

## ENGINEERING RESEARCH CENTERS FOR THE SCHOOL OF ENGINEERING

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Revised and approved:

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This document discusses the rationale and methods for establishing Engineering Research Centers in the School of Engineering. Criteria for establishment of Centers, management methods, evaluation techniques and policies are described.

### Introduction

The primary concept associated with the establishment of Research Centers is to improve the stature of the School by amalgamating selected faculty members and students into cooperative research groups with sufficient critical mass to achieve national and international prominence. Amalgamation of resources, increased visibility, the prospect of enhancement of research excellence, and the ability to solicit funds to support Center activities are primary reasons for establishing Centers. Research Centers within the School will provide an organizational structure that will assist in focusing interdisciplinary research activities.

The basis for Center creation and operation is governed by the following objectives:

- Centers must provide clear benefits beyond currently available cooperative efforts between faculty members.
- Centers must support and clearly augment the stated mission of the School of Engineering.
- Centers should be self-supporting. Industrial, foundation, or government support and recognition is a specific aim.
- Centers will undertake basic and applied research in the major areas that impinge on their technological themes and which provide potential for advancing the state-of-the-art.
- Centers will be for a period of three years duration. Reapplication for continued status should briefly outline the current status of the Center and reasons for continuation based on the criteria in this document.

### Desired Center Characteristics

1. **Critical Mass.** Current methods for collaboration between small numbers of faculty are straightforward and accomplished with few, if any, impediments. Indeed, a strength of the Vanderbilt research community lies in the ease of collaboration. Centers should be constructed to take advantage of this ease of collaboration. It is expected that Centers contain no fewer than four faculty investigators constituted predominantly from Engineering faculty.
2. **Research Areas.** The research topics selected for a Center must accurately reflect the interests and expertise of the faculty involved. The research focus should be of current or prospective importance to industry, government, and basic research interest. Research areas in many cases may be interdisciplinary and will often extend outside the School of Engineering.
3. **External Funding Requirements.** Centers must operate exclusively through external funds.
4. **Industrial, Foundation, or Government Sponsorship.** Given the principle that Centers should interact with external sponsors, each Center should demonstrate either that sponsors are already significant, or that sponsorship is highly likely.

## Center Structure

1. **Personnel.** Centers are formed primarily from the faculty ranks and include postdoctoral and graduate students, support staff, and visitors. All personnel who hold faculty rank shall have their primary appointment in one of the departments. A Center director shall be appointed by the Dean and will have responsibility for the overall direction and administration of the Center. Persons who contribute significantly to the life of a Center but who reside in other units of the University may be appointed members of the Center.
2. **Industrial Affiliates.** Companies may become affiliated members in a Center by contributing to the Center in one or more of several modes. For example, industries may contribute funds to support specific research projects or may provide general support funds that could entitle them to progress reports and limited consulting. Industrial affiliated membership may also be in the form of contribution of services-in-kind.
3. **Grants and Contracts Administration.** Routine grant and contract administration will be handled through the Division of Sponsored Research of the University. Center Directors will review Center proposals prepared by Center members with a goal of assisting in the coordination of resources and requests to the School of Engineering administration and to the appropriate department(s).
4. **Relationship to School of Engineering.** Centers are interdisciplinary research units within the School of Engineering. Center activities are reported by Center Directors to the appropriate Department Chairs and to the Associate Dean for Research. Center oversight is the responsibility of an Administrative Committee of the School of Engineering. A function of the Administrative Committee is to insure that the research activities of the Center are aligned with the overall academic mission of the School of Engineering.

## Center Operations

1. **Research Characteristics.** In general, any fundamental or applied research problems supported by governmental or industrial sources are allowable that conform to the general guidelines of the School and University. Center research projects, however, must represent a focused effort. That is, it is clearly insufficient to form a Center around a set of unrelated projects.
2. **Fund Solicitation.** With due coordination with School and University solicitation efforts, Centers are allowed to solicit funds directly for their support. Support may be in the form of Industrial Memberships in the Center.
3. **Publication Restrictions.** Centers will adhere to current University policy on publication restrictions.
4. **Patent Rights.** Patent policies included in the *Faculty Manual* will be followed, with the following exception. Net income designated for the inventor's department will be allocated to the Center responsible for the patent disclosure.
5. **Copyrights.** Copyright protection would be sought for software developed under Center aegis. Centers will comply with University copyright policies.
6. **Review.** The Administrative Committee on an annual basis will evaluate center progress and achievements. A principle is that new Centers can be easily initiated and old Centers terminated as Center viability waxes and wanes and as national need dictates. Centers that do not show continuing progress toward meeting the objectives set forth in this document will be recommended for closure:
7. **Interaction with Individual Departments.** Certain operating matters require close interaction between Centers and individual departments. Specific cases where such interaction is appropriate and where departmental approval is required include the following:
  - Any budgetary actions which are likely to impact departmental personnel and facilities (e.g., purchases, faculty research offsets, additional staffing);

- Allocation of space for Center activities; and
  - Faculty travel on Center business, to the extent that the trip compromises faculty teaching responsibilities.
8. **Recommendations for Promotion and Salary Increases.** Center Directors will assume the responsibility of advising the appropriate departmental chairs on promotion and salary increases for all research faculty (research professor, research associate professor, etc.), research associates, visiting scholars, and staff associated with the Center.

#### Creating a Center

1. **Overview.** Interested faculty form a group and produce a preliminary proposal for review by the Dean. This proposal should include letters from the prospective Center members expressing their support for both the concept of the Center and for the proposed leadership of the Center. If there is a clear indication of interest by the Dean, the faculty will be invited to prepare a more formal proposal.
2. **Formal Proposal Contents.** The formal proposal should contain the following elements: detailed description of proposed areas
  - rationale for Center establishment
  - description of leadership of Center and management structure
  - faculty and qualifications listing
  - description of specific research projects, both current and planned
  - industrial relationships and supporting letters
  - statement of management policies

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