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Selection

ABSTRACT

This document describes a data processing system now being implemented that is designed to provide rapid retrieval of information concerning a certificate holder's status. A brief history of past and present methods of teacher certification processing is included. These methods are then compared to the system currently being implemented. The new system provides the capability of collecting substantially more data and of storing and retrieving it in a meaningful report format. According to the author, the primary benefits of this system over the old are the ease with which inquiries can be answered, the more rigorous editing capabilities, and the faster computer service. Information on the costs, the procedures, and the problems of implementing the system and some indications about the directions of future changes in recordkeeping are included. Numerous charts and sample forms conclude the report. (Author/DN)

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DATA PROCESSING AT NORTH CAROLINA

DEPARTMENT OF PUBLIC INSTRUCTION

DIVISION OF TEACHER CERTIFICATION

by

John D. Wilson

December 1971

- I. Introduction
 - A. Need
 - B. History
- II. Proposed System
 - A. Explanation
 - B. Charts
 - 1. Gantt Chart
 - 2. Teacher Certification Division
 Organizational Chart
 - 3. Input-Output System Block
 - 4. Application Flow
 - 5. Monthly Processing Cycle
 - C. Output
 - D. Benefits
- III. Conversion
 - A. Data Files and Programs Required
 - P. Problems Encountered
- IV. Cost Estimates
 - A. One Time Conversion Costs
 - B. Continuing Costs By Week and Annually
- V. Future Directions
 - A. Microfilm
 - B. Computer Output Microfilm (COM)
 - C. Revisions, Manpower Requirements Projections
- VI. Exhibits
 - A. Application Form
 - B. Coding Form
 - C. Certificate
 - D. Coding Structures
 - E. "Alpha-Index Cards"



I. Introduction

This paper is intended to be a description of the use of automatic data processing by a part of the North Carolina

Department of Public Instruction. It does not describe the requirements for becoming certified. Should the reader be interested in obtaining more information about these requirements, he should write: Division of Teacher Certification, North Carolina

Department of Public Instruction; Education Building; Raleigh, N.C., 27602.

The project reported on here was developed with the cooperation of the Management Information Systems Division and the Teacher Certification Division of the North Carolina State Education Agency. The exhibits and most of the charts used were developed in the course of the project.

A. Statement of Need.

The need for a method of rapidly retrieving information concerning a certificate holder's status is becoming increasingly apparent. Although the currently adopted method is a very good approach and is effeciently administered, sometimes problems arise.

Slow Retrieval - The actual speed of retrieval is rather fast if the file folder is in the file when it is wanted; however, 50% of the time the folder is out of file and may take several minutes or up to an hour to locate. This is due mainly to folders being pulled on written request and then having a follow-up telephone call received inquiring about the same request.*

This situation would not improve if some changes to the current system (explained in the next section) were not implemented. The reason is that approximately fifteen thousand new certificates are issued each year. Almost that many certificates are renewed each year, also.

When the Division of Teacher Certification receives an inquiry concerning the proper position in the State funded educational salary structure for a teacher or administrator, his most recent experience as well as his college course work and other approved certification preparation activities must be available for evaluation. (An estimated 70 to 80 percent of these inquiries can be responded by the data contained in an "alpha-index card" which will be explained lated.) Due to the high rate of out-offile occurrences, current searches for a folder often require prolonged searches through queries of folders waiting to be filed and stacks on various desks.

This frequently makes it difficult or lengthy to handle telephone inquiries.



-2-

^{*}From a proposal presented to The N. C. Teacher Certification Division in Raleigh after a study had been conducted.

B. Fistory and Current Methods.

The State of North Carolina began to certify teachers about the year 1918. Prior to 1962, all folders containing data were filed alphabetically and no index was required. The certificates were hand typed. No statistics could be obtained except by the simplest sampling techniques. In 1962 records were keypunched and certificates printed on an IEM 407 Electronic Accounting Machine. The punched cards have been saved and updated in a card master file. New Certificates are issued a sequential number on a first-in first-out basis.

The current data processing methods employed involve the interrelationships of three files. These files are: 1. the folders containing all documents presented in support of the inssuance of a certificate and current rating status. This file is in certificate number order. 2. A file of index cards which contain the name and certificate number of each certified individual. This file is in alphabetic sequence by last name to cross index the first file. 3. The third file is the series of punch-cards which are used to print the certificates. This file is in certificate number order. Its use is primarily for compiling statistical reports. The file is matched on an annual basis with budget data on each instructional and administrative position in North Carolina's public schools. This process is important as it provides a means of validating data and updating experience for active teachers.

In February of 1971, a feasibility study was conducted to determine the possibilities of converting the current method of

unit record processing to a computerized system. This entailed approximately three man-months and arrived at a proliminary design and some projections of time and manpower and equipment needed.

In June, the project was given a green light and asked to be completed by Christmas, 1971, instead of the originally estimated completion date of late February, 1972. Priority was also given the project so that the revised schedule might be met.

II. The Proposed System

A. Explanation

The primary objectives of the proposed system (now being implemented) are to provide the facility of collecting substantially more data, storing it and retrieving it in a meaningful report format. The latter is an extremely important part of any system that is to contribute valuable information about the State's teacher force. Generalized report writing programs will be used to select and print pertinent data and will be designed and implemented on an "as needed" basis. As such these reports will not be discussed in any great detail in this paper. The detailed system specifications which the programmers worked from are about 125 pages, so will only be used as a source of some data for this paper.

The heart of this new system is a rather large edit and update program which carefully checks all values submitted for an individual's record against specific permissable values, upper and lower bounds or some other requirement. Some data must be present in order to have a valid record, some is optional.

Bifore this system, no means has been available to collect social security number. In the beginning, it will be optional data but after a few months, it will be required in every master file record created. This will be done because it is proposed that a future revision of this system convert to a social security number key and drop the currently assigned six digit certificate number.

Some other additional data not currently being collected will include up to three entries for education level, institution code, and date of graduation; the date, teaching areas and scores achieved on the National Teacher Examination; also up to five years of employment history data will be available to the evaluator. This data will help in the analysis and projection of State fund allocations to local school districts, the evaluation of teachers scores based on statewide norms, and will give information on which institutions prepare what sort of teachers both in quantity and quality. Also it will be possible to see if certain schools prepare more and/or better teachers in a certain subject area.

Teacher transcripts, though required for certification will not be a part of the master record. No meaningful course codes or grading systems span all schools, and the data would not contribute that much to the value of the Data Processing master file. Transcripts will be retained in a person's document folder (which will eventually be microfilmed).

The inputs to the edit and update program will be keypunched into cards in the format suggested by the coding form shown in

exhibi' B. However, a keypuncher could work directly from the application for a certificate. The application blank itself will be re-designed for easier use of keypunchers, although the general organization of data will be approximately the same.

Currently keypunchers work from marked up file copies of certificates. After familiarity with the new card layouts is gained, this means of input will be accommodated. In fact, probably very little data will be coded on the form shown in exhibit B.

B. Charts

The following charts include a Gantt Coart showing the schedule developed last June. As of this writing (mid-November, 1971) the schedules appear to have been met pretty well. Assuming no serious problems, we anticipate being able to be fully operational at the beginning of 1972. Following this are charts showing the organizational structure of the Division of Teacher Certification, and a chart of the general view of the work process of the Division.

Also included are flow charts showing the programs involved and their relationships to the whole system. Note that one chart is for the weekly or semi-weekly cycle and one is for a longer cycle - approximately each month.

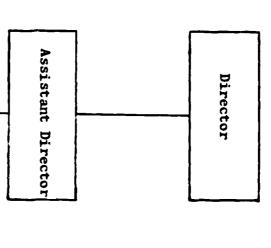
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TEACHER CERTIFICATION PROJECT

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CERTIFICATION DIVISION



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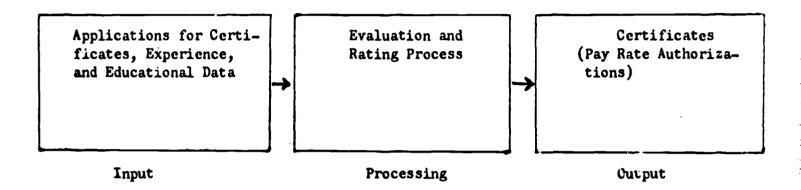
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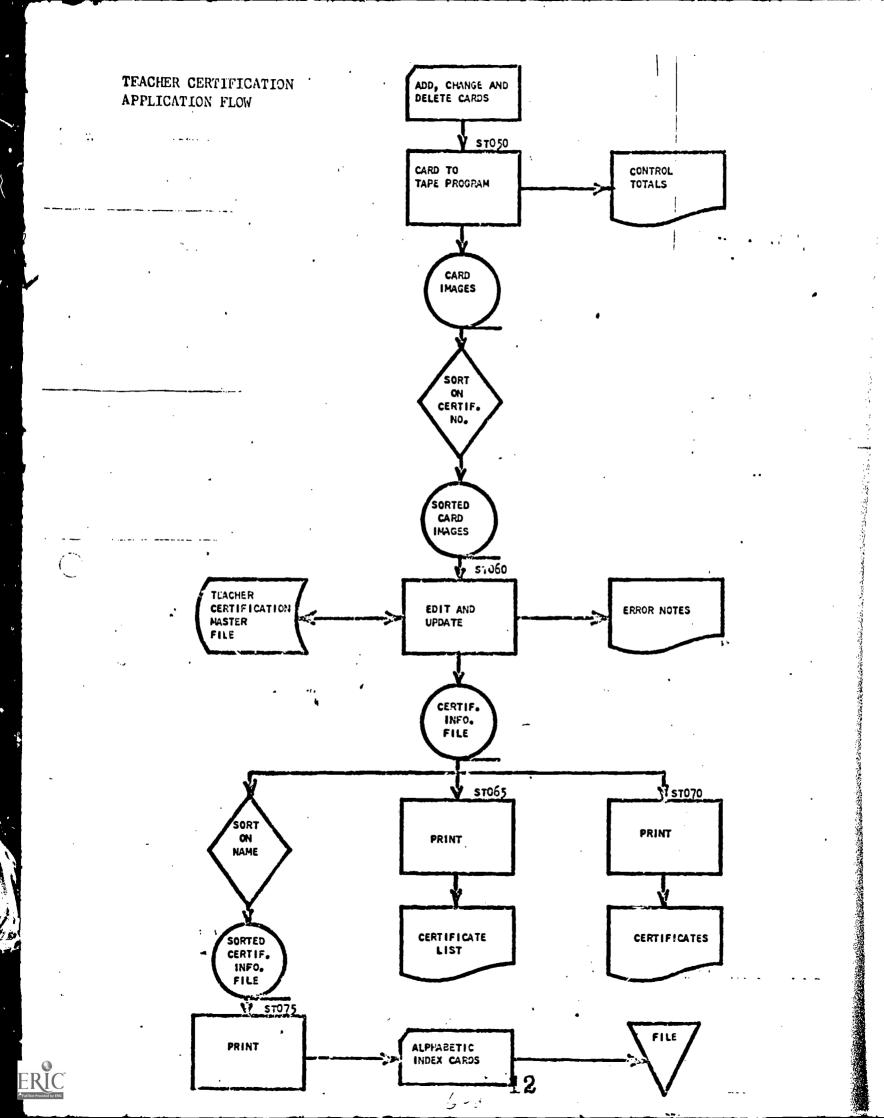
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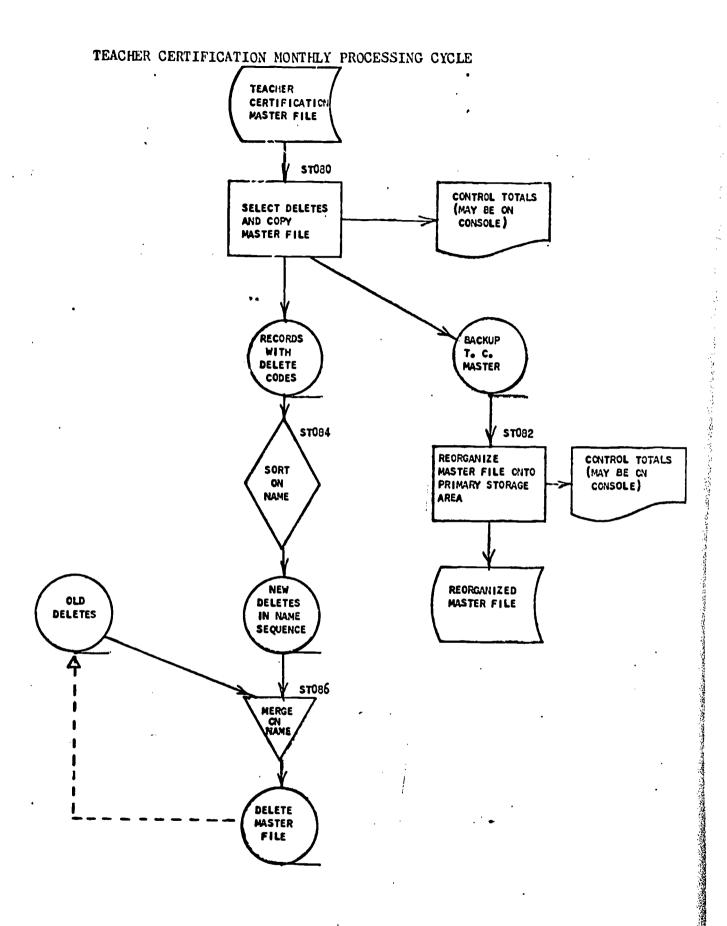


Input-Output Chart of Teacher Certification Division Activities



11





1.3

C. Outputs

To the teacher in the school, the only visible output is the certificate shown in exhibit C. However, this is the same certificate currently used. The most notable change in the new system is the availability of an 'alpha-index card". Since this card is small, and since only a relatively small number of people will be using this file directly, the data displayed is not labeled and quite cryptic.

Other important print outs are the certificate list and the error messages which point out data problems that must be resolved.

Statistical reports and the programs which compile them, an important part of the system, have not been fully designed yet. They will be undertaken in the early part of 1972.

D. Benefits

The primary benefit of this system over the one used in the past is that a significant number of inquiries will be able to be answered by the data on the new "alpha-index card". The more rigorous editing capabilities of the computer as well as the faster service are other definite advantages. A benefit of the use of microfilm mentioned in part V is the archival angle of having a teacher's credentials available in case the records of his attendance were destroyed at his alma mater. This is more than a remote possibility with campus unrest fulminating in attacks on school administration buildings.

III. Conversion Efforts

A. Data Files and Programs Required

The problem of converting the current Teacher Certification

Master File (300,000 cards), the 1971-72 school year administrative



budget file (55,000 cards), and the 1970-71 Principal's Preliminary report (50,000 cards) is a monstrous task. The North Carolina State Retirement System's Master File was also used to extract some dataabout the State's teachers.

The first step was to put all the cards on tape and align a key field, certificate number and insert a card code for sorting purposes. Then the records were sorted and fed into a reformatting program which made them appear as newly certified teachers to the edit and update program. These programs will take approximately twenty-five hours of time on an IEM 370/145 although the time would be comparable on any other machine with input-out equipment of similar speeds, since the programs for conversion are all I/O bound, i.e., they are waiting for reads or writes of data. The printing of all the "alpha-index cards for the first time will take an estimated thirty-five hours more computer time.

B. Problems Encountered

The unit record equipment used up to this time was not very demanding of the quality of data fed into it. Consequently some cards with invalid data (three or more punches in one column) were found. Of a sample of data used for testing, approximately 2.1% of the input cards required corrections and re-entry. This will mean about 6,500 cards to correct and re-enter for the complete conversion.

This assumes that the errors are equally dispersed throughout the file. It is hoped that the quality of data improves as
the file entries are more recent. This would mean fewer corrections
before the system could be up and running.

IV. Cost Estimates

A. One Time Conversion Costs



The conversion costs are primarily of two kinds, man weeks of effort and machine time. Assuming on average manpower wage of \$225. per week for a total of 60 man-weeks gives a cost of \$13,500. The machine time for conversion is estimated to be 35 hours of machine time at \$40. per hour for a machine cost of \$1,400.

Total cost of men and machine for conversion to the computer system would be about \$15,000. This does not include the overhead of management nor does it consider the time required by people from the Division of Teacher Certification. To date this time has not been extensive.

B. Continuing Costs

The continuing costs of the new system will be from three major areas - manpower, computer time costs and forms costs. The continuing manpower requirement may be estimated at one systems analyst at half-time and one programmer at half-time. Using the assumption that their average wage is \$225. per week each this is a weekly cost of \$225. The machine expenses are estimated at 1.5 hours per week. There are monthly runs also to be considered of about four hours per month or an additional hour per week. This gives 2.5 hours per week at \$40. per hour or \$100. per week. Forms are calculated to be \$1500. per year. In tabulated form:

manpower	\$225 weekly	\$11,500 annually
computer time	\$100 weekly	5,000 annually
corms	\$ 30 weekly	1.500 annually
TOTAL	\$355 weekly	\$18,000 annually



V. Future Directions

Several developments are on the horizon in the records section. The most far reaching change soon to be implemented is the installation of microfilming equipment.

A. Microfilm.

The recording of present and future documents on microfilm is a task which is necessitated by the lack of available space to expand the existing overcrowded file room. The film will probably be stuffed into jackets and used in the form of microfiche. When a record of an invidivuals credentials is desired, the microfiche will be duplicated and the original returned to the file. This should eliminate the "out of file" condition which is encountered in approximately one-half of the current searches for a folder. Microfilm is also a more durable media than paper, it doesn't fade yellow or tear as easily.

B. Computer Output Microfilm (COM).

Each year the experience history of actively employed teachers must be updated. This constitutes updating over one third of the file and hand filing of these alpha-index cards would be a tedious process. For the first year, the cards will be printed on a computer printer and plans were to regenerate the entire file annually. It may be feasible to put the index on microfilm directly from the computer and access it with a reader-printer. However, updates would still be printed on continuous form cards and this would necessitate two searches for many index entries.

Initial cost estimates including machine expenses are approximately half that of hard copy. This may justify semi-annual or even quarterly regeneration of the file on microfilm which would keep



-10-

the size of the update file relatively small.

C. Revision of Approach

Already several areas which can be improved upon have been lined up for tentative revisions in 1972. Rearrangements of information in several of the input card layouts would be easier for the user. A large number of certificate holders are certified in only one area. Since the new system uses fixed length records, it was decided to devote space for six certificate areas per teacher. Much of that space is not used and could be eliminated by using variable length records or a master record followed by several trailer records. A similar approach could be used in the storing of repetitive experience history data.



APPLICATION FOR INITIAL NORTH CAROLINA TEACHER'S CERTIFICATE STATE DEPARTMENT OF PUBLIC INSTRUCTION, RALEIGH

Instructions	for completing	ng this	applicatio	n are found	on the	back pa	age. 				
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IX. OUT-OF-STATE INSTITUTIONAL RECOMMENDATION FOR PROFESSIONAL SCHOOL PERSONNEL: Officials from out-of-state colleges should fill out these sections (if applicable) and forward this form with an official transcript of the Record of Scholastic Preparation to the DIVISION OF TEACHER EDUCATION, STATE DEPARTMENT OF PUBLIC INSTRUCTION, RALEIGH, NORTH CAROLINA.

Student Teaching Record:	
Name of Student	
Name of College	
Title and catalog number of Supervise Teaching Course	
Subject or subjects taught	
and/or	
Grade or grades in which taught	
Did this applicant have full-time student teaching? Yes No	
Number of clock hours of actual teaching	
Comments:	:
DateSignature and	
Signature and	d Title of Appropriate College Official
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NCATE (National Council for Accreditation of Teacher Education) recomm	, , , , , , , , , , , , , , , , , , , ,
Name of College	
Has college been visited by NCATE and approved as a result of the visit?	Yes No
Applicant's major or area of teacher preparation	
Area(s) in which applicant is recommended	

	,
DateSignature and	Title of Recommending College Official



official transcript of the Record OF PUBLIC INSTRUCTION, I		on to the DIVISION		
Name of Student		Na.	Middle	Maiden
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Degree				
NATIONAL TEACHER EXAM				
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ACADEMIC RECOMMENDATI	ON			
The applicant has complete and is hereby recommended as				on for a certificate as a teacher as for the certificate.
Subject(s) in which the applicant				
*Certification field	Signature and	Title of Recommending	Official	Date
*Certification field	Signature and	Title of Recommending	Official	Date
Intermediate Certification		•		
Grade(s) in which the application	cant completed student t	eaching		
Subject endorsement(s)	••Signature	and Title of Recommend	ling Official	Date
Early Childhood Education Cert	ification (Only Profess	ional Recommendatio	n required)	
Grade(s) in which the applic	cant completed student t	eaching		
PROFESSIONAL RECOMMEN				
The applicant has complete cate as a teacher and is hereby Approval of Programs for Teach	recommended as possess			n of preparation for a certifi- y the State Guidelines for the
*Signature of recommending official re	Signature and Title of Required for each area of certi-	fication		Date
**Recommending official for academic	concentration for Intermedia	te certification is to be d	etermined by the institution.	

X. NORTH CAROLINA INSTITUTIONAL RECOMMENDATION FOR PROFESSIONAL SCHOOL PERSONNEL: This section must be completed by North Carolina institutions with approved programs of teacher preparation. Please forward this form and an



APPLICANT'S INSTRUCTIONS FOR COMPLETING FORM 1

The applicant is fully responsible for establishing official documents to support his application. All material should be sent to the DIVISION OF TEACHER EDUCATION, STATE DEPARTMENT OF PUBLIC INSTRUCTION, RALEIGH, NORTH CAROLINA. 27602.

APPLICATION. The applicant will complete the personal information requested on the front of this form and send the form to the registrar of the institution where the Professional preparation, including student teaching, was completed. A North Carolina institution will complete Item X. An out of-State institution will complete Item IX. The registrar of each institution attended by the applicant must file an official transcript unless the credit has been transferred and appears on some other transcript. An evaluation of the application will be made and sent to the address given on the application form.

NATIONAL TEACHER EXAMINATIONS. The National Teacher Examinations are a prerequisite to the issuance of a North Carolina Teacher's Certificate. If the applicant has taken the examination, he should have the Educational Testing Service, Box 911, Princeton, New Jersey, file an official report of scores. If the examinations have not been taken, arrangements should be made to take them as soon as possible.

TEACHING EXPERIENCE. Teaching experience which occurred outside of the public schools of North Carolina must be verified by the superintendent of the administrative unit in which the experience was obtained. Secure one Form No. 6 for each administrative unit in which experience occurred. (This form is available in the local school superintendent's office and the State office).

MILITARY SERVICE EXPERIENCE. Increment credit will be granted to a person who served one or more years of active duty after having completed a minimum of sixty semester hours of college credit. Form No. 7 may be completed by your local superintendent to establish this experience. (This form is available in the local school system or from the State office).

CERTIFICATION AREAS. The State of North Carolina issues certificates in the areas listed below. Item VIII on the front of this application form should show the Class and Area in which the applicant is seeking certification.

EMERGENCY CERTIFICATES.

Emergency Class A-This rating is granted to a person who holds a Master's Degree without having completed an appropriate Teacher Training Program.

Emergency Class B-This rating is granted to a person who has at least ninety semester hours of work or who holds the Bachelor's Degree without Teacher Training.

Emergency Class C-This rating is granted to a person who has completed a minimum of sixty semester hours.

STANDARD CERTIFICATES

CLASS "A" LEVEL (Bachelor's Degree)

Early Childhood (K-3)

Intermediate (4-9)

(Show Subject endorsement)

Subject Areas (7-12)

Agriculture

Rible

Business Education

Distributive Education

English

French

German

Home Economics

Industrial Arts

Introduction to Vocations Latin

Mathematics

Science

Social Studies

Spanish

Speech

Trade & Industrial Education

Special Subjects (K-12)

Health Education Library Science

Physical Education and Health

Special Education

CLASS "G" LEVEL (Master's Degree): Same areas as shown for Class "A"

SPECIAL SERVICE PERSONNEL: (Master's Degree and Sixth Year)

Audiovisual Director

Psychologist

Supervisor

Counselor **Principal**

Superintendent

Supervisor of Student Teachers

NOTE: College credit to be acceptable for certification in North Carolina must have been earned in an institution accredited by one of the regional accrediting associations or by the State Department of Education in the State in which the institution is located.



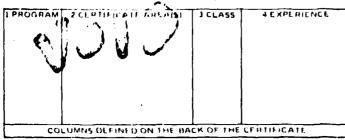
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ATTENTION CERTIFICATE HOLDER



This is your North Carolina certificate. The individual's copy has been issued for your records. The Superintendent's copy (original and carbon) must be presented to your Superintendal before you can be paid. (General Statutes 115-152 and 115-153) (Refer to the back of this form for additional information and instructions.)

こうこととう かくさなる のいとうしている 東西のおから はない はない はんしゅう

INDIVIDUAL'S COPY STATE OF NORTH CAROLINA Department of Public Instruction, Raleigh, North Carolina THE PERSON NAMED HE FOOD HAS COMPLETED A PROGRAM OF PREPARATION APPROBY THE STATE BOARD OF EDUCATION AND IS HEREBY GIVEN THIS. Certificate TO SERVE IN THE SCHOOLS OF NORTH CAROLINA IN THE AREA(S) INDICATED: OATE EFFECTIVE NAME OF PERSON CERTIFIC oft NO. THEFT I SHOWE ! DATE ISSUED CERTIFICATE AREA(S) EXPERIENCE CLASS PZOGRAM GIVEN UNDER OUR HANDS IN ACCORDANCE WITH THE RULES AND HE GULATIONS OF THE STATE BOARD OF FOUCATION. STATE SUPERINTENDENT OF PUBLIC INSTRUCTION COLUMNS DEFINED ON THE BACK OF THIS CERTIFICATE

	eted For Your Information Only,	 -	
DATE	2. APPROVED RENEWAL EDUCATION ACTIVITY	3. CREDIT	4. ADMINISTRATIVE UNIT OR COLLEGE
		. ,	′ '



CODES FOR TEACHER MASTER FILE

MARITAL STATUS	RACE	SEX
S - Single	W - White	M - Male
M - Married	N - Negro	F - Female
D - Divorced	I - Indian	• • • • • • • • • • • • • • • • • • • •
W - Widow	0 - Oriental	

A - Separated

MUUCATION LEVEL

- 1. Less than 60 semester hours college credit.
- 2. 60-89 semester hours.
- 90 semester hours to a degree.
 Bachelor's Degree.
- 5. Master's Degree.
- 6. Sixth year of college credit completed.
- 7. Doctor's Degree awarded.

MOCE COMMON	NODELL GAROLTHA COURSE D. T. C. D. CORDO	
MOST COMMON	NORTH CARCLINA SCHOOL F.I.C.E. CODES	
002906	Appalachian State University	Boone
002913	Campbell College	Buies Creek
002920	Duke University	Durham
002923	East Carolina University	Greenville
002950	North Carolina Central University	Durham
002972	North Carolina State University	Raleigh
002907	University of North Carolina	Asheville
002974 .	University of North Carolina	Chapel Hill
002975	University of North Carolina	Charlotte
002976	University of North Carolina	Greensboro
002984	University of North Carolina	Wilmington
002981	Western Carolina	Cullowhee

SPECIAL EDUCATION CODES

- ER Educable Mentally Retarded
- SI Speech Impaired
- HI Hearing Impaired
- CR Crippled
- VI Visually Impaired
- ED Emotionally Disturbed
- LD Learning Disabled
- HB Homebound
- HP Hospitalized
- GT Gifted and Talented
- TR Trainable and Mentally Retarded
- AG Agriculture
- HE Home Economics
- TI Trade and Industrial
- DE Distributive Education
- IV Introductions to Vocations
- BE Vocational Office Education
- MG Middle Grade
- OE Other LD Local Directors

SOURCE OF FUNDS

- S State
- L Local
- V Vocational
- F Federal

TERMINATION CODES

- RE Retired
- DE Deceased
- PR -- Personal Reasons
- DH Disability, Health Reasons
- WI Withdrawal of Benefits
- DI Disciplinary Reasons

BUDGET CODES

Super intendent
ASSOCIATE AND ASSISTANT SUPERINTENDENT
ESEA DIRECTOR
SUPERVISORS AND ESEA COORDINATORS
UNIT-WIDE LUNCHROOM SUPERVISOR (IF CENTIFIED)613.3
ATTENDANCE COUNSELOR (IF CERTIFIED)
PRINCIPALS
HIGH SCHOOL TEACHERS622
HIGH SCHOOL LIERARIANS
HIGH SCHOOL COUNSELORS
DRIVER TRAINING AND SAFETY EDUCATION TEACHERS671.1
VOCATIONAL TEACHERS
AGRICULTURE
HOME ECONOMICS
TRADE AND INDUSTRIAL
DISTRIBUTIVE EDUCATION
INTRODUCTIONS TO VOCATIONS
VOCATIONAL OFFICE EDUCATION
MIDDLE GRADE
OTHER
LOCAL DIRECTORS
ELEMENTARY TEACHERS
ELEMENTARY LIBRARIANS
ELEMENTARY COUNSELORS
SPECIAL EDUCATION TEACHERS
TRAINABLE MENTALLY RETARDED TEACHERS
KINDERGARTEN672

TWO-LETTER STATE ABREVIATIONS

ING-PELLEN DIVIE UPPELLULE	
KENTUCKYKY	OH10OH
LOUISIANALA	OKLAHOMAOK
MAINEME	OREGONOR
MARYLANDMD	PENNSYLVANIAPA
MASSACHUSETTSMA	PUERTO RICOPR
MICHIGANMi	RHODE ISLANDRI
MINNESOTAMN	SOUTH CAROLINASC
MISSISSIPPIMS	SOUTH DAKSTASD
MissouriMO	TENNESSEETN
MONTANAMT	T.S.XASTX
NEBRASKANB	UTAHUT
NEVADANV	VERMONTVT
New HampshireNH	VirginiaVA
NEW JERSEYNJ	VIRGIN ISLANDSVI
New MexicoNA	WASHINGTONWA
NEW YORKNY	WEST VIRGINIAWY
NORTH CAROLINANC	WISCONSINWI
NORTH DAKOTAND	WYCMINGWY
	LOUISIANALA MAINEME MARYLANDMD MASSACHUSETTSMA MICHIGANMI MINNESOTAMN MISSISSIPPIMS MISSOURIMO MONTANAMT NEBRASKANB NEVADANV NEW HAMPSHIRENH NEW JERSEYNJ NEW MEXICONH NEW YORKNY NORTH CAROLINANC

PROGRAM

- INDICATES THE SUCCESSFUL COMPLETION OF AN "APPROVED TEACHER EDUCATION PROGRAM" IN A NORTH CAROLINA INSTITUTION.
- THIS CODE INDICATES THAT THE INDIVIDUAL HAS COMPLETED A PROGRAM FOR CERTIFICATION OTHER THAN THE "APPROVED PROGRAM" APPROACH AS INDICATED IN CODE OI.
- SUB-STANDARD CERTIFICATE BASED ON THE EMERGENCY REGULATIONS OF THE STATE BOARD OF EDUCATION.
- 04 CONDITIONED CERTIFICATE VALID FOR ONE YEAR WITH TEMPORARY DEFICIENCIES WHICH MUST BE SATISFIED WITH APPROPRIATE COLLEGE CREDIT.
- SPECIAL OCCUPATIONAL EDUCATION CERTIFICATE LIMITED TO USE IN THE AREA SHOWN.
- RECIPROCITY CERTIFICATE BASED ON PREPARATION OUTISDE OF NORTH CAROLINA.

AREA __ Column 2 - -Elementery Special Subject Areas (Grades 1-12) - Subject Areas Special Service Personnel Occupational Education Subject Ariss (Crass) School Libration Tascher Libration Unlimited Mantally Rasselvid Speech and Hearing Visually Handicapad Crispled Emplianally Desturbed Physical Saucerson Health Estatorian Health Estatorian Rassing Mestic Instrumental Musical Instrumental Musical Exonomiga Sac siday Antiropolicay Fracth Sacrich Garner Russian Lohn Basiness Education B Superintendine The Principal (K-72) The Principal (K-72) The Principal (K-72) The Principal Translate The Theorems School Principal Theorems The Translate T 020 021 022 023 Elementary (Graduate)* Princity* Granuar* Early Childhood Education Agriculture Agriculture Test_{ing}to Home Economics Distributive Education Trade and Industrial Introduction to Vasci 22.000 Internatione (Last three digits show subject andersoment(s). Emergency Ratin 031 Emuganay * No New Correlation to Base of in these areas. Column 3 - Class refers to level of preparation. A, VA, PVA, NSP, E1.P G, SG, VG, P, S, CS, AVG AP, ASG, AS, AS G12, GG, SA3, GVG, G1G PV, V Bacholor's degree Massor's degree Siels Year (eleances) Castaris de gree Vocational Tradoo

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THE "ALPHA-INDEX CARDS"

The following pages describe the information contained in a "alpha-index card". In order to conserve space, the cards will not have labels explaining the nature of the data nor the codes used to represent certain conditions. The user must learn, through familiarity, that certain data will appear in certain positions.

The explanation of codes for these cards appears in another part of this booklet.



2.8

p							
LAST	FIRST	MIDDLE	MAID		X]11	l*	104000
999-99-9999	1/29/37	432111	2/1	4/71		7 4 76* 3	7/01/71*
SEPARATED	ORIENTAL	FEMALES	ER	123		Sie	2/14/71
384468884888	www.ina.agaac	DELETED F	ROM MAS	TER			·
5 003123 464*	01 002	P-07%1.62	312.02	A 920	P-07	G-11 70	623.1. *
4 006789 659	01 1.00	G-11:160	160.	920	P-06	G-10 69	623.1 *
		*163	154	920	P-05	G-09 68	623.1 *
			1.50	920	P-04	G-08 67	623.1 *
		*	MI	J.	P-03	G-07 66-	
		*				-	
							•
03/71 08 623 1	.1 671 646	1170			•		
STREET							•
OPTIONAL ADDRE	SS DATA				•		ı
CITY	NC 27	604				•	
	110 -7						
TC XX/XX/XX*			,				

The following pages describe the data fields on this card and the boxes which are drawn around logical units.

It is important to point out here those fields which are not enclosed in a box.

In the upper right corner of the card is a person's certificate number. This is a six digit numeric item.

In the center of the card under maiden name is a date which is the date the card was last changed.

The three lines next to the bottom line are address lines and include street address, city, state, and zip code.



LAST	FIRST	MIDDLE	MAIDE	N	* 11			104000	١.
·· 9 99-99-9999	1/29/37	432111	2/14,	/71	7	4 7	61: 7,	/01/71 [.]	* /
SEPARATED	ORIENTAL	FEMALE*	ER	123	5	3 ⊱	2,	/14/71	
466666666666	*********	*DELETED F	ROM MASTI	ER			;		
5 003123 46.	\$*01 002	P-07*162	312.02A	920	P-07	G-11	70	623.1	*
4 006789 659	01 100	G-11*160	160.	920	P-06	G-10	69	623.1	3%
•		*163	154	920	P-05	G-09	68	623.1	*
	;	*174	150	920	P-04	G- 08	67	623.1	℀
		*	MIL		P-03	G-07	66-		3;-
		*					i	;	
								• •	
03/71 08 623	11 671 646	1170*			•				

TC XX/XX/XX*

The data in the box above is a logical unit. The asterisk is a flag that will be printed only when some of the data in the box has changed from the previous card.

The last name will appear first with up to 14 characters.

The first name will appear following the last name and may have up to 10 characters.

The middle name will be next with up to 10 characters.

The maiden name will be the last data item carried in this group and can be up to 14 characters.



LAST	FIRST	MIDDLE	MAIDE	N	* 1	1*		104000	١,
999-99-9999	1/29/37	432.111	2/14	/71	•	7 4 7	6∜ 7	/01/71	ii:
SEPARATED	ORIENTAL	FEMALES	ER	123		Si:	2	/14/71	
3000000000000000000000000000000000000	ย่อยออยอยอย	SEDELETED F	ROM MAST	ER			,	, ,	
5 003123 46.	4*01 002	P-07*162	312.02A	920	P-07	G-11	70	623.1	*
4 006789 659	9 01 100	G-11 *160	160.	920	P-06	G-10	69	623.1	36
•		*163	154	920	P-05	G -09	6 S	623.1	-;;
		*174	150	920	P-04	G- 08	67	623.1	7
		*	MIL		P-03	G-07	66-		-:
		*	•					;	
								•	
03/71 08 623	11 671 646	1170*			•				
STREET							٠		
OPTIONAL ADDR	RESS DATA			•	•				
CITY	NC 27	7604							

In the upper left of the above group will appear an individual's social security number. This is a 9 digit number edited with two dashes between groups of 3, 2, and 4 digits.

In the center of the top line is the person's date of birth. It will be in the order of month/day/year.

In the upper right corner of the above box is the retirement number. This is a 6 digit numeric field.

In the lower left corner of the above box is a word describing the person's marital status.

In the center of the lower line of the box is a word describing a person's race.

In the lower right corner of the above box is printed a word—either MALE or FEMALE to denote the certificate holder's sex.

_	LAST 999-99-99	•	RST /29/37	MIDDLE 432111	MAIDE 2/14		* 11 7		104000 4 76* 7/01/71		
	SEPARATED		IENTAL	FEMALES:	ER	123		336	2,	/14/71	j
	*****	*****	****	*DELETED F	ROM MASTI	ER				•	
	5 003123	464*01	002	P-07*162	312.02A	920	P-07	G-11	70	623.1	*
	4 006789	659 01	100	G-11 *160	160.	920	P-06	G-10	69	623.1	*
		•		*163	154	920	P-05	G-09	68	623.1	} ∻
				*174	150	920	P-04	G-08	67	623.1	*
				*	MIL		P-03	G-07	66-		3 ;-
				*	•					•	•
								. •		1	

TC XX/XX/XX*

The above box encloses data@bout a person's employment status. The asterisk in the box will be printed any time data in this box changes from the previous card.

The rightmost field in this box is a single letter designating the source of funds for this employee's position. It will be an S for state, L for local, V for vocational or F for federal.

The center field in the above box is the school number which can be coupled with the unit number below it to give a unique number for the identification of a particular school. The field is three numeric digits.

In the left hand side of this box will appear two letters designating a special education teacher's area of specialty. For non-special education teachers this area will remain blank.



32

LAST	FIRST	MIDDLE	MAIDE	N	*11	*	104000
~ 999-99-9999	1/29/37	432111	2/14,	/71	L ₂	76* 7	/01/71* \
SEPARATED	ORIENTAL	FEMALE*	ER	123		2	/14/71
******	8888888	⇒DELETED F	ROM MASTI	ER		•	
	! *0 1 002	P-07:162	312.02A	920	P-07	G-11 70	623.1 *
4 006789 659	9 01 100	G-11*160	160.	920	P-06	G-10 69	623.1 *
		*163	154	920	P-05	G-09 68	623.1 *
	•	*174	150	920	P-04	G-0S 67	623.1 *
		*	MIL		P-03	G-07 66-	· *
		· *	•			i	

TC XX/XX/XX*

The data in the box above is a logical unit. The asterisk is a flag that will be printed only when some of the data in the box has changed from the previous card.

The field to the left in the top line is the year first employed in North Carolina. It is a two digit numeric number with the asterisk flag for this group to its right.

Directly underneath the years of teaching experience is the number of years taught in North Carolina. It also is a 2 digit numeric number.

To the right on the second line of this box is the number of years of teaching experience out of the state of North Carolina. It also is a 2 digit numeric field.

LAST - 999-9999	FIRST 1/29/37	MIDDLE 432111	MAIDEN 2/14/		* 11	* 4 76	104000 76% 7/01/71		
SEPARATED	ORIENTAL	FEMALE*	ER	123	S	* 4 70	· ' ·	14/71	` \
********	36666666666666	*DELETED F	ROM MASTE	ER			ı		
5 003123 46	4*01 002	P-07*162	312.02A	920	P-07	G-11	70	623.1	36
4 006789 65	9 01 100	G-11 *160	160.	920	P-06	G-10	69	623.1	*
		*163	154	920	P-05	G-09	6 8	623.1	*
		*174	150	920	P-04	G- 08	67	623.1	3 %
		*	MIL		P-03	G-07	66-		*
	•	*						:	•

TC XX/XX/XX*

The box above encloses the date a certificate expires. The asterisk on the right will be printed any time a new date is put in the system or the certificate is reprinted.

It is implied that the certificate expires on June 30 of the year printed on the card.

LAST	FIRST	MIDDLE	MAIDE	N	* 11	146	104000
- 999-99-9999	1/29/37	432111	2/14/71			7 4 76* 7	701/71*
SEPARATED	ORIENTAL	FEMALE**	ER	123	5	5 ⊬ 2	/14/71
386888888888	**********	*DELETED F	ROM MASTI	ER			
5 003123 464	*OI. 002	P-07*162	312.021	920	P-07	G-11 70	623.1 *
4 006789 659	01. 100	G-11*160	160.	920	P-06	G-10 69	623.1 *
•		*163	154	920	P-05	G-09 68	623.1 *
		*174	150	920	P-04	G-08 67	623.1 3
		*	MIL		P-03	G-07 66-	, ⊰:
•	•	*					t
							•
03/71 08 623	11 671 646	1170*			•	•	

TC XX/XX/XX*

The box above is a logical unit of information about certificate dates. The asterisk in the upper right corner of the box is a flag which will only be printed when some data within the box changes from a previous printing of the card.

The six position date (Month/Day/Year) which is edited with slashes in the upper part of the box is the date which the certificate is effective. In most cases, this will be a July first date but there may be exceptions.

The six position date (Month/Day/Year) which appears on the bottom line of this box is the date of issue of the certificate.



35

_	LAST 999-99-99	-99-9999 1/29/37		MIDDLE 432111	MAIDE 2/14		* 11		104000 1 76% 7/01/71		
	SEPARATED	Ol	RIENTAL	FEMALE*	ER	123	9	3 56	2,	/14/71	
	6666666666	seeseeje:	<i>ны</i> чынын-	DELETED F	ROM MAST	ER				•	
	5 003123	464*01	002	P-07#162	312.024	920	P-07	G-11	70	623.1 *	
	4 006789	659 01	100	G-11*160	160.	920	P-06	G-10		623.1 *	
				*163	154	920	P-05	G-09	68	623.1 *	
				*174	150	920	P-04	G-08		623.1 *	
				*	MIL		P-03	G-07	66-	*	
				*					į	:	

TC XX/XX/XX*

The box above encloses a row of asterisks and the message that tells that a record has been deleted from the Active Master File. The data in the record will go to a tape file of deleted records.

This message will only be printed for records which are deleted from the Active Master File.



LAST - 000 0000	FIRST 1/29/37	MIDDLE 432111	MAIDE		* 11		104000`\ 7/01/71*
- 999-99-9999 SEPARATED	ORIENTAL	FEMALE#	2/14, ER	123	5		2/14/71
**********	*8888888888	SEEDELETED F	ROM MASTI	ER		t.	
5 003123 46	4 *0 1 002	P-07# L62	312.021	920	P-07	G-11 70	623.1.
4 006789 65	9 01 100	G_11 *160	160.	920	P-06	G-1 0 69	623.1
		*163	154	920	P-05	G-09 68	623.1 *
		* 1.74	150.	920	P-04	G-08 67	<u> </u>
		*	MIL		P-03	G-07 66-	. 30
		· *				1	-
		•					•

TC XX/XX/XX*

The boxes above are the data which tells of a person's experience history. There are seven columns of data in each line. Each line stands for one scholastic year of experience. The asterisk to the right of each years entry will be printed as a flag only if some of the data for that year has changed from the previous card.

Starting from the left:

The first column consists of a three digit number telling the number of days taught for that scholastic year.

The second column consists of seven alphanumeric characters which identify a teacher's position number.

The third column is a three digit numeric field which reports the unit number code.

The fourth field is a person's rating which consists of a class of up to three alphabetic characters and experience of two numeric digits. The class and experience are separated by a hyphen.

The fifth field is for alternate rating, and has the same format as the rating.

The sixth field is a two digit number telling the school year to which the experience history applies. This will be the calendar year in which the school year ends.

The seventh and right hand field in the box consists of the budget code which is a five digit numeric field with a decimal understood to fall between digits 3 and 4.



- 37

				_		_	_			` `	
	LAST	FI	RST	MIDDLE	MAIDE	N	× 11	*]	104000`	`\
`~	999-99-9999) i.,	/29/37	432111	2/14	/71	7	4 76	5* 7/	/01/71	: /
	SEPARATED	OR	ENTAL	FEMALE*	ER	123	S	306 306	2/	/14/71	į
	********	*****	646688	*DELETED F	ROM MASTI	ER					1
	5 003123	464 <u>*</u> 01	002	P-07*162	312.02A	920	P-07	G-11.	70	623.1	*
	4 006789	559 01	100	G-11*160	160.	920	P-06	G-10	69	623.1	*
				*16 3	154	920	P-05	G-09	6S	623.1	36
				*174	150	920	P-04	G-03	67	623.1	*
				. !	MIL		P-03	G-07	66-		*
				*						•	·

03/71 08 623 11 671 646 1170*

STREET

OPTIONAL ADDRESS DATA

CITY

NC 27604

TC XX/XX/XX*

The box above encloses data about the National Teacher Examination (NTE) scores: All data recorded in these seven fields must be numeric. The asterisk at the right will print if any data in the box has changed.

The first field on the left shows the <u>DATE</u> on which the exam was taken. Only the month and year are recorded.

The second field from the left is the CODE for the Teaching Area A Exam. This is a two position field.

The third field from the left is the SCORE for the Teaching Area A Exam. This is a three position field.

The fourth field from the left is the CODE for the Teaching Area B Exam. This is a two position field.

The fifth field from the left is the SCORE for the Teaching Area B Exam. This is a three position field.

The sixth field from the left is the <u>WEIGHTED COMMON SCORE</u>. It is a three position field.

The seventh and last field is a COMPOSITE SCORE and consists of up to four digits.



-	LAST			RST	MIDDLE	MAIDE		* 11			101 000	'\
•-	999-99-99	99	1	/29/37	432111	2/14,	/71	7	7 4 76	5* 7,	/01/71:	.: \ <u>`</u>
	SEPARATED		OR	TENTAL	FEMALE*	ER	123	5	S :*	2,	/14,′71	j
	4848888888	14:0HH	HHH:	keke meneke k	DELETED F	ROM MASTI	ER					
	5 003123	464	:01	002	P-07#162	312,024	920	P-07	G-11	70	623.1	*
	4 006789	659	01	100	G-11*160	160.	920	P-06	G-10	69	623.1	*
					*163	154	920	P-05	G-09	68	623.1	36
					*174	150	920	P-04	G-08	67	623.1	3%
					*	MIL		P-03	G-07	66-		46
		,			*						÷	•

TC XX/XX/XX*

The box above encloses two fields. The asterisk on the right will only be printed if the data in this group changes from the previous card.

The first field is a two character alphabetic termination code.

The second field is a termination date in the form of month, day and year.



٠		AST 99-99-99)99		RST /29/37	MIDDLE 432111	MAIDE 2/14		* 11			104000` /01/71:	
	SI	EPARATEE)	OR.	IENTAL	FEMALE*	ER	123	S	5 %	2,	/14/71	j
	**	(ABBBBBBBB		::::::::::::::::::::::::::::::::::::::	*****	DELETED F	ROM MAST	ER					1
	5	003123	46.13	01	002	P-07*162	312.02A	920	P-07	C-11	70	623.1	*
	4	006789	659	þ1	100	G-11%160	160.	920	P-06	G-10	69	623.1	30
	l			}		*16 3	154	920	P-05	G-09	68	623.1	*
	-					*174	150	920	P-04	G-08	67	623.1	₹ ∻
						*	MIL		Γ-03	G-07	66-		1 %
						· -3 (-						:	

TC XX/XX/XX*

The box above is a logical unit. The asterisk in the upper right corner of the box is a flag which will only be printed when some of the data in the box changes from the previous updating of the card.

This box consists of three columns of up to three rows each. The first column on the left is a one digit number for education level.

The center column in the box above is a six digit numeric code which uniquely identifies the schools attended by the certificate holder.

The right hand column in the above box is the date of graduation of the certificate holder and consists of four digits. The first two specify the month and the last two record the year of graduation.



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	,	·							
LAST	FIRST	MIDDLE	MAIDEN 2/14/71		X 1	1*		104000	`\
999-99-9999	1/29/37	432111			7 4 7		6* 7/01/71* \		۶ /
SEPARATED	ORIENTAL	FEMALE*	ER 123		S#		2/14/71		
*********		*DELETED F	ROM MAS	rer î					
5 003123 464	01 002	P-07∺162	312.02	1 920	P-07	G-11	70	623.1	*
4 006789 659	01 100	G –11∺160	160.	920	P-06	G-10	69	623.1	**
		<u>*</u> 163	154	920	P-05	G-09	68	623.1	*
	ļ	*1 74	150	920	P-04	G-08	67	623.1	*
		*	MII	_	P-03	G-07	66-		%
		*	•					·	
03/71 08 623 1 STREET OPTIONAL ADDRE	•	1170*		,				•	
CITY		60.4			•			•	
OIII	NC 27	004							
TC XX/XX/XX*	•					•			

The boxes above are a series of up to six lines, each line describing an area of certification. To the right of each line is an asterisk which will be printed only if data on that line has changed from a previous (updating) printing of the card.

The column on the left side of the boxes above describes the program. This is a two digit number.

The center column tells the certificate area. It is up to five numeric digits long, although in most cases it will only be three digits.

The class and experience column will be printed on the right of this box, separated by a hyphen. The class consists of up to three alphabetic characters. These are to the left of the hyphen. On the right side of the hyphen is a two digit number telling the number of years of experience in this certificate area.

The above codes are explained on the back of a certificate.