

Holistic Review: Developing a Rubric for Graduate Admissions in STEM
UC Davis TGA Committee
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Non-Prioritized List of Attributes for a Graduate Admission Rubric

- **Academic Capability**
 - Academic preparation/toolbox at a level that would enable the faculty to work with them in the graduate program (Fisk-Vanderbilt rubric)
 - Successful performance in key courses that indicate performance above a necessary threshold, e.g. math (Fisk-Vanderbilt rubric)
 - Ability to do advanced graduate work (Campbell 1990)
 - Sustained GPA of 3.0 or above (Northwestern IMSD rubric)
 - Record of high academic performance relative to opportunities and conditions experienced
 - Academic growth, especially in the sciences, e.g. increase in GPA in jr/sr years (Northwestern IMSD rubric)
- **Research Capability**
 - Understanding of how science works and research experience
 - Desire/track record to advance the participation of others, share knowledge, and contribute to the community
 - Breadth and depth of thought; hierarchy of goals; links general and specific
 - Creativity and ability to contribute diverse and novel ideas and approaches
 - Curiosity to discover the unknown; enjoyment in problem solving (Northwestern IMSD rubric)
 - Ability to think quantitatively, logically and critically; passion for problem solving (UCD GGE Rubric)
 - Ability to synthesize development within discipline, master competencies, (Enright and Gitomer 1989)
 - Ability to think critically
 - Ability to think conceptually-many people understand facts, but ability to pull together in a thought
 - Decision-making skills (White et al., 2009)
 - Ability to find the facts: information gathering (Campbell 1990)
 - Disciplinary imagination
- **Research Experience**
 - Evidence that they took full advantage of available research opportunities (Fisk-Vanderbilt rubric)
 - Research experience at UG institution (Northwestern IMSD rubric)
 - Extended post-baccalaureate research experience (Northwestern IMSD rubric)
 - Research for master's degree (Northwestern IMSD rubric)
 - Graduate-level coursework (Northwestern IMSD rubric)
 - Oral presentation at scientific meetings (Northwestern IMSD rubric)
 - Poster at scientific meetings (Northwestern IMSD rubric)
 - Publications (Northwestern IMSD rubric)
- **Fire-in-the-Belly**
 - Conscientiousness; motivation and dedication; ability to focus and work hard; intellectual commitment
 - Evidence of commitment and passion (Fisk-Vanderbilt rubric)
 - Persistence in the face of hardships/challenges (Fisk-Vanderbilt rubric)
 - Tenacity, (Enright and Gitomer 1989)
 - Motivation, (Enright and Gitomer 1989)

- **Positive Self-Concept**
 - Integrity, moral compass, ethical, truthful, reliable, emotionally stable
 - Realistic self-appraisal; delineates strengths and weaknesses, works on self-development
 - Resourcefulness; never runs out of options; confidence to complete challenging goals (UCD GGE Rubric)
 - Maturity/ability to be reflective about their performance (Fisk-Vanderbilt rubric)
 - Acceptance of personal responsibility; not blaming others (Northwestern IMSD rubric)
 - Preference for independence (Northwestern IMSD rubric)
 - Comfort with a future with variable options (Northwestern IMSD rubric)
 - Enthusiasm (Enright and Gitomer 1989)
- **Communication/Organizational Ability**
 - Excellent communication and interpersonal skills (UCD GGE Rubric)
 - Ability to seek positive and successful peers/mentors and convince them to help; organizes and motivates other to reach common goals
 - Ability to set and communicate (scientific) goals, to design an organized set of tasks to reach goals, and to complete tasks to reach goal
 - Ability to gather, synthesize and act on information
- **Maturity/Collaboration**
 - Coachability: openness to guidance and assistance, e.g. involvement in past diversity program (Northwestern IMSD rubric)
 - Collegiality/making professional connections/networking (Kyllonen, 2005)
 - Openness to experience (Costa and McCrae, 1992, Enright and Gitomer 1989)
 - Diversity of experiences with cultures, schools of thought, and ecological and socioeconomic environments
 - Leadership skills (Enright and Gitomer 1989)
 - Teamwork

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