Program Planning Summary
State Board for Technical and Comprehensive Education

1. **College:** Spartanburg Community College (SCC)

2. **Award:** Associate Degree in Industrial Technology

3. **Major:** Radiation Protection Technology

4. **Designation** (Check one)

   a. ____X____ New Program Proposal

   __72__ Number of credit hours

   b. _____ Program Modification

   _____ Number of credit hours

5. **Proposed Date of Implementation**: Fall 2008

6. **Justification of Need**:

Spartanburg Community College (SCC) proposes to offer an Associate Degree in Industrial Technology with a major in Radiation Protection Technology (RPT), effective fall 2008. SCC's vision and mission is to provide innovative leadership by delivering relevant, accessible, and affordable educational programs and services to support and improve the economic vitality of the college's tri-county service area, which includes Spartanburg, Cherokee, and Union counties. In response to this mission, SCC proposes to partner with local businesses, namely Duke Energy, to develop and implement a RPT degree program that will help to meet the local demand for qualified and highly trained radiation protection (RP) technicians to operate nuclear power equipment. The proposed program is designed to prepare students at the technician level with the skills necessary to gain employment upon graduation. The proposed RPT curriculum is accredited by the Institute of Nuclear Power Operations (INPO). The college will use Duke Energy employees as adjunct instructors to teach all the RPT courses in order to provide the most up-to-date and occupationally-specific instruction. Also, to insure that the technicians are trained at the highest level, SCC will require that students successfully complete two internships at a Duke Energy nuclear facility prior to graduation.

By federal law, a nuclear power plant requires 30 - 50 RP technicians for operation. The starting salary of a technician is $40,000/year with the strong possibility of supplementary overtime/holiday hours providing a potential $100,000/year. Presently, there are 103 Duke Energy nuclear power plants in the United States with 31 new plants to be approved for licensing in the immediate future. Nationally, it is estimated that by the year 2015, 60% of the current RP technician population will have retired. A conservative estimate of the total number of RP technicians is approximately 2,700 *replacement* RP technicians and 1,200 *new* RP technicians. When the percentage of projected retirees is viewed in tandem with the development of approximately 31 new facilities, the desperate need for RP technicians becomes quite apparent.

7. **Anticipated Program Demand and Productivity**:

Duke Energy has described the nuclear industry's shortage of RP technicians as a "desperate" situation. The need for RP technicians will increase even more in SCC's service area with the projected development of an additional Duke Energy nuclear power plant in Cherokee county (i.e. Lee Plant). The management at Duke Energy anticipates that the Lee Plant will begin to hire RP technicians in 2010 and the plant will be fully operational by 2014. SCC has partnered with Duke Energy to ensure that the industry demands are met and positions at the Lee Plant are filled as quickly as possible with highly skilled RP technicians. With the development of the Lee Plant at least 50 associate degree RP technicians will be needed to meet the anticipated staffing requirements through 2015. (See Table I) The college plans to enroll an average of 19 students annually into the proposed RPT program over the next 10 years in an effort to meet the industry's need.

Table I

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
New Capacity											
Lee Plant**				5	10	20	17	10	10		50**

Note: Each cohort needs 2 years to complete the associate degree and 2 years to completed ANSI or OJT/TPE task qualifications.

** These numbers include staffing for 50 RP technicians to staff Lee Plant as technicians.

8. **Assessment of Extent to Which Proposed Program Duplicates Existing Programs in the State**:

There are currently no other RPT programs in the state of South Carolina.

9. **Relationship of the Proposed Program to Existing Programs at the Proposing Institution**:

The college currently has an Associate Degree in Health Science with a major in Radiologic Technology, which provides training specific for employment in a medical facility. The proposed program provides training and instruction that will prepare graduates for employment in an industrial facility.

10. **Relationship of the Proposed Program to Other Institutions Via Inter-Institutional Cooperation:**

The proposed program is designed primarily as a terminal degree. The goal of the proposed program is to provide graduates with the competencies required to successfully perform as a RP technician within the college's service area. However, after one year of service, all of SCC RPT program graduates who are employed by Duke Energy can take advantage of full tuition assistance to continue their education at a local four-year college/university. The SCC has a long-standing positive relationship with the four-year colleges in the area; therefore, the college anticipates that transfer agreements will be discussed upon final

approval of this program.

11. **Total Costs Associated With Implementing the Proposed Program (General Estimates Only)**:

With the exception of one general education course (Physical Science II - PHS 102), SCC currently offers all of the general education courses required for the proposed program. This will give the college the benefit of economies of scale in offering the general education courses that are applicable to other programs. Program start-up costs include the following:

- Adjunct salary costs will be approximately **$5,000** per year. This is based on SCC's agreement with Duke Energy to provide certified adjunct faculty and INPO accredited course materials.
- Equipment and supplies for PHS 102 have been purchased at a total cost of **$7,500**
- Library reference materials are estimated at **$15,000**

Total costs to implement the proposed program: $27,500

_____ _____

(Signature of College President) (Date)