Research Scientist Promotion Criteria for the School of Education

Research centers affiliated with Indiana University’s School of Education provide opportunities for sustained and focused research in areas outside the boundaries of traditional academic departments. These research centers directly contribute to the School of Education’s national and international reputation for excellence and to its long tradition in service to education in the State of Indiana, as well as nationally. These centers’ capacity for serving the education community and other clientele (e.g., governmental agencies, PK-12 and higher education systems) depends in part on being able to maintain facilities and organizations which are staffed by stable, well-qualified cadres of researchers in non-tenure track faculty positions; the productivity, success and sustainability of many of these research centers are dependent on the ability to retain one or more research scientists with richly diversified, specialized competencies.1

The three-tier system of research ranks (i.e., Assistant Scientist, Associate Scientist, and Senior Scientist) was instituted by Indiana University in 1981 to enhance the competitive recruitment and retention of doctoral level researchers. Effectively using this career ladder framework to recruit and retain high-quality research scientists necessitates transparent, appropriate and well-defined criteria and procedures for their annual review and promotion. Supplementing the University’s policy statements on qualifications for research ranks (see below), this document provides the details and context needed to ensure the validity, appropriateness and fairness of the promotion process, and provides well-defined criteria for promotion appropriate to the roles, responsibilities and expectations of research scientist positions within the School of Education.

BACKGROUND/CONTEXT

Several factors need to be taken into consideration in the identification and definition of valid and meaningful criteria for research scientist promotion, including the following:

Diverse missions and contexts of research centers. Each research center and institute has a distinct mission, purpose, and set of goals. The criteria for promotion must recognize the diversity of the missions, and the individual’s contribution to that mission.

In addition, in evaluating research scientists’ performance, the fact that research centers at the School of Education are funded by external contracts, grants, user fees, and other externally generated revenue must be taken into consideration. The funding base for the centers has two significant implications: (1) the research scientists’ commitment to promoting the mission of the center, above and beyond their individual research interests, is critical to the success and sustainability of the center, and (2) the responsibilities and expectations of research scientists whose positions are funded by external contracts and grants are largely prescribed by the external

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1 Although research scientists traditionally have been employed as part of a Center, there may be instances where a research scientist is employed directly by a funded research project or an academic department within the School of Education. In such instances, the criteria delineated in this document may be used by substituting “project” or “department” for “center” throughout the document.
funder, decreasing the research scientists’ flexibility in pursuing individual research interests and/or devoting time to other (unfunded) endeavors. With regard to this latter point, for example, a research scientist who is paid 100% on contracts that do not include peer-reviewed publications as a specific expectation or deliverable, which is often the case, has no time allocated for writing journal articles; and typically any additional available time and hours must be devoted to the success and sustainability of the center.

Research scientist responsibilities and expectations. Two critical factors that need to be taken into account in evaluating the performance of research scientists are (1) the diversity of responsibilities and expectations both within and between centers, and (2) the critical role of research scientists’ service to the center. First, the specific position responsibilities and expectations of research scientists, even within the same research rank, vary greatly. These differences are significant and substantive both across and within centers. For example, an Associate Scientist at one center might serve as the principal investigator of an externally funded contract that includes developing research methodology, designing new instruments, and conducting data analyses for the purposes of providing information on best practices to a department of education; an Associate Scientist at another center might supervise a team of researchers – both full-time and graduate level – to conduct original analyses on a large multi-institutional dataset for the purpose of producing an annual report to higher education leaders and the media.

Second, the critical role of research scientists’ service to the center needs to be taken into account in evaluating their performance. As noted previously, research centers within the School of Education are completely self-funded by external contracts, grants, user fees, and/or other externally generated revenue. Therefore the long-term sustainability of centers in this soft-money environment is directly dependent on the center’s reputation, visibility, and ability to continue to attract new (and returning) funding sources. This requires research scientists to invest substantial time and effort into the productivity and sustainability of the center, and to uphold a commitment to the center and its welfare. For these reasons, the research scientist’s promotion needs to include an evaluation of the candidate’s service to the center.

A: UNIVERSITY QUALIFICATIONS

The School of Education criteria for research scientist promotion are guided by the Indiana University policy statement on research ranks (Regulation of Research Appointments ACA-20, effective 2-07-1981, last updated 2-02-1993; http://policies.iu.edu/policies/categories/academic-faculty-students/academic-appointment-review/Regulation-of-research-appointments.shtml). Research rank appointments are appropriate for individuals who hold the terminal degree in their field, who have some postdoctoral experience (or its equivalent), and whose primary responsibilities will be research and service. University policy outlines the following general qualifications for each of the three research ranks, stating that these qualifications are roughly equivalent to those set forth in the area of research for members of the faculty.

Assistant Scientist: typically has completed the terminal degree in his or her discipline and, in some fields, has at least one year of successful postdoctoral research experience; is capable of
original, independent research and scholarship under the direction of a senior faculty member or an Associate Scientist or a Senior Scientist

**Associate Scientist:** typically has completed a minimum of three years postdoctoral research; has begun to establish a national reputation through published work and has responsibility for carrying out independently, as principal investigator, projects of his or her own devising

**Senior Scientist:** typically has demonstrated a career of continued growth in scholarship which has brought a national or international reputation as a first-class researcher or scholar who has made substantial contributions to his or her discipline

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**B: SCHOOL OF EDUCATION**

The following paragraphs define the two primary responsibilities of the research scientist within the School of Education: (1) research and creative activity, and (2) service. In addition, the criterion areas are characterized generally as they relate to the overall missions and purposes of the centers and School of Education.

**B: 1: DEFINITIONS**

**Research and Creative Activities**

This category is broadly construed to include all original inquiry and systematic analyses of problems (both practical and theoretical). In general, this category involves the question of what the research scientist has contributed to the field of education through scholarship and creative efforts. To align with the roles and responsibilities of research scientists in the School of Education and its centers, the definition of research and creative activities has been defined to recognize and value research scientists’ diverse forms of scholarship. More specifically, for its definition of research and creative activity for research scientists, the School of Education relies on three of the four types of scholarship defined by Boyer (1990): ²

- **Scholarship of discovery** (discovery research) includes all activities that extend knowledge through the discovery or collection of new information. The scholarship of discovery includes, but is not limited to, the typical label of basic or original research (e.g., primary empirical research, historical research, theory development and testing, methodological studies, and philosophical inquiry and analysis).

- **Scholarship of application** (applied research) includes all activities that relate knowledge in academic disciplines to communities outside academia, including the discovery, evaluation and communication of research findings. The scholarship of application

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focuses on using research findings and innovations to address real-world, societal problems.

- **Scholarship of integration** (integrative research) includes all activities that are primarily interdisciplinary and interpretive, focusing on making connections across disciplines, across topics within a discipline, or across time. The scholarship of integration includes interpreting one’s own research so that it is useful beyond one’s own disciplinary boundaries and can be integrated into a larger body of knowledge.

**Service**

This category focuses on service to the respective center (or in some cases, project or department) and its central mission/purpose, and is a primary responsibility of all research scientists. The School of Education recognizes that the reputation, stature and long-term sustainability of its centers are highly dependent upon research scientists’ service to the center. Research scientists perform a broad array of services that are vital to supporting the quality and effectiveness of the centers.

A research scientist’s service to the center can take a variety of forms and directions, such as any or all of the following: participation (or leadership of) a center committee, working group or task force; substantive involvement in a center initiative or project that contributes to the mission of the center (e.g., self-study of the center; developing a strategic plan; developing new organizational infrastructure); substantive project management roles (e.g., project design, project recruitment, report production, supervision of project staff, management of the project budget); performing integral administrative functions of the center (e.g., budget management; recruitment of personnel; personnel supervision and management (including graduate students, academic staff, professional and support staff); personnel allocation/appointments; and grant and contract oversight. Service to the center may also include service activities external to the center that directly support the mission of the center, such as any or all of the following: representing the center at School of Education and/or University meetings, committees and/or events; representing the center at non-University events, meetings, conferences for the purposes of promoting the center and/or developing new business; outreach to relevant organizations and agencies; informing the needs of member organizations; and developing and/or maintaining projects and/or relationships with funders, clients, and key stakeholders. These efforts and other service activities are considered in promotion decisions to the extent that they contribute to the mission of the center.

In addition to the primary category of service to the center, this category may include service to the School of Education, University, profession and/or public. These forms of service also may take a variety of forms and directions, such as any or all of the following: administration within the School, University, or to professional organizations; service on School or University committees and faculty governance boards, commissions, task forces, and councils (not directly related to the mission of the center); conducting training and development in the field; advising or other service to any level of public or private educational institutions or professional organizations; advising or other service to government or public interest groups; and promoting the work of the center externally through working with media and other appropriate dissemination
vehicles. Additional service may also include teaching or contributing to the instructional program of the School of Education or the University as needed and appropriate.

C: SCHOOL OF EDUCATION CRITERIA

The appropriateness and importance of the type of scholarship and level (or type) of service will vary with the expectations of a given research scientist position. Therefore, it is critical that excellence in research and creative activities, and at least satisfactory in service, are evaluated within the specific context of a given position (i.e., mission of the respective center, research scientist’s allocation of effort, and the specific responsibilities and expectations of a given position). For example, a research scientist within one center might serve as the principal investigator/project director for funded research that precludes publication in peer-reviewed journals due to the proprietary nature of the data; whereas another research scientist serves as the principal investigator/project director for funded research that has as its primary deliverable a peer-reviewed publication, or serves at a center where peer-reviewed publications are directly related to the visibility, productivity and sustainability of the center; whereas another research scientist may serve as the principal investigator/project director for funded research that focuses on working closely and collaboratively with stakeholders to understand and use research findings to change education practices. Given the varied natures of these positions, and the parameters for allowable activities dictated by the funding source(s), it would not be fair or appropriate to evaluate these research scientists with the same criteria.

Some general guidance, however, is provided below that can be used in evaluating excellence in research and service. To be valid and meaningful, however, these criteria must also take into consideration the research scientist’s allocation of effort, the specific responsibilities and expectations of a given position, and the mission of the respective center.

C: 1: Research and Creative Activity

The evaluation of research and creative activity involves the examination of a number of criteria, may include but are not limited to the following:

- **Productivity.** Research productivity may include one or more areas of scholarship (i.e., scholarship of discovery, scholarship of application, scholarship of integration), meaning that research scientists may demonstrate productivity in one or more of these areas of scholarship depending on the responsibilities and expectations of the position. In assessing productivity, criteria may include the activities themselves (e.g., number, size and/or scope of research projects completed by the research scientist), and/or the product of these activities (e.g., reports, publications, presentations). Mentoring and/or advising graduate students and other academic staff (e.g., research associates, more junior research scientists) on components of the research process (e.g., skill development training, developing reports and/or papers, and
other creative activities) may also be considered to the extent that this type of research activity is an expectation or responsibility of the research scientist position.

- **Quality.** The quality of a candidate’s research (including the research design and methodology, data collection, analyses and/or report writing) is an important component of the assessment of scholarly contribution. Assessment of quality may include the following: the extent to which the activity’s purposes, goals and objectives are clear; the extent to which the activity reveals a high level of relevant knowledge, discipline-related expertise/skills and reflective understanding; and the extent to which appropriate methods are used for the research activity including principles of honesty, integrity and objectivity. Quality may also include the extent to which the activity and outcomes are presented appropriately and effectively to its various audiences. Discipline-specific or professional standards in a given field also should be considered as appropriate.

- **Impact.** Criteria may also include the impact of a research scientist’s scholarship on the respective field or discipline, and/or the impact of the research and its findings on key stakeholders or environments (e.g., changing teachers’ practices; influencing education policy; informing key education decisions and improvement initiatives; guiding the development of best practices). Assessment of impact may include the breadth and reach of the impact, the extent to which the work can affect and be accessed by diverse stakeholders (both academic and/or practical), and/or the ways in which the research has influenced and/or informed education policies and practices. Impact on the scholarship development of graduate students and other academic staff (e.g., research associates, more junior research scientists) resulting from mentoring and/or advising may also be considered to the extent that this type of research activity is an expectation or responsibility of the research scientist position.

C: 2: Service

The evaluation of service involves the examination of a number of criteria, including but not limited to the following:

- **Quantity, Diversity and/or Quality of service to the center, School of Education, University, profession and external constituencies (e.g. funding agencies, public).**

- **Effectiveness/Impact of service.** Criteria for assessing service to the center also includes an examination of the effectiveness of the service, the overall impact of service and the significance of the service to the welfare, productivity and sustainability of the center.

- **Leadership and Initiative.** At the promotion to Senior Scientist level, the criteria for assessing service to the center also includes the research scientist’s initiative in taking on new service activities, as well as the research scientist’s initiative in creating and designing new service activities to meet the needs of the center. The criteria also include the research scientist providing independent administrative leadership for the center, and demonstrating leadership on service activities both within the center (e.g., serving as chair of a committee; spearheading a new initiative) and outside the center (e.g., sustaining projects over time; maintaining relationships with funders and clients; developing new funding streams and/or
successfully leading funded proposals; informing the needs of member organizations; and formally representing the center to external entities).

**D: 1: CRITERIA FOR PROMOTION TO ASSOCIATE SCIENTIST**

The criteria for promotion to Associate Scientist are presented below, along with criteria for differentiating ratings of satisfactory, very good/highly satisfactory, and excellent in each category. A rating of unsatisfactory indicates the failure to achieve the level of satisfactory performance. For successful promotion to Associate Scientist, a candidate must be rated excellent in research and creative activity and at least satisfactory in service.

**D: 1: a: Research and Creative Activity Criteria (for Promotion to Associate Scientist)**

**Satisfactory**

Evidence that the candidate’s research has had an impact on the field and key stakeholders or environments (e.g., changing teachers’ practices; influencing education policy; informing key education decisions; guiding the development of best practices).

**Very Good/Highly Satisfactory**

Indicates performance that is appreciably better than Satisfactory but less than Excellent

**Excellent**

Excellence in research and creative activity for promotion to Associate Scientist includes evidence of the following:

(1) The candidate is beginning to establish himself or herself as an expert in his or her respective discipline, field or area of practice through sustained productivity and high quality work in one or more areas of scholarship (i.e., scholarship of discovery, scholarship of application, or scholarship of integration). The productivity and quality of competitive contracts and grants, and/or mentoring graduate students and other academic positions, also should be considered as part of this criteria category in instances where these types of scholarship are a responsibility or expectation of the position.

(2) The candidate is beginning to independently design and implement substantive research projects as a principal investigator/project director or co-principal investigator/co-project director. The candidate increasingly provides intellectual leadership and research autonomy for one or more aspects of the research process (e.g., methodology design, data collection, data analyses, report writing, dissemination of findings); the candidate increasingly demonstrates the capability to independently (and effectively) interface with clients/funders regarding research (as appropriate); and the candidate independently resolves methodological

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3 The definition of research and creative activities has been defined to recognize and value research scientists’ diverse forms of scholarship, including these three types of scholarship defined by Boyer (1990).
or other research problems and/or issues that may arise during the research process. The intellectual independence/research autonomy in designing, writing and submitting competitive contracts and grants also should be considered in instances where this type of scholarship is an expectation of the position.

(3) There should also be evidence that the candidate is contributing to the scholarship of discovery, the scholarship of application and/or the scholarship of integration in at least one of the following ways:

(a) Creativity/innovation – for scholarship of discovery this may include, for example, conceptual and theoretical innovation or methodological originality; for scholarship of practice this may include, for example, applying knowledge to develop new methodologies, instruments or analyses (e.g., developing survey items/measurement instruments, designing methodology, designing new reports, innovative contributions to analyses or report production, new uses of statistics or methodology, as well as other activities) and/or developing research designs, methodology and/or instruments that break new ground or provide new applications to problems encountered in the field; for scholarship of integration this may, for example, include making new connections across disciplines, across topics within a discipline, or across time.

(b) Impact – for scholarship of discovery this may include, for example, substantive methodological or theoretical contributions to the field; for scholarship of application this may include, for example, the impact of the research and its findings on key stakeholders or environments (e.g., changing teachers’ practices; influencing education policy; informing key education decisions; guiding the development of best practices); for scholarship of integration this may include, for example, adding new critical insights to a subject area and/or practice area so that key stakeholders, clients and/or practitioners in the field now view the subject with greater clarity or new perspectives.

D: 1: b: Service Criteria (for Promotion to Associate Scientist)

Satisfactory

A record of participation in service activities related to the mission of the center, and to the goals and purposes of the School of Education, the University, and/or profession.

Very Good/Highly Satisfactory

Indicates performance that is appreciably better than Satisfactory but less than Excellent.

Excellent

Excellence in service for promotion to Associate Scientist includes evidence of the following:

(1) The candidate demonstrates a strong commitment to center, as evidenced by the quantity, diversity and quality of service activities the research scientist engages in related to the mission of the center.
The research scientist’s service to the center is consistently strong and has a positive impact on the development and/or sustainability of the center. There is evidence that the service provided by the research scientist significantly contributes to the welfare, productivity and/or sustainability of the center.

Additional service related to promotion should be tied directly to the mission, goals and purposes of the School of Education, University or profession.

D: 2: CRITERIA FOR PROMOTION TO SENIOR SCIENTIST

The criteria for promotion to Senior Scientist are presented below, along with criteria for differentiating ratings of satisfactory, very good/highly satisfactory, and excellent in each category. A rating of unsatisfactory indicates the failure to achieve the level of satisfactory performance. For successful promotion to Senior Scientist, a candidate must be rated excellent in research and creative activity and at least satisfactory in service.

D: 2: a: Research and Creative Activity Criteria (for Promotion to Senior Scientist)

Satisfactory

Satisfactory research and creative activity for promotion to Senior Scientist includes evidence of the following:

The candidate continues to work to establish himself or herself as an expert in his or her respective discipline, field or area of practice through sustained productivity and high quality work in one or more areas of scholarship (i.e., scholarship of discovery, scholarship of application, scholarship of integration)\(^4\), and the candidate shows evidence of growth in scholarship over time.

Very Good/Highly Satisfactory

Indicates performance that is appreciably better than Satisfactory but less than Excellent

Excellent

Excellence in research and creative activity for promotion to Senior Scientist should include evidence of the following:

(1) The candidate has established himself or herself as an expert in his or her respective discipline, field or area of practice through consistent and sustained productivity and high quality in one or more areas of scholarship (i.e., scholarship of discovery, scholarship of application, and scholarship of integration)\(^5\). There is evidence of the research scientist

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\(^4\) The definition of research and creative activities has been defined to recognize and value research scientists’ diverse forms of scholarship, including these three types of scholarship defined by Boyer (1990).

\(^5\) The definition of research and creative activities has been defined to recognize and value research scientists’ diverse forms of scholarship, including these three types of scholarship defined by Boyer (1990).
having a national and/or international reputation in his or her respective discipline, field or area of practice as demonstrated by one or more of the following: acknowledgement of the importance of the research scientist’s contributions by peers, public and key stakeholders in the field; on-going, consistent success in obtaining new research contracts, grants and other new work that demonstrates recognition of the research scientist’s reputation and prior contributions to the field; advising or consulting with others (e.g., government agencies, institutions of high education, foundations, professional organizations) in the research scientist’s area(s) of expertise; invited presentations, keynotes, workshops related to the research scientist’s area(s) of expertise; and/or awards and achievements related to the research scientist’s area(s) of expertise. The productivity and quality of competitive contracts and grants, and/or mentoring graduate students and other academic positions, also should be considered as part of this criteria category in instances where these types of scholarship are a responsibility or expectation of the position.

(2) The candidate consistently demonstrates intellectual independence/research autonomy, and regularly provides intellectual leadership for multiple aspects of the research process (e.g., methodology design, data collection, data analyses, and dissemination of findings). The candidate independently designs and implements substantive research projects as a principal investigator/project director or co-principal investigator/co-project director, and provides intellectual leadership and/or mentoring of others at the center, School or University in their research and scholarship endeavors.

(3) There should also be evidence of major accomplishments, substantive contributions and/or leadership over a period of years to the scholarship of discovery, the scholarship of application and/or the scholarship of integration in at least one of the following ways:

(a) Creativity/innovation – for scholarship of discovery this may include, for example, conceptual and theoretical innovation or methodological originality; for scholarship of application this may include, for example, applying knowledge to develop new methodologies, instruments or analyses (e.g., developing survey items/measurement instruments, designing methodology, designing new reports, innovative contributions to analyses or report production, new uses of statistics or methodology, as well as other activities) and/or developing research designs, methodology and/or instruments that break new ground or provide new applications to problems encountered in the field; for scholarship of integration this may, for example, include making new connections across disciplines, across topics within a discipline, or across time

(b) Impact – for scholarship of discovery this may include, for example, substantive methodological or theoretical contributions to the field; for scholarship of application this may include, for example, the impact of the research and its findings on key stakeholders or environments (e.g., changing teachers’ practices; influencing education policy; informing key education decisions; guiding the development of best practices); for scholarship of integration this may include, for example, adding new critical insights to a subject area and/or practice area so that key stakeholders, clients and/or practitioners in the field now view the subject with greater clarity or new perspectives

D: 2: b: Service Criteria (for Promotion to Senior Scientist)
Satisfactory

Satisfactory service for promotion to Senior Scientist includes evidence of the following:

(1) The candidate demonstrates a commitment to the center, as evidenced by the quantity, diversity and quality of service activities the research scientist engages in related to the mission of the center (e.g., number of service activities, scope of activities, range and diversity of activities); and the candidate demonstrates a high level of professional competence and/or expertise in the performance of the service.

(2) The candidate’s service to the center is consistently effective, and has a positive impact on the development and/or sustainability of the center.

(3) The candidate has performed service to the School of Education, University, profession and/or public.

Very Good/Highly Satisfactory

Indicates performance that is appreciably better than Satisfactory but less than Excellent

Excellent

Excellence in service for promotion to Senior Scientist includes evidence of the following:

(1) The candidate demonstrates a strong and consistent commitment to center, as evidenced by the quantity, diversity and quality of service activities the research scientist engages in related to the mission of the center (e.g., number of service activities, scope of activities, range and diversity of activities). The breadth, depth and quality of service activities clearly demonstrates a high level of professional competence and/or expertise in the performance of the service. The candidate has lead one or more complex, special assignments that are critical to center operations. Service to the center can take a variety of forms and directions, as outlined in the definition of service in this document.

(2) The candidate’s service to the center is consistently effective, and regularly has a positive impact on the development and/or sustainability of the center. There is strong evidence that the research scientist’s service activities have resulted in substantive contributions over a period of years to the welfare, productivity and/or sustainability of the center.

(3) The research scientist regularly and consistently demonstrates leadership and initiative in his or her service to the center. The research scientist regularly identifies opportunities for furthering the mission of the center, and takes the initiative to develop solutions to operational and/or organizational problems. The candidate has a history of providing independent administrative leadership for the center.

(4) The candidate has performed service to the School of Education, University, profession and/or public.
Promotion Dossier Checklist for Associate and Senior Research Scientist in the School of Education

Candidate_________________________________________ Center____________________________________

General:

☐ Signature Sheet
☐ Center Promotions Advisory Committee (CPAC) recommendation (report of exact vote or separate memos from colleagues). CPAC evaluation of research or creative activities, and service.
☐ Center Director’s personal recommendation and a summary evaluation of teaching, research/creative activities, and service
☐ Candidate’s CV
☐ Candidate’s own statement on research or creative activities and service
☐ A minimum of six outside evaluations to be secured by the Dean
☐ Copy of list of referees supplied by candidate
☐ Copy of list of referees supplied by the Center Director
☐ Copy of referees selected to write and those who did not respond

Research:

☐ CPAC evaluation of stature of (1) venues in which publications appear or (2) museums in which showings have been presented, performances, and so forth
☐ Candidate documentation of the contribution made by candidate to co-authored or collaborative work and Center projects
☐ Copies of scholarly publications, papers, and development projects
☐ Copies of professionally relevant publications
and/or
☐ Copies of creative work, reviews of creative performances and exhibitions
and/or
☐ Documentation of grants obtained and applied for

Service:

☐ Summary of activities (Center or other University service; local, state, or national service; professional or other)
☐ Evidence of quality of teaching and contributions to the instructional mission of the University
☐ Evaluation by Center Director of the quality as well as the quantity of service
☐ Evaluation by professional colleagues (or knowledgeable individuals) of the quality and impact of service activities

I have given a completed copy of this checklist to the candidate and included a copy in the dossier.

________________________________________________________________________
Candidate _________________________ (date) ____________________________________________________________________
Center Director __________________ (date)