To: College of Arts and Sciences Curriculum Committee

From: Marc McEllistrem, Department of Chemistry
Materials Science Academic Program Director

Doug Dunham, Department of Physics
Materials Science Center Director

Date: October 22, 2009

Re: Formation of a Materials Science Department

The faculty in Materials Science request that the College of Arts and Science Curriculum Committee endorse our proposal to restructure the Materials Science Program as a Department of Materials Science.

Background
At present, faculty in Materials Science have joint teaching appointments between Materials Science (75% teaching load) and another department (25% teaching load). For example, at present, Dunham holds a joint appointment in Materials Science and Physics, while McEllistrem holds a joint appointment in Materials Science and Chemistry. Because the Materials Science Program cannot form a Department Personnel Committee (DPC) or develop their own Department Evaluation Plan (DEP), faculty teaching in materials science have no option but to be reviewed by the department in which they have a 25% teaching appointment (which is known as their "home department"). While this structure has had both benefits and challenges for the current faculty, it has generally been a serviceable model.

Rationale for forming a Department
There have been three (3) Materials Science tenure track faculty searches under the above-described Program structure (two searches for which the "home department" was Physics, one with a Chemistry "home"). All have been unsuccessful. During on-campus interviews, candidates have expressed serious reservations about accepting a position for which the majority of their effort (teaching and scholarship) is devoted to Materials Science but for which their tenure and promotion decisions reside in the "home department" with which they are connected. Further, faculty hired under the current model doing very similar work would be reviewed under differing guidelines in different DEPs. The proposed new department avoids this potentially inequitable situation. In short, while the present structure is serviceable for faculty who are already here and tenured, it creates problems in recruiting new faculty.

Interdisciplinarity retained
The existing program has been deliberately structured to highlight the interdisciplinary nature of materials science. In particular, because the field of materials science is itself an interdisciplinary enterprise (materials scientists routinely borrow ideas and understanding from chemistry, physics, biology, geology, computer science, etc.), the
new academic major, whether served by a department or a program retains those interdisciplinary themes. In addition, the faculty in the proposed department would continue to hold joint appointments in other departments and teach in those majors, such that connections between Materials Science and the existing science departments would be retained (and are expected to be enhanced as more faculty are hired).

**Rationale for forming a Department instead of a Functionally Equivalent Unit**

This particular issue has been broadly and extensively discussed: we (McEllistrem and Dunham) have (either separately or jointly) sought input from the Dean of the College of Arts and Sciences, the chair and the faculty in the Chemistry department, the chair and the faculty of the Physics and Astronomy department, the chair of the Geology department, and Jill Ferguson in Materials Science. Without exception, the department chairs and faculty have argued for establishing a department, for a variety of reasons: the ambiguity of a functionally equivalent unit leaves them wondering why not a department instead; the reorganized program will be a de facto department (so call it that); and because the resources are there to support a department. Perhaps the most commonly heard advice for a department is centered on the hiring of new faculty: since the existing program’s structure is a barrier to hiring faculty, the best route is to create a structure that candidates understand best - a department. Bringing candidates to campus and attempting to explain why a 'functionally equivalent unit' is preferred over a department fails to do what we are trying to do: reassure prospective hires. For these reasons, we propose to reorganize the academic program into an academic department.

**Budgetary Impact**

The program is presently managed by two faculty each with a 50% teaching reassignment and a 50% assignment for administrative responsibilities: Doug Dunham is director of the Materials Science Center and coordinates with local industry, K-12 schools, and stakeholders external to UW-Eau Claire in developing collaborations and joint research projects, while Marc McEllistrem is director of the Materials Science Academic Program and serves as its chair. These two administrative roles are supported by an Academic Department Associate who works at 50% in materials science. All of these positions, as well as faculty and staff yet to be hired, are funded by the Nano Science, Technology, Engineering and Math Decision Item Narrative (NanoSTEM DIN); no funds beyond those provided by the DIN are needed for the proposed reorganization.

The existing administrative structure will not change as a result of reorganizing the unit from a program to a department, so there will be no impact on the operational expenses associated with managing the collective materials science efforts. Curriculum development and review processes have proceeded with input from departments that are either directly or indirectly impacted. To date, these departments have been predominantly the Chemistry and Physics and Astronomy departments. Curriculum development and review processes will also remain unchanged.