

BOONE PICKENS SCHOOL OF GEOLOGY

Mission

The Boone Pickens School of Geology at Oklahoma State University prepares students to apply theory, concepts, and technology to solve problems in a variety of geological fields. The school provides undergraduate and master degree students with a high-quality education designed to develop leadership skills and enhance employment opportunities in government, industry, as well as preparing students to pursue a doctoral degree. Faculty throughout the school conduct a broad range of cutting-edge geologic research often emphasizing field-based methods with field areas that range from Oklahoma to international sites.

Vision

The Boone Pickens School of Geology will achieve national and international stature in scholarly and creative activities by being recognized for outstanding research.

To accomplish this:

- The Boone Pickens School of Geology will continue its emphasis on excellence in teaching;
- Will become the department of choice for students seeking a degree in Geology in the state of Oklahoma and the Mid-Continent region; and
- Will seek approval of a Ph.D. Program in Geology within the next 3-5 years.

Core Values

Excellence - We seek excellence in all our endeavors, and we are committed to continuous improvement. We are characterized by a dedicated faculty who conduct outstanding research, teaching, and creative activities.

Intellectual Freedom - We believe in ethical and scholarly questioning in an environment that respects the rights of all to freely pursue knowledge. We are committed to academic freedom.

Integrity - We are committed to the principles of truth and honesty, and we will be equitable, ethical, and professional.

Service - We believe that serving others is noble and worthy endeavor. We are dedicated to serving the Earth Science community, and have strong ties with the petroleum and environmental industries and governmental agencies.

Diversity - We respect others and value diversity of opinions, freedom of expression, and other ethnic and cultural background. We are committed to promoting greater diversity and maintaining an inclusive work environment.

Stewardship of Resources - We are dedicated to the efficient and effective use of resources. We accept the responsibility of the public's trust and are accountable for our actions.

Learning - We value quality, field-based undergraduate and graduate Geology programs and general education. We are committed to using the latest instructional technology and modern geologic tools and equipment.

Goals, Critical Success Factors, Objectives, and Strategies

Goal 1: Maintain academic excellence in undergraduate and graduate/ professional education in Geology.

Critical Success Factors:

- Outstanding high school seniors become Geology majors
- Outstanding undergraduate Geology majors become graduate students at the Boone Pickens School of Geology
- Boone Pickens School of Geology undergraduate and graduate curriculum include state of the art advances in geological sciences
- Boone Pickens School of Geology faculty are involved in teaching national and international seminars and outreach courses
- Increase the overall standardized Geology test scores of graduating seniors

Objectives:

Objective 1.1: Increase academic quality of incoming freshmen and transfer students in Geology.

Strategies:

- Revise scholarship selection criteria to award scholarships based on higher academic standards.
- Target recruiting at prestigious secondary schools with advanced science and mathematics programs.
- Maintain current math and science requirements for a bachelor's degree in Geology.

Objective 1.2: Increase academic quality of incoming graduate students in Geology.

Strategies:

- Review and revise requirements for graduate admission.
- Require incoming graduate students to complete deficiencies in requisite undergraduate curriculum.
- Recruit quality undergraduate students at professional meetings, scientific forums and other universities and colleges.

Objective 1.3: Revise undergraduate and graduate courses and add new ones to include newly acquired knowledge in geological sciences.

Strategies:

- Develop new course work to keep current with changing professional and technical needs.
- Modify existing courses to include newly developed ideas and technology.

Objective 1.4: Encourage undergraduate and graduate students to attend professional meetings and present research results.

Strategies:

- Provide departmental support for transportation to professional meetings.
- Encourage alumni to provide financial support for students to attend meetings and participate in associated workshops and field trips.
- Provide departmental resources to prepare presentations and publications.

Goal 2: Increase research productivity and creative activities.

Critical Success Factors:

- Outstanding graduate students involved in research and creative activities through research assistantships
- Provide an enhanced environment for research, scholarship, and creative activities
- Hire faculty who complement the existing faculty skills
- Establish a Ph. D. Program in Geology by 2010
- Increased number of teaching assistantships
- Increased teaching assistantship stipend to at or above the Big 12 average
- Achieve research and teaching standards
- Lower teaching load to enhance research productivity

Objectives:

Objective 2.1: Establish and develop departmental standards for research and teaching excellence.

Strategies:

- Faculty will publish in top ranked scientific journals and will deliver invited and volunteered presentations in national and international meetings.
- Review the departmental tenure and promotion document.
- Adjust teaching load to accommodate increased research productivity as evidenced by increased numbers of publications, invited presentations, external funding.
- Establish research symposium course to create an environment for research communication.

Objective 2.2: Increase the number of research assistantships and fellowships for graduate students by 10% over the next five years.

Strategies:

- Encourage faculty to write research proposals to include graduate students as research assistants.
- Establish a fund-raising program with the OSU Foundation targeting graduate student fellowships.
- Establish industry and governmental consortiums with the goal of funding additional graduate student fellowships and research assistantships.

Objective 2.3: Submit a proposal for acquiring a Ph.D. program in Geology within the next three years.

Strategies:

- During the next academic year, complete a market research survey for the students who will graduate from the newly proposed Ph.D. program.
- During the next academic year, identify factors distinguishing the School of Geology Ph.D. program from other programs in Oklahoma.
- Hire two additional faculty members within the next three years that complement existing programs and will serve to add depth and breadth to our program so as to enhance the Ph.D. proposal.
- Recruit industry and alumni support for the establishment of a Ph.D. program through financial as well as non-financial means.
- Have a proposal for a Ph.D. program written and submitted within three academic years.

Objective 2.4: Obtain funding to increase the number of teaching assistantships at the Boone Pickens School of Geology.

Strategies:

- Work with the college to increase funding to hire more teaching assistants while decreasing the teaching load of a half-time teaching assistant from four to two introductory geology lab sections so that they can spend more time in research.

Objective 2.5: Obtain funding to increase the teaching assistantships stipend to at or above the Big 12 average.

Strategies:

- Work with the college to increase the teaching assistantships stipend to at or above the Big 12 average.

Objective 2.6: Maintain local, regional, and international research efforts by the Boone Pickens School of Geology faculty.

Strategies:

- Encourage faculty to participate in national and international geologic research efforts by supporting national and international meetings, workshops, and field conferences.
- Encourage faculty to participate in local research efforts with geological societies, local industry, and governmental agencies by funding participation in meetings, field conferences, and workshops.

Goal 3: Retention, promotion and award of outstanding faculty members.

Critical Success Factors:

- Outstanding faculty stay at the Boone Pickens School of Geology
- Outstanding faculty receive merit-based raises substantially above average raises
- Faculty salaries are at or above the Big 12 average for the discipline and rank
- Mid-year raises and funding are available for outstanding faculty members for purposes of retention
- Increased number of tenured faculty members

Objectives:

Objective 3.1: Apply and develop the merit-based raise program for faculty.

Strategies:

- Clearly differentiate among faculty with regard to teaching loads and research expectations.
- Rewards should be directed at successful research because OSU is a comprehensive land grant university.
- The merit raise program should give extra credit for grants and refereed publications in international journals.

Objective 3.2: Develop an effective program for mentoring junior faculty members.

Strategies:

- Improvement in the quality of faculty begins with mentoring junior faculty. One senior faculty may be assigned to directly mentor a junior faculty in all aspects of the profession.
- Mentoring includes sending a junior faculty to visit grant agencies, having them apply for Big 12 faculty fellowships, and helping get them established in professional societies.
- Faculty-student interactions in formal and informal settings can enhance research productivity. Greater effort will be made to stimulate these opportunities.

Objective 3.3: Enhance faculty involvement in departmental affairs.

Strategies:

- Improve the involvement of faculty in departmental decision-making processes.

- Periodic curricular review is essential to stimulate change and grow student credit hours. Such involvement will enhance faculty retention and create synergism among all faculty.

Objective 3.4: Publicize accomplishments of outstanding faculty members.

Strategies:

- Send announcements to the OSU Public Information Office, off-campus newspapers, other media, and alumni when level of importance warrants wide circulations.
- Department head will nominate faculty for university awards in teaching and research. When applicable, nominations should also be made for awards in professional societies.

Goal 4: Retention, promotion, and reward of outstanding staff members.

Critical Success Factors:

- Outstanding staff members stay at the Boone Pickens School of Geology
- Staff salaries reflect salaries of comparable positions in the region
- Outstanding staff members receive merit-based raises substantially above average raises
- Mid-year raises and funding is available for outstanding staff members for purposes of retention
- Increased number of full-time staff members

Objectives:

Objective 4.1: Increase job duties to include web page development and maintenance.

Strategies:

- Work with the college to release frozen staff position within department.

Objective 4.2: Obtain funding for a merit-based raise program for staff.

Strategies:

- Work with the college to obtain adequate funding for raises.

Objective 4.3: Maintain an effective program for mentoring staff members.

Strategies:

- Department head will provide mentoring and guidance to supervising staff member.
- Supervising staff member will provide mentoring and guidance to secondary staff members.

Objective 4.4: Create opportunities for staff members to improve their technical skills and knowledge of university and department policies.

Strategies:

- Provide funding for attendance to on-campus and off-campus seminars and workshops.
- Provide release time for staff to allow them to attend seminars and workshops.

- Provide up-to-date equipment for staff to allow them to improve their technical skills and excel in their job duties.

Objective 4.5: Publicize accomplishments of outstanding staff members.

Strategies:

- Acknowledge accomplishments at departmental functions.
- Provide awards of accomplishment to staff members.
- Nominate staff for awards within the university.

Goal 5: Increase diversity, and number of undergraduate and graduate students from the current level. We will enhance diversity in our recruitment of faculty, staff, and students.

Critical Success Factors:

- Increased numbers of students in under-represented groups in the department
- Increased numbers of faculty in under-represented groups in the department
- Increased numbers of staff in under-represented groups in the department

Objectives:

Objective 5.1: Recruit diverse faculty and staff members.

Strategies:

- The Boone Pickens School of Geology will continue to build on its record of hiring and retaining faculty members from diverse backgrounds. We will aggressively work to fill open faculty positions with qualified candidates from under-represented groups (Native American, Hispanic, African-American, Female, etc.).
- Develop visiting and sabbatical faculty exchanges between the Boone Pickens School of Geology and under-represented faculty members from other institutions to enhance networking and recruitment efforts.
- Use conferences and professional meetings to recruit faculty from under-represented groups. Advertise open faculty positions in schools with a large population of under-represented graduate students.
- Increase diversity among staff by widely advertising open positions within and outside the campus.

Objective 5.2: Recruit diverse students.

Strategies:

- Visit schools with high minority student enrollment to identify and encourage good students to apply to the Boone Pickens School of Geology. Whenever feasible, these visits should be coordinated with the OSU recruiters.
- Use the resources of the office of High School and College Relations to identify and target students from under-represented groups as potential candidates for admission to the Boone Pickens School of Geology.
- Continue to use scholarships to attract students from under-represented groups. Identify more good students from schools with high minority enrollment who could qualify for scholarships. Discuss with alumni the possibility of funding minority scholarships.

- Recruit graduate students from colleges with high minority student enrollment.

Objective 5.3: Continue to develop an environment that is encouraging and friendly to a diverse faculty, staff, and students.

Strategies:

- Encourage faculty and staff to attend diversity training.
- Establish a mentoring program for all incoming students. Two types of mentoring programs will be considered: Faculty acting as mentors, and upper class/graduate students as mentors.
- Prepare and encourage minority undergraduates in the department to apply for the graduate program in the Boone Pickens School of Geology.
- Encourage faculty and staff to attend events on campus that celebrate the diversity at OSU, e.g., minority faculty reception, and international student organization functions.
- Work with the office of the Vice-President of Diversity to utilize available resources on campus to promote diversity within the Boone Pickens School of Geology.

Objective 5.4: Encourage diverse students and faculty to create organizations and support networks.

Strategies:

- Encourage faculty, staff, and students to participate in diverse organizations across campus and propose ideas for promoting diversity by forming additional organizations. Seek support from the Office of Diversity for these initiatives.
- Encourage and support faculty, staff, and students' efforts to set up diverse organizations modeled after the Association of Women Geoscientists (AWG), a group recently formed in the Boone Pickens School of Geology.

Objective 5.5: Publicize accomplishments of outstanding diverse faculty and students.

Strategies:

- Encourage faculty and students to present their research work in both informal and formal settings.
- Hold an annual event to celebrate the accomplishments of faculty, staff, and students.

Goal 6: Expand and renovate physical facilities for instruction, research, and creative activities. Improve the quality of field camp and the technology to teach modern field techniques.

Critical Success Factors:

- Teaching collections are established and organized for undergraduate geology core courses
- Field camp enrollment stabilizes at about 20-25 students per year
- At least one proposal per year has been submitted aimed at improving and expanding the physical facilities for instruction, research, and creative activities, including field camp
- At least one proposal per year has been submitted aimed at improving or adding laboratory equipment facilities to the Boone Pickens School of Geology
- At least one proposal per year has been submitted aimed at establishing reciprocal agreements

Objectives:

Objective 6.1: Establish teaching collections/equipment for undergraduate courses and field camp with emphasis on use of digital media.

Strategies:

- Establish a protocol for faculty and graduate students to organize the teaching collections used for courses.
- Establish a committee that researches the needs and funding possibilities for undergraduate instructional development and field camp.
- Establish a committee that writes and submits one proposal per year to either internal or external funding sources to improve the teaching collections and equipment for undergraduate courses or field camp.
- Establish an OSU Foundation account for focused giving (field camp, equipment, field work, vehicles, and/or meeting attendance).

Objective 6.2: Establish teaching collections/equipment for graduate courses with emphasis on use of digital media.

Strategies:

- Establish a committee that researches the needs and funding possibilities for graduate instructional development.
- Establish a committee that writes and submits one proposal per year to either internal or external funding sources to improve the teaching collections and equipment for graduate courses.

Objective 6.3: Support and publicize facilities in the department that could be used by the broader community.

Strategies:

- Develop a web page that highlights the physical facilities in the Boone Pickens School of Geology.
- Create a brochure and poster that highlights the physical facilities in the Boone Pickens School of Geology that can be disseminated and presented at meetings.
- Organize an annual event that advertises the facilities available in the Boone Pickens School of Geology.

Objective 6.4: Seek support from funding agencies for laboratory equipment.

Strategies:

- Establish a committee that researches the needs and funding possibilities for facility development.
- Establish a committee that writes and submits one proposal per year to either internal or external funding sources to improve or add laboratory equipment to the Boone Pickens School of Geology.

Objective 6.5: Seek reciprocal agreements for use of laboratories at other institutions.

Strategies:

- Establish a committee that researches the needs and funding possibilities for reciprocal agreements.
- Establish a committee that writes and submits one proposal per year to companies or agencies for reciprocal agreements.

Goal 7: Contribute to economic development/quality of life while maintaining and improving contacts with industries and agencies.

Critical Success Factors:

- Advisory committee established
- Research and teaching collaboratives established with Oklahoma agencies
- Consortium of Oklahoma energy producers established in order to serve their research and training needs
- Community partnerships established that help to promote scientific understanding and care of Oklahoma's landscape
- Number of student internships increased (industry, academia, and government)
- In-residence visiting scientist from industry/agencies is established
- Industry/agency participation in research and field trips is established

Objectives:

Objective 7.1: Establish departmental advisory committee from alumni working in industry/academia/government.

Strategies:

- Draft an advisory committee mission statement.
- Contact active alumni and describe strategy behind advisory committee.
- Ask for input.
- Modify our strategy based on input from alumni.
- Establish committee.
- Hold first meeting.

Objective 7.2: Research collaboratives established with Oklahoma agencies.

Strategies:

- Draft a plan through discussion with faculty and advisory committee.
- Contact Oklahoma agencies and schedule a meeting with them to discuss potential collaboratives.
- Modify our strategy based on input from agencies.
- Begin collaboration with an agency after consultation with faculty/university administration.

Objective 7.3: Consortium of Oklahoma energy producers established in order to serve their research and training needs.

Strategies:

- Draft a plan through discussion with faculty and advisory committee.
- Contact Oklahoma energy producers and schedule a meeting with them to discuss needs.
- Modify our strategy based on input from the energy producers.
- Begin research on a topic of broad interest to the energy producers after consultation with faculty/university administration.

Objective 7.4: Increase internships for undergraduate and graduate students.

Strategies:

- Create inventory of past internships so that we have a baseline against which to measure our progress.
- Discuss strategy with advisory committee.
- Encourage students to apply for internships.
- Working with campus resources, provide workshop for students on how best to prepare for interviews and applications for internships.

Objective 7.5: Establish community partnerships that help to promote scientific understanding and care of Oklahoma's landscape.

Strategies:

- Draft a mission statement based on input from faculty and advisory committee.
- Contact community agencies and describe our intentions.
- Ask for input.
- Modify our strategy based on input from community agencies.
- Hold first meeting with key interested agencies.
- Begin service.

Objective 7.6: Solicit and assign an "in-residence" visiting scientist from industry/agencies for one-year terms.

Strategies:

- Using advisory committee as sounding board, collect names of potential candidates.
- Advertise solicitation program nationally/internationally.
- Select scientist.
- Discuss arrangements with home company/agency.
- Publicize achievement.
- Begin work program.

Goal 8: Support innovative and interdisciplinary programs and pedagogy.

Critical Success Factors:

- Faculty participation in the interdisciplinary programs such as Environmental Science, Space and Planetary Sciences, and International Studies
- Faculty involvement in teacher education programs

Objectives:

Objective 8.1: Support the interdisciplinary programs in Environmental Science, Space and Planetary Sciences, and International Studies through participation of faculty in teaching, research and graduate student supervision.

Strategies:

- Serve on faculty advisory committees (e.g., steering committee, admissions committee, curriculum committee) established by these interdisciplinary programs.
- Teach courses that serve graduate students in these programs.
- Contribute presentations to seminars sponsored by these interdisciplinary programs.
- Serve as thesis/dissertation advisor for students in interdisciplinary programs and recruit new students to those programs.
- Provide office and research lab space in the Boone Pickens School of Geology for graduate students in interdisciplinary programs who are being advised by Geology faculty and who do not otherwise have space.
- Pursue funding opportunities through interdisciplinary programs.
- Support proposals for new graduate degrees in Planetary and Space Science.

Objective 8.2: Continue to support teacher education programs.

Strategies:

- Continue to teach courses that support teacher education, including GEOL 1613, Inquiry-based Earth Science, GEOL 3004, Earth Science for Teachers, and GEOL 5710, Advanced Studies in Geology.
- Support the OSU College of Education programs by serving as thesis/dissertation committee members.
- Collaborate on proposals and funded projects that address Earth Science education.

Goal 9: Contribute to outreach service by developing distance education courses for undergraduates and graduates and to promote general public awareness of the Earth Sciences.

Critical Success Factors:

- Distance education and web-based courses established
- Workshops and short courses sponsored at professional forums
- Displays constructed and displayed
- Geoscience events publicized in the appropriate media

Objectives:

Objective 9.1: Evaluate incentives for distance learning.

Strategies:

- Investigate the use of closed-circuit video via Internet for distance learning.
- Upgrade the paper-based GEOL 1014v, Geology and Human Affairs, correspondence course so it is available on CD and/or the web.
- Potentially develop new distance-learning courses for GEOL 1224, Prehistoric Life and Development of the Continents, and GEOL 3043, Scenic Geologic Regions.
- Offer special off-campus courses for in-service teachers (GEOL 3004, Earth Science for Teachers or GEOL 4990, Special Problems in Earth Sciences).
- Offer special off-campus courses for the geoscience industry as the need arises.
- Teach workshops and short courses at professional forums.
- Develop field trips and instructional materials for companies and professional societies.
- Establish a consortium of Oklahoma Earth Science teachers for the purpose of mutually solving pertinent educational problems.

Objective 9.2: Promote public awareness of Earth Science content and events.

Strategies:

- Design a series of geoscience displays for the Nobel Research Center.
- Obtain funding to produce an attractive and informative minerals and rock “garden” near the Noble Research Center.
- Periodically publicize noteworthy geoscience events of local interest, as well as commenting upon events that are of general public interest.
- Publicize significant accomplishments by the faculty and students of the School of Geology.

- Visit schools to present special programs that promote the Earth Sciences (in coordination with the office of High School and College Relations).

Goal 10: Promote a continuing relationship with departmental alumni.

Critical Success Factors:

- Increased feedback from alumni
- Increased alumni involvement
- Increase in gifts and donations

Objectives:

Objective 10.1: Provide for greater alumni input and involvement.

Strategies:

- Write a brief departmental history and history of Geology in Oklahoma.
- Use an Alumni “assessment” as a feedback device for adjusting departmental curriculum.
- Invite select alumni to participate in advisory or fund-raising committees.
- Invite alumni to lead field trips or present at seminars.
- Offer special field trips or programs especially for alumni, including the possibility of holding a field camp reunion.
- Continue to host an annual banquet for graduates and alumni where they can become reacquainted and recognized for special accomplishments.

Objective 10.2: Produce a periodical and a web site that informs alumni of current happenings in the department.

Strategies:

- Revive the “Geovista” publication for release on an annual or biannual basis (to include events, faculty research, new and retiring faculty, curriculum items, pictures, etc.).
- Have student geoscience clubs contribute a special student section of “Geovista.”
- Include select “Geovista” items within the departmental web site.

Objective 10.3: Maintain industry/agency fieldtrips.

Strategies:

- Compile a history of past trips.
- Discuss fieldtrip-funding strategies with faculty and advisory committee.
- Meet with Oklahoma-based companies to establish their research and fieldtrip priorities.

- Solicit industry-perceived need for types and locations of field trips.