The significant decrease in the price of office automation technology has made this technology more affordable for more companies. This has serious implications from the standpoint of future demands for secretarial and clerical workers. For this reason, a study was conducted to assess the likely impact of automation on secretarial and clerical workers and the resultant need for a model program for displaced secretarial and clerical workers. Data were collected from government agencies, management consultants, database and other literature searches, a survey of 328 office workers in Galveston, Texas, and in-depth interviews with managers from four offices of the American Life Insurance Company (three in Texas and one in Boston). It was concluded that the most immediate need with respect to office occupations education is for training to enable office workers to use automated office technology to its fullest potential. Community colleges should also take a longer-term view of the education offered in their office education programs and must prepare their students to be adaptable and resilient in the face of change. (Appendices include an instructor's syllabus for a course in intermediate information processing, which deals with information processing applications in a networked environment; the table of contents to a series of 20 learning modules on self-directed job searches; and a sample learning module.) (MN)
Introduction

The introduction of new technologies into the work environment often conjures up images of massive layoffs, long unemployment lines, and disruption of family life. These images are not without foundation, unfortunately. Automation, as well as changing conditions of trade and consumption patterns, has displaced millions of workers. According to a survey conducted by the Census Bureau in 1984, with analysis performed by the Bureau of Labor Statistics, 11.5 million workers lost jobs due to plant closings or relocation, abolition of a position or a shift, or slack work during the period January 1979 and January 1984 (BLS, 1985). During the five-year period of the study, 5.1 million displaced workers reported they were without work for more than a year, and those who found jobs reported their wages had been cut by 20 percent or more. Displaced workers were typically white male workers with a steady work history. Women were underrepresented in the displaced population, but those women who were displaced fared significantly worse than white men in regaining employment. Whatever the group affected, prolonged displacement causes increased economic and emotional stress.

Concern over the hardships brought about by displacement led to government programs designed to serve the needs of the displaced workers. Title III of the 1982 Job Training Partnership Act authorized services for displaced workers; Trade Adjustment Assistance provides compensation and adjustment services to workers displaced as a result of foreign competition; and the Employment Service system administers unemployment insurance benefits.

With economic recovery in the mid-1980's came a reduced concern over displaced workers. Displacement, however, is likely to be an on-going problem and will not be stopped by economic recovery. Indeed, displacement will more than likely accelerate due to global competition causing adoption of new technologies, the loss of some domestic jobs to "off-shore" production facilities, and the further shrinking of our older industries. In an economy as rapidly changing as that of the United States, displacement and the concomitant need for services for those displaced, will continue.

The nation needs to develop a mechanism for constructively dealing with displacement when it occurs, preventing it when possible, and preparing for inevitable change. Within this context, the Coordinating Board provided Galveston College with an opportunity to investigate the issue of displacement among secretarial/clerical workers in light of the rapidly changing office work environment.
One of the causes for this change in the office work environment is the significant decrease in the price of office automation technology, making this technology affordable to more companies. As a result, companies have increased capital expenditures for office equipment in the hopes of raising productivity. The introduction of office automation equipment has not only had an impact on the physical office surroundings, but also on the people who work there.

Due to the advances and acceptance of technology, office workers are becoming more productive. Increased productivity can work for, as well as against, the office worker. On the one hand, elimination of routine tasks can increase the quality of the work environment. On the other hand, because productivity is increased, fewer workers will be needed in the office.

The study of displacement among secretarial/clerical workers is also important because women and minorities make up the majority of the administrative support (secretarial/clerical) occupational category. Will the advances made by these groups be negatively affected by the introduction of office automation into the work environment?

The objectives of the study, therefore, are to

1. Determine the nature of job displacement among secretarial/clerical workers.
2. Determine how the role of the secretarial/clerical worker will be changed as a result of advanced technology.
3. Determine the need for a model program for displaced secretarial/clerical workers.

A comprehensive research effort was completed in order to achieve the above objectives. Throughout the investigation, the following definition of office automation was used. Office automation is "the application of microelectronic information technology and communication technology to office work" (AAO, 1985). Primary and secondary sources of information were tapped from industry, management consultants, government agencies, database and other literature searches, and secretaries themselves. Results from the interviews, reports, and articles are synthesized in this report.

The primary research consisted of a survey of 328 office workers in the City of Galveston and in-depth interviews with managers from American National Insurance Company (Galveston, TX), University of Texas - Medical Branch (Galveston, TX), Tenneco (Houston, TX), and Arthur D. Little (Boston, MA). The survey of office workers attempted to determine their attitude toward office automation technology today and in the future. Interviews with private and public institution executives were completed to determine their experiences and opinions concerning
displacement of secretaries and other office workers in the past, present, and future.

Literature searches of databases such as ERIC and other published indexes were also useful in providing information concerning office automation and displacement. Publications such as Automation of America’s Offices and Technology and Structural Unemployment: Reemploying Displaced Adults by the Office of Technology Assessment and the Occupational Outlook Quarterly, to name just a few of the many important materials that were helpful during this project.

The report is comprised of three sections, which include (1) The Nature of Secretarial/Clerical Displacement (2) The Changing Role of the Secretarial/Clerical Worker, and (3) The Need for a Model Program for Displaced Secretarial/Clerical Workers. A section concerning study conclusions is also included.

THE NATURE OF SECRETARIAL/CLERICAL DISPLACEMENT

Displaced workers are adults with an established work history who have lost their jobs through no fault of their own, and who face real difficulties in finding new ones. Technology is a potent factor in causing displacement. Changes in process technologies that increase productivity enable fewer workers to produce the same output. If productivity rises at a faster rate than output, the level of employment in the relevant sectors will fall. If changes in productivity are rapid and employment shrinks correspondingly, normal turnover and attrition cannot handle the needed work force reduction, and workers are displaced (AAO, 1985).

If we apply the above discussion to the office work environment, the possibility arises that with the introduction of more advanced labor-saving devices into the office, office workers will be displaced. Office automation can substitute for labor, supplement labor, or reorganize work and therefore make labor more efficient. It can allow highly technical, knowledge-intensive work to be done by relatively untrained and unskilled, lower paid workers. Capital investment in office work has always been low compared to investment in manufacturing and agriculture. Approximately 85% of office operating costs are labor costs. Because capital investment in office automation technology is occurring rapidly, the nature of white collar work is changing. The question becomes will secretarial/clerical workers become "displaced" in the same sense as the workers in the manufacturing industry have been displaced.

Another issue in studying the notion of secretarial/clerical displacement is who becomes displaced. Since most clerical jobs are now held by women, and one-third of working women are in clerical occupations, they are most vulnerable to displacement. Minority groups such as Black and Hispanic women are likewise
disproportionately represented in low-level clerical positions and are likely to be affected negatively by office automation. Some women now in clerical positions are also trying to move into managerial and professional jobs, but even these job ladders may be truncated by automation. In managerial and professional occupations that are vulnerable to office automation, women tend to have less seniority and thus are also more vulnerable to displacement.

Although numerous job opportunities for secretarial positions are currently available across the country, office automation and changing staffing patterns have slowed the employment growth of the secretarial profession. The most recent statistics compiled for 1984 show that there are 2,797,000 secretaries employed in the United States, making this one of the largest occupations in the U.S. economy (Occupational Outlook Quarterly, Spring 1986). The Bureau of Labor statistics projects that there will be an additional 268,000 secretaries by 1995. Table 1 indicates that the growth in this occupational category has slowed.

Table 1. The Growth in the Number of Clerical Jobs, 1950-84

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of clerical jobs* (million)</th>
<th>Growth in the number of jobs (percent)</th>
<th>Total employment (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>6.6</td>
<td>11.3%</td>
<td>11.3%</td>
</tr>
<tr>
<td>1960</td>
<td>8.8</td>
<td>33%</td>
<td>13.4</td>
</tr>
<tr>
<td>1970</td>
<td>12.9</td>
<td>46%</td>
<td>16.4</td>
</tr>
<tr>
<td>1980</td>
<td>16.9</td>
<td>31%</td>
<td>16.9</td>
</tr>
<tr>
<td>1982</td>
<td>16.8</td>
<td>0%</td>
<td>16.8</td>
</tr>
<tr>
<td>1984</td>
<td>16.7</td>
<td>0%</td>
<td>15.9</td>
</tr>
</tbody>
</table>


The magnitude of displacement depends to a certain extent on one's assessment of the likely advances in office automation and how quickly those advances will be integrated into the office. As can be seen from the systems diagram on page 5 the introduction of labor-saving automation technology has substantial effect on white collar employment.

THE CHANGING ROLE OF 'THE SECRETARIAL/CLERICAL WORKER'

This section discusses the history of office technology, the likely trends in new office technology, and the general consequences of office technology on the role of the secretarial/ clerical worker. In addition, three scenarios are developed which put into different perspectives the impact of office automation on the office environment.
Figure 1. A Framework for Analyzing Long-Range Effects of Office Automation on White-Collar Employment
The Office Today and Tomorrow

In order to understand the changing role of the secretarial/clerical worker, we must understand the changes taking place in the office. A summary of the technological advances in the office is depicted in Figure 2 on page 7. The first phase of office automation began in the 1950s, but it was not until the 1980s that the power of microcomputer technology became widely available.

The typical office of today contains some type of computer system. Depending upon the needs of the business, this computer can be anything from a mainframe to the most simple word processing system. In this office, the focus has been on the office automation technology rather than on the jobs which these machines are improving. As a result, more emphasis will be placed on using the developing office automation technology to increase productivity by making the technology more interactive and easier to use.

In the future more mainframes and personal computers will be connected which will facilitate the interchange of information between these two systems. Also, more personal computers will be linked together by new networking technology. A central server will be set up, but each personal computer will be able to run programs without interfering with the performance of tasks on the other computers.

The process of capturing data on computers has been one of the most time consuming tasks in the office environment, and, in terms of office automation, one of the most important. In fact, according to the Office of Technology Assessment, "A critical determinant of the results of office automation over the next 15 years is the outlook for computer input technology." However, if companies find a way to effectively eliminate most keyboarding, this process would have grave implications for the narrowly skilled secretarial/clerical office worker. Already, increased compatibility between systems has eliminated redundant keyboarding and more advanced software packages have made it easier to revise documents.

It is likely that in the future the problems of capturing data easily and inexpensively will be solved. A way of eliminating data-entry work "is to allow a consumer or client to enter information directly into the organization's computer" (AAO, 1985). Optical scanning and voice recognition technologies, although not yet perfected, are other ways in which the process of capturing data could be reduced.

In a period of less than ten years an enormous amount of new technology has been adopted in the office environment. Personal computers only became commercially available in 1978, and today those same computers are almost as prevalent as typewriters. This rapid adoption of technology might indicate the attitude of
### Figure 2. History of Technology Used in the Office

**Source:** Office of Technology Assessment

### Table: History of Office Automation

<table>
<thead>
<tr>
<th>Phase</th>
<th>Technologies/Inventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td></td>
</tr>
<tr>
<td>Second</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td></td>
</tr>
</tbody>
</table>

### Diagram: History of Technology

- **Mechanical Era (1900-1920):** Radiotelephone, Carbon paper
- **Electrification Era (1920-1940):** Electric espresso, Electric typewriter
- **Third Phase Office Automation:** Optical scanning and recognition equipment, Microprocessors
- **Second Phase Office Automation:** Magnetic tape "selectric" typewriters, Magnetic ink printing, Perforated card reader
- **First Phase Office Automation:** Facsimile transmission, Electronic (solid state) calculating machines, Manual typewriters, Magnetic tape "selectric" typewriters, Magnetic ink printing, Perforated card reader, Various other changes in office procedures and equipment

**Source:** Office of Technology Assessment
business and other institutions to implement office tools that are perceived to improve productivity. But how long can this rate of change continue? Is there a point at which companies and other institutions will not be able to absorb any more technology?

In summary, according to The Outlook for Office Automation Technology Report, the dominant trends in office automation from 1985 to 2000, are likely to be:

- a continuing strong movement toward microcomputers and toward distributed data access and data handling, usually superimposed on rather than superceding centralized automatic data processing;
- more powerful, easier to use, software;
- a strong trend toward linking and networking of microcomputers, minicomputers, mainframes, and peripheral and supporting systems;
- increasing choice among technological options for accomplishing information handling objectives;
- more and more capture of data at the point of origin, decreasing the need for repeated keyboarding and centralized data entry; and
- growing capability for communications, between devices, between organizations, and between locations.

Consequences of Office Automation

The effects of the rapidly changing office automation technology on the content or nature of secretarial/clerical work have been controversial. Are the new jobs increasing in variety, autonomy, challenge, and responsibility or are these jobs becoming more routine and boring? Some experts believe that office technology will actually de-skill office workers, making the office environment much like the automated factories of the late industrial era. Work will become routinized, demand less creative thinking, and produce more job dissatisfaction. On the other hand, others believe that the jobs of secretaries and clerical workers will be enhanced. Instances of secretaries using online databases and statistical software have been documented.

The relationship between managers and clerical staff is also changing due to office automation technology. The traditional roles of managers and clerical staff are becoming blurred.
Researchers have referred to this redistribution of labor as the "clericalization of professional work" and the "professionalization of clerical work (AAO, 1985)." Managers are doing more and more keyboarding themselves. The draft produced by the managers is then given to the secretary to "clean up" and print out. It is also not unusual to find managers creating and printing out all their own correspondence.

Office automation has of yet not had a positive effect on the earnings of the office worker. Many secretarial/clerical workers are up-grading their skills to keep pace with the changing technology but are not receiving greater compensation. In addition, opportunities for promotion are changing due to office automation technology. Traditionally, secretarial/clerical workers have aspired to private secretary or administrative assistant jobs. With the advent of office automation, these private or executive level jobs are being eliminated with secretaries being shared by a large number of managers.

Scenarios

In an attempt to gain insight into the many possible future states of the office environment, several scenarios have been developed. These scenarios are by no means meant to be inclusive of all the possible occurrences in the office environment; rather, they represent a range of possibilities. For example, the first scenario is optimistic, the second scenario is moderate, and the third scenario is pessimistic concerning the future need for traditional secretarial/clerical office work. The three scenarios are graphically illustrated in the diagram below. Each scenario is based upon current knowledge of office automation technology and is written as though the reader has been placed ten years into the future.

Scenario One Scenario Two Scenario Three
Optimistic Moderate Pessimistic

The scenarios vary according to three driving forces which have been identified as important areas for change within the office environment. Driving forces are actions, if changed, would significantly alter the system in which they work. The driving forces identified in this paper are technological innovations, financial considerations, and human interface.
Scenario One - Increased Demand for Secretaries

Office automation has not decreased the demand for secretarial and clerical workers. Instead, the demand for people who can effectively work with automation technology has increased.

The introduction of automation technology has made the office more simple and more complex at the same time. It is now easier to keyboard and correct a letter, but, as a result, managers are asking secretaries to make more changes and have raised management's expectations of outgoing correspondence and reports. Personal computers have increased office efficiency, but now a technical specialist is necessary to make sure the equipment is operating smoothly. The complexity introduced into the office has made up for any potential downturn in demand for traditional secretarial/clerical office work. Managers do not take the time, nor are they inclined, to learn all the intricacies that involve office technology like personal computers, printers, and other peripherals.

The new technology has, in fact, created more job opportunities for secretarial/clerical workers who know how their office operates as well as how to use available technology. These workers are highly trained and sought after specialists who can provide a link between management and the technology. There seems to be a form of a "wish list" in most organizations that is never attended to because the day-to-day activities keep the staff busy. With the introduction of new technology, office workers now have the time to assist managers in other ways that have nothing to do with typing or filing.

In the next ten years, if as many technological breakthroughs are made as were made in the previous ten years, it is likely that sophisticated applications such as voice recognition software might become available. However, considering the significant investment that corporations, institutions, and individuals have made in the current technology, they might not be as anxious to purchase the newest invention unless it is financially advantageous to make the switch. Whether or not a widely accepted model becomes available to quantitatively measure the productivity gains of office workers will determine the speed in which new technology is implemented.

Another consideration when making the switch from "old" to "new" technology is the human factors involved. How much new training must be done to take advantage of the new technology? Will workers and/or managers resist or maybe rebel against the new technology? What is the institution's responsibility to its current office staff? These and other such factors must be taken into account before organizations purchase new technology.
for the office environment. Consequently, human implementation considerations might slow the technology acquisition process and further delay any technology which might replace a large number of office workers.

Scenario Two - New Secretarial Skills

Secretaries and clerical workers are not typists, telephone operators, or file organizers, they are office assistants. Their job is to assist managers in running the office and achieving the objectives in their particular area or organization. Therefore, secretaries and clerical workers will not be displaced, but will be retrained for other tasks that will assist managers accomplish the organizational mission.

In the next ten years technology has advanced, but not to the point that human interface is eliminated. Someone will still be needed to put the paper in the printer, help schedule appointments, and trouble shoot problems that the manager may not have the time or particular knowledge to solve by oneself. Also, office environments are not only comprised of computer to computer communication; rather, person to person interaction is an important and prevalent aspect in the office environment. A computer/person communication system which solves problems that may not be clearly defined might cause more misunderstandings than provide efficiencies in the office.

When new technology is purchased, organizational investment has not only been in equipment, but also in their employees who operate that equipment. It is unlikely that an organization will invest heavily in training programs for workers who are going to be displaced. Training for office workers can be as much as twice the cost of the combined hardware and software expenditures making the office worker the most valuable element in the office environment.

This scenario does not indicate large growth in the secretarial clerical profession, but since the secretarial/clerical workers make up one of the largest single groups in white-collar work environments, there will still be plenty of jobs available in that profession even if that profession only maintains its current size.

Scenario Three - Secretaries Replaced

The need for traditional secretarial skills in the office have steadily decreased in the last ten years. Organizations have learned to take advantage of the productivity gains from technology and now need fewer people to accomplish the same amount of work.
Technological innovations have continued to be developed at a rapid pace. Voice recognition systems have been perfected such that a person could talk into a computer and it would store the information received, check the grammar, spelling, and format. Any revisions could of course be made by the same voice communication system. The result of this type of system would most likely be that dictation, typing, revising, and proofreading documents, which have been the traditional word processing tasks of secretaries, would become completely automated. The implementation of this technology in the office environment would have the same effect on the office that robotics has had in the manufacturing sector.

Other technological developments have not only made more processing and memory power available at comparatively lower prices, but the computer hardware and software designers have developed techniques to up-grade older systems for reasonable prices. It is now only a matter of replacing parts of a system with more sophisticated hardware and software. The greatest advantage of a part replacement strategy is that institutions and people that have already invested in technology do not lose their initial capital outlays. On the contrary, institutions and individuals will increase the value of their equipment at a nominal price.

Although some secretarial/clerical workers were "let go" because of the efficiencies that automation brought, it is difficult to determine whether these people would have been asked to leave the company for another reason. The way in which staff was trimmed over the last ten years has been simply not to hire new secretary/clerical workers. When a secretary/clerical worker would retire, leave for another job, or for other reasons, that position would simply not be filled again. Also, those secretary/clerical workers considered to be exceptional were trained for other positions within that company or institution. As a result, in ten years time few secretarial/clerical workers remained employed in that capacity.

Resistance to the elimination of secretarial positions was not as great as some "experts" predicted. Secretarial/clerical workers did not organize in time to gain the strength necessary to fight against the technological innovations. Most secretarial and clerical workers, in fact, spent most of their energy on learning how to operate the technology that would soon replace them. Without resistance from secretarial and clerical workers, the choice for most organizations became a financial one -- the "bottomline" figures carried the most weight in decision making.
NEED FOR MODEL PROGRAM FOR DISPLACED SECRETARIAL/CLERICAL WORKERS

An effective curriculum development process has four stages -- planning, design, implementation, and evaluation. The planning function addresses the need for a program and the resources available to carry out that program. This stage is extremely important to the overall effectiveness of the curriculum outcomes. Without an adequate definition of the need for a curriculum, it becomes an exercise in futility to design instruction.

With the need for adequate planning in mind, designing a model program for displaced secretarial/clerical workers at this time is premature. Continued monitoring of the effects of office automation is needed, and various alternative approaches should be considered based on the level of automation introduced into the office environment.

In the short term, traditional secretarial skills may need to be upgraded to include applications software packages such as spreadsheets, database management, and files management. This would give the secretary a broader range of marketable skills and would allow one to take advantage of the possible blurring of the traditional roles of managers and secretaries for promotion opportunities. Such a curriculum has been developed by Galveston College for integration into its Office Technology program. The instructor's course syllabus for this course is provided in Appendix A. It is important to note that unless salaries keep pace with the higher level skills necessary to work in a microcomputer environment, there will not be much incentive for secretaries to continue to upgrade their skills.

Given the worst case scenario where secretarial/clerical positions are eliminated because of office automation, displaced worker programs must be implemented to assist secretaries to make the transitions to new types of jobs. As with other displaced worker programs, training components should include job search training and assistance, vocational counseling, new skills training, and remedial and basic education. A model job search training curriculum has been developed by JIST Works, Inc. The content of the curriculum has been field tested by thousands of job seekers, instructors, and administrators. It consists of the workbook: Getting the Job You Want and its companion Instructor's Guide. Appendix B includes the table of contents for this curriculum and an example of the Instructor's Guide.

More important to the issue of planning for programming for the secretarial/clerical field is a mechanism for monitoring the effect of office automation on the number of jobs. Most organizations that have implemented office automation have not laid off office workers. However, once the organization begins to take full advantage of the power of the technology, the need
for office workers will be reduced. Prior to this time, educational agencies should be ready with programs which would help displaced workers make the transition to other types of work.

CONCLUSIONS

Training and education is crucial for the successful implementation of automated office technology. Without education of some kind, the hardware and software will be underutilized and in some cases not used at all. As was stated in the OTA study, "A major factor in achieving the full productivity benefits of office automation is the availability of workers skilled in its use."

Computer software and hardware vendors, corporations, community colleges, and other institutions all can provide some amount of office automation equipment education and training. How much education and training is done depends on the employer and the employees. Some employers require thorough training while other employers require a small amount. Employees in transition or who otherwise feel a great need to further their education will enroll in other programs in addition to other training they might have had.

Automation technology has been changing so rapidly that it has been difficult for public schools and community colleges to keep up with corporations and commercial schools that have the resources to provide the most modern equipment for their students. This disparity in the quality of training raises an interesting question concerning whether the already disadvantaged sector of the population will be put further behind those individuals who can afford additional training.

Organizations must understand the social implications of displacement in the female dominant segment of the workforce. Gains made to date in achieving wage equity could be eliminated if organizations place too much emphasis on achieving increased productivity at the expense of the human factor. Managers and executives need to be made aware of the effect of the office environment and to devise appropriate ways to retrain their employees or restructure their company so that the fewest number of workers are displaced.

Community colleges might need to take a longer term view of the education offered in their office education programs. They must realize that the secretarial/clerical positions as it is being taught now may soon become virtually nonexistent. The first lesson for students entering the office profession is to be adaptable and resilient in the face of change. This
attitude, if acquired, will serve the students well not only for major career changes, but for changes in technology that seem to confront them almost everyday. Community colleges that take a longer term view will be in the best position to prepare their students for the uncertain times ahead.
OFT 2401: Intermediate Information Processing

INSTRUCTOR’S COURSE SYLLABUS

Course Title: Intermediate Information Processing

Course Number:

<table>
<thead>
<tr>
<th>Prefix</th>
<th>No.</th>
<th>Lecture Hrs.</th>
<th>Lab Hrs.</th>
<th>Credit Hrs.</th>
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<td>OFT</td>
<td>2401</td>
<td>3</td>
<td>2</td>
<td>4</td>
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</tbody>
</table>

Course Description:

Information processing applications in a networked environment. Students will learn to use advanced word processing applications in addition to learning practical applications of a spreadsheet, data base, and graphics as well as electronic mail and files. Lab fee.

Prerequisites:

OFT 1402 - Principles of Information Processing
This course gives hands-on experience in the basic operation of word processing on microcomputers. Course also covers theory, concepts, word processing system components and business applications necessary to develop proficiency-level skills.

CSC 1402 - Microcomputers and Their Applications
A study of microcomputer systems and their uses. Programming fundamentals of microcomputers, design, operation, and applications.

ACT 1401 - Elementary Accounting
An introductory course to provide the clerical, management and secretarial student with a knowledge of bookkeeping procedures which may be encountered in personal service enterprises, merchandise, notes and interest, the accrual basis of accounting, periodic summaries, and adjusting and closing accounts at the end of an accounting period.
Texts:

A. Spreadsheet

**DDC Spreadsheets: Skill Building Exercises and Applications**, by Iris Blanc and Cathy Vento, Dictation Disk Company, 1986. (Also Teacher Manual to Accompany)


B. Database


References:


Equipment and Materials Required:

A. Software:
   1. DisplayWrite 4 by IBM
   2. Lotus 1-2-3 by Lotus Development Corp.
   3. dBase III by Ashton Tate
   5. Tutorial on E-mail by Applied Data Research.

B. Microcomputers with sufficient memory to run software the school has available. A ratio of one student to each microcomputer is necessary since this course requires hands-on exercises to be completed independently.

C. Keys may be provided for students to check their daily work; however, some form of feedback from instructors should take place routinely. One suggestion is to have instructors initial correct papers before the student turns them in to be recorded. This procedure gives the student immediate feedback and ensures that he will not proceed to another topic until he has mastered the present one.

D. Software documentation should be available for student use in the lab.

E. The instructional materials for this course will include specific exercises for students to use as well as supplemental exercises that instructors can develop as needed.

Instructional Process:

1. Student’s Laboratory Guides provide outlines of laboratory assignments and steps to follow to complete each lab assignment. Equipment lists and additional information needed by instructor are in the Instructor’s Guides for each unit.

2. Tests and quizzes will be given periodically. Sample tests and keys are attached to this syllabus.

3. Homework will be assigned as necessary.
COMPETENCY STATEMENTS:

Office Technology Program exit competencies upon which this course is based:

A. Design, create, edit, combine and copy electronic spreadsheet files, and produce graphs using electronic spreadsheet software.

B. Design, create, edit, update, combine and copy database files, and produce labels and reports using a database management system.

C. Define desktop management system, and use a desktop management software package.

D. Transfer database and electronic spreadsheet files to word processing files.

E. Produce a business or technical report, given a collection of data, using word processing, spreadsheet, graphics and database management software.

F. Demonstrate an understanding of decision-support functions by creating database and electronic spreadsheet files to use as decision-support (management) tools.

G. Use an electronic spreadsheet for basic bookkeeping functions.

H. Define and explain the functions and advantages of a local area network.

I. Evaluate factors in selecting a local area network.

J. Define and describe the functions of an electronic mail system.

K. Complete an electronic mail tutorial.

L. Develop and demonstrate responsible work behavior in an automated environment and in a local area network environment.

M. Establish procedures for efficient work flow while working in a shared environment (LAN).
N. Exhibit a professional attitude in completing assigned tasks.

O. Exhibit independence in comprehending and applying written instructions given in software documentation and assigned tasks.

Evaluation of Students:

Examinations:

There will be two unit tests, one progress test, and one final project (Technical Report). No make-up exams will be given without prior approval.

Laboratory/Homework:

Assignments will be due according to lesson schedule. All assignments must be in mailable form. All exercises for one unit will be averaged for one unit grade. Late assignments will not be accepted after one week past the due date.

Work Habits:

Technique makes up 10% of the final grade. The technique grade will evaluate the student's ability to work alone asking questions only when necessary, the ability to make decisions after reading and comparing information, the ability to use the software with a minimum amount of help from the instructor, the ability to use time wisely, the ability to bring all necessary supplies and books to class, and the ability to maintain a positive attitude toward the course and the instructor.
Grades:

Final Grade Determination:
Grading Scale (suggested)

Unit Exams:
Unit 1 10%
Unit 2 10%

Lab Exercises:
Units 1, 2, 3, 4, and 5 40%

Final Project:
Unit 6 15%

Homework:
(Includes weekly library reports) 15%

Techniques and Work Habits:
(See attached form) 10%

FINAL SEMESTER GRADE --------------------- 100%

Course Outline:

Introduction:

1. The Changing Role of the Secretary
2. Professionalism in a Changing Technological Environment

Contents of Unit 1: Database Management

1. Concepts and Terms
2. Functions and Commands
   a. designing the database
   b. creating the database
   c. editing the database
   d. updating the database
   e. combining databases
   f. copying databases

Contents of Unit 2: Electronic Spreadsheets

1. Concepts and Terms
2. Functions and Commands
   a. creating the spreadsheet
   b. editing the spreadsheet
   c. combining spreadsheets
   d. copying spreadsheets
   e. producing graphs
Contents of Unit 3: Desktop Management Software

1. Concepts and Terms
2. Electronic Notepad
3. Calculator
4. Calendar
5. Dialer

Contents of Unit 4: Local Area Networks

1. Concepts and Terms
2. Evaluating and Choosing LAN's

Contents of Unit 5: Electronic Mail

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Module One: Introduction to Self Directed Job Search

SESSION TYPE: Theory
TIME FRAME: 45 Minutes

Introduction to Self-Directed Job Search

Key Concepts:

Over 90% of all students ask the same five questions about looking for work: where are the jobs, who do I talk to, how do I get to these people, what do I talk about, what is the easiest way to convince an employer to hire me.

Most extended unemployment is self-created and is directly related to job seekers' lack of knowledge about:

a. their own employment value, skills and abilities
b. the 5 basic reasons for extended unemployment
c. the most successful job finding methods/tools
d. the needs and expectations of the employer
e. factors that affect the hiring decision

None of the social, business or educational systems can, or are responsible for, guaranteeing employment. Selection of a rewarding career and finding work is the responsibility of the individual.

Successful job seekers must learn to master certain skills, perform certain tasks, take moderate interpersonal risks and understand that entry level work is a "stepping stone" toward career development.

There are a number of job search/career development myths which, when believed, foster extended unemployment and career failure.

The effects of extended unemployment are devastating to job seekers, their social and familial network and finally the social and economic structure of the community.

The need for a reinforceable, realistic vocational/job objective is critical for successful operation of a job search.

Finding work takes considerable effort. This will include class work, homework, library and field research.

Research shows that the two most successful job search methods are direct contact with employers and networking with friends, relatives and acquaintances. The two most powerful tools for finding work are the telephone and the telephone yellow pages.

Training Objectives/Competencies:

During class time, each student will identify a primary and secondary vocational objective along with completing the entire Job Search Knowledge Review. Each question is to be reviewed by the group upon completion.

As a homework assignment, all students must target one other realistic vocational objective should their primary and secondary objective be immediately unattainable.
Module One: Quiz

1. Identify each of the 5 basic reasons for people remaining unemployed.

2. List no fewer than 5 negative effects of unemployment.

3. Identify 5 of the 10 most prevalent myths which counter the success of young job seekers.

4. Specify at least 8 "key" job search skills needed for successful self-directed job search.

5. Name the 2 most powerful job search methods.

6. Name the 2 most powerful tools used to find work.

Method for Evaluation: Fill In Blanks, In Class Observation, Quiz

Point of Evaluation Delivery: During Module One, Beginning Module Two

Learning Principles to be Primarily Used:

[X] Whole/Partial Learning
[X] Active Learning
[ ] Overlearning
[ ] Primacy & Recency
[ ] Multiple Sense Learning

[X] Spaced Learning
[ ] Feedback
[X] Reinforcement
[X] Meaningful Material
[ ] Transfer of Learning

Primary Training Methods Used:

[X] Lecture
[ ] Small Group (quints)
[ ] Small Group (diads)
[ ] Illustration
[X] Inside Class Work
[ ] Library Research
[X] Questioning

[X] Large Group Brainstorm
[X] Small Group (triads)
[ ] Demonstration
[ ] Extraction of Information
[X] Homework
[ ] Field Research
[X] Testing/Verbal or Written

Materials Needed:

Transparencies: Job Search Questions
Shocking Statistics
How to Get the Job You Want
Why People Stay Unemployed
Skills Triad
How People Find Jobs
Proof by Example
Last Word on Applications
Great Expectations
Problem Questions

Handouts: Key Job Search Skills
Job Search Knowledge Review

Reference Materials: None