

Before the
U.S. Patent and Trademark Office

In the Matter of
Request for Comments on
Administrative Updates to the General Requirements Bulletin for
Admission to the Examination for Registration to Practice in Patent
Cases Before the United States Patent and Trademark Office

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Comment of Patent Law Scholars

Alexander S. Evelson
Cassidy A. Pomeroy-Carter
Certified Law Students
Phil Malone
Counsel for Commenters
Juelsgaard Intellectual Property
& Innovation Clinic
Stanford Law School
(650) 724-1900
pmalone@stanford.edu

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The undersigned patent law scholars submit this comment in response to the Administrative Updates to the General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases Before the United States Patent and Trademark Office (USPTO). We support the specific proposed updates put forward by the USPTO and recommend that they be implemented promptly. But we also note that those proposals are only one small part of a larger and more important set of questions about diversity in the patent bar, as well as in patenting and innovation more generally. We therefore urge the USPTO to quickly follow up this request for comments with additional updates to patent bar eligibility requirements and broader actions to improve diversity in the patenting system.

I. Introduction

The lack of diversity among IP practitioners is a well-established problem.¹ According to a 2019 report, about 80% of IP practitioners are male and about 86.5% are white.² Determining exact figures for the patent bar specifically is difficult because the USPTO does not currently collect data on patent attorney and agent demographics.³ But a recent American Bar Association study found that a mere 22% of patent practitioners are female and only around 6% are racially diverse.⁴ This dearth of diversity has both economic and social costs.⁵ The IP community may be missing out on improved innovation outcomes and financial returns that flow from increased diversity.⁶ And as the United States grapples with systemic inequalities, it is crucial that all institutions, including the USPTO and patent bar, do their part to help mitigate inequities. While the USPTO has taken important steps “to encourage and increase the participation of women, minorities, and veterans as inventor-patentees,”⁷ it has done comparatively little to address diversity in the patent bar.

Patent bar eligibility requirements are not solely responsible for the lack of diversity within the practitioner community. Still, current requirements unjustifiably foster and perpetuate existing

¹ See generally Mary Hannon, *The Patent Bar Gender Gap: Expanding the Eligibility Requirements to Foster Inclusion and Innovation in the U.S. Patent System*, 10 IP THEORY 1 (2020). Cf. Holly Fechner & Matthew S. Shapanka, *Closing Diversity Gaps in Innovation: Gender, Race, and Income Disparities in Patenting and Commercialization of Inventions*, 19 TECH. & INNOVATION 727, 728-29 (2018) (discussing the gender, race, and income gaps among patent holders).

² AM. INTELL. PROP. L. ASS’N, 2019 REPORT OF THE ECONOMIC SURVEY (2019).

³ See Elaine Spector & LaTia Brand, *Diversity in Patent Law: A Data Analysis of Diversity in the Patent Practice by Technology Background and Region*, 13 LANDSLIDE (Sept./Oct. 2020), <https://perma.cc/6PG3-GGU3>.

⁴ *Id.*

⁵ Cf. Amy C. Madl & Lisa Larrimore Ouellette, Commentary, *Policy Experiments to Address Gender Inequality Among Innovators*, 57 HOUS. L. REV. 813, 814 (2020) (noting how a lack of diverse innovators is significantly holding back the pace of innovation).

⁶ Engine Advocacy, Comment Letter on the National Strategy for Expanding American Innovation (Feb. 23, 2021), <https://perma.cc/DSM9-2M7Y> (“It would be difficult to overstate the value of diversity to innovation and entrepreneurship.”); Eric Goldman et al., Comment Letter on the Study of Underrepresented Classes Chasing Engineering and Science (SUCCESS) Act (June 30, 2019) (discussing how diverse inventors benefit from diverse practitioners); Hannon, *supra* note 1, at 19 (“[I]ncreasing the diversity of the patent bar will have significant tangential benefits on the patent system.”). Cf. Sylvia Ann Hewlett et al., *How Diversity Can Drive Innovation*, HARV. BUS. REV. (2013) (discussing the benefits to business leaders who embrace diversity).

⁷ U.S. PAT. & TRADEMARK OFF., REPORT TO CONGRESS PURSUANT TO P.L. 115-273, THE SUCCESS ACT 26 (2019).

inequities.⁸ While the USPTO’s proposed updates may help improve diversity, these changes alone are insufficient. Accordingly, we strongly support their prompt implementation but also urge the USPTO to use these changes as a first step. Below, we offer support for the proposed changes, recommend additional measures to expand Category A further during the current administrative update process, and suggest other actions the USPTO should take in the near future to improve diversity in the patent bar.

II. The USPTO Should Adopt the Three Proposed Updates to Patent Bar Eligibility Requirements.

The USPTO should adopt all three proposed updates as one immediate and easy step toward improving diversity in the patent bar. The proposed changes are modest and commonsense measures. They will reduce application burden by allowing a larger number of potential practitioners to qualify under the streamlined Category A process. Greater application burden tends to discourage applicants, an effect that may be especially acute for individuals from underrepresented demographics. As a result, reducing barriers to entry should have desirable effects on patent bar diversity. While we lack the data to forecast the exact effect, we can safely say these efforts will increase the absolute number of diverse practitioners. That increase in representation will be a critical first step in the push for making the patent bar more representative of the US population at large.

- *Proposal 1: Add Common Category B Degrees to Category A.* Conferral of degrees in these subjects demonstrates the scientific and technical expertise needed for patent prosecution, so the USPTO should include all of them in Category A.
- *Proposal 2: Accept Advanced Degrees Under Category A.* Current USPTO policy does not accept graduate degrees as Category A qualifiers. Because advanced degrees require even more rigorous training than their undergraduate counterparts, the USPTO should accept both undergraduate and advanced degrees—including master’s and doctoral degrees—under Category A.
- *Proposal 3: Accept a Combination of Core Sciences Under Category B, Option 4.* The USPTO should grant applicants the flexibility to demonstrate their competence through a combination of core sciences under Category B.

These administrative updates are straightforward, noncontroversial, and timely;⁹ we strongly support their implementation.

III. In This Administrative Update Process, the USPTO Should Expand Category A to Include Additional Degrees Beyond the Limited List It Has Proposed.

While the USPTO’s proposed updates are a necessary first step, more can and should be done now. To further the Office’s goal of promoting fairness in the application process and to help

⁸ See generally Hannon, *supra* note 1.

⁹ Gene Quinn, *USPTO’s Drew Hirshfeld on Proposed Changes to Requirements for Patent Bar Registration: It ‘Just Makes Sense’*, IPWATCHDOG (Mar. 22, 2021), <https://perma.cc/AJ3L-DKKZ>.

address the patent bar's diversity gap, we propose several additional updates the USPTO should implement during this process. These added changes are themselves fairly straightforward and easy to implement, and there is no reason for the USPTO to delay.

A. Category A should include computer science degrees that are not ABET- or CSAB-accredited.

Currently, the USPTO requires registrants attempting to qualify under Category A with a computer science degree to have graduated from an ABET- or CSAB-accredited program.¹⁰ This requirement creates a distinction among computer science degrees with no discernable justification. Many established computer science programs lack ABET or CSAB accreditation.¹¹ Among Ivy League universities, for example, only one has a program that is ABET-accredited.¹² Notably, the most prestigious computer science programs in the country—UC Berkeley, Stanford, and Carnegie Mellon—all lack ABET and CSAB accreditation.¹³ Graduates of these programs undoubtedly possess the technical skills necessary for patent prosecution but are currently ineligible under the Category A pathway.

This is especially problematic because computer science programs tend to lack the science course requirements necessary for Category B qualification.¹⁴ The result is that many graduates of nonaccredited computer science programs are ineligible for the patent bar unless they either (1) knew in advance that they intended to qualify for the patent bar and therefore supplemented their degree requirements with additional coursework or (2) are able to return to school to complete the requisite Category B courses.¹⁵ The USPTO should correct this problem during the current update process by expanding Category A to include computer science degrees from programs that are not accredited by ABET or CSAB.

B. The USPTO should gather information to identify further expansions of Category A.

The current list of Category A degrees is extremely limited, creating burdensome and unnecessary barriers to entry for the patent bar. While the expansion proposed by the USPTO is one initial step to help remedy this issue, there are potentially many other degrees that offer sufficient scientific and technical training to prepare graduates for patent prosecution.

Expanding patent bar eligibility to encompass additional degrees will increase the number of diverse practitioners. At best, this expansion will increase somewhat the percentage of patent practitioners who are women or minorities. At the very least, it will increase the absolute number.

¹⁰ Administrative Updates to the General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases Before the United States Patent and Trademark Office, 86 Fed. Reg. 15467, 15468 (proposed Mar. 23, 2021).

¹¹ Hannon, *supra* note 1, at 12.

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.* at 12-13.

Thus, by including additional degrees under Category A, the USPTO can ensure that more diverse applicants will be able to participate in and contribute to the IP community.

Moreover, these benefits will accrue while producing few, if any, negative effects. The USPTO Rules of Professional Conduct already require, under Section 11.101 – Competence, that practitioners represent clients only if they possess the requisite “legal, scientific, and technical knowledge, skill, and preparation” for the task at hand.¹⁶ The competency requirement should ensure that any new practitioners, like existing ones, only take on matters within the scope of their technical and legal competence.

To identify additional degrees that should be enumerated as Category A qualifiers, the USPTO should initiate an information-gathering process. Below, we (1) discuss two types of degrees that illustrate the need for further Category A expansion and (2) describe a process the USPTO could use to identify additional Category A degrees.

1. *There are at least two categories of degrees that warrant additional consideration.*

- a. STEM degrees that differ from those in the proposed updates

There are many science, technology, engineering, and mathematics (STEM) degrees that require intensive technical training but will not be enumerated under Category A, even if the USPTO implements its proposed updates. To avoid the inefficiencies inherent to forcing applicants with such degrees to use the Category B pathway, the USPTO should allow applicants with STEM degrees to presumptively qualify under Category A.

As a starting point, the USPTO should allow degrees with similar requirements to but slightly differing names from enumerated degrees to qualify. The USPTO currently requires that degree names *exactly* match an enumerated Category A degree to qualify under that pathway. For example, “biology” is a current Category A degree and “biological science” would be an enumerated degree under the USPTO’s proposed updates. However, a practitioner with a degree in “biological sciences” is unable to qualify under Category A, even though their studies and training are likely to be identical or at least comparable. While that practitioner could still use the Category B pathway to qualify, the process is more laborious for both the applicant and the USPTO. To avoid this inefficient and unwarranted result, the USPTO should allow degrees with comparable requirements and substantially equivalent names to qualify applicants under Category A.

Furthermore, not all STEM degrees that clearly demonstrate scientific and technical competence are similar in name to existing or proposed Category A degrees. Certain disciplines, such as biomechanical engineering and robotics, require comparable levels of technical training but are not currently captured, even by a similar name. To ensure that qualified applicants can avail themselves of the Category A pathway, the USPTO should focus on expanding the list of

¹⁶ 37 CFR § 11.101.

enumerated degrees further to encompass the wider range of STEM degrees that applicants are likely to be earning today.

b. STEM-adjacent preprofessional and professional degrees

Many preprofessional (or undergraduate professional) degrees require significant scientific and technical training but are not currently recognized as Category A qualifiers. These include some fields, such as nursing and pharmacy, that tend to attract a greater percentage of female students. For instance, as of 2018, approximately 87% of undergraduate students studying nursing were women.¹⁷ While nursing degrees do not currently qualify applicants for the patent bar via Category A, these degrees require rigorous scientific and technical training.¹⁸ This is just one example of a host of potential preprofessional or undergraduate professional degrees that provide such training but are not currently recognized as Category A qualifiers. Expanding Category A to include these degrees holds the potential to remove barriers to entry to the patent bar both generally and for diverse practitioners in particular.

The USPTO should also consider professional degrees that require substantial scientific and technical training but lack an undergraduate counterpart. Medical and dental students, for example, must complete a rigorous technical curriculum to graduate: their training would certainly prepare them to prosecute patents. But because admission to these programs does not specify required undergraduate majors, these students may lack undergraduate STEM degrees. Such graduates should be eligible for patent bar admission under Category A. Similarly, certain LLM programs have a technical component.¹⁹ Graduates of these programs and individuals with other STEM and STEM-adjacent professional degrees should presumptively qualify for eligibility to the patent bar under Category A.

2. The process for gathering the necessary data is straightforward and can help the patent eligibility requirements stay current.

The degrees named throughout this section are not intended as a comprehensive list. Rather, they are illustrative of the *types* of additional degrees that the USPTO should consider adding as Category A qualifiers. As the USPTO begins to implement its proposals, it should gather information to make informed decisions about exactly which additional degrees to accept. For instance, the USPTO could conduct a cross-university study to identify the range of names for degrees that consistently provide the requisite scientific and technical training and then add those names to Category A. Furthermore, if while conducting this study, the USPTO finds that there are degrees that do not qualify in every instance but tend to have significant scientific rigor, it may

¹⁷ AM. ASS'N COLLS. NURSING, 2019 ANNUAL REPORT 4 (2019).

¹⁸ See, e.g., *B.S. Nursing Science Course Planner*, U.C. IRVINE: SUE & BILL GROSS SCHOOL NURSING, <https://perma.cc/N78V-GDTS> (detailing the extensive biology and chemistry requirements for a bachelor's degree in nursing).

¹⁹ Christopher Turoski, *Trade Secrets to Promoting Diversity of Patent Practitioners*, 24 VAND. J. ENT. & TECH. L. (forthcoming 2021). The paper also discusses several other types of degrees, such as an M.L.S. or M.Sc. Patent Law, worth considering. The USPTO can go further to shape these programs so they are compatible with the needs of the patent bar.

choose to create a streamlined Category B eligibility pathway for applicants holding such degrees, or permit institutions to petition for approval of their programs.

In addition to assessing Category A qualifiers in the near future, the USPTO should develop a procedure to update the list on an ongoing basis. Degree programs frequently change in name and nature, and the USPTO should prepare itself to keep pace. For example, if the USPTO maintains a list of qualifying degrees, it can update it with new degrees as applicants with those backgrounds apply. One way to achieve this would be to integrate this update process with the Category B pathway: the USPTO could examine degree programs of Category B applicants and add those degrees that provide the necessary training to the list of Category A qualifiers.

By expanding Category A, the USPTO can take an important step towards increasing diversity in the patent bar without any loss of quality or other negative effects. We strongly urge it to do so.

IV. The USPTO Should Promptly Institute Additional Measures to Improve Diversity in the Patent Bar.

While expanding eligibility requirements is a crucial first step towards improving diversity in the patent bar, these changes alone are insufficient. To make the patent bar more representative of the US population at large, a broader suite of initiatives is needed. The following section briefly proposes several potential actions the USPTO should consider in the near term to help realize this aim.

A. Institute an apprenticeship track for eligibility to the patent bar

As recently as 1990, the USPTO allowed applicants who had completed “a long apprenticeship under a registered patent attorney” to qualify for the patent bar.²⁰ It removed the apprenticeship track in the early 1990s, citing administrative difficulties. But developments over the past 30 years may have improved the USPTO’s administration capacity. Moreover, several large states (including New York and California) have had success with similar programs for their respective state bars,²¹ suggesting that careful planning can overcome this logistical challenge. The USPTO could reintroduce an apprenticeship path for patent bar eligibility and could model its requirements after those in states that currently operate successful programs. This change will offer individuals from a variety of backgrounds an alternative path to complete training that will prepare them to join the patent bar.

²⁰ *Premysler v. Lehman*, 71 F.3d 387, 388 (Fed. Cir. 1995).

²¹ Four states currently have full apprenticeship tracks for their respective state bars. Mike LaSusa, *School's Out: Legal Apprentices Take Alternative Path to Bar*, LAW360 (June 16, 2019, 8:02 PM EDT), <https://perma.cc/ATW9-LDU6>. Two have mixed apprenticeship options for bar eligibility. *State-by-State Guide to Apprenticeships*, SUSTAINABLE ECONS. L. CTR.: LIKE LINCOLN, <https://perma.cc/49SL-GXCD>.

B. Collect data on diversity among applicants and practitioners

The USPTO does not currently collect or track data concerning the demographics of applicants to the patent bar or of those successfully admitted.²² The failure to do so hinders efforts to assess the extent of diversity gaps in the patent bar and to track the effect of implemented solutions. Pending legislation would require the USPTO to collect demographic information on patent applicants.²³ The USPTO should do the same for patent bar applicants, practitioners, and examiners, and if it determines it lacks legal authority to do so should seek to include such authority in the IDEA Act. Collecting this information will position the USPTO to make more strategic, data-driven decisions on efforts to improve diversity in the patent bar in the future. In doing so, the USPTO should consider principles of inclusive demographic data collection.²⁴ For instance, offering options broader than a binary male/female distinction can ensure that gender data more accurately reflect the underlying population. Similarly inclusive options, including the ability to decline to respond, can and should be drafted for all demographic fields.

C. Create a separate set of eligibility requirements for patent practitioners focused on design patents

Design patents comprise approximately 7% of all patent applications.²⁵ In 2019, that equated to over 45,000 patent applications.²⁶ Patent practitioners preparing these patents need not rely on technical knowledge when writing or assessing the claims they contain. The contents of these applications are therefore at odds with the eligibility requirements for the patent bar.²⁷ In light of this mismatch, the USPTO should continue to consider a separate set of requirements for practitioners who wish to focus exclusively on design patents.²⁸ Accepting applicants with backgrounds in, for example, design and user experience would further increase diversity among patent bar practitioners and assure that the backgrounds of those practitioners match design patent subject matter.²⁹ After all, the USPTO hires people with backgrounds in art and design, not technical backgrounds, to be design patent examiners.

²² See Spector & Brand, *supra* note 3.

²³ *IDEA Act Added as Amendment to U.S. Innovation and Competition Act*, IPWATCHDOG (May 20, 2021), <https://perma.cc/3BRA-3TEM>.

²⁴ See, e.g., HARV. OFF. REG. AFF. & RES. COMPLIANCE, ORARC TIP SHEET: INCLUSIVE DEMOGRAPHIC DATA COLLECTION (2020), <https://perma.cc/GG98-EWGZ>.

²⁵ Gene Quinn, *Design Patents: Under Utilized and Overlooked*, IPWATCHDOG (Mar. 4, 2021), <https://perma.cc/9WB8-XZ8U>.

²⁶ *Id.*

²⁷ See Christopher Buccafusco & Jeanne Curtis, *The Design Patent Bar: An Occupational Licensing Failure*, CARDOZO ARTS & ENT. L.J. (2018); Hannon, *supra* note 1, at 13.

²⁸ Christopher Buccafusco et al., Comment Letter on the National Strategy for Expanding American Innovation (Feb. 23, 2021) (“This solution can create a stronger connection between the background of the prosecuting attorney and the subject matter of the applications being prosecuted and can only serve to improve the quality of design patents.”).

²⁹ See Hannon, *supra* note 1, at 13.

D. Expand outreach and education efforts

Barriers to entry at the eligibility stage contribute to the lack of diversity in the patent bar, but they are only part of the issue. Systemic problems perpetuate a leaky pipeline problem where relatively few diverse candidates pursue science and law, and even fewer attempt to work at the intersection.³⁰ The USPTO can help mitigate this issue by expanding outreach efforts aimed at underserved communities and diverse students.³¹ By cultivating an early interest in potential applicants, the USPTO can improve the odds that they will eventually pursue careers in the patent space.

E. Assess the history and utility of eligibility requirements

As one commentator has pointed out, “it is difficult to determine when or why the USPTO created the technical-education requirement.”³² Thus, as part of a larger effort to assess the utility and appropriateness of the scientific and technical training requirements as currently formulated, the USPTO should conduct a thorough review of the history and reasons for adopting the current eligibility requirements. The requirements have been in place in some form for decades,³³ but much has changed in the intervening timeframe that may make any such reasons inapplicable even if they were justified earlier. While ensuring technical proficiency is often proffered as explanation, “[p]roblems of insufficient technical credentials . . . appear to have played little role in the establishment of the technical-education requirement”³⁴ Accordingly, it would be valuable for the USPTO to conduct a comprehensive examination of the history of the development, implementation, and effectiveness of the requirements. Such an effort can inform future decisions regarding their relevance in a modern context.

V. Conclusion

We wholeheartedly support efforts that reduce unnecessary barriers to entry for qualified patent bar applicants. The USPTO’s proposed administrative updates are a step in the right direction. But the USPTO should not stop there. Further measures are needed, and they should be considered and implemented quickly as part of an ongoing, high-priority push to improve diversity in the patent bar and innovation ecosystem more broadly.

Respectfully submitted,

Professor Ann Bartow

University of New Hampshire Franklin Pierce School of Law

³⁰ See Hannon, *supra* note 1, at 20 (discussing the discouragement inventor Sara Blakely experienced upon learning her state had no women patent attorneys); Colleen V. Chien, *The Inequalities of Innovation* 34-35 (Santa Clara Univ. Legal Stud., Working Paper No. 2018-03, 2021) (same).

³¹ See Turoski, *supra* note 19 (providing a framework the USPTO can use to help overcome the numerous hurdles to becoming a patent practitioner).

³² William Hubbard., *Razing the Patent Bar*, 59 ARIZ. L.R. 383, 398 n. 77 (2017).

³³ Changes to Representation of Others Before the United States Patent and Trademark Office, 1283 Off. Gaz. Pat. Office (Nov. 16, 2004) at cmt. 33.

³⁴ Hubbard, *supra* note 31, at 401-02.

Professor Christopher Buccafusco
Cardozo School of Law

Professor Sarah Burstein
University of Oklahoma College of Law

Professor Ralph D. Clifford
University of Massachusetts School of Law

Jeanne Curtis
Independent Consultant

Professor Brian L. Frye
University of Kentucky College of Law

Professor Eric Goldman
Santa Clara University School of Law

Mary T. Hannon
DePaul University College of Law, '21

Professor Cynthia M. Ho
Loyola University of Chicago School of Law

Professor Mark D. Janis
Indiana University Maurer School of Law

Professor Amy Landers
Thomas R. Kline School of Law

Professor Yvette Joy Liebesman
Saint Louis University School of Law

Professor Brian J. Love
Santa Clara University School of Law

Professor Mark P. McKenna
Notre Dame Law School

Professor Aaron Perzanowski
Case Western Reserve University School of Law

Professor Ana Santos Rutschman
Saint Louis University School of Law

Professor Joshua Sarnoff
DePaul University College of Law

Professor Jason M. Schultz
NYU School of Law

Professor Christopher B. Seaman
Washington and Lee University School of Law

Professor Erik Stallman
University of California, Berkeley, School of Law