

**Request for Authorization to Establish a
Bachelor of Science in Neurodiagnostics and Sleep Science at UNC Charlotte**

The University of North Carolina at Charlotte requests authorization to establish a B.S. in Neurodiagnostics and Sleep Science degree program (CIP 51.0999).

Program Description

The Department of Kinesiology at UNC Charlotte, in collaboration with the Departments of Allied Health Sciences and Neurology in the School of Medicine at UNC Chapel Hill, requests permission to establish a post-professional baccalaureate degree program in neurodiagnostics and sleep science (NDSS). Neurodiagnostic and sleep science procedures record and study the electrical activity of the brain, spinal cord, and peripheral nerves, the function of the cardiovascular system, and the function of the respiratory system. Potential students for this program are Sleep Technologists and Electroneurodiagnostic Technologists holding an associate's degree who are already registered and practicing, but who want to pursue a BS degree to expand their professional knowledge and expand opportunities for career advancement. A written collaborative agreement, signed by the two institutions, stipulates that UNC Charlotte will provide the academic home for the program as well as faculty instructors, and that UNC Chapel Hill will provide facilities, faculty, and specialized NDSS course content offered via distance education. All coursework for the program will be offered online, with required laboratory practicum experiences completed by students at UNC-CH facilities or at local hospitals and sleep clinics. There is a required internship at the end of the two-year curriculum.

Relevance to Institutional Mission and Strategic Plan

The proposed baccalaureate program is consistent with UNC Charlotte's mission to offer "exemplary undergraduate programs," and the UNCC College of Health and Human Services mission to offer "professionally recognized and accessible undergraduate programs that are nationally and globally relevant, and responsive to changing health care... needs in the state and region."

Highlights from UNC-GA Data Template

No other public or private college or university in North Carolina offers a similar degree. In the past three years, UNC Charlotte has established one doctorate, five masters, and two baccalaureate programs, and has discontinued six masters and nine baccalaureate programs.

Outcome of Consultation with Disciplinary Panels

The panel included two faculty members from ECU, one faculty member from UNCG, and one faculty member from UNCP, in addition to the UNCC and UNC-CH presenters. Panel members discussed the curriculum and some of the coursework in the proposed program, and agreed on the need and demand for the program. Overall discussion was positive, with consensus on the desirability of offering this degree program.

Student Demand

To assess the demand for a baccalaureate degree program in NDSS, students enrolled in the five community college programs in NC with a concentration in polysomnography and/or electroneurodiagnostic technology were surveyed. Eighty-two percent (82%) of the students surveyed (N = 39 respondents) indicated that they were interested in pursuing a BS degree in neurodiagnostics and sleep science. In addition, letters of support from the North Carolina Community College System, Council for Allied Health in North Carolina, UNC Chapel Hill School of Medicine Department of Neurology, North Carolina Association of Sleep Technologists, and the American Society of Electroneurodiagnostic Technologists attest to the interest in and need for this program in North Carolina. UNC Charlotte projects full enrollment of the program in its fourth year will be sixty part-time students.

Opportunities for Graduates of the Program

According to the proposal, the number of patients seen for diagnosis and therapy for sleep-related disorders in North Carolina has increased significantly over the past 20 years, with the largest increase occurring in the past five years. Hospitals are actively investing in sleep clinics to help meet the patient need. The October 24, 2012 issue of the Triangle Business Journal states “Helping people sleep well is becoming a big business, and Duke Raleigh Hospital is expanding... to double the size of its center. Sleep facilities such as Duke Raleigh Hospital number more than 3,300 and sleep lab revenue nationally is expected to increase in 2012 to \$5.8 billion from the current \$4.5 billion [note: an increase of almost 29%].” Accredited sleep centers must employ qualified staff, which is a major issue the proposed program is addressing.

Resource Implications

Resource needs: No new facilities, library resources, equipment, or information technology services are needed to implement the proposed degree program. UNCC states the campus is prepared to implement and support the program from existing resources.

Resources allocated: The Department of Kinesiology within the College of Health and Human Services will administer the proposed program. An additional 0.5 FTE faculty position will be reallocated from campus resources to teach in the NDSS program. Existing courses in Nursing and Respiratory Care will be utilized, and new courses will be developed in-load by the faculty teaching in the program.

Funding Formula Calculation: After four years when the program reaches full projected enrollment, based upon the current enrollment change funding formula, UNCC would receive additional funding of approximately \$317,000 if fully funded by the General Assembly.

Recommendation

It is recommended that the Board of Governors approve UNC Charlotte’s request to establish a B.S. in Neurodiagnostics and Sleep Science degree program (CIP 51.0999).

General Information Template for Academic Program Review

Degree Area and Level:

B.S. Neurodiagnostics and Sleep Science at UNC Charlotte (CIP 51.0999). This degree program is in collaboration with UNC-Chapel Hill.

Addressing UNC Tomorrow:

This proposed program would address several Recommendations within the UNC Tomorrow Report including the components to enhance Our Global Readiness (Recommendation 4.1), Our Citizens and Their Future: Access to Higher Education (Recommendation 4.2), Our Health (Recommendation 4.5), and Our University's Outreach and Engagement (Recommendation 4.7).

Role of Program in Relation to State and Regional Needs:

According to the proposal, "Sleep disorders affect approximately one-third of the North Carolina population, or almost 3 million people. These disorders are directly associated with decreased cognitive function, depression, weight gain, and irritability; and often result in death due to heart disease, diabetes, and accidents associated with these primary effects. Hospitals are eagerly investing in sleep clinics to help meet the patient need. The October 24th issue of the Triangle Business Journal states "Helping people sleep well is becoming a big business, and Duke Raleigh Hospital is expanding...to double the size of its center...". Sleep facilities such as Duke Raleigh Hospitals number more than 3,300 and sleep lab revenue nationally is expected to increase by 2012 to \$5.8 billion from the current \$4.5 billion according to Market data Enterprises. The National Sleep Foundation published an article stating "Market data also expects mainstream publicity regarding the importance of sleep to continue, along with heavy advertising for sleep drugs. Market data predicts the number of sleep labs will grow by 6 percent over the next four years". North Carolina alone has more than 20 sleep centers accredited by the American Academy of Sleep Medicine, and this number is continuing to rise. Accredited sleep centers must employ qualified staff, which is a major issue the proposed program will positively affect."

US Labor Department Analysis:

- *Summary* – No narrative applicable to this degree program.

Availability of Program Statewide (Enrollment and Degrees Awarded in Last 3 Years):

- *Public universities* – N/A
- *Private universities* – N/A

UNCC Campus enrollment and degrees awarded in similar programs at the Bachelors level:

(Based on two CIP digits – 51 CIP is the summary group for Health Professions and Related Programs under which Neurodiagnostics and Sleep Science is listed as a program.)

Upper Division Enrollment			Academic Year						
			Fall 08	Spr 09	Fall 09	Spr 10	Fall 10	Spr 11	Fall 11
UNCC	Respiratory Care Therapy/Therapist	BSRT	37	32	61	56	61	59	74
	Athletic Training/Trainer	BS	35	31	27	24	24	23	28
	Clinical Laboratory Science/Medical Technology/Technologist	BA	3	2	3	1	1	1	0
	Public Health Education and Promotion	BSPH	69	88	111	125	140	171	183
	Registered Nursing/Registered Nurse	BSN	296	303	287	287	269	310	314

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Number of Degrees Awarded			Academic Year		
			2008-2009	2009-2010	2010-2011
UNCC	Respiratory Care Therapy/Therapist	BSRT	2	19	19
	Athletic Training/Trainer	BS	18	15	6
	Clinical Laboratory Science/Medical Technology/Technologist	BA	0	0	0
	Public Health Education and Promotion	BSPH	19	30	31
	Registered Nursing/Registered Nurse	BSN	194	205	183

Campus Average of upper division enrollment and degrees awarded per degree program in this area at the Bachelors level over the last 3 Academic Years, Fall 2008-Fall 2011:

(Based on two CIP digits – 51 CIP is the summary group for Health Professions and Related Programs under which Neurodiagnostics and Sleep Science is listed as a program.)

Campus Average			
	Number of Active Programs	Upper Division Enrollment per Semester	Degrees Awarded per Year
ASU	8	50	20
ECU	12	108	51
FSU	1	86	28
NCA&T	2	83	29
NCCU	3	65	28
UNCA	1	91	37
UNC-CH	7	106	55
UNCC	5	175	49
UNCP	3	48	22
UNCW	5	81	34
WCU	8	72	29
WSSU	5	163	112
Campus Average:		94	41

UNC Charlotte Degree Programs added in the past three years:

- Bachelor
 - BA Japanese Studies (04/09/2010)
 - BA Special Education, General Curriculum (03/20/2009)
- Master
 - MS Real Estate (11/11/2011)
 - PSM Health Informatics (09/09/2011)
 - MA Anthropology (08/13/2010)
 - MS Construction and Facilities Management (06/11/2010)
 - Master Fire Protection and Administration (06/11/2010)
- Doctoral
 - PhD Bioinformatics and Computational Biology (01/14/2011)

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UNC Charlotte Degree Programs discontinued in past three years:

- *Bachelor*
 - BA English, Secondary Education (02/11/2011)
 - BA Math, Secondary Education (02/11/2011)
 - BS Math, Secondary Education (02/11/2011)
 - BA Chemistry, Teacher Licensure (02/11/2011)
 - BA French, K-12 (02/11/2011)
 - BA German, K-12 (02/11/2011)
 - BA History Education (02/11/2011)
 - BA Spanish, K-12 (02/11/2011)
 - BA Special Education, Mental Handicaps (03/20/2009)
- *Master*
 - MEd Special Education, Cross-Categorical Disabilities (03/20/2009)
 - MEd Special Education, Behavioral-Emotional Handicaps (03/20/2009)
 - MEd Special Education, Mental Handicaps (03/20/2009)
 - MEd Special Education, Learning Disabilities (03/20/2009)
 - MEd Special Education, Severe and Profound Handicaps (03/20/2009)
 - MA Art Administration (03/20/2009)
- *Doctoral*
 - N/A