open-source resources also would cost little more. However, if the faculty member chooses to videotape and then stream his/her own class or use Virtual Worlds (e.g. Second Life), the costs could be considerable. For example, the costs of an island and the build-out of that island in Second Life would have to be amortized over a specific number of courses, and the more courses in this format, the lower the cost until another island would be needed. For the purposes of this budget, I have been very conservative and estimated \$1,000 per course for the cost of additional technology.

<sup>xxxv</sup> Assume that one advisor can deal with 1000 student visits per year in an online or onsite capacity.

<sup>xxxvi</sup> Assume that one advisor can deal with 1000 student visits per year in an online or onsite capacity.

<sup>xxxvii</sup> I have taken the total number of faculty headcount and multiplied it by the recharge rate and then divided by the number of courses that faculty teach each year (4). Though the recharge rate has not yet been established, I used \$175/person/year as an estimate.

<sup>xxxviii</sup> I have taken the total number of faculty headcount and multiplied it by the recharge rate and then divided by the number of courses that faculty teach each year (4). Though the recharge rate has not yet been established, I used \$175/person/year as an estimate.

<sup>xxxix</sup> I have taken the total number of staff (4) headcount and multiplied it by the recharge rate and then divided by the number of activities that each staff performs annually. Though the recharge rate has not yet been established, I used \$175/person/year as an estimate.

<sup>xl</sup> I have taken the total number of staff (4) headcount and multiplied it by the recharge rate and then divided by the number of activities that each staff performs annually. Though the recharge rate has not yet been established, I used \$175/person/year as an estimate.

<sup>xli</sup> Online classes many times have special library needs because students cannot come physically to the library. At the UW we have a dedicated position in the library for all online classes that helps instructors and students identify and establish electronic material resources.

<sup>xlii</sup> I have taken the total library costs for materials and staff and divided by the total number of headcount students and assumed that a student takes 6.93 classes per year (if we have 47,361 students and approximately 36,438 student FTE).

<sup>xliii</sup> I have taken the total library costs for materials and staff and divided by the total number of headcount students and assumed that a student takes 6.93 classes per year (if we have 47,361 students and approximately 36,438 student FTE).

<sup>xliiv</sup> At this point, we do not have an inexpensive solution for exam verification. We only have such items as retinal verification, etc. As a result, we ask students to go to a pre-assigned physical site for identity verification for exams. Though the sites generally participate for free, we need an exam proctor coordinator who establishes and verifies sites and sometimes sends exams. This half-time employee can deal with approximately 700 classes per year.

<sup>xliiv</sup> Generally, the UW attributes 7.5% of total tuition revenues to student financial aid.

<sup>xliiv</sup> Generally, the UW attributes 7.5% of total tuition revenues to student financial aid.

<sup>xliiv</sup> This overhead represents general costs that cannot be easily applied to specific activities in an activities-based budgeting model. Such costs may include the President's and Provost's office, the human resources office, general administrative systems, emergency management, disability services, the office of planning and budgeting, the attorney general's office, etc. These costs would apply to both online and onsite classes.

<sup>xliiv</sup> This overhead represents general costs that cannot be easily applied to specific activities in an activities-based budgeting model. Such costs may include the President's and Provost's office, the human resources office, general administrative systems, emergency management, disability services, the office of planning and budgeting, the attorney general's office, etc. These costs would apply to both online and onsite classes.

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## UW Online Learning: Degrees, Certificates, Courses

### Distance learning degrees: 11

- [Master in Construction Engineering](#)
- [Master in Aeronautics & Astronautics Engineering](#)
- [Master in Aerospace Engineering](#)
- [Master in Mechanical Engineering](#)
- [Master of Nursing, Master of Science](#) (from the UW School of Nursing)
- [Extended Master in Public Health](#)
- [Extended Master of Clinical Health Services](#) (from the MEDEX Northwest Physician Assistant Program)
- [Master in Strategic Planning for Critical Infrastructures](#)
- [Master of Library and Information Science \(dMLIS\)](#)
- [Master in Applied Mathematics](#)
- Bachelor of Science in Electrical Engineering (BSEE) – UW Bothell

### Distance learning certificate programs: 31

- [Addiction and the Brain](#) – on a contract basis only
- [Advanced Research in Addiction and the Brain](#) – on a contract basis only
- [Biotechnology Project Management](#)
- [Brain Research in Education](#)
- [C++ Programming](#)
- [Construction Management](#)
- [Critical Infrastructures Protection](#)
- [Database Management](#)
- [Decision Making for Climate Change](#)
- Editing
- [E-Learning Design and Development](#)
- [Embedded and Real-Time Systems Programming](#)
- [Emergency Management](#)
- [Facility Management](#)
- [Geographic Information Systems](#)
- [Gerontology](#)
- [Guardianship \(online + classroom combined\)](#)
- [Heavy Construction Project Management](#)
- [Information Assurance & Cybersecurity](#)
- [Infrastructure Construction](#)
- [Marketing, Advanced Interactive \(online + classroom combined\)](#)
- [Medical Engineering: Biosensors and Biomaterials](#)
- [Oracle Applications Development \(online + classroom combined\)](#)
- Paralegal Studies
- [Project Management](#)
- [Psychological Trauma: Effective Treatment and Practice \(online + classroom combined\)](#)
- School Library Professional
- [SQL Server Specialist \(Autumn-start; online + classroom combined\)](#)
- [Sustainable Transportation \(online\)](#)

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- **Urban Green Infrastructure**
  - [Web Technology Solutions](#)
- Distance learning undergraduate credit classes: 58 (some of these classes are listed in the Time Schedule)
  - Online free courses (including mini courses): 12

	2004	2005	2006	2007	2008	2009 (1 <sup>st</sup> qtr)
<b>UW DL Enrollments</b>						
<b>Total UW DL</b>	<b>10865</b>	<b>9919</b>	<b>11892</b>	<b>11242</b>	<b>12369</b>	<b>2438</b>