1. Applicant Name and Address:
   Institution or Agency: Santa Barbara Community College District
   Street Address: 721 Cliff Drive
                   Santa Barbara, California 93109

2. Project Director and Address:
   Name: Shirley L. Conklin
   Telephone: (805) 965-0581 extension 366
   Title: Assistant Dean, Health Occupations
   Institution: Santa Barbara City College
   Street Address: 721 Cliff Drive
                   Santa Barbara, California 93109

3. Proposal Title: Modular Nursing Curriculum

4. Brief Abstract of Proposal: This proposal is for funds to facilitate the
   implementation and evaluation, over the next three years, of a flexible
   modular curriculum in the Associate Degree Nursing program which will
   enable each student to proceed at his or her own rate and to be evalu-
   ated on objective measures of mastery of the subject rather than rela-
   tive to a peer group. It is expected that this plan will enable students
   to complete the nominal two-year program in a period of time which will
   vary with the student up to a maximum of 6½ semesters, that it will
   reduce attrition in the program, improve opportunities for disadvantaged
   students, and make student-teacher ratio more uniform throughout the year.

5. Duration Dates: 1st year - August 1, 1974 to June 30, 1975
   Number of Continuing Years: three (3)

6. Funding Request: 1st year $54,704  2nd $49,260  3rd $47,220
   Total: $151,184

7. Authorizing Official:
   
   Dr. Glenn G. Gooder
   Superintendent-President
   Santa Barbara City College

   Date: January 15, 1974
SANTA BARBARA COMMUNITY COLLEGE DISTRICT

MODULAR NURSING CURRICULUM

STATEMENT OF THE PROBLEM

It has long been recognized by many faculty members at Santa Barbara City College that, in order to be a truly "open college", it would be desirable to find some way for each student to progress at his own individual rate. Thus, a student should not be constrained to a college calendar which is geared to some hypothetical "average" student, but should be free to start at any time and progress more rapidly or more slowly than average, depending upon his or her particular background and abilities.

Unfortunately, the realization of such an ideal has been slow in coming because the curriculum is usually designed with the calendar in mind, and because, even to incorporate such a plan on a modest basis would entail significant additional record-keeping and procedural changes. Furthermore, such a plan would naturally lead to much less use of the formal lecture approach to teaching in favor of one-to-one and small group teaching situations. This, in turn, would require the development of a considerable amount of supplementary learning materials, such as audio-visual and programmed learning materials for independent study by the student.

The Associate Degree Nursing (ADN) faculty at Santa Barbara City College has undertaken a thorough re-structuring of its two-year curriculum with this goal in mind. It had been observed that the attrition rate in past years in the ADN program had been rather high, recently ranging from over 20 percent to 40 percent. Investigation revealed that this was attributable to a great extent to the difficulty some students had maintaining an academic pace geared to an average student. Attrition figures for the last three years have been severe as shown below.

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Students Entering</th>
<th>Year</th>
<th>No. of Students Completing Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>40</td>
<td>1971</td>
<td>.24</td>
</tr>
<tr>
<td>1970</td>
<td>40</td>
<td>1972</td>
<td>31</td>
</tr>
<tr>
<td>1971</td>
<td>45</td>
<td>1973</td>
<td>32</td>
</tr>
</tbody>
</table>

Approximately 13 percent of the students entering have been minority students, who have had cultural and/or language difficulties in the program. Other students have found it necessary to drop out because they are unable to devote the required time because of financial or health problems. The proposed plan would help both groups, by permitting them to proceed at a slower rate. (In many cases the attributes which had originally been handicaps -- culture and language -- could subsequently become assets in the nursing profession.)

At the other end of the spectrum are many ADN students who enroll at Santa Barbara City College with a considerable previous exposure to the medical field through having worked in one of Santa Barbara's many hospitals, clinics, and doctors' offices. Approximately 18 percent of entering students have completed vocational (practical) nursing programs and have been employed as licensed vocational nurses for lengthy periods before enrollment. Others have worked as nurses' aides, doctors' receptionists, etc.
These students are often capable of proceeding at a much more rapid pace and become frustrated by the constraints imposed by the calendar. They are capable of following a program which is either accelerated or enriched.

While the retention of disadvantaged students in the program is probably the most important justification for the change, there are many other desirable by-products. Faculty could be used more effectively since the relief from time spent preparing and delivering formal lectures can be spent in a more personal approach through direct contact with one or a few students at a time. This should permit the use of more creative approaches to teaching tailored to individual needs and innovations in the evaluation of student achievement. Also, by accepting applicants into the program whenever space is available, more students will be accommodated by maintaining the enrollment at maximum level throughout the academic year. New applicants will also not be inconvenienced by an extended wait before entering the program. (Community demand for the program is evidenced by the fact that, for the past three years the number of applicants has exceeded 250.) Employers will also benefit by having a more uniform flow of graduates over the year rather than having to wait until June of each year to meet a group of new graduates.

In short, the plan should promote increased diversity through meeting the needs of a broader socio-economic-cultural group, and of cost-effectiveness through reduced attrition and more efficient and effective use of the teaching staff.

During the academic years 1971-1972 and 1972-1973, the ADN faculty developed a modular curriculum plan whereby the entire two-year program leading to the associate degree was broken down into thirty-four modules, all of which are to be completed for the degree. Some modules are prerequisite to others, but otherwise the modules can be undertaken at any time and can, in principle, be completed by each student at a rate dependent on her own abilities. Successful completion of each module is demonstrated by the student showing evidence of having achieved a pre-defined level of mastery of the subject matter measured in terms of specific behavioral objectives, both theoretical and clinical. The plan thereby allows for recognition of competencies gained outside the formal college environment.

In Fall, 1973 the new curriculum structure was introduced, and it has been in use since that time. However, it was and is still geared to the two-semester calendar used by the rest of the college. Initially it was planned to begin implementation of the free-schedule aspect of the program during the current 1973-74 academic year, after refinement of the modular curriculum. This was to be done in stages, starting out by registering a partial class of first-semester students in mid-year and then in Fall, 1974, permitting students to complete modules at their own rates. For complex reasons related to the keeping of records on registration, attendance, and grading, the completely flexible plan could not be immediately implemented.

Acceptable mechanics of record-keeping have now been devised. What remains at this point is the full implementation of a flexible plan whereby students can register at virtually any time of the academic year and proceed at their own rates. This is planned to begin in the Fall, 1974, semester.

Introduction of this plan in the Fall will require two additional professional staff persons. One will be a registered nurse who will supervise an on-campus skills laboratory where students will study and practice specific clinical skills before performing them in the clinical setting. The other will be a project assistant with experience in nursing education to co-ordinate all aspects of the project, including
setting up special workshops, development of special materials, development of student evaluation methods, module revision, and overall project evaluation. Also, one additional clerical person will be needed to set up and maintain the additional records that will be required and for typing, filing, and correspondence related to the project.

Funds are being sought to cover the increased expense during the period of transition and evaluation, including some additional audio-visual materials and equipment, related travel, and consultant fees. After the three-year trial period is completed a thorough evaluation will be performed, and, if the plan is judged to be successful, the skills laboratory supervisor and additional clerk will be made permanent and their salaries made a regular part of the college budget.

DESCRIPTION OF THE PROJECT

The overall project, as noted above, is the development and implementation of a plan whereby each student can progress through a nominal two-year nursing program at a rate commensurate with her abilities and preparation. It is expected that some students will complete the program in 1½ years or less while others may take 3 years or more. Much of the project has been completed, and all that remains is the actual implementation of the plan and its intricate evaluation in practice.

It is believed that this project is the first attempt at any college or university in the country to implement such a plan for an entire nursing training program. It, therefore, may have important implications for nursing education elsewhere.

The basic goals of the project are the following:

- To enable the student to progress at her own rate.
- To provide improved opportunity for success in nursing to the disadvantaged student.
- To provide more individualized programming and closer tutorial guidance to students.
- To increase the number of students while reducing per capita costs.
- To increase student motivation and satisfaction and reduce fear of failure.
- To reduce attrition rates in the ADN program.
- To optimize teacher loads and make loads more uniform throughout the academic year.
- To permit teachers to use their skills in a more creative manner.
- To provide a steady supply of graduates for employers rather than a once-a-year graduating class.
- To better meet the needs of the community by accepting applicants when space is available, rather than only once a year.
The final step in the implementation of the project will take place in Fall, 1974. The objectives of this phase are the following:

- To establish detailed record-keeping procedures and forms consistent with the needs of the College and the State.

- To maintain a skills laboratory with a newly-hired registered nurse in charge.

- To permit students to plan their own timetables leading to completion of the ADN program.

- To permit entry into the ADN program anytime between the beginning of the Fall semester and December 1, or between the beginning of the Spring semester and May 1.

- To develop and perfect new evaluation procedures by which each student can demonstrate mastery of cognitive and performance skills.

- To certify students' mastery of the subject matter and skills of each module at any time they demonstrate required levels of competence.

- To develop learning material packages for each module consisting of printed material, film presentations, taped lectures, etc., enabling the student to pursue independent study.

- To establish individualized tutorial assistance for each student in the clinical and cognitive aspects of the nursing curriculum.

- To shift emphasis from the lecture-classroom situation to the seminar or group discussion environment and/or to one-to-one teacher/student conferences.

- To assemble and evaluate data concerning the effectiveness of the program relative to the basic goals cited above.

- To co-ordinate with other programs in the College in providing personal and career counseling and remedial education where required.

Implementation of the plan will begin in August with the detailed establishment of procedures and the laying out of a final timetable for acquisition of audio-visual materials and equipment, finalization of module revisions and student evaluation criteria. In September a slightly smaller than usual entering class will be enrolled to reserve openings for later enrollees. Filling of additional spaces in the class and replacement of drop-outs will occur throughout the year. Also, students will be encouraged from the start to progress at their own rate so that by the end of the first year there should be a wide diversity in the stages of progress among the students.

Throughout this first year especially there will be very close coordination with students to observe difficulties that might arise from their new exposure to independent study. Supplementary tutoring will be provided through the College's Learning Resources Center.
An already established campus-wide peer counseling program will also be used as needed to assist students who may be experiencing personal difficulties.

COMMITMENT OF SANTA BARBARA CITY COLLEGE

It has been stated that this project began in 1971-72. That is has progressed this far is due to the very dedicated efforts of the ADN teaching staff who put in many hours of time without extra compensation to develop the plan and to re-design the curriculum. The Admissions and Records staff has cooperated in helping to establish general procedures whereby the flexible scheduling can be accomplished within constraints imposed by College and State requirements. The ADN teaching staff is fully committed to effecting a smooth transition from a strict semester basis to the flexible program outlined here.

Finally, this project has been reviewed with the Assistant Dean, Health Occupations; the Administrative Dean, Instruction; and with the President of the College, all of whom enthusiastically support the project. It is felt by these administrators that this project, if successful, could become an archetype for similar restructurings of other departments in the College thus furthering the ultimate goal of becoming a truly open campus.

EVALUATION OF THE PROJECT

Because of the innovative nature of the project, it is necessary that it be subjected to a very careful and thorough evaluation. The ADN faculty has a great deal invested in the project and will be fully occupied with its implementation. It is felt that the interests of both thoroughness and objectivity will be best served by an outside evaluator. Thus, the project assistant, who will be hired from outside the ADN faculty of the College, will be responsible for coordinating all aspects of project evaluation.

The project will be evaluated with respect to the basic goals listed above. Much of this evaluation will be an objective analysis of statistics derived from the records of the next few years, and a comparison with those of past years. However, it is necessary and desirable also that some of the evaluation be subjective, based on the reaction of students and faculty.

The criteria upon which the plan will be judged are:

- Number of students admitted
- Attrition rate
- Student pre-entrance test scores and grade-point averages
- Cost per student graduated
- Student/teacher ratio--level and variability
- Student performance on State board examinations
- Student satisfaction
- Teacher satisfaction

- Effect upon teaching strategies and creativity

The subjective measures will be watched continually and will be discussed in periodic faculty meetings throughout the academic year and during student-teacher conferences. Also interviews with students, faculty, and hospital staff during the training period and with faculty and employers after graduation will be conducted by the evaluator. Quantitative criteria will be evaluated at the end of each semester, but will probably not be too meaningful until at least the end of the first full year. Prior to that they will merely be observed for trends. At the end of the second and third years, a thorough analysis of the data compared with prior years will be made to determine the extent to which the project has succeeded in its goals. A decision will be made at that time to continue the plan, to effect major modifications, or to discontinue it and return to the traditional approach.

The cost of evaluation will be essentially that portion of the project assistant's time that is required for that purpose—perhaps one-third overall, but increasing from virtually zero at the beginning to nearly full-time at the end. All quantitative data will come directly from the records which will be kept, in any event, as a requirement of the College and the State. Subjective aspects of the evaluation will be a normal part of faculty interaction with one another and with students, except that a formal study of student reaction will probably be undertaken through use of a questionnaire.

Evaluation will culminate in the publication of a final report, describing in detail the statistical results of the three-year trial and the attitudes of the students, faculty, and employers. This report will, of course, be available to the Fund if desired.
### Budget

1st Year Only

#### Budget Item

**A. Direct Costs:**

1. **Salaries and Wages**
   - a. Professional* .......... $20,000
   - b. Consultant* ........... 1,000
   - c. Clerical .................. 7,000

2. **Employee Benefits** ........... 5,200

3. **Travel** ..................... 1,500

4. **Materials and Supplies** ...... 500

5. **Equipment (Purchase or Rental)*** ...... 3,000

6. **Production (Printing, Reproduction, Audio-Visual)*** ...... 2,000

7. **Other*** ............... 0

**B. Indirect Costs** .................. $14,504

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**TOTAL** .................. $54,704

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**Institutional Support (1st year total)** .......... $ **

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*See explanation of budget items on page 10.*
BUDGET
2nd Year Only

BUDGET ITEM

A. Direct Costs:

1. Salaries and Wages
   a. Professional* $ 20,000
   b. Consultant* 500
   c. Clerical 7,000
2. Employee Benefits 5,200
3. Travel* 1,000
4. Materials and Supplies 500
5. Equipment (Purchase or Rental)* 1,500
6. Production (Printing, Reproduction, Audio-Visual)* 500
7. Other* -0-

B. Indirect Costs* $ 13,060

TOTAL $ 49,260

Institutional Support (2nd year total) $ **

*See explanation of budget items on page 10.
**BUDGET**

3rd Year Only

**BUDGET ITEM**

A. Direct Costs:

1. Salaries and Wages
   a. Professional*  $ 20,000
   b. Consultant*  500
   c. Clerical  7,000

2. Employee Benefits  5,200

3. Travel*  1,000

4. Materials and Supplies  500

5. Equipment (Purchase or Rental)*  -0-


7. Other  -0-

B. Indirect Costs*  $ 12,520

**TOTAL**  $ 47,220

Institutional Support (3rd year total)  $ **

*See explanation of budget items on page 10.
*Explanation of Budget Items*

A. 1. a. Professional Salaries -- This item includes $9,000 for a registered nurse to supervise the skills laboratory and $11,000 for a project assistant.

A. 1. b. It is anticipated that outside consultants will be used to assist in certain areas -- curriculum content, teaching methodologies, use of programmed instruction techniques and audio-visual equipment, and methods of evaluation of student achievement. This expense will be heaviest in the first year of the project and will be nominal in the second and third years.

A. 3. Travel budget is estimated amount for faculty to attend workshops and conferences which have a direct relationship to the project in fields such as programmed instruction. This will be somewhat heavier in the first year.

A. 5. Equipment costs are for audio-visual equipment, specifically movie and slide projectors, tape recorders.

A. 6. Production costs are mainly for the production of basic learning materials, slides, taped lectures, etc.

B. Indirect costs are based on a negotiated VEA rate for fiscal year 1972 of 36.08 percent. No rate has been approved for the current year, but application is pending.

**Institutional Support -- All costs of teaching faculty and administration salaries and benefits will be borne by the College. The College has purchased special study carrels and some equipment which will facilitate independent study and which will be used on this project. The carrels, completely equipped cost $9,540.00, and were purchased using State matching funds. Other equipment purchased by the College with the help of matching funds includes movie and slide projectors, video tape, audio equipment, and a 35mm camera, totalling over $10,500, in value. The College on its own has purchased nearly $1,700 in films and Trainee-aide programs for this project.

The major cost items in the proposed project are employee-related -- salaries and benefits. A project assistant at $11,000 per year will coordinate and program under the supervision of the Assistant Dean, Health Occupations and will perform the evaluation of the program and prepare a final report. A registered nurse will be added to the staff to supervise the on-campus skills laboratory and one clerk will be added to handle the greater load of record-keeping that will be needed to maintain adequate data as needed by the College records office, and the State of California, and for evaluation of the program.