

Standard 4

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Faculty

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Faculty



The faculty of Oregon State University share a strong commitment to excellence in teaching, research, and scholarship. The result is a productive community of active contributors in diverse fields. OSU faculty lead in national and international arenas, publish in the most highly respected journals, and create scholarship and artistic works in the arts, humanities, social sciences, sciences, and technology.

OSU faculty members are heirs to an academic tradition that blends national and international leadership with a linkage to the people of Oregon. They teach, develop, and manage educational programs, advise students, conduct scholarly activities, and provide a wide range of public services throughout Oregon and the world. The central campus in Corvallis includes about 1,227 faculty members with professorial rank, 351 instructors, 606 faculty research assistants and research associates, and 647 other academic and student support faculty. In addition, 400 faculty members are assigned to OSU Extension Service offices throughout the state, Oregon Agricultural Experiment Station branches, the Hatfield Marine Science Center in Newport, the Forest Research Laboratory near Corvallis, and various other off-campus sites. Detailed information and statistics about OSU's faculty are provided in the *OSU Fact Book: 2000* and Appendix 4.1.

Through the faculty's scholarship and teaching, OSU is able to offer seventy-eight undergraduate degree programs, the most comprehensive range in the state, plus more than eighty-two master's and fifty-eight doctoral degrees. Nationally prominent scholars and scientists regularly teach undergraduate courses at all levels, advise graduate students, and are highly involved in a variety of scholarly activities. Faculty members are also committed to working with and strengthening the state's resources, including families, youth, forests, agriculture, marine resources, high technology, the arts, a diverse cultural heritage, small and large businesses, and the professions. Beyond the state's borders, OSU faculty members are editors of national and international journals, serve on a myriad of state, federal, and international advisory boards, and provide personal leadership in international programs through more than sixty institutions in nearly thirty countries.

This self study of OSU faculty takes a look at faculty responsibilities and their relationship to the

University's mission and goals, then addresses faculty credentials and faculty participation in academic planning, governance, and related activities. Faculty workloads are then examined, as are faculty development opportunities, faculty evaluation and reviews, and the promotion and tenure process. Faculty salaries and benefits are discussed next, followed by sections relating to OSU's policy on outside activities, its faculty recruitment and appointment processes, and its position on academic freedom. The focus then shifts to faculty involvement in scholarship, research, and artistic creation. Featured in this discussion are research and scholarship agendas, related policies and practices, sponsored research and programs, and a summation of the resources provided by the University to support these endeavors. Finally, OSU strengths and challenges in terms of faculty-related issues are highlighted.

Faculty Selection, Roles, Development, Evaluation, and Welfare

The selection, support, welfare, development, and retention of a faculty characterized by its excellence is of paramount importance to OSU. The University employs professionally qualified faculty who have a primary commitment to the University and its mission and goals, and who are representative of each field or program in which the University is majorly involved. Each faculty member has a position description outlining his or her responsibilities, and access to University-wide policies and procedures as they relate to carrying out those responsibilities. Procedures, policies, and practices are in place to ensure equitable treatment, periodic evaluation and feedback, and widely available opportunities for support and development.

Faculty Roles and Responsibilities

Faculty roles and responsibilities at OSU encourage contributions to the mission of the University in three areas: (a) teaching, advising, and other assignments; (b) scholarship and creative activity; and (c) institutional, public, and professional service. Responsibilities in each of these areas are identified in individual faculty position descriptions that are updated as necessary and serve as the basis for faculty work, faculty performance reviews, and promotion and tenure decisions. The three areas are also represented in University faculty awards, which recognize and honor exceptional faculty performance. These awards include, among others, the OSU Faculty Teaching Excellence Award, the Extended



Teaching is central to the mission of OSU. The formal and informal advising and mentoring of undergraduate and graduate students is an indispensable component of the educational experience.

Education Faculty Achievement Award, the Dar Reese Excellence in Advising Award, the Emerging Scholar Faculty Award, the D. Curtis Mumford Faculty Service Award, and several Distinguished Professor Awards for outstanding achievements in undergraduate teaching, teaching and scholarship, and career-long contributions (Exhibit 4.1).

Teaching and Advising

Teaching is central to the mission of OSU. Most faculty have significant responsibilities in instruction through: (a) presenting resident credit courses, non-credit seminars and workshops, Extension Service programs, international programs, and distance and continuing education programs; (b) directing undergraduate and graduate projects, internships, and theses, and serving on master and doctoral committees; and (c) mentoring undergraduate and graduate students and postdoctoral associates. All faculty involved in instructional programs are also expected to be committed to the well-being of students, both inside and outside the classroom. Effective advising helps create an environment that fosters student learning and student retention. The formal and informal advising and mentoring of undergraduate and graduate students is an indispensable component of the broader educational experience of the University.

Many positions held by faculty with professorial rank enhance the learning environment for students and the larger social environment within which learning takes place, provide educational programs for resident students outside the classroom setting, extend the University's programs and expertise to the public in off-campus settings, and focus directly on the creation, integration, and application of knowledge. Faculty with assignments in research, Extension Service, international development, information services, student services, diagnostic and analytical services, and administration are evaluated by the standards appropriate to the field.

In 1993, the concept of "extended education," defined as "education and service for citizens who are not resident at the University's campus and which draw upon the knowledge base of the University," was introduced by then-President John Byrne (Appendix 4.2). Byrne expressed a goal that the extended education mission of OSU be considered of equal importance to that of instruction and scholarly activity and that each OSU college become involved in delivering extended education programs beyond the Corvallis campus to the people of Oregon. Part of that mission was accomplished to some degree when all Extension Service faculty were assigned homes in academic departments in 1995. Other examples can be seen in the increasing numbers of outreach programs implemented by colleges and departments (and described in Standard 2 and in the notebook exhibits). The term "extended education" was dropped in favor of "OSU Statewide" after President Paul Risser was hired in 1996 and after distance education implemented a large grant that has primarily been used to develop Web-based courses for off-campus delivery. Although it is expected that the concept of extended education will live on through the Extension Service, Distance and Continuing Education, and other outreach efforts, it is also expected that its emphasis and the extent of individual college and departmental faculty commitment to this endeavor may vary with changing technologies, shifting priorities, and available resources.

Scholarship and Creative Activity

All OSU faculty in the professorial ranks have a responsibility to engage in scholarship and creative activity. OSU has changed the language of scholarly activity, broadening the traditional definition of “research” to include not only what goes on in traditional laboratories and field stations, but also in libraries, art studios, music rooms, and others venues where OSU faculty are involved. At OSU, scholarship and creative activity may take many forms, including but not limited to: (a) research contributing to a body of knowledge; (b) development of new technologies, materials, or methods; (c) integration of knowledge or technology leading to new interpretations or applications; and (d) creation and interpretation in the arts. The acronym RISC (Research, Innovation, Scholarship, and Creativity), based on a framework developed by OSU’s Conrad “Bud” Weiser in the mid-1990s (Exhibit 4.2), is used to emphasize this interpretation.

Scholarship and creative activity are also understood to be intellectual work that is validated by peers and communicated not only through professional journals and monographs, but also through formal presentations at professional meetings and comparable peer-evaluated forums. While the kinds of scholarship that faculty engage in varies across the University, the requirement that the significance of the scholarship be validated and communicated beyond the University helps sustain high standards. For faculty members in certain positions where seeking competitive grants and contracts is an essential responsibility, success in this endeavor, particularly when the grants are highly competitive and peer-reviewed, is also considered a component of achievement in scholarship.

Service

Faculty service is essential to the University’s success in serving its central mission, and is a responsibility of all faculty. Faculty members perform a

William Gerwick



Under joint sponsorship of the OSU sabbatical program and a Senior Fogarty International Fellowship, William Gerwick of OSU’s College of Pharmacy spent a year (1990–1991) in the laboratory of Nobel Prize winner Bengt Samuelsson. With Karolinska Institute faculty, Gerwick investigated the biosynthetic pathways that primitive marine plants use to make bioactive compounds related, or in some cases identical, to important classes of human hormones (prostaglandins and leukotrienes). Gerwick obtained federal support for a research program in this area and authored twenty-seven research papers and six review articles on topics directly growing out of these sabbatical investigations (1992–2000). This past summer he co-organized an international meeting in Berlin, Germany, on oxylipins from non-mammals. The perspectives gained from his sabbatical and subsequent research on marine oxylipins has enhanced Gerwick’s teaching of this important area of human biochemistry to professional degree students in Pharmacy.

Gerwick’s current sabbatical will allow him to write a grant application to the National Institutes of Health (NIH) in support of his work in neuropharmacology and marine toxins. He will also complete a book chapter for the *The Alkaloids* series and take a course on *Techniques in Molecular Biology*, an area relatively new to him, but one for which he already has NIH grant support. Gerwick also plans to conduct molecular biology research at the University of Minnesota laboratory of a colleague with whom he has a NIH grant.

broad array of services that are vital to supporting and sustaining the quality and effectiveness of the University and its programs. Faculty members are expected to provide service to the University, its students, clientele, programs, and professional disciplines as collegial and constructive members of the University and the broader community. Examples include service related to faculty governance; academic and student support units; international development; community and state programs; student groups and organizations; department, college, and university committees; and professional organizations and associations.

Faculty Credentials



At OSU, scholarship and creative activity take many forms—contributing to a body of knowledge, developing new technologies, integrating knowledge toward new interpretations and applications, and original creativity in the arts.

OSU faculty members have been educated at a heterogeneous collection of well over 200 academic institutions, public and private, domestic and foreign, including virtually all of the most prestigious institutions in the U.S. (Appendix 4.3). In the 1999–2000 academic year, about 75 percent of instructional faculty held a PhD, first professional, or other terminal degree. Departments are able to attract and retain faculty with appropriate academic backgrounds. Faculty vitas in the notebook exhibits for the departments show that virtually every faculty member teaching in a particular discipline has one or more academic degrees in the same, or a closely related, discipline.

OSU faculty members are at the forefront of research in a wide array of disciplines. Many faculty members are fellows of one or more professional organizations, indicating their stature in terms of professional credentials. Many textbooks, research monographs, research articles, and conference proceedings have been contributed by OSU faculty. Selected examples of these scholarly works over the last five years are listed in Appendix 4.4. In 1998 alone OSU faculty members published twenty-three books and edited eight journals. In 1999, more than thirty patents were filed by OSU faculty members and nine patents were issued. In 1998 and 1999, a total of thirty-five new technology licenses were issued and more than seventy invention disclosures were filed. Other examples of scholarly contributions are prevalent in the notebook exhibits for colleges and departments.

Faculty Participation in Academic Planning, Governance, Curriculum Development, and Advising

OSU has a well-defined system through which faculty participate in the governance of the University. The Faculty Senate is the governing body at OSU, representing faculty in all academic and administrative units. It has legislative responsibility regarding academic policies, educational

standards, curricula and academic programs, academic regulations, and faculty welfare, and it makes recommendations to University administration. The Senate meets monthly during the academic year and includes a total of 132 members. The Faculty Senate Website (osu.orst.edu/dept/senate/) includes meeting agendas and minutes, bylaws, forum papers, a list of officers and members, and information about the Senate's twenty-six standing committees (purpose, agendas, minutes, and membership).

In the 1999–2000 academic year, as part of its business activities, the Faculty Senate:

- Revised the academic regulation regarding student eligibility for participation in intercollegiate athletics.
- Revised academic regulations to clarify when, and under what circumstances, the examination for credit may be used.
- Approved a proposal to decentralize the College of Pharmacy by forming two departments.
- Re-affirmed its support of the guidelines for post-tenure review (see the Periodic Review of Faculty section later in this Standard).
- Passed a resolution that would make the OUS responsible for negotiating the health care benefits package for its member institutions.
- Created a task force that examined models by which salaries could be increased to equal the means of OSU's peer institutions and proposed a model and timeframe to achieve this goal.

The President of the Faculty Senate is a member of the OSU President's Cabinet. The Cabinet meets once a week to consider important University-wide issues and advise OSU's President regarding the development and implementation of strategies and plans.

Faculty participate in a major way in academic planning at the department, college, and University levels. Strategic and long-range plans at both the department and college levels are developed with faculty involvement, and faculty input shapes departmental and college missions and

priorities. Departmental faculty determine entrance criteria for their programs and establish rules in addition to University-wide rules that guide the implementation and successful conduct of those programs. Many faculty members also participate in departmental, college, and University committees. More examples of faculty involvement in academic planning can be seen in the notebook exhibits for the colleges and departments.

Faculty involvement in curriculum and academic program development occurs on the department and college level and is also addressed through the Faculty Senate Curriculum Council. The OSU curriculum and academic program development process, including faculty roles, is discussed in the Curriculum Development Procedures section of Standard 2. Faculty involvement in advising is extensively addressed in the Academic Advising section of Standard 2 and the Student Advising section of Standard 3.

Workloads of Instructional Faculty

The position description for each faculty member includes the approximate percentage of responsibility related to the areas of teaching, advising, and other assigned duties; scholarship and creative activity; and service. Position descriptions vary widely. However, every person at the rank of assistant professor and above must have scholarly activity as part of their position description. This means that tenure-track faculty members are provided with time to pursue research and other scholarly activities.

While the mean student-credit-hour load is not onerous (roughly fifty students per term), some faculty members are responsible for large classes. Professors leading large classes usually have the aid of graduate teaching assistants who teach recitation and laboratory sections, grade homework, and perform other supportive activities. Teaching large classes is considered in establishing workloads, consistent with position descriptions. In some cases, part-time instructors are also used

to alleviate faculty workloads. (Appendix 4.5 details the mean number of student credit hours generated per faculty member in the fall of 1999.)

Like most other state-supported research universities, OSU has its share of large classes. However, hundreds of smaller classes are offered as well.

The distribution of undergraduate classes taught during the fall term of 1999 is illustrated in Appendix 4.6. More than half of the classes had fewer than thirty students, and three-quarters of the classes enrolled fewer than fifty students.



Faculty Development Opportunities

Providing opportunities for faculty development is a high priority of the University. Enriching and advancing faculty skills in teaching, research, advising, and administration are considered to be fundamentally important to the continued excellence of the University.

Seminars, Lectures, Conferences, and Observances

Departmental seminars and lectures presented by visiting scholars, University faculty members, and graduate students enrich the intellectual environment of the department, provide overviews and comprehensive analyses of current topics and techniques in the field, encourage scholarship, and develop instructional skills. In addition, many national and international conferences are scheduled annually on campus and open to faculty participation. A recent example is the Computers and Philosophy Conference co-sponsored by OSU and the American Philosophical Association in January 2001. Cutting-edge science and discussion focused on artificial intelligence, ethics, robotics, and the social and political issues of computing. The conference featured nationally known speakers, and participants included professional philosophers, educators, historians, and social critics.

Funding for faculty development is available from a variety of sources to advance skills in teaching, research, advising, and administration.

Annual University lectures include the Ava Helen Pauling Peace Lecture, the Tom McCall Lecture in Public Affairs, the Condon Lecture Series featuring scientific subjects, the John V. Byrne Lecture Series, the Sigma Xi Research Award Lecture, and the Biology Colloquium which examines a specific and timely biological theme with the participation of leading scientists. The Martin Luther King, Jr. Celebration is a two-day program of activities and events, and Black History Month is

a month-long program of speakers, workshops, films, and related activities. Women's History Month features speakers on women's issues, films, theatrical presentations, and musical performances. (For more information about these and other lectures and observances, see osu.orst.edu/staff/faculty/handbook/uniawa/sannual.htm)

Faculty development and training opportunities also include those offered by Information Services (osu.orst.edu/dept/isteach/isclass/html) and the Office of Human Resources (osu.orst.edu/admin/hr/). Each year, the Office of Academic Affairs presents a workshop for administrators and offers "writing across the curriculum" faculty seminars through the Writing Intensive Curriculum Program. Academic Affairs has recently budgeted for a 0.5 FTE Instructional Development Officer with expertise in instruction and learning to organize workshops, seminars, and other activities for faculty. The Communication Media Center works with faculty in developing, producing, and delivering Web-based courses, but because of budget issues has had to reduce its more expanded training agenda relating to other instructional media and technologies.

Development Grants

Grants for faculty development in research and scholarship are available through several funds and awards. The Research Office works closely with the Research Council to provide grants enabling new faculty members to begin their scholarship activities and experienced faculty members to develop new research ideas. These include the University's **Public Service Institutional Grant** from the National Institutes of Health, with awards up to \$8,000, and the **General Research Fund** from state resources, with awards up to \$4,000.

In addition, the **Faculty Development Fund** for Undergraduate Instruction is used to support the improvement of undergraduate instruction. Priority is given to those projects or activities initiated by tenure-track assistant professors.

Marcus Borg

is an OSU Distinguished Professor in Religion and Culture and the Hundere Endowed Chair in Religious Studies. Known as one of the leading historical Jesus



scholars of this generation, he recently organized and spoke at OSU's nationally televised symposium, *God at 2000*, that included, among several internationally regarded scholars of religion, Nobel Peace Prize Laureate Bishop Desmond Tutu. Two of Borg's nine books have become best-sellers—*Jesus: A New Vision* and *Meeting Jesus Again for the First Time*. He has lectured at the Smithsonian and Chautauqua Institutions and in England, Austria, Germany, Belgium, Hungary, Israel, and South Africa.

An outstanding teacher, Borg has received all of OSU's major awards for teaching and has been recognized by the Oregon State Legislature. The first person in the OSU College of Liberal Arts to be designated as an OSU Distinguished Professor, Borg has twice been president of the CLA Faculty Council. His upper- and lower-division courses include *Great Ideas*, *World-Views and Values in the Bible*, *Philosophy and Religion*, *World-Views and Environmental Values*, and *Great Figures: The Historical Jesus*.

Borg sees philosophy as primarily concerned with the role of ideas in our lives. "Ideas matter much more than we commonly think they do, especially our world-views and values, namely our ideas about what is real and how we are to live," Borg says. "We receive such ideas from our culture as we grow up, and unless we examine them, we will not be free persons, but will to a large extent live out the agenda of our socialization."

Activities eligible for support include projects that promote multicultural understanding and cultural diversity, improve student advising, enhance instructional effectiveness, and promote new techniques of instruction. The **Faculty Productivity Award Loan Fund** makes interest-free loans to departments, individuals, and offices for the purpose of improving instruction and faculty development, and the **L.L. Stewart Faculty Development Award** provides funds to enhance the professional development of individual professors in terms of improving their teaching ability. **Writing Intensive Curriculum Grants** are also available to support the use of writing in instruction and the development of department style guidebooks.

Sabbatical Leaves

Sabbatical leave is granted to tenured faculty of academic rank for the purpose of research, writing, advanced study, travel undertaken for the observation and study of conditions affecting the applicant's field, or related scholarly or professional activities. Since sabbatical leave is considered to be a privilege and not a right, it is granted only when it can be shown that the applicant is capable of using this period in a manner that will provide greater service to the institution and the state.

Sabbatical applications are reviewed and assessed in terms of: (a) the proposed sabbatical activity and its consistency with the applicant's record of instruction and scholarship; (b) the probability that the faculty member, as a result of the sabbatical, will be able to advance the instruction, scholarship, or extended education programs of the department and the University; and (c) available funding for hiring replacement faculty if needed. Information regarding eligibility for sabbatical leave and the application and approval process is included in the *OSU Faculty Handbook* (Exhibit 4.3) and at osu.orst.edu/staff/faculty/handbook/.

Faculty Evaluation and Reviews

OSU has University-wide policies and procedures in place for systematic faculty evaluation and review. These include student and peer evaluations of teaching, periodic reviews, and post-tenure reviews. All are described below; further details can be found in the *OSU Faculty Handbook* (Exhibit 4.3).

Student and Peer Teaching Evaluations

Evaluations of teaching by students and faculty peers provide feedback for faculty members to improve their own teaching. Peer evaluations, arranged with a colleague, include a review of lecture notes, reading materials, and examinations; observation of several class sessions; and a signed written evaluation by the peer. Such evaluations are not required, but are strongly encouraged in some colleges and departments. Implementation of the peer evaluation process is documented in a number of college and departmental notebook exhibits, but the practice is not consistently used in all colleges.

Student evaluations are required every term for each class a faculty member is teaching. Students anonymously fill out evaluation forms (Appendix 4.7) that are collected and tabulated. A copy of the tabulated results must be provided to the faculty member, and a duplicate copy is placed in the faculty member's personnel file. Students might also be asked by deans or department chairs/heads to submit signed letters of evaluation to be used in assessing a faculty member's performance. Unless the faculty member has signed a voluntary waiver of access, (Exhibit 4.4), solicited letters are not considered confidential.

Periodic Review of Faculty (PROF)

Reviews of faculty can improve the quality of the teaching, research, and service functions of the University, as well as assure that faculty members are regularly informed of their status. All OSU faculty with an FTE of 0.5 or more are reviewed peri-



The Ava Helen Pauling Peace Lecture is one of several University lectures that bring leading figures in the humanities, arts, and sciences each year.

The photo of Ava Pauling is courtesy of the Linus Pauling Institute.

odically. Faculty on annual tenure appointments are reviewed annually. Assistant and associate professors on indefinite tenure are reviewed annually during their second through fifth years at OSU and during any period in which they are reviewed intensively for promotion in rank. Otherwise they are reviewed at least once every three years, as are tenured professors and senior instructors. Other faculty on fixed-term appointments are reviewed during their first five years of service, during any period in which they are being reviewed intensively for promotion or advancement, and at least once every three years thereafter. Each school, college, or division annually reports to the Office of Academic Affairs the names of those faculty members being reviewed.

The substance of the review is developed by individual schools, colleges, or divisions, but must follow certain guidelines. In each instance, the evaluation should include a statement of the faculty member's current responsibilities and signed comments from individuals designated by the evaluating unit to assess the faculty member's

progress in teaching and advising, scholarship and creative activity, and service to the University. Sources of information may be current or former students, other faculty members from OSU or elsewhere, professional colleagues, and, if appropriate, members of the public. In all instances, the

evaluation is based only on material that is relevant to the faculty member's profession and the performance of faculty assignments.

A faculty member must have an opportunity to read and initial the evaluation and provide written comments, explanations, or rebuttals that become part of departmental personnel records along with the original evaluation. Disagreements on the contents of the file are handled through normal University appeal procedures (Exhibit 4.3, Grievance Procedures).



Anonymous student evaluations are required every term for each class a faculty member is teaching.

In addition to the annual PROF, some academic units conduct three-year intensive reviews for faculty on annual tenure track appointments. Although the purpose of such a review varies from unit to unit, the primary intent is to review the faculty member's progress toward indefinite tenure. In general, the three-year review is expected to be used as a supplement to the annual review, but not a replacement.

Review of Academic Administrators

OSU policy holds that those responsible for supervising academic administrators provide continuous counsel related to each administrator's effectiveness, making specific suggestions when improvement is needed. In addition, the supervisor is expected to conduct a formal periodic performance evaluation of each administrator at intervals not to exceed five years. No standard procedures for these evaluations have been established since administrative positions vary greatly. However, each evaluation must include opportunities for substantive input from faculty, staff, and students within the unit, as well as individuals and groups both inside and outside the University who are significantly affected by the administrator's performance.

Post-Tenure Reviews

The University provides for post-tenure review of its faculty to recognize and foster excellence, help good faculty members become better, and identify and help underachieving faculty members fulfill the potential that was recognized when they were hired and reaffirmed when tenure was awarded. Post-tenure review guidelines were approved by the Faculty Senate in 1998 and are in various stages of implementation in the colleges and departments (Appendix 4.8).

Under this system of review, outstanding performance by a faculty member is recognized and rewarded. However, if the review process identifies areas in which a faculty member is not fulfilling the expectations of his/her position, a professional development plan is drafted and implemented. The process therefore provides

Balz Frei is a professor of biochemistry and biophysics, as well as Director and Endowed Chair of the Linus Pauling Institute. His research interests focus on understanding the molecular mechanisms of atherosclerosis and cardiovascular disease and how they are modulated by antioxidant intervention. He has published extensively on the role of vitamin C and other dietary antioxidants in health and disease.



The Food and Nutrition Board of the National Academy of Sciences recently increased the recommended daily amounts of antioxidant micronutrients vitamin C and vitamin E. Frei had testified twice before the panel and helped review some of the reports. He issued a statement that the Board's final recommendations did not go far enough. "Studies . . . provide a wealth of evidence," Frei said, "that higher levels of dietary antioxidants could help in the battle against the biggest health threats in America today." Frei also participated in a study published in *Lancet*, which reported that a 500-milligram daily supplement of vitamin C can significantly reduce blood pressure in hypertensive patients.

He has participated on teams of the National Institutes of Health and the American Heart Association, among other organizations. Frei is one of the organizers of an upcoming conference on the relationship between diet and cancer, heart disease, neurodegenerative diseases, and aging.

effective evaluation, useful feedback, appropriate intervention, and timely and affirmative assistance to ensure that every faculty member establishes and maintains a record of professional development and accomplishment during the various phases of his or her career.

At intervals of no longer than five years, in addition to the annual review by the unit head, a peer committee of faculty from the academic unit reviews each tenured faculty member. Faculty members whose performance is deemed excellent are acknowledged by the University and the appropriate academic units through public recognition and remuneration programs established for this purpose. If the peer committee or unit head conclude that a faculty member's record is less than satisfactory, the unit head, in consultation with the peer committee and the faculty member under review, draft a professional development plan. This plan includes definite steps to be taken to remedy the specifically identified deficiencies. A timetable of no longer than three years is provided to accomplish the goals of the plan, with annual monitoring by the unit head and peer

committee to measure progress. The plan specifies the resources to be made available to accomplish the goals, such as support for scholarly professional activities or a program for the improvement of teaching.

In the event of an unsatisfactory annual review and failure to achieve the goals of the development plan, the unit head, in consultation with the peer committee, may recommend redistribution of effort, reassignment within the unit, reduction in salary, or the imposition of sanctions. Sanctions include reduction in rank, reassignment within the institution, or termination of appointment. The review committee forwards the results of its review and the unit's recommendation to the academic supervisor and the Provost for a final decision.

Promotion and Tenure

Promotion and tenure guidelines at OSU were thoroughly reviewed and modified in the mid-1990s, primarily to align them with the expanded definitions of scholarly activity and factors related

to the move of Extension faculty into academic departments. Details relating to the promotion and tenure process are outlined in the *OSU Faculty Handbook* (Exhibit 4.3) and (Appendix 4.9).



A candidate for tenure is reviewed on the basis of teaching performance, scholarly activity, and service to the University and the community.

Reports from the annual Periodic Review of Faculty (PROF), while not included in the candidate's dossier for promotion and tenure, are used by supervisors in tenure units to inform faculty, in a constructive way, of their progress toward promotion and tenure. Tenure resides in the academic unit, which for most faculty is the department. Typically, the department head

or departmental promotion and tenure committee (formed among tenured faculty within the unit) initiates the review in consultation with the candidate. The promotion and tenure committee prepares a dossier that includes, among other materials, an evaluation of the candidate's teaching performance by a committee of students. In most cases, the department head and the promotion and tenure review committee independently evaluate the dossier and make recommendations. If both recommendations are negative, the dossier is not forwarded unless the candidate insists on proceeding or is in the final year of annual tenure. If both recommendations are positive or split, the dossier is forwarded.

The next review is at the college level, where letters of evaluation from the dean and the college promotion and tenure review committee are added to the dossier. The Provost and Executive Vice President is responsible for the final review and decision. Completed dossiers that have received uniformly positive recommendations at the previous levels of review are forwarded to the Provost and Executive Vice President, who assures that University-wide standards have been met. In reaching a final decision, the Provost and Executive Vice President may confer with others as appropriate.

Dossiers that have received mixed recommendations at the unit or college level are further reviewed by the University Administrative

Promotion and Tenure Committee chaired by the Provost and Executive Vice President. The Faculty Senate Promotion and Tenure Committee has access to all dossiers under consideration, and sends representatives to observe the deliberations of the administrative committee to ensure an equitable process for all faculty. In cases where members of the Administrative Promotion and Tenure Committee are divided over the final recommendation, or make a recommendation that differs from the originating unit, the candidate's dean and supervisor are invited for discussion. In instances of a negative decision, the basis for the denial is stated along with information on the right to appeal.

The usual rejection rate is 5 to 10 percent of the dossiers that reach the central administrative level. However, some dossiers are stopped at the department and college levels because of early submission for promotion and tenure, lack of documentation of scholarship and positive impact, and/or insufficient evidence of effectiveness and excellence in teaching, advising, or other identified responsibilities. A summary of promotion and tenure decisions for the past five years are summarized in Exhibit 4.5.

Faculty Salaries

Faculty salaries vary by college as well as rank. The typical professor in the College of Engineering, for example, has a much larger salary than the typical professor in the College of Liberal Arts. The highest mean faculty salaries across all three ranks are in the Colleges of Business, Engineering, and Veterinary Medicine. The mean salaries of OSU faculty by rank and unit/college for the 1998–1999 academic year are presented in Table 4.1.

Salary differences are most significant at the assistant professor level. For assistant professors, the mean salary ranges from \$37,416 (Home Economics and Education) to \$58,678 (Business), a difference of 57 percent. At the associate professor level, the mean salary ranges from \$45,376 (Home

Economics and Education) to \$63,732 (Engineering), a difference of 40 percent, and at the full professor level, the mean salary range is from \$62,693 (Agricultural Sciences) to \$82,929 (Engineering), a difference of 32 percent. Another way of looking at the data is to say that at any particular rank, the difference in mean salary between the college with the highest salaries and the college with the lowest salaries is about \$20,000.

Nationally, faculty salaries showed an average 4.7 percent increase per year from 1989 through 1999. In contrast, OSU salaries increased an average of 3.8 percent a year. As a result, OSU fell 10 percent further behind the national average over the eleven-year period. Comparisons between annual salary increases nationally and at OSU since 1989 are summarized in Table 4.2.

The mean faculty salaries at OSU are significantly below salaries at OSU's peer institutions (Appendix 4.10). This is the case for all faculty ranks except instructors, as shown in Table 4.3 and Figure 4.1.

Faculty salaries received a boost in the 2000–2001 operating budget, which was impacted by a large gain in student enrollment resulting in a 10.3 percent increase over the cost of the continuing

Table 4.2 Faculty Salary Increases, OSU and National Comparison, 1989–1999

Year	National Annual Increase (%)	OSU Annual Increase (%)
1989	7.3	5.0
1990	6.6	7.4
1991	4.3	6.2
1992	3.6	6.2
1993	4.2	0.0
1994	4.6	0.0
1995	4.0	3.0
1996	3.5	6.0
1997	4.3	0.0
1998	4.8	6.0
1999	4.8	2.0
Average	4.7	3.8

Source: OSU Office of Budgets and Institutional Research, 2000

Table 4.1. Mean Salaries of Instructional Faculty by Unit/College and Rank: 1998–1999

Unit/College	Professor	Associate	Assistant
Agricultural Sciences	\$62,693	\$46,551	\$39,913
Business	\$77,778	\$62,455	\$58,678
Engineering	\$82,929	\$63,732	\$53,790
Extension Service ¹	\$64,718	\$49,577	\$40,669
Forestry	\$65,162	\$49,196	\$41,115
Health and Human Performance	\$74,480	\$50,845	\$40,448
Home Economics and Education	\$68,105	\$45,376	\$37,416
Liberal Arts	\$63,447	\$45,831	\$39,564
Oceanic and Atmospheric Sciences	\$71,131	\$53,888	\$42,346
Pharmacy	\$68,942	\$54,763	\$46,752
Science	\$68,530	\$49,911	\$44,052
Veterinary Medicine	\$78,661	\$64,501	\$55,945

¹Extension Service faculty are members of OSU units/colleges, but are funded through the Extension Service budget.

Source: OSU Office of Budgets and Institutional Research, 2000

services level provided the previous year. The budget includes \$3.9 million for faculty salary increases, which translates into the equivalent of a 5.25 percent raise. While the increase was welcome, OSU faculty salaries are still low when compared to peer institutions, and this issue remains a University priority.

Faculty Benefits

Policies and opportunities regarding faculty benefits are clearly stated, widely available, and equitably administered. These include retirement benefits, insurance plans (health, disability, and life), development programs, leave options, and a variety of health and fitness programs. In addition, faculty are eligible to participate in a variety of investment and savings plans. Leaves are offered for development opportunities (including sabbaticals), parental or family medical concerns, military training, and jury duty. Classified and unclassified academic and professional employees working at least half time on appointments of ninety days or longer (or per term for nine-month appointments) are eligible for full benefits. The

Table 4.3 1999-2000 Faculty Salary Data (in thousands) for OSU and its Peer Institutions

Institution	Instructor	Assistant	Associate	Full	Benefits
Colorado State University	–	\$48.5	\$56.4	\$75.8	18%
University of California - Davis	–	\$53.9	\$64.2	\$91.3	28%
North Carolina State	\$38.8	\$53.9	\$62.2	\$85.3	18%
Purdue University	\$28.5	\$51.4	\$60.1	\$86.9	28%
Iowa State University	\$35.7	\$49.9	\$61.9	\$83.2	24%
Michigan State University	\$32.6	\$49.1	\$60.4	\$81.5	29%
Oregon State University	\$32.5	\$46.8	\$53.0	\$70.9	31%
Mean of peer institutions	\$33.9	\$51.1	\$60.8	\$84.0	24.2%
OSU/mean of peers	95.9%	91.6%	87.1%	84.4%	–

Source: OSU Office of Budgets and Institutional Research

OSU Faculty Handbook (Exhibit 4.3) provides an overview of these options and opportunities.

Faculty Involvement in Outside Activities

OSU encourages faculty members to undertake outside activities (not to exceed an average of one day per week) that will increase their effectiveness and broaden their experience in relation to their functions at the University, or which will be of service to the community, private sector, nation, or world. Appropriate involvement includes that in which the cumulative total of outside activities does not substantially interfere with the performance of the faculty member's University duties and is consistent with policies of the faculty member's college, school, or division.

Outside activities must be approved by the department head/chair and dean or dean and Provost and Executive Vice President using the Request for Approval of Outside Employment form (Exhibit 4.6) for consulting, or a memorandum for cases of deeper involvement with commercial enterprises. Faculty members must make it clear to outside employers, colleagues, and audiences that they are acting in an individual capacity and not in the name of the University. Also, faculty members may not use the University name, logo, stationery, property, facilities, equipment, and services for outside work and cannot

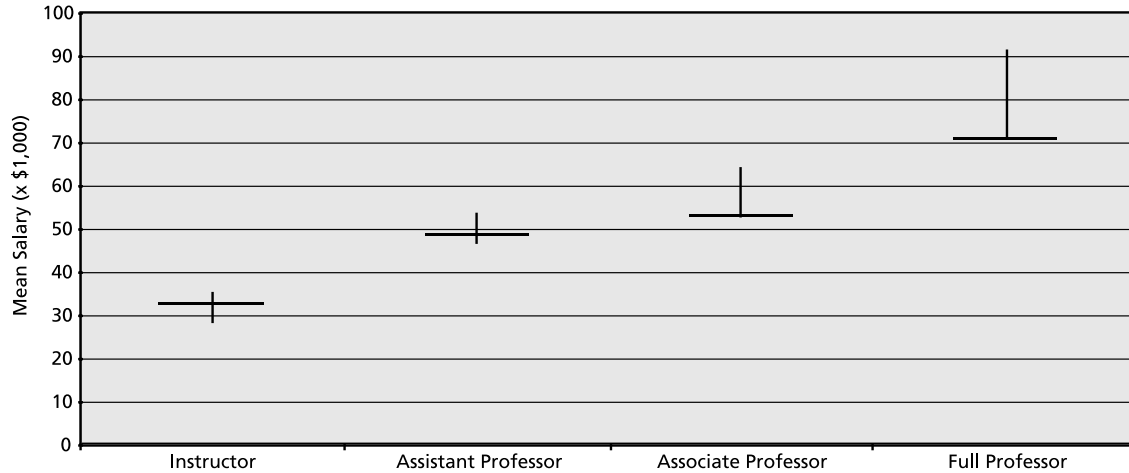
include their University affiliation or telephone number in public documents. (More details are included in the *OSU Faculty Handbook*.)

For part-time faculty members, these restrictions apply only to the times or periods where they are compensated as University employees, except where the use of the University name, property, and equipment is concerned.

Recruitment and Appointment of Faculty

The hiring process for full-time faculty begins at the department level. The department chair/head submits a recruitment plan in the Notification of Academic Position Opening (NAPO) packet (Exhibit 4.7). The recruitment plan includes a position description, a list of search committee members, screening criteria, and a description of how the position will be advertised. OSU expects diverse representation on the search committee and broad advertising of the employment opportunity. The appropriate dean or vice provost approves the NAPO packet and forwards it to the Office of Human Resources (OHR). The OHR either authorizes the search or recommends changes to the NAPO packet. It also communicates to the department whether there is an under-representation of women and/or people of color in the unit for that job category. A request for a waiver of search is reviewed by the Office of

Figure 4.1 Mean Salary at OSU vs. Peer Institutions by Rank: 1998–1999



Note: Base line illustrates the mean salary for OSU, while the vertical line illustrates the salary range of OSU's peers.

Source: OSU Office of Budgets and Institutional Research, 2000

Affirmative Action and Equal Opportunity for appropriateness.

The department advertises for the open position and examines the applications received.

Information about the candidate pool and the selected interviewees are then forwarded to the OHR, which assesses the overall diversity of the pool and the reasons given if any members of under-represented groups were screened out. The OHR must give approval before the department can interview the top candidates. After the department has selected their top candidate, the Proposal for Academic Appointment packet (Exhibit 4.8) is submitted to OHR for review. Approval of both the OAAEO and the Office of Academic Affairs is required before the department can make a formal offer of employment.

Part-time instructors play a particularly important role in departments experiencing rapidly rising enrollments. They represent about 8.2 percent of the total instructional faculty at OSU and generate 12.2 percent of the student credit hours.

About 28.6 percent of the part-time faculty hold a PhD, 52.1 percent have a master's degree, and the remaining 19.3 percent have a bachelor's degree. Most also have invaluable professional experience to share with students. The level of part-time and

adjunct faculty is assessed each year to ensure that there is not an over-reliance to the detriment of the University or its mission and goals.

Many departments maintain an instructor pool from which they draw part-time faculty. Any department may advertise for applicants to its instructor pool by submitting to the Office of Human Resources a NAPO packet documenting an open advertisement process. The packet is active for twelve months. Before hiring a candidate from the instructor pool, departments must detail to the OAAEO reasons why women and/or persons of color were screened out if this occurred. Renewals and extensions of part-time instructors are approved indefinitely as long as they continue to work without a break in service of two years or more. In cases of such a break, candidates must reapply to be considered along with other candidates.

Offer letters are sent to the successful candidates to inform them of their position description, work assignment, and conditions of employment. Human Resources conducts two orientation sessions a month to introduce new employees to the benefits provided by OSU. The *OSU Faculty Handbook* (Exhibit 4.3) outlines their rights and responsibilities as faculty members.

Academic Freedom

Academic freedom for OSU faculty is protected by the *Oregon Administrative Rules* (OAR 580-22-005) and by OSU. This issue is discussed in the Academic Freedom section of Standard 9, which also includes the text of OSU's academic freedom statement appearing in the *OSU Faculty Handbook* (Exhibit 4.3).

Scholarship, Research, and Artistic Creation

A consistent expectation concerning scholarship, research, and artistic creation begins with the OSU mission statement and flows through the college mission statements, the *OSU Faculty Handbook*, and promotion and tenure guidelines. In each document, there is a clear expectation for faculty to engage in scholarship, research, and artistic creation, as is appropriate to their discipline. This expectation is inextricably linked to the University's educational mission and to the

resulting benefits within the state and beyond its borders.

The mission statement clearly identifies that "Oregon State University aspires to stimulate a lasting attitude of inquiry, openness and social responsibility. To meet these aspirations, we are

committed to providing excellent academic programs, educational experiences and creative scholarship." The mission statements of all OSU colleges echo these concepts and commitments (see the college notebooks and Appendix 4.11). The *OSU Faculty Handbook* states that "All Oregon State University faculty in the professorial ranks have a responsibility to engage in scholarship and creative activity." These expectations are followed up in the promotion and tenure process, where

criteria include "achievement in scholarship and creative activity that establishes the individual as a significant contributor to the field or profession, with potential for distinction" (promotion from assistant to associate professor) and "distinction in scholarship, as evident in the candidate's wide recognition and significant contributions to the field or profession" (promotion to professor).

The following sections explore OSU's commitment to scholarship, research, and artistic creation in terms of supporting policies and practices, research and scholarship agendas, sponsored research and programs, and resources provided by the University.

Policies and Practices

Nearly all of the University's policies specifically addressing scholarship, research, and artistic creation relate to various aspects of research activity. The Vice Provost for Research and the Director of Sponsored Programs coordinate compliance and policies relating to these areas, in some cases sharing coordination with others also concerned with safety, regulatory, and ethical considerations and having other institutional reporting lines (see Figure 4.2). Policies and procedures are made available across the University through various means of distribution (Appendix 4.12). The Vice Provost for Research is ultimately responsible for the oversight of such policies and practices. The Director of Sponsored Programs makes recommendations to the Vice Provost regarding policies and practices for sponsored programs, and sees that they are implemented. All policies and practices are closely coordinated with Research Accounting, which reports to the Vice President for Finance and Administration.

The shared governance of the University extends to the development and administration of research policies and practices. A number of policies are related to regulatory and compliance mandates and are dictated by external sources. Even so, faculty members play a central role in their development and administration. The Vice



The University has a clear expectation for faculty to engage in scholarship, research, or artistic creation and provides policies and resources that support these efforts.

Provost for Research utilizes an Advisory Board (consisting of fifteen faculty from various academic and administrative units), which provides regular communication on research issues and broadly represents faculty interests across the University. In addition, faculty committees appointed by the Vice Provost oversee many policies and practices pertaining to safety, regulatory, and ethical issues in their area of responsibility, and also write recommendations for consideration by the Vice Provost and the Advisory Board. All University faculty have the opportunity to become part of these committees through an annual joint solicitation by the Faculty Senate and Academic Affairs. Committee size varies from six to ten faculty members typically appointed to three-year terms. The breadth of faculty involvement by academic department is illustrated in Appendix 4.13.

Faculty members may provide input to any of the committee and advisory board members, but they

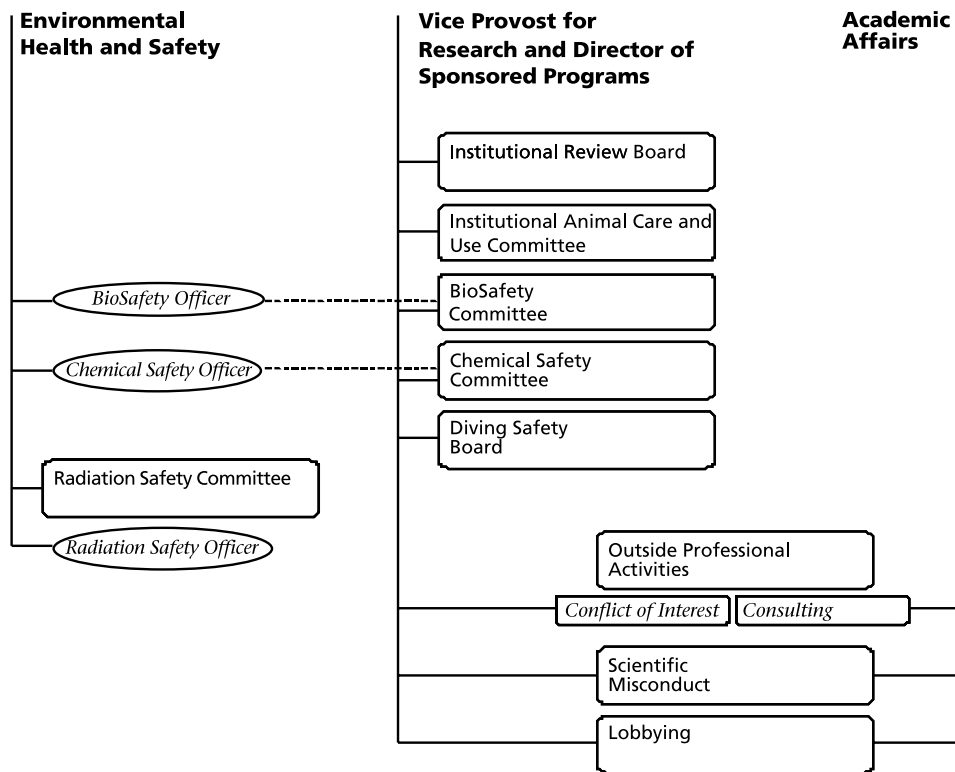
Jane Lubchenco and Bruce Menge,

co-holders of the OSU Wayne and Gladys Valley Chair of Marine Biology, have initiated a study of the 1,200 miles nearshore from Oregon to Southern California. They head



the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO), bringing together leading centers of marine science research—OSU, Stanford, and the Universities of California at Santa Cruz and Santa Barbara. PISCO researchers have begun coordinated studies of coastal ecosystems by conducting monitoring, experimental research, interdisciplinary training, student education, and public outreach. The program received a five-year, \$17.7 million grant, the largest ever to a university from the David and Lucile Packard Foundation.

Figure 4.2 Reporting Lines for Safety, Compliance, Regulatory, and Ethics Committee



Source: OSU Office of Research

also have other avenues of communication. They may approach issues through meetings of their departmental structure or through the Faculty Senate or various Senate committees. Department chairs relate directly to their dean, and deans may provide input directly to the Vice Provost for Research or at meetings of the Provost's Council. Those faculty members connected to research centers, institutes, or programs may address policies and practices through those units' scientific or administrative advisory boards or with the unit director.

In an effort to better communicate OSU research policies and other pertinent information related to proposal development, a series of informational workshops and seminars has been designed for faculty members submitting proposals for external funding. In addition, a new "sponsored programs operational package", featuring an overview of sponsored program policies, procedures, rates, and changes, is being disseminated to faculty online and in other venues.

Research policies and procedures are widely accessible through the *OSU Faculty Handbook* (Exhibit 4.3), the *Research Handbook* (Exhibit 4.9), the

Human Subjects Handbook (Exhibit 4.10), and various approval forms, all of which are available online (see osu.orst.edu/research for details). Specific policies include those relating to drug-free workplace status, lobbying activities, scientific and scholarly misconduct, conflict of interest, regulatory compliance and research responsibilities, various safety factors (chemical, radiation, diving, and biosafety), the care and use of laboratory animals, and the use of human subjects in research. OSU complies with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals, Public Law 99-158, as well as the regulations of the Department of Health and Human Services for the protection of human subjects involved in research (45 CFR 46 as amended and published in the *Federal Register* on January 26, 1981, March 8, 1983, and June 18, 1991). The OSU Institutional Review Board for the Protection of Human Subjects is charged with the responsibility of reviewing, prior to initiation, all research (including interviews, surveys, and questionnaires) involving human subjects regardless of the source of funding.

Research and Scholarship Agendas

OSU is in the process of building a multidisciplinary, multi-investigator, multi-institutional approach to research and scholarship. Its research and scholarly enterprise has particular clusters of excellence in high technology; natural resources and the environment; health and biotechnology; education and training; and in the arts, humanities, and science. Examples from each of these areas include the following:

- **High Technology.** Multidisciplinary research is "hot" at OSU in electroluminescence (EL) for flat-panel display applications. With potential for durable, reliable, high-definition applications such as high resolution TV, automobile instrument panels, and virtual reality devices, this technology could become a major growth industry. OSU scientists are part of a Phosphor Technology Center of Excellence supported by the Defense Advanced Research Projects



Leonard Friedman earned his PhD in 1991 from the University of Southern California's School of Public Administration. His research explores the mechanisms by which acute care hospitals choose to acquire certain high technology medication innovations. This narrow focus expands to take in the concepts of hospital-physician relationships, strategy development, and cost containment mechanisms.

He teaches undergraduate and graduate courses in health care administration and management, strategic management, health care law and regulation, health information systems, human resource management, organization theory and behavior, and managed care.

Friedman currently serves as chair of the Faculty Senate Curriculum Council, which reviews University curricula in an effort to implement the long-range educational mission of the University.

Agency, and are also collaborating with Planar Systems, an Oregon firm that is a world leader in the field. Recently, Doug Keszler, Chemistry, and John Wager, Engineering, achieved unprecedented efficiency in a new AC voltage EL phosphor. Other breakthroughs have been demonstrated by Janet Tate, Physics. These scientists, along with Art Sleight, Chemistry, are also pursuing the development of an EL in which light is induced by DC voltage excitation. This involves a newly discovered material with potential for see-through electronic and optoelectronic applications.

■ **Natural Resources and the Environment.** The Coastal Landscape Analysis and Modeling Study (CLAMS) uses satellite imagery plus a braintrust of experts in everything from geography to the social sciences to visualize various landscape scenarios. "CLAMS enables us at last to think of the entire landscape," says Norm Johnson, Forest Resources, "and to consider how our actions will affect it." With a comprehensive view of vegetation, biodiversity, habitat, and human activity the team can help federal land managers, watershed councils, cities, counties, and landowners compare alternatives and work toward common ground. This project, involving the OSU College of Forestry, the Oregon Department of Forestry, and the U.S. Forest Service, may have impact far beyond the state.

■ **Health and Biotechnology.** An OSU collaboration is leading toward important technologies for the prevention and treatment of infectious diseases. In 1998, Dennis Hruby, Microbiology, helped found a Corvallis laboratory (SRL; SIGA Research Laboratories) where New York-based SIGA Technologies, Inc., collaborates with OSU faculty. The National Institutes of Health (NIH) has funded four Small Business Innovative Research grants at the lab, totaling more than \$600,000. Included is a prestigious SBIR-AT-NIAID for research towards a strep throat vaccine. One SRL vaccine is in FDA-approved Phase I clinical trials at the Maryland vaccine center. Also, in response to the growing threat of bioterrorism, NIH has just invested \$500,000 in a joint collaboration between OSU and SRL to



Mario Magaña, entered OSU nine years ago knowing little English. He has since earned BS and MS degrees and now is an assistant professor working in the Extension Service 4-H Youth Development program. Magaña is currently responsible for an innovative initiative to start Spanish-speaking 4-H clubs in Morrow and Umatilla counties.

His position was created as a result of cooperative efforts between the OSU Extension Service and the OSU Diversity Initiative.

In six months, Magaña has enrolled more than 200 Hispanic youth in a wide variety of activities ranging from soccer clubs to computer clubs. In addition, he has recruited and trained Hispanic adults to serve as program volunteers. All the clubs, including soccer, provide a platform for learning life skills, staying in school, and pursuing further education. Magaña's goal is to see Hispanics, Anglos, and Native Americans working together. Through education he hopes to reduce prejudice. "It's a lack of knowledge and understanding," Magaña says, "and a matter of getting to know each other."

develop new antiviral drugs. SIGA and Hruby have filed nine patents in the last three years. The relationship between SIGA and OSU speeds the development of health technologies, opens opportunities for OSU students and graduates, and is expected to attract more industry to Oregon.

■ **Education and Training.** OSU School of Education faculty, led by George Copa, are active in two consortia with other universities working to improve career and technical education programs in K-12 schools and community and technical colleges across the country. One group will operate the National Center for Research, the other the National Center for Dissemination, in Career and Technical Education. Initiatives include meeting challenging academic and technical education standards, more closely linking secondary and postsecondary levels of technical education, and increasing responsiveness to students with special learning needs. The consortia competitively won the appointments by the U.S. Department of Education. The five-year funding agreement for the two centers totals about \$22.5 million.

- **Arts, Humanities, and Science.** Environmental toxins can cause impairment of neurons for months after a person has been exposed to them. Philip McFadden, Biochemistry and



High technology has become a major focus of multidisciplinary research, involving Materials Science, Chemistry, Electrical and Computer Engineering, and Physics departments.

Biophysics, is discovering exactly how such toxins cause natural color changes in fish, amphibians, and reptiles. His work is providing keys to measuring neurotoxins quickly, before they can harm the nervous system. The fundamental mechanism of the color changes, McFadden has found, is conceptually similar to color changes on a computer monitor, with single living cells functioning like pixels. The “video signal” that causes changes in the intensity of these living pixels is, in fact, the changing mixture of neurotransmitters and hormones that originate from nerve endings and blood capillaries in the skin. McFadden’s lab has built and is refining a biosensor device to measure such toxins. He is also focusing on how fish scales function as optical sensors for nerve gas exposure.

Many other OSU scholars are pursuing additional research interests that may involve efforts that are smaller in scale, but not of lesser importance. The descriptions of colleges and departments in Standard 2 include many indications of specific research strengths in these units. A summary of the research missions and activities of each OSU

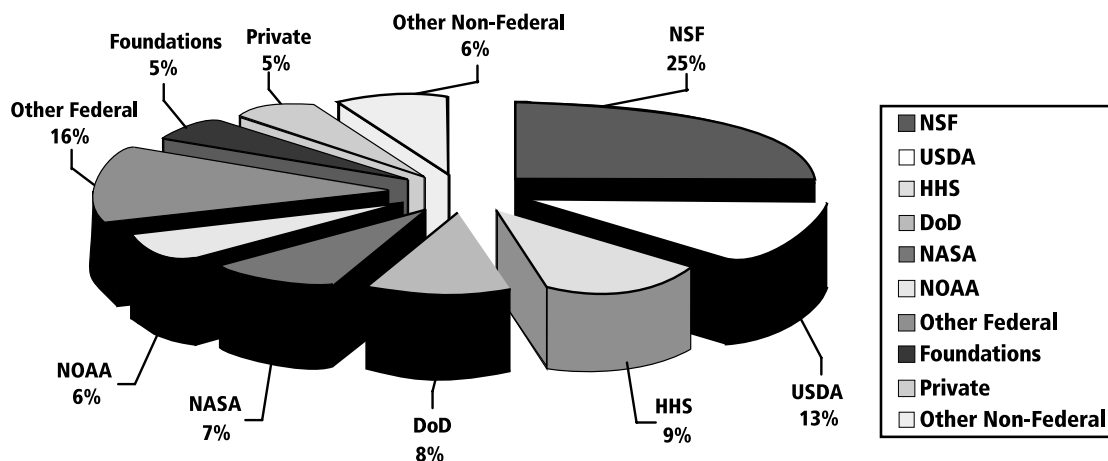
research unit (colleges, departments, programs, centers, and institutes) is available online (osu.orst.edu/research/SummDoc/TOC.html).

Sponsored Research and Programs

During the past ten years, the number of research awards received by OSU has increased by 21 percent, while the dollar amount of the awards has increased by 32 percent. In FY 1990, OSU had 1,349 awards totaling \$80,651,983, while in FY 2000 the comparable figures were 1,635 awards totaling \$106,289,969 (Table 4.4). Dollars awarded in FY 2000 represent a variety of sources, but are dominated by federal funding agencies (Figure 4.3). Success in the federal arena reflects the quality of OSU faculty ability to compete successfully in the peer review process, as well as the University’s position as a land-grant, sea-grant, and space-grant institution.

Another way to look at research dollars is in terms of expenditure data. These data reflect current activity, while award data indicate future activity. OSU expenditure data for sponsored projects grew steadily from FY 1991 through FY 1998, then experienced a small decline during the last two years (see Table 4.5). Overall, the ten-year period reflects a 28 percent increase in sponsored program expenditures.

Figure 4.3 Percentage of Total Awards by Funding Source, FY 2000



Source: OSU Office of Research, 2000

Table 4.4 OSU Research and Scholarly Activity: FY 1996 to FY 2000

Academic Units	FY 1995-1996		FY 1996-1997		FY 1997-1998		FY 1998-1999		FY 1999-2000	
	Awards	Amount	Awards	Amount	Awards	Amount	Awards	Amount	Awards	Amount
Agricultural Sciences	453	\$19,516,526	386	\$18,304,734	482	\$23,312,578	388	\$19,262,569	417	\$18,673,766
Business	0	\$0	0	\$0	0	\$0	0	\$0	0	\$0
Engineering	167	\$9,224,741	182	\$10,127,021	232	\$11,809,734	199	\$10,774,154	200	\$11,443,905
Forestry	196	\$16,371,908	196	\$10,742,416	165	\$15,088,432	132	\$8,674,237	152	\$10,668,272
Graduate School	9	\$188,023	10	\$208,000	5	\$123,500	10	\$254,000	13	\$313,000
Health and Human Performance	17	\$872,082	19	\$366,995	31	\$1,501,419	23	\$1,701,144	39	\$2,526,189
Home Economics and Education	10	\$854,107	17	\$1,026,065	53	\$1,972,229	35	\$1,090,496	49	\$2,029,211
Liberal Arts	11	\$173,492	14	\$474,840	14	\$446,560	15	\$489,707	15	\$355,145
Oceanic and Atmospheric Sciences	191	\$21,933,823	215	\$19,803,927	227	\$21,224,226	267	\$23,421,314	244	\$26,410,870
Pharmacy	21	\$926,492	21	\$1,542,121	18	\$1,418,603	10	\$826,663	20	\$1,751,340
School of Education	17	\$364,337	8	\$168,200	9	\$203,276	7	\$548,875	16	\$1,143,888
Science	243	\$12,140,389	235	\$11,664,559	213	\$12,230,458	209	\$30,473,697	209	\$13,901,942
Veterinary Medicine	2	\$31,883	7	\$168,105	9	\$137,217	13	\$442,241	18	\$279,082
Agricultural Experiment Station	137	\$2,103,529	97	\$2,567,832	103	\$3,352,032	74	\$1,918,023	105	\$2,830,532
Administrative Units	13	\$998,445	12	\$961,941	14	\$871,723	17	\$1,023,664	14	\$1,745,780
Extension Service	69	\$3,528,424	66	\$4,909,039	23	\$2,604,512	11	\$1,213,525	9	\$658,021
International Programs	23	\$11,374,787	27	\$7,911,737	22	\$7,635,553	32	\$6,254,647	11	\$678,885
Research Centers/Institutes	88	\$8,398,303	74	\$8,980,339	74	\$8,765,284	80	\$9,168,595	94	\$9,073,032
Distance and Continuing Education	0	\$0	0	\$0	1	\$30,000	0	\$0	10	\$1,786,109
Total	1667	\$109,001,291	1586	\$99,927,871	1695	\$112,727,336	1522	\$117,537,551	1635	\$106,268,969

Source: OSU Office of Research, 2000



Alix Gitelman completed her PhD in Statistics from Carnegie Mellon University in 1999 and joined OSU a few months later. Her position description includes teaching, statistical consulting with OSU's Agricultural Experiment Stations, and research. Her research interests are in the area of causal inference and applied Bayesian methods and applications of environmental, biomedical, and educational statistics.

Nationally, OSU's ranking in research and development expenditures over the last seven years has ranged from fifty-sixth to sixty-fifth out of more than 500 institutions (Table 4.6). Data for the last three years show some shifting in the ranking while earlier years reflect a more consistent ranking. This same pattern appears when OSU is ranked among public universities and land-grant universities. Although OSU has substantially increased its project expenditures throughout the years, it appears that other universities have also done so.

Resources Provided by the University

Consistent with its mission and goals, the institution provides appropriate administrative, financial, physical, and informational resources for scholarship, research, and artistic creation. These are discussed below, as well as extensively addressed in the exhibit notebook for the OSU Research Office.

Financial Resources

Financial contributions are appropriated by OSU for the purpose of promoting and enhancing research at all levels of the University. OSU has a

number of pools of discretionary funds used to support and promote the University's research enterprise, the primary source being grant and contract indirect cost recovery (ICR). In addition, the central administration at OSU has access to support provided by gifts and bequests made available through the Oregon State University Foundation, Inc. Although these tend to involve smaller amounts of money that specify a particular area of application, they are nevertheless a valuable contribution. The following programs are supported by discretionary funds and managed by the University's Research Office:

- **The General Research Fund.** GRF funds are awarded to faculty for research that is not otherwise supported by organized or directed programs. Awards are made to enable faculty to carry out scholarly, creative work that should lead to the pursuit of other funding sources. Funds have been used to support pilot research, emerging research opportunities, new research fields, developing research laboratories, and centrally-shared research resources.
- **The Research Equipment Reserve Fund.** RERF funds are used to acquire, repair, renovate, or improve equipment directly used for research. "Equipment" is defined as an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost of at least \$5,000. Personal computers are excluded from consideration. Proposal review criteria include a consideration of the ability to leverage new or additional external funding opportunities.
- **Start-up and Matching Funds.** The central administration routinely attempts to contribute as much as one-third of the total funds required for new faculty start-up packages. In some cases the University's contribution is

Table 4.5 Sponsored Project Expenditures, FY 1991 to FY 2000 (Dollars in Thousands)

FY 91	FY 92	FY 93	FY 94	FY 95 ¹	FY 96	FY 97	FY 98	FY 99	FY 00
\$79,403	\$84,208	\$103,637	\$107,650	—	\$99,959	\$103,639	\$112,249	\$104,581	\$101,866

¹Data not available

Source: OSU Office of Research, 2000

Table 4.6 Total Research and Development Expenditures at Universities and Colleges, Oregon State University National Ranking: FY 1991 to FY 1998

Fiscal Year	A OSU Ranking With All Institutions ¹	B OSU Ranking With All Public Institutions ²	C OSU Ranking With All Land-Grant Universities ³
1998	65	45	30
1997	63	41	28
1996	56	35	27
1995	60	38	27
1994	60	38	28
1993	60	39	28
1992	58	38	27
1991	60	39	28
n=	547	154	88

¹ Includes 547 public and private institutions.

² Includes only those public colleges and universities ranking in the top 180 of the institutions reported in column A.

³ NSF data was displayed by separate institution. Land grant universities encompasses multiple campuses within same university system. OSU ranking occurred with each institution listed in the NSF data and therefore the total number appears greater than the actual number.

Source: National Science Foundation

higher, sometimes as much as one-half of a requested package. Matching funds for external, competitive equipment grants are also drawn from this fund, although the OSU receiving unit (college or department) also contributes toward the cost.

- **Faculty Release Time.** Limited support is available for tenure-track faculty to be released from one course in one term to develop a research proposal. The amount of funding is based on the replacement cost needed to teach the course, rather than on the awardee's salary. Preference is given to newer and more junior faculty and to those applications that describe incisive, innovative research questions with a strong likelihood of funding. However, senior faculty are also eligible, especially if the proposal to be developed represents a change in direction for the faculty member's research or scholarship.
- **The Major Initiative Program Fund.** This fund is intended to provide incentive for faculty to develop major research initiatives. Proposed initiatives should build on existing strengths within the University, significantly add to the research infrastructure, and enhance the visi-

bility of OSU's research programs both within the state and nationally. Each year \$25,000 is awarded to support one major research initiative.

- **The Kelley Family Fund.** In 1999 the Kelley Family donated \$500,000 to be dispersed in \$100,000 increments over a five-year period. The gift is to be used to acquire or improve equipment directly used for materials science research. A minimum match of a dollar-for-dollar is required. The Research Office contributes up to half of the required sum, with a maximum of \$50,000. The balance must be derived from the department, college, or other funds.
- **The Undergraduate Research, Innovation, Scholarship and Creativity Program.** URISC is designed to increase the level of undergraduate student participation in research endeavors. Other goals are to encourage faculty to accept students as valuable contributors to research efforts and to seek out and develop innovative models for supporting multidisciplinary scholarship students from all academic backgrounds. Within the next several funding cycles, the



Among the courses taught by **Dawn Wright**, OSU associate professor of geosciences and leading expert in the evolving field of geographic information science (GIS), is an internet-based virtual GIS seminar simultaneously connecting universities across the nation. Wright is considered such a dynamic teacher and role model that she is currently featured on "Remarkable Careers in Oceanography," a National Science Foundation Internet series designed to encourage children, especially girls, to pursue careers in science (wexo.who.edu/default.htm).

"Deepsea Dawn" brings to the classroom her enthusiasm for the seafloor "plumbing systems" that provide important clues to the nature of volcanic eruptions and the birth and death of hydrothermal vents. Her research encompasses spatial analysis, marine geography, dynamic geology of mid-ocean ridges, and high-resolution video and photographic image interpretation and processing. Wright is currently developing the Digital Geospatial Data Clearinghouse for the Oregon Coast. She edited the book, *Marine and Coastal Geographical Information Systems*, and is now at work on *Undersea with GIS*. She shares her discoveries from numerous research cruises, including trips on the submersible ALVIN, with her students. As a former technician with the Ocean Drilling Program, she can even tell students what it is like to wrestle with heavy equipment on a heaving ship in the open sea.

University has a goal of involving a quarter of all registered undergraduates in this program.

- **The D.B. DeLoach Undergraduate Research Fund.** This fund is in the form of OSU Foundation grants to support undergraduate research, projects, theses, and other creative work. Funds are to be used to purchase or rent required equipment and supplies, and generally may not be used for travel expenses. Students are ordinarily limited to a single DeLoach award during their academic career at OSU.
- **The Richard Chambers Undergraduate Environmental Research Fund.** Undergraduates are invited to submit applications for \$500 environmental research grants. Grants are intended to foster projects or research in applied environmental enhancement and/or conservation involving the preservation or betterment of Oregon's wilderness, natural resources, or quality of life.

Another form of financial support provided to faculty by the University involves intellectual property and the transfer of university-generated technologies. The Bayh-Dole Act of 1980 permits universities to own inventions developed by faculty and staff who have conducted research under

U.S. government sponsorship. The University is also permitted to transfer ownership of inventions to its inventors. University administration encourages OSU researchers to consider the commercial applications of their research and to disclose potential inventions and new software. The potential benefits to the community, state, nation, researchers, and OSU are undeniably valuable. OSU has one of the most liberal royalty distribution policies in the nation (Exhibit 4.11), and also provides support for patent awards and maintenance. If an invention is to be protected and promoted by OSU, the University will administer patent activity and, if appropriate, pay for initial patent costs and promotion. In some cases, the department, school, or college may share in patent costs. The University will perform the majority of the marketing and patenting function, including payment of all patent maintenance fees. In addition, all financial costs incurred by the inventor to move these processes forward, including all attorney and legal fees, are covered by the University's Technology Transfer Office.

Physical Resources

Building Use Credits (BUC) are derived as a fixed percentage (4.3 percent) of the Indirect Cost

Recovery and set aside for improvements to facilities that directly or indirectly support research. The majority of BUC are returned to the colleges-of-origin to be distributed by the deans to address their most pressing needs. A small portion of the BUCs are held at the levels of the Vice President for Finance and Administration and the Vice Provost for Research to be distributed on an emergency basis, or to departments that do not have sufficient project volume to support reconstruction needs.

Various campus buildings provide meeting facilities to support faculty efforts in scholarly, research, and artistic creation, or other efforts related to professional responsibilities. The **LaSells Stewart Center** provides low-cost, year-round meeting and conference facilities to the University community. Satellite reception and transmission and a wide variety of audiovisual equipment is available, and meeting rooms are wired for computer use. The **CH2M HILL Alumni Center** is a 45,000-square-foot campus facility that can accommodate everything from large conferences to small meetings, as well as banquets and receptions. Meeting rooms have state-of-the-art multimedia presentation systems and teleconferencing facilities.

The **OSU Memorial Union** is the community center of campus activities. Meeting and conference facilities, as well as a variety of audiovisual equipment, are available for use by the University community. The **Valley Library** provides private study rooms (carrels) on a first-come, first-served basis for faculty members and PhD candidates.

The **OSU Portland Center** is the home for OSU services in the Portland metropolitan area. The Center functions as a base for maintaining working relationships with the state's agricultural, forestry, and high-technology industries and strengthening OSU's leadership in international trade and development. The Center provides office space as well as rooms for meetings and small group activities.

The **Hatfield Marine Science Center** (HMSC) is a research and teaching facility located in

Newport on the Yaquina Bay estuary near the open waters of the Pacific. It has an integral role as a laboratory facility serving resident scientists, a base for far-ranging oceanographic studies, and a classroom for students. The Center is well equipped with specialized instruments, constant temperature rooms, computer equipment, and wet laboratories with running fresh and sea water. Housing is available at the Center for students and visiting researchers.

Research Centers

OSU facilities include more than twenty programs, centers, and institutes that support research and scholarly activity. With some exceptions, these resources enable faculty to share specialized state-of-the-art core facilities, collaborate across disciplines, host national and international conferences, and generally extend opportunities for engagement in scholarship and research. Selected facilities are featured below. A complete list of research facilities, units, centers, consortia, institutes, and collaborations appears in Appendix 4.14.

The **Agricultural Experiment Station** is the principal agricultural research agency in the state. Its mission is to conduct research and demonstrations in the agricultural, biological, social, and environmental sciences that contribute to the economic and social welfare of Oregon. Facilities include the central station in Corvallis and eleven branch stations located in the major crop and climate areas of the state. The Agricultural Experiment Station carries out its research in some 300 projects that offer economic, social, and environmental benefits for Oregonians.

The **Forest Research Laboratory** is Oregon's forestry research agency. Established by the Oregon Legislature in 1941, the program is supported by state and federal appropriations and by research grants from public and private sources. In addition to research in campus laboratories



Environmental toxins in fish are being traced and measured using a biosensor device created as part of a research project in Biochemistry and Biophysics.

and University forests, studies are conducted cooperatively in public and private forests throughout the state. The Laboratory's program is designed to provide information enabling wiser public and private decisions concerning the management and use of Oregon's forest resources and the operation of the state's wood-using industries.

The **Radiation Center** is a campus-wide instructional and research facility. Staff members provide a wide variety of services related to the use of radiation and radioactive materials, including instruction, consultation, and safety evaluations. In addition, the Center provides direct support and assistance for teaching and research. The Center also accommodates instructional and nuclear research and development programs requested by other universities, federal and state agencies, and industrial organizations.

The **Herbarium** provides the principal training ground for OSU students in plant systematics and serves as a source of information and specimens for researchers at OSU and other institutions. Herbarium staff identify plant specimens as a public service, answer inquiries about plants of the Pacific Northwest, advise on floristic surveys of important natural areas, and provide information on human-related concerns such as weeds,

edible plants, poisonous plants, wildlife food plants, anthropological materials, wildflowers, and cultivated plants. The Herbarium also serves as a repository for plant collections made by other state agencies.

The **Center for Gene Research and Biotechnology** (CGRB) is concerned with the development of knowledge and its application to organismal, cellular, and molecular levels of living systems. The Center acts as an administrative unit for the creation of flexible alliances of faculty to address opportunities related to biotechnology, including training grants, industrial contracts, and foundation support. It also assists other OSU units in transferring technology between the faculty and the industrial center. The CGRB operates a Central Services Laboratory, an important research facility for all members of the CGRB as well as other OSU researchers.

The **Marine/Freshwater Biomedical Sciences Center** promotes research and training activities that use aquatic research models to investigate environmentally related human diseases. Center activities include a pilot project support mechanism for feasibility studies, support of an aquatic research core facility and a molecular structure core facility, a seminar series, regularly scheduled research meetings and conferences, and a community outreach and education program.

The **Environmental Health Sciences Center** was established in 1967 with funding by the National Institute of Environmental Health Sciences. It provides resources for coordinating and stimulating interdisciplinary research and training related to the effects of environmental factors on human health. Academic areas include environmental and molecular toxicology, chemistry, biochemistry and biophysics, toxicology, molecular biology, food science and technology, fisheries and wildlife, veterinary medicine, pharmacology, zoology, and statistics. The Center's visiting scientists program complements research expertise in these areas.

Marjorie Sandor earned her MFA in Creative Writing from the University of Iowa in 1984. Her areas of specialization are short story writing and analysis of form of short stories. Her work was cited in Best American Short Stories' 100 best stories of the year in both 1997 and 1999, and one of her essays was cited in Best American Essays' 100 best essays of 1998.

Her story collection, *Portrait of My Mother, Who Posed Nude in Wartime*, won the 1998 Rona Jaffe Foundation Award for Women Writers. The OSU chapter of the Mortar Board National Senior Honor Society named her a "Top Prof" in 1998. She joined OSU as an assistant professor in 1994 and was promoted to associate professor and granted tenure in 1999.



The **Center for the Humanities** is primarily concerned with advancing interdisciplinary humanities research and improving the quality of humanities research and teaching at OSU. It hosts visiting scholars and OSU resident fellows engaged in research, and sponsors or co-sponsors research conferences, seminars, and numerous public programs. The Center also maintains an undergraduate certificate program in Twentieth Century Studies, developed during its early years.

The **Linus Pauling Institute** was moved to OSU in 1996 and is primarily supported by gifts from individuals, private corporations, and foundations. OSU provides laboratory/office space and some faculty salary support. The Institute's mission is to determine the function and role of the micronutrients, phytochemicals, and microconstituents of food in promoting health and treating disease, and to advance knowledge in areas that were of interest to Pauling, an OSU graduate.

The **Center for Advanced Materials Research** was established to strengthen research and education in the properties, synthesis, and understanding of new materials, with special emphasis on materials of importance to Oregon's economy. It is an interdisciplinary program spanning nine departments in the Colleges of Engineering, Forestry, and Science.

The **Center for Salmon Disease Research** has trained many of the nation's professional fish pathologists and fish health researchers, developed vaccines and diagnostic tests that are routinely used for cultured and wild stocks of fish, and provided a wealth of knowledge on the pathogenic mechanisms and epidemiology of most of the serious salmonid diseases in the world. The Center was established in 1994 as a multidisciplinary unit to recognize this group as a research and educational center within OSU and the Oregon University System.

The **Center for the Study of First Americans** has a mission to promote interdisciplinary dialogue, research, and public interest in the peopling of the Americas. The Center designs and imple-

ments programs of study and research involving physical, biological, and cultural sciences; provides leadership and coordination for scholars worldwide on the subject of First Americans; promotes an open dialogue among government, business, and Native American communities on the preservation and appropriate use of cultural and biological resources relating to the study of the First Americans; and disseminates the products of its work through education and publication programs reaching a broad range of audiences.

The **Center for Water and Environmental Sustainability** (CWEST) reflects the merger of the Oregon Water Resources Research Institute and the Center for Analysis of Environmental Change. Other relevant programs and efforts are also under the CWEST umbrella. CWEST acts as an interdisciplinary point of contact and coordinating entity for internal and external users involved in issues related to water resources and environmental sustainability.

The **Cooperative Institute for Marine Resource Studies** (CIMRS) was established in 1982 to foster collaborative research between the National Oceanic and Atmospheric Administration (NOAA) and OSU in fisheries ecosystem studies, aquaculture, oceanography, and marine-resource technology and related fields. The present day partnership brings together scientists from NOAA's NW Fisheries Science Center, the Pacific Marine Environmental Laboratory, and OSU to work on problems of mutual interest.

The **Survey Research Center**, established in 1973, provides research support with regard to survey design, sample selection, questionnaire construction, data collection and reduction, statistical analysis, and the reporting of results. The Center is available to OSU faculty, departments of the Oregon University System, and organizations serving the public interest.

The **Transportation Research Institute** deals with transportation-related issues, enhancing research and interaction within OSU and linking



The Radiation Center provides a variety of services involving radioactive materials and accommodates nuclear research and development programs for other agencies.

Thomas Dick earned his PhD in Mathematics Education from the University of New Hampshire in 1984 and joined OSU in 1986. His research interests include the study of factors related to mathematics achievement and participation, gender differences and affective factors in the learning of mathematics, spatial visualization, and cognitive science as applied to the learning of advanced mathematics. Dick is currently investigating the effects of the use of technology on the learning of college calculus, and he has worked extensively in the calculus curriculum reform movement. He developed MATH EXCEL classes to help students improve their performance in various lower-division mathematics classes. He is a co-editor of "Connecting Research to Teaching" for NCTM's Mathematics Teacher journal and is an associate editor for *School Science and Mathematics*.



with other universities, industry, and government. The Institute facilitates a variety of research efforts and also serves as a clearinghouse and central source for information.

Informational Resources

OSU Information Services (IS), which includes the OSU Libraries and information technology units, offers an array of valuable resources with many applications and implications for OSU faculty, as well as staff and students. Specific resources and services offered by IS units are extensively addressed in Standard 5.

Research Briefs, a weekly newsletter, provides short descriptions of current funding opportunities and deadline dates. Faculty, staff, and students may receive copies automatically each week via e-mail, or pick up paper copies in the OSU Research Office (Exhibit 4.12).

Strengths and Challenges

The OSU faculty includes many outstanding teachers and educators, advisors and administrators, researchers and scholars. These dedicated individuals are collectively sustaining an exemplary tradition of interdisciplinary endeavors that support students on and off campus, benefit the citizens of Oregon, and have far-reaching impacts beyond the state's borders. Excellence in teaching and advising builds on a base of excellence in scholarship and service, and the result is a productive scholarship community of active contributors in diverse fields. While dedicated to its central teaching mission, OSU faculty lead in national and international arenas, publish in the most highly respected journals, and create innovations in the arts, humanities, social sciences, sciences, and technology.

OSU faculty actively participate in academic planning at the department and college levels, particularly in developing curriculum and academic programs and helping to shape unit missions and priorities. Faculty also provide input related to the University mission and goals and have many opportunities to serve on University-wide committees as well as the OSU Faculty Senate. The Faculty Senate is a productive, representative governing body with a well-defined system for dealing with curriculum development, faculty evaluation, and other important faculty-related issues. Faculty-related policies, procedures, and practices are thoroughly addressed in the *OSU Faculty Handbook*, widely accessible online.

The University has a finely tuned recruitment and appointment process designed to ensure equal and fair practices, particularly related to affirmative action issues and the hiring of under-represented populations. Systematic procedures are in place for regular reviews of faculty members (including academic administrators) to assess their effectiveness; provide feedback from their peers, students, and selected others; and offer a means of identifying where individuals might be supported to improve their performance. These

reviews are closely tied to faculty responsibilities as related to individual position descriptions; overall expectations of involvement in teaching, advising, scholarly activity, and service; and college and University missions and goals. The promotion and tenure process was thoroughly reviewed and modified in the mid-1990s, and a post-tenure review was introduced to recognize excellence, ensure continued improvement in faculty performance, and identify and support underachieving faculty.

Consistent with OSU's vision related to the goal of becoming a statewide university, the concept of extended education was strengthened in the colleges and departments in 1995 by the addition of about 300 Extension Service faculty who were assigned academic homes. At the same time, non-Extension Service faculty increased their involvement in distance education endeavors and expanded their outreach efforts in other programs beyond the campus borders. Coinciding with the move of Extension Service faculty and the emphasis on extended education, OSU re-examined and expanded the traditional definition of scholarly activity. This new interpretation has been incorporated into faculty evaluations, including promotion and tenure guidelines, and has received considerable positive attention throughout the land-grant system.

Procedures and practices are in place to ensure compliance with policies relating to safety, regulatory, and ethical considerations concerning scholarship, research, and artistic creation. Faculty have a substantive role in the development and administration of these procedures and practices through a system that includes an advisory board, numerous committees, and various other opportunities for faculty input.

Overall, the University provides appropriate administrative, financial, physical, and informational resources for the support of research and scholarly activities. Financial contributions are designated for the purpose of promoting and enhancing research and scholarly work at all lev-

els of the University, and physical facilities include more than twenty programs, centers, and institutes that support these activities. Sponsored research and programs funded by grants, contracts, and gifts are consistent with the University's mission and goals. Faculty have demonstrated their ability to compete successfully in this area by increasing the number of research awards by 21 percent and the dollar amount by 32 percent.

Faculty development opportunities are prevalent on campus through conferences, seminars, lectures, observances, and other activities. Support for expenses related to participation in national and international conferences of professional associations and other off-campus faculty development activities is extremely limited, however. Eligible faculty have the opportunity for renewal through sabbatical leaves.

OSU faculty have access to a variety of benefits that compare well with other institutions, although in recent years health benefits have eroded somewhat with the increasing inflation in the medical care sector. Faculty salaries, however, are very low in comparison with peer universities, despite a 5.25 percent raise given for the 2000-2001 year. This area remains a priority of central administration.

Other challenges identified by faculty include needs for new facilities, updated equipment, more space, more staff, and larger operational budgets. These are seen as essential for enabling faculty members to better perform their responsibilities related to teaching, advising, and scholarly activities, as well as to continue to advance college and University missions. These concerns are expressed and addressed in the college and department sections of Standard 2, and primarily relate to the effects of budget reductions occurring as a result of the passage of Oregon Ballot Measure 5.



Consistent with OSU's vision of becoming a statewide university, extended education was strengthened in 1995 when about 300 Extension Service faculty were assigned to academic departments. This move increased faculty involvement in distance education endeavors and expanded outreach efforts beyond campus borders.

Resources

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- 4.3 *Faculty Salary Data for OSU and Its Peer Institutions: 1999–2000.* Oregon State University, Office of Budgets and Institutional Research, 2000.
- 4.4 *OSU Research and Scholarly Activity: FY 1996 to FY 2000.* Oregon State University, Office of Research, 2000.
- 4.5 *Sponsored Project Expenditures: FY 1991 to FY 2000.* Oregon State University, Office of Research, 2000.
- 4.6 *Total Research and Development Expenditures at Universities and Colleges, Oregon State University National Ranking: FY 1991 to FY 1998.* National Science Foundation.

Appendices

- 4.1 *OSU Institutional Faculty Profile.* Oregon State University, Office of Budgets and Institutional Research, 2000.
- 4.2 *On the University's Third Mission: Extended Education.* Oregon State University, Office of the President, June, 1993.
- 4.3 *OSU Number and Source of Terminal Degrees of Faculty.* Oregon State University, Office of Human Resources, 2000.



Ronald Wrolstad has directed his thirty-four-year research career to assessing the quality of processed fruits and vegetables. He has focused most of his attention on how changes in sugars, nonvolatile acids, and polyphenolics during processing and storage can affect the color of fruit juices. His research has led to more than 100 refereed journal

articles and book chapters. Wrolstad is a Fellow of the Institute of Food Technologists and a Fellow of the ACS Division of Agricultural and Food Chemistry and is recognized as one of the world's leading experts in determining the authenticity of fruit juices.

- 4.4 *OSU Scholarly Research Activities: Selected Examples Published by OSU Faculty: 1994 through 1998.* Oregon State University, Office of Academic Affairs (in OSU Fact Books, 1996 to 2000).
- 4.5 *Student Credit Hours: Fall Term 1999.* Oregon State University, Office of Budgets and Institutional Research, 2000.
- 4.6 *OSU Distribution of Undergraduate Classes: Fall Term 1999.* Oregon State University, Office of Budgets and Institutional Research, 2000.
- 4.7 *OSU Student Assessment of Teaching (Form).* Oregon State University.
- 4.8 *OSU Post-Tenure Review Guidelines.* Oregon State University, Faculty Senate, 1998.
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- 4.10 *OSU Peer Institutions.* Oregon State University, Office of Academic Affairs, 1998.
- 4.11 *College Expectations as Stated in Mission Statements.* Oregon State University.
- 4.12 *Communication of Safety, Compliance, Regulatory Policies and Procedures Related to Scholarship, Research, and Artistic Creation.* Oregon State University, Office of Research.
- 4.13 *Departments Represented in Research Committees.* Oregon State University, Office of Research.
- 4.14 *OSU Research Organizations and Facilities.* Oregon State University, Office of Academic Affairs, Office of Research, and Office of Budgets and Institutional Research.

Exhibits

- 4.1 *OSU University Day: September 18, 2000.* Oregon State University Faculty Senate.
- 4.2 *"The Value System of a University—Rethinking Scholarship" by Conrad J. Weiser.* The Oregon State University Experience: Scholarship Unbound, 1998.
- 4.3 *OSU Faculty Handbook.* Oregon State University, Office of Academic Affairs.
- 4.4 *OSU Waiver of Access.* Oregon State University, Office of Academic Affairs.
- 4.5 *OSU Executive Summary, Promotion and Tenure Review: 1996 to 2000.* Oregon State University, Office of Academic Affairs.
- 4.6 *OSU Request for Approval of Outside Employment (Form).* Oregon State University, Office of Human Resources.
- 4.7 *OSU Notification of Academic Position Opening (NAPO) Packet.*
- 4.8 *OSU Affirmative Action Data Sheet.* Oregon State University, Office of Affirmative Action and Equal Opportunity.
- 4.9 *OSU Research Handbook.* Oregon State University, Office of Research, 1995 and 2000.
- 4.10 *OSU Human Subjects Handbook.* Oregon State University, Office of Research, September 2000.
- 4.11 *OSU Royalty Distribution Policy.* Oregon State University, Office of Research.
- 4.12 *OSU Research Briefs (Examples).* Oregon State University, Office of Research.