

# Hiring and/or Admissions Policies for the Department of Geological Sciences, University of Colorado Boulder

This is what was found by the Pod(lets) in the Department of Geosciences at the University of Colorado Boulder on Hiring and/or Admissions Policies, as well as what the pod would propose to change and improve.

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# Graduate Admissions

## Current Practices

### Institutional Context

CU Boulder is regularly listed as one of the top institutions for geosciences worldwide. Our applicants are often also being recruited by institutions such as Caltech/MIT/Harvard/Stanford.

### Recruitment

#### Outreach

Pretty minimal beyond what the Graduate School does and any efforts by individual faculty members.

- Individual faculty members meet with students who've contacted them at conferences (or over Zoom)
- CU Grad School does some bare bones marketing for admissions (meaning they send out 3 emails) - they email people who've signed up on a "prospects list" to motivate them to actually apply
- In the past, admissions office has purchased a list of GRE-takers and emails them; this is likely not applicable anymore now that GEOL doesn't require the GRE.
- Grad School sends out a list of McNair scholars and Colorado Advantage Program; the department hasn't specifically targeted these lists for grad recruitment, but we could
- Department Diversity Plan involves an aspect of outreach to local schools (either high schools or MSIs), but this is still in the planning stage.
- [RESESS](#) (some students from RESESS have joined the department as graduate students)
- In 2021, the Graduate Admissions Committee ran two 1-hr open houses prior to the admissions deadline (students who'd expressed interest in applying through the Graduate School website were invited, it was not advertised elsewhere). These were helpful for last-minute application questions, but likely not effective at addressing equity issues since they were only a couple weeks before the deadline.
- Overall, we conclude that we could benefit from a more cohesive strategy.

Our department was an inaugural member of [AGU's recently introduced Bridge Program](#) (started in 2019). This program is designed to "[increase] opportunities for students from underrepresented populations to obtain graduate degrees and create a network of peers, mentors and advisers to support and serve them before, during and after grad school". The department sets aside a 2-yr TA package specifically to be used for recruiting an applicant from the Bridge program; additional Bridge applicants can be supported by RAs from individual faculty if they have not filled these position(s) through the regular admissions process. A member of the Diversity, Equity, and Inclusion (DEI) committee in our department is the liaison with this program.

## Admissions

### Requirements:

- Online application
  - Demographic information on race and ethnicity is optional, when not provided it is difficult to consider the application for diversity related fellowship opportunities (detailed below)
- 3 letters of recommendation
- Science Study Summary
- Personal statement
  - 2 pages single spaced
  - Prompt attempts to make clear what information the applicant should provide
- Unofficial transcripts from all post-secondary institutions attended
- Non-refundable application fee (\$60 for US citizens, \$80 for international students)
  - Potential fee waivers are detailed below
- TOEFL/IELTS scores from the past two years for all international applicants unless English is their native language or they have completed a full year of academic study at a US (or another native-English speaking country) academic institution within the past two years

Evaluation: In their application, students are asked to indicate at least 3 faculty members that they are interested in working with. Once applications are processed by the Graduate School, they are sorted into “Queues” of selected faculty members, who review applications in Slate Reader. Within Slate, faculty can choose to recommend admission, waitlist, or decline for individual applications and are required to provide the reason(s) for declining an application. In general, each application should be reviewed by at least 3 faculty (the ones selected by the student in their application). There is no shared rubric for faculty evaluations—each faculty member operates independently. The graduate admissions committee provides additional evaluation of applicants with GPAs less than the typical department-enforced minimum GPA (3.0).

Offers: The department typically requires faculty to have a minimum of 2 years of funding (although exceptions to this minimum are made); most students receive offers with a combination of TA and/or RA support. Most offers are not 5 years (since most grants are only 3 years). The department reserves a 2-yr package to be offered as a Diversity Fellowship; prospective students are nominated by each faculty “interest group” for this fellowship. The D&I Committee has formalized guidance for Diversity Fellowship nominations and evaluation. The department also nominates 1 student for the university-wide Chancellor’s Fellowship, which covers the 5th year and provides a large first year “signing bonus” (the sponsoring department/faculty must cover the other 4 years of salary). In recent history, the Chancellor’s Fellowship seems contingent on GPAs >3.9 and a strong research record; this campus-wide fellowship is out of our direct control, although they did recently drop the GRE from consideration when many departments dropped the GRE requirement individually.

## Yield

Typical applicants (general practice and COVID-adaptation): 200-300 applicants/yr

(anecdotal) we seem to frequently lose admitted students to other universities which provide 5 years of guaranteed funding up front and salary vs. the cost of living in Boulder.

## Transition

Fees and living expenses are commonly a financial challenge for incoming students:

- \$60 application fee (domestic); \$80 for international applicants. However, if an applicant indicates they cannot pay the application fee for a GEOL application due to financial hardship, they can submit an application for a fee waiver (launched Fall 2020). If an applicant qualifies for a fee waiver, the Department pays for it to the Graduate School.
  - The CU Graduate School provides fee waivers (upon request) for: McNair Scholars Program applicants, Peace Corps Volunteers (active currently), AmeriCorps Volunteers (active currently), all active duty U.S. military, veterans, those who have previously served, those in the National Guard, and those on Active Reserve
  - GEOL provides fee waivers (upon request) for prospective students who are not eligible for the Graduate School fee waiver, but for whom the application fee is a financial hardship. Since the department covers the \$60 fee, there are some restrictions on this program to limit it to serious applicants, which are: U.S. citizen, U.S. permanent resident, or DACA recipient, or are currently attending a domestic University within the United States; applying for the M.S. or Ph.D. program in GEOL, with intent to enroll in the following fall (i.e., not planning to defer); meet the GEOL admission requirements of holding a baccalaureate degree from a college or university of recognized standing, or have done work equivalent to that required for such a degree by the start of the semester to which you are applying; have at least a 3.00 (B) grade point average in your undergraduate or masters degree program; have a minimum 2 out of 3 letters of recommendation from recommenders complete and attached to your online application at the time you request the application fee waiver
  - The first year, [student fees](#) are per semester:
    - \$765-850 for students pre-comps
      - \$240-501 for resident students post-comps (Status D)
- \$200 fee when accepting offer (paid to the Bursar's Office), which is refunded if a degree is granted. If a student does not complete their degree, \$200 admissions fee is forfeit.
  - The Bursar's Office lists an additional set of nonrefundable new student fees:
    - New grad students: \$62
    - International students: \$145 + \$40 (immigration compliance fee)
    - Transfers: \$145
- First stipend payment: Aug 31 (half month's pay) often closely proceeds first tuition/fees payment: Sept/Oct
- Housing in Boulder is hard to come by, and expensive. Rent is usually 40-65% of monthly stipend.

The department runs a week-long required orientation for incoming graduate students, described via the following:

“Geological Sciences (GEOL) Onboarding Week is required and takes place the week before August classes begin (seven days: August 16 – August 22, 2021). We ask that you are present in Colorado for all of onboarding week so that you can understand how the program functions, and meet Graduate Program Leadership and others who will support you in obtaining your degree. We cover critical topics like curriculum requirements, teaching, lab/research groups, funding and employment, faculty advisor/student relationship, collaborative advising, and coursework. We require Department TA Training (only offered once/year), and provide opportunities for new student cohort building, meeting continuing students, and other protocols.”

The department also required first year graduate students to take GEOL 5101 (Fall; 1 credit) and GEOL 5102 (Spring; 1 credit): “Intro to Geological Science Faculty”. These courses are led by the department chair and offer an introduction to different aspects of our department.

Some issues reported with the orientation/transition process:

- Not enough information about accessibility, necessary gear, etc. for the Niwot Ridge overnight/hike part of orientation week
- Many students are exhausted at the end of the week because TA trainings are intense
- No mechanism for connecting with other incoming students (e.g., cohort-building, finding roommates, etc.); note that possible solutions to this are being demoed this year by the creation of different committees in the department, including the DEI one.

## Retention

We do not currently have good long-term statistics on retention due to inadequate record-keeping by a previous graduate program administrator. However, to the best of our knowledge about ~90% of students who enroll complete a degree (regardless of whether it is the initial degree they applied for). COVID has affected this and we expect that as we begin tracking retention rate, this percentage will decrease (i.e., more students than typical leave the program without completing a degree).

## Recommendations

1. Develop a more robust outreach and recruitment strategy to reach out actively to a more diverse pool of students. Pair this with resources to help students prepare for graduate school (and applying to graduate school) to make “hidden curriculum” visible.
  - a. Actively advertising at local MSIs
    - i. Schools we suggest recruitment at: Fort Lewis College, Tribal Colleges in the region, Western Colorado, University of Northern Colorado, Metropolitan State University of Denver (has seniors do research projects), Mesa State, New Mexico Tech, UNM

- ii. Recommend creating a structure that could be supported (financially and otherwise) by faculty members writing this into Broader Impacts in grants
  - b. Review how requirements (especially in terms of coursework) are stated explicitly or implied on the website and in GEOL application materials. Evaluate whether all coursework requirements are necessary, since some could create barriers for students coming from smaller programs or shifting focus from other disciplines.
  - c. Highlight profiles of current graduate students, including those from less standard backgrounds (biology, chinese studies), with details about what they studied here and how they made the transition (pre and during grad school)
  - d. Develop and provide materials/information that can be provided to students elsewhere early on (sophomore year) to help them get on the track for admission into the program if that's what they want (e.g., <https://geogradapp.com/> )
    - i. One way of implementing this could be expanding the GATES program beyond just undergraduates in GEOL at CU.
2. Development of rubric for evaluating applicants by Graduate Admission Committee
  - a. Once initial development has been completed, get feedback from full faculty and current graduate students
  - b. This can be put into Slate to minimize extra effort for faculty
    - i. IQBio has already done this
  - c. Revise the personal essay prompt in the graduate application so that it is more focused and clearly states what we want to know about the applicants.
3. Address potential barriers in graduate curriculum
  - a. Recommend that Grad Curriculum Committee work with graduate students and the Graduate School to provide more flexibility about 3000/4000 level courses earning credit for graduate students. This would reduce the effect of undergraduate course preparation as a barrier. Given the Graduate School's current policy, we suggest the Grad Curriculum Committee work with the faculty and the graduate students to identify a specific list of 3000/4000 level courses that may be most commonly useful for incoming graduate students from a variety of backgrounds to take, then the Chair could bring this list to the Graduate School and ask for a blanket exception for all courses on this list for all students in the GEOL MS and PhD programs.
  - b. Recommend that the Grad Curriculum Committee consider designing modules (of existing courses) for different topic areas to support students who need to build their knowledge in a particular area.
4. Redesign the Niwot Ridge orientation trip to make it accessible to all students (considering availability of gear, physical accessibility, etc.); provide more clear information about what this trip entails and what alternative options are.
5. Work with Graduate School, Bursar's Office, and Registrar's Office to negotiate criteria and a protocol for waiving the \$200 fee for graduate students accepting offers of admissions. Although this fee is technically returned when students graduate, in many cases it could represent a financial hardship—many students can't afford to "lend" the university \$200 interest-free for several years.

# Faculty Hiring

## Current Practices

### Institutional Context

Requirements for an application to a faculty position: Cover letter, CV, names and addresses of three references, a statement of research that clearly outlines to non-specialists how the research contributes to the important scientific problems of their discipline; a statement of teaching experience and philosophy; and if the position is co-listed with the CU Museum of Natural History, a statement of curatorial experience and vision is required. Application must also include three representative published papers. Note that the faculty job ad includes the statement: The University of Colorado is an Equal Opportunity Employer committed to building a diverse workforce. We encourage applications from women, racial and ethnic minorities, individuals with disabilities and veterans. Alternative formats of this ad can be provided upon request for individuals with disabilities by contacting the ADA Coordinator at [hr-ada@colorado.edu](mailto:hr-ada@colorado.edu).

Faculty search guidelines: Faculty positions are advertised nationally and internationally in accordance with University Policy (see 1997 Handbook for Department Chairs and Program Directors), and the resulting applications are reviewed by the search committee (comprised of 4 - 6 members of the faculty). For searches that are jointly appointed between an Institute or the Museum of Natural History and Geological Sciences, the search committee shall have at least two faculty members from the Institute/Museum. Search committee members are required to take an Implicit Bias training (30-minute Skillsoft course entitled Faculty Diversity Search and Hiring Committee Guidance) before meeting as a committee or reviewing any application materials. Recommendations of best practice from this Implicit Bias training include developing a rubric with which to evaluate the applications before any committee members view the applications or applicant list, and using a set list of questions to ask all candidates invited to phone/Zoom interviews. Commonly, the search committee identifies a short list of 8-10 candidates who are invited to phone/Zoom interviews (historically, questions have not been provided to candidates in advance of these interviews, or just one of the questions was provided in advance). Following these interviews, the committee deliberates to define a list of finalists. Upon recommendation of the search committee, 3 - 5 finalists are invited to the campus for personal interviews which last 2 - 3 days. For joint hires between an institute and the Department of Geological Sciences, the candidate must be acceptable to both units, and a letter is drafted between the Institute (or Museum) Director and the Chair of Geological Sciences. Finalists are to be interviewed by Divisional Dean. Top finalist is identified by the Search Committee and the terms of offer are discussed between the Divisional Dean and Chair/Director.

## Recruitment

### Outreach

- Equal Opportunity/Affirmative Action: It is the ongoing policy and practice of the University of Colorado at Boulder to provide equal employment opportunity (EEO) to all individuals and to take affirmative action (AA) with respect to qualified individuals from underrepresented groups. Equal opportunity ensures all qualified applicants and employees are treated fairly and not discriminated against with regard to the individual's race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression or veteran status. Affirmative action is a federal law requirement for employers who are federal contractors, such as CU Boulder, to take positive actions towards the outreach and employment opportunities for women, members of underrepresented racial/ethnic groups, veterans, and individuals with disabilities. Affirmative action is a part of the way CU Boulder regularly conducts its business and complements the philosophy and belief that diversity enriches the educational and employment experience for all faculty, staff and students at CU Boulder.
- Department submits a draft faculty job advertisement to the College of Arts and Sciences' Faculty Affairs Coordinator. The draft ad template will be reviewed by Faculty Affairs Coordinator and respective divisional or associate dean. The Faculty Affairs Coordinator sends the ad template to International Student and Scholar Services (ISSS@colorado.edu), if expecting international candidates in a permanent position.
- Once approved, faculty job ads are placed on/in: external CU Boulder jobs board, GSA, AAPG, AWG, NHCOL, SPNCH list serve, and Paleonet lists (the latter three for Museum faculty positions).

### Hiring

#### Process for hiring:

- Materials required:
  - Cover letter
  - CV
  - Proof of degree (varies)
  - Contact information for recommenders (4)
  - Diversity statement
  - Teaching statement
  - Research statement
  - For Museum cross-listed job: Curatorial statement
- Democratic vote among all faculty in the department on the top finalist. When more than one institute is involved in the hiring process, the institute who pays the salary and package of the new faculty is the one who makes the final decision.



- Department submits the following to the College of Arts and Sciences' Faculty Affairs Coordinator: draft offer letter (templates for offer letters are available through Faculty Affairs), CV, and three letters of recommendation.
- Draft offer letter is reviewed by the College of Arts and Sciences' Faculty Affairs Coordinator and sent to Divisional Dean for review/approval.
- Once approved, the College of Arts and Sciences' Faculty Affairs Coordinator submits draft offer letter to Office of Faculty Affairs for approval.
- Once approved by the Office of Faculty Affairs, the College of Arts and Sciences' Faculty Affairs Coordinator routes offer letter for all signatures with cc: to the following: Unit, Human Resources, and Budget Office.
- College of Arts and Sciences' Faculty Affairs Coordinator prints a copy of the fully-executed offer letter and sends to the Office of Faculty Affairs along with the CV and three letters of recommendation.
- The College of Arts and Sciences' Faculty Affairs Coordinator submits welcome/onboarding email to candidate.

We do require use of rubric and implicit bias trainings for search committees.

Yield

Generally pretty good

Transition

There is a 1-day orientation for new faculty. It is moderately helpful but quite overwhelming.

Retention

Two people who have left recently (past decade, one wanted more industry-oriented science). One faculty member rostered in the Museum and tenured in Geological Sciences left CU-Boulder for a permanent position at the National Science Foundation. Very good tenure promotion record (which helps in recruitment)

Professional Development

RIO PI Academy; LEAP (Leadership Education for Advancement and Promotion; <https://www.colorado.edu/leap>) - they hold 2-day workshops for pre-tenure faculty, career development growth grants, etc. ; Faculty Leadership Institute (FLI)

Satisfaction and Support

Junior Faculty Sanity (a grassroots non-CU sponsored but very awesome social opportunity)

Geological Sciences Department has a faculty mentoring program wherein new faculty are assigned senior faculty mentors (one or more). In my experience, this has been very helpful to many.

Spousal/partner hires have been done in Geological Sciences over the years, and the department has hired spouses of faculty members hired in other departments/institutes.

## Recommendations

- Identify where we are advertising and gaps (and how to fill them)
  - Lack of targeted advertising to societies for underrepresented groups (SACNAS, [NABG](#), [AISES](#))
- Conversations about research productivity need to be framed within the context of what kind of institution they are coming from
  - CalState teaches 4-4, number of papers is going to be lower than under a teaching load at CU/other R1s
- Expand and formalize the involvement of current students in hiring
  - At least one undergrad/graduate student should be on the search committee; we recommend that the graduate student member be chosen by the graduate student body, with consideration of fit with respect to the subfield of the hire.
  - Formalized feedback mechanisms from students (surveys sent to all students who attended a job talk or met with the candidate) - faculty search committee should work with graduate students to identify specific types of feedback they want to solicit so that this feedback can actually be useful for faculty voting on candidates
  - An alternative option to explore would be forming a student search committee that would act in parallel to the faculty search committee (since they can't review applications or participate in meetings where application materials are discussed): the student search committee could participate in Zoom interviews and provide input for the finalist list, attend all the job talks, share a meal with each on-campus interview candidate, solicit feedback from other graduate students, and submit a ranked recommendation with specific feedback to the faculty search committee.
  - Expand opportunities for students to meet with candidates, either through expanding the existing lunch conversations with students, or by organizing a separate non-meal-time meeting with a larger group of students
- Consider having our hiring practices audited by an outside consultant.