



Programmatic Terms and Conditions for Science of Learning Centers (SLC) (NSF 03-573)

1. **Key Personnel:** Any requested changes to Key Personnel/Partner Institutions, other than to the PI and/or Co-PI's listed on the first page of this Agreement, must be submitted in writing, in advance, and with all needed documentation, to the NSF Cognizant Program Officer for review and approval. No changes may be affected prior to formal, written NSF Cognizant Program Officer approval. PI/Co-PI changes must be submitted through FastLane for Grants Officer approval.

2. **Program/Project Description:** The Science of Learning Centers (SLC) program supports large-scale, long-term projects to extend the frontiers of knowledge of learning and to create the intellectual, organizational, and physical infrastructure needed for the long-term advancement of learning research. All SLCs share a science of learning research focus and incorporate diverse, multidisciplinary environments through partnerships with academia, industry, education, and other related public and private entities. SLCs seek to understand what learning is and how it is affected at all levels. The SLC enterprise emerges from the intersections of diverse disciplines across the biological, cognitive, computational, mathematical, physical and social sciences, engineering, and education. Each SLC is awarded NSF funding to meet the goals of:
 - Advancing the frontiers of all the sciences of learning through integrated research;
 - Connecting this research to specific scientific, technological, educational, and workforce challenges; and
 - Enabling research communities that can capitalize on new opportunities and discoveries and respond to new challenges

3. **Project Governance:** The Awardee serves as the lead institution in the SLC and is responsible for the management and resolution of all issues and concerns among all the subawardees. The Awardee will assure that:
 - The SLC Partner Institutions function together as an integrated project with shared research, education and knowledge-transfer goals;
 - An efficient and effective SLC governing/management structure is in place throughout the project period to support all critical or significant project activities, including:
 - An SLC Director who works closely with both the SLC Board of Directors and the SLC Advisory and Scientific Review Board to fulfill a clearly articulated vision, mission, and strategic plan, including:
 - * Executive responsibility for day-to-day SLC project management, staffing, and resource allocation in accordance with the SLC

Strategic Plan that has been approved by the NSF Cognizant Program Officer;

- * Administering the award in accordance with NSF policies and the terms of the cooperative agreement;
 - * Arranging for external evaluation of the Center's activities;
 - * Cooperating with NSF on the development of databases and other appropriate infrastructure for monitoring and evaluation of the Centers;
 - * Reporting on new findings and the evolving state of the art in science of learning research;
 - * Serving as the liaison between the Center and a National Network of SLC Directors (the network);
 - * Working within the Network to address common goals, problems and opportunities;
 - * Facilitating personnel and resource exchanges;
 - * Supporting integrated partnerships; and
 - * Ensuring cooperation, coordination, and avoidance of duplication of effort between SLCs.
- An SLC Board of Directors qualified to implement the Center's strategic plan and assist the SLC Director with general SLC management as appropriate;
 - An External Advisory and Scientific Review Board that:
 - * Consists of six eminent researchers and educators and represents a broad range of expertise and interests;
 - * Meets at least annually;
 - * Provides guidance and advice for all the Center's activities consistent with its vision, goals, and objectives;
 - * Communicates in writing any changes to the charter to the NSF Cognizant Program Officer;
 - * Includes representation from stakeholder communities that are potentially served by the SLC;
 - * Displays the diversity of the United States citizenry in its membership; and
 - * Does not include members with a financial or institutional formal affiliation or collaborative connection with the SLC or the SLC National Network.

4. Governing Responsibilities: The Awardee will ensure the SLC governance bodies work together to accomplish the following key activities and relationships:

- Establish diverse teams at all organizational levels of the center, inclusive of women and men, underrepresented minorities, and persons with disabilities;
- Create and institutionalize partnerships with schools, industry, international partners, professional societies and/or other appropriate external entities that involve significant exchanges of people and ideas;

- Develop mechanisms to share resources and disseminate ideas among the Center, its partners, and broader audiences of researchers, educators and the public;
- Provide innovative research, educational, and career development opportunities for all participants; and
- Provide experimental, computational, and/or other equipment and facilities needed to enable a robust research and learning environment.

5. Reporting Requirements: The Awardee will provide ad hoc and regular reports as designated by the NSF Cognizant Program Officer with content, format, and submission time line established by the NSF Cognizant Program Officer. The Awardee will submit all required reports via FastLane using the appropriate reporting category; for any type of report not specifically mentioned in FastLane, the Awardee will use the "Interim Reporting" function to submit reports. These reports may include:

- Evaluation reports from an external evaluator;
- An initial SLC Strategic Plan, due within ninety (90) days of the award and annually thereafter, that will include:
 - The SLC long-range vision in a concise and cogent statement;
 - The succinct mission statement or strategy for accomplishing that vision;
 - Well defined annual performance goals with completion time lines, milestones, and deliverables for the initial five-year award period, including:
 - * Maintaining the unifying SLC intellectual theme as proposed with attention to how the goals are to be integrated with each other and across participating institutions;
 - * A coherent plan for integrating institutional activities into a focused progression to accomplish the mission;
 - * An outline of goals, strategies, and success measures for each component research thread;
 - * An outline of goals, strategies, and success measures for the center's educational activities; and
 - * An outline of goals, strategies, and success measures for the inclusion of the faculty members from Engineering Departments as collaborators.
 - A diversity plan that moves beyond the initial step of attaining minority institution partners and implements performance measures related to:
 - * Diversity expectations for each of the lead and partnering institutions;
 - * Increasing participation of and providing research and educational opportunities to United States citizens, nationals, and lawfully admitted permanent resident aliens;
 - * Ensuring participation in the SLC activities by women, minorities, people with disabilities, and members of other underrepresented groups as undergraduate and graduate students, postdoctoral researchers, industrial fellows, faculty members, and others;

- * Encouraging women, minorities, people with disabilities, and members of other underrepresented groups to pursue careers in science and engineering; and
 - * Identifying actions that will enhance and ensure diversity throughout the life of the SLC well beyond NSF funding.
- Establishing a program of ethics training within the cross-disciplinary and multi-institutional context of the SLC and all Institutional Partners, including participating governing/management body members, SLC staff, faculty, visiting faculty, postdoctoral researchers, and graduate and undergraduate students.
 - Documentation of the Intellectual Property Rights Agreements agreed to by SLC institutions and subawardees related to knowledge transfer and significant intellectual exchanges with other groups, including groups in the private sector, federally supported laboratories, state and local government, and other academic institutions.
6. Awardee Support of Ongoing Management and Oversight: The Awardee will ensure full commitment and cooperation among the governing structure components, and all project staff during all ongoing NSF project management and oversight activities. The Awardee will ensure availability of all key partners during any desk or on-site review as well as timely access to all project documentation. The Awardee will ensure that:
- The Center Director and Other Key Personnel attend cross-Center meetings, appropriate workshops organized by NSF, and annual meetings of the National Network of SLC Center Directors;
 - The Center is well prepared for and participates fully in the annual on-site review;
 - The Center Director attends the annual awardee meeting/workshop;
 - There is Center participation in teleconference or videoconference meetings between appropriate Center and NSF staff to follow up on problems identified in the annual reports or site visits, and
 - The Center participates in the regular (at least monthly) meetings of Center staff before each Science of Learning Seminar. The NSF Cognizant Program Officer may occasionally participate in these meetings.
7. Award Duration and Renewal: Initial support for an SLC will be for five years, with ten years being the maximum duration for NSF support to an SLC:
- Funding for each year is contingent on successful progress as indicated by annual on-site reviews;
 - During the fourth year of operation the SLC may submit a renewal proposal for continued support;
 - The revised proposal will undergo merit review;
 - An SLC's achievements and future plans will be evaluated comprehensively;
 - SLCs successful in passing the fourth-year review will be renewed for another five years, commencing at the beginning of the sixth year and will continue to be reviewed by NSF annually;

- An SLC that does not pass the fourth-year review will be phased-out over a one-year period, at a reduced level of support; and,
- If a Center is successful in application for renewal funding, NSF's funding strategy represents full support of the project for Years 1 through 8, with phase down of NSF support of all project activities in Years 9 and 10 as approved by the NSF Cognizant Program Officer. The Awardee must develop specific and concrete plans for sustainability of the Center's activities following the period of NSF support (which will be no more than a total of 10 years).

Grantee-approved no-cost extensions will not be allowed. Any no-cost extension must be approved by the Cognizant NSF Grants Officer.