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ABSTRACT

This document is a compilation of 17 brief final reports resulting from research and curriculum projects carried out by faculty members of St. Louis Community College at Forest Park during released and extended time. Each report includes a project title, the name of the principal investigator, number of credit hours released, and college division. A statement of major objectives, a description of methods, materials, and procedures used, a summary of results, and major conclusions of each project are presented. This document illustrates the diversity of instructional development activities which faculty undertake under released time programs. (JDS)

Office of Research and Development

St. Louis Community College

at Forest Park

Released and Extended Time Projects Committee 1976

RELEASED AND EXTENDED TIME PROJECTS

COMMITTEE

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PROJECT TITLE:	Development of a Laboratory Manual for Positioning 33.100 and 33.101
PRINCIPAL INVESTIGATOR:	Richard T. Chavez
CREDIT HOURS:	4
DIVISION:	Life Science (Radiologic Technology)

Forest Park Community College has invested approximately $45,000 in an energized x-ray laboratory and a phantom designed to be used for radiographic positioning. It is the feeling of all those involved in radiologic technology that under present conditions, the above mentioned equipment is not being used to its maximum instructional effectiveness in positioning, and this is due to the fact that there has been, to date, little research done to investigate the capabilities of this "phantom", nor is there a commercially produced publication tailored to the particular aspects of the "PIXY" phantom.

Major objectives were: To devise such a media particularly tailored to the needs and wants of Forest Park Community College in order to increase the effectiveness of laboratory instruction in positioning 33.100 and 33.101.

Brief description of methods, materials and procedures: The first need to be met was to establish exactly what the positioning capabilities and limitations of the "PIXY" phantom were. After establishing the above data, a set of radiographic exposure factors was established for all the various positions commonly taught in Positioning 33.100 and 33.101.

After establishing both of these critieria, a lesson plan was made for each unit in positioning. These lesson plans encompass both the mock and real exposure situations as well as learning activities and objectives for each lesson and each individual position.

Summary results: The positioning capabilities of the "PIXY" phantom were assessed and found to be somewhat lacking, however, with proper immobilization and restraining devices, most routine positioning may be done.

The exposure data for use with the "PIXY" phantom were established using conventional procedures to produce a fixed KVP exposure guide. These exposures were then checked by making actual exposures on the "PIXY" phantom. Although the manufacturer claims that this phantom has actual body density with regards to x-ray penetration, it became evident in the experiment that considerably less exposure be used on "PIXY" than on a real patient of the same dimensions. Therefore, some adjustments in technical factors were necessary to maintain proper radiographic quality.

Major conclusions: Lesson plans for each unit were made and then tailored to the types of experience deemed desirable in a positioning lab session.

PROJECT TITLE: Mini-Course Survey Analysis (1974-75)

PRINCIPAL INVESTIGATOR: S. Jo Clayton

CREDIT HOURS: 2

DIVISION: Social Science

The basic problem addressed is the continuous search for means and ways to improve the quality of offerings in Political Science. The purpose of the project was to assess, by survey research, student reaction to alternative modes of education instituted in the introductory course.

Major objectives were: That students learn in many ways in addition to the lettered tradition. Students were placed in an active role in planning and selecting mini-courses and mode of learning. The objective was to obtain feedback from the people involved and to make adjustments in offerings based on their reaction.

Brief description of methods, materials and procedures: A questionnaire was designed to monitor student opinion. Data were collected in the end of fall and spring semester (1974-75). A codebook was designed, the data was coded and keypunched. A frequency count and bivariate correlations were run. A summary of the quantitative and qualitative results was written.

Summary results: Positive reaction to self-directed study was found. Racial differences to this mode of learning disappeared. Initial difficulties with computer assisted instruction were corrected. Overall reactions generally were favorable. Game simulation was exceedingly well-liked among the students who chose this mode of instruction. Special needs of one-quarter of our black students were identified. Subject content was a major concern of the students. A high percentage felt departmental goals were achieved.

Major conclusions: Dr. Zant and Dr. Clayton will continue the mini-course concept with adjustments as needs are identified. A much better delivery of services are being offered without sacrificing intellectual quality.

PROJECT TITLE:	Computer Assisted Programming for Machine Tools
PRINCIPAL INVESTIGATOR:	Jerry Craig
CREDIT HOURS:	1
DIVISION:	Physical Science (Engineering Graphics)

Utilize the typewriter/tape punch terminals presently available in the Computer Lab to prepare punched tapes to operate the Slo-Syn Numerical Control machine in the Manufacturing Processes lab. Students will be able to use the industry standard "APT" computer language to program machine tools.

Major objectives were: The typewriter/tape punch terminals in the computer lab require special computer assisted programs to convert data into the proper format to operate the Slo-Syn controller. A special program was required to do this.

Processing of the APT language programs requires a very large computer. McDonnell Automation Company will do this processing and return data to Forest Park Community College for final post processing into form for the Slo-Syn controller. A special program was required to do this.

Research the possibility of developing a program similar to APT for use on the Forest Park Community College computer.

Brief description of methods, materials and procedures:
An interested student, Mr. William Woods was trained in the operation of the Slo-Syn controller. Mr. Woods then worked with Mr. Guy Vils of the data processing department to write the special programs to convert the data into the proper formats.

McDonnell Automation Company was contacted on the procedure for processing student programs; the input and output formats required.

Several trial routines were developed in an attempt to provide a language similar to APT on the Forest Park Community College computer. The development of such a program was determined to be beyond the scope of this project.

Summary results: With the assistance of Guy Vils in writing theSN/C program now available at Forest Park Community College this program is on line at all times for student use.

When the new computer at McDonnell Automation goes on line in June, the data processing department will be able to process APT language programs and punch tapes through the terminals in the Forest Park Community College computer lab.

In the attempts to devise a computer language similar to APT for use at Forest Park Community College we learned considerable practical computer programming. Many of the subroutines are of use in calculation for manual programming and will be left on the computer for student use.

Major conclusions: There seems to be considerable local need for persons trained in N/C programming. Students completing a course in programming (APT) can expect employment.

PROJECT TITLE:	How to Prepare for an Interview
PRINCIPAL INVESTIGATOR:	Mary Fuller
CREDIT HOURS:	2
DIVISION:	Business

The purpose of this project is to show students how to market their knowledge, skills, and experiences most effectively when looking for a job.

Major objectives were: To show students how to prepare and present themselves for an interview. To assist students in identifying sources for self-evaluation. To assist students in the preparation of pertinent documents for job procurement. To provide students with adequate marketable skills to deal directly with the local community and the employment field.

Brief description of methods, materials and precedures: Student and instructor participation in preparing resume, letters of application, selection of companies; identifying titles of persons hiring. Video-tapes of positive interviews and a negative interview has been prepared for evaluation and critique. Guidelines are set forth for paragraph format, letter structure, phrasing and other instructional aids in the preparation necessary for the interview.

Summary results: This Learning Packet on, "How to Prepare For An Interview," can be utilized in all department courses of the College and industry; as well as inservice upgrading for job promotions and hiring.

Major conclusions: Job interview techniques seem to work best where it is felt to be needed by the student and instructor the most and when it is made a part of an integrated instrucitonal process.

PROJECT TITLE: Laboratory Manual for Engineering Circuits I

PRINCIPAL INVESTIGATOR: George Humphreys

CREDIT HOURS: 3

DIVISION: Physical Science (Engineering)

There were no manuals for students use in labs in Engineering Circuits I and II (30.215 and 30.216).

Summary results: The prepared manual contains instructions to the student on keeping a log book and preparing laboratory reports, twelve experiments for Engineering Circuits 30.215, and an appendix describing a circuit I designed to be used with this manual.

PROJECT TITLE:	Effects of Language Insight On Students' Communication Skills And Attitudes Toward Language.
PRINCIPAL INVESTIGATOR:	Geraldine Hynes
CREDIT HOURS:	4
DIVISION:	Humanities (Language Insight)

The Language Insight program is a twelve credit core-course for freshmen. It combines the objectives of English Composition I, Oral Communication, Readings in Contemporary Prose, and Basic French or Spanish Conversation into one set of objectives. The resulting course is team-taught, with one faculty member from each of the four departments working with each section. Two sections, one during the day and one during evening hours, have been offered each semester since Fall 1973, except for the Summer 1974 session, when one section only was offered. Enrollment demands necessitated the opening of a third section of Language Insight in the fall.

Major objectives were: To experiment and pinpoint some of the unique benefits and services Language Insight offers its students. Also needed to determine what advantages the Insight format itself presents. Although data had been collected over the past six semesters, thus far there had been no systematic appraisal of the data concerning students' achievements and attitudes. This study proposed to determine to what extent past Language Insight students have met the language performance and attitude objectives set forth by instructors and to compare their results with those of students who have completed the four component courses outside of the Language Insight context.

Research Questions:

1. What is the Language Insight Student Profile? How does it compare to control groups and the FPCC student population in general?
2. To what extent do Language Insight students meet the performance objectives of the four courses combined in this program? How does their performance compare to that of students in control groups?
3. What attitudinal changes occur in Language Insight students regarding language, language use, and the self-perceived language abilities? How do these attitudinal changes compare to those of students in control groups?

Brief description of methods, materials and procedures: Five instruments were devised and administered to collect the data used in answering the Research Questions above: a Student Information Form, a Language Attitude Inventory and 3 skills tests (a Diagnostic Reading Test, a Basic French Conversation Achievement Test, and a set of topics for impromptu speeches). The instruments were administered on a pre/post basis to both experimental (Language Insight) and control groups over six semesters. Resulting data were grouped and organized so that statistical tests could be applied.

Specifically:

1. Totals were summed and percentages computed to reveal demographic characteristics of Language Insight students. These were compared to those of control groups and of the FPCC student population in general.
2. Differences, mean differences, and standard deviations were computed and the t-test for the difference between means was applied to determine the significance of Language Insight students' changes in language attitudes during the semester. Comparisons were made between experimental and control groups.
3. Differences, mean differences, and standard deviations were computed and the t-test was applied to determine the significance of differences in achievement of performance objectives (communication skills) between experimental and control groups.

Summary results: The statistical evidence shows the language Insight program to be attracting a certain type of FPCC student--one who is slightly older than the average student, who has been out of school longer and has not experienced many prior academic successes. He is returning to college with some apprehension about his own abilities, but he expresses ambition and a desire to improve himself. He is not seeking career taining so much as a broadly defined "better education."

The results of the skills tests in three of the course components show that there is no statistically significant difference between the improvement of experimental and control groups. That is, despite the unique format of Language Insight and manner of presentation of the various behavioral objectives, our students gained just as much in speaking, reading, and French skills as did students in conventional sections of these courses.

The results of the Language Attitude Inventory show that the Language Insight students changed their attitudes more drastically over the semester than any control group. They gained the most sophistication about the nature and functions of language

(as measured by Part 1 of the Inventory) and showed the greatest increase in confidence toward their own language abilities (as measured by Part 2).

Major conclusions: It is clear that the Language Insight program is helping to fulfill a major goal of FPCC -- to serve the particular needs of its students. This study has defined the characteristics of a segment of the FPCC population -- the group who enrolls in Language Insight. We have discovered that these students testify to a lack of communication skills and a desire to improve them. Language Insight, provided the same opportunities to increase these skills as does conventional reading, oral communication and foreign language courses. In addition, it provides a unique opportunity for students to gain psychological benefits. It is implied that the Insight program improves its students' chances of success in the academic environment, helping them to achieve the educational goals they set for themselves.

PROJECT TITLE: Multi-Level German

PRINCIPAL INVESTIGATOR: Geraldine Moser

CREDIT HOURS: 3

DIVISION: Humanities (German)

The material for the program is based upon Geraldine Moser's teaching experience and on research materials, viz.,
(1) Individualized Foreign Language Instruction by Frank M. Crittner and Fred LaLeike, National Textbook Co., 1973
(2) Individualizing Foreign Language Instruction, Proceedings of the Stanford Conference, May 6-8, 1971, edited by Howard P. Aleman and Robert L. Politzer, Newbury House Publishers.
(3) Responding to New Realities Chapter 8, Individualization and Personalization by June Phillips, pp. 219-263, National Textbook Co.,, 1974. The Challenge of Communication, chapter 6, Tailoring Language Instruction to Student Needs" by Elizabeth G. Joiner, pp. 151-185, National Textbook Co., 1974.

Major objectives were: The aforementioned material provided up-to-date information on:
(A) the theory andp philosophy of individualized instruction
(B) classroom management in individualized programs
(C) how to begin and to expand an individualized program
(D) the role of the teacher in an individualized classroom
(E) developing curriculum for individualizing instruction and
(F) analyzing the student-teacher relationship in the foreign language classroom.

Brief description of methods, materials and procedures: The project incorporates 20 lesson presentations that begin with strict side-by-side translation (German to English) with a gradual transition to partial translation then to new vocabulary only. Concomitant with this gradual transition is an expanded grammatical explanation via patterns and examples. This aids the student in learning the target language (German in this case) patterns by repetition at first and then examination of a particular structure to further his/her language development. Tapebook assignments parallel each textbook lesson and reinforce structural patterns in the target language -- these being assigned outside of the teacher-student contact time for review individually and in small groups. Beyond these procedures, achievement tests have been developed so that competency can be measured.

As each student reaches comprehension levels of 80-85% competency, he or she may proceed onto the next chapter. Remedial work for those who have not reached that level will depend on their particular lack in skill. They would be provided with assignments outside of classroom time to improve their skills and retake the test when they are ready. The final exam will be a passage from the textbook"Lesestuck"or a topic of the student's choosing to be presented in German.

Major conclusions: In conclusion, the project may be used as a model for foreign language instruction. It can be used in its entirety or in part as resource material by language instructors. The material is presented in sequential order so that the student can master one structure and move onto another pattern, i.e., chapter. The Achievement Test is designed in the early lessons as a multiple choice model to test student recognition. Further on, the student is asked to translate from English and to answer in German, both of which would demonstrate the student's ability to recognize not only structural patterns but also to respond in German to already learned patterns, i.e., phrases. The testing becomes more complicated in design as more variety occurs in language usage. The program should provide strong basic skills for the student and flexible format for the instructor.

PROJECT TITLE: "Curriculum Guide for a 3 Credit-Hours Transferable Course in Children's Literature"

PRINCIPAL INVESTIGATOR: Carol Niederlander

CREDIT HOURS: 3

DIVISION: General Curriculum (Reading Skills)

The purpose of this extended time project was to develop a curriculum guide for a three credit-hours transferable course in children's literature.

Major objectives were: (1) To choose an appropriate text, complete a thorough study of it, and construct a course outline covering the various units to be taught; (2) To read as many classic and quality children's books as time permits, such books as the Newberry and Caldecott award winners; (3) To prepare a list of good children's books to submit to the Forest Park Community College library for ordering, so as to establish a basic collection necessary for student use; (4) To review the extensive critical literature dealing with children's literature; (5) To locate other instructional aids that would be helpful additions to the course--such things as film versions of children's books; contact other instructors and professionals in the field so as to determine standard course requirements and to ensure the quality of Forest Park Community College's children's literature course.

Brief description of methods, materials and procedures: Before selecting the text suggestions from Kathryn Nelson, Human Services, Dr. Susan Rick, whose area of expertise is early childhood education, and Carol Hess, Forest Park Community College librarian who has worked in elementary schools were considered. The 800 page textbook, Children and Books by Arbuthnot and Sutherland, was chosen and considered by all to be one of the best available.

A list of books was prepared covering all major categories of children's literature for all three major age groups--young children, middle-grades children, and older children--to submit to the library staff for ordering.

Summary results: A detailed course outline designed to be followed day by day for this fall's semester calendar was developed. Each day's major topic, the chapter and pages of the chapter to be covered, and additional pages describing instructional techniques

are all noted. The book order list of 360 books, all noted by major category and by age-grouping in several categories is complete. Appropriate instructional aids have been found and names and phone numbers of area instructors located.

Major conclusions: The course will cover many areas--how to select books for children, how to tell stories and read to children as well as introduce students to the marvelous variety of excellent books now available for children--fables, folk tales, historical fiction, informational books, modern realistic fiction, fantasy, to name a few. This information will be of great use to anyone, parent of professional, who is interested in children.

PROJECT TITLE:	Course Development: Applied Behavior Modification
PROJECT INVESTIGATOR:	James Riley
CREDIT HOURS:	2 1/2
DIVISION:	Social Science (Psychology)

Behavior modification is an area that is receiving increasing emphasis in various applied settings (e.g., hospitals, correctional institutions, schools, etc.). Employees in such settings are currently finding it an asset to be acquainted with behavior technology. In spite of the large number of career programs offered at Forest Park, no course in applied behavior modification is available.

Major objectives were: to develop a course in applied behavior modification that is directly applicable to several of the career areas customarily offered on campus. Additionally, the course will satisfy the needs of the non-career student who wishes to know more about behavior modification.

Brief description of methods, materials and procedures: The course itself consists of three interrelated components: individual readings, classroom experiences, and individual application projects. Individual readings will provide a foundation for the understanding of the technology of behavior modification, with the primary reading source being a programmed text utilizing a behavioral approach. Classroom experiences will consist of audio-visual aids and demonstrations, in addition to the regular lecture/discussion format. Individual application projects will require the student to design, implement and summarize a short-term behavior change project, utilizing a behavioral approach.

The course will specifically begin with a brief history of psychology and a discussion of behaviorism as a system of psychology. Attention will then shift to elementary principles of learning and techniques of behavior change. The course will culminate with a discussion of behavior change strategies and ethical considerations involved in the behavior change process.

Major conclusions: Applied Behavior Modification will provide the career and non-career student with a thorough foundation in the principle theories and methods of behavior technology. The course will be offered during the Spring 1976 semester as a special problems course (95.293.01). While the course will be transferrable, at least as an elective, copies of the project report is being forwarded to department of psychology at local universities for a determination regarding its being equivalent to their respective courses(if offered) in behavior modification.

PROJECT TITLE: Enlargement and Reorganization of Art Department

PRINCIPAL INVESTIGATOR: Mary M. Stiritz

CREDIT HOURS: 3

DIVISION: Humanities (Art)

The slide collection of the Art Department was not an adequate teaching source for art course study. Many of the existing slides were inferior in quality, and there were serious historical deficiencies in the collection as a whole. In order to provide the most efficient use of the slide collection, it was necessary also to reorganize the filing system.

Major objectives were: Interest, enthusiasm, and success in the study and teaching of Art History are dependent on proper illustration of works of art in the classroom. Because the existing collection of slides frequently prevented the instructor from discussing in class major works of art which the student confronted in his textbook, the new slide resources will provide a better learning situation.

Brief description of methods, materials and precedures:

(A) Complete survey and inventory of the existing slide collection to determine slides needed in each period of art.
(B) Selection of the major works of art missing in the collection.
(C) Location of illustrations of the selected art works in library books for slide photography, and when not procurable in books, slides were researched from slides order catalogues.
(D) Labeling and identifying all new slides according to Artist, Title, Date, Location, and Source.
(E) Reorganization of the slide collection, including: correctly identifying mislabeled and unlabeled slides already present in collection; recovering misfiled slides; establishing new classifications to simplify and expedite findings and filing slides; entering all new slides.

Summary results: With the completion of this enlargement project the Art Department now has a teaching collection of slides that will meet the needs of introductory levels of study. The new slide resources will provide the fundamental visual material essential for effective classroom instruction, whereby the student can now benefit from classroom presentation of all works of art he encounters in his textbook. Furthermore, the enlarged collection will allow greater flexibility and possibility for all Art Department and Humanities courses.

Major conclusions: The reorganization of the filing system will greatly facilitate future use and additions to the collection. A set of instructions for slide care and filing has been formulated to ensure continued efficiency and maintenance of the collection.

PROJECT TITLE: A Film Critique Manual for Student Radiologic Technologists (shoulder girdle-lower)

PRINCIPAL INVESTIGATOR: Dwayne J. TerMaat

CREDIT HOURS: 4

DIVISION: Life Science (Radiologic Technology)

There isn't any text or manual available that teaches the student what specific criteria to use in evaluating radiographs. Since we have multiple lab sections it becomes a matter of chance whether all of the same criteria is actually taught in each lab. Therefore, a lab manual would standardize our instruction. Also, outside the lab or hospital the student only has notes from the criteria given in lab or lecture. A manual would provide a readily available visual source for the student to study film critique.

Major objectives were: (1) To provide x-ray students with a manual containing specific criteria to evaluate radiographs (since no such text is presently available). (2) To enable the student to study film critique "at home". (3) To promote film critique consistency in each lab and lecture section.

Brief description of methods, materials and procedures: The specific criteria to be used in evaluating each radiograph of the shoulder girdle and lower extremities must first be identified. Radiologists from affiliating hospitals will be asked to help identify all possible criteria that should be used. Then, radiographs that meet these criteria must be obtained. Some of these should be available from our campus file. Others will have to be obtained by searching through the radiology department film files of our affiliated hospitals.

Radiographs having certain errors will also be selected for the manual so that the student will be able to make a comparison between a radiograph of good quality and other radiographs containing the more common mistakes. Of primary interest will be the quality of the "positioning" and the "exposure technique". When all the radiographs have been selected they will be brought to District Office where negatives for printing will be made of them.

A manual can then be printed by the District Office Instructional Resources Department. A large quantity of manuals should be produced so that each year all students and faculty will have one.

With last year's extended time project successfully completed, this proposal becomes a continuation of the original project. In subsequent summers it is anticipated that the remaining body systems will be put into similar study manuals so that eventually there will be a film critique manual for the whole human body.

Summary results: At this point the manual has merely been written and the radiographs selected for publication. When published, the manual will first be used at that time. Therefore, no results or conclusions as to the usefulness of this manual or, of the intended objectives are known yet.

PROJECT TITLE: A Study of Literature of American Minorities

PROJECT INVESTIGATOR: Al Watt

CREDIT HOURS: 3

DIVISION: Humanities (English)

In each minority group (Chicano or Mexican-Americans or Indian-Americans, Asian-Americans and Black-Americans) the language is rich in its own unique form.

Major objectives were: Although the social and historical background should be a constant point of reference in the course, the literary analysis and interpretation which the course exacts would be advantageous, in that two primary objectives for the course would be fullfilled to establish an ethnic profile from social customs and beliefs expressed in the literature, and to make the student sensitive to the literary trends of the work studied. Moreover, this course is geared to the current times of cultural pluralism of overriding language barriers, of searching for self and cultural identity. The overall objective with reference to the college-wide goals, is to enrich the educational and academic goals of students, thereby, enlarging the scope of humanistic studies and an appreciation of cultural difference in our society.

Brief description of methods, materials and procedures: Students will be introduced to traditions and historical realities of Chicanos or Mexican-Americans, Asian Americans, Native-Americans or Indian-Americans and Black Americans all of which reveal the riches of a multi-cultural society; a pluralistic approach to examining the character and literature of various minorities in the United States will be utilized. Native-Americans as well as Black American have always known the power of Nommo(the spoken word) of their songs, narratives, oratory, legends. and poetry.

According to recent studies by the New York Time and other researchers, Mexican Americans, the nations second largest minority group, places the highest priority on education as a way to escape their social and economic problems; but often their offspring are victims of racism. There are more than six million Mexican-Americans in the United States, placing them second to Blacks in the minority-group size. Most live in the cities and their problems are urban ones.

Similiarly, the Chinese and Japanese immigration began in the late eighteenth century to this country; even though the Asian cultures were as rich and as old as the Egyptian and Hebrew, the Chinese in America were no more welcome than their Black American brothers who were brought to this country in chains. Nevertheless, as people they played a major role in the linking of cities of the west to the Pacific coast.

Summary results: The reading selections, although organized according to individual ethnic groups, have been chosen primarily to enable students to understand the h an experience. Kurt Vonnegut is right in stating that a greater awareness of others (minorities) is immediate and vital to our lives -- it is relevant.

Major conclusions: Writings by minorities are excellent vechicles for motivating students to appreciate the immigrant experience, particularly in the earlier periods of settlement. For this purpose it was found that Baderman/Bradshow's Speaking for Ourselves, a comprehensive multi-ethnic text which includes a collection of short stories, poems, essays, and dramas written by Asian, Hispanic, Native-American, and Afro-American writers. In this survey course, students would better be able to come to understand how changes must be met in one's life when "psychological roots" are transplanted to "foreign soil" (America).

Coorespondingly, students are being asked to wrestle with their own ideas and attitudes toward the inherent goodness in all men. Increasingly, according to the National Council of Teachers of English (NCTE) minority writiers are demanding and receiving from educational institutions the recognition of multi-ethnic courses (particularly, literature which focuses more on the internal view of ethnic writers.

PROJECT TITLE: Basic Science-With Chemistry Emphasis

PRINCIPAL INVESTIGATORS: Rose Davis
Joe Coffey

CREDIT HOURS: Rose Davis (3)
Joe Coffey (1)

DIVISION: General Curriculum

The purpose of the proposal was to develop a course of study outline for Basic Science with Chemistry Emphasis.

Major objecitves were: That a program of study specifically geared for preparing students for the college chemistry courses offered here at Forest Park Community College is needed, and that the development of such a course of study is possible.

Brief description of methods, materials and procedures: The investigators reviewed related literature and course of study outlines relative to the above. Interviews were conducted with both students and faculty in an attempt to obtain, evaluate and formulate a course of study skills.

Summary results: This investigation resulted in the construction of a course of study outline for Basic Science with Chemistry Emphasis whose objective, content and construction are designed to develop and/or enhance the student's ability to interpret written scienctific material, to associate known mathematical skills and concepts with similar concepts in chemistry, and to develop an understanding of the metric system of measurement and the ease in converting to and from the American system.

The investigation also revealed that there is no textbook presently available that will satisfy the needs of the course described in the outline submitted; consequently, several selected references have been recommended.

Major conclusions: One major conclusion of this investigation is that a textbook is needed for the proposed course, and it is the recommendation of the investigators that such a text be written.

Another major conclusion of the study suggest that a minimum degree of competence in certain mathematical skills are needed in order to take advantage of the preparation offered; therefore, the investigators recommend Math Lab (45.009) and Math Work (45.004) as prerequisites.

PROJECT TITLE: Development of Performance Based Audio-Visual Aids for use in an open Laboratory for Freshmen and Sophomore Clinical Laboratory Technology Students

PROJECT INVESTIGATOR(S): Mary Ann Honti
Jack Pennington

CREDIT HOURS: 3 Each

DIVISION: Life Science (Clinical Lab)

The CLT instructors are limited in the school-setting to teaching and manual application of practically all laboratory testing. This is good for understanding and manual skills, but lacking in some of the basic "more than manual" techniques. It is inconceivable that this, or any tax-supported institution could afford some of the sophistication in the hospital area. Therefore, to give better and more coordinated training and allow the students full background training in the school, the development of performance based audiovisual training aids is necessary.

Major objectives were: To develop audio-visual tapes explaining in full and showing by demonstration proper venapuncture techniques, and to develop audio-visual tapes explaining in full and howing by demonstration proper capillary puncture techniques.

Brief description of methods, materials and procedures: There is a great need by the clinical laboratory student at FPCC for audio-fisual instructional aids. The availability of these instructional aids commercially for our level student is almost non-existent. With this knowledge and the realization of the need for our students, we have made two audio-visual tapes describing venapuncture and capillary techniques.

St. Louis Veterans Hospital Administration, 915 North Grand Ave., was used for the shooting of the tape. Their full cooperation was extended.

Methods and procedures are as follows:
1. Visit hospital laboratories
2. Video-tape procedures as done in the laboratory
3. Write and record script to accompany the tape
4. Edit and finalize tapes and scripts
5. Insert slides as part of tape when necessary

1. Video-tapes, $55.00 each; maximum 1; $55.00

Summary results: Two audio-visual tapes were prepared, one describing the venapuncture procedure commonly used in the laboratory; the second was a detailed explanation of capillary techniques.

This project proved to be much more involved than Pennington and Honti had suspected; 100 hours were put in on just these two video tapes. They have on "story boarded" one other program which should be completed in the near future. Both could not, however, justify delay to this project for these two programs.

These two audio-visual tapes has a very significant contribution to the clinical laboratory department. Plus, since there is an overlap in the allied health fields, the chosen topics which would not only apply to the clinical laboratory student, but to other allied health students, i.e., nursing, physician's assistant, respiratory therapy, and medical office assistant, to mention a few. Other departments and programs will have access to the tapes with the same degree of freedom as the clinical laboratory technology program.

Major conclusions: With these audio-visual tapes prepared by college instructors, Pennington and Honti created an instructional contribution which will serve to better prepare the student to accomplish their training and function in the community as a well trained, knowledgeable member of the medical field.

PROJECT TITLE:	Development of Instructional Tool for the Study of Anatomy & Psychology
PRINCIPAL INVESTIGATOR(S):	Elsie S. Roush Layne Van Brunt
CREDIT HOURS:	3 Each
DEPARTMENT:	Life Science(Biology)

The purpose of this project was to develop a set of video tapes for use in Human Anatomy and Physiology (70.133-134). These tapes were to be demonstrations of anatomical dissection and of physioogical experiments. There is currently nothing of this sort available from other sources.

Major objectives were: To record on video tape the following demonstrations:

1. Physiological response of frog muscle to stimulus
   a. Preparation of frog gastrocenemius muscle
   b. Types of muscle contraction
   c. Physiological states of muscle
   d. Response to muscle stimulation
   e. Response to stimulation of sciatic nerve
   f. Effects of certain drugs on the neuromuscular junction

2. Anatomical demonstration
   a. Relation of specific anatomical terms to usage
   b. Use of anatomical terms in the study of osteology
   c. Demonstration dissection of major muscle groups
   d. Relation of muscle dissection to osteology study

Brief description of methods, materials and procedures:

1. Prepare outline of content material.
2. Confer with ITV for technical advise on "staging".
3. Establish timetable for filming.
4. Prepare and dissect specimens for filming.
5. Tape demonstrations.
6. Edit.
7. Prepare script or subtitles and dub audio.

Summary of Results: The following video tapes were prepared, and are listed in the ITV catalogue with these descriptions.

I. The dual objective method that correlates
   A. Study of vocabulary
   B. Study of bone

II. Place a bone in the anatomical position with a work picture
   A. Long and short bones
   B. Flat-irregular bones

Major conclusions: This project resulted in the preparation of tapes that will be used as teaching aids. These tapes, will be a real and important teaching tool. After seeing (and using) the final product, further tapes should be prepared relating to other units of study in Anatomy and physiology.

PROJECT TITLE(S)	Respiratory Technology-Formal Curriculum 3rd Semester (Rachel F. Stewart) Complete Curriculum-Respiratory Therapist (Anthony B. McDonald)
PRINCIPAL INVESTIGATOR(S):	Rachel F. Stewart Anthony B. McDonald
CREDIT HOURS:	6 Each
DIVISION:	Life Science (Respiratory Therapy)

Rachel F. Stewart - Respiratory Technology-Formal Curriculum 3rd Semester.

The basic problem is that the one year Respiratory Therapy Program is new and process of developing a formal curriculum is still in progress.

Major objectives were: 1. Continue the development of an organized curriculum based on the guidelines set by the American Association of Respiratory Therapy. 2. Construct learning objectives for classroom. 3. Work with Anthony McDonald in the design of behavioral objectives for clinical.

Brief description of methods, materials and procedures:

1. Organized material to be covered in each class.
2. Outlined major instructional units.
3. Divide units into lesson plans.
4. Outlined individual lesson plans.
5. Organized clinical objective booklet.

Using several textbooks and the guidelines set by the AART, the curriculum was outlined for two of the courses; Long Term Ventilation (38.074) and Clinical Medicine and Pulmonary Rehabilatation (38.075).

Class notes are available in the Respiratory Therapy Department.

Summary results: On file is a formal outline for four of the courses taught in the Respiratory Technician Program, plus lesson plan outlines which are given to the student at least each week.

Major conclusions: The addition of these two completed course outlines to the two that were prepared last semester strengthens the foundation upon which the Respiratory Technician Program is being constructed.

Complete Curriculum - Respiratory Therapist Program

The Respiratory Therapist Program has no formal curriculum outline or behavioral objectives set for the second semester of this year. Classes up to this point were taught by part-time teachers and no uniformity of goals or teaching programs were established.

Major objectives were: Building up a complete curriculum for the second semester of this program, both in the freshman and sophomore areas is essential. This can be built onto the first semester curriculum and two year course outline established this past summer. The curriculum needs to be developed for three reasons. First, the program needs to be layed out so that each topic is given the proper stress, time and teaching technique. Second, I hope to establish a complete set of behavioral objectives for the course and apply a module system. Third, our students take their clinical sessions at various hospitals in the city. We need to have a clearly established curriculum so that we can coordinate the classroom learning with the clinical.

Brief description of methods, materials and procedure: Mainly books and slides concerning our field will be used. The suggested curriculum outlined by the American Association for Respiratory Therapy will be utilized. Also, we expect a great deal of input from our advisory committee. which was a strong proponent in favor of building a formal curriculum plan.

Major conclusions: The addition of these two completed course outlines to the two that were prepared last semester strengthens the foundation upon which the Respiratory Technician Program is being constructed.

PROJECT TITLE:	Open Math Lab Learning Center
PRINCIPAL INVESTIGATOR:	Arthur Visor Sharon Watkins
CREDIT HOURS:	1 1/2 each
DIVISION:	General Curriculum (Basic Academic Study Skills)

At Forest Park Community College there are many students that are unsuccessful in math courses. Many of these students need remedial and tutorial assistance. Because of the large number of students and the kinds of problems of those who need help, the individual instructors are unable to handle the situation during office hours. Several instructors have attempted to include the teaching of math skills along with other course material in the classroom but have found it virtually impossible to reach all students. Others have required students to attend special class sessions for math help only and have found that students need much more help and time than they had anticipated.

Major objectives were: Would be to design an open math learning center for the delivery of special services to improve the math skills of all students who need help at Forest Park.

Brief description of methods, materials and procedures: First a plan was designed for an open math lab. The feasibility of the design in terms of staffing, budgeting, resources and materials were investigated. After a plan that can be implemented was devised, the math lab organization was altered to accommodate the necessary changes.

Major conclusions: Because of limited facilities, materials and student assistants and lack of availability of sufficient instructional assistance, the open math lab would start on a small scale. Gradually the services would be extended to the entire college.

PROJECT TITLE: Self Study of Forest Park Nursing Courses to Determine the Feasibility of a Major Curriculum Revision

PROJECT INVESTIGATOR(S): Marybelle Barnes
Amelia Casmier
Patricia Hall
JoAnn Hediger
Lucille Mitchell
Joan Nelson
Dolores Reher

CREDIT HOURS: 2 Each

DIVISION: Life Science (Nursing)

The nursing faculty reached the conclusion that a major curriculum change is indicated as a result of on-going curriculum and study. Curriculum changes are needed in the following areas:

1. Organization of content:
   Rationale: provide greater variety of teaching methods
   provide focus on application of essential principles and concepts
   provide clearly identifiable threads

2. Individualized learning:
   Rationale: provide self pacing
   provide variety of learning styles
   provide self discipline
   provide opportunity for increased responsibility in learning activities

3. Evaluation by mastery of behavior objectives:
   Rationale: provide mastery of objectives by levels
   simple to complex - i.e. achievement of simple behavioral objectives before progression to more complex objectives.
   provide mastery of specific concepts and principles
   provide mastery of specific skills
   provide self evaluation

Major objectives were: (1) To investigate a modular system of learning. (2) To investigate educational modes of pacing. (3) To investigate a format for courses that would be more conducive to effective student learning. (4) To investigate means to reduce current withdrawal/failure rate. (5) To investigate feasibility of adopting one commercially available format, (Wiley's Learning Experience Guides - LEGS) which is intended to facilitate objectives #1 thru #4. (6) Insure better use of already developed clinical and theoretical objectives as criterion for student progression within the course units, course and total curriculum.

Brief description of methods, materials and procedures Seven faculty members met, as a group, for a total of 90 hours in 11 days, May 19 thru June 3, 1975. Before the project began the following steps had been taken:

1. The nursing faculty curriculum committee has thoroughly examined the present curriculum.

2. Two workshops for the nursing faculty on the LEGS program had been held during the 1974-1975 school year.

3. The Life-Science Division Chairperson and the Dean of Instructional Resources had been approached with the idea and opinions sought.

4. Individual members of the faculty had made on-site visits to another A.D. Nursing Program using LEGS. They talked with faculty and students, attended class sessions and collected data. Those ADN programs visited were: Olympic Community College in Bremerton, Washington; Peninsula Community College in Port Angelis, Washington; John P. Logan Community College in Carterville, Illinois; Shawnee Community College in Harrisburg, Illinois.

5. Consultation with Ms. Judy Richter, Reading Department, regarding the reading level of LEGS materials: There is a wide range of reading levels - probably 5th through 13 plus. But the plan looks good. Should be helpful format once the students understand how to use it.

Summary results: The LEGS Program is learning content by mastery of curriculum objectives in which each leg (unit) contains:

1. clearly written behavior objectives
2. theoretical and clinical learning experiences with audio-visual and reading references.
3. extra learning experiences for the highly motiviated and/or accelerated student.

4. self-tests to measure achievement of objectives.

The content seems pertinent to meet the job requirements of the ADN graduate. Content is essential, thus eliminating unrealistic or extra goals to be accomplished in a two year span. The entire curriculum is well integrated, proceding from simple concepts and skills to the more complex requiring the development of problem solving skills. More difficult content areas require that students review and build upon previous learning. The integrated material is clearly identified throughout the curriculum by symbols. Growth and development from birth to death is well integrated throughout the LEGS program, therefore, the conceptual framework of our present curriculum, The Life Continuum, is ideal for the implementation of LEGS. The program focuses on the individual learning needs of students, offering a variety of educational methods to achieve stated objectives. The program is constructed in levels and units which allows the implementation of self-pacing.

Major conclusions: It was recommended to the Forest Park Community College Department of Nursing that 85 percent be the minimum passing grade taking into consideration that the tests will be teacher-made. This would mean a "B" grade or a 3.0 grade point average would be required to pass a nursing course.

Clinical experience is an integral part of the activities required to meet the objectives. Satisfactory performance in the clinical laboratory is required for passing the course.

A student cannot proceed to the next level until the prior one has been passed. If the first test is failed, there will be a chance to retest within a week. Before planning for the second testing, the student must see the academic advisor and be advised as to problems identified, suggested steps to take, etc. The student may decide to either repeat the level, pace in a slower group, withdraw, or to study and be retested.

If the test is failed the second time, the student is allowed a third chance for testing with the understanding that the student must pass this time or either repeat the level or withdraw. This process may continue until the end of the semester if the student chooses to remain in the program. At the end of the semester the student must have passed all tests and shown satisfactory clinical performance to pass on to the next semester.

To be considered pacing, there must be time allowed for individual differences. A maximum of four years to complete the program is recommended. This is an important consideration considering our long waiting lists.

It is felt that if a student diligently carries out the directions laid out in LEGS, there would be success unless there are other intervening problems. These problems would be assessed via counseling and chances given such as the re-testing.

The semester would be considered ended and beginning according to the institutions academic calendar.

Policies for readmission will be considered later and probably individualized. There must also be procedures and policies worked out regarding registration and credit for work taken to fit in with present district procedures and policies.

The minimum length of time a student must take as well as challenging procedures will be discussed further in the fall after more data is collected from our accrediting agencies.