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THE IDENTIFICATION OF COMMON COURSES IN PARAMEDICAL EDUCATION.

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*PARAMEDICAL OCCUPATIONS EDUCATION, TEMPE, ARIZONA

INTEGRATION OF PARAMEDICAL EDUCATION THROUGH CONSOLIDATION OF RELATED TRAINING WAS STUDIED AS A FIRST STEP IN CURRICULUM DESIGN FOR MAXIMUM EFFICIENCY OF EDUCATIONAL PROGRAMS WHICH WILL MEET THE CHANGING REQUIREMENTS OF MEDICAL CARE OCCUPATIONS. THE OBJECTIVES WERE TO DETERMINE--(1) COURSES COMMON TO PRESENT PARAMEDICAL EDUCATION PROGRAMS, (2) THE NATURE OF SUCH COMMONALITIES, AND (3) GUIDELINES FOR THE INTEGRATION OF THESE PROGRAMS. ALL MAJOR MEDICAL, DENTAL, AND PARAMEDICAL GROUPS FROM UNIVERSITY, JUNIOR COLLEGE, HIGH SCHOOL, AND HOSPITAL PROGRAMS IN A METROPOLITAN AREA WERE REPRESENTED IN A WORKSHOP OF 24 PARAMEDICAL EDUCATORS WHO MET WEEKLY FOR 6 MONTHS. MEMBERS OF THE WORKSHOP GATHERED CURRICULUM MATERIALS FOR 20 PARAMEDICAL CAREERS FROM 126 EDUCATION PROGRAMS CONSISTING OF 2,613 COURSE TITLES IN 110 SEPARATE INSTITUTIONS THROUGHOUT THE UNITED STATES. COMPUTER PRINT-OUTS LISTED CAREERS, COURSES, SUBJECT CLASSIFICATIONS, AND RELATED DESCRIPTIVE DATA SUCH AS NUMBER OF CLOCK HOURS FOR EACH IN LECTURE, LABORATORY, AND CLINICAL EXPERIENCE. OF THE 126 GENERAL SUBJECT CLASSIFICATIONS, 78 WERE COMMON TO 2 OR MORE PARAMEDICAL FIELDS. THERE APPEARED TO BE A DIFFERENCE OF OPINION AMONG CURRICULUM DEVELOPERS OF PARAMEDICAL EDUCATION PROGRAMS AND A NEED FOR A STUDY IN EACH OF THE PARAMEDICAL CAREERS OF THE TASKS PERFORMED BY THE PRACTITIONERS. (JM)

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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**The Identification of Common Courses
in
Paramedical Education**

**College of Education
Arizona State University
Tempe, Arizona
July 15, 1966**

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Bureau of Research, Division of Adult and Vocational Research.**

SUMMARY OF PROJECT

- A. Grant number OE-6-85-032
- B. Title: The Identification of Common Courses in Paramedical Education
- C. Investigator: Dr. Bill J. Fullerton, Professor and Chairman of the Department of Secondary Education, Arizona State University
- D. Institution: Arizona State University, Tempe, Arizona
- E. Duration: November 15, 1965 to July 15, 1966
- F. Purpose and Objectives:

Health care of the highest quality for all who need it is a goal that cannot be realized in any community where there are serious shortages of medical and paramedical personnel. The existence of such shortages is a serious problem of our times. Many educators, hospital administrators, physicians and public administrators believe that a fragmented system of education in the paramedical fields is to some extent responsible for this situation. They point to the difficulties experienced in recruiting qualified students, the high drop-out rate (one-third to two-thirds of those who enroll), the high cost of instruction due to small classes and limited use of expensive equipment, lack of enough qualified faculty, and the frustrating discrepancies that occur between training programs and job requirements.

The Identification of Common Courses in Paramedical Education is an attempt to explore the integration of paramedical education through curriculum consolidation of related training programs. The overall objective of this research is to design curricula based on the changing requirements of medical care for educational programs with maximum efficiency. The objectives

of this phase of the research--the first step in designing these curricula--are to determine courses common to present paramedical education programs, the nature of such commonalities, and guidelines for the integration of these programs.

G. Procedure:

A workshop was established consisting of 24 paramedical educators representing all major medical, dental, and paramedical groups from university, junior college, high school and hospital programs in the Phoenix metropolitan area. This workshop met regularly each week for six months under the direction of the Principal Investigator, Dr. Bill J. Fullerton, and Dr. Willard Fetterhoff, a Curriculum Specialist in the Department of Secondary Education at Arizona State University. Members of the workshop gathered curriculum materials for 20 paramedical careers from 126 education programs in 110 separate institutions throughout the United States. Each member of the workshop collected materials in the area of his or her specialization, and professional judgment was exercised in analyzing, classifying, and interpreting these materials. Consistency in interpretation and interdisciplinary comparative judgment were achieved through the regular meetings of the entire workshop. Altogether, 2,613 course titles and their contents were examined. These were reduced to 126 general subject classifications. The subject classifications were programmed in a computer, together with the level (high school, post-high school, junior college, university or other) of education at which they occurred in each institution, and the depth of content as indicated by the number of clock hours devoted to classroom lectures, laboratory experience, and directed clinical practice.

The 20 educational programs analyzed by the workshop were as follows: three-year registered nurse, two-year registered nurse, licensed practical nurse, nurse aide, dental assistant, medical technologist, medical secretary, radiologic technologist, dental hygienist, dental technician, physical therapist, physical therapy assistant, occupational therapist, occupational therapy assistant, inhalation therapist, medical assistant, laboratory assistant, medical record librarian, medical record technician, radioisotope technician. The number of programs examined for each career ranged from one for dental technicians and physical therapy assistants to ten or more for three-year R.N.'s, two-year R.N.'s, medical technologists and medical record librarians.

Two computer print-outs were made listing the 20 para-medical careers studied and the courses required for each career in each of the 126 schools from which curriculum materials had been obtained. All 2,613 courses were listed under their respective subject classifications as indicated by the workshop, with the number of clock hours for each in lecture, laboratory, and clinical experience. Each course was identified also by the institution and the level of instruction at which it was given. A complete review of the first computer print-out was made by the workshop and re-interpretations of some of the data were programmed for the second computer run.

It was evident at this point that considerable variation was to be found in many of the same courses offered by different institutions. For example, the workshop had identified 22 separate courses under the subject classification of "Nursing, Fundamentals". These 22 courses are offered in 12 different schools. Two of the

schools require laboratory experience in Nursing Fundamentals; four of them require clinical practice in their fundamentals course; and the others require only classroom lectures. In the four schools requiring clinical practice in their fundamental course, the amount of clinical practice ranges from 20 to 360 clock hours. The total clock-hour requirement in Nursing Fundamentals in the 12 schools offering this course ranges from 18 hours to 465 hours.

Numerical comparisons were then made of the 20 paramedical programs for which information was obtained. The number of course titles examined by the workshop and the number of subject classifications to which they were reduced were listed for each program. For example, 18 three-year R.N. programs had been examined by the workshop and found to contain 425 different course titles. These were reduced to 27 subject classifications. Similarly, 12 medical technologist programs had been examined containing 175 course titles, which were reduced by the workshop to 32 subject classifications. The large number of course titles in each occupation indicated a general absence of standardization among schools educating students for the same career, an observation further borne out by the wide variations in clock hours for similar courses at different institutions. In reducing the large number of course titles to a smaller number of subject classifications, the workshop only approximated a standardization of subject matter, and it was recognized that only general rather than specific commonalities between programs could be identified.

On this basis it was found that a very wide range of commonalities existed in the subject classifications common to

more than one career program. The number of programs to which each of the subject classifications was found to be common extended from two to 16. Forty-eight of the 126 subject classifications were limited to one field only. Seventy-eight of the subject classifications were common to more than one field. The 11 most frequent commonalities, with the number of career programs requiring the subject in each case, were: general education--16; anatomy and physiology--15; microbiology--14; uncommon courses--14; anatomy--12; professional ethics--12; general psychology--12; electives--12; medical terminology--11; mathematics--9; general chemistry--9. Forty of the subject classifications were common to four or more paramedical careers.

Further analysis of the commonalities between and among the 20 paramedical careers revealed that each career has substantial numbers of subject classifications in common with each of several other careers. In a few cases the absence or near absence of commonality was also revealed. For example, the three-year registered nurse program has 16 subject classifications in common with the licensed practical nurse program; 10 in common with the radiologic technologist program; 14 in common with the dental hygienist program; and only one in common with the dental technician program.

A detailed analysis of variations in clock hours required by different institutions within each subject classification was made by the workshop. The range was determined for each subject classification within each of the 20 paramedical education programs. Microbiology, for example, which was found to be among the most common subject classifications (required in 14 of

the 20 paramedical education programs studied), had a range in clock hours for three-year registered nurses from 36 at one school to 256 at another. The same course ranged from 55 to 128 clock hours for two-year registered nurse programs. For medical technologists, the range was from 96 to 880 clock hours.

A series of charts and tables containing the results of the computer print-out and the analyses and interpretations of those results by the workshop were constructed for final evaluation and summarization of the findings. These were made initially by the Principal Investigator and his professional staff, then submitted to the individual members of the workshop for editing. The report containing results and conclusions represents a consensus of the professional judgment of the members of the workshop based on the curriculum materials studied and the computer analysis of these materials.

H. Results and Conclusions:

Curricula for 20 paramedical education programs from 126 separate schools located in 110 institutions in 36 states revealed 2,613 course titles. These were reduced to 126 general subject classifications. Seventy-eight of these were found to be common to two or more paramedical education programs.

Of the 20 paramedical education programs studied, 12 were found to have a high incidence of commonality of general subject classifications. Eight were found to have a lower incidence of commonality. For the most part, those with the higher incidence of commonality were the programs requiring higher levels of skill and knowledge. Common courses were less evident in programs requiring less training.

Considerable variations were revealed in course titles and course content (reflected by clock hours in lecture, laboratory and clinical experience) among institutions offering educational programs for the same paramedical careers. The minimum and maximum total clock hours required in any given subject classification varied extensively among different paramedical fields and within the same field.

In paramedical careers where national accreditating agencies exist or where the Council on Medical Education of the American Medical Association has established minimum essentials, the educational programs tend to be more standardized and do not vary as greatly as in careers for which educational standards are not prescribed. The extent of such standardization, however, is considerably less than might be expected. Differences of opinion among curriculum developers of all paramedical education programs are evidenced by the extensive differences in clock hours required in similar courses of study and in the different courses of study prescribed in the same paramedical fields.

It was clearly evident that many of the paramedical education programs in which students are trained for different careers require much of the same course content. This would indicate that curriculum developers can, in fact, combine courses, classes, faculty, facilities and materials for more efficient and economical programs.

Equally evident, however, is the need for behavioral objectives to be more precisely identified than has yet been done if significant results are to be accomplished. Studies should be conducted in each of the paramedical fields to ascertain the

relationships between required educational programs and actual job experience. The irregularity of general education requirements (communications, humanities, social and behavioral sciences, science and mathematics, and physical education) raises questions not of the value of general education but of its relationship to the particular requirements of each paramedical career. The proliferation of technical course titles and their wide variation in content and depth suggests that most of them could be substantially redesigned without endangering accreditation standards. A strong possibility exists that much of the content of both general education and technical courses could be taught in centrally located school systems rather than for each institution to expend time, talent, facilities and finances on small and possibly inferior classes.

The results of this research suggest rather strongly that paramedical education today reflects the personal philosophies of the educators who have developed a variety of curricula. Additional research would provide a foundation upon which to base new philosophical approaches to paramedical education which are more effective in terms of the tasks to be performed, and which are better able to meet the demands of scientific progress and changing health manpower requirements.

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CHAPTER I

THE PROBLEM AND SIGNIFICANCE OF THE STUDY

General Background for the Study

The need for qualified individuals to administer to the health service or paramedical responsibilities associated with the activities of members of the medical and dental professions is apparent. Equally as noticeable is the fact that individuals engaged in allied medical and health service activities are always in short supply. Concerned individuals indicate, however, that the critical element is the alarming statistical information which reveals the increasing number of shortages of fully prepared graduates who are qualified and skilled in the many paramedical occupations and career fields. Charles A. Boyle¹ reported in a current survey conducted by the Arizona State Employment Service that 14,280 persons were employed in 16 health service occupations in the State of Arizona. Of this number, 7,800 were employed in the Phoenix metropolitan area. The survey revealed that there were positions vacant at that time in each of the 16 paramedical occupations. This fact is serious enough, but more alarming were the survey figures which (taking into consideration the demand, the replacements, and the deficits) projected a net shortage of 2,321 persons in these 16 health service occupations in Arizona by 1970. Boyle reported further that an additional deficit could be anticipated as a result of the population growth in Arizona which has averaged an increase of seven per cent or more annually the past 15 years. Additional shortages will also result because of the recent Kerr-Mills and Medicare legislation, and because of a trend which

¹Charles A. Boyle, "Manpower Trends in Selected Paramedical Occupations," Manpower Planning and Employment Development Section, Arizona State Employment Service, June, 1965.

indicates people, with increasing frequency, are making demands and utilization of hospitals and other health agencies.

The increased specialization of health services, the recent social concern for extending health care, and the lengthening life span, all stress the need to direct our attention upon the preparation of personnel for paramedical careers. This problem should be of great concern to all of us and stated in direct and simple terms focuses attention upon (1) a shortage of paramedical service personnel and (2) programs which prepare qualified individuals for careers in paramedical occupations.

The Need for Study

Health agencies ranging from the Office of the Surgeon General to local hospital directors' offices are aware of the need to meet the critical shortage of personnel prepared in the paramedical occupations. They are also mindful of the need for improved efficiency in selection, education, and retention practices of paramedical personnel in an effort to help provide adequate health services for the present as well as to meet the demands of the future. In a survey conducted by Good Samaritan Hospital it was revealed there were between 1,200 and 1,300 students enrolled in health occupation training programs in the Phoenix metropolitan area in the spring semester of 1965. On the basis of past experience, not more than one-third of these students are expected to complete their training. This is a net annual graduation of less than 400, yet present population growth patterns in the Phoenix area alone requires an annual graduation of 600 to 700.²

²Survey conducted by Good Samaritan Hospital, Phoenix, Arizona, March, 1965.

Many educators, hospital administrators, physicians and interested observers throughout the country believe that the present fragmented system of education for paramedical careers is to some extent responsible for these shortages.³

The Statement of the Problem

It would appear from the foregoing discussion that a need exists to study several aspects of the problem area. This investigation, however, was confined to the curricular elements related to the problem area. It was believed that initial research efforts should be aimed at seeking answers to the following questions: are there courses required in paramedical education programs which are common to all or many of these programs? If so, what is the nature of this commonality and to what extent does the commonality exist? Can guidelines be established, based on the findings of this research, leading to a single paramedical education center and developing an integrated approach to the curriculum of several related paramedical education programs?

Delimitations of the Study

Paramedical career fields for which education programs are offered in the Phoenix, Arizona metropolitan area were studied. In addition, data were collected and analyzed from out-of-state paramedical education programs not now available in the Phoenix area, but for which a recognized need exists at the present time. In all, a total of 20 paramedical careers were finally included in the study. They are listed below:

1. Three-year Registered Nurse
2. Two-year Registered Nurse
3. Licensed Practical Nurse
4. Nurse Aide
5. Dental Assistant
6. Medical Technologist

³Several of these persons are referred to by name in the following section on Research Design and Procedures of this report. These observations are also to be found in the report of the National Task Force on Health Manpower, and in the recommendations of the National Advisory Committee on Health Occupations, adopted in December, 1964.

7. Medical Secretary
8. Radiologic Technologist
9. Dental Hygienist
10. Dental Technician
11. Physical Therapist
12. Physical Therapy Assistant
13. Occupational Therapist
14. Occupational Therapy Assistant
15. Inhalation Therapist
16. Medical Assistant
17. Laboratory Assistant
18. Medical Record Librarian
19. Medical Record Technician
20. Radioisotope Technician

Attempts were made to gather curricular materials from other paramedical education programs in addition to those listed above, but without success. The fact that some institutional representatives contacted failed to return materials for analysis or to return useable materials, in terms of this study's research design and procedures, was responsible for this problem. The study, therefore, is now related to the reader, in terms of the data returned relative to the 20 paramedical education programs listed previously.

Objectives of the Study

By way of summary, it is appropriate to state the objectives of the study. Stated briefly, the objectives of this investigation were (1) to identify courses which were common to two or more of the various paramedical education programs being researched, and (2) to determine the nature and extent of such commonality insofar as it might help the investigators suggest guidelines for the integration of some parts of these various paramedical education programs.

CHAPTER II

RESEARCH DESIGN AND PROCEDURES

Method of Research

In general, the method of research employed was descriptive and analytical. The procedures involved, however, were somewhat unique because of the large number of specialized personnel involved in gathering and interpreting data. Therefore, the research methodology could be classified further as a form of action research. The terms of the approved research proposal set up some specifications which made action research involving community participation in this project an important part of the method of investigation. The proposal was designed, hopefully, as the first step of a continuing curriculum project in paramedical education which would ultimately result in improved efficiency in training paramedical specialists and which would help to alleviate shortages of paramedical personnel in the Phoenix metropolitan area. The purpose of the study necessarily called for the interest, support, involvement, and participation of members of the community. This proposal further was designed as an initial or introductory step toward determining if it would be practical to extend the concept of paramedical education consolidation to all of the hospitals and educational institutions in the Phoenix metropolitan area. The idea for the proposal originated in a community-wide cooperative enterprise of many hospital administrators, professional medical people, professional educators, and interested community lay leaders who were cognizant of the need and urgency for action.

The method of research, in other words, might appropriately be described as community cooperation in action research in order to collect, analyze, classify, and interpret data relative to paramedical education for purposes of helping to find solutions to a problem of growing and urgent community concern.

Efforts made to locate related research to support this research proposal revealed that relatively little information was available which was concerned with the development and improvement of paramedical education as a cooperative community enterprise such as envisioned here.

Because of circumstances described above, a Paramedical Curriculum Advisory Committee was selected by the Phoenix Planning Board for a Health Services Education Center. The Phoenix Planning Board has overall responsibility for the planning program, including curriculum development. Table 1 presents a list of the names and the official positions of the 24 members selected for the Paramedical Curriculum Advisory Committee. From the official positions indicated for each of the members of the Committee, it can be noted that the committee was composed of administrative and faculty representatives from high school, junior college, university, and hospital training programs representing the seven major institutions in the Phoenix metropolitan area, and representing all major medical, dental, and paramedical groups. Members of this Advisory Committee represent institutions at which educational programs now exist for training personnel for paramedical careers. Moreover, many of them were officials who were directly responsible for and/or actively engaged in paramedical education and who had access to curricular data in paramedical education.

Procedures Utilized in the Study

Under the supervision of the Principal Investigator, Dr. Bill J. Fullerton, Professor and Chairman of the Department of Secondary Education, Arizona State University, Tempe, Arizona and assisted by the Director of the Planning Program, Dr. Arthur M. Lee, Director, Arizona Health Services Education Association, Phoenix, Arizona, and a Planning Advisor, Colonel Harold H. Moore, Assistant Director, Arizona Health Services Education Association, the paramedical Curriculum Advisory Committee undertook the problem of accomplishing the

TABLE 1

PARAMEDICAL CURRICULUM ADVISORY COMMITTEE

<u>Name</u>	<u>Title</u>
Florette Awe, R.N.	Chairman, Nursing Department Phoenix College
Carl R. Bjorklund, M.D.	Director of Physical Medicine and Rehabilitation, Chairman, Department of Physical Medicine and Rehabilitation Good Samaritan Hospital
Vurlyne Boan, R.N.	Director, School of Nursing Good Samaritan Hospital
Gordon V. Bradshaw, Ph.D.	Professor of Biology Phoenix College
Eugene Chasey, Ed.D.	Assistant Professor of Education Arizona State University
Sister Mary Christina, Ph.D.; R.N.	Director, School of Nursing St. Joseph's Hospital
Paul Crosier	Architectural Consultant Busby Associates
Ralph Fargotstein, M.D.	Director of Laboratories Maricopa County General Hospital
Willard Fetterhoff, Ed.D.	Assistant Professor of Education Arizona State University
Bill J. Fullerton, Ed.D.	Chairman, Department of Secondary Education Professor of Education Arizona State University
Donald Grandgenett	Research Assistant and Faculty Associate Arizona State University
Nelson L. Haggerson, Ph.D.	Professor of Education Arizona State University
Richard Harms, R.P.T.	Director of Rehabilitation Services Good Samaritan Hospital
Clyde Hollister, R.T., B.Sc.	Director of Radiologic Technology Training St. Joseph's Hospital
Robert H. Huntington, D.M.D.	Chairman of Dental Hygiene Arizona State Dental Assoc.

Paramedical Curriculum Advisory Committee, cont.

8

Arthur M. Lee, Ph.D.

Director, Arizona Health Services
Education Association

Shirley Mannion, R.N.

Department Head Practical Nursing Program
Phoenix Union High School

Colonel Harold Moore

Assistant Director, Arizona Health
Services Association

William T. Northey, Ph.D.

Assistant Professor of Microbiology
Arizona State University

Charles Purtymun, D.M.D.

Chairman of Dental Hygiene
Arizona State Dental Assoc.

James Riordan, M.D.

Director of Radiology
St. Joseph's Hospital

Samuel Runyon, A.R.I.T.

Director of Inhalation Therapy
St. Luke's Hospital

Irwin Spector, M.A.

Director of Research and Curriculum
Maricopa County Junior College System

Mildred Welnick, R.R.L.

Director, Medical Records Department
St. Joseph's Hospital

objectives of the research proposal. To review, these objectives were to determine courses common to present paramedical education programs; to determine the nature and extent of such commonalities; and to develop guidelines, if appropriate, for the integration of these programs.

The Paramedical Curriculum Advisory Committee was organized into a Workshop group. Dr. Willard Fetterhoff, a curriculum development specialist in the Department of Secondary Education at Arizona State University, was appointed as the Chairman and Director of the Workshop group by the Principal Investigator. Under Dr. Fetterhoff's supervision and direction, research assignments were made to members of the Paramedical Curriculum Advisory Committee Workshop staff. Assignments were made on the basis of their positions, responsibilities, and experience in the various paramedical careers. A Steering Committee was appointed consisting of the Workshop Chairman, Principal Investigator, and two professors who are specialists in curriculum development from the Department of Secondary Education at Arizona State University, Dr. Nelson Haggerson and Dr. Eugene Chasey. The Steering Committee was responsible for the plan of action at the meeting of the Workshop staff. Research assignments given to the curriculum analysts of the 20 paramedical careers investigated are listed in Table 2. When a comparison of the assignments to researchers of paramedical careers, as listed in Table 2 is made with the official positions of the researchers, as listed in Table 1, it is readily apparent that all researchers were qualified professionals and many of them practitioners in the paramedical careers to which they were assigned investigation responsibilities.

The size of the sample in each of the paramedical programs researched was difficult to determine because there were many educational programs operating in some paramedical career fields and few in others. Another factor which required consideration in this regard was the similarity of many paramedical programs. This similarity was due to accrediting criteria set up by national

TABLE 2

**RESEARCH ASSIGNMENTS TO MEMBERS OF THE PARAMEDICAL
CURRICULUM ADVISORY COMMITTEE**

NAME	PARAMEDICAL CAREERS RESEARCHED
Floretta S. Awe, R.N.	Two-year Registered Nurse
Carl R. Bjorklund, M.D.	Physical Therapist; Occupational Therapist; Physical Therapy Assistant; Occupational Therapy Assistant
Vurlyne E. Boan, R.N.	Three-year Registered Nurse; Medical Secretary
Sister Mary Christina, R.N., Ph.D.	Three-year Registered Nurse
Richard Harms, R.P.T.	Physical Therapist; Occupational Therapist; Physical Therapy Assistant; Occupational Therapy Assistant
Clyde C. Hollister, R.T., B.Sc.	Radiologic Technologist; Radioisotope Technician
Shirley Mannion, R.N.	Medical Assistant; Licensed Practical Nurse; Nurse Aide
William T. Northey, Ph.D.	Medical Technologist; Laboratory Assistant
Charles Purtymun, D.M.D.	Dental Hygienist; Dental Technician; Dental Assistant
James J. Riordan, M.D.	Radiologic Technologist; Radioisotope Technician
Samuel Runyon, A.R.I.T.	Inhalation Therapy
Mildred B. Welnick, R.R.L.	Medical Record Librarian; Medical Record Technician

associations for some paramedical careers and by the Council on Medical Education of the American Medical Association. The criteria of minimum essentials for Accreditation by these associations has tended to standardize, to some extent, the 10 approved training programs for three-year, two-year, and licensed practical nurses, medical technologists, radiologic technologists, medical record librarians, medical record technicians, occupational therapists, physical therapists, and inhalation therapists.⁴ A great number of paramedical trainees in many of the 20 careers investigated were receiving an education in programs which were not accredited by these national associations. Educational programs for many of the paramedical careers requiring fewer skills and less time in preparation, than the 10 mentioned above, varied greatly in content, depth, time, and standards. It was difficult, therefore, to make comparisons between the non-accredited paramedical programs studied and even more difficult to make comparisons between and among all of the 20 different paramedical careers researched. For these reasons and others, such as limitations of time and funds, each researcher on the Paramedical Curriculum Advisory Committee Workshop staff was asked to study the educational programs of at least 10 different training institutions in as many different geographical, metropolitan areas.

It was agreed that each curriculum analyst would have to carefully make professional and experiential judgments in the process of gathering, analyzing, classifying, and interpreting data in his paramedical specialty. The personnel involved in this research activity, as noted in Table 2, were qualified to research in the paramedical fields studied. The extreme specialization of certain paramedical fields necessitated involving such curricular analysts from such fields in gathering, analyzing, classifying, and interpreting

⁴ "Education Programs in Areas Allied to Medicine", Journal of the American Medical Association, Volume 194, Number 7, November 15, 1965.

data. Consistency in interpretation of data was aided by scheduled workshop meetings. Discussion at such meetings resulted in a general consensus relative to the subject classification of different course titles and the interpretation of courses of study. The final subject classifications and interpretations made by the curricular analysts were used as input data for analyses by the computer. The computer was programmed to select and print out the courses required in each paramedical career program, the courses common to various paramedical programs, and finally, the extent and nature of the commonality of such courses in the various paramedical career programs. Conclusions and recommendations were drawn from this data as basic information to the writings of program guidelines for the preparation of paramedical practitioners. Table 3 presents, in diagrammatic form, the research design and procedures utilized in this investigation. Table 4 reveals the names and locations of the various 110 training institutions from which researchers on the Paramedical Curriculum Advisory Committee Workshop staff obtained programs for study and analysis. One hundred twenty-six paramedical education programs were secured for analysis by the various members of the Workshop staff from more than 300 contacts with training institutions. The 126 educational programs analyzed represented 110 training institutions in metropolitan areas, for the most part, within 36 different states of the United States. Satisfactory geographical distribution was obtained.

The Paramedical Curriculum Advisory Committee Workshop staff met in weekly scheduled evening sessions to make plans, report progress, and to analyze and consolidate data collected. Instruments utilized to consolidate and record analyses and interpretations of paramedical education programs were prepared in the first meeting of the Workshop staff. These data collection instruments are included in Appendices A, B, and C of this report. An examination of these appendices will show that the researcher secured information as

TABLE III

RESEARCH DESIGN AND PROCEDURES

DESCRIPTIVE METHOD--COMMUNITY COOPERATION IN ACTION RESEARCH

INPUT - (Programs of study collected in the various paramedical fields.
 Curricular analysts requested these programs from existing
 training institutions.)

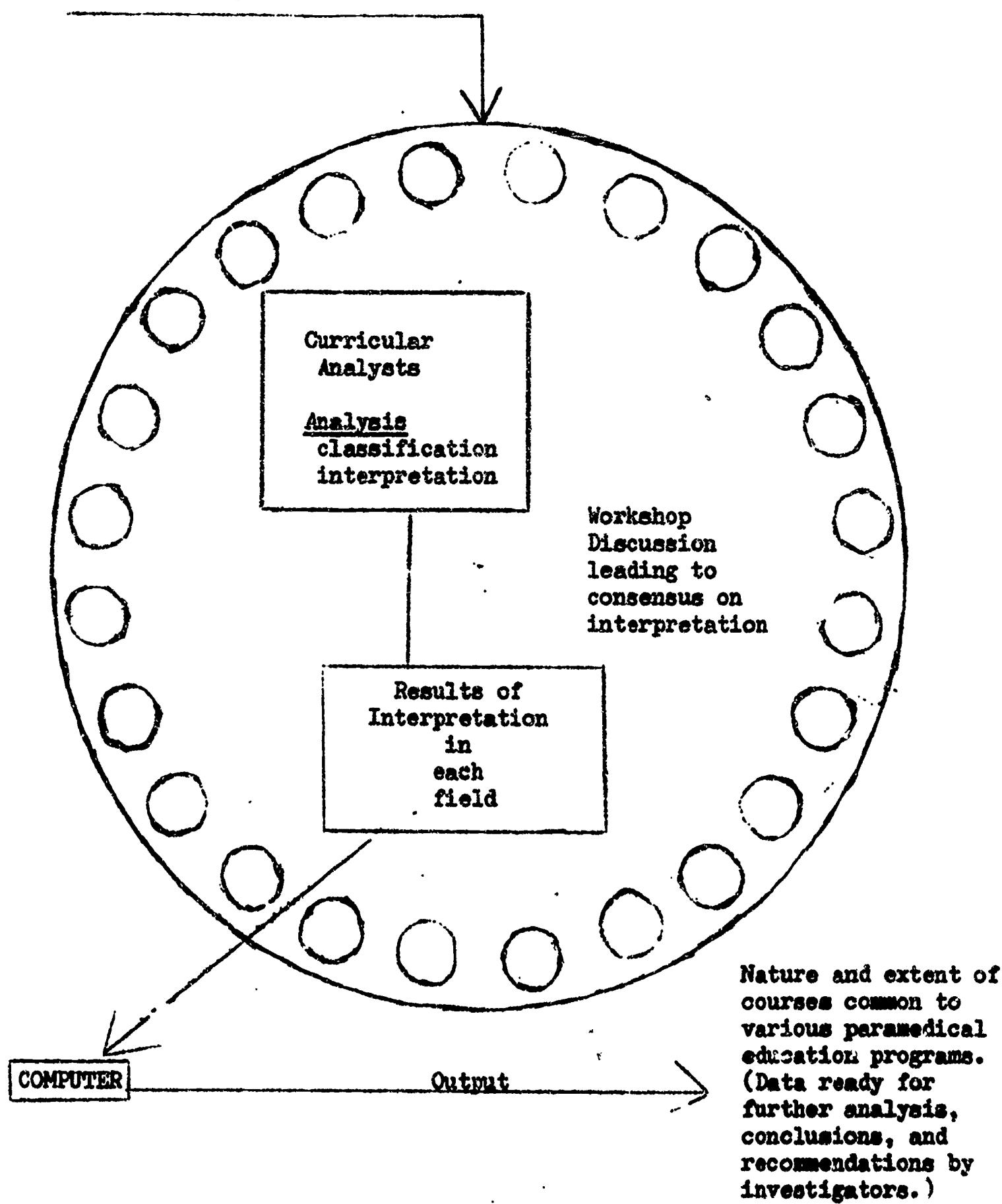


TABLE 4

A CODE NUMBER INDEX TO THE NAME OF AN INSTITUTION AND THE LEVEL OF THAT INSTITUTION FROM WHICH PARAMEDICAL CAREER PROGRAMS WERE ANALYZED

<u>CODE NUMBER</u>	<u>NAME</u>	<u>LOCATION</u>	<u>LEVEL*</u>
<u>INSTITUTION</u>			
1	ALEXIAN BROTHERS HOSPITAL	CHICAGO, ILLINOIS	3
2	AMERICAN MEDICAL ASSOCIATION COMMITTEE ON EDUCATION AND HOSPITALS		5
3	ARIZONA STATE COLLEGE	FLAGSTAFF, ARIZONA	1
4	ARIZONA STATE UNIVERSITY	TEMPE, ARIZONA	1
5	BAPTIST MEMORIAL HOSPITAL	MEMPHIS, TENNESSEE	3
6	BELLIN MEMORIAL HOSPITAL	GREEN BAY, WISCONSIN	3
7	BOWMAN GRAY SCHOOL OF MEDICINE (NORTH CAROLINA BAPTIST HOSPITAL)	WINSTON SALEM, NORTH CAROLINA	3
8	BRADLEY UNIVERSITY	PEORIA, ILLINOIS	1
9	BURLINGTON HOSPITAL SCHOOL OF NURSING	BURLINGTON, IOWA	3
10	CARNEGIE COLLEGE	CLEVELAND, OHIO	2
11	CHICAGO WESLEY MEMORIAL	CHICAGO, ILLINOIS	3
12	CLARK COLLEGE	VANCOUVER, WASHINGTON	3
13	COLORADO STATE UNIVERSITY	FORT COLLINS, COLORADO	1
14	COOK COUNTY HOSPITAL	CHICAGO, ILLINOIS	3
15	CRAWFORD H. LONG MEMORIAL HOSPITAL	ATLANTA, GEORGIA	3
16	EASTERN SCHOOL FOR PHYSICIANS' AIDS	NEW YORK, NEW YORK	5
17	ESSEX COLLEGE OF BUSINESS	NEWARK, NEW JERSEY	5
18	EVANGELICAL DEACONESS	MILWAUKEE, WISCONSIN	5
19	EVERETT JUNIOR COLLEGE	EVERETT, WASHINGTON	2
20	FOOTHILL COLLEGE	LOS ALTOS HILLS, CALIFORNIA	2
21	FULLERTON JUNIOR COLLEGE	FULLERTON, CALIFORNIA	2
22	GOOD SAMARITAN HOSPITAL	PHOENIX, ARIZONA	3
23	HARPER HOSPITAL SCHOOL OF NURSING	DDETROIT, MICHIGAN	3
24	HERMAN HOSPITAL	HOUSTON, TEXAS	3

*LEVELS: 1 = University; 2 = Junior College; 3 = Hospital; 4 = High School; 5 = Other Institutions

CODE NUMBER	NAME	INSTITUTION	LOCATION	LEVEL
25	HILLCREST MEDICAL CENTER	TULSA, OKLAHOMA	3	
26	HOMER G. PHILLIPS HOSPITAL	ST. LOUIS, MISSOURI	3	
27	IDAHO STATE UNIVERSITY	POCATELLO, IDAHO	1	
28	INDIANA UNIVERSITY	BLOOMINGTON, INDIANA	1	
29	KNAPP COLLEGE OF NURSING	SANTA BARBARA, CALIFORNIA	3	
30	LOMA LINDA UNIVERSITY	LOMA LINDA, CALIFORNIA	1	
31	LONG BEACH CITY COLLEGE	LONG BEACH, CALIFORNIA	1	
32	LOS ANGELES VALLEY COLLEGE	VAN NUYS, CALIFORNIA	1	
33	MEDICAL COLLEGE HOSPITAL	CHARLESTON, SOUTH CAROLINA	1	
34	MEDICAL COLLEGE OF VIRGINIA	RICHMOND, VIRGINIA	1	
35	MERCY COLLEGE OF NURSING	SAN DIEGO, CALIFORNIA	1	
36	MICHAEL REESE HOSPITAL AND MEDICAL CENTER	CHICAGO, ILLINOIS	3	
37	MICHIGAN STATE UNIVERSITY	EAST LANSING, MICHIGAN	1	
38	MONMOUTH MEMORIAL HOSPITAL	LONG BRANCH, NEW JERSEY	3	
39	MOUNT MERCY COLLEGE	PITTSBURGH, PENNSYLVANIA	1	
40	MOUNT SINAI	NEW YORK CITY, NEW YORK	3	
41	NEWPORT HOSPITAL	NEWPORT, RHODE ISLAND	3	
42	O'CONNOR HOSPITAL SCHOOL OF NURSING	SAN JOSE, CALIFORNIA	3	
43	ORANGE COAST COLLEGE	COSTA MESA, CALIFORNIA	2	
44	OTTUMWA HEIGHTS	OTTUMWA, IOWA	1	
45	OUR LADY OF THE LAKE	RATON ROUGE, LOUISIANA	3	
46	PHOENIX JUNIOR COLLEGE	PHOENIX, ARIZONA	1	
47	PHOENIX UNION HIGH SCHOOL	PHOENIX, ARIZONA	4	
48	POINT PARK JUNIOR COLLEGE	PITTSBURGH, PENNSYLVANIA	2	
49	PROVIDENCE HOSPITAL	SEATTLE, WASHINGTON	3	
50	QUEEN OF ANGELS HOSPITAL	LOS ANGELES, CALIFORNIA	3	
51	RICHMOND PROFESSIONAL INSTITUTE	RICHMOND, VIRGINIA	5	
52	SACRED HEART DOMINICAN COLLEGE (ST. JOSEPH'S HOSPITAL)	HOUSTON, TEXAS	3	
53	SCHWEITZER SCHOOL	WICHITA, KANSAS	5	
54	SPRINGFIELD TECHNICAL INSTITUTE	SPRINGFIELD, MASSACHUSETTS	5	
55	SOUTHWEST PREPARATORY	PHOENIX, ARIZONA	5	
56	ST. CLARE'S HOSPITAL	ALLEGANY, NEW YORK	3	
57	ST. LUTE'S HOSPITAL	KANSAS CITY, MISSOURI	3	

<u>CODE NUMBER</u>	<u>INSTITUTION</u>	<u>LOCATION</u>	<u>LEVEL</u>
58	ST. JOSEPH'S HOSPITAL	PHOENIX, ARIZONA	3
59	ST. JOSEPH'S HOSPITAL	MOUNT CLEMENS, MICHIGAN	3
60	ST. PETERSBURG JUNIOR COLLEGE	ST. PETERSBURG, FLORIDA	2
61	ST. VINCENT'S HOSPITAL	LOS ANGELES, CALIFORNIA	3
62	SWEDISH COVENANT HOSPITAL	CHICAGO, ILLINOIS	3
63	TUFTS UNIVERSITY	MEDFORD, MASSACHUSETTS	1
64	THOMPSON INSTITUTE	HARRISBURG, PENNSYLVANIA	5
65	UNIVERSITY OF ARIZONA	TUCSON, ARIZONA	1
66	UNIVERSITY OF CALIFORNIA AT LOS ANGELES	BERKELEY, CALIFORNIA	1
67	UNIVERSITY OF CALIFORNIA AT LOS ANGELES	LOS ANGELES, CALIFORNIA	1
68	UNIVERSITY OF FLORIDA	GAINSEVILLE, FLORIDA	1
69	UNIVERSITY OF ILLINOIS	URBANA, ILLINOIS	1
70	UNIVERSITY OF KANSAS	LAWRENCE, KANSAS	1
71	UNIVERSITY OF MARYLAND	COLLEGE PARK, MARYLAND	1
72	UNIVERSITY OF MICHIGAN	ANN ARBOR, MICHIGAN	1
73	UNIVERSITY OF MISSOURI	COLUMBIA, MISSOURI	1
74	UNIVERSITY OF NEW MEXICO	ALBUQUERQUE, NEW MEXICO	1
75	UNIVERSITY OF NORTH CAROLINA	CHAPEL HILL, NORTH CAROLINA	1
76	UNIVERSITY OF PACIFIC	FOREST GROVE, OREGON	1
77	UNIVERSITY OF SOUTHWESTERN LOUISIANA	LAFAYETTE, LOUISIANA	1
78	UNIVERSITY OF WISCONSIN	MADISON, WISCONSIN	1
79	VITTERBO COLLEGE (ST. FRANCIS HOSPITAL)	LA CROSSE, WISCONSIN	3
80	WASHINGTON UNIVERSITY	SEATTLE, WASHINGTON	1
81	WEBER STATE COLLEGE	OGDEN, UTAH	1
82	YALE UNIVERSITY	NEW HAVEN, CONNECTICUT	1
83	ZIERGMAN SCHOOL	SAN FRANCISCO, CALIFORNIA	5
84	NATIONAL OFFICE		5
85	MEDICAL COLLEGE OF GEORGIA	AUGUSTA, GEORGIA	5
86	EMORY UNIVERSITY HOSPITAL	ATLANTA, GEORGIA	3
87	KRESS SCHOOL OF PRACTICAL NURSING (PIMA COUNTY GENERAL HOSPITAL)	TUCSON, ARIZONA	3
88	COCHISE JUNIOR COLLEGE	DOUGLAS, ARIZONA	2
89	DAYTON, OHIO SCHOOL OF PRACTICAL NURSING	DAYTON, OHIO	3

<u>CODE NUMBER</u>	<u>INSTITUTION NAME</u>	<u>LOCATION</u>	<u>LEVEL</u>
90	SAINT ANTHONY HOSPITAL SCHOOL OF PRACTICAL NURSING	DENVER, COLORADO	3
91	MESA JUNIOR COLLEGE	MESA, ARIZONA	2
92	MERCY CENTRAL SCHOOL OF PRACTICAL NURSING	SPRINGFIELD, OHIO	3
93	PIERRE SCHOOL OF PRACTICAL NURSING	PIERRE, SOUTH DAKOTA	5
94	ARIZONA STATE HOSPITAL	PHOENIX, ARIZONA	3
95	STATE UNIVERSITY OF NEW YORK AT BUFFALO	BUFFALO, NEW YORK	1
96	HENDRICK MEMORIAL HOSPITAL	AETLENE, TEXAS	3
97	SINAI HOSPITAL OF BALTIMORE	BALTIMORE, MARYLAND	3
98	SPokane COMMUNITY COLLEGE	SPokane, WASHINGTON	2
99	ST. JOSEPH'S HOSPITAL	LOWELL, MASSACHUSETTS	3
100	INCARNATE WORD COLLEGE (SANTA ROSA MEDICAL CENTER)	SAN ANTONIO ?, TEXAS	1
101	MADISON SANATORIUM AND HOSPITAL	MADISON, WISCONSIN	3
102	ST. MARGARET'S HOSPITAL	HAMMOND, INDIANA	3
103	CITY COLLEGE OF SAN FRANCISCO	SAN FRANCISCO, CALIFORNIA	2
104	STANFORD UNIVERSITY (STANFORD MEDICAL CENTER)	STANFORD, CALIFORNIA	1
105	ST. LOUIS UNIVERSITY	ST. LOUIS, MISSOURI	1
106	DUKE UNIVERSITY MEDICAL CENTER	DURHAM, NORTH CAROLINA	1
107	MISERICORDIA HOSPITAL	PHILADELPHIA, PENNSYLVANIA	3
108	DOCTORS HOSPITAL	CLEVELAND HEIGHTS, OHIO	3
109	TUCSON SCHOOL DISTRICT NO. 1	TUCSON, ARIZONA	5
110	PIMA COUNTY GENERAL HOSPITAL, TUCSON	TUCSON, ARIZONA	3

to the level of education (high school, post-high school, junior college, university, or other) at which courses in a given paramedical career were offered in each institution, the titles of the courses required before and after admission to the program, and the depth of content in each subject discipline as revealed by the number of clock hours devoted to classroom lecture work, laboratory experience, directed clinical practice, and total clock hours for each course title. Clock hours were regarded as the best measure of study since practices in the allowance of semester or quarter hours of credit varied widely among the training institutions for comparable clock hours spent in the study of a given subject. Reports recorded on the various instruments utilized for the collection of data were made available to key-punch operators who prepared data cards for the computer. Appendix D, PMRP Form 4, "First Progress Report" was used by the researchers in making progress reports of the analysis and interpretation of educational programs at the half-way point in the study. These reports assisted the Principal Investigator and the Workshop staff in preparing The First Progress Report for the United States Office of Education. Appendix E, PMRP Form 5, was used by the researchers to keep a record of resource materials secured from the various paramedical education institutions contacted.

The curriculum content analysts and the curriculum development specialists on the Workshop Advisory Committee gave special attention to the educational programs in the various institutions in the Phoenix area. Because of familiarity with these programs and easy access to information concerning them, they were used by the researchers as bases for comparison with programs from institutions in other parts of the United States. Requests for additional information were made by the Research Assistant with several paramedical education centers including the College of Health Related Professions at the University of Florida; the Junior College at

St. Louis; St. Mary's Junior College in Minneapolis; Bronx Community College; Chicago City Junior College; Technical and Vocational Centers in Springfield, Massachusetts, Madison, Wisconsin, and Pittsburgh, Pennsylvania; as well as the private medical center of North Carolina Baptist Hospital, Winston-Salem, North Carolina.

Many curricular materials such as catalogs, syllabi, brochures, library materials, course descriptions, pamphlets from training institutions, information concerning national requirements for accreditation of paramedical careers, course guides and communication were collected in the progress of the study. All of these materials were classified and made available to the Committee in its regular Workshop meetings. Records of these resource materials were made on the data collection instrument PMRP Form 5 "Resource Materials" shown in Appendix E of this report.

Throughout the progress of the study, advice and service was available from the several curriculum development specialists and curricular analysts whose names and official positions are listed in Table 1, "Paramedical Curriculum Advisory Committee". In addition to the curricular analysts and the curriculum development specialists, it should be noted that an architectural consultant, Paul Crosier of Busby Associates, met with the Workshop group to audit the procedures of the study for his orientation and to offer professional advice which might later help to coordinate curriculum development with facilities planning.

CHAPTER III

THE PRESENTATION AND INTERPRETATION OF DATA

The Paramedical Career Programs Analyzed

It was reported in Chapter II on Research Design and Procedures that 126 paramedical programs from 110 different training institutions in 20 paramedical occupations were analyzed. Problems of determining the size of the sample for each of the 20 paramedical programs being researched were discussed. It was decided, however, that each curricular analyst should obtain and analyze at least 10 programs in the paramedical field(s) assigned to him in 10 different training centers that preferably were located in metropolitan areas. Table 5 shows the number of programs finally analyzed in each of the 20 paramedical careers studied and the number of contacts made with training institutions by the curricular analysts on the Paramedical Curriculum Advisory Committee Workshop staff in order to obtain the 126 programs. The curricular analysts examined eight or more programs from different training institutions in each of the following careers: three-year registered nurse, two-year registered nurse, licensed practical nurse, medical technologist, medical secretary, physical therapist, inhalation therapist, and medical record librarian. In some of the other careers only limited numbers of organized, well-defined programs were available for analysis. Only one organized program was analyzed for the dental technician and the physical therapy assistant; two organized programs were obtained for nurse aide, dental assistant, occupational therapist, and medical records technician, although as Table 5 indicates, a greater number of contacts were made in attempts to locate planned, organized programs in these paramedical careers.

TABLE 5

PARAMEDICAL CAREER PROGRAMS ANALYZED FROM 110 INSTITUTIONS

Career Number	Career Title	Institutions Contacted	Programs Analyzed
1	Three-year Registered Nurse	23	18
2	Two-year Registered Nurse	17	11
3	Licensed Practical Nurse	18	9
4	Nurse Aide	28	2
5	Dental Assistant	17	2
6	Medical Technologist	22	12
7	Medical Secretary	14	9
8	Radiologic Technologist	4	3
9	Dental Hygienist	14	4
10	Dental Technician	14	1
11	Physical Therapist	10	9
12	Physical Therapy Assistant	4	1
13	Occupational Therapist	7	7
14	Occupational Therapy Assistant	11	2
15	Inhalation Therapist	14	8
16	Medical Assistant	18	4
17	Laboratory Assistant	12	4
18	Medical Record Librarian	35	15
19	Medical Record Technician	13	2
20	Radioisotope Technician	3 298	3 126

Code Number Index to the Subject
Classifications in 20 Paramedical Careers

Data concerning the 126 programs were analyzed and recorded upon the gathering and collection instruments shown in Appendices A, B, and C. From the gathering and collection instruments the data was transferred by key punch operators to computer data cards. The analysis of the 126 paramedical programs for all the careers studied yielded 2,613 separate courses which were classified into general subject classifications by the curricular analysts. Table 6 presents a code number index to the subject classifications into which the 2,613 separate courses were assigned. The curriculum analysts in each field had considerable difficulty in assigning a number of courses to certain subject classifications for a variety of reasons. In some instances the courses examined partook of the nature and scope of more than one subject classification. In other cases the limited description accompanying a particular course made it necessary for the curricular analysts to use their professional and experiential judgments in assigning such a course to a subject classification.

Three of the 126 general subject classifications need especial explanation. Code number 0 listed in Table 6 as "Uncommon Courses" was a classification assigned to course titles which were required in only one of the programs of a given paramedical career. In other words, such courses were not like any other course in that career field. Code number 124 listed in Table 6 as "General Education" was a classification assigned to course titles which the curriculum analyst in a particular field did not regard as a part of the technical training for that career. This classification, in general, included courses offered in the areas of communications, humanities, behavioral and social

TABLE 6

CODE NUMBER INDEX TO THE SUBJECT CLASSIFICATION IN 20 PARAMEDICAL CAREERS

<u>Code Number</u>	<u>Subject Classification</u>
0	Uncommon Courses
1	Nursing Fundamentals
2	Nursing Trends
3	Anatomy
4	Anatomy and Physiology
5	Chemistry, General
6	Human Growth and Development
7	Nursing
8	Nursing, Clinical Conference
9	Clinical Practice, Nursing
10	Physiology
11	Nursing, Medical Surgical
12	Vocational Relationships
13	Ethics, Professional
14	Nutrition
15	Mathematics
16	Psychology, General
17	Health, Personal and Community
18	Human Relationships
19	Sociology
20	Microbiology
21	Pediatrics
22	Nursing, Psychiatric
23	Obstetrics
24	Pharmacology
25	Theology
26	Dietetics
27	First Aid
28	Botany
29	Physics
30	Zoology
31	Nursing, Geriatrics
32	Nursing, Procedures
33	Office Training and Management
34	Psychology, Applied
35	Terminology, Dental
36	Dental Assisting
37	Chemistry, Quantitative
38	Chemistry, Qualitative
39	Chemistry, Organic
40	Chemistry, Inorganic
41	Biochemistry
42	Clinical Laboratory Problems, Medical Technologist
43	Histology
44	Immunology
45	Laboratory Techniques, Medical Technologist

<u>Code Number</u>	<u>Subject Classification</u>
46	Urinalysis
47	Blood Bank
48	Cytology
49	Electrocardiograph (EKG)
50	Hematology
51	Micro-technique, Medical Technology
52	Parasitology
53	Pathology
54	Serology
55	Virology
56	Accounting
57	Anatomy - Physics
58	Business Correspondence
59	Shorthand, General and Medical
60	Filing
61	Office Machines
62	Office Practice
63	Secretarial Practice and Procedures
64	Terminology, Medical
65	Typing
66	Economics
67	Medical Science Conferences
68	Administration, Departmental
69	Film Critique
70	Darkroom Chemistry and Technique
71	Diseases, Medical Surgical
72	Equipment, Radiology
73	Radiation Therapy
74	Radiation Safety
75	Radiographic Exposure Techniques
76	Radiographic Positioning
77	Radiographic Procedures
78	Radiography, Intra-Oral
79	Radiography, Pediatrics
80	Radiology, Nursing Procedures
81	Radiation Physics
82	Radiation Therapy
83	Radiographic Isotopes
84	Anesthesia
85	Dental Anatomy
86	Clinical Practice, Dental
87	Dental Health
88	Orientation, Dental
89	Dental Materials
90	Physical Agents, Physical Therapy
91	Neurology
92	Clinical Assignment, Physical Therapy

<u>Code Number</u>	<u>Subject Classification</u>	25
93	Organization & Administration, Physical Therapy	
94	Orientation, Physical Therapy	
95	Physical Therapy	
96	Therapeutic Exercise	
97	Orientation, Occupational Therapy	
98	Handcrafts	
99	Occupational Therapy	
100	Principles & Practices, Occupational Therapy	
101	Kinesiology	
102	Organization & Administration, Occup. Therapy	
103	Physical Disabilities	
104	Clinical Assignment, Occupational Therapy	
105	Tests and Measurement, Physical	
106	Organization & Administration, Inhalation Ther.	
107	Equipment Operation, Inhalation Therapy	
108	Clinical Practice, Inhalation Therapy	
109	Inhalation Therapy	
110	Orientation, Inhalation Therapy	
111	Orientation, Medical Assistant	
112	Basal Metabolism Rate (BMR)	
113	Laboratory Assistant Responsibilities	
114	Organization & Adm., Medical Record Librarian	
115	Directed Practice, Medical Record Librarian	
116	Medical Record Science, Medical Record Libr.	
117	Medical Record Science, Fundamentals	
118	Medical Record Science, Legal Aspects	
119	Clinical Practice, Radioisotope Technician	
120	Diagnostic Procedures, Radioisotope Technician	
121	Instrumentation, Radioisotope Technician	
122	Radiobiology, Radioisotope Technician	
123	Mathematics, Radiological	
124	General Education	
125	Electives	

sciences, sciences and mathematics (where not regarded as part of the technical training), and physical education. Some courses listed as "General Education" in one paramedical career might appropriately be classified by a curricular analyst as technical training in another field. Code number 125 listed in Table 6 as "Electives" was used for the assignment of all course titles identified as electives. In some programs these courses were not identified by title, but simply by the word "elective(s)" with the number of semester or quarter hours of credit required.

It was desirable in this study to assign, and thus reduce, the 2,613 separate course title entries for the 126 programs analyzed to as small a number of broad-field subject classifications as possible and yet still have each subject classification easily recognizable as a separate subject of specific content.

The Listing of Courses Reported in the Survey of 20 Paramedical Careers Grouped According to Subject Classifications

Table 7 is a computer print-out listing of all 126 subject classifications for all of the 20 paramedical careers with the various course titles assigned to each subject classification occurring within a given paramedical field. Consider Career Number One, Three-Year Registered Nurse, as an example. Under this paramedical career are listed, by code number, separate subject classifications as follow:

- | | |
|---------------------------------|------------------------------------|
| 1. Nursing Fundamentals | 11. Nursing, Medical Surgical |
| 2. Nursing Trends | 12. Ethics, Professional |
| 3. Anatomy | 14. Nutrition |
| 4. Anatomy and Physiology | 15. Psychology, General |
| 5. Chemistry, General | 16. Health, Personal and Community |
| 6. Human Growth and Development | 18. Human Relationships |
| 7. Nursing | 19. Sociology |
| 8. Nursing, Clinical Conference | 20. Microbiology |
| 9. Nursing, Clinical Practice | 21. Pediatrics |
| 10. Physiology | 22. Nursing, Psychiatric |

- | | |
|------------------|-------------------------|
| 23. Obstetrics | 29. Physics |
| 24. Pharmacology | 31. Nursing, Geriatrics |
| 25. Theology | 124. General Education |
| 27. First Aid | 125. Electives |

Columns 2, 3, 4, and 5 of Table 7 show the number of clock hours devoted respectively to each separate course in lecture, laboratory, clinical practice, and total clock hours as reported by the various training institutions. For uniformity and consistency the curricular analysts all interpreted one semester hour as equivalent to 15 clock hours and one quarter hour as equivalent to 10 clock hours.

As an example, in Table 7, under the Subject Classification Number 1, "Nursing Fundamentals", of the three-year registered nurse career, consider the first course title, "Adjustment, Professional 1". The institution reporting this course indicated only that a total of 24 total clock hours were spent in lecture, laboratory, or clinical practice or whether part of the 24 hours was spent in each kind of training experience. In the second entry under "Nursing Fundamentals" the course title was listed by the training institution as "Nursing Fundamentals." The computer record in this case shows that students in the three-year registered nurse career are required to devote 408 clock hours to this particular course. Of the total 408 hours required in nursing fundamentals the student is required to spend 48 hours in lecture, no hours in laboratory work, and 360 hours in clinical practice or directed work experience.

Column 6 ("Inst"), Table 7 indicates the code number for the institution. By referring to Table 4 again it can be seen that Institution Number 1 is Alexian Brothers Hospital in Chicago Illinois. Both the course in "Adjustments, Professional 1" and "Nursing Fundamentals" are requirements in this same training institution. In column 7,

TABLE 7
A LISTING OF COURSES REPORTED IN THE SURVEY OF 20 PARAMEDICAL CAREERS
GROUPED ACCORDING TO SUBJECT CLASSIFICATIONS

CAREER NUMBER	CLINICAL LEVEL
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	1
35	1
36	1
37	1
38	1
39	1
40	1
41	1
42	1
43	1
44	1
45	1
46	1
47	1
48	1
49	1
50	1
51	1
52	1
53	1
54	1
55	1
56	1
57	1
58	1
59	1
60	1
61	1
62	1
63	1
64	1
65	1
66	1
67	1
68	1
69	1
70	1
71	1
72	

THREE-YEAR REGISTERED NURSE, CONTINUED

1. NURSING, FUNDAMENTALS, CONTINUING NURSING FUNDAMENTALS

- | | |
|----|------------------------|
| 1 | ANATOMY AND PHYSIOLOGY |
| 2 | ANATOMY AND PHYSIOLOGY |
| 3 | ANATOMY AND PHYSIOLOGY |
| 4 | ANATOMY AND PHYSIOLOGY |
| 5 | ANATOMY AND PHYSIOLOGY |
| 6 | ANATOMY AND PHYSIOLOGY |
| 7 | ANATOMY AND PHYSIOLOGY |
| 8 | ANATOMY AND PHYSIOLOGY |
| 9 | ANATOMY AND PHYSIOLOGY |
| 10 | ANATOMY AND PHYSIOLOGY |

THREE-YEAR REGISTERED NURSE, CONTINUED

.4 ANATOMY AND PHYSIOLOGY, CONTINUED

ANATOMY AND PHYSIOLOGY 2
 ANATOMY AND PHYSIOLOGY 3
 ANATOMY AND PHYSIOLOGY 1
 ANATOMY AND PHYSIOLOGY 2
 ANATOMY AND PHYSIOLOGY 1
 ANATOMY AND PHYSIOLOGY 3
 ANATOMY AND PHYSIOLOGY 4
 SCIENCE 1
 SCIENCE 2
 SCIENCE 3
 SCIENCE 4

ANATOMY AND PHYSIOLOGY
 SCIENCE 1

SCIENCE 2
 SCIENCE 3

CHEMISTRY, GENERAL
 CHEMISTRY 1
 CHEMISTRY 2
 CHEMISTRY
 CHEMISTRY
 CHEMISTRY

HUMAN GROWTH AND DEVELOPMENT
 PSYCHOLOGY GROWTH DEVELOPMENT
 CHILD GROWTH AND DEVELOPMENT
 CHILD GROWTH AND DEVELOPMENT
 CHILD GROWTH AND DEVELOPMENT
 HUMAN GROWTH AND DEVELOPMENT
 PSYCHOLOGY DEVELOPMENTAL

.7 NURSING
 GYNECOLOGY
 NURSING, OCCUPATIONAL HEALTH
 RECOVERY ROOM, PAST ANESTHETIC
 REHABILITATION
 NURSING 1
 SEMINAR
 NURSING 1 2 3
 NURSING 1
 NURSING 2

	CAREER NUMBER	INST	CLASS	LEVEL
LECT	CLIN	TOTL	INST	CLAS
29	31	32	32	32
31	32	32	32	32
32	32	32	32	32
34	34	34	34	34
35	35	35	35	35
36	36	36	36	36
37	37	37	37	37
38	38	38	38	38
39	39	39	39	39
40	40	40	40	40
41	41	41	41	41
42	42	42	42	42
43	43	43	43	43
44	44	44	44	44
45	45	45	45	45
46	46	46	46	46
47	47	47	47	47
48	48	48	48	48
49	49	49	49	49
50	50	50	50	50
51	51	51	51	51
52	52	52	52	52
53	53	53	53	53
54	54	54	54	54
55	55	55	55	55
56	56	56	56	56
57	57	57	57	57
58	58	58	58	58
59	59	59	59	59
60	60	60	60	60
61	61	61	61	61
62	62	62	62	62
63	63	63	63	63
64	64	64	64	64
65	65	65	65	65
66	66	66	66	66
67	67	67	67	67
68	68	68	68	68
69	69	69	69	69
70	70	70	70	70
71	71	71	71	71
72	72	72	72	72
73	73	73	73	73
74	74	74	74	74
75	75	75	75	75
76	76	76	76	76
77	77	77	77	77
78	78	78	78	78
79	79	79	79	79
80	80	80	80	80
81	81	81	81	81
82	82	82	82	82
83	83	83	83	83
84	84	84	84	84
85	85	85	85	85
86	86	86	86	86
87	87	87	87	87
88	88	88	88	88
89	89	89	89	89
90	90	90	90	90
91	91	91	91	91
92	92	92	92	92
93	93	93	93	93
94	94	94	94	94
95	95	95	95	95
96	96	96	96	96
97	97	97	97	97
98	98	98	98	98
99	99	99	99	99
100	100	100	100	100

THREE-YEAR REGISTERED NURSE, CONTINUED

-7 NURSING, CONTINUED
CIVIL DEFENSE AND DISASTER
INTRO. NURSING PHARM1 PHARM 2 COM SKILL
NURSING EMERGENCY
NURSING REHABILITATION

THREE-YEAR REGISTERED NURSE, CONTINUED

THREE-YEAR REGISTERED NURSE, CONTINUED

MISSING: MEDICAL SUGGESTIVE EVIDENCE CONTINUED

THREE-YEAR REGISTERED NURSE, CONTINUED

- 11 NURSING, MEDICAL SURGICAL, CONTINUED
NURSING EXPERIENCE, SENIOR
NURSING MEDICAL SURGICAL 1
NURSING MEDICAL SURGICAL 2
NURSING MEDICAL SURGICAL 3
NURSING MEDICAL SURGICAL
NURSING OPERATING ROOM
NURSING OPERATING ROOM
NURSING ORTHOPEDIC
NURSING ORTHOPEDIC
NURSING MEDICAL SURGICAL
NURSING MEDICAL SURGICAL
NURSING MEDICAL SURGICAL
NURSING MEDICAL SURGICAL

ETHICS IN PROFESSIONAL MANAGEMENT

14 NUTRITION NUTRITION FOOD HABITS DEVELOPMENT OF

NUTRITION

THREE-YEAR REGISTERED NURSE, CONTINUED

	CAREER NUMBER	INST	CLAS	LEVEL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	CLIN	TOTL			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
14 NUTRITION, CONTINUED					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUTRITION					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUTRITION					32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUTRITION					32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NUTRITION					32	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16 PSYCHOLOGY, GENERAL					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PSYCHOLOGY INTRODUCTORY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY GENERAL					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY OF PERSONALITY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
HUMAN BEHAVIOR FOUNDATIONS OF					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY 1					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY 2					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY GENERAL					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY GENERAL					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PHYSIOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PHYSIOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
PSYCHOLOGY					48	54	54	48	54	54	48	54	54	48	54	54	48	54	54
17 HEALTH, PERSONAL AND COMMUNITY					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COMMUNITY HEALTH					40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
HEALTH PROBLEMS COMMUNITY					36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
18 HUMAN RELATIONSHIPS					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WORD ADMINISTRATION					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANAGEMENT NURSING UNIT					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEADERSHIP SKILLS INTR.					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUMAN RELATIONS SEMINAR					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUMAN RELATIONS AND LEADERSHIP					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LEADERSHIP					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

THREE-YEAR REGISTERED NURSE, CONTINUED

	CAREER NUMBER	INST	CLAS	LEVEL
LECT	CLIN	TOTL	1	
SOCIOLOGY				
MARRIAGE AND THE FAMILY				
SOCIOLOGY-MODERN SOCIAL PROBLEMS				
SOCIOLOGY - COURTSHIP MARRIAGE				
SOCIOLOGY				
MARRIAGE AND THE FAMILY				
SOCIOLOGY, SOCIOLOGICAL SCIENCE AND SOCIAL 1				
SOCIOLOGY, SOCIOLOGICAL SCIENCE AND SOCIAL 2				
SOCIOLOGY, SOCIOLOGICAL SCIENCE AND SOCIAL 3				
SOCIO-PSYCHOLOGY				
SOCIOLOGY				
SOCIOLOGY-PRINCIPLES				
SOCIOLOGY 1				
SOCIOLOGY 2				
SCIENCE AND SOCIAL 1				
SCIENCE AND SOCIAL 2				
SCIENCE AND SOCIAL 3				
SCIENCE AND SOCIAL 4				
SOCIOLOGY-SOCIAL FOUNDATIONS 2				
SOCIOLOGY-SOCIAL FOUNDATIONS 3				
SOCIOLOGY-SOCIAL FOUNDATIONS 4				
SOCIOLOGY-SOCIAL FOUNDATIONS 5				
SOCIOLOGY-SOCIAL FOUNDATIONS 6				
SOCIOLOGY AND SOCIAL 1				
SOCIOLOGY AND SOCIAL 2				
SOCIOLOGY AND SOCIAL 3				
SOCIOLOGY AND SOCIAL 4				
SOCIOLOGY-SOCIAL FOUNDATIONS 1				
SOCIOLOGY-SOCIAL FOUNDATIONS 2				
SOCIOLOGY-SOCIAL FOUNDATIONS 3				
SOCIOLOGY-SOCIAL FOUNDATIONS 4				
SOCIOLOGY-SOCIAL FOUNDATIONS 5				
SOCIOLOGY-SOCIAL FOUNDATIONS 6				
SOCIOLOGY AND SOCIAL 1				
SOCIOLOGY AND SOCIAL 2				
SOCIOLOGY AND SOCIAL 3				
SOCIOLOGY AND SOCIAL 4				
SOCIOLOGY AND SOCIAL 5				
SOCIOLOGY AND SOCIAL 6				
SOCIOLOGY				
SOCIAL PROBLEMS				
SOCIOLOGY-SOCIAL PROBLEMS				
SOCIOLOGY				
MARRIAGE AND THE FAMILY				
SOCIOLOGY				

THREE-YEAR REGISTERED NURSE, CONTINUED

PEDIATRICS
NURSING AND PEDIATRIC
NURSING AND PEDIATRIC
NURSING AND PEDIATRIC
NURSING AND PEDIATRIC
MATERNAL CHILD NUR. NUTRIT. DIET THER. PHAR

THREE-YEAR REGISTERED NURSE, CONTINUED

	CAREER NUMBER	INST.	CLAS.	LEVEL	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	3 3 3 3 3 3 3 3	
22	NURSING, PSYCHIATRIC				1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	
	NURSING AND PSYCHIATRIC	105	CLIN	TOTL	336	441	41	42	408	42	408	42	408	42
	NURSING AND PSYCHIATRIC	40	LECT		0	144	144	144	192	50	144	144	144	144
	NURSING AND PSYCHIATRIC	48	LAB		24	144	144	144	225	56	144	144	144	144
	NURSING AND PSYCHIATRIC	135			0	225	360	230	230	58	225	360	230	230
	NURSING AND PSYCHIATRIC	106			0	124	124	124	124	58	124	124	124	124
	NURSING AND PSYCHIATRIC	106			0	124	124	124	124	64	124	124	124	124
	NURSING AND PSYCHIATRIC	48			0	144	144	144	144	64	144	144	144	144
	NURSING AND PSYCHIATRIC	135			0	180	315	230	230	94	180	315	230	230
23	OBSTETRICS				320	320	320	320	320	320	320	320	320	320
	NURSING OBSTETRICAL	86	LECT		0	60	60	60	109	118	60	60	60	60
	NURSING OBSTETRICAL	86	LAB		0	0	0	0	0	25	0	0	0	0
	NURSING OBSTETRICAL	73			0	286	336	336	384	418	286	336	336	336
	NURSING OBSTETRICAL	96			0	600	600	600	765	800	600	600	600	600
	NURSING OBSTETRICAL	96			0	432	432	432	432	432	432	432	432	432
	NURSING OBSTETRICAL	165			0	41	41	41	41	41	41	41	41	41
	NURSING OBSTETRICAL	130			0	0	0	0	0	0	0	0	0	0
	NURSING OBSTETRICAL	130			0	0	0	0	0	0	0	0	0	0
	NURSING OBSTETRICAL	106			0	0	0	0	0	0	0	0	0	0
	NURSING OBSTETRICAL	121			0	0	0	0	0	0	0	0	0	0
	NURSING OBSTETRICAL	84			0	0	0	0	0	0	0	0	0	0
	NURSING OBSTETRICAL	84			0	0	0	0	0	0	0	0	0	0
	NURSING OBSTETRICAL	48			0	0	0	0	0	0	0	0	0	0
24	PHARMACOLOGY				0	0	0	0	0	0	0	0	0	0
	PHARMACOLOGY	0	LECT		40	40	40	40	40	40	40	40	40	40
	PHARMACOLOGY	0	LAB		30	30	30	30	30	30	30	30	30	30
	PHARMACOLOGY	0			18	18	18	18	18	18	18	18	18	18
	PHARMACOLOGY	0			32	32	32	32	32	32	32	32	32	32
25	THEOLOGY				0	0	0	0	0	0	0	0	0	0
	THEOLOGY	0	LECT		18	18	18	18	18	18	18	18	18	18
	THEOLOGY	0	LAB		18	18	18	18	18	18	18	18	18	18
	THEOLOGY	0			18	18	18	18	18	18	18	18	18	18
	THEOLOGY	0			18	18	18	18	18	18	18	18	18	18
	THEOLOGY	0			18	18	18	18	18	18	18	18	18	18
	THEOLOGY	0			18	18	18	18	18	18	18	18	18	18
	THEOLOGY	0			18	18	18	18	18	18	18	18	18	18
	THEOLOGY	0			18	18	18	18	18	18	18	18	18	18

THREE-YEAR REGISTERED NURSE, CONTINUED

		CAREER NUMBER ¹	TOTAL CLAS	LEVEL
LECT	LAB	CLIN	INST	
25 THEOLOGY, CONTINUED			48{10	42
THEOLOGY	0	0	48}	42
THEOLOGY	0	0	15{3	56
THEOLOGY	0	0	16{3	56
THEOLOGY	0	0	16{7	61
THEOLOGY 2	0	0	16{48	61
THEOLOGY	0	0	16{48	61
-27 FIRST AID			18	30
NURSING, FIRE PREVENTION AND FIRST AID			1	1
-29 PHYSICS			24	36
PHYSICS	0	0	24	36
-31 NURSING, GERIATRIC			75	75
124 GENERAL EDUCATION				
SPEECH	48	54	54	54
ENGLISH	57	57	54	54
ENGLISH	36	36	48	48
SPEECH	48	48	54	54
ENGLISH 1	48	48	54	54
ENGLISH 2	48	48	54	54
ENGLISH COMPOSITION	48	48	48	48
HISTORY U. S.	48	48	48	48
ENGLISH	48	48	48	48
COMMUNICATION SKILLS	30	30	48	48
COMPOSITION	48	48	48	48
EXPRESSION FUNDAMENTALS	48	48	48	48
LITERATURE INTRO.	0	0	0	0
ENGLISH	15	15	15	15
COMMUNICATION SKILLS 2	15	15	15	15
COMMUNICATION SKILLS 3	15	15	15	15
COMMUNICATION SKILLS	15	15	15	15
PHILOSOPHY 1	15	15	15	15
PHILOSOPHY 2	15	15	15	15
ENGLISH	61	61	61	61

THREE-YEAR REGISTERED NURSE, CONTINUED

	CAREER NUMBER	INST	CLAS	LEVL
LECT	48	0	0	1
LAB	48	0	48	1
CLIN	48	0	48	1
TOTAL	125	0	125	1

125 ELECTIVES
ELECTIVES
ELECTIVES

TWO-YEAR REGISTERED NURSE , CONTINUED

TWO-YEAR REGISTERED NURSE, CONTINUED

		CAREER NUMBER	INST	CLAS	LEVEL	CLIN	TOTL	2
1.1	NURSING, MEDICAL SURGICAL, CONTINUED							
	NURSING MEDICAL SURGICAL	384	432	31				
	NURSING MEDICAL SURGICAL	0	144	192				
	NURSING MEDICAL SURGICAL	48	144	176				
	NURSING MEDICAL SURGICAL	32	96	128				
	NURSING MEDICAL SURGICAL	32	96	144				
	NURSING MEDICAL SURGICAL	48	96	144				
	NURSING MEDICAL SURGICAL	64	144	208				
	NURSING MEDICAL SURGICAL	18	162	180				
	NURSING MEDICAL SURGICAL	18	54	72				
	NURSING MEDICAL SURGICAL	48	43	45				
	NURSING MEDICAL SURGICAL	56	45	60				
	NURSING MEDICAL SURGICAL	96	144	192				
	NURSING MEDICAL SURGICAL	56	168	224				
	NURSING MEDICAL SURGICAL	56	168	288				
	NURSING MEDICAL SURGICAL	56	168	256				
	NURSING MEDICAL SURGICAL	56	168	286				
	NURSING MEDICAL SURGICAL	56	168	286				
	NURSING CARE, ADULT PATIENTS WITH COMPLEX NEEDS	96	192	231				
	NURSING MEDICAL SURGICAL 1	64	55	55				
	NURSING MEDICAL SURGICAL 2	64	55	55				
	NURSING MEDICAL SURGICAL 3	55	55	55				
	NURSING SEMINAR	11	11	0				
1.4	NUTRITION	0	0	0				
	NUTRITION	44	33	32				
	NUTRITION	32	32	32				
	NUTRITION	32	32	48				
	NUTRITION	32	32	48				
	NUTRITION	33	33	33				
1.6	PSYCHOLOGY, GENERAL	0	0	0				
	PSYCHOLOGY GENERAL INTRODUCTORY	48	55	55				
	PSYCHOLOGY GENERAL	48	48	48				
	PSYCHOLOGY GENERAL	48	48	48				
	PSYCHOLOGY GENERAL INTRODUCTORY	48	48	48				
	PSYCHOLOGY GENERAL INTRODUCTORY	48	48	48				
	PSYCHOLOGY GENERAL	48	48	48				
	PSYCHOLOGY GENERAL	48	48	48				
	PSYCHOLOGY GENERAL INTRODUCTORY	48	48	48				

TWO-YEAR REGISTERED NURSE, CONTINUED
 17 HEALTH, PERSONAL AND COMMUNITY
 HEALTH PERSONAL COMMUNITY

		CAREER NUMBER	INST	CLAS	LEVEL
		LECT	LAB	CLIN	TOTL
19	SOCIOLOGY SOCIOLOGY SOCIOLOGY AND GENERAL SOCIOLOGY SOCIOLOGY SOCIOLOGY SOCIOLOGY SOCIOLOGY SOCIOLOGY SOCIOLOGY MARRIAGE AND THE FAMILY	22	0	0	81
20	MICROBIOLOGY BACTERIOLOGY MICROBIOLOGY MICROBIOLOGY MICROBIOLOGY MICROBIOLOGY MICROBIOLOGY MICROBIOLOGY MICROBIOLOGY MICROBIOLOGY BACTERIOLOGY MICROBIOLOGY 1, MICROBIOLOGY 2, LABORATORY	33	0	0	81
21	PEDIATRICS NURSING AND PEDIATRIC NURSING AND PEDIATRIC NURSING AND PEDIATRIC NURSING AND PEDIATRIC NURSING AND PEDIATRIC NURSING AND PEDIATRIC NURSING AND PEDIATRIC	33	0	0	81
					44

TWO-YEAR REGISTERED NURSE, CONTINUED

		CAREER NUMBER	INST	CLAS	LEVEL
	LECT	LAB	CLIN	TOTL	²
22	NURSING, PSYCHIATRIC NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC 1 NURSING AND PSYCHIATRIC 2 NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC	48 44 55 16 16 32 36 32 56 40	0 0 0 0 0 0 0 0 0 0	192 165 165 48 96 144 108 144 168 120	240 209 220 64 112 20 29 21 34 46
		522222333333	522222333333	111111111111	45
23	OBSTETRICS NURSING OBSTETRICAL NURSING OBSTETRICAL 2 NURSING OBSTETRICAL NURSING OBSTETRICAL	48 21 32 33 32 32 32 32 32 48 40 32 22	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	192 90 60 99 192 144 144 144 144 144 120 96 132 176 176 176 192 160 128 154	240 1112 12 192 132 224 20 21 144 144 144 144 144 43 46 60 81
		522222333333	522222333333	111111111111	
29	PHYSICS PHYSICS AND INTRODUCTION		55	0	55
30	ZOOLOGY ZOOLOGY		55	44	0
					55
124	GENERAL EDUCATION ENGLISH ENGLISH ENGLISH 1, COMPOSITION ENGLISH 2, COMPOSITION ENGLISH 3, COMPOSITION PHYSICAL EDUCATION BIOLOGY ENGLISH 1, COMPOSITION ENGLISH 2	48 48 33 33 33 0 44 22 25 25	0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 66 66 55 55	48 48 33 33 33 12 12 19 19

1124 GENERAL EDUCATION, CONTINUED
REGISTERED NURSE, CONTINUED

TWO-YEAR REGISTERED NURSE , CONTINUED

		CAREER NUMBER	INST	CLAS	LEVEL			
		CLIN	TOTL					
LECT	LAB							
124	GENERAL EDUCATION, CONTINUED							
	PHYSICAL EDUCATION	46	46	1				
	PHYSICAL EDUCATION	46	46	1				
	PHYSICAL EDUCATION	46	46	1				
	PHYSICAL EDUCATION	46	46	1				
	ENGLISH COMPOSITION	60	60	1				
	ENGLISH COMPOSITION	60	60	1				
	GOVERNMENT, NATIONAL	60	60	1				
	GOVERNMENT, STATE-LOCAL	60	60	1				
	PHYSICAL EDUCATION	60	60	1				
	PHYSICAL EDUCATION	60	60	1				
	PHYSICAL EDUCATION	60	60	1				
	PHYSICAL EDUCATION	60	60	1				
	SCIENCES PHYSICAL	60	60	1				
	ENGLISH, FRESHMAN COMP. AUGMENTATION	81	81	1				
	ENGLISH, FRESHMAN COMP. FUND.	81	81	1				
	ENGLISH, FRESHMAN COMPOS. EXPOSITION	81	81	1				
	HISTORY AMERICAN CIVILIZATION	81	81	1				
	HUMANITIES	81	81	1				
125	ELECTIVES	0	0	2	2	2	2	2
	ELECTIVES	0	0	1	2	1	1	1
	ELECTIVES	0	0	1	2	1	1	1
	ELECTIVES	0	0	1	2	1	1	1
	ELECTIVES	0	0	1	2	1	1	1

LICENSING PRACTICAL NURSE

		CAREER NUMBER	CLIN	TOTL	INST	CLAS	LEVEL
1	NURSING, FUNDAMENTALS	96	43	116	255	47	0
	NURSING FUNDAMENTALS	48	48	80	176	54	1
	NURSING FUNDAMENTALS	20	0	96	116	35	1
	NURSING FUNDAMENTALS	75	160	0	235	87	1
	NURSING FUNDAMENTALS 1	85	130	174	289	87	1
	NURSING FUNDAMENTALS 2	130	98	54	282	89	1
	NURSING PRINCIPLES	173	145	48	266	90	1
	NURSING FUNDAMENTALS	16	0	0	16	90	1
	NURSING REHABILITATION	148	64	240	288	91	1
	NURSING FUNDAMENTALS	64	62	60	215	92	1
	NURSING PRINCIPLES SKILLS	93	0	0	112	91	1
	NURSING PRINCIPLES SKILLS	224	0	0	224	93	1
4	ANATOMY AND PHYSIOLOGY	32	9	32	87	1	
	ANATOMY AND PHYSIOLOGY	31	51	102	88	1	
	ANATOMY AND PHYSIOLOGY	50	50	50	89	1	
	ANATOMY AND PHYSIOLOGY	50	50	50	90	1	
	BODY STRUCTURE FUNCTION	52	52	52	92	1	
	BODY STRUCTURE PERS. HEALTH	52	52	52	93	1	
6	HUMAN GROWTH AND DEVELOPMENT	64	0	64	54	1	
	HUMAN GROWTH AND DEVELOPMENT	26	0	26	89	1	
	GROWTH DEVEL. THRU. DECLINING YRS. NORM	18	20	20	92	1	
	CHILD GROWTH AND DEVELOPMENT	18	18	18	93	1	
	CHILD DEVELOPMENT	18	18	18	93	1	
11	NURSING, MEDICAL SURGICAL	140	0	580	720	74	0
	NURSING MEDICAL SURGICAL	28	0	0	28	47	0
	NURSING MEDICAL SURGICAL	96	352	448	54	1	
	NURSING MEDICAL SURGICAL	22	0	0	22	87	1
	NURSING MEDICAL SURGICAL	50	800	850	87	1	
	NURSING MEDICAL SURGICAL	68	136	204	88	1	
	NURSING MEDICAL SURGICAL	90	360	450	88	1	
	NURSING MEDICAL SURGICAL	130	250	380	88	1	
	ILLNESS-INTRO TO CONDITIONS	12	0	0	12	89	1
	ILLNESS MEDICAL SURGICAL	56	256	312	89	1	
	NURSING SURGICAL REC. RM INC.	56	320	376	89	1	
	NURSING MEDICAL SURGICAL	64	34	558	656	90	1

LICENSED PRACTICAL NURSE, CONTINUED

		CAREER NUMBER	INST	CLAS	LEVEL
		LECT	LAB	CLIN	TOTL
11	NURSING, MEDICAL SURGICAL, CONTINUED				
	NURSING MEDICAL SURGICAL	20	0	0	20 { 90
	OUT PATIENT CLINIC	0	4	64	68
	MEDICAL SURGICAL	112	0	288	400
	ILLNESS-INTRO TO CONDITIONS	67	0	0	67
	NURSING MEDICAL SURGICAL	38	0	324	362 { 97
	NURSING MEDICAL SURGICAL	44	0	224	268
	ILLNESS INTRO	24	0	0	24 { 94
	RECOVERY ROOM	2	0	78	80 { 94
	SUPPLY-CENTRAL	1	0	39	40 } 93
12	VOCATIONAL RELATIONSHIPS				
	RELATIONSHIPS VOCATIONAL	24	32	32	47 54
	ADJUSTMENT PROFESSIONAL VOCATIONAL	32	32	34	87
	RELATIONSHIPS PERSONAL VOCATIONAL	17	17	17 { 17	88
	RELATIONSHIPS PROFESSIONAL	20	20	20 { 20	88
	ADJUSTMENT PROFESSIONAL VOCATIONAL	16	16	16 { 16	89
	RELATIONSHIPS PERSONAL VOCATIONAL	12	12	12 { 12	89
	ADJUSTMENT PROFESSIONAL VOCATIONAL	32	32	32 { 32	90
	RELATIONSHIPS PERS.- VOCATIONAL	46	46	84	92
	GUIDANCE	32	32	32 { 32	93
	RELATIONSHIPS VOCATIONAL	32	0	0	93
13	ETHICS, PROFESSIONAL				
	ETHICS AND MEDICAL	16	0	16	90 1
14	NUTRITION				
	NUTRITION	16	0	16	54
	NUTRITION	66	10	76	89
	NUTRITION	24	18	42	90
15	MATHEMATICS				
	ARITHMETIC BASIC DRUGS-SOLUT.	12	0	0	12 89
	ARITHMETIC REVIEW	48	0	0	48 91
16	PSYCHOLOGY, GENERAL				
	PSYCHOLOGY INTRODUCTORY	16	0	0	16 54 2

LICENSED PRACTICAL NURSE , CONTINUED

		CAREER NUMBER	INST	CLAS	LEVL
	LECT	LAB	CLIN	TOTL	
17	HEALTH, PERSONAL AND COMMUNITY HEALTH PERSONAL COMMUNITY HEALTH, MENTAL PERSONAL HEALTH AND ADJUST. HEALTH PERSONAL COMMUNITY HEALTH PERSONAL COMMUNITY COMMUNITY HEALTH	30 20 54 18 36 20	0 0 0 0 0 0	30 20 54 18 36 20	47 87 88 89 90 92
18	SOCIOLOGY SOCIOLOGY BASIC COMMUNITY HEALTH SOCIOLOGY MARRIAGE AND THE FAMILY MARRIAGE AND THE FAMILY MARRIAGE AND THE FAMILY	16 50 42 11 22 10	0 0 0 0 0 0	16 50 42 11 22 10	54 89 90 92 92 93
19	SOCIOLOGY SOCIOLOGY BASIC COMMUNITY HEALTH SOCIOLOGY MARRIAGE AND THE FAMILY MARRIAGE AND THE FAMILY MARRIAGE AND THE FAMILY	16 50 42 11 22 10	0 0 0 0 0 0	16 50 42 11 22 10	54 89 90 92 92 93
20	MICROBIOLOGY MICROBIOLOGY	16	0	0	54
21	PEDIATRICS NURSING AND PEDIATRIC NURSING AND PEDIATRIC PEDIATRICS PEDIATRICS NURSING AND PEDIATRIC NURSING AND PEDIATRIC NURSING AND PEDIATRIC PEDIATRICS INTRO. NURSING AND PEDIATRIC NURSING AND PEDIATRIC	30 15 30 28 24 48 48 29 12 15 18	0 0 0 0 0 0 0 0 0 0 0	210 15 240 160 130 144 144 115 12 195 18	240 15 270 168 162 192 192 12 200 18
22	NURSING, PSYCHIATRIC NURSING AND PSYCHIATRIC NURSING AND PSYCHIATRIC PSYCHIATRY INTRO	28 32 12 12	8 0 0 0	166 96 68 0	90 91 92 92

LICENSURE PRACTICAL NURSE, CONTINUED

COURSE	CREDIT HOURS	CAREER NUMBER	CLAS	LEVEL	TOTAL		INST		CLIN		CLIN TOTL		INST		CLAS		LEVEL		
					LECT	LAB	CLIN	CREDIT HOURS	CLAS	LEVEL	CLIN	CREDIT HOURS	CLAS	LEVEL	CLIN	CREDIT HOURS	CLAS	LEVEL	
23 OBSTETRICS	OBSTETRICAL	NURSING	NURSING	NURSING	OBSTETRICAL														
					30	0	210	240	0	0	0	210	240	0	0	0	0	0	0
					15	0	352	448	1	1	1	352	448	1	1	1	1	1	1
					96	0	240	285	1	1	1	240	285	1	1	1	1	1	1
					45	0	120	150	1	1	1	120	150	1	1	1	1	1	1
					22	0	200	232	0	0	0	200	232	0	0	0	0	0	0
					24	0	144	144	0	0	0	144	144	0	0	0	0	0	0
					48	0	192	192	0	0	0	192	192	0	0	0	0	0	0
					24	0	120	120	0	0	0	120	120	0	0	0	0	0	0
					5	0	195	200	0	0	0	195	200	0	0	0	0	0	0
					18	0	18	26	0	0	0	18	26	0	0	0	0	0	0
24 PHARMACOLOGY	PHARMACOLOGY	NURSING	NURSING	NURSING	OBSTETRICAL														
					45	0	0	45	0	0	0	0	45	0	0	0	0	0	0
					16	0	16	16	0	0	0	16	16	0	0	0	0	0	0
					32	0	32	32	0	0	0	32	32	0	0	0	0	0	0
					64	0	64	64	0	0	0	64	64	0	0	0	0	0	0
					32	0	32	32	0	0	0	32	32	0	0	0	0	0	0
26 DIETETICS	DIET KITCHEN	DIET THERAPY	DIET THERAPY	DIET THERAPY	NUTRITION DIET														
					10	0	35	35	0	0	0	35	35	0	0	0	0	0	0
					35	0	32	32	0	0	0	32	32	0	0	0	0	0	0
					46	0	46	46	0	0	0	46	46	0	0	0	0	0	0
					10	0	64	64	0	0	0	64	64	0	0	0	0	0	0
					20	0	20	20	0	0	0	20	20	0	0	0	0	0	0
					52	0	52	52	0	0	0	52	52	0	0	0	0	0	0
					2	0	48	48	0	0	0	48	48	0	0	0	0	0	0
27 FIRST AID	FIRST AID	FIRST AID	FIRST AID	FIRST AID															
					10	0	10	10	0	0	0	10	10	0	0	0	0	0	0
31 NURSING, GERIATRICS	NURSING, GERIATRIC	NURSING, GERIATRIC	NURSING, GERIATRIC	NURSING, GERIATRIC															
					15	0	15	15	0	0	0	15	15	0	0	0	0	0	0
					20	0	20	20	0	0	0	20	20	0	0	0	0	0	0
					14	0	14	14	0	0	0	14	14	0	0	0	0	0	0
					14	0	14	14	0	0	0	14	14	0	0	0	0	0	0

LICENSED PRACTICAL NURSE , CONTINUED

	CAREER NUMBER 3			
	LECT	CLIN	TOTL	INST CLAS
	LEVL	CLAS	LEVL	LEVL
124	GENERAL EDUCATION	48	0	48
	ENGLISH	0	32	91
	PHYSICAL EDUCATION	0	0	1
	PHYSICAL EDUCATION	0	32	2

NURSE AIDE	LECT	LAB	CLIN	CAREER NUMBER	INST	CLAS	LEV'L	TOTAL											
								4	3	3	4	3	4	3	4	3	4	3	4
1 NURSING, FUNDAMENTALS ORIENTATION ORIENTATION	3 30	0 0	0 10	0 40	3 109	47 0	0 0	43	43	43	43	43	43	43	43	43	43	43	43
11 NURSING, MEDICAL SURGICAL NURSING MEDICAL SURGICAL NURSING MEDICAL SURGICAL	38 108	0 0	120 702	158 810	47 93	0 1	0 1	33	33	33	33	33	33	33	33	33	33	33	33
14 NUTRITION NUTRITION	3	2	0	5	47	0	0	4	4	4	4	4	4	4	4	4	4	4	4
18 HUMAN RELATIONSHIPS RELATIONSHIPS PERSONAL INTERPERSONS.	4	0	0	4	47	0	0	4	4	4	4	4	4	4	4	4	4	4	4
31 NURSING, GERIATRICS NURSING GERIATRIC AGED CARE	38 3	0 0	120 117	158 120	47 93	0 1	0 1	33	33	33	33	33	33	33	33	33	33	33	33
32 NURSING, PROCEDURES BODY MECHANICS-PATIENT ENVIRONMENT-PATIENTS HYGIENE-PATIENTS-PERSONAL NURSING-ADM.-DISCH.-OF PATIENTS NURSING PROBLEMS-SPECIAL NURSING VITAL SIGNS BODY-ILLNESS-CARE-DIET BODY-ILLNESS-CARE-DIET NURSING PROCEDURES PATIENT CARE-SPECIAL	4 5 20 2 12 4 10 10 124 10	2 28 6 0 6 0 0 0 0 30	0 0 0 0 6 0 0 0 0 30	6 7 28 2 12 10 40 40 40 30	47 47 47 47 47 47 109 109 109 109	0 0 0 0 0 0 0 0 0 0													
124 GENERAL EDUCATION COMMUNICATION SKILLS EMPLOYMENT-APPLICATION FOR	3 4	0 0	0 0	37 4	47 47	0 0	0 0	43	43	43	43	43	43	43	43	43	43	43	43

	DENTAL ASSISTANT	CAREER NUMBER	CLIN TOTL	INST	CLAS	LEVEL
LECTR	LAB					
0	UNCOMMON STERILIZATION		0	0	47	1
.12	VOCATIONAL RELATIONSHIPS BUSINESS CAREERS		7	0	7	21
.13	ETHICS, PROFESSIONAL ETHICS AND MEDICAL		12	0	12	47
.14	NUTRITION DIET NUTRITION		30	0	30	21
			60	0	60	47
.17	HEALTH, PERSONAL AND COMMUNITY HEALTH PERSONAL HYGIENE PERSONAL		30	0	30	21
			30	0	30	47
.20	MICROBIOLOGY BACTERIOLOGY		30	0	30	47
.27	FIRST AID FIRST AID FIRST AID		30	0	30	21
			30	0	30	47
.33	OFFICE TRAINING AND MANAGEMENT OFFICE MANAGM. DENTAL 2 SEM. OFFICE TRAINING COOP. DENTAL		60	0	60	21
			240	0	255	21
.34	PSYCHOLOGY, APPLIED BUSINESS HUMAN REL- PSYCHOLOGY APPLIED PSYCHOLOGY APPLIED		45	0	45	21
			45	0	45	21
			30	0	30	47
.35	TERMINOLOGY, DENTAL TERMINOLOGY DENTAL		0	0	0	47
.36	DENTAL ASSISTING DENTAL SCIENCE APPLIED CHAIRSIDE ASSISTING		90	0	90	21
			0	0	0	47

DENTAL ASSISTANT, CONTINUED

		CAREER NUMBER	INST	CLAS	LEVEL
		LECT	LAB	CLIN	TOTL
53	PATHOLOGY PATHOLOGY	45	0	0	45
65	TYPIING TYPIING	90	0	0	90
78	RADIOGRAPHY, INTRA-ORAL ROENTGENOGRAPHY DENTAL	60	30	0	90
84	ANESTHESIA ANESTHESIA	60	0	0	60
85	DENTAL ANATOMY ANATOMY, DENTAL	60	0	0	60
86	CLINICAL PRACTICE, DENTAL LAB PROCEDURES DENTAL OPERATIVE PROCEDURE DENTAL	0 30	90 90	0 0	90 { ^{2nd} 120} 21
87	DENTAL HEALTH DENTAL HEALTH EDUCATION	60	0	0	60
88	ORIENTATION, DENTAL ORIENTATION	60	0	0	60
124	GENERAL EDUCATION COMMUNICATION PRAC. GOVERNMENT AMERICAN SURVEY HISTORY U. S. PHYSICAL EDUCATION SPEECH ELEMENTS OF	45 30 45 30 45	0 0 0 0 0	0 0 0 0 0	45 { ¹¹⁵ 30 { ¹¹⁵ 45 { ¹¹⁵ 30 { ¹¹⁵ 45 { ¹¹⁵
125	ELECTIVES ELECTIVES	0	0	0	0
					21

MEDICAL TECHNOLOGIST

0	UNCOMMON COAGULATION ORIENTATION	
✓ 3	ANATOMY EMBRYOLOGY ANATOMY ANATOMY, GENERAL ANATOMY, MICROSCOPIC AND EMBRYOLOGY	
✓ 4	ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY	
✓ 5	CHEMISTRY, GENERAL CHEMISTRY, GENERAL CHEMISTRY CHEMISTRY CHEMISTRY CHEMISTRY CHEMISTRY CHEMISTRY CHEMISTRY, GENERAL 2 SEMESTER CHEMISTRY, GENERAL 2 SEMESTER CHEMISTRY, GENERAL AND QUAL. 1 CHEMISTRY, GENERAL AND QUAL. 2 CHEMISTRY, GENERAL CHEMISTRY, GENERAL	
10	PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY	
15	MATHEMATICS MATHEMATICS ALGEBRA AND TRIGONOMETRY CALCULUS AND ANALYTICAL GEOMETRY ALGEBRA COLLEGE TRIGONOMETRY	

LECT	LAB	CLIN	TOTL	INST	CLAS	LEV'L	CAREER NUMBER		5	5	5	5	5	5
							6	6						
5	0	0	0	51	24	1	1	1	35	0	0	0	0	0
35	0	0	0	35	24	1	1	1	35	0	0	0	0	0
30	180	0	210	4	24	1	1	1	48	24	24	24	24	24
48	24	0	72	13	24	1	1	1	36	37	37	37	37	37
36	72	0	108	116	37	1	1	1	36	37	37	37	37	37
36	36	0	72	116	37	1	1	1	36	37	37	37	37	37
32	32	0	64	78	1	1	1	1	32	32	32	32	32	32
45	135	0	180	4	24	1	1	1	45	49	24	24	24	24
49	0	0	224	27	24	1	1	1	49	53	27	27	27	27
96	128	0	180	37	37	1	1	1	96	180	37	37	37	37
108	72	0	560	58	58	1	1	1	108	560	58	58	58	58
80	480	0	560	110	110	1	1	1	80	560	110	110	110	110
80	480	0	112	65	65	1	1	1	80	112	65	65	65	65
64	48	0	144	67	67	1	1	1	64	144	67	67	67	67
64	48	0	60	204	204	1	1	1	64	60	204	204	204	204
48	96	0	68	68	68	1	1	1	48	96	68	68	68	68
56	24	0	72	68	68	1	1	1	56	72	68	68	68	68
36	36	0	0	0	0	1	1	1	36	36	0	0	0	0
36	36	0	0	0	0	1	1	1	36	36	0	0	0	0
48	48	0	0	0	0	1	1	1	48	48	0	0	0	0
48	64	0	0	0	0	1	1	1	48	64	0	0	0	0
64	64	0	0	0	0	1	1	1	64	64	0	0	0	0
36	36	0	0	0	0	1	1	1	36	36	0	0	0	0
36	36	0	0	0	0	1	1	1	36	36	0	0	0	0
48	48	0	0	0	0	1	1	1	48	48	0	0	0	0

MEDICAL TECHNOLOGIST, CONTINUED

MEDICAL TECHNOLOGIST, CONTINUED

			CAREER NUMBER	6	CLAS	LEVEL
			CLIN TOTL	INST		
28	BOTANY, CONTINUED BOTANY MEDICAL MYCOLOGY BOTANY, INTRO TO		18 96 0	114 72	67 68	1 1
29	PHYSICS GENERAL PHYSICS GENERAL PHYSICS GENERAL PHYSICS OF ELEMENTS PHYSICS GENERAL PHYSICS GENERAL		45 48 0 36 36 0 45 48 0 35 36 0 48 48 0 48 48 0	180 192 192 96 96 172 36 48 96 69 76 76 76 80 78	4 13 24 13 27 13 68 13 76 13 78 13	1 1 1 1 1 1 1 1 1 1 1 1
30.	ZOOLOGY ZOOLOGY ZOOLOGY		45 36 0 32 32 0 32 32 0	180 172 128 96 72 76 96 76 76	4 8 68 68 76 76	1 1 1 1 1 1 1 1 1 1 1 1
37	CHEMISTRY, QUANTITATIVE ANALYSIS, QUANTITATIVE ANALYSIS, QUANTITATIVE QUANTITATIVE ANALYSIS-2 SEMESTER ANALYSIS, QUANTITATIVE ANALYSIS, QUANTITATIVE ANALYSIS-PRINCIPLES 2 SEM. ANALYSIS, QUANTITATIVE CHEMISTRY QUANT-CLINICAL QUANTITATIVE, INTRO. TO QUALITATIVE ANAL.-QUAN. ANAL.		45 32 0 36 48 0 48 48 0 72 48 0 32 48 0 18 96 0 16 96 0 36 36 0 32 96 0	270 96 24 32 96 24 36 48 48 72 48 48 32 48 48 18 96 96 16 96 96 36 36 96 32 96 96	3 8 13 27 37 50 96 120 80 114 112 67 67 67 72 72 72 128 128 128	1 1 1 1 1 1 1 1 1 1 1 1
38	CHEMISTRY, QUALITATIVE CHEMISTRY QUALITATIVE ANALYSIS-GENERAL ANALYSIS-GEN. AND QUALITATIVE CHEMISTRY QUALITATIVE QUALITATIVE ELEM.		45 48 0 46 48 0 48 48 0 32 64 0	270 96 96 96 64 64 112 96 96 96 76 76	4 144 112 96 96 76	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
39	CHEMISTRY, ORGANIC CHEMISTRY ORGANIC CHEMISTRY, ORGANIC CHEMISTRY ORGANIC CHEMISTRY ORGANIC INTRO. TO CHEMISTRY ORGANIC CHEMISTRY GEN-ORGANIC 2 SEM. CHEMISTRY ORGANIC CHEMISTRY ORGANIC		45 45 0 45 48 0 48 48 0 48 48 0 48 48 0 48 48 0 36 48 0 48 48 0	135 135 135 180 96 96 96 96 96 96 96 96 96 96 96 96 96 96 80 80 80 84 84 84	4 4 4 8 27 27 8 65 65 8 68 68 7 76 76	1 1 1 1 1 1 1 1 1 1 1 1

MEDICAL TECHNOLOGIST , CONTINUED

		CAREER NUMBER	TOTAL	INST	CLAS	LEVEL	
		LECT	LAB	CLIN			
39	CHEMISTRY, ORGANIC	CONTINUED					
	CHEMISTRY ORGANIC ADV.	48	48	0	96{	78	1
	CHEMISTRY ORGANIC	48	48	0	96}	78	1
40	CHEMISTRY, INORGANIC						
	CHEMISTRY INORGANIC	48	48	0	96	8	1
41	BIOCHEMISTRY						
	BIOCHEMISTRY GENERAL 2 SEM.	45	0	0	45	4	1
	BIOCHEMISTRY	36	0	0	36	13	1
	BIOCHEMISTRY CLINICAL	36	24	504	504	24	1
	BIOCHEMISTRY	36	24	60{	60	37	1
	BIOCHEMISTRY GENERAL	72	48	120{	120	37	1
	BIOCHEMISTRY	48	64	112	112	67	1
	BIOCHEMISTRY	48	48	96	96	76	1
	BIOCHEMISTRY INTRO.	48	32	80	80	78	1
42	CLINICAL LAB. PROBLEMS, MED. TECH.						
	CLINICAL LAB METHODOLOGY	0	72	0	72{	68	1
	CLINICAL LAB PRACTICUM	0	144	0	144{	68	1
	CLINICAL LAB PROBLEMS, SEMINAR IN	0	24	0	24	68	1
43	HISTOLOGY						
	HISTOLOGY	30	180	0	210	4	1
	HISTOLOGY	32	96	0	128	8	1
	HISTOLOGY	32	80	0	80	58	1
	HISTOLOGY COMPARATIVE ANIMAL	32	80	0	112	76	1
44	IMMUNOLOGY						
	IMMUNOLOGY MEDICAL ADV.	30	270	0	300	4	1
	IMMUNOLOGY-SEROLOGY-INTRO	24	72	0	96	13	1
	IMMUNOLOGY	32	32	0	64	27	1
	IMMUNOLOGY AND SEROLOGY	36	36	0	72	37	1
	INFECTION-IMMUNITY 2 SEM.	32	96	0	128	65	1
	BACTERIAL PATHOGENS AND BASIC IMMUNOL	72	72	0	144	68	1
45	LAB. TECHNIQUES, MED. TECH.						
	LAB TECHNIQUE CLINICAL	24	36	0	60	13	1
	LAB. INSTRUMENTS AND MEDIA	36	0	0	36	37	1
	TECHNICIAN CLINICAL LAB	0	75	0	75	48	2

MEDICAL TECHNOLOGIST , CONTINUED

	CAREER NUMBER	INST	CLAS	LEVEL
	CLIN	TOTL		
46 URINALYSIS				
URINALYSIS AND CLINICAL MICROSCOPY				
URINALYSIS				
URINALYSIS				
47 BLOOD BANK				
BLOOD BANK	18	168	0	186
BLOOD BANK	20	140	0	160
BLOOD BANK	20	140	0	160
48 CYTOLOGY				
CYTOLGY	19	168	0	187
CYTOLGY	30	130	0	160
CYTOLGY	30	130	0	160
49 ELECTROCARDIOGRAPH (EKG)				
EKG	30	180	0	210
EKG	8	42	0	50
EKG	0	40	0	40
EKG	0	40	0	40
50 HEMATOLOGY				
HEMATOLOGY	31	336	0	367
HEMATOLOGY	60	420	0	480
HEMATOLOGY	60	420	0	480
HEMATOLOGY	16	32	0	48
51 MICRO-TECHNIQUE, MED. TECH.				
MICROTECHNIQUE	0	270	0	270
MICROTECHNIQUE	0	96	0	96
MICROTECHNIQUE	32	64	0	96
MICROTECHNIQUE	32	64	0	96
52 PARASITOLOGY				
PARASITOLOGY	45	135	0	180
PARASITOLOGY	24	24	0	48
PARASITOLOGY	20	126	0	146
PARASITOLOGY	36	48	0	82
PARASITOLOGY	32	0	0	37
PARASITOLOGY	32	32	0	67
PARASITOLOGY	32	64	0	67
PARASITOLOGY			96	78

MEDICAL TECHNOLOGIST, CONTINUED

			CAREER NUMBER	TOTL	INST	CLAS	LEVEL
LECT	LAB	CLIN					
-53 PATHOLOGY				967	37	1	1
PATHOLOGY		0	108	{ 204	37	1	1
PATHOLOGY		0	0				
-54 SEROLOGY			185	24	1	1	1
SEROLOGY		0	134	{ 319	24	1	1
TISSUE		0	160	{ 200	58	1	1
SEROLOGY		0	160	{ 200	58	1	1
SEROLOGY		0	160	{ 200	58	1	1
SEROLOGY		0	160	{ 200	58	1	1
			67				
55 VIROLOGY			36	13	1	1	1
VIROLOGY		0	24	{ 60	13	1	1
VIROLOGY		0	32	0	24	1	1
VIROLOGY		0	48	80	67	1	1
-83 RADIOGRAPHIC ISOTOPES							
RADIOISOTOPE			3	42	0	45	24
124 GENERAL EDUCATION							
GENETICS			45	0	0	45	4
BIOLOGY			48	48	0	96	8
BIOLOGY			96	96	0	192	27
SCIENCE, NATURAL			108	108	0	216	37
BIOLOGY			48	16	0	64	67
BIOLOGY			48	48	0	96	76
BIOLOGY			48	64	0	112	78
125 ELECTIVES							
ELECTIVES			0	0	0	0	4
ELECTIVES			0	0	0	1350	24
ELECTIVES			0	0	0	1410	58

CAREER NUMBER	CLAS	LEVEL	INST	TOTL	CLIN	LAB	LECT	MEDICAL SECRETARY
								0 UNCOMMON FIELD TRIPS-GUEST LECTURES-MISC.
.4 ANATOMY AND PHYSIOLOGY								
ANATOMY-ASTEO AND PATH	15	5	1	16	1	5	36	
TOPOGRAPHICAL ANATOMY ELEM. PHYSIOLOGY	25	2	1	10	1	1	60	
ANATOMY AND PHYSIOLOGY	15	1	1	1	0	0	60	
ANATOMY AND PHYSIOLOGY	130	0	0	0	0	0	130	
ANATOMY AND PHYSIOLOGY	60	60	60	0	0	0	60	
ANATOMY AND PHYSIOLOGY	30	30	30	0	0	0	30	
ANATOMY AND PHYSIOLOGY	12	12	12	0	0	0	12	
ANATOMY AND PHYSIOLOGY	12	12	12	0	0	0	12	
ANATOMY AND PHYSIOLOGY	24	24	24	0	0	0	24	
.6 HUMAN GROWTH AND DEVELOPMENT								
PERSONAL DEVELOPMENT	48	48	48	0	0	0	48	
HUMAN DEVELOPMENT	45	45	45	0	0	0	45	
HUMAN DEVELOPMENT	45	45	45	0	0	0	45	
.13 ETHICS, PROFESSIONAL								
FUTURE-FACING	24	24	24	0	0	0	24	
LOGIC-ETHICS ADV.	30	30	30	0	0	0	30	
LOGIC-ETHICS	30	30	30	0	0	0	30	
ETHICS AND MEDICAL	24	24	24	0	0	0	24	
.15 MATHEMATICS								
MATHEMATICS	45	45	45	0	0	0	45	
MATH-BUSINESS	75	75	75	0	0	0	75	
MATHEMATICS	45	45	45	0	0	0	45	
MATH-BUSINESS	24	24	24	0	0	0	24	
.16 PSYCHOLOGY, GENERAL								
PSYCHOLOGY	0	0	0	0	0	0	0	
PSYCHOLOGY PERSONALITY ADJUSTMENT	45	45	45	0	0	0	45	
.18 HUMAN RELATIONSHIPS								
HUMAN RELATIONS	52	52	52	0	0	0	52	
PROBLEMS CONTEMPORARY	45	45	45	0	0	0	45	

MEDICAL SECRETARY, CONTINUED

		LECT	LAB	CLIN	CAREER NUMBER	TOTAL	INST	CLAS	LEVEL
20	MICROBIOLOGY BACTERIOLOGY	24	36	0	60	10	1	1	
25	THEOLOGY	30	0	0	30	44	1	1	
	THEOLOGY	30	0	0	30	44	1	1	
	THEOLOGY	30	0	0	30	44	1	1	
27	FIRST AID FIRST AID	0	0	0	0	17	1	1	2
34	PSYCHOLOGY, APPLIED PSYCHOLOGY, APPLIED	52	0	0	52	16	1	5	
45	LAB. TECHNIQUES, MED. TECH. LABORATORY TECHNIQUE LABORATORY MEDICAL TECHNICIAN CLINICAL LAB	0	228	0	228	16	1	2	5
46	URINALYSIS GASTRICS AND URINE	24	36	0	60	10	1	1	
50	HEMATOLOGY HEMATOLOGY	48	72	0	120	10	1	1	
56	ACCOUNTING ACCOUNTING ACCOUNTING ACCOUNTING ACCOUNTING ACCOUNTING ACCOUNTING COLLECTION AND CREDIT	0	0	0	0	0	17	1	
	ANATOMY-PHYSICS ANATOMY PHYSICS 1	45	45	0	45	44	1	1	
	ANATOMY PHYSICS 2	45	45	0	45	44	1	1	
	ANATOMY PHYSICS 3	45	45	0	45	48	1	1	
	ANATOMY PHYSICS 4	105	105	0	105	64	1	1	
		24	24	0	24	83	1	1	
57	ANATOMY-PHYSICS ANATOMY PHYSICS 1	36	0	0	36	10	1	1	
	ANATOMY PHYSICS 2	36	0	0	36	10	1	1	
	ANATOMY PHYSICS 3	36	0	0	36	10	1	1	
	ANATOMY PHYSICS 4	36	0	0	36	10	1	1	

MEDICAL SECRETARY, CONTINUED

94 BUSINESS CORRESPONDENCE
ENGLISH BUSINESS
ENGLISH MEDICAL BUSINESS
COMMUNICATION BUSINESS
CORRESPONDENCE ENGLISH

59	SHORTHAND, GENERAL AND MEDICAL SHORTHAND MEDICAL ADV. SHORTHAND MEDICAL SHORTHAND TECHNICAL ADV. SHORTHAND TECHNICAL SHORTHAND DICTION MEDICAL SHORTHAND SHORTHAND MEDICAL ADV. SHORTHAND MEDICAL SHORTHAND SEG. AND ADV. DICTION MEDICAL OFFICE DICTION TRANSCRIBING MEDICAL DICTION TRANSCRIPTION MEDICAL SHORTHAND MEDICAL
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60 FILING FILING FILING OFFICE PRACTICE FILING INT80 TO BMS

64 OFFICE MACHINES
MACHINES OFFICE
MACHINES OFFICE
MACHINE ELECTIVES

MEDICAL SECRETARY , CONTINUED

	CAREER NUMBER	INST	CLAS	LEVEL	1 1	4 4	5 5	2 2	2 2	5 5																
LECT	CLIN	TOTL	CLIN	LEVEL	1 1																					
-62	OFFICE PRACTICE		CLINICAL		64	0	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	
	OFFICE PRACTICE MEDICAL					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OFFICE PRACTICE CLINICAL				78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CLINICAL PRACTICE				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OFFICE NURSING TECHNIQUES MEDICAL				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OFFICE PROCEDURES				15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	INSURANCE FORMS				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LAW-APPLIED FUNDAMENTALS				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OFFICE PRACTICE ADV.				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OFFICE PRACTICE PRODUCTION				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	OFFICE PRACTICE TRANSC. MACHINES				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RECORD KEEPING OFFICE				24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RECORDS OFFICE				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TELEPHONE USAGE TECHNIQUES				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-63	SECRETARIAL PRACTICE AND PROCEDURES				350	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECRETARIAL DUTIES MED				30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECRETARIAL MEDICAL TECH				30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECRETARIAL PROCEDURE				30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECRETARIAL PRACTICE MEDICAL				40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECRETARIAL FUNDAMENTALS MEDICAL				30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECRETARIAL STUDIES MEDICAL				45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ASSISTING-MEDICAL				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SECRETARIAL AUTOMATED PROC. MED.				24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-64	TERMINOLOGY, MEDICAL				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TERMINOLOGY AND MEDICAL				15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TERMINOLOGY AND MEDICAL				30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TERMINOLOGY AND MEDICAL				15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TERMINOLOGY AND MEDICAL				15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ENGLISH-VOCAB. BLDG. SPELING				45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TERMINOLOGY AND MEDICAL				30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOCABULARY BLDG. MEDICAL				48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOCABULARY BLDG. MEDICAL				48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOCABULARY BLDG. MEDICAL				48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOCABULARY SKILLS				12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MEDICAL SECRETARY : CONTINUED

MEDICAL SECRETARY, CONTINUED

RADIOLOGIC TECHNOLOGIST, CONTINUED

			CAREER NUMBER	INST	CLAS	LEVEL
			CLIN	TOTL		
16	PSYCHOLOGY, GENERAL					
	PSYCHOLOGY	45	0	0	45	43
	PSYCHOLOGY	45	0	0	45	58
	PSYCHOLOGY	45	0	0	45	103
	PSYCHOLOGY	45	0	0	45	105
	PSYCHOLOGY	60	0	0	60	111
17	HEALTH, PERSONAL AND COMMUNITY					
	HEALTH EDUCATION	30	0	0	30	43
	HEALTH, PERSONAL	30	0	0	30	111
18	SOCIOLOGY					
	SOCIOLOGY	45	0	0	45	43
	SCIENCE AND SOCIAL	75	0	0	75	58
19	MICROBIOLOGY					
	MICROBIOLOGY	45	45	0	90	103
20	FIRST AID					
	FIRST AID	45	0	0	45	111
21	PHYSICS					
	PHYSICS, GENERAL	45	0	0	45	43
	PHYSICS, GENERAL	45	45	0	90	58
	PHYSICS, GENERAL	45	45	0	90	58
	PHYSICS, GENERAL	30	45	0	75	103
	PHYSICS, GENERAL	45	45	0	90	105
	PHYSICS, GENERAL	45	45	0	90	105
22	ZOOLOGY					
	EMBRYOLOGY	0	45	45	45	58
	ZOOLOGY	0	45	45	45	58
23	TERMINOLOGY, MEDICAL					
	TERMINOLOGY AND MEDICAL	12	0	0	12	58
	TERMINOLOGY AND MEDICAL	12	0	0	12	58
	INTRODUCTION TO X-RAY TECHNOLOGY	45	0	0	45	103
	TERMINOLOGY, MEDICAL	30	0	0	30	103
	TERMINOLOGY, MEDICAL	30	0	0	30	103
	TERMINOLOGY, MEDICAL	45	0	0	45	105

RADIOLOGIC TECHNOLOGIST, CONTINUED

DARKROOM CHEMISTRY AND TECHNIQUE
DARKROOM - CHEMISTRY AND TECHNIQUE
DARKROOM - CHEMISTRY AND TECHNIQUE
DARKROOM CHEMISTRY AND TECHNIQUE
DARKROOM - CHEMISTRY + TECHNIQUE
DARKROOM - CHEMISTRY + TECHNIQUE

71 DISEASES, MEDICAL SURGICAL SURVEY
DISEASES - MEDICAL SURGICAL SURVEY
DISEASES - MEDICAL SURGICAL SURVEY

70

RADILOGIC TECHNOLOGIST, CONTINUED

		CAREER NUMBER	INST	CLASS	LEVEL
LECT	LAB	CLIN	TOTL		
72 EQUIPMENT, RADIOLOGY EQUIP. RADIOLOGY MAINT. EQUIP. RADIOLOGY MAINT.		53	53	53	53
RADIATION THERAPY		1	1	1	1
RADIATION THERAPY		1	1	1	1
RADIATION THERAPY		1	1	1	1
RADIATION THERAPY, RADIATION THERAPY, RADIATION THERAPY, RADIATION THERAPY		1	1	1	1
73 RADIATION THERAPY		1	1	1	1
RADIATION-ELECTRIC PROTEC.-PATIENTS PER RADIATION-ELECTRIC PROTEC.-PATIENTS PER RADIATION-ORIENTATION-ELM PROTECTION RADIATION-ORIENTATION-ELM PROTECTION	10 10 30 30 0	225 225 0 0 150	235 235 0 0 0	58 58 58 58 58	58
74 RADIATION SAFETY		1	1	1	1
RADIATION-ELECTRIC PROTEC.-PATIENTS PER RADIATION-ELECTRIC PROTEC.-PATIENTS PER RADIATION-ORIENTATION-ELM PROTECTION RADIATION-ORIENTATION-ELM PROTECTION	10 10 30 30 0	225 225 0 0 40	235 235 0 0 40	58 58 58 58 58	58
75 RADIOGRAPHIC EXPOSURE TECHNIQUES		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOSURE PRINC.		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOSURE PRINC. ADV.		1	1	1	1
RADIOGRAPHIC EXPOSURE PRINC. ADV.		1	1	1	1
RADIOGRAPHIC EXPOSURE PRINC.		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOS.-CONVR.-TECHN.-PRIN.		1	1	1	1
RADIOGRAPHIC EXPOSURE PRINC.		1	1	1	1
RADIOGRAPHIC EXPOSURE PRINC.		1	1	1	1
76 RADIOGRAPHIC POSITIONING		1	1	1	1
RADIOGRAPHIC POSITIONING-ROUTINE ADV.		1	1	1	1
RADIOGRAPHIC POSITIONING-ROUTINE		1	1	1	1
RADIOGRAPHIC POSITIONING-ROUTINE		1	1	1	1
RADIOGRAPHIC POSITIONING-ROUTINE		1	1	1	1
RADIOGRAPHIC POSITIONING-NON-ROUTINE		1	1	1	1
RADIOGRAPHIC POSITIONING-NON-ROUTINE		1	1	1	1

RADIOLOGIC TECHNOLOGIST, CONTINUED

	CAREER NUMBER	CLAS	LEVEL	INST	TOTL	CLIN	LECT	LAB
-81	RADIATION PHYSICS	3 3 3 3 3 3 3 4	1	5 0	5 0	1	3 3 3 3 3 3 3 4	1
	X-RAY RADIUM AND PHYSICS FUND.	4 0	4 2	0	8 2	5 0	1	
	X-RAY RADIUM PHYSICS FUND. ADV.	2 0	2 0	0	4 0	5 0	1	
	X-RAY RADIUM PHYSICS FUND. ADV.	2 0	2 0	0	4 0	5 0	1	
	X-RAY RADIUM PHYSICS	4 0	4 2	0	8 2	5 0	1	
	X-RAY RADIUM PHYSICS	3 0	4 5	0	7 5	1 0 4	1	
	X-RAY RADIUM PHYSICS	5 0	0	0	5 0	1 0 4	1	
	X-RAY RADIUM PHYSICS	3 0	0	0	3 0	1 0 5	1	
-82	RADIATION THERAPY	2 2 3 4	1	2 2 3 4	2 2 3 4	1	2 2 2 2 2 2 2 2	1
	INTRODUCTION TO X-RAY + X-RAY TECHNOLOG	1 5	0	0	1 5	6 0	4 3	1
	INTRODUCTION TO X-RAY + X-RAY TECHNOLOG	4 5	0	0	4 5	4 3	1	
	RADIOGRAPHIC EXPOSURE ADV.	1 0	0	2 2 5	2 3 5	5 0	1	
	ROENTGENOGRAPHY, INTRODUCTION TO	1 5	0	0	1 5	1 0 5	1	
-83	RADIOGRAPHIC ISOTOPES	3 1	1	3 1	2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1	1 2 2 2 2 2 2	1
	RADIOACTIVE ISOTOPES MED. FAMILIARIZATI	1	1	1	2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2	1
	RADIOACTIVE ISOTOPES MED. FAMILIARIZATIO	1	1	1	2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2	1
-84	GENERAL EDUCATION	2 2 2 2 2 2 2 2	1	2 2 2 2 2 2 2 2	2 2 2 2 2 2 2 2	1 1 1 1 1 1 1 1	1 2 2 2 2 2 2 2	1
	ART, INTRODUCTION TO	1 5	0	0	1 5	4 3	4 3	1
	ART, INTRODUCTION TO	1 5	0	0	1 5	4 3	4 3	
	ENGLISH	3 0	4 5	0	3 0	4 3	4 3	
	ENGLISH	3 0	4 5	0	3 0	4 3	4 3	
	ENGLISH	3 0	4 5	0	3 0	4 3	4 3	
	HISTORY, AMERICAN	3 0	4 5	0	3 0	4 3	4 3	
	INSTITUTIONS, POLITICAL (AMERICAN)	3 0	4 5	0	3 0	4 3	4 3	
	PHYSICAL EDUCATION	3 0	4 5	0	3 0	4 3	4 3	
	PHYSICAL EDUCATION	3 0	4 5	0	3 0	4 3	4 3	
	PHYSICAL EDUCATION	3 0	4 5	0	3 0	4 3	4 3	
	PHYSICAL EDUCATION	3 0	4 5	0	3 0	4 3	4 3	
	ENGLISH	1 2 0	4 5	0	1 2 0	4 5	4 5	1 0 3
	GENETICS	8	4 5	0	8	4 5	4 5	1 0 3
	HUMANITIES	1 2 0	4 5	0	1 2 0	4 5	4 5	1 0 3
	PHYSICAL EDUCATION	8	4 5	0	8	4 5	4 5	1 0 3
	PHYSICAL EDUCATION	8	4 5	0	8	4 5	4 5	1 0 3
	ENGLISH	3 0	3 0	0	3 0	3 0	3 0	1 0 3
	PHYSICAL EDUCATION	3 0	3 0	0	3 0	3 0	3 0	1 0 3
	PHYSICAL EDUCATION	3 0	3 0	0	3 0	3 0	3 0	1 0 3

INDUSTRIAL TECHNOLOGIES, CONTINUED

HUMANITIES	HUMANITIES
HUMANITIES	HUMANITIES
PHYSICAL EDUCATION	PHYSICAL EDUCATION
PHYSICAL EDUCATION	PHYSICAL EDUCATION
GENERAL	GENERAL
BIOLOGY, GENERAL	BIOLOGY, GENERAL
ENGLISH	ENGLISH
ENGLISH	ENGLISH
AIR SCIENCE	AIR SCIENCE
POLITICAL SCIENCE	POLITICAL SCIENCE
AIR SCIENCE	AIR SCIENCE
GENERAL	GENERAL

DENTAL HYGIENIST

0 UNCOMMON EDUCATION, INTRODUCTION TO

			CAREER NUMBER	INST	CLAS	LEVEL
LECT	LAB	CLIN	TOTL			
0	0	0	0	27	1	1
-3	ANATOMY ANATOMY GROSS MICRO, ANATOMY ANATOMY-ORAL		30 30 30	30 60 60	74 74 74	
-4	ANATOMY AND PHYSIOLOGY ANATOMY PHYSIOLOGY HEAD AND NECK ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY	0 32 36 45 0	0 0 96 0 45	0 32 32 45 45	27 73 73 74 74	
-5	CHEMISTRY, GENERAL CHEMISTRY CHEMISTRY GENERAL CHEMISTRY CHEMISTRY	0 60 48 45 45	0 32 45 45 45	0 60 60 90 90	30 73 74 74 74	
-6	HUMAN GROWTH AND DEVELOPMENT GROWTH AND DEVELOPMENT PSYCHOLOGY CHILD	0 48	0 0	0 48	30 73	
-10	PHYSIOLOGY PHYSIOLOGY	0 0	0 0	0 0	27 30	
-12	VOCATIONAL RELATIONSHIPS COUNSELING AND INTERVIEWING	0	0	0	30	
-13	ETHICS, PROFESSIONAL ETHICS AND JURISPRUDENCE, DENTAL ETHICS AND JURISPRUDENCE, DENTAL ETHICS-ECONOMICS-JURISPRUDENCE MANAGEMENT ETHICS PRAC.	0 0 32 15	0 0 32 15	27 30 73 74		

DENTAL HYGIENIST, CONTINUED

	CAREER NUMBER	9	CLAS	LEVEL
	CLIN	TOTL	INST	
-14 NUTRITION AND DIETETICS NUTRITION + CAVITIES CONTROL NUTRITION NUTRITION	0 0 0 0	0 0 32 30	27 31 73 74	1 1 1 1 1 1 1 1
-15 MATHEMATICS	0 0 0 0	0 0 75	27	1 1 1 1 1 1 1 1
-16 PSYCHOLOGY, GENERAL PSYCHOLOGY PSYCHOLOGY GENERAL PSYCHOLOGY GENERAL	0 0 0 0	45 48 45	27 73 74	1 1 1 1 1 1 1 1
-17 HEALTH: PERSONAL AND COMMUNITY TO MENTAL HYGIENE; INTRODUCTION TO HEALTH PERSONAL COMMUNITY HEALTH-PUBLIC	0 0 0 0	0 0 32	30 32 73 74	1 1 1 1 1 1 1 1
-18 SOCIOLOGY SOCIOLOGY SCIENCE AND SOCIAL SOCIOLOGY-PRINCIPLES SOCIOLOGY	0 0 0 0	0 0 0 0 0	120 120 48 45 45	1 1 1 1 1 1 1 1
-19 MICROBIOLOGY MICROBIOLOGY BACTERIOLOGY BACTERIOLOGY AND PATHOLOGY BACTERIOLOGY	0 0 0 0	0 0 30	0 0 75 74 74	1 1 1 1 1 1 1 1
-20 PHARMACOLOGY PHARMACOLOGY PHARMACOLOGY PHARMACOLOGY	0 0 0 0	0 0 32	0 32 45 74	1 1 1 1 1 1 1 1
-21 THEOLOGY THEOLOGY THEOLOGY THEOLOGY THEOLOGY	0 0 0 0	0 0 0 0 0	0 30 30 30 30	1 1 1 1 1 1 1 1
				0 0 0 0 90

DENTAL HYGIENIST, CONTINUED

		CAREER NUMBER 9			CLAS	LEVEL
		LECT	CLIN	TOTL	INST	CLAS
.27	FIRST AID	0	0	0	30	1
	FIRST AID	30	0	30	74	1
	FIRST AID					1
36	DENTAL ASSISTING					1
	DENTAL ASSISTING					1
	DENTAL ASSISTING AND TECHNIQUES					1
.41	BIOCHEMISTRY	0	0	0	30	1
	BIOCHEMISTRY	0	0	0	30	1
.43	HISTOLOGY	0	0	0	27	1
	HISTOLOGY	32	48	80	73	1
	HISTOLOGY	15	30	45	74	1
.53	PATHOLOGY	0	0	0	27	1
	PATHOLOGY	32	48	80	73	1
	PATHOLOGY	30	0	30	74	1
.78	RADIOGRAPHY, INTRA-ORAL	0	0	0	27	1
	ROENTGENOGRAPHIC TECHNIQUE, ORAL	0	0	0	30	1
	RADIOLOGY	32	0	32	73	1
	RADIODONTICS	0	15	15	74	1
	ROENTGENOLOGY-ORAL					1
.84	ANESTHESIA	0	0	0	30	1
	ANESTHESIOLOGY					1
.85	DENTAL ANATOMY	0	0	0	27	1
	ANATOMY, DENTAL				27	1
	DENTAL ANATOMY				30	1
	DENTAL HYGIENISTS PERIODONTOLOGY				30	1
	DENTAL RESEARCH				30	1
	MORPHOLOGY, TOOTH				30	1
	PERIODONTOLOGY				30	1
	ANATOMY, DENTAL				74	1

DENTAL HYGIENIST, CERTIFIED

- 86 CLINICAL PRACTICE, DENTAL
CLINICAL PRACTICE
CLINICAL PRACTICE
CLINICAL PRACTICE
CLINICAL PRACTICE
CLINICAL PRACTICE
CLINICAL PRACTICE

DENTAL HYGIENIST, CONTINUED

124 GENERAL EDUCATION

PHYSICAL EDUCATION
SPEECH
ENGLISH
HISTORY GOVERNMENT AMERICAN
PHYSICAL EDUCATION

ENGLISH

ELECTIVE ELECTIONS

DENTAL TECHNICIAN

		CAREER NUMBER 10		
LECT	LAB	C/L IN	TOTL	INST CLAS
0	UNCOMMON CUSPAL COORDINATION	0	225	66 1
0	DENTURES, FULL DENTURES, REMOVABLE PARTIAL	0	390	66 1
0	INLAYS-CROWN AND BRIDGEWORK	0	390	66 1
-3	ANATOMY ANATOMY MORPHOLOGY	0	255{1 0	66 1
89	DENTAL MATERIALS GYPSUM PRODUCTS	0	225	66 1

PHYSICAL THERAPIST

CAREER NUMBER	CLAS	INST	TOTL	CLIN	LAB	LECT	LEVEL
0 UNCOMMON DERMATOLOGY							
JOURNAL CLUB 1							
JOURNAL CL 2							
JOURNAL CL 3							
JOURNAL CLUB 4							
JOURNAL CLUB SEMINAR							
3 ANATOMY, HUMAN AND APPLIED							
ANATOMY							
ANATOMY 1							
ANATOMY 2							
ANATOMY-HUMAN DISSECTION							
ANATOMY, FUNCTIONAL							
ANATOMY, FUNCTIONAL							
GROSS 2							
ANATOMY, GROSS							
ANATOMY, APPLIED							
ANATOMY, HUMAN							
ANATOMY, GROSS							
6 HUMAN GROWTH AND DEVELOPMENT							
DEVELOPMENT, CHILD							
GROWTH AND DEVELOPMENT, CHILD							
10 PHYSIOLOGY							
EXPERIENCE, CLINICAL							
PHYSIOLOGY, GEN. AND APPLIED							
PHYSIOLOGY, APPLIED							
PHYSIOLOGY, APPLIED							
PHYSIOLOGY, APPLIED							
PHYSIOLOGY 1							
PHYSIOLOGY 2							
PHYSIOLOGY							
PHYSIOLOGY 1							
PHYSIOLOGY 2							

PHYSICAL THERAPIST, CONTINUED

		CAREER NUMBER	TOTL	INST	CLAS	LEVEL
LECT	LAB	CLIN				
-10	PHYSIOLOGY, CONTINUED					
	PHYSIOLOGY					
	PHYSIOLOGY					
-13	ETHICS, PROFESSIONAL ETHICS AND ADMINISTRATION	15	0	120	95	1
	ETHICS AND ADMINISTRATION	30	90	0	105	95
	RELATIONSHIPS, PROFESSIONAL, ETHICS	45	60	0	105	95
	ETHICS AND ADMINISTRATION					
	RELATIONSHIPS, PROF. AND COMMUNITY	7	0	0	15	71
	RELATIONSHIPS, PROF. AND COMMUNITY	15	0	0	15	72
	RELATIONSHIPS, PROF. AND COMMUNITY	22	0	0	22	75
	ETHICS, ORG. + ADMN.	15	0	0	15	95
-13	MATHEMATICS	0	0	60	72	1
-16	PSYCHOLOGY, GENERAL	16	0	16	66	1
	PSYCHOLOGY	30	0	30	80	1
	PSYCHOLOGY	30	0	30	95	1
	PSYCHOLOGY	45	0	45	95	1
-17	HEALTH, PERSONAL AND COMMUNITY	15	0	0	15	1
	HEALTH, PERSONAL AND COMMUNITY	4	0	4	4	1
	HEALTH, PUBLIC	12	0	12	12	1
	HEALTH, PUBLIC-INTRO. TO					
-20	MICROBIOLOGY	6	0	0	6	34
	MICROBIOLOGY					
-21	PEDIATRICS	6	0	0	6	66
	PEDIATRICS					
-22	NURSING, PSYCHIATRIC	15	0	0	15	2
	PSYCHOLOGY	30	0	30	30	28
	PSYCHOPATHOLOGY	30	0	30	30	30
	PSYCHOLOGY OF PHYSICALLY DISABLED	12	0	12	12	34
	PSYCHIATRY	16	0	16	16	71
	PSYCHOLOGY OF HANDICAPPED	30	0	30	30	72
	DISABILITY FACTORS-SOCIAL AND EMOTIONAL	45	0	45	45	80
	PSYCHIATRY					

PHYSICAL THERAPIST, CONTINUED

SCHOOL THERAPIST, CONTINUED

THEOLOGY PHYSICAL THERAPY REHABILITATION

PHYSICAL THERAPY RELIGION-SELECTED 1

RELATION 2 M

Books 201

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BIOPHYSICS PHYSICS-PHYSICAL THERAPY

HISTOLOGY

53 PATHOLOGY
PATHOLOGY
PATHOLOGY
PATHOLOGY
PATHOLOGY
PATHOLOGY
PATHOLOGY-BASIC PRIN. OF DISEASE-INJURY
PATHOLOGY, GENERAL
PATHOLOGY 1
PATHOLOGY 2
HISTOLOGY AND PATHOLOGY
PATHOLOGY

78 RADIOPHOTOGRAPHY, INTRA-ORAL X-RAY

90 PHYSICAL AGENTS, PHYSICAL THERAPY
AGENTS, PHYSICAL
AGENTS, PHYSICAL 1
AGENTS, PHYSICAL 2
MESSAGE 1
MESSAGE 2
ELECTROTHERAPY-LOW FREQUENCY

PHYSICAL THERAPIST, CONTINUED

90 PHYSICAL AGENTS, PHYSICAL THERAPY, CONTINUED

HYDROTHERAPY #

MESSAGE

THERMOTHERAPY 1

THERMOTHERAPY 2

HYDROTHERAPY

MESSAGE

THERAPY, PHYS.-ELECTROTHERAPY + RADIATION

ELECTROTHERAPY

MESSAGE, HYDROTHERAPY AND BANDAGING

THERMOTHERAPY AND OCTINOThERAPY

ELECTROTHERAPY

AGENTS, PHYSICAL-ELECTROTHERAPY

AGENTS, PHYSICAL-MESSAGE

AGENTS, PHYSICAL-THERMOTHERAPY

MESSAGE

AGENTS, PHYSICAL

AGENTS, PHYSICAL

AGENTS, PHYSICAL

91 NEUROLOGY NEUROANATOMY, APPLIED
 NEUROANATOMY
 NEUROANATOMY
 NEUROANATOMY
 NEUROLOGY
 NEUROSURGERY
 NEUROLOGY
 NEUROANATOMY
 NEUROLOGY

92 CLINICAL ASSIGNMENT, PHYSICAL THERAPY
EDUCATION, CLINICAL 1
EDUCATION, CLINICAL 2
INTERNSHIP
OBSERVATION, CLINICAL
CLINICAL ASSIGNMENT 1
CLINICAL ASSIGNMENT 2
PRACTICE, CLINICAL
EXPERIENCE, CLINICAL
EXPERIENCE, CLINICAL-A
EXPERIENCE, CLINICAL-B
OBSERVATION, CLINICAL 2

PHYSICAL THERAPIST, CONTINUED

92	CLINICAL ASSIGNMENT, PHYSICAL THERAPY, CONTINUED
	OBSERVATION, CLINICAL 3
	OBSERVATION, CLINICAL
	TRAINING, CLINICAL
	EXPERIENCE, CLINICAL 1
	EXPERIENCE, CLINICAL 2
	EXPERIENCE, CLINICAL 3
	CLINICAL ASSIGNMENT
	CLINICAL ASSIGNMENT

93 ORG. AND ADMIN. • PHYSICAL THERAPY
HISTORY-ADMN. AND PROF. RELATIONSHIPS
HISTORY-ADMN. AND PROF. RELATIONSHIPS
PHYS. THERAPY-HISTORY AND TRENDS
ADMINISTRATION, PROF. AND LITERATURE
AGENCIES, PROF. AND SOCIAL-CORRELATION
PHYS. THERAPY-ADMN. AND CLIN. OBSERV.
PHYS. THERAPY-CURRENT LITERATURE
PHYS. THERAPY-NURSING PROCEDURES + REL
THERAPY, PHYSICAL, FOUNDATIONS OF
ORGANIZATION AND ADMINISTRATION
ADMINISTRATION, PHYS. THERAPY
ORGANIZATION-PHYSICAL THERAPY

94 ORIENTATION: PHYSICAL THERAPY PATIENT CARE, INTRO. TO ORIENTATION CARE, PATIENT-INTRO. TO CARE, PATIENT-INTRO TO ORIENTATION PROFESSIONAL

93 PHYSICAL THERAPY
MEDICINE, CLINICAL
LECTURES, CLINICAL 1
LECTURES, CLINICAL 2
LECTURES, CLINICAL 3
CLINICAL MEDICINE
INJURIES, INDUSTRIAL
INJURIES, INDUSTRIAL 2
THERAPY PHYS.-SPECIAL TOPIC
MEDICINE INTRO. TO
MEDICAL PROCEDURES, BASIC
MEDICINE 1

95 PHYSICAL THERAPY, CONTINUED PHYSICAL THERAPIST, CONTINUED

96 THERAPEUTIC EXERCISE, THERAPEUTIC, AND ASSISTIVE DEVS.

PHYSICAL THERAPIST, CONTINUED

96 THERAPEUTIC EXERCISE, CONTINUED
EXERCISE, THERAPEUTIC-B
THEORY AND TECHNIQUE
EXERCISE, THERAPEUTIC 1
EXERCISE, THERAPEUTIC 2
EXERCISE, THERAPEUTIC 3
THERAPY, PHYSICAL-INTRO.
DEVICES, ASSISTIVE
EXERCISE, PHYSIOLOGY OF
EXERCISE, THERAPEUTIC
ORTHOPEDIES
PHYS. THERAPY, APPLICATION OF
PROCEDURES, PHYS. THERAPY
DEVICES, ASSISTIVE

101 KINESIOLOGY
KINESIOLOGY
ANATOMY AND KINESIOLOGY
ANATOMY AND KINESIOLOGY
KINESIOLOGY
KINESIOLOGY

124 GENERAL EDUCATION
SPEECH
COMPOSITION, ENGLISH
HUMANITIES
LANGUAGE, FOREIGN
SCIENCES, NATURAL
SCIENCES, SOCIAL
UNIV. COURSES, GENERAL REQUIRED
SPEECH

PHYSICAL THERAPIST, CONTINUED

	LECT	LAB	CLIN	CAREER NUMBER	TOTL	INST	CLAS	LEVEL
125 ELECTIVES	75	0	0	95	95	1	1	1
ELECTIVES [1]	90	0	0	90	95	1	1	1
ELECTIVES [2]	90	0	0	90	95	1	1	1
ELECTIVES [3]								

PHYSICAL THERAPY ASSISTANT

			CAREER NUMBER 12.	INST	CLAS	LEVEL
	LECT	LAB	CLIN	TOTL	INST	CLAS
0 UNCOMMON ORIENTATION TO AFFILIATING HOSPITALS	45	0	0	45	54	1. 5
3 ANATOMY ANATOMY, FUNCTIONAL	30	45	0	75	54	1. 5
4 ANATOMY AND PHYSIOLOGY ANATOMY + PHYSIOLOGY	30	45	0	75	54	1. 5
13 . ETHICS, PROFESSIONAL ETHICS, ORG. ADMIN.	30	0	0	30	54	1. 5
16 PSYCHOLOGY, GENERAL PSYCHOLOGY	45	0	0	45	54	1. 5
27 FIRST AID FIRST AID	22	23	0	45	54	1. 5
.62 OFFICE PRACTICE OFFICE PROCEDURES	45	0	0	45	54	1. 5
.64 TERMINOLOGY, MEDICAL TERMINOLOGY	30	0	0	30	54	1. 5
.90 PHYSICAL AGENTS, PHYSICAL THERAPY AGENTS, PHYSICAL AGENTS, PHYSICAL	30	45	0	75 } 30 45 0 75 }	54	1. 5
.92 CLINICAL ASSIGNMENT, PHYSICAL THERAPY	0	0	0	270	270	54
.94 ORIENTATION, PHYSICAL THERAPY PATIENT, PREPARATION OF	30	45	0	75	54	1. 5
.95 PHYSICAL THERAPY ACTIVITIES OF DAILY LIVING ESCORT SERVICE MEDICAL ASSISTING SKILLS	30	45	0	75 } 15 45 0 60 } 15 45 0 60 }	54	1. 5

PHYSICAL THERAPY ASSISTANT, CONTINUED

-96 THERAPEUTIC EXERCISE CONDITIONS TREATED EXERCISE, THERAPEUTIC

124 GENERAL EDUCATION COMMUNICATION SKILLS

LECT	LAB	CLIN	CAREER NUMBER	INST	CLAS	LEVEL
45	0	0	45	54	1	5
30	45	0	75	54	1	5
45	0	0	45	54	1	5

OCCUPATIONAL THERAPIST

CAREER NUMBER 13.

0 UNCOMMON
SEMINAR
STUDY, DIRECTED
SEMINAR

18 ANATOMY
ANATOMY, HUMAN
ANATOMY + PHYSIOLOGY, HUMAN
ANATOMY, HUMAN

14 ANATOMY AND PHYSIOLOGY [11]
ANATOMY + PHYSIOLOGY [12]
ANATOMY + PHYSIOLOGY, HUMAN

19 CLINICAL PRACTICE, NURSING
HANDCRAFTS-JEWELRY

10 PHYSIOLOGY

PHYSIOLOGY
READJUSTMENT, INDIVIDUAL
PHYSIOLOGY
PHYSIOLOGY
PHYSIOLOGY
PHYSIOLOGY

16 PSYCHOLOGY, GENERAL
EDUCATION, SPECIAL AND ADULT

PSYCHOLOGY
PSYCHOLOGY
PSYCHOLOGY
PSYCHOLOGY
PSYCHOLOGY
PSYCHOLOGY

19 SOCIOLOGY
AGENCIES, SOCIAL AND EDUCATION
SOCIOLOGY

LECT	LAB	CLIN	TOTL	INST	CLAS	LEVEL	1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8	1-9	1-10	1-11	1-12
15	0	75	90	63	1-1													
30	45	0	30	63	1-2													
30	0	180	0	210	2-1													
30	45	45	180	135	2-2													
30	60	60	0	0	2-3													
30	45	30	0	0	2-4													
30	60	60	0	0	2-5													
30	45	45	0	0	2-6													
30	60	60	0	0	2-7													
30	45	45	0	0	2-8													
30	60	60	0	0	2-9													
30	45	45	0	0	2-10													
30	60	60	0	0	2-11													
30	45	45	0	0	2-12													
30	60	60	0	0	2-13													
30	45	45	0	0	2-14													
30	60	60	0	0	2-15													
30	45	45	0	0	2-16													
30	60	60	0	0	2-17													
30	45	45	0	0	2-18													
30	60	60	0	0	2-19													
30	45	45	0	0	2-20													
30	60	60	0	0	2-21													
30	45	45	0	0	2-22													
30	60	60	0	0	2-23													
30	45	45	0	0	2-24													
30	60	60	0	0	2-25													
30	45	45	0	0	2-26													
30	60	60	0	0	2-27													
30	45	45	0	0	2-28													
30	60	60	0	0	2-29													
30	45	45	0	0	2-30													
30	60	60	0	0	2-31													
30	45	45	0	0	2-32													
30	60	60	0	0	2-33													
30	45	45	0	0	2-34													
30	60	60	0	0	2-35													
30	45	45	0	0	2-36													
30	60	60	0	0	2-37													
30	45	45	0	0	2-38													
30	60	60	0	0	2-39													
30	45	45	0	0	2-40													
30	60	60	0	0	2-41													
30	45	45	0	0	2-42													
30	60	60	0	0	2-43													
30	45	45	0	0	2-44													
30	60	60	0	0	2-45													
30	45	45	0	0	2-46													
30	60	60	0	0	2-47													
30	45	45	0	0	2-48													
30	60	60	0	0	2-49													
30	45	45	0	0	2-50													
30	60	60	0	0	2-51													
30	45	45	0	0	2-52													
30	60	60	0	0	2-53													
30	45	45	0	0	2-54													
30	60	60	0	0	2-55													
30	45	45	0	0	2-56													
30	60	60	0	0	2-57													
30	45	45	0	0	2-58													
30	60	60	0	0	2-59													
30	45	45	0	0	2-60													
30	60	60	0	0	2-61													
30	45	45	0	0	2-62													
30	60	60	0	0	2-63													
30	45	45	0	0	2-64													
30	60	60	0	0	2-65													
30	45	45	0	0	2-66													
30	60	60	0	0	2-67													
30	45	45	0	0	2-68													
30	60	60	0	0	2-69													
30	45	45	0	0	2-70													
30	60	60	0	0	2-71													
30	45	45	0	0	2-72													
30	60	60	0	0	2-73													
30	45	45	0	0	2-74													
30	60	60	0	0	2-75													

OCCUPATIONAL THERAPIST, CONTINUED

	CAREER NUMBER	INST	CLAS	LEVEL
	LECT	LAB	CLIN	TOTL
20	MICROBIOLOGY			1
	MICROBIOLOGY			2
21	PEDIATRICS			1
	PEDIATRICS			2
	PEDIATRICS, OCCUP. THERAPY IN			1
	PEDIATRICS, THEORY-OCCUP., THERAPY			1
22	NURSING, PSYCHIATRIC			1
	PSYCHIATRY			1
	PSYCHIATRY, OCCUP. THERAPY			1
	OCCUPATIONAL THERAPY (PREVENTIVE			1
	PSYCHIATRY			1
	PSYCHIATRY CLERKSHIP, PSYCHIATRIC (AND SEMINAR)			1
	PSYCHIATRY			1
	PSYCHIATRY			1
23	THEOLOGY			1
	RELIGION 1			1
	RELIGION 2			1
	RELIGION 3			1
24	PATHOLOGY			1
	PATHOLOGY			1
25	TERMINOLOGY, MEDICAL			1
	MEDICAL TERMINOLOGY			1
26	PHYSICAL AGENTS, PHYSICAL THERAPY			1
	DEVICES, ASSISTIVE AND ORTHOTICS			1
	MEDIA, ADAPTATION OF			1
27	NEUROLOGY			1
	NEUROANATOMY			1
	NEUROLOGY			1
	NEUROANATOMY			1
	NEUROLOGY			1
	NEUROLOGY			1
	NEUROLOGY			1

OCCUPATIONAL THERAPIST : CONTINUED

CABINET NUMBER 12

96 THERAPEUTIC EXERCISE
ORTHOPEDICS
REHABILITATION AND COMMUNITY SERVICES
THERAPEUTIC TECHNIQUES PRACTICUM 1
THERAPEUTIC TECHNIQUES PRACTICUM
REHABILITATION
ORTHOPEDICS
REHABILITATION
EXERCISE, THERAPEUTIC
REHABILITATION

97 ORIENTATION, OCCUPATIONAL THERAPY
ORIENTATION
ORIENTATION
ORIENTATION
ADJUSTMENTS, PROFESSIONAL
ORIENTATION, OCCUP., THERAPY

98	HANDCRAFTS
	ARTS-FINE AND APPLIED
	RECREATION
	ARTS, INDUSTRIAL AND SKILLS 1
	ARTS, INDUSTRIAL AND SKILLS 2
	CERAMICS
	CRAFTS, GENERAL
	DESIGN AND ART

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A horizontal row of 20 black circular dots, evenly spaced, used as a visual element.

OCCUPATIONAL THERAPIST. CONTINUED

CAREER NUMBER 13

HANDICRAFTS : COTTONWEAR

OCCUPATIONAL THERAPIST , CONTINUED

CAREER NUMBER	13	CLAS	INST	TOTL	CLIN	LECT	LAB	CLIN	INST	PRINCIPLES AND PRACTICES . OCCUP. THERAPY , CONTINUED
100										PRINCIPLES + PRACTICE
						15	45	6	270	PRINCIPLES + PRACTICE
						15	135	6	60	PRINCIPLES + PRACTICE
						15	180	0	150	PRINCIPLES + PRACTICE
						45	90	0	225	PRINCIPLES + PRACTICE
						60	135	0	150	PRINCIPLES + PRACTICE
						45	225	0	180	PRINCIPLES + PRACTICE
						90	45	0	315	PRINCIPLES + PRACTICE
						15	45	60	60	OCCUP. THERAPY 3
						15	45	60	70	OCCUP. THERAPY 4
						15	45	60	70	OCCUP. THERAPY 5
						15	45	60	70	OCCUP. THERAPY 6
101	KINESIOLOGY									ANATOMY AND KINESIOLOGY
						75	45	0	30	KINESIOLOGY
						30	45	0	75	KINESIOLOGY
						45	0	90	54	KINESIOLOGY
						45	0	45	63	KINESIOLOGY
						30	45	0	68	KINESIOLOGY
						30	45	0	75	KINESIOLOGY
						15	23	0	38	KINESIOLOGY
						30	45	0	75	KINESIOLOGY , APPLIED
102	ORG. AND ADMIN., OCCUP. THERAPY									ADMINISTRATION OF OCCUP. THERAPY
						15	0	0	15	DISABILITIES PHYSICAL
						60	0	0	60	ORGANIZATION + ADMIN.
						30	0	0	30	ORGANIZATION AND ADMINISTRATION
103	PHYSICAL DISABILITIES									DISABILITY, PHYSICAL IN OCCUP. THERAPY
						15	45	0	45	DISABILITY, PHYSICAL
						15	0	0	63	DISABILITIES, PHYSICAL
						30	0	0	63	DISABILITIES, PHYSICAL
						45	90	0	135	DISABILITIES, PHYSICAL
						45	90	0	135	DISABILITIES, PHYSICAL
104	CLINICAL ASSIGNMENT, OCCUP. THERAPY									TRAINING, CLINICAL
						0	0	0	3510	INTERNSHIP, OCCUP. THERAPY
						0	0	0	30	PRACTICUM, OCCUP. THERAPY 1
						15	45	0	60	PRACTICUM, OCCUP. THERAPY 2
						0	0	0	605	CLINICAL ASSIGNMENT
						0	0	0	675	CLINICAL ASSIGNMENT

OCCUPATIONAL THERAPIST, CONTINUED

104 CLINICAL ASSIGNMENT, OCCUP. THERAPY , CONTINUED

	CAREER NUMBER	13	INST	CLAS	LEVEL
	LECT	LAB	CLIN	TOTAL	
CLINICAL ASSIGNMENT	0	0	480	480	68
CLINICAL ASSIGNMENT	0	0	0	0	1
HOSPITAL TRAINING 3	0	0	450	450	69
HOSPITAL TRAINING 4	0	0	300	300	70
HOSP. TRAINING 2	0	0	300	300	70
					1
TESTS AND MEASUREMENTS, PHYSICAL RESEARCH METHODOLOGY (INTRODUCTION) MUSCLE TESTING	30	0	0	30	51
	3	12	0	15	70
					1
GENERAL EDUCATION LIBERAL ARTS COURSES PREREQUISITE COMMUNICATION SERVICES	0	0	930	30	69
	60	0	60		
ELECTIVES	45	0	0	45	30
					1

ERIC

OCCUPATIONAL THERAPY ASSISTANT

	CAREER NUMBER	14	CLAS.	LEVEL
	LECT	LAB	CLIN	TOTL
0 UNCOMMON SERVICES HOSPITAL, ORIENTATION	21	0	0	21
18 HUMAN RELATIONSHIPS DYNAMICS-GROUP	0	0	0	0
22 NURSING, PSYCHIATRIC PERSONALITY DEVELOPMENT PERSONALITY DEVELOPMENT	20 24	0 0	0 0	20 { 41 24 } 41
64 TERMINOLOGY, MEDICAL TERMINOLOGY AND MEDICAL	2	0	0	2
96 THERAPEUTIC EXERCISE SKILLS, SPECIALTY SKILLS, SPECIALTY TREATMENT	125 95 3	0 0 0	0 0 0	125 { 213 95 } 22 3 } 22
97 ORIENTATION, OCCUPATIONAL THERAPY ORIENTATION, INSTITUTIONAL ACTIVITY THERAPY OCCUP. HISTORY AND PHILOSOPHY TRAINING PROGRAM INTRO. TRAINING PROGRAM INTRO.	36	0 0 0 0 0	0 0 0 0 0	36 { 40 2 } 40 1 } 22 1 } 22 1 } 22
100 PRINCIPLES AND PRACTICES, OCCUP. THERAPY OCCUPATIONAL GENERAL PRACTICE THERAPY OCCUPATIONAL MENTALLY ILL THERAPY OCCUPATIONAL ROLE AND FUNCTION THERAPY OCCUPATIONAL ROLE AND FUNCTION	75 78 2 2	0 0 0 0	0 0 0 0	75 { 67 78 } 67 2 } 22 2 } 22
104 CLINICAL ASSIGNMENT, OCCUP. THERAPY CLINICAL CONDITIONS CLINICAL CONDITIONS CLINICAL PRACTICE CLINICAL PRACTICE	55 53 0 0	0 0 145 145	0 0 145 145	55 { 345 53 } 345 0 } 22 0 } 22
105 TESTS AND MEASUREMENTS, PHYSICAL EVALUATION EVALUATION	7 9	0 0	0 0	7 { 9 9 } 22

INHALATION THERAPIST

0 UNCOMMON
REPORTS AND DISCUSSION-JOURNAL CLUB
ORIENTATION

	CAREER NUMBER	INST 15	CLAS LEVEL	3-3	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	LECT	LAB	CLIN	TOTL	CLIN	CLIN	CLIN	CLIN	CLIN	CLIN	CLIN
0 UNCOMMON REPORTS AND DISCUSSION-JOURNAL CLUB ORIENTATION											
3 ANATOMY											
ANATOMY	86	0	0	0	68	15	1	1	33	1	1
ANATOMY	8	0	0	0	6	14	15	15	15	15	15
ANATOMY	12	0	0	0	12	12	25	25	25	25	25
ANATOMY	12	0	0	0	12	12	25	25	25	25	25
ANATOMY	200	0	0	0	200	35	35	35	35	35	35
ANATOMY	36	0	0	0	36	82	82	82	82	82	82
4 ANATOMY AND PHYSIOLOGY											
ANATOMY AND PHYSIOLOGY	40	0	0	0	40	6	6	6	6	6	6
RESPIRATION PHYSIOLOGY-ANATOMY	80	0	0	0	80	60	60	60	60	60	60
ANATOMY AND PHYSIOLOGY ADV	32	48	48	48	80	20	20	20	20	20	20
ANATOMY AND PHYSIOLOGY	48	96	96	96	144	20	20	20	20	20	20
5 CHEMISTRY, GENERAL											
CHEMISTRY	8	0	0	0	8	6	6	6	6	6	6
CHEMISTRY	6	0	0	0	6	6	6	6	6	6	6
CHEMISTRY	20	0	0	0	20	6	6	6	6	6	6
CHEMISTRY	200	0	0	0	200	6	6	6	6	6	6
CHEMISTRY	200	0	0	0	200	33	33	33	33	33	33
10 PHYSIOLOGY											
PHYSIOLOGY	12	0	0	0	12	15	15	15	15	15	15
PHYSIOLOGY	15	0	0	0	15	12	12	12	12	12	12
PHYSIOLOGY	12	0	0	0	12	10	10	10	10	10	10
PHYSIOLOGY OF RESPIRATION AND CIRC.	0	0	0	0	0	61	61	61	61	61	61
CARDIOPULMONARY PHYSIOLOGY	61	0	0	0	61	62	62	62	62	62	62
13 ETHICS, PROFESSIONAL ADJUSTMENT PROFESSIONAL											
ETHICS AND ADMINISTRATION	24	0	0	0	24	5	5	5	5	5	5
ETHICS AND ADMINISTRATION	5	0	0	0	5	0	0	0	0	0	0
ETHICS AND ADMINISTRATION	15	0	0	0	15	0	0	0	0	0	0
ETHICS AND ADMINISTRATION	15	0	0	0	15	0	0	0	0	0	0
MEDICAL ADJUSTMENT PROFESSIONAL	12	0	0	0	12	15	15	15	15	15	15
MEDICAL ADJUSTMENT PROFESSIONAL	15	0	0	0	15	33	33	33	33	33	33

INHALATION THERAPIST, CONTINUED

	CAREER NUMBER	TOTAL INST.	CLAS.	LEVEL
LECT	LAB	CLIN		
.15 MATHEMATICS MATH-HOSPITAL MATH-LABORATORY	0	0	0	3 3
-16 PSYCHOLOGY, GENERAL PSYCHOLOGY PSYCHOLOGY PSYCHOLOGY OF PATIENT CARE PSYCHOLOGY GENERAL PSYCHOLOGY	10 10 6 10 48 6	0 0 0 0 0 0	10 10 6 10 48 6	6 7 14 15 20 25
-17 HEALTH, PERSONAL AND COMMUNITY HEALTH	0	0	20	2
-18 MICROBIOLOGY BACTERIOLOGY BACTERIOLOGY BACTERIOLOGY BACTERIOLOGY MICROBIOLOGY GENERAL BACTERIOLOGY	32	0 0 0 0 0 96 0	12 15 12 17 32 12	6 7 14 15 20 25
-19 OBSTETRICS OBSTETRICS OBSTETRICS OBSTETRICS OBSTETRICS INTERMITT POS PRESS BREATHING,	0	0 0 0 0 0	15 42 0 0 0	15 21 63 0 0
-20 PEDIATRICS PEDIATRICS PEDIATRICS PEDIATRICS PEDIATRICS INTERMITT POS PRESS BREATHING,	0	0 0 0 0 0	0 15 39 60 0	0 15 33 60 0
-21 PHARMACOLOGY PHARMACOLOGY MEDICATIONS MEDICINE PHARMACOLOGY PHARMACOLOGY	0	0 0 0 0 0	0 15 39 60 0	0 15 33 60 0
-22 PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY	0	0 0 0 0 0 0	0 15 39 60 0 0	0 15 33 60 0 0
-23 PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY	0	0 0 0 0 0 0	0 15 39 60 0 0	0 15 33 60 0 0
-24 PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY PHYSIOLOGY	0	0 0 0 0 0 0	0 15 39 60 0 0	0 15 33 60 0 0

INHALATION THERAPIST, CONTINUED

	CAREER NUMBER	INST	CLAS	LEVEL
LECT	LAB	CLIN	TOTL	
.29 PHYSICS				
PHYSICS-CHEMISTRY OF RESPIRATION	20	0	20	6
PHYSICS	30	0	30	7
PHYSICS OF MEDICINE	10	0	10	14
PHYSICS AND CONCEPTS	20	0	20	15
PHYSICS	48	0	48	20
	10	0	10	25
.30 ZOOLOGY				
ZOOLOGY	48	0	96	1
.40 CHEMISTRY, INORGANIC				
CHEMISTRY INORGANIC	32	0	80	2
.53 PATHOLOGY				
PATHOLOGY	30	0	30	6
PATHOLOGY	12	0	12	14
PATHOLOGY	15	0	15	15
PATHOLOGY	12	0	12	25
CARDIOPULMONARY DISEASE	60	0	60	62
.64 TERMINOLOGY, MEDICAL				
TERMINOLOGY AND MEDICAL				
.84 ANESTHESIA				
GASES-MEDICAL	20	0	20	6
ANESTHESIA	8	0	8	33
.91 NEUROLOGY				
NEUROSURGERY	3	0	15	1
NEUROSURGERY	3	15	12	14
.106 ORG. AND ADMIN., INHALATION THERAPY				
ADMINISTRATION PROCEDURES	30	0	30	6
ADMINISTRATION	16	0	16	20
.107 EQUIPMENT OPERATION, INHALATION THERAPY				
BREATHING DEVICES INTERMIT POS. PRES.	50	0	50	6
GAS SUPPLY SYSTEMS SAFETY	20	0	20	6
INCUBATORS CROUPETTES TENTS MASKS CANNU	40	0	40	6
SUCTION DEVICES VACUUM	10	0	10	6
EQUIPMENT TESTING AND ANALYSIS	10	0	10	14

INHALATION THERAPIST • CONTINUING

107 EQUIPMENT OPERATION, INHALATION THERAPY, CONTINUED
FACIAL DEVICES
GAS SUPPLY SYSTEMS-REGULATOR
HUMIDIFICATION-NEBULIZATION-VAPOORIZATION
MAINTENANCE PREVENTATIVE
PRESSURE BREATHING TECH.
TENTS HOODS INCUBATORS
EQUIPMENT OPERATION THER. TECHNIQUES
ANALYZERS AND TESTERS
CHAMBERS AND HOODS
CYLINDERS AND REGULATORS
HUMIDIFIERS AND NEBULIZERS
MASKS AND CATHETERS
RESUSCITATORS + RESPIRATORS
RESUSCITATORS AND RESPIRATORS
TENTS AND INCUBATORS
EQUIPMENT AFTERCARE, COMPLETE REVIEW
EQUIPMENT, PIPING SYSTEMS
OXYGEN CYLINDER, REG., ANALYZERS
OXYGEN TOXICITY EQUIP. CARE STERILIZATION
EQUIPMENT TECHNIQUES

108	CLINICAL PRACTICE, INHALATION THERAPY CLINICAL PRACTICE VITAL SIGNS TEMP - PULSE - RESP. CLINICAL PRACTICE NURSING ARTS	INHALATION THERAPY-CLINICAL MEDIC INHALATION THERAPY-NURSING ARTS CLINICAL INHALATION THERAPY EXP. AD CLINICAL INHALATION THERAPY EXP. BE CLINICAL INHALATION THERAPY EXP. IN CLINICAL PRACTICE CLINICAL PRACTICE NURSING ARTS	OPER RM, DEL RM, POST-OP, REC RM PATIENT CARE-ART AND TECHNOLOGY
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109 INHALATION THERAPY
EMERGENCY THERAPY
HYPERBARIC SYSTEM
LUNG FUNCTION ANALYSIS
CLINICAL ASPECTS INHALATION THERA
METHODS PROCEDURES

INHALATION THERAPIST , CONTINUED

	CAREER NUMBER	15	INST	CLAS.	LEVEL
	LECT	CLIN	TOTAL	CLIN	INST
109 INHALATION THERAPY , CONTINUED					
EMERGENCY	5	5	5	5	5
SAFE PRACTICES	5	5	5	5	5
SURGERY-GENERAL	6	6	6	6	6
SURGERY-THORACIC	6	6	6	6	6
SPECIALTY INTRO	4	4	4	4	4
FUNDAMENTAL INHALATION THERAPY	32	96	0	15	15
PROCEDURES APP. INHAL. THERAPY BEG.	16	0	56	0	128
PROCEDURES APPLICATION INHAL THERAPY AD	48	96	0	56	172
PRO. APP. INHAL. THERAPY INTERMED.	48	0	144	0	144
ASPIRATION AND SUCTION	4	5	20	29	192
BRONCHIOGRAM-SCOPE	4	4	22	30	24
EMERGENCY	6	6	0	21	39
HYPOTHERMIA	6	6	0	52	52
PULMONARY FUNCTION STUDIES	6	6	0	56	56
SURGERY-GENERAL	6	6	0	40	40
SURGERY-THORACIC	6	6	0	40	40
CLASS TEXT	75	0	0	38	59
ISOLATION	75	4	0	0	75
TECH USED. MAIN CONDITIONS + INTR	0	0	0	0	0
INHALATION THERAPY	33	10	0	0	33
LABORATORY TECHNIQUES	0	0	0	0	0
110 ORIENTATION, INHALATION THERAPY					
HISTORY-INHALATION THERAPY					
ORIENTATION-INHALATION THERAPY					
INHALATION THERAPY DEPT., ORGAN. FUNCTI					
124 GENERAL EDUCATION					
ENGLISH-EFFECTIVE WRITING					
FINE ARTS ELECTIVE					
PHYSICAL EDUCATION					
PHYSICAL EDUCATION					
PHYSICAL EDUCATION					
SCIENCE SOCIAL LIT - PHILOS- ELECTIVE					
SPEECH EFFECTIVE SPEAKING					
SCIENCES PHYSICAL					
125 ELECTIVES					
ELECTIVES					

MEDICAL ASSISTANT

	CAREER NUMBER 16						
	LECT	LAB	CLIN	TOTL	INST	CLAS	LEVEL
0 UNCOMMON GROOMING	6	0	0	6	55	1	5
LECTURES--DOCTORS AND OTHERS	10	0	0	10	55	1	5
4 ANATOMY AND PHYSIOLOGY							
ANATOMY AND PHYSIOLOGY 1	60	0	0	60	10	1	
ANATOMY AND PHYSIOLOGY 2	60	0	0	60	10	1	
ANATOMY TOPOGRAPHICAL AND ELEM. PHYSIOLOGY	60	0	0	80	16	1	
ANATOMY AND PHYSIOLOGY	0	0	0	0	54	1	
5 CHEMISTRY, GENERAL CHEMISTRY, CLINICAL	24	36	0	60	10	1	
13 ETHICS, PROFESSIONAL OFFICE HAGM.-ETHICS RECEPT SKILLS	7	3	0	10	55	1	
14 NUTRITION	0	0	0	0	54	1	
16 PSYCHOLOGY, GENERAL PSYCHOLOGY	0	0	0	0	54	1	
18 HUMAN RELATIONSHIPS PERSONAL DEVELOPMENT RELATIONS HUMAN	48	0	0	48	10	1	
20 MICROBIOLOGY BACTERIOLOGY	16	24	0	40	10	1	
27 FIRST AID FIRST AID	0	0	0	0	54	1	
34 PSYCHOLOGY, APPLIED PSYCHOLOGY APPLIED	52	0	0	52	16	1	
45 LAB. TECHNIQUES, MED. TECH. LABORATORY TECHNIQUES LABORATORY TECHNIQUES, MEDICAL	0	0	0	228	16	1	
				0	0	54	5

MEDICAL ASSISTANT, CONTINUED

MEDICAL ASSISTANT, CONTINUED

	CAREER NUMBER 16				
	LECT	LAB	CLIN	TOTL	INST CLAS LEVEL
-6A ADMINISTRATION, DEPARTMENTAL X-RAY DEPT MANAGEMENT	22	0	0	22	10 1 5
-82 RADIATION THERAPY X-RAY TECHNIQUE X-RAY TECHNIQUES X-RAY TECHNIQUES	0 36 36	0 48 48	0 0 0	170 { 938 84 { 10 84 { 10	10 1 1 1 1
111 ORIENTATION, MEDICAL ASSISTANT FUTURE, FACING THE	24	0	0	24	16 1 5
124 GENERAL EDUCATION COMMUNICATIONS 1 COMMUNICATIONS 2 COMMUNICATIONS 3 COMMUNICATIONS 4 COMMUNICATION SKILLS	36 36 24 24 0	0 0 0 0 0	0 0 0 0 0	36 { 10 36 { 10 24 { 10 24 { 10 54	1 5
125 ELECTIVES MISC.	36	0	0	36	16 1

LABORATORY ASSISTANT

0 UNCOMMON
TRAINING. LIMITATION OF

	CAREER NUMBER 17						
	LECT	LAB	CLIN	TOTL	INST	CLAS	LEVEL
0	0	0	0	0	53	1	5
4	ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY	180	0	0	180	58	1
5	CHEMISTRY, GENERAL CHEMISTRY, GENERAL CHEMISTRY, CLINICAL CHEMISTRY, CLINICAL CHEMISTRY, CLINICAL CHEMISTRY, CLINICAL CHEMISTRY	0 0 240 120 32 30	0 0 0 0 0 0	0 0 120 240 1200 480	02 120 58 58 480 400	53 53 58 58 59 62	5 5 5 5 5 5
13	ETHICS, PROFESSIONAL ETHICS AND MEDICAL ADJUSTMENT PROFESSIONAL ETHICS AND MEDICAL ETHICS, CATHOLIC HOSPITAL	0 30 15 30	0 0 0 0	0 30 15 30	0 30 58 58	53 58 58 58	1 1 1 1
15	MATHEMATICS MATH-LABORATORY MATHEMATICS BASIC LABORATORY	180	0	0	180	58	1
20	MICROBIOLOGY MICROBIOLOGY BACTERIOLOGY SERO. PARAS. BACTERIOLOGY PARASITOLOGY BACTERIOLOGY BACTERIOLOGY	0 75 18 16	0 0 0 0	0 585 240 320	120 660 240 62	53 53 59 62	5 5 5 5
43	HISTOLOGY HISTOLOGY	0	0	0	20	53	1
45	LAB. TECHNIQUES, MED. TECH. ROUTINE ANALYSIS	10	0	0	240	62	1
46	URINALYSIS URINALYSIS URINALYSIS URINALYSIS	0 12 45	0 0 0	0 120 459	160 58 57	53 58 58	1 0 1

LABORATORY ASSISTANT

	CAREER NUMBER 17					
	LECT	LAB	CLIN	TOTL	INST	CLAS LVL
47 BLOOD BANK	0	0	0	40	53	1
BLOOD BANK	75	0	585	660	58	1
BLOOD BANK	18	0	0	240	59	1
BLOOD BANK	10	0	0	240	62	1
BLOOD BANKING	0	0	0	20	53	1
40 ELECTROCARDIOGRAPH (EKG)	0	0	0	0	53	1
50 HEMATOLOGY	0	0	0	160	53	1
HEMATOLOGY	90	0	810	900	58	1
HEMATOLOGY	24	0	0	48	59	1
HEMATOLOGY	20	0	0	400	62	1
54 SERROLOGY	12	0	0	12	58	1
SERROLOGY	45	0	414	459	58	1
SERROLOGY	0	0	0	15	58	1
62 OFFICE PRACTICE	45	0	0	45	58	1
QUALITY CONTROL, BASIC ELEMENTS OF	15	0	0	15	58	1
RECORDS, LABORATORY	0	0	0	0	58	1
64 TERMINOLOGY, MEDICAL	180	0	0	180	58	1
TERMINOLOGY AND MEDICAL	0	0	0	0	58	1
112 BASAL METABOLISM RATE (BMR)	0	0	0	0	53	1
BMR, EKG	0	0	0	270	58	1
BMR, EKG	6	0	0	6	59	1
BMR, EKG	5	0	0	80	62	1
113 LAB. ASSISTANT RESPONSIBILITIES	0	0	0	0	53	1
L'R. ASST. RESPONSIBILITY OF	0	0	0	0	53	1
LAB. SEVR. RELATIONSHIP TO OTHER HOSP. DEPTS	0	0	0	0	53	1
LABORATORY, SAFETY IN	0	0	0	0	53	1
ORIENTATION	66	0	0	240	59	1
ORIENTATION-LABORATORY	30	0	0	0	62	1
124 GENERAL EDUCATION	33	0	0	33	11	1
COMMUNICATION SKILLS	0	0	0	0	1	1

MEDICAL RECORD LIBRARIAN

			CAREER NUMBER	18	INST	CLAS	LEVEL
		LECT	LAB	CLIN	TOTL		
0	UNCOMMON AFFILIATIONS (U.W. HOSPITALS) SCHOOL REQUIREMENTS FIELD OF	0	0	0	0	49	1
3	ANATOMY ANATOMY	0	0	0	60	84	1
4	ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY	100 45 0 0 0 0 0	0 0 45 105 0 0 0	100 45 77 77 79 84 84	26 1 1 1 1 1 1	1 1 1 1 1 1 1	3 5
5	CHEMISTRY, GENERAL CHEMISTRY GENERAL CHEMISTRY GENERAL	45 0	0 45	0 0	45 45	77 77	1 1
10	PHYSIOLOGY PHYSIOLOGY	0	0	0	60	84	1
13	ETHICS, PROFESSIONAL ETHICS AND MEDICAL	30	0	0	30	49	1
15	MATHEMATICS STATISTICS, INTRO ALGEBRA COLLEGE OR STATISTICS ALGEBRA MATHEMATICS TRIGONOMETRY MATH INTRO. STATISTICS 1 MATH INTRO. STATISTICS 2 MATHEMATICS MATH STATISTICS	59 0 45 45 45 45 0	0 0 0 0 0 0 0	0 0 45 45 45 45 0	54 45 77 77 77 77 0	30 58 1 1 1 1 0	1 1 1 1 1 1 5
16	PSYCHOLOGY, GENERAL PSYCHOLOGY PSYCHOLOGY GENERAL PSYCHOLOGY INTRODUCTORY	25 45 0	0 0 0	0 0 0	25 45 84	26 77 1 1	3 1 5

MEDICAL RECORD LIBRARIAN, CONTINUED

MEDICAL RECORD LIBRARIAN, CONTINUED

MEDICAL RECORD LIBRARIAN, CONTINUED

	CAREER NUMBER	18	INST	CLAS	LEVEL
	CAREER TOTAL		CLIN	LAB	LFCY
114	ORG. AND ADMIN., MED. RECORDS LIBR. CONTINUED				
	ADMINISTRATION AND ORGANIZATION	45	45	0	45
	MEDICAL RECORD ADMINISTRATION PROBLEMS	45	45	0	45
	ADMINISTRATIVE PROBLEMS	250	0	0	0
	MEDICAL RECORD ADMINISTRATION PROBLEMS	30	0	0	0
	OFFICE MANAGEMENT AND ORGANIZATION	60	90	90	90
	PROBLEM SOLVING, SEMINAR	15	0	0	0
	ADMINISTRATION AND ORGANIZATION PROBLEMS	30	0	0	0
	MEDICAL RECORD ADMINISTRATION PROBLEMS	0	0	0	0
	ADMINISTRATION AND ORGANIZATION 1	24	24	0	24
	ADMINISTRATION AND ORGANIZATION 2	24	24	0	24
	ADMINISTRATION AND ORGANIZATION 3	36	0	0	36
	ADMINISTRATION AND ORGANIZATION 4	78	65	0	78
	MEDICAL RECORD ADMINISTRATION PROBLEMS	33	0	0	33
	ORGANIZATION ADMINISTRATION	90	0	0	90

115 DIRECTED PRACTICE, MED. RECORDS LIBR.

CLINICAL PRACTICE	36	0	420	417	417	36	30	49	9	1
WORK METHODS AND STANDARDS	0	0	345	420	420	0	0	49	49	1
CLINICAL PRACTICE	0	0	300	345	345	0	0	300	300	1
CLINICAL PRACTICE	0	0	300	300	300	0	0	49	49	1
CLINICAL PRACTICE	0	0	300	300	300	0	0	49	49	1
CLINICAL PRACTICE	0	0	105	105	105	0	0	52	52	1
CLINICAL PRACTICE	0	0	504	504	504	0	0	58	58	1
CLINICAL PRACTICE	0	0	288	288	288	0	0	69	69	1
CLINICAL PRACTICE	0	0	75	75	75	0	0	79	79	1
CLINICAL PRACTICE	0	0	75	75	75	0	0	79	79	1
CLINICAL PRACTICE	0	0	105	105	105	0	0	84	84	1
CLINICAL PRACTICE	0	0	240	240	240	0	0	85	85	1
CLINICAL PRACTICE	0	0	505	505	505	0	0	86	86	1
CLINICAL PRACTICE, DIRECTED	0	0	105	105	105	0	0	100	100	1
DIRECTED PRACTICE EXPERIENCE	30	0	30	30	30	0	0	101	101	1
DIRECTED PRACTICE	30	0	30	30	30	0	0	101	101	1

116 MED. RECORD SCIENCE, MED. RECORDS LIBR.
 CODING AND INDEXING
 DISCHARGE ANALYSIS PROCEDURE
 MEDICAL RECORD SCIENCE-LEC. AND LAB.
 LIBRARY SCIENCE MEDICAL RECORE
 MEDICAL RECORD SCIENCE
 MEDICAL RECORD SCIFFCE

41	0	41	5	1
145	0	145	5	1
0	0	312	5	1
100	0	100	26	1
30	0	30	28	1
30	0	30	28	1

MEDICAL RECORD LIBRARIAN, CONTINUED

	CAREER NUMBER 18			CLAS LEVEL		
	CLIN TOTL	INST	CLAS	LECT	LAB	CLIN
114 MED. RECORD SCIENCE, MED. RECORDS LIBR., CONTINUED						
MEDICAL RECORD SCIENCE	45	0	50	28		
MEDICAL RECORD SCIENCE (1)	75	0	45	28		
MEDICAL RECORD SCIENCE (2)	75	0	300	26		
MEDICAL-RECORD ANALYSIS	72	0	525	28		
MEDICAL-RECORD SCIENCE	72	0	72	30		
MEDICAL RECORDS PROCEDURE 1	30	0	72	30		
MEDICAL RECORD SCIENCE 1	60	0	60	39		
MEDICAL RECORD SCIENCE 2	60	0	60	39		
MEDICAL RECORDS PROCEDURE 2	30	0	30	39		
CODING AND CONFERENCE	30	0	30	49		
MEDICAL RECORD SCIENCE	48	0	45	49		
MEDICAL RECORD SCIENCE	75	0	105	49		
MEDICAL RECORD SEMINAR IN	180	0	180	52		
MEDICAL RECORD SCIENCE	60	0	60	58		
MEDICAL RECORD SCIENCE	60	0	180	69		
MEDICAL RECORD SCIENCE	60	0	300	69		
MEDICAL RECORD SCIENCE	45	0	225	77		
MEDICAL RECORDS INTRO.	30	0	30	77		
MEDICAL RECORD SCIENCE 1	0	0	45	79		
MEDICAL RECORD SCIENCE 2	45	0	45	79		
MEDICAL RECORD SCIENCE	0	0	150	84		
MEDICAL RECORD SCIENCE	48	0	96	85		
MEDICAL RECORD SCIENCE 2	48	0	96	85		
MEDICAL RECORD SCIENCE 3	48	0	96	85		
MEDICAL RECORD SCIENCE	144	0	284	86		
MEDICAL RECORD SCIENCE	180	0	180	100		
MEDICAL RECORD SCIENCE	30	0	30	100		
MEDICAL RECORD SCIENCE	60	0	60	101		
MEDICAL RECORD SCIENCE	90	0	90	101		
			900	990		
117 MFD. RECORD SCIENCE, FUNDAMENTALS	177	0	177	5		
MEDICAL SCIENCE, FUNDAMENTALS	30	0	30	5		
MEDICAL SCIENCE FUNDAMENTALS SEMINAR	36	0	304	26		
MEDICAL RECORD ADMIN. SEMINAR	36	108	144	30		
MEDICAL RECORD ADMIN. SEMINAR	36	108	144	30		
MEDICAL SCIENCE FUNDAMENTALS	54	0	54	30		
MEDICAL SCIENCE FUNDAMENTALS C.P.C.	30	0	30	39		
	15	0	15	49		

MEDICAL RECORD LIBRARIAN, CONTINUED

MEDICAL RECORD LIBRARIAN, CONTINUED

	LECT	LAB	CLIN	TOTAL	INST	CLAS	LEVL
125 ELECTIVES , CONTINUED							
ELECTIVES	0	0	0	180	84	1	5
ELECTIVES	0	0	0	180	84	1	5
ELECTIVES	0	0	0	180	84	1	5
ELECTIVES	0	0	0	180	84	1	5

	LECT	LAB	CLIN	TOTAL	INST	CLAS	LEVL
CAREER NUMBER 18							
	0	0	0	180	84	1	5
	0	0	0	180	84	1	5
	0	0	0	180	84	1	5
	0	0	0	180	84	1	5

MEDICAL RECORD TECHNICIAN

		CAREER NUMBER 19						
		LECT	LAB	CLIN	TOTAL	INST	CLAS	LEVEL
3	ANATOMY ANATOMY	40	0	0	40	58	1	3
4	ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY + PHYSIOLOGY ANATOMY AND PHYSIOLOGY	40	0	0	40	96	1	3
		60	0	0	60	97	1	3
		60	0	0	60	98	1	2
		40	0	0	40	99	1	3
		40	0	0	40	102	1	3
63	SECRETARIAL PRACTICE AND PROCEDURES	0	0	0	0	58		
	SECRETARIAL PRACTICE	0	0	60	60	96		
	SECRETARIAL PRACTICE	0	0	120	120	97		
	SECRETARIAL PRACTICE	0	0	60	60	98		
	SECRETARIAL PRACTICE	0	0	50	50	98		
	SECRETARIAL PRACTICE	0	0	36	36	99		
	SECRETARIAL PRACTICE	0	0	36	36	99		
	SECRETARIAL PRACTICE	0	0	36	36	99		
	SECRETARIAL PRACTICE	0	0	36	36	99		
	SECRETARIAL PRACTICE	0	0	184	184	102		
64	TERMINOLOGY, MEDICAL TERMINOLOGY AND MEDICAL TERMINOLOGY	30	0	0	30	58		
	MEDICAL TERMINOLOGY	30	0	0	30	96		
	MEDICAL TERMINOLOGY	45	0	0	45	97		
	MEDICAL TERMINOLOGY	60	0	0	60	98		
	MEDICAL TERMINOLOGY	25	0	0	25	99		
	MEDICAL TERMINOLOGY	72	0	0	72	102		
114	OPG. AND ADMIN., MED. RECORDS LIBR. DATA MANAGEMENT AND REPORTS DISCHARGE PROCEDURES OFFICE ADMITTING ORIENTATION	0	0	0	0	58		
		0	0	0	0	58		
		0	0	0	0	58		
115	DIRECTED PRACTICE, MED. RECORDS LIBR.	0	0	0	0	20		
	DIRECTED PRACTICE	0	0	0	0	60		
	DIRECTED PRACTICE	0	0	0	0	60		
	DIRECTED PRACTICE	0	0	0	0	240		

MEDICAL RECORD TECHNICIAN - CONTINUED

1116 MFD. RECORD SCIENCE, MED. RECORDS LIBR.
CODING AND INDEXING
MEDICAL RECORD SCIENCE
RECORD DEPARTMENT, MEDICAL

111A MED. RECORD SCIENCE, LEGAL ASPECTS
MEDICAL RECORDS LEGAL ASPECTS
LEGAL ASPECTS
LEGAL ASPECTS
LEGAL ASPECTS

RADIOISOTOPE TECHNICIAN

	CAREER NUMBER	INST	CLAS	LEVEL
	LECT	LAB	CLIN	TOTL
0 UNCOMMON REVIEW	2	0	0	2 107
REVIEW	2	0	0	2 107
REVIEW	2	0	0	2 107
REVIEW	2	0	0	2 107
REVIEW	2	0	0	2 107
4 ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY AND PHYSIOLOGY ANATOMY + PHYSIOLOGY	80 30 30	0 0 0	80 30 30	5 1 57 1 106 1
29 PHYSICS ELECTRICITY BASIC	35	0	0	35 1
64 TERMINOLOGY, MEDICAL TERMINOLOGY AND MEDICAL	20	0	0	20 1
68 ADMINISTRATION, DEPARTMENTAL OFFICE PROCEDURES-RADIOISOTOPE RECORDS RECORDS ADMIN. PROCEDURES RECORDS CODING-FILING RECORDS-ADMIN-CODING-FILING, PROCEDURES RECORDS, ADDMIN-FILING + CODING	5 5 3 5 3	0 0 0 0 0	150 150 153 ³⁰⁶ 57 ³ 0	5 58 58 58 108 108
74 RADIATION SAFETY PROTECTION-HANDLING RADIOACTIVE SUBSTAN PROTECTION-SHIELDING PROTECT-HAND-SHIELD OF RADIOACTIVE SUBS PROTECT-HANDLING RADIOACTIVE SUBSTANCES PROTECT HAND SHIELD OF RADIOACTIVE SUBS	20 10 0 2 10	0 0 0 0 0	20 225 654 2 10	5 58 58 106 107 106 108 108
81 RADIATION PHYSICS ATOMIC STRUCTURE-RADIOACTIVITY PHYSICS AND BASIC RADIATION PHYSICS AND BASIC RADIATION BASIC PHYSICS + RADIATION PHYSICS + BASIC RADIATION	40 35 20 0 20	0 0 0 0 0	40 35 150 654 20	5 57 58 106 106 106 108 108

RADIOISOTOPE TECHNICIAN , CONTINUED

	CAREER NUMBER	20	CLAS	LEVEL
LECT	CLIN	TOTL	INST	CLAS
8.3 RADIOGRAPHIC ISOTOPES INTRO-RADIOISOTOPE LAB EXPERIMENTS	30	0	30	57
RADIOISOTOPE LAB ADV - DEMOS-CONF-QUIZ.	0	30	0	57
CLINICAL LAB EQUIP.-PROCEDURES	60	0	60	57
INTRO RADIOISOTOPES	10	0	225	235 { 58
ORIENTATION-RADIOISOTOPE	20	0	20 { 25/1	58
INTRO. RADIOISOTOPES	2	0	2	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
RADIOISOTOPE LAB. EXPERIMENTS	0	0	0	107
INTRODUCTION TO RADIOISOTOPES	20	2	20 { 22	108
INTRODUCTION TO RADIOISOTOPES	2	2	2	108
119 CLINICAL PRACTICE, RADIOISOTOPE TECH.	0	0	0	5
CLINICAL PRACTICE PROCEDURES-CLINICAL RADIOISOTOPE	0	0	1800	57
PROCEDURES-SPECIFIC	130	675	805	58
CLINICAL PROCEDURES	30	0	30	106
CLINICAL PRACTICE	40	150	190	108
120 DIAGNOSTIC PROCEDURES. RADIOISOTOPE TECH	40	0	40	5
DIAGNOSTIC PROCEDURES RADIOISOTOPES	160	160	160	57
PROCEDURES-RADIOISOTOPE-EQUIP-CALCULA-R	0	3	3	107
DIAGNOSTIC PROCEDURES RADIOISOTOPES	0	2	2	107
DIAGNOSTIC PROCEDURES RADIOISOTOPES	0	2	2	107
DIAGNOSTIC PROCEDURES RADIOISOTOPES	2	2	2	107
DIAGNOSTIC PROCEDURES RADIOISOTOPES	2	2	2	107
PROCEDURES, CLINICAL RADIOISOTOPES	10	10	10	108

RADIOISOTOPE TECHNICIAN, CONTINUED

	CAREER NUMBER	20	INST	CLAS	LEVEL
LECT	LAB	CLIN	TOTL	INST	CLAS
1221	1	1	1	1	1
INSTRUMENTATION	40	0	0	40	5
INSTRUMENTATION	40	0	225	265	56
INSTRUMENTATION	15	15	0	30	106
INSTRUMENTATION	2	0	0	2	107
INSTRUMENTATION	2	0	0	2	107
INSTRUMENTATION	2	0	0	2	107
INSTRUMENTATION	2	0	0	2	107
INSTRUMENTATION	15	30	45	108	
1222	1	1	1	1	1
RADIOBIOLOGY, RADIOISOTOPE TECH.	20	5			
RADIOBIOLOGY	10	10	57		
RADIATION PROTECTION AND RADIOBIOLOGY	10	160	58		
INTERACTION OF RADIATION PHYSIOLOGICALS	10	654	106		
RADIOBIOLOGY	0	0	2	107	
RADIOBIOLOGY	0	0	2	107	
RADIOBIOLOGY	0	0	2	107	
RADIOBIOLOGY	10	10	107		
RADIOBIOLOGY	10	10	108		
RADIOBIOLOGY	10	10	108		
RADIOBIOLOGY	10	10	108		
RADIOBIOLOGY	10	10	108		
1223	1	1	1	1	1
MATHEMATICS, RADIOLOGICAL	10	5			
MATHEMATICS	10	10	57		
MATH RADIOLOGICAL	30	225	58		
MATH RADIOLOGICAL	5	80	58		
RADIATION UNITS	5	75	30		
MATHEMATICS-RADIOLOGICAL	30	30	106		
MATHEMATICS-RADIOLOGICAL	30	30	108		
MATH. RADIOLOGICAL	5	108			

("Clas"), Table 7, opposite these two course titles the "1" indicates that the training institution was one offering post-high school work.

In column 8, ("Levl"), Table 7, the "3" indicates that this training institution is a hospital. This information may be found by referring again to Table 4 for code number and level designation for each of the 110 training institutions from which the 126 paramedical educational programs were obtained.

An inspection of the listings of the 22 separate courses under the subject classification of "Nursing Fundamentals" gives other interesting information. For example, these 22 course titles are all from 12 different training institutions. Only two of the 12 different training institutions (numbers 23 and 42) require laboratory experience in Nursing Fundamentals. Only four of these training institutions (numbers 1, 9, 40, and 61) required hours in clinical practice in this subject classification. The requirement in clinical practice ranges from 20 to 360 clock hours in these four schools. The total clock hour requirement in Nursing Fundamentals for these 12 training institutions ranges from 18 hours in training institution #29 to 465 hours in training institution #58.

After a consideration of the example above, it is apparent that Table 7, the computer print-out listing, has valuable information which can be used for comparative purposes concerning the subject classifications and separate course titles, clock hours devoted to lecture, laboratory, and clinical practice, as well as the minimum and maximum number of clock hours required in a particular paramedical career program by the various training institutions. A cross reference can be made with Table 4 for the location of other data concerning the training institutions which is also enlightening.

The Number of Programs Analyzed, Course Titles Classified and Subject Classifications Resulting in Each Paramedical Career Studied

Table 8 is designed to give the reader a quick summarization as well as a means of making numerical comparisons with the data from the computer output presented in Table 7. Table 8 shows the 20 paramedical careers listed in code number order and the total number of programs analyzed in each. Column 4, Table 8 shows the number of separate course titles analyzed and assigned to subject classifications numbers 1-123. Column 5, Table 8, presents the number of separate course titles which were classified as follow:

0	Uncommon Courses
124	General Education
125	Electives

Column 6, Table 8, reveals the total number of course titles classified in each paramedical career. Column 7, Table 8, shows the number of different subject classifications to which the total course titles were assigned. For example, consider career #1, three-year registered nurse. Table 8 in column 3 shows that the curricular analysts for this career examined 18 programs from different training institutions and found 425 different course titles, (401 technical plus 24 classified as Uncommon, General Education, or Electives), which they assigned to 27 different general subject classifications. Curricular analysts for all careers examined 2,278 technical courses plus 335 Uncommon, General Education, and Elective courses which were assigned to 126 subject classifications.

An Analysis of the Commonality of the
78 Subject Classifications Found to be Required
in Two or More of the 20 Paramedical Careers Studied

Table 9 is a concise computer print-out summary of the commonality of the subject classifications to the 20 paramedical careers.

TABLE 8

THE NUMBER OF PROGRAMS ANALYZED, COURSE TITLES
CLASSIFIED, AND SUBJECT CLASSIFICATIONS
RESULTING IN EACH PARAMEDICAL CAREER

Code No.	Paramedical Career	Programs Analyzed	Number of Course Titles Assigned Subject Classifications			Number of Subject Classifications in each Paramedical Career
			#1-123	#0,124-5	Total	
1	3-year R.N.	18	401	24	425	27
2	2-year R.N.	11	156	79	235	21
3	L.P.N.	9	119	3	122	20
4	Nurse Aide	2	18	2	20	7
5	Dental Assistant	2	26	7	33	21
6	Medical Technologist	12	163	12	175	32
7	Medical Secretary	9	136	24	160	29
8	Radiologic Technologist	3	163	49	212	32
9	Dental Hygienist	4	99	18	117	30
10	Dental Technician	1	7	4	11	3
11	Physical Therapist	9	225	18	243	32
12	Physical Therapist Ass't.	1	16	2	18	4
13	Occupational Therapist	7	168	6	174	27
14	Occupational Therapy Ass't.	2	21	1	22	9
15	Inhalation Therapist	8	138	12	150	27
16	Medical Assistant	4	43	8	51	24
17	Laboratory Assistant	4	45	2	47	18
18	Medical Record Librarian	15	190	59	249	25
19	Medical Record Technician	2	66	0	66	8
20	Radioisotope Technician	3	77	5	82	13
TOTALS		126	2273	335	2613	

Although identification of code numbers for the 20 paramedical careers and other information may be found in Table 5, they are listed below for quick reference in reading and interpreting Table 9.

- | | |
|-------------------------------|-----------------------------------|
| 1 Three-Year Registered Nurse | 11 Physical Therapist |
| 2 Two-Year Registered Nurse | 12 Physical Therapist Assistant |
| 3 Licensed Practical Nurse | 13 Occupational Therapist |
| 4 Nurse Aide | 14 Occupational Therapy Assistant |
| 5 Dental Assistant | 15 Inhalation Therapist |
| 6 Medical Technologist | 16 Medical Assistant |
| 7 Medical Secretary | 17 Laboratory Assistant |
| 8 Radiologic Technologist | 18 Medical Record Librarian |
| 9 Dental Hygienist | 19 Medical Record Technician |
| 10 Dental Technician | 20 Radioisotope Technician |

In column 1, Table 9, the general subject classifications are listed in code number order, (See Table 6), except that the Subject Classification "0", Uncommon Courses, is listed last. As indicated before, Subject Classifications "0", "124", and "125" are described as Uncommon Courses, General Education Courses, and Elective Courses respectively. Table 9 reveals that, for example, the subject classification "Nursing Fundamentals" is required in four paramedical careers: three-year registered nurse, two-year registered nurse, licensed practical nurse, and nurse aide. Table 9 further reveals that the subject classification "General Education" is required in 16 of the 20 paramedical careers. The subject classification, "Anatomy and Physiology", is required in 15 of the paramedical occupations. The 11 most frequent commonalities are as follow:

<u>Subject Classification</u>	<u>Number of Paramedical Careers to Which Common</u>
General Education	16
Anatomy and Physiology	15
Microbiology	14
Uncommon Courses	14
Anatomy	12
Ethics, Professional	12
Psychology, General	12
Electives	12
Terminology, Medical	11
Mathematics	9
Chemistry, General	9

TABLE 9
AN ANALYSIS OF THE COMMONALITY OF THE 126 SUBJECT CLASSIFICATIONS FOUND
TO BE REQUIRED IN TWO OR MORE OF THE 20 PARAMEDICAL CAREERS

SUBJECT	CLASSIFICATIONS	CAREERS																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
NURSING, FUNDAMENTALS		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NURSING TRENDS		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ANATOMY		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ANATOMY AND PHYSIOLOGY		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CHEMISTRY, GENERAL		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HUMAN GROWTH AND DEVELOPMENT		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NURSING, CLINICAL CONFERENCE		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CLINICAL PRACTICE, NURSING		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PHYSIOLOGY		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NURSING, MEDICAL SURGICAL		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
VOCATIONAL RELATIONSHIPS		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ETHICS, PROFESSIONAL		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NUTRITION		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MATHEMATICS		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PSYCHOLOGY, GENERAL		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HEALTH, PERSONAL AND COMMUNITY		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HUMAN RELATIONSHIPS		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SOCIOLOGY		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MICROBIOLOGY		*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Table 9 cont.

SUBJECTS	CAREERS																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
PEDIATRICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NURSING, PSYCHIATRIC	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OBSTETRICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PHARMACOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
THEOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DIETETICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FIRST AID	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
BOTANY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PHYSICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ZOOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NURSING, GERIATRICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NURSING, PROCEDURES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OFFICE TRAINING AND MANAGEMENT	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PSYCHOLOGY, APPLIED	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TERMINOLOGY, DENTAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DENTAL ASSISTING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CHEMISTRY, QUANTITATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CHEMISTRY, QUALITATIVE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CHEMISTRY, ORGANIC	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CHEMISTRY, INORGANIC	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
BIOCHEMISTRY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CLINICAL LAB. PROBLEMS, MED. TECH.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HISTOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
IMMUNOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
LAB. TECHNIQUES, MED. TECH.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
URINALYSIS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
BLOOD BANK	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CYTOLGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ELECTROCARDIOGRAPH (EKG)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HEMATOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MICRO-TECHNIQUE, MED. TECH.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PARASITOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PATHOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SEROLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
VIROLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ACCOUNTING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ANATOMY-PHYSICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
BUSINESS CORRESPONDENCE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SHORTHAND, GENERAL AND MEDICAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FILING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Table 9 cont.

SUBJECTS	CAREERS																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
OFFICE MACHINES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OFFICE PRACTICE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
SECRETARIAL PRACTICE AND PROCEDURES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
STEREONIOLOGY, MEDICAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
TYPING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ECONOMICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
MEDICAL SCIENCE CONFERENCES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ADMINISTRATION, DEPARTMENTAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
FILM CRITIQUE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DARKROOM CHEMISTRY AND TECHNIQUE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DISEASES, MEDICAL SURGICAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
EQUIPMENT, RADIOLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIATION THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIATION SAFETY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIOGRAPHIC EXPOSURE TECHNIQUES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIOGRAPHIC POSITIONING	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIOGRAPHIC PROCEDURES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIOGRAPHY, INTRA-ORAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIOGRAPHY, PEDIATRICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIOLOGY, NURSING PROCEDURES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIATION PHYSICS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIATION THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
RADIOGRAPHIC ISOTOPES	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ANESTHESIA	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DENTAL ANATOMY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CLINICAL PRACTICE, DENTAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DENTAL HEALTH	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ORIENTATION, DENTAL	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
DENTAL MATERIALS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PHYSICAL AGENTS, PHYSICAL THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
NEUROLOGY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
CLINICAL ASSIGNMENT, PHYSICAL THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ORG. AND ADMIN., PHYSICAL THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ORIENTATION, PHYSICAL THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PHYSICAL THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ThERAPEUTIC EXERCISE	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
ORIENTATION, OCCUPATIONAL THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
HANDCRAFTS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
OCCUPATIONAL THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
PRINCIPLES AND PRACTICES, OCCUP. THERAPY	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

Table 9, cont.

SUBJECTS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CAREERS	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

KINESIOLOGY
 ORG. AND ADMIN., OCCUP. THERAPY
 PHYSICAL DISABILITIES
 CLINICAL ASSIGNMENT, OCCUP. THERAPY
 TESTS AND MEASUREMENTS, PHYSICAL
 ORG. AND ADMIN., INHALATION THERAPY
 EQUIPMENT OPERATION, INHALATION THERAPY
 CLINICAL PRACTICE, INHALATION THERAPY
 INHALATION THERAPY
 ORIENTATION, INHALATION THERAPY
 ORIENTATION, MEDICAL ASSISTANT
 BASAL METABOLISM RATE [BMR]
 LAB. ASSISTANT RESPONSIBILITIES
 ORG. AND ADMIN., MED. RECORDS LIBR.
 DIRECTED PRACTICE, MED. RECORDS LIBR.
 MED. RECORD SCIENCE, MED. RECORDS LIBR.
 MED. RECORD SCIENCE, FUNDAMENTALS
 MED. RECORD SCIENCE, LEGAL ASPECTS
 CLINICAL PRACTICE, RADIOISOTOPE TECH.
 DIAGNOSTIC PROCEDURES, RADIOISOTOPE TECH.
 INSTRUMENTATION, RADIOISOTOPE TECH.
 RADIOBIOLOGY, RADIOISOTOPE TECH.
 MATHEMATICS, RADIOLOGICAL
 GENERAL EDUCATION

Table 9 reveals that 48 of the 126 subject classifications listed were required in only one of the 20 paramedical fields, while 78 subject classifications (including the three subject classifications "6", "124", and "125" were required in two or more of the 20 paramedical careers.

The Total Number of Subject Classifications, Course Titles, and the Commonality of Subject Classification in Each of the 20 Paramedical Careers Studied

Table 10 is a synthesis of data taken from Tables 6, 7, 8, and 9. A reference to the four previous tables is desirable for best interpretation of data in Table 10. From this Table it can be seen that of the 126 subject classifications the following information obtains:

48	subject classifications relate to only one paramedical career,
30	subject classifications are common to 2 paramedical careers,
11	subject classifications are common to 3 paramedical careers,
13	subject classifications are common to 4 paramedical careers,
2	subject classifications are common to 5 paramedical careers,
5	subject classifications are common to 6 paramedical careers,
3	subject classifications are common to 7 paramedical careers,
3	subject classifications are common to 8 paramedical careers,
2	subject classifications are common to 9 paramedical careers,
1	subject classification is common to 11 paramedical careers,
4	subject classifications are common to 12 paramedical careers,
2	subject classifications are common to 14 paramedical careers,
1	subject classification is common to 15 paramedical careers,
1	subject classification is common to 16 paramedical careers,

126 total subject classifications assigned to all paramedical careers.

**The Cross Reference Chart
Showing Frequency of Commonality of 123
Subject Classifications Among the 20 Paramedical Careers Studied**

Table 11 is a summary abstraction of the information revealed in Tables 7 and 9. Table 11 excludes from consideration the subject classifications of Uncommon Courses, #0, General Education, #124, and Electives, #125. This cross reference chart shows the commonality of subject classifications between and among the 20 paramedical careers.

TABLE 10

THE TOTAL NUMBER OF SUBJECT CLASSIFICATIONS, COURSE TITLES AND THE COMMONALITY OF SUBJECT CLASSIFICATIONS IN EACH OF THE 20 PARAMEDICAL CAREERS

Code No.	Subject Classification	Paramedical Careers										No. P.M.C.'s to which subject classification is common	Total No. Courses									
		1	2	3	4	5	6	7	8	9	10			12	13	14	15	16	17	18	19	20
1	Nursing Fundamen.	22	17	13	2							54	22	4	2							
2	Nursing Trends	19	3									4	3	2	12	1	4	5	1	1	1	
3	Anatomy	8	3									1	9	14	5	1	3	4	1	6	5	3
4	Anatomy & Physio.	25	10	6								13	6	5	1	6	2	5	1	6	50	15
5	Chemistry, Gen.	6	6									3										9
6	Human Gro.& Dev'l.	6	6	4								2										6
7	Nursing	46	2																			2
8	Nursing, Clin. Conf.	10																				1
9	Nursing, Clin. Prac.	13																				2
10	Physiology	5	4									6										8
11	Nursing, Med. Surg.	68	31	21	2																	4
12	Voca. Relationships		11		1							1										3
13	Ethics, Profess.	12	1		1							4										12
14	Nutrition	14	8	3	1							1										7
15	Mathematics		2		2							9										9
16	Psychology, Gen.	20	11	1								1										3
17	Health, Per.& Comm.	2	1	7								2										3
18	Human Relationship	6				1						2										3
19	Sociology	35	10	6								2										3
20	Microbiology	15	12	1								1	27	1	1	3	1	1	2	1	4	6
21	Pediatrics	13	8	10																		6
22	Nursing Psychia.	17	10	4																		4
23	Obstetrics	14	12	10																		6
24	Pharmacology	7										5										6
25	Theology	15																				6
26	Dietetics	9																				1
27	First Aid	1																				8
			2																			11
																						130

TABLE 10 cont.

Code No.	Subject Classification	Paramedical Careers and Number of Courses per Subject Classification *										Total No. Courses	No. P,C's to which subject classification is common								
		1	2	3	4	5	6	7	8	9	10										
		Number of Programs Analyzed in each Career																			
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
Botany										10	28	29	30	31	32	33	34	35	36	37	38
Physics										1	1	1	1	1	1	1	1	1	1	1	1
Zoology										6	6	6	6	6	6	6	6	6	6	6	6
Nursing, Geriatrics	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3	3	3	3	3	3	3
Nursing, Procedures										10	10	10	10	10	10	10	10	10	10	10	10
Off. Train., & Manag.										2	2	2	2	2	2	2	2	2	2	2	2
Psychology, App.										1	1	1	1	1	1	1	1	1	1	1	1
Terminology										1	1	1	1	1	1	1	1	1	1	1	1
Dental Assisting										2	2	2	2	2	2	2	2	2	2	2	2
Cheq., Quant.										10	10	10	10	10	10	10	10	10	10	10	10
Chem. Qualit.										4	4	4	4	4	4	4	4	4	4	4	4
Chem., Organic										10	10	10	10	10	10	10	10	10	10	10	10
Chem., Inorganic										1	1	1	1	1	1	1	1	1	1	1	1
Stockadestry										8	8	8	8	8	8	8	8	8	8	8	8
Clin. Lab., Prob., Med. Tecno										3	3	3	3	3	3	3	3	3	3	3	3
Histology										4	4	4	4	4	4	4	4	4	4	4	4
Immunology										6	6	6	6	6	6	6	6	6	6	6	6
Lab. Proceq., Med. Tecno										3	3	3	3	3	3	3	3	3	3	3	3
Urinalysis										3	3	3	3	3	3	3	3	3	3	3	3
Blood Bank										3	3	3	3	3	3	3	3	3	3	3	3
Cytology										2	2	2	2	2	2	2	2	2	2	2	2
EMG										2	2	2	2	2	2	2	2	2	2	2	2
Menatology										4	4	4	4	4	4	4	4	4	4	4	4
Micro-tecng, Med. Tecno										3	3	3	3	3	3	3	3	3	3	3	3
Parasitology										7	7	7	7	7	7	7	7	7	7	7	7
Pathology										1	1	1	1	1	1	1	1	1	1	1	1
Seriology										5	5	5	5	5	5	5	5	5	5	5	5
Virology										1	1	1	1	1	1	1	1	1	1	1	1
Accounting†										2	2	2	2	2	2	2	2	2	2	2	2
Anatomy-Physics										7	7	7	7	7	7	7	7	7	7	7	7
Business Corresp.										4	4	4	4	4	4	4	4	4	4	4	4

TABLE 10 cont.

Code No.	Subject Classification	Paramedical Careers and Number of Courses per Subject Classification *													Total No. Courses	No. PMC's to which subject classification is common					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
		Number of Programs Analyzed in each Career																			
59	Shorthand	20																			1
60	Filing	3																			2
61	Office Machines	3																			2
62	Office Practice	14																			4
63	Sec., Pract. & Procedure	10																			3
64	Terminology, Medical ping	11	6																		11
65	Economics	1	19																		4
66	Med. Science Conf.	1	1																		2
67	Adm., Departmental	2	11																		1
68	Film Critique	11	5																		1
69	Darkroom Chem. & Techq.	5																			1
70	Diseases, Med., Surgical	2																			1
71	Equip., Radiology	2																			1
72	Radiation Therapy	5																			1
73	Radiographic Safety	4																			1
74	Radiographic exp. technqs.	16																			1
75	Radiographic Positioning	10																			1
76	Lectographic Proceds.	15																			1
77	Radiography, Intra-Oral	3																			1
78	Radiography, Pediatrics	4																			1
79	Radiotol., Nursing Procds.	7																			1
80	Radiation Physics	1																			1
81	Radiation Therapy	4																			1
82	Radiographic Isotopes	1																			1
83	Anesthesia	2																			1
84	Dental Anatomy	1																			1
85	Clin. Proc., Dental	2																			1
86	Dental Health	1																			1
87	Orientalization, Dental	1																			1
88	Dental Materials	2																			1
89																					1

TABLE 10 cont.

Code No.	Subject Classification	Paramedical Careers and Number of Courses per Subject Classification *															Courses	Total No. of Programs Analyzed in each Career	Subject Classification	No. P.M.C.'s to which classification is common	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
90	Phys. Agents, Phys. TherapY	25	2	2													29	3			
91	Neurology	10		7													19	3			
92	Clinic.-Assistn., Phys. TherapY	19	1														20	2			
93	Org's in. & Subdn., Phys. TherapY	12															12	1			
94	Orthoped., Phys. TherapY	5		1													6	2			
95	Physical TherapY	30	3														33	2			
96	Therapeutic Exercise	36	2														50	4			
97	Occup. Occup. TherapY																5	2			
98	Endocrinology																38	1			
99	Oncopatology																14	2			
100	Princ. & Tech. of Occup. Ther.																21	4			
101	Kinesiology																5	8			
102	Org's in. & Adap. Occup. Ther.																4	1			
103	Physical Disabilities																6	1			
104	Clin. Assis'tn., Occup. Ther.																11	4			
105	Tests & Measurements, Physiol.																15	2			
106	Organ. Syst., Occup. Ther.																10	3			
107	Equip. Oper., Instr., Ther.																25	1			
108	Clinical Practice																14	1			
109	Inhalation Therapy																26	1			
110	Oriente., Instr., Ther.																3	1			
111	Oriente., Med. Asst., t.																1	1			
112	Basal Metab. Rate (BMR)																4	1			
113	Labs. Assis't. Responsibilities																5	1			
114	Ordn', & Adm. Med. Rec. Libr., n																4	1			
115	Dir., Pract., Med. Rec. Libr., n																36	2			
116	Med. Rec. Secreccn., Libr., n																17	4			
117	Med. Rec. Secr. Science, Libr., n																21	2			
118	Med. Rec. Science, Legal, Aspects																40	32	72	2	1
119	Clin. Pract., Radiosotope, Tech																11	4	15	5	2
120	Dial., Proced., Radiolosc., Tech																7	1			

TABLE 10 cont.

Code No.	Subject Classification	Paramedical Careers and Number of courses per Subject Classification *										Total No. Courses	No. PMC's to which subject classification is common							
		1	2	3	4	5	6	7	8	9	10									
Number of Programs Analyzed in each Career																				
121	Instrumentation, Radioisotope Tech																			
122	Radiobiology, Radioisotope Tech																			
123	Math., Radiological	22	75	3	2	5	7	21	38	14	8	1	2	9	5	1	47	7	1	
124)		2	4		1	3	2	11	3		3	1	1	1	1	10		360	16	
125)					1	2	1		1	4	7	1	3	1	2	1	2	0	42	
0	Uncommon																		33	
TOTAL COURSE TYPES		425	235	122	20	33	175	160	212	117	11	243	18	174	22	150	52	47	249	56
SUBJECT CLASSIFI- CATIONS 1-123		401	156	119	18	26	163	136	163	99	7225	16	168	21	138	44	45	190	66	77
																				2277

TABLE 11

CROSS REFERENCE CHART SHOWING FREQUENCY OF COMMONALITY
OF 123* SUBJECT CLASSIFICATIONS AMONG THE 20
PARAMEDICAL CAREERS STUDIED

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<u>3 YR. R.N.</u>	1	*	19	16	5	5	6	8	10	14	1	11	5	11	2	12	8	4	9	2	2
<u>2 YR. R.N.</u>	2	19	*	12	3	3	-	4	9	10	1	9	3	3	1	11	5	3	8	2	2
<u>L.P.N.</u>	3	16	12	*	4	6	5	4	8	12	0	8	4	6	1	9	6	4	6	1	1
<u>N.A.</u>	4	5	3	4	*	1	0	1	1	0	0	0	0	1	0	0	2	0	0	0	0
<u>D.A.</u>	5	5	3	6	1	*	2	4	5	13	1	5	3	2	0	5	6	2	4	0	0
<u>MED. TECHNO.</u>	6	6	7	3	0	2	*	6	8	9	1	7	2	5	0	10	7	11	7	2	3
<u>MED. SEC.</u>	7	8	4	4	1	4	6	*	8	7	0	6	5	2	6	14	9	12	3	3	3
<u>RAD. TECHNO.</u>	8	10	9	8	1	5	8	8	*	10	3	8	5	6	1	11	8	6	9	3	6
<u>D.H.</u>	9	14	10	12	1	13	9	7	10	*	2	11	5	8	0	10	7	6	10	1	1
<u>D.T.</u>	10	1	1	0	0	1	1	0	0	3	2	*	2	1	0	1	0	0	1	1	0
<u>P.T.</u>	11	11	9	8	0	5	7	6	8	11	2	*	7	13	3	11	3	5	7	1	1
<u>S.T.A.</u>	12	5	3	4	0	3	2	6	5	5	1	7	*	6	2	5	6	5	4	3	2
<u>O.T.</u>	13	11	8	6	0	2	5	5	6	8	1	13	6	*	6	9	4	3	8	3	2
<u>O.T.A.</u>	14	2	1	1	1	0	0	2	1	0	0	3	2	*	1	2	1	1	1	1	1
<u>I.T.</u>	15	12	11	9	0	5	10	6	11	10	1	11	5	9	1	*	4	6	10	3	4
<u>MED. ASS'T.</u>	16	8	5	6	2	6	7	14	8	7	0	3	6	4	2	4	*	10	7	3	3
<u>LAB. ASS'T.</u>	17	4	3	4	0	2	11	9	6	6	0	5	4	3	1	6	10	*	6	3	2
<u>M.R. LIBR.</u>	18	9	8	6	0	4	7	12	9	10	1	7	4	8	1	10	7	6	*	3	2
<u>M.R. TECH.</u>	19	2	2	1	0	0	2	3	3	1	1	1	3	3	1	3	3	3	*	2	2
<u>RAD. TECH.</u>	20	2	2	1	0	0	3	3	6	1	0	1	2	2	1	4	3	2	2	2	*

* Subject classifications of general education, electives and subjects uncommon are excluded.

For example, career #1, three-year registered nurse, has 19 subject classifications in common with career #2, two-year registered nurse; 16 subject classifications in common with career #3, licensed practical nurse; 10 subject classifications in common with career #8, radiologic technologist; 14 subject classifications in common with career #9, dental hygienist; and only one subject classification in common with the dental technician. The occurrence of commonality in subject classifications between two different paramedical careers was frequently observed. The following information presents the 24 occasions of greatest occurrence of commonality which existed between two different paramedical careers:

Career #	1	and Career #	2	had	19 subject classifications in common.	"	"
" "	1 "	" "	3 "	16	" "	" "	" "
" "	1 "	" "	9 "	14	" "	" "	" "
" "	7 "	" "	16	14	" "	" "	" "
" "	5 "	" "	9 "	14	" "	" "	" "
" "	11 "	" "	13	13	" "	" "	" "
" "	2 "	" "	3 "	12	" "	" "	" "
" "	3 "	" "	9 "	12	" "	" "	" "
" "	7 "	" "	18	12	" "	" "	" "
" "	1 "	" "	11	11	" "	" "	" "
" "	9 "	" "	11	11	" "	" "	" "
" "	1 "	" "	13	11	" "	" "	" "
" "	2 "	" "	15	11	" "	" "	" "
" "	8 "	" "	15	11	" "	" "	" "
" "	11 "	" "	15	11	" "	" "	" "
" "	7 "	" "	17	11	" "	" "	" "
" "	1 "	" "	8	10	" "	" "	" "
" "	2 "	" "	9	10	" "	" "	" "
" "	8 "	" "	9	10	" "	" "	" "
" "	6 "	" "	15	10	" "	" "	" "
" "	9 "	" "	15	10	" "	" "	" "
" "	16 "	" "	17	10	" "	" "	" "
" "	9 "	" "	18	10	" "	" "	" "
" "	15 "	" "	18	10	" "	" "	" "

Table 11 also shows the absence of commonality in subject classifications between and among the 20 paramedical fields.

The Minimum and the Maximum Number of Combined Lecture,
and Clinical Practice Experience (Expressed in Total Clock Hours)
Required in Each of the 78 Classifications Which Were Common To Two
Or More of the 20 Paramedical Careers Studied

Table 12 is a general summary table showing the least number and the greatest number (expressed in total clock hours) of combined lecture, laboratory and clinical practice experience required in the 78 subject classifications found common in two or more of the 20 paramedical programs studied. Column 1, Table 12, shows the code number in numerical sequence for each of the 78 subject classifications which are common to two or more of the 20 paramedical careers. Column 2, Table 12, presents the 78 general subject classifications by name and lists for each classification the paramedical careers to which it is common. The remaining columns reveal the minimum and maximum number (expressed in total clock hours) required in combined lecture, laboratory, and clinical practice experiences for each (numbered 1 through 20) paramedical career for each of the 78 subject classifications. Consider the subject classifications #1, Nursing Fundamentals. This classification is common to careers #1, 2, 3, and 4 as identified earlier. Note that the total clock-hour requirements for career #1, three-year registered nurse, range from 10 to 465 hours for the subject classification, Nursing Fundamentals, as compared to 3 to 40 hours for career #4, Nurse Aide.

TABLE 12

THE MINIMUM AND THE MAXIMUM NUMBER OF COMBINED LECTURE, LABORATORY, AND CLINICAL PRACTICE EXPERIENCES
 (EXPRESSED IN TOTAL CLOCK HOURS) REQUIRED IN EACH OF THE 78 SUBJECT CLASSIFICATIONS WHICH
 ARE COMMON TO TWO OR MORE OF THE 20 PARAMEDICAL CAREERS STUDIED

COURSE NUMBER	CAREER NUMBER	TITLE	3 YR CARRIER	2 YR CARRIER	DEBT		MED RAD	DENT	DEBT	MED RAD	M.R.	RAD	TOTAL		
					SEC	TECN									
1 Nursing, Fundamentals	10	81	224	3											3-558
	465	558	415	40											
2 Nursing, Trends	15	16													15-72
	72	32													
3 Anatomy	57	80					72	624	60	510	120	75	90	12	12-1316
	292	96					210	624	60	510	1316	75	210	200	
4 Anatomy and Physiology	38	44	32				64	30	90	90		75	135	40	30-300
	240	256	102				64	130	294	164		75	300	224	
5 Chemistry, General	33	66					49	90	60					6	6-1440
	80	198					1120	150	180					200	
6 Human Growth and Development	32	33	18				48	48	48					15	15-90
	54	55	64				90	48	48					45	
7 Nursing	20	176													20-5871
	5871	192													
8															
9 Nursing, Clinical Practice	120													3	3-3474
	3474														
10 Physiology	60	33						48						32	12-750
	192	144						165						*	
														750	
														150	
														61	
														60	
														60	

*This subject classification included as a part of another subject classification in this field.

TABLE 12 Continued

COURSE NUMBER	CARRIER TITLE	3 YR R.N., R.H., LPN NA	DENT MED ASST TECH	DENT MED SBC TECH	HY TECH	PT PTA OT	MED LAB ASST TT	M.R. M.R. LHR TECH	RAD TOTAL TECH	TOTAL RANGE					
11 Nursing Medical Surgical		320 3768	318 1188	400 1034	158 810					158-3768					
12 Vocational Relationships			24 84	7 7			*	*		7-84					
13 Ethics, Professional	15	16	12	24	10	15	8 78	30 78	5 87	10 10	75 75	30 30	5-310		
14 Nutrition	12	32	16	5	30		30 32			*	*		5-76		
15 Mathematics	12 72	48 48	75 128	5 75	60 90	75 60		60 60		8 17	180 180	45 45	8-160		
16 Psychology, General	30 160	48 55	16 16	36 128	24 75	45 90	45 60	45 48	60 75	45 45	30 345	6 48	* *	25 45	
17 Health, Personal and Community	36 40	22 22	18 54	30 30		30 30	32 32	32 32	4 15		32 32			4-54	
18 Human Relations	12 1322			4 4		45 52				8 8	96 96			4-1322	
19 Sociology	15 144	33 55	10 50				45 75	45 120				45 45		45 585	
20 Microbiology	36 256	55 128	16 16	30 30	96 880	60 60	90 90	75 75	6 6	15 15	5 128	40 40	120 660	15 120	5-880
21 Pediatrics	112 916	112 240	156 270							8 8	45 75	21 63		8-916	

TABLE 12 Continued

CAREER NUMBER	TITLE	CAREER NUMBER	3 YR 2 YR			DENT MED RAD DENT DENT			PT	FTA OR	FTA IT	ASST LIBR TECH TECH	TOTAL	MED M.R. M.R. RAD
			R.N.	R.N.	LPN	NA	ASST	TECN SEC	TECN HY	TECH	ASST	LIBR	TECH	TOTAL
22	Nursing, Psychiatric	120	144	92							12	45	44	12-460
		460	240	166							45	165	44	
23	Obstetrics	109	128	120										21-816
		816	240	448										
24	Pharmacology	18	32											9-231
		64	231											
25	Theology	31												31-525
		120												
27	First Aid	18	10	30										10-45
		18	10	30										
29	Physics	24	55											35 10-193
		24	55											
30	Zoology	99	99											45-180
		99	99											
31	Nursing, Geriatrics	75												14-158
		75												
34	Psychology, Applied										30	52	45	30-90
											90	52	45	
36	Dental Assisting											90	32	32-90
												90	32	
40	Chemistry, Inorganic												80	80

TABLE 12 Continued

TABLE 12 Continued

CODE NUMBER	CARRIER NUMBER	TITLE	3 YR CARRIER NUMBER	2 YR R.N.	VR R.N.	DENT LPN	MED NA	RAD ASST	DENT TECN	MED SEC	RAD TECN	DENT PT	DENT PTA	RAD PTA	DENT TECH	RAD TECH	M.R. ASST	M.R. TECH	RAD TECH	TOTAL RANGE
61	Office Machines			30													135			30-144
62	Office Practice			75													144			15-316
63	Secretarial Practice and Procedures			15													45			4-350
64	Terminology			316													45			
65	Typing			72													350			
66	Economics			350													4			
68	Administration, Departmental			75													30			5-600
74	Radiation Safety			145													145			306
78	Radiography, Intra-Oral			105													90			
81	Radiation Physics			90													90			2-654
82	Radiation Therapy			90													12			654
				90													12			15-338
				90													12			338
				90													12			338
				90													12			142

TABLE 12 (continued)

CARRIER	3	VR	2	VR	DENT	MED	MED	RAD	DENT	DENT	MED	LAB	M.R.	M.R.	RAD	TOTAL	RANGE				
TERM	R.N.	R.N.	LPN	NA	ASST	TECN	SEC	TECN	HY	TECH	PT	PTA	OT	OTA	RT	ASST	LIBR	TECH	TECH		
CARRIER	NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
83	Radiographic Isotopes										45	30							22	22-257	
84	Anesthesia										45	158							8	8-60	
85	Dental Anatomy										60	*	*						40	60-112	
86	Clinical Practice, Dental										60	112							560	210-560	
87	Dental Health										60	60	560						560	60-640	
88	Orientation, Dental										60	60	640						256	45-60	
89	Dental Materials										60	60	45						45	45-60	
90	Physical Agents, Physical Therapy										60	60	45	225					30	30-1215	
91	Neurology										60	60	45	225					150	15-1108	
92	Clinical Assignment, Physical Therapy										60	60	120	120					120	60-675	
94	Orientation, Physical Therapy										60	60	105	105					18	30..75	
											675	675	270	270					30	48	75

TABLE 12 Continued

COURSE NUMBER	CARRIER NUMBER	TITLE	3 YR	2 YR	DENT	MED	RAD	DENT	MED	RAD	DENT	MED	RAD	LAB	M.R.	H.R.	RAD	TOTAL RANGE		
95	Physical Therapy														30	195				
															285	195				
96	Therapeutic Exercise														30	120	15	223		
															1330	120	225	223		
97	Orientation, Occupational Therapy														30	40				30-60
															60	40				
100	Prin. and Pract., Occupational Therapy														60	157				60-1575
															1575	157				
101	Kinesiology														30	30				30-596
															596	210				
104	Clinical Assignment, Occupational Therapy														480	348				348-3600
															3600	348				
105	Tests & Measurements, Physical														45	15	16			15-121
															121	30	16			
114	Orgn. and Adm. Med. Rec. Librn.														60	*				60-460
															460	*				
115	Directed Practice, Med. Rec. Librn.														36	20				20-505
															505	360				
116	Med. Rec. Sci., Med. Rec. Librn.														100	65				65-1623
															1050	1623				
118	Med. Rec. Sci., Legal Aspect														30	5				5-84
															84	20				

Table 12 reveals that there is a very wide range in the commonality, expressed in total clock hours of required training, for a given subject classification common to and required in several different paramedical fields. For example, consider the general subject classification of microbiology--among the most common--required in 14 of the 20 paramedical education programs studied. A synthesis of data from Table 12 reveals the total minimum and maximum clock hours required in the study of microbiology in 14 paramedical career programs to range as follow:

<u>Code</u>	<u>Career Requiring Microbiology</u>	<u>Range in Clock Hours</u>
1	Three-Year Registered Nurse	36 - 256
2	Two-Year Registered Nurse	55 - 128
3	Licensed Practical Nurse	16 - 16
5	Dental Assistant	30 - 30
6	Medical Technologist	96 - 880
7	Medical Secretary	60 - 60
8	X-ray Technologist	90 - 90
9	Dental Hygienist	75 - 75
11	Physical Therapist	6 - 6
13	Occupational Therapist	15 - 15
15	Inhalation Therapist	5 - 128
16	Medical Assistant	40 - 40
17	Laboratory Assistant	120 - 660
18	Medical Record Librarian	15 - 120

Similar comparisons like those above can be abstracted from the contents of Table 12 for each of the subject classifications required in two or more of the paramedical education programs studied.

CHAPTER IV

MAJOR FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

1. An analysis of 20 paramedical career programs revealed that 2,613 course titles could be assigned to 126 different general subject classifications.

2. Of the 126 general subject classifications, 48 were not common to any other paramedical field. These 48 general subject classifications, not common to any two paramedical career programs, in all probability would not be considered as part of a core program for training paramedical personnel.

3. Seventy-eight of the 126 general subject classifications were common to two or more paramedical fields.

4. Of the 2,613 course titles 34 were sufficiently unique to be classified under a general category subject classification "O" for uncommon. These courses titles, in all probability, would not be considered as a part of a core program for training paramedical personnel.

5. Of the 20 paramedical career training programs commonality of general subject classifications was greater among those for three-year registered nurse, two-year registered nurse, licensed practical nurse, dental hygienist, medical secretary, radiologic technologist, medical assistant, inhalation therapist, physical therapist, occupational therapist, medical record librarian and medical technologist than among the remaining eight programs.

6. Of the 20 paramedical career training programs commonality of general subject classifications was not as great among training programs for nurse aide, dental assistant, dental technician, occupational therapy assistant, medical record technician, laboratory assistant, physical therapy assistant, and radio-isotope technician when compared with the commonality of general subject classifications among those listed in number 6, supra. This is to be expected inasmuch

as these careers generally require fewer skills, and a shorter time in training than most of the other careers studied.

7. Commonality of general subject classifications was greatest between:

- a. three-year nursing and two-year nursing
- b. three-year nursing and licensed practical nursing
- c. three-year nursing and dental hygienist
- d. medical secretary and medical assistant
- e. dental hygienist and dental assistant
- f. physical therapist and occupational therapist

8. Of the 78 general subject classifications common to two or more paramedical careers, general education courses ranked first; anatomy and physiology second; microbiology and uncommon courses third; anatomy, professional ethics, general psychology, and elective courses fourth; and medical terminology fifth as subject classifications commonly required.

9. The minimum and maximum total clock hours required in training for any given subject classification required in the several different paramedical fields varied extensively. Curriculum developers should study Table 12 carefully in light of the objectives of their own particular paramedical education programs before developing a "common" course which students from several paramedical education programs would study. At this point, it would appear that more information is needed before recommending the exact subject classifications and paramedical education programs which could and should be combined.

10. Standards for training, as regards courses and clock hours required, varied greatly among the 20 paramedical career programs studied. This condition was to be expected since obviously some of the paramedical careers call for greater knowledge and skill than others.

11. The educational programs for the same career in different training institutions revealed much variation relative to the particular courses required and with respect to the time spent in clock hours of either lecture, laboratory, and/or clinical practice experiences. This was particularly noticeable in the non-accredited programs.

12. The wide variation of titles utilized to describe courses among the many training institutions in the same and in different paramedical careers made comparisons difficult in some instances and nearly impossible in a number of cases. Within programs for the same paramedical career similar course content carried many different course titles, some of which were difficult to assign to one general subject classification because they partook of the nature of two or more subject classifications. Refer to Table 7 for courses classed as "Nursing Trends", for example.

13. Some paramedical education programs do not meet the standards for accreditation of any recognized national medical or paramedical accrediting agency.

14. The Council on Medical Education of the American Medical Association had established minimum essentials for accrediting training programs in seven of the 20 fields studied: medical technologists, radiologic technologists, medical record librarians, medical record technicians, occupational therapists, physical therapists, and inhalation therapists. Minimum essentials had also been established for three-year, two-year and license practical nurse programs by the nursing associations. The minimum essentials for some of these careers had been in force several years and some were under study for revision. In the above 10 paramedical career fields the educational programs tended to be more standardized and varied to a lesser degree.

15. It was apparent that many paramedical personnel were holding titles and positions in various paramedical careers without having completed an accred-

ited training program. Some personnel held positions in these careers as a result of their work experience in hospital or health service facilities over a period of time. The limited number of accredited training institutions have not been able to supply enough formally prepared paramedical personnel graduated from accredited programs to meet the demand for health services. Many small hospitals have not had the time, facilities, and personnel to conduct formal programs of training which could meet accreditation standards.

16. The amount of general education required in most paramedical programs varied considerably in each of the specific areas of general education. The variation was due in part to the subject classification given to a particular general education course given by curricular analysts. In some cases, a course which might be commonly regarded as general education was classified as a technical course by some institutions for a particular career field, while in another institution for the same career the same course was classified as a general education course.

17. It is recommended that a series of studies be conducted of the time and motion requirements of each paramedical career investigated in this research. Such a series of studies in each career would ascertain what relationships there seem to be, if any, between what a student has to learn and what he is required to practice on the job. The present study suggests there is some disagreement among paramedical educators and curriculum developers with respect to the demands in several paramedical careers as evidenced by the different requirements in clock hours of study to prepare personnel to perform certain specific functions on the job.

18. Since certain of the different paramedical education programs required identical course experiences, it seems appropriate to suggest that curriculum developers could cooperatively combine courses, classes, faculty, facili-

ties and materials to more economically and efficiently prepare personnel for responsibilities in certain paramedical fields. As indicated earlier, behavioral objectives need to be identified more precisely than now seems to be the case, before cooperative activities to combine forces will bear fruitful outcomes.

CHAPTER V

IMPLICATIONS FOR FURTHER RESEARCH

1. Since there seems to be a difference of opinion among curriculum developers of paramedical education programs (as evidenced by the extensive differences in clock hours required in similar courses of study and the different courses of study prescribed in the same paramedical field) the implication exists that a study need be conducted in each of the paramedical careers of the tasks performed by the practitioners. An analysis of the job requirements, when compared with the curricular experiences presently programmed for a paramedical student, might suggest the need for a different set of learning experiences to prepare them for the job. It may possibly be the job requirements are such that a subdivision of speciality responsibilities exist which make it feasible to create additional and new paramedical careers. Hypothetically, one might suggest a possible solution to the problem of a shortage of paramedical personnel is to reduce the preparation period for the job. If the job specializations can be narrowed and the preparation periods shortened as a result of curriculum revisions and the creation of new paramedical careers, then logically one might expect paramedical education programs to have fewer drop-outs and thus produce a greater supply of graduates. The opposite rationale might produce similar results, also. Perhaps the combining of paramedical education experiences might permit a program to produce individuals in the same period of time who can perform a greater number of tasks. In other words, the present study suggests the need to examine every facet of our paramedical preparation programs. Certainly the present different approaches to the same objective suggest the need to examine each approach as well as some other innovative approaches.

2. This study also suggests the need for developing accrediting agencies to help upgrade those educational programs where, at the present time, no accrediting agencies exist. Furthermore, in those paramedical career fields where accreditation standards are enforced there is reason to suggest greater efforts on their part be made to exert leadership in promoting experimentation and innovation in curriculum development.

3. There appeared to be a suggestion that General Education requirements (e.g., communications, humanities, social and behavioral sciences, science and mathematics, and physical education) were required irregularly among the various paramedical programs studied. This implies the need to determine what experiences in this area of study are necessary for each of the careers. Certainly, in metropolitan areas much of this content could be taught in a centrally located school rather than each institution expending time, talent, facilities, and finances for small classes of students. At the present time, this research reveals that much diffusion occurs in the area of General Education. Consolidation of content, faculty, facilities, and finances need be experimented with in order to bring about greater efficiency in the utilization of each. Certain technical courses fall into this same category and in these instances the implication suggests a similar consolidation, too.

4. This study directly suggests that programs which prepare paramedical personnel reflect the personal philosophies of the educators who have developed their curricula. One should expect this situation to develop and obtain, however, it is this condition which implies the need for research to determine what philosophical approach to a curriculum is more effective in terms of the tasks to be performed by the

practitioner. How much lecture, laboratory, and/or clinical practice experiences are necessary? While some of each must of necessity be required, the wide variation programmed experiences required in identical courses for identical careers suggests little research has been done to answer the previous question.

5. The nature of the design and procedures of this research proposal and the time, manpower, and finances available were not fully adequate to examine comprehensively the 2,613 different courses of this study to the extent and in the detail and breadth which was desirable. This study revealed the need to attempt research with a much larger budget and with employment of full-time curricular analysts in order to accomplish a greater depth of analysis.

ADMISSION REQUIREMENTS REPORT

Division _____

Job _____

Hospital or School _____

Reporter _____

	Demonstrations Discussions Lectures Seminars	Directed Clinical Experience	Laboratory Experience	Total Clock Hours					
High School Graduation Required?									
Yes _____	No _____								
High School Courses Required?									
1. _____	2. _____								
3. _____	4. _____								
<u>Post High School Courses Required Before Admission to the Technical Training Program:</u>									
1. _____									
2. _____									
3. _____									
4. _____									
5. _____									
6. _____									

APPENDIX A

Indicate clock hours under each category of experience. To change semester hours to clock hours consider one semester hour as equal to: 15 clock hours of lecture, 45 clock hours of laboratory, 75 clock hours of clinical or supervised practice.

Prop. Poem 1a

ADMISSION REQUIREMENTS REPORT

Division Job

Hospital or School Reporter

EMRP FORM 2

TECHNICAL TRAINING REPORT

Division

Hospital or school

Reporter _____
Job _____

Indicate clock hours under each category of experience. To change semester hours to clock hours, consider one semester hour as equal to: 15 clock hours of lecture, 45 clock hours of laboratory, 75 clock hours of clinical or supervised practice.

APPENDIX D

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PMRP FORM 4

FIRST PROGRESS REPORT

ADVISORY COMMITTEE RESEARCHER _____

PARAMEDICAL FIELD _____

HOSPITAL AND/OR EDUCATIONAL INSTITUTION _____

DATES COVERED BY REPORT _____

PMRP FORM 5

RESOURCES MATERIALS

PARAMEDICAL FIELD _____ + RESEARCHER _____

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.
- 11.
- 12.