them with an education of the highest quality available anywhere in the world and which reflects the unique needs of the Nation. It is designed to stimulate and enable colleges and universities to provide the quality of education necessary to produce baccalaureate or higher degree level graduates capable of strengthening the Nation's food and agricultural scientific and professional work force. It is intended that projects supported by the program will:

(a) Address a State, regional, national, or international educational need;

(b) Involve a creative or nontraditional approach toward addressing that need which can serve as a model to others;

(c) Encourage and facilitate better working relationships in the universities and the private sector, to enhance program quality and supplement available resources; and

(d) Result in benefits which will likely transcend the project duration and USDA support.

§ 3405.5 Matching funds.

Each application must provide for matching support from a non-Federal source. CSREES will cite in the program announcement the required percentage of institutional cost sharing.

§ 3405.6 Scope of program.

This program supports projects related to strengthening undergraduate or graduate teaching programs as specified in the annual program announcement. Only proposals addressing one or more of the specific targeted need areas(s) identified in the program announcement will be funded. Proposals may focus on any subject matter area(s) in the food and agricultural sciences unless limited by determinations as specified in the annual program announcement. A proposal may address a single targeted need area or multiple targeted need areas, and may be focused on a single subject matter area or multiple subject matter areas, in any combination (e.g., curiculum development in horticulture; curriculum development, faculty enhancement, and student experiential learning in animal science; faculty enhancement in food science and agribusiness management; or instruction delivery systems and student experiential learning in plant science, horticulture, and entomology). Targeted need areas will consist of one or more of the following:

(a) *Curricula design and materials development.* (1) The purpose of this initiative is to promote new and improved curricula and materials to increase the quality of, and continuously renew, the Nation's academic programs in the food and agricultural sciences. The overall objective is to stimulate the development and facilitate the use of exemplary education models and materials that incorporate the most recent advances in subject matter, research on teaching and learning theory, and instructional technology. Proposals may emphasize: the development of courses of study, degree programs, and instructional materials; the use of new approaches to the study of traditional subjects; or the introduction of new subjects, or new applications of knowledge, pertaining to the food and agricultural sciences.

(2) Examples include, but are not limited to, curricula and materials that promote:

(i) Raising the level of scholastic achievement of the Nation's graduates in the food and agricultural sciences.

(ii) Addressing the special needs of particular groups of students, such as minorities, gifted and talented, or those with educational backgrounds that warrant enrichment.

(iii) Using alternative instructional strategies or methodologies, including computer-assisted instruction or simulation modeling, media programs that reach large audiences efficiently and effectively, activities that provide hands-on learning experiences, and educational programs that extend learning beyond the classroom.

(iv) Using sound pedagogy, particularly with regard to recent research on how to motivate students to learn, retain, apply, and transfer knowledge, skills, and competencies.

(v) Building student competencies to integrate and synthesize knowledge from several disciplines.

(b) *Faculty preparation and enhancement for teaching.* (1) The purpose of this initiative is to advance faculty development in the areas of teaching competency, subject matter expertise, or student recruitment and advising skills. Teachers are central to education. They serve as models, motivators, and mentors—the catalysts of the learning process. Moreover, teachers are agents for developing, replicating, and exchanging effective teaching materials and methods. For these reasons, education can be strengthened only when teachers are adequately prepared, highly motivated, and appropriately recognized and rewarded.

(2) Each faculty recipient of support for developmental activities under § 3405.6(b) must be an ''eligible participant'' as defined in § 3405.2(j) of this part.

(3) Examples of developmental activities include, but are not limited to, those which enable teaching faculty to:

(i) Gain experience with recent developments or innovative technology relevant to their teaching responsibilities.

(ii) Work under the guidance and direction of experts who have substantial expertise in an area related to the developmental goals of the project.

(iii) Work with scientists or professionals in government, industry, or other colleges or universities to learn new applications in a field.

(iv) Obtain personal experience working with new ideas and techniques.

(v) Expand competence with new methods of information delivery, such as computer-assisted or televised instruction.

(vi) Increase understanding of the special needs of non-traditional students or students from groups that are underrepresented in the food and agricultural sciences workforce.

(c) *Instruction delivery systems.* (1) The purpose of this initiative is to encourage the use of alternative methods of delivering instruction to enhance the quality, effectiveness, and cost efficiency of teaching programs. The importance of this initiative is evidenced by advances in educational research which have substantiated the theory that differences in the learning styles of students often require alternative instructional methodologies. Also, the rising costs of higher education strongly suggest that colleges and universities undertake more efforts of a collaborative nature in order to deliver instruction which maximizes program quality and reduces unnecessary duplication. At the same time, advancements in knowledge and technology continue to introduce new subject matter areas which warrant consideration and implementation of innovative instruction techniques, methodologies, and delivery systems.

(2) Examples include, but are not limited to:

(i) Use of computers.

(ii) Teleconferencing.

(iii) Networking via satellite communications.

(iv) Regionalization of academic programs.

(v) Mobile classrooms and laboratories.

(vi) Individualized learning centers.

(vii) Symposia, forums, regional or national workshops, etc.

(d) *Scientific instrumentation for teaching.* (1) The purpose of this initiative is to provide students in science-oriented courses the necessary