**CRC – PART ONE**
**CORE REVIEW**


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# CRC
# PART I – CORE REVIEW
# MEDICAL ASSISTING

# CRC
## PART I – CORE REVIEW

A. Catalog Course Descriptions

CRC
PART I – CORE REVIEW

A.      Catalog Course Descriptions


SUMMARY

A review of the Medical Assisting Department catalog descriptions showed that all were accurate except for the following:

A grammar mistake in the description for the MDA 2010 – Medical Office  Medications. The description should read "oral **and** parenteral medications" instead of "oral parenteral medications".

MDA 2460 – the prerequisites listed have not been updated to reflect the BIS to MDA course changes that have already gone through curriculum. BIS 2100 is now MDA 1055, BIS 2107 is now MDA 1053, and BIS 2108 is now MDA 2383.

- The MDA department plans to fix the errors through the curriculum process.

## MDA 1170 ............................3 Credits
### Medical Assisting Laboratory Procedures

This course is designed to give the medical assisting student practical experience in the collection and handling of various specimens and in the performance and interpretation of tests done in the physician's office. These include Gram staining, initial culture taking, basic microbe identification, routine urinalysis, hematology, and other basic lab tests. Emphasis will be placed on patient contact orientation, contamination of specimens, patient education prior to testing, and explanation of results. Course/lab fees.

## MDA 1200 ............................ 1 Credit
### Basic X-ray Techniques and Spirometry

This course is designed to teach the student the medical assistant's role in preparation of the patient for the diagnostic procedures of radiography and spirometry. Emphasis is on basic radiological positioning and techniques. This course will include discussion of equipment, as well as safety precautions and protection. Course/lab fees.

## MDA 1250 ............................ 1 Credit
### Phlebotomy

This course will provide instruction in the skill of phlebotomy by lecture, demonstration and lab practice. It will include universal standards, proper equipment and technique, skills for problem draws, specimen handling, quality control, interpersonal skills and professional liability. Course/lab fees.

## MDA 1350 ............................3 Credits
### Medical Law and Ethics

This course is designed to give the Medical Assisting student and other health care practitioners a knowledge of law and ethics as they pertain to medicine. The course will provide the student with a thorough understanding of his medico-legal responsibilities and relationship to his physician/employer and patient. Emphasis will be placed on the practical application of the principles of medical law and ethics.

## MDA 1461 ............................3 Credits
### Medical Assisting Externship I

Pre or Corequisites: CIS 1000, or CIS 1050, and MDA 1051, MDA 1140, MDA 1200, MDA 1250, MED 1103

This course covers a review and rotation sequence of practical experience in offices of qualified physicians and/or accredited hospitals and clinics. Skills acquired in the first year of the Medical Assisting program will be applied during the 90 hours of clinical practice under the supervision of College faculty. In addition to medical office practice, human relation skills will be stressed in the course work. Course/lab fees.

## MDA 1570 ............................3 Credits
### Basic Electrocardiography

Students will gain hands-on experience using an electrocardiograph machine after learning the circulatory, conduction and mechanical systems of the heart, Einthoven's Triangle, cardiac depolarization, repolarization and terminology. Drugs and their effect on the heart will be discussed. The student will learn to measure the cardiac complex, recognize and eliminate artifacts on a graph and identify basic arrhythmias of the heart as recorded on the EKG. Holter Monitoring and the principles of stress testing will also be presented. Course/lab fees.

## MDA 1580 ............................3 Credits
### Intermediate EKG and Arrhythmia

Prerequisites: MDA 1570

This course will provide an intermediate level of understanding of the 12 lead EKG and cardiac arrhythmia as documented on the electrocardiogram including arterial and ventricular arrhythmia, heart blocks, aberrant ventricular conduction, myocardial infarction hypertrophy and pacemaker spikes. Course/lab fees.

## MDA 2010 ............................3 Credits
### Medical Office Medications

Pre or Corequisite: MED 1103

This course will provide the Medical Assisting student with a basic understanding of drug therapy, including the legal, technical, ethical and moral aspects of handling and administering medications. The Medical Assisting student will practice administration of oral parenteral medication. Nutritional supplements and diet supplementations related to therapy as prescribed by the physician will be covered. High school algebra background is needed in the calculation of drug dosages. Course/lab fees.

## MDA 2380 ............................4 Credits
### Medical Office Insurance Coding and Billing

Pre or Corequisites: CIS 1000 or CIS 1050, and MED 1103

This course will give the student the fundamentals of medical office insurance diagnosis and procedure coding as well as skills required to produce mailable forms in a timely manner to: Blue Shield, Medicare, Medicaid, Champus and other third party payers. Students will learn to reconcile payments and rejections, process inquiry forms and understand the Diagnostic Related Groupings and how they relate to inpatient regulations. Course/lab fees.

## MDA 2383 ............................ 1 Credit
### Medical Office Insurance Coding and Billing Applications

Pre or Corequisite: MDA 2380

Students apply their knowledge in medical terminology, insurance coding and billing and word processing skills by executing accurate claim submissions for reimbursement, utilizing a billing software program. The students will be required to complete computer-based assignments.

## MDA 2410 ............................3 Credits
### Ophthalmic Assisting Procedures I

Pre and Corequisite: MED 1103, or consent of instructor.

This course is designed to acquaint the student with the duties and responsibilities of assisting in the specialty of ophthalmology. The student will be instructed in the following: structure and function of the eye, disease processes, patient history, chart documentation and refractive status of the eye. Course/lab fees.

## MDA 2420 ............................3 Credits
### Ophthalmic Assisting Procedures II

Pre and Corequisite: MDA 2410, or consent of instructor.

This course will provide instruction regarding the function and usage of instruments for diagnostic purposes in the area of ophthalmology. The student will be instructed in the following: visual field testing, retinoscope, tonometer, keratometer and exophthalmometer. Course/lab fees.

## MDA 2460 ............................4 Credits
### Medical Assisting Externship II

Pre or Corequisites: BIS 2100, BIS 2107, BIS 2108, MDA 1170, MDA 1350, MDA 1461, MDA 1570, MDA 2010, MDA 2380.

This course covers a review and rotation sequence of practical experience in offices of qualified physicians and/or accredited hospitals and clinics. Skills acquired in the Medical Assisting program will be applied during the 120 hours of clinical and administrative practice under the supervision of College faculty. In addition to medical office practice, human relation skills will be emphasized in the course work. Course/lab fees.

## MDA 2560 ............................4 Credits
### Medical Assisting Seminar

This course is designed to review the entire Medical Assisting curriculum in preparation for writing the CMA certification exam. Emphasis will be placed on transdisciplinary, administrative, and clinical areas. This course will apply toward CEU requirements for recertification of Certified Medical Assistant through the AAMA. Course/lab fees.

## (MEC) MECHANICAL TECHNOLOGY

## MEC 1010 ............................3 Credits
### Introduction to Manufacturing Processes

Prerequisites: Secondary school algebra and geometry or MAT 1100 or consent of instructor.

The student will explain basic manufacturing procedures in terms of materials tooling, machines, molding, measurements, gauging, automation and selected machine operations. Course/lab fees.

## MAT 1630 .............................4 Credits

### College Algebra and Trigonometry

**Prerequisites:** MAT 1540 and MAT 1560 (or equivalent college transfer courses) with a "C" or better within the last three years or COMPASS math placement test results appropriate for this course within the last two years.

General Education Attributes ............................ 3, 7

This course is meant to be a review of the real number system and basic algebra, including inequalities, absolute value, exponents and radicals; functional notation and composition of functions; linear and quadratic functions; rational and algebraic functions; exponential and logarithmic functions; definition of trigonometric functions using the unit circle; graphs of the trigonometric functions; development and use of identities; right triangle trigonometry; Law of Sines; Law of Cosines; complex numbers including trigonometric form; theory of equations; theory and application of matrices and determinants; inverse functions.

## MAT 1730 .............................4 Credits

### Calculus I

**Prerequisite:** MAT 1630 (or equivalent college transfer course) with a "C" or better within the last three years, or MAT 1540 and MAT 1560 (or equivalent college transfer courses) with a "C" or better within the last three years, or COMPASS math placement test results appropriate for this course within the last two years.

General Education Attributes ............................ 3, 7

Limits; continuity; concept of the derivative; differentiation of algebraic and transcendental functions; applications of the derivative; antidifferentiation; the indefinite integral; the definite integral; the Fundamental Theorem of Calculus; numerical integration; integration involving logarithmic functions; some applications of the integral. Some of the course concepts will be explored and/or enhanced with current technology.

## MAT 1740 .............................4 Credits

### Calculus II

**Prerequisite:** MAT 1730 (or equivalent college transfer course) with "C" or better.

Integrals involving inverse trigonometric functions; hyperbolic functions; an introduction to differential equations; applications of the definite integral; techniques of integration; limits of indeterminate forms; improper integrals; two-dimensional analytic geometry using polar coordinates and parametric equations; infinite series. Some of the course concepts will be explored and/or enhanced with current technology.

## MAT 2530 .............................4 Credits

### Mathematics for Elementary Teachers I

**Prerequisite:** MAT 1150 (or equivalent college transfer course) with a "C" or better within the last three years or COMPASS math placement test results appropriate for this course within the last two years.

General Education Attributes ...................... 1, 2, 3

Throughout this course students will be introduced to the National Council of Teachers of Mathematics (NCTM) Standards and will participate in their implementation. Students will work in collaborative problem solving groups, make presentations to the class, learn and teach a math game, work with manipulatives, observe an elementary school classroom and share ideas with the purpose of developing philosophy and attitude as well as improving speaking, writing, thinking and computational skills. Math content includes elementary set theory; basic algorithms of arithmetic including operations using whole numbers, integers, fractions, decimals and percents; the binary number system and other non base 10 systems; elementary number theory; logic; problem solving techniques; student usage of calculators, computers and other technology.

## MAT 2540 .............................4 Credits

### Mathematics for Elementary Teachers II

**Prerequisite:** MAT 2530 (or equivalent transfer course) within the last three years with "C" or better.

Course topics will be developed with the use of problem solving strategies, manipulatives, technology and collaborative learning in conjunction with NCTM and AMATYC standards. Topics include solving equations and inequalities, graphs and equations of functions, elementary probability and statistics, informal geometry (including symmetry and transformation, similarity and congruence, area, perimeter and volume) and systems of measurement. Topics will be taught with emphasis on effective teaching methodology. Students will be encouraged to share ideas and make presentations to the class, develop philosophy and attitude and improve their speaking, writing and thinking about mathematics.

## MAT 2740 .............................4 Credits

### Calculus III

**Prerequisite:** MAT 1740, (or equivalent college transfer course) with "C" or better.

Three-dimensional analytic geometry and vectors; multi-variable functions; partial differentiation with applications; multiple integrals and applications; cylindrical coordinates; vector calculus. Some of the course concepts will be explored and/or enhanced with current technology.

## MAT 2810 .............................4 Credits

### Differential Equations

**Prerequisite:** MAT 1740 (or equivalent college transfer course) with "C" or better.

This is a first course in ordinary differential equations. It includes solution of principal types of first order differential equations with applications, solution of higher order linear equations by undetermined coefficients and by variation of parameters, solution by using infinite power series, solution of linear equations by Laplace Transforms, matrix solution of systems of linear differential equations, and solution and applications of higher order differential equations.

## MAT 2880 .............................4 Credits

### Linear Algebra

**Prerequisite:** MAT 1740, (or equivalent college transfer course) with "C" or better.

The topics covered are systems of linear equations, matrix operations and properties of matrices, vector spaces (subspaces of Rn linear transformations, determinants, Eigenvectors and Eigenvalues, diagonalization and inner products. Although not required, MAT 2740 is recommended before enrolling in this course.

## (MDA) MEDICAL ASSISTING

## MDA 1051 .............................4 Credits

### Medical Assisting - Administrative Procedures

This course is designed to acquaint the student with the administrative requirements of the medical facility. The course will provide instruction in the following: medical receptionist skills, HIPAA Regulations, human relations, medical secretarial skills, bookkeeping methods, and management techniques.

## MDA 1053 ........................... 1 Credit

### Medical Office Software Applications

This course provides students with medical office application skills utilizing a medical office software program. Students will integrate various communication and data entry skills to perform tasks efficiently in the administrative area of a medical office as they prepare for patient billing. Basic keyboard knowledge is necessary as the students will be required to complete computer-based assignments.

## MDA 1055 ........................... 1 Credit

### Introduction to Medical Office Transcription

**Pre or Corequisite:** CIS 1000 or CIS 1050 and MED 1103, or consent of instructor.

The students will be introduced to the transcription area of a physician's office. Students will utilize and apply their knowledge in medical terminology and word processing skills. The students will use keyboarding skills as they complete computer-based assignments.

## MDA 1140 .............................3 Credits

### Medical Assisting Clinical Procedures I

This course is designed to acquaint the student with the duties and responsibilities in the clinical area of a medical facility. The student will be instructed in the following: assisting the doctor, assessing vital signs, sterilization procedures, minor surgery, medical specialties, physiotherapy and diet therapy. Course/lab fees.

# CRC
## PART I – CORE REVIEW

### B. Syllabus Review

CRC
PART I – CORE REVIEW

B.     Syllabus Review


SUMMARY

Mandatory Items:   A review of the Medical Assisting syllabi has been concluded.  Upon completion it was determined that all MDA syllabi are in compliance with OCC required criteria.

Recommended Items:   All syllabi contained the pertinent recommended items.

Optional Items:
Semester Meeting Times & Room – not present in the syllabi
Teaching/Learning Strategies – present in some syllabi
Applicable Forms Pertinent to Course – none are needed
Reference to Student Policies in OCC Catalog – reference to MDA Student Handbook policies in some syllabi
Policy on Use of Computing Resources – present where pertinent
Description of Required Computer Skills – present where pertinent

- The MDA department will be adding an additional reference to OCC's Student Policies within all syllabi.
- The MDA department will also be adding statements to all syllabi regarding teaching/learning strategies.

# CRC
## PART I – CORE REVIEW

### C. Enrollment Trends and Student Retention

CRC
PART I – CORE REVIEW

C.    Enrollment Trends and Student Retention

SUMMARY

In regards to enrollment trends and student retention the Office of Assessment and Effectiveness reported the following:

- As a sign of strength, the overall composite program dashboard score for Medical Assisting has steadily increased over the last three years. Moreover, when compared against all other curriculum tracked in the program dashboard, Medical Assisting ranked 7th out of 99.

- In large part the composite score is being positively impacted by the number of completed sections, increasing number of credit hours, the percent of minority students in the program, and the relatively high number of students successfully completing MDA courses.

- Over the past three years the number of active sections has increased, while the percent of canceled sections has decreased. In 2005-06, 90% of MDA sections were completed compared to the college-wide average of 87%. This trend also coincides with a Sharpe increase in credit hours. During 2005-06 MDA's credit hour trend ratio ranked second highest among all 99 curriculum tracked in the program dashboard.

- Over the last three years, the percent of minority students in the program has remained in line with the college-wide average, with approximately 30% of MDA students being minority, compared to 28% for the college.

- Medical Assisting students enjoy a high course completion rate and far exceeds the college-wide average. In 2005-06, the course completion rate stood at 82%, well above the college rate of 68%.

- A further sign of the current overall strength of the MDA program is that all seven program dashboard measures met or exceeded their college benchmarks.

- Increasing demand for medical assisting courses is evident in the rapid growth in credit hours. Most noteworthy is the large increase which occurred between 2002-03 and 2003-04, jumping from 769 to 1,492 credit hours. This

94% increase over one year is in large part attributed to the implementation of program planning/marketing recommendations. Mainly, repackaging the existing courses, while maintaining their high quality, and promoting the program to specific targeted populations. Furthermore, the sustained benefit of program planning/marketing efforts is evident in a 280% increase in credit hours over the past five years (2001-02 to 2006-07)

- In terms of awarding associate degrees, MDA has averaged 3.7 degrees per year over the last ten years, with the average declining to 2.8 degrees over the last five years. Additionally, over the last ten years an average of 3.2 certificates per year have been awarded, while over the last five years this average has risen slightly to 3.4 per year.

- However, with the recent establishment of the five certificates of achievement, there has been a positive impact on the number of completions. Medical Insurance Coding and Billing and Phlebotomy have experienced the largest demand and have averaged 14 and 9 certificates of achievement per year, respectively, over the last three years. These two certificates are believed to be more marketable to a wider variety of healthcare settings and may explain the higher number of awards than the other three certificates of achievement.

- In terms of programs granting associate degrees, Medical Assisting was ranked the 39th highest among all OCC curriculum during 2005-06. Also in that same year, the certificates of achievement associated with the program were quite successful in their ranking. Of all certificates/certificates of achievement awarded at OCC, Medical Insurance and Billing was ranked 3rd, Phlebotomy was ranked 5th, Medical Assisting was ranked 9th, Medical Office Clinical Procedures was ranked 13th, and Medical Office Administrative Procedures and Ophthalmic Assisting both were tied at 16th.

The Medical Assisting Department noticed a very positive response regarding enrollment in all Medical Assisting programs since working together with Institutional Research and the marketing of the new programs.

- The Medical Assisting Department's goal will be to maintain the above mentioned statistics as we enter into a potential downward enrollment trend in Michigan.
- While the Medical Assisting One-year Certificate program is the accredited program through the AAMA/CAAHEP, and provides all skills necessary for entry-level employment; the Associate degree is highly recommend to all students.

# CRC
## PART I – CORE REVIEW

D. Discipline/Program Needs and Resources

CRC
PART I – CORE REVIEW

D.    Discipline/Program Needs and Resources

SUMMARY

**What recourses or services does your Discipline/Program need?**
This year the Medical Assisting Department was granted an additional full-time position.
This position was greatly needed and will not only assist in quality instruction, but; will
reduce the amount of time spent by the coordinator in hiring, and orientating a large part-
time instructor base within the department.

Staff development activities are many and varied for the medical assisting instructors.
The instructors are Certified Medical Assistants, a RN, a Certified Medical Coder, a
Registered Cardiovascular Ultrasound Technician, and a Certified EKG Technician. All
of the instructors must complete continuing education hours to stay current in their area
of expertise. This is also mandated by CAAHEP to keep accreditation of the program,
and all instructors are in compliance. Many of the instructors also take advantage of
OCC's PDTC opportunities.

The comments response from adjunct faculty regarding students in the program indicated
there is concern regarding the readiness for college in the student's English, math, and
study skills. As far as the English and math skills, we realize that OCC at this time does
not require those students who demonstrate need to enroll in remedial courses, before
taking any program courses.

The ophthalmic instructor stated that she would like the ophthalmic courses taught more
than once a year, since these are the only courses taught in this area. We had discussion
regarding enrollment requirements of 15 students to make a course happen. Until this
winter semester the course had barely met that requirement. If a need arises in the future
the department would look into a second offering of the two ophthalmic courses.

**What curriculum revisions or development does your Discipline/Program see as
beneficial to instruction?**
The Medical Assisting Department follows the Role Delineation Chart of Medical
Assisting Competencies for a CAAHEP accredited program distributed by the American
Association of Medical Assistants. The department must address enrollment, attrition,
completion rate of all competencies (which must be 100%), the number of graduates,
graduate satisfaction, and employer satisfaction in a comprehensive annual assessment of
the program. At this time the program is in compliance and meets all criteria.

# CRC
# PART II – CORE REVIEW
# MEDICAL ASSISTING

# CRC
## PART II – CORE REVIEW

E. Input From Internal and External Community

CRC
PART II – PROGRAM REVIEW AND PROGRAM REVIEW OF OCCUPATIONAL
EVALUATION (PROE)

E.    Input from internal and external community

SUMMARY

Data response for faculty, students, and advisory committee

**Advisory Perceptions of Occupational Analysis**
The Advisory committee members were surveyed using the Program Personnel Resource
Survey instrument developed by the AAMA. The available responses to the questions
were Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree.
The results were as follows:

## Integration of PROE Data Collection regarding Advisory Committee/Industry Perceptions of Occupational Programs and the AAMA Program Personnel Resource Survey

The AAMA "Program Personnel Resource Survey" was used to survey the Medical
Assisting Advisory Committee in Spring of 2007. We found the form to be unwieldy and
confusing. The form has since been discontinued by the AAMA and a new one has not
as yet been developed. Since the committee had been surveyed prior, the AAMA results
(in green) have been assigned to similar areas from the PROE (in black)

1.    The program at Oakland Community College is meeting the expectations of
      the advisory committee.
      "Faculty Require annual review of goals and learning domains by the
      Advisory Committee."
      86% (6/7) strongly agree        14% (1/7) generally agree

      "Please rate the OVERALL quality of the resources supporting the
      program"
      43% (4/7) strongly agree        14% (1/7) generally agree
      [43% (3/7) did not respond – possibly due to form format]

2.    The courses offered are preparing the students for the workforce.
      "Faculty identify and respond to changes in the needs and/or
      expectations of its communities of interest."
      86% (6/7) strongly agree        14% (1/7) generally agree

Externship Supervisors from Advisory Committee:
"Students are adequately prepared to perform scheduled exercises in the externship setting."
100% (3/3) strongly agree

"Externship activity is sequential to laboratory and didactic instruction."
100% (3/3) strongly agree

"Students are prepared to behave in a professional manner in the externship setting."
100% (3/3) strongly agree

3.    The advisory committee is informed about the program.
"Faculty keep the Advisory Committee informed of program status."
86% (6/7) strongly agree        14% (1/7) generally agree

Externship Supervisors from Advisory Committee:
"Externship instructors feel adequately prepared for each group of students."
100% (3/3) strongly agree

4.    The advisory committee has substantial input into decision-making within the program.
"Faculty foster positive relations with externship affiliates."
100% (7/7) strongly agree

"Medical Advisor(s) participate(s) in curriculum design modification to ensure appropriate scope and accuracy of medical content."
57% (4/7) strongly agree     14% (1/7) generally agree
30% (2/7) NA

5.    The advisor committee is satisfied with the direction of the program.
"Faculty identify and respond to changes in the needs and/or expectations of its communities of interest."
86% (6/7) strongly agree        14% (1/7) generally agree

Handwritten Comments:

"Based on my experiences with interns/externs from various other training/educational sources, the preparedness of OCC MA students far exceeds those who have been at my clinical site."

"This is the best run medical assistant program I work with by far."

**Faculty perceptions of the Occupational Analysis**

The PROE was distributed to nine faculty members. The survey gathered feedback from the faculty on issues such as the courses offered in the program, faculty satisfaction with student preparation for the program and the quality of instruction. The items were rated 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree).
The results were positive and included on the following pages.


**Student perceptions of the Occupational Analysis**

The PROE was distributed to two entering classes of students. The survey gathered feedback from the students on issues such as the program of study meets my expectations, satisfaction with the quality of instructors, and instructors make the course subject matter interesting. The items were rated 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree).
The results were positive and included on the following pages.

An area of concern in the student response was the difficulty of getting into medical assisting classes. Priority registration does not help students in the One-year Certificate in Medical Assisting, nor any of the Certificates of Achievement. In fact, it hinders the registration for MDA students. The seats are taken by students waiting to get into other health programs who have their pre-req courses (credits) completed.

Due to this difficulty the department held seats for Winter Semester to insure those that needed to graduate this June could do so. After a comprehensive review all needs have been met.

There were a few comments regarding lab anxiety. This survey was conducted in the first few weeks of students entering into the program when they first feel so overwhelmed. These questions would be a better answered near the end of the semester.

OAKLAND
COMMUNITY
COLLEGE

# MEDICAL ASSISTING
# STUDENT EVALUATION
# FALL 2007

## Prepared for:
## Letyna Roberts
## Manager of State and Federal Programs

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October 2007

OAKLAND COMMUNITY COLLEGE
MEDICAL ASSISTING
STUDENT EVALUATION
FALL 2007

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## Purpose

The purpose of the study was to compile the data for a summary report of the Medical Assisting program for the PROE/Curriculum Review process. The final results will be forwarded to Letyna Roberts, Manager of State and Federal Programs, for distribution.

## Methodology

Survey responses were collected from 38 students. The survey gathered feedback from the students on issues such as the courses offered in the program, student satisfaction with the program, and the quality of instruction. The items were rated 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree). Mean responses for each item were calculated and the results are presented below.

# OAKLAND COMMUNITY COLLEGE
## MEDICAL ASSISTING
## STUDENT EVALUATION
## FALL 2007

## Results

| | Question | Mean |
|---|---|---|
| 1 | My program of study at Oakland Community College is meeting my expectations. | 4 |
| 2 | The courses offered in my program of study are preparing me for the workforce. | 5 |
| 3 | I would like to change my current program of study because of academic reasons. | 4 |
| 4 | I would like to attend another institution because of dissatisfaction with my current program of study. | 4 |
| 5 | I am satisfied with the quality of instructors in my program of study. | 5 |
| 6 | I feel that the instructors are knowledgeable about the course subject matter. | 5 |
| 7 | I am satisfied with the course offerings in my current program of study at Oakland Community College. | 4 |
| 8 | My instructors help me to understand how useful my program of study can be in the real-world. | 5 |
| 9 | My instructors make the course subject matter seem interesting. | 5 |
| 10 | I am infomed about what is happening in my program. | 4 |
| 11 | I think the department is committed to student success. | 5 |
| 12 | I am satisfied with my program of study. | 4 |

- The students are expressing agreement to strong agreement with the items measured on the questionnaire.
- The student responses typically ranged between agree and strongly agree.
- Question three is indicating that the students disagree with changing their current program of study due to academic reasons.
- Question four is similar to question three in that the students are indicating that they disagree with attending another institution because of dissatisfaction with my current program of study.

**OAKLAND COMMUNITY COLLEGE**
**MEDICAL ASSISTING**
**STUDENT EVALUATION**
**FALL 2007**

*If there is one thing you could change about the program, then explain*
*what it is and how it would enhance the program:*

## Open-Ended Responses:

1. To use grades instead of date of prerequisites' completion for getting enrolled in different programs (for example, Nursing program)

2. To offer more class openings, have more teachers so students don't have to wait longer and allow more students to get in and get out of the program more efficient(ly).

3. Some of the courses should be offered more (Phlebotomy). Some classes are needed and should be offered all year.

4. OK

5. Offering classes more than once a year; if it was offered at least twice I would be able to have a greater chance of getting in that particular class.

6. Offer all classes later in the day, not just one time offering.

7. Nothing as of yet

8. Nothing as of yet

9. More time to do hand[s]-on things, as we do in the lab

10. More opportunities to get into classes that are need[ed]

11. More openings in classes that are required

12. More individualized instruction in labs; it feels like there are too many people in the lab at one time for everyone to receive adequate instruction. I think it would be better to only have part of the class attend labs on given dates to lessen the congestion.

13. I would like more options as to when classes are offered, to allow for a more timely completion of the program.

14. I would like it if they offer(ed) more of the classes than they do. It is very difficult to get into classes. I am trying to get a job tomorrow, and when you only offer certain classes only twice, it makes it hard to meet goals. Thank you.

## Open-Ended Responses:

15. I would like all classes to be offered all year so students who have to go part-time can finish in a timely manner, and so classes wouldn't be so hard to get into.

16. I would change the rate of speed we go through the lab evaluations. I think we need more practice time on areas before we move on, or introduce the next set of things to learn. It is [too] early in the program to evaluate.

17. I would add more classes in order to accommodate everyone.

18. I wish it was easier to get into classes. They fill up so quickly.

19. I will prefer more lab practice.

20. I believe that a class on Medical Math would be beneficial to the students. I took a Medical Math class at my previous school and it was a great help to me in my courses.

21. Have more classes so that students would be able to get into classes that they need to complete.

22. Classes fill up and it's difficult to get into the courses you need. I realize it could be a shortage of instructors. If a course is critical to graduation, perhaps an effort could be made to open up another class.

23. Add more classes - very hard to get into specific courses needed to graduate.

24. Add additional weight scales in class.

# CRC
## PART II – CORE REVIEW

F.  Comparable Courses/Programs and Trends

CRC
PART II – PROGRAM REVIEW AND PROGRAM REVIEW OF OCCUPATIONAL
EVALUATION (PROE)

F.    Comparable courses/Programs and trends


SUMMARY

OCC Medical Assisting students can transfer all credits into the following areas:
Sienna Heights –Bachelors in Allied Health Science
Davenport University – Bachelors in Allied Health Science
Central University – Bachelors in Community Development and Health Care
Administration

According to the Office of Assessment and Effectiveness occupational projections for
Medical Assisting include:
Twelve occupations related to Medical Assisting were identified.
General forecast is positive for employment for the next five years (2006-11).
It is estimated that during this time period approximately 3,400 new jobs are expected.
It is also estimated that 5,800 openings will occur resulting from the need to replace
current workers.

The most recent survey analysis from the Institutional Research Department stated the
following:
All responses from graduates of 04/05 regarding preparation for employment in the
competencies according to the American Association's Role Delineation were positive.

The most recent survey of employers from that same graduate class produced positive
responses for employee preparation according to the same AAMA Role Delineation
Chart.


- After review the Medical Assisting Department's goal is to maintain a high
  response rate from graduates and employers regarding the program's role in
  preparing the graduate for employment.
- Some students do continue for a Bachelor Degree.
- Some students enter into the program as the first requirement of clinical hours
  as they pursue their interest in becoming a Physician's Assistant.

# CRC
# PART II – CORE REVIEW

## G.  Outcomes Assessment

CRC
PART II – PROGRAM REVIEW AND PROGRAM REVIEW OF OCCUPATIONAL
EVALUATION (PROE)

G.    Outcomes Assessment


SUMMARY

The most recent Program Assessment Plan was November 05/06. This year's review is
in process. These are the 05/06 results.

## Benchmark 1:

Annual review by program faculty will show 80% of students will demonstrate proficiency in each
MDA course in both theory and skill with a grade of 78% or higher.

## Assessment Method 1:

Written and practical exams are used to demonstrate competency in each area as recommended
by the AAMAE's Medical Assistant Role Delineation. Mid-terms, Finals and lab evaluations are
utilized. Under direct supervision of the Instructor or Clinical Instructor, students demonstrate
competency in clinical skills as designated by the AAMA Medical Assistant Role Delineation.

**Timeline 1:** November 06

**Result 1:**    All courses were measured with only one class falling below the
benchmark of 80% of the students passing above the 78% benchmark.  MDA
1170, Medical Assisting Laboratory Procedures measured a 71% passing rate.

**Comment 1:**  Textbook, teaching and assessment methods were reevaluated.
There will be a textbook change starting with the next rotation of MDA 1170.

**Data Provider 1:** faculty

---

## Benchmark 2:

Annual review will show 80% of the graduates will pass the AAMA certification exam at the
proficiency level of ≥ 500 as determined by the AAMA.

**Assessment Method 2:** AAMA national CMA certification exam results.

**Timeline 2:**  November 06

**Result 2:**  There were 11 June graduates.  All grads took the national exam to
become a CMA and passed at the proficiency level of 500 or above.

Identify and respond to issues of confidentiality
Perform within legal and ethical boundaries
Establish and maintain the medical record
Document appropriately
Demonstrate knowledge of federal and state health
legislation and regulations


**Comment 1:**      No change at this time.

**Data Provider 1**: faculty

---

### Learning Outcomes #3
Graduates will competently perform administrative, clinical and transdiciplinary skills as outlined by the AAMA Assistant Role Delineation.

### Benchmark 1:

Annual review by the program faculty will show 80% of graduates and employers surveyed will report satisfactory or better, on a scale of 1-5 (very good to very poor) according to the AAMA Medical Assistant Role Delineations, regarding, employability preparation and education received.

**Assessment Method 1:** Graduate and employer survey. Number of graduates will determine if this is appropriate method.

**Timeline 1**: November 06

**Result 1:**      The most recent survey of the six graduates from 04/05 resulted in three responses (50% response rate).  All responses according to preparation for employment in the competencies according to the AAMA Role Delineation were positive.
          The most recent survey of employers from that same graduate class produced two responses.  All areas were positive for employee preparation according to the AAMA competencies from the Role Delineation Chart.
**Comment 1:**      None at this time.

**Data Provider 1**: IR Office

---

- One class from Benchmark #1 in the MDA program fell below the outcome of: "Annual review by program faculty will show 80% of students will demonstrate proficiency in each MDA course in both theory and skill with a grade of 78% or higher.  We have changed textbooks and hope to see an improvement.

- Overall it is the department view that more students are unprepared for the rigors of college work for numerous reasons (remedial levels in math, reading and writing, time management, study skills, anxiety levels, ESL, etc.). These issues are outside of the department's control. At this time, we are now including in two entry level courses lectures on study skills to become a successful student. Unfortunately, this cuts into the valuable time needed to teach curriculum theory and skills.
- On a positive note the June graduate scores for the national exam were just received. Once again OCC grads performed at the 99+ percentile in the nation with a cut score of 647 and the top of the national score being 630.

OAKLAND
COMMUNITY
COLLEGE

# Oakland Community College

# Oakland Community College

# Medical Assisting Program Accreditation Documentation

# Commission on Accreditation

## OF ALLIED HEALTH EDUCATION PROGRAMS

The Commission on Accreditation of Allied Health Education Programs
certifies that the
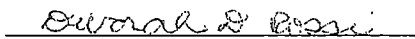
**Medical Assistant (Associate Degree and Certificate) Program**

**Oakland Community College**
**Waterford, Michigan**

has completed an accreditation review and is judged to be
in compliance with the nationally established standards

this 18th day of October 2002.

President, Board of Directors

Chair, Committee on Accreditation
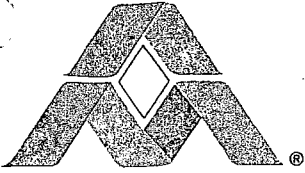
February 22, 2006

Karen A. Kittle, CMA, AAS
Medical Assistant Program Director
Oakland Community College
7350 Cooley Lake Road   HL HH206
Waterford, MI  48327-4187

Dear Ms. Kittle:

The Curriculum Review Board of the American Association of Medical Assistants Endowment (CRB-AAMAE) is implementing the *2003 Standards and Guidelines for Medical Assisting Educational Programs*. As a part of this implementation, the maximum time between comprehensive reviews (formerly called site visits) has been increased to ten (10) years.

Based on this change, the next comprehensive review for the Oakland Community College medical assisting program will now occur no later than April 2012. The CRB-AAMAE does reserve the right to schedule a comprehensive review prior to that date, if the program's outcomes are not meeting the established thresholds.

Please update your files to reflect this change.

Sincerely,

Judy A. Jondahl, MS, RN, CLNC
Director of Accreditation
Deputy Assistant Executive Director

cc:     Gordon May, MA, President
        Nadia Boulos, MSN, PhD, Dean of Nursing and Allied Health
        Cathy Kelley-Arney, CMA, MLT, BSHS, CRB-AAMAE Chair
        Robin Snider-Flohr, EdD, RN, CMA, CRB-AAMAE Co-Vice Chair
        William W. Goding, MEd, RRT, CRB-AAMAE Co-Vice Chair
        Donald A. Balasa, JD, MBA, Executive Director and Legal Counsel

# Oakland Community College

# Medical Assisting Program Accreditation Annual Review Status
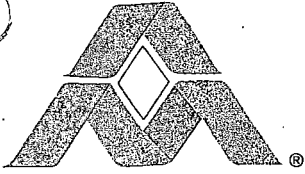
February 26, 2007

Karen A. Kittle, CMA, AAS
Medical Assisting Program Director
Oakland Community College
7350 Cooley Lake Rd
Waterford, MI 48327-3864

Dear Ms. Kittle:

The Curriculum Review Board of the American Association of Medical Assistants Endowment (CRB-AAMAE) has reviewed the outcome results on your 2006 Annual Report Form (ARF) and congratulates Oakland Community College Certificate Medical Assisting Program on meeting the retention, placement, exam success, graduate and employer outcome thresholds. While the exam participation threshold is monitored with no adverse action resulting from failure to meet this outcome, the CRB-AAMAE noted that the Oakland Community College Certificate Medical Assisting Program met this outcome.

As the Oakland Community College Certificate Medical Assisting Program has met all of the required outcomes, you are not required to provide any further information for this reporting period. You will be receiving your 2007 Annual Report later this year, based on the reporting time frame you select. The opportunity to make this selection will be sent via email with a request for updating the program's demographic information in March 2007.

Again, congratulations for your continued efforts in producing quality medical assistants as demonstrated in your meeting all of the outcome thresholds.

Sincerely,

*Joyce E. Garibay*

Joyce E. Garibay, BA, CMA
CRB-AAMAE Chair

cc:     Gordon May, PhD, President
        Nadia Boulos, MSN PhD, Dean of Nursing & Allied Health
        Eugenia M. Fulcher, BSN, EdD, RN, CMA, CRB-AAMAE Vice Chair
        Judy A. Jondahl, MS, RN, CLNC, Director of Accreditation
        Donald A. Balasa, JD, MBA, Executive Director and Legal Counsel

CMA    CERTIFIED MEDICAL ASSISTANTS: COMMITTED, CREDENTIALED, CARING

OAKLAND
COMMUNITY
COLLEGE

# Oakland Community College

# Medical Assisting Program
# Curriculum Review
# 2007

## Faculty Sign-Off Form*


## For Curriculum Review of Program:

_____


I approve the Curriculum Review Report as written by the Faculty Program Review Coordinator.


Yes _____✓_____ No _____

Comments: (Attach additional sheets if necessary)


Name (printed) _____Gayle Mazzocco_____

Signature _____Gayle F Mazzocco_____

Date _____11-19-07_____


* This form is to be copied by and distributed to all faculty within the Program to ensure awareness and participation.

*If there is one thing you would like to change about the program, then explain what it is and how it would enhance the program?*

## Open-Ended Responses

1. The program serves the community well. The fact that OCC has an open door policy allows students to enter who are not academically ready. I know that the college is attempting to address this. I would like to see all students who enter OCC, regardless of program, be required to meet minimum competencies in Math and English.

2. Pertaining to question a: I think students should [take] a Study Skills class. Question 13 - I would like to pick all options - A, B, C, & D.

3. OCC has the only program offered (not online) for Ophthalmology. Because of this, I recommend offering Ophthalmic Procedures I & II, Fall and Winter Semesters. If enrollment increased - acquiring new equipment

**OAKLAND COMMUNITY COLLEGE**
**MEDICAL ASSISTING**
**FACULTY EVALUATION**
**FALL 2007**

## Results

| | Question | Mean |
|---|---|---|
| 1 | The programof study in which I teach at Oakland Community College is meeting my expectatic | 5 |
| 2 | The courses offered in the program are preparing the students for the workforce. | 5 |
| 3 | The program can be more challenging academically for the students. | 3 |
| 4 | The program can be more competitive with other institutions that offer similar programs. | 5 |
| 5 | I am satisfied with the quality of instruction provided to the students in this program. | 5 |
| 6 | My fellow faculty members in the program are knowledgeable about the course subject matter. | 5 |
| 7 | I am satisfied with the course offerings in this program. | 5 |
| 8 | I feel that the program has a focus on real world applications. | 5 |
| 9 | I feel that the students are prepared for the rigors of the program. | 4 |
| 10 | I am informed about what is happening in this program. | 5 |
| 11 | Opportunities are available for me to make suggestions for improvements in this program. | 5 |
| 12 | I think the department has a commitment to student success in the program. | 5 |

- The average responses of 4 and 5 are indicating that the faculty is in high agreement with the items assessed in the questionnaire.
- Question three indicates that the faculty is somewhat neutral to the program being more challenging academically for the students.
- Where as question four indicates that the faculty strongly disagrees that the program can be more competitive with other institutions that offer similar programs.

**OAKLAND COMMUNITY COLLEGE**
**MEDICAL ASSISTING**
**FACULTY EVALUATION**
**FALL 2007**

## Purpose

The purpose of the study was to compile the data for a summary report of the Medical Assisting program for the PROE/Curriculum Review process. The final results will be forwarded to Letyna Roberts, Manager of State and Federal Programs, for distribution.

## Methodology

Survey responses were collected from nine faculty members. The survey gathered feedback from the faculty on issues such as the courses offered in the program, faculty satisfaction with student preparation for the program, and the quality of instruction. The items were rated 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree). Mean responses for each item were calculated and the results are presented below.

OAKLAND COMMUNITY COLLEGE
MEDICAL ASSISTING
FACULTY EVALUATION
FALL 2007

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**OAKLAND COMMUNITY COLLEGE**

# MEDICAL ASSISTING
# FACULTY EVALUATION
# FALL 2007

## Prepared for:
## Letyna Roberts
## Manager of State and Federal Programs

Prepared by:
**Stephanie Wren**
Research Analyst
**Office of Institutional Research**
(248) 232-4528
October 2007

**Major Highlights**

**Program Dashboard**

**Credit Hour Trends**

**Degree Trends**

**Occupational Projections**

**Occupational Skills
Analysis**

**Program Assessment Plan**

**Program Assessment
Results**

**Program
Planning/Marketing Report
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**CRC Recommendations**

*Follow up*

**Medical Assisting**
**Major Highlights**
**September 2007**

Overview

The information contained in this binder represents supporting reports and data associated with the CRC's review of the Medical Assisting program. These reports are intended to provide a historical perspective, as well as an idea of current strengths and future challenges facing the program which may impact short and long term planning.

Major Highlights

- As a sign of strength, the overall composite program dashboard score for Medical Assisting has steadily increased over the last three years. Moreover, when compared against all other curriculum tracked in the program dashboard, Medical Assisting ranked 7th out of 99.

- In large part the composite score is being positively impacted by the number of completed sections, increasing number of credit hours, the percent of minority students in the program, and the relatively high number of students successfully completing MDA courses.

- Over the past three years the number of active sections has increased, while the percent of canceled sections has decreased. In 2005-06, 90% of MDA sections were completed compared to the college-wide average of 87%. This trend also coincides with a sharp increase in credit hours. During 2005-06 MDA's credit hour trend ratio ranked second highest among all 99 curriculum tracked in the program dashboard.

- Over the last three years, the percent of minority students in the program has remained in line with the college-wide average, with approximately 30% of MDA students being minority, compared to 28% for the college.

- Medical Assisting students enjoy a high course completion rate and far exceeds the college-wide average. In 2005-06, the course completion rate stood at 82%, well above the college rate of 68%.

- A further sign of the current overall strength of the MDA program is that all seven program dashboard measures met or exceeded their college benchmarks.

- Increasing demand for medical assisting courses is evident in the rapid growth in credit hours. Most noteworthy is the large increase which occurred between 2002-03 and 2003-04, jumping from 769 to 1,492 credit hours. This 94% increase over one year is in large part attributed to the implementation of program planning/marketing recommendations. Mainly, repackaging the existing courses, while maintaining their high quality, and promoting the program to specific targeted populations. Furthermore, the sustained benefit of program planning/marketing efforts is evident in a 280% increase in credit hours over the past five years (2001-02 to 2006-07)

- In terms of awarding associate degrees, MDA has averaged 3.7 degrees per year over the last ten years, with the average declining to 2.8 degrees over the last five years. Additionally, over the last ten years an average of 3.2 certificates per year have been awarded, while over the last five years this average has risen slightly to 3.4 per year.

- However, with the recent establishment of the five certificates of achievement, there has been a positive impact on the number of completions. Medical Insurance Coding and Billing and Phlebotomy have experienced the largest demand and have averaged 14 and 9 certificates of achievement per year, respectively, over the last three years. These two certificates are believed to be more marketable to a wider variety of healthcare settings and may explain the higher number of awards than the other three certificates of achievement.

- In terms of programs granting associate degrees, Medical Assisting was ranked the 39th highest among all OCC curriculum during 2005-06. Also in that same year, the certificates of achievement associated with the program were quite successful in their ranking. Of all certificates/certificates of achievement awarded at OCC, Medical Insurance and Billing was ranked 3rd, Phlebotomy was ranked 5th, Medical Assisting was ranked 9th, Medical Office Clinical Procedures was ranked 13th, and Medical Office Administrative Procedures and Ophthalmic Assisting both were tied at 16th.

- In terms of identifying current as well as future employment opportunities, twelve occupations related to Medical Assisting were identified. Generally, the forecast for these occupations are positive over the next five years (2006-11). It is estimated that during this time period approximately 3,400 new jobs are expected, while over 5,800 openings will occur resulting from the need to replace current workers.

- The program assessment plan established by Medical Assisting has three unique Learning Outcomes and has one to three Benchmarks per Learning Outcome, which is in accordance with the guidelines established by the Student Outcomes Assessment Committee. However, improvements could be made by combining two of the benchmarks for the first learning outcome and additionally using the same verbiage for the first learning outcome as used in the third learning outcome.

- Ideally, there are two direct assessment methods included in the plan, which are student performance on the AAMA certification exam and faculty evaluation on the externships. Meanwhile, the assessment plan has two indirect assessment methods, e.g. an employer survey and a graduate survey.

- The program assessment plan could be enhanced by adding one additional learning outcome for the degree program and either a second learning outcome specific to the Ophthalmic option or a benchmark that points specifically to this option. At this point there is no evidence that assessment of this portion of the program is being implemented.

- Between July 2006 and August 2007, 5 of the 12 Benchmarks have been assessed (42%). Of those assessed, 4 met their benchmarks while one did not. For the one benchmark that was not met, it was decided that a textbook change would occur starting with the next rotation of the MDA 1170 course.

- Further review/investigation should be undertaken to explore the similarities and differences between the Medical Assisting and Medical Transcription programs. Both of these programs appear to serve a common segment of the healthcare industry as well as the same targeted student populations.

# Oakland Community College
# Program Dashboard

The purpose of the program dashboard is to provide a data driven tool designed for the efficient and objective review of all curriculum offerings. Based on a common set of measures which apply to all programs/disciplines the dashboard facilitates the systematic identification of well performing as well as ailing curriculum so early intervention efforts can be undertaken.

In a rapidly changing economic and competitive environment it is necessary if not imperative to continually review curriculum offerings annually. Dashboard reports are a useful tool for monitoring program performance. In addition, they allow for an integrated approach for collecting, presenting, and monitoring data to meet long and short-term programmatic decision-making needs.

# Oakland Community College
# Percent of Target Achieved
# 2005-06

Medical Assisting MDA
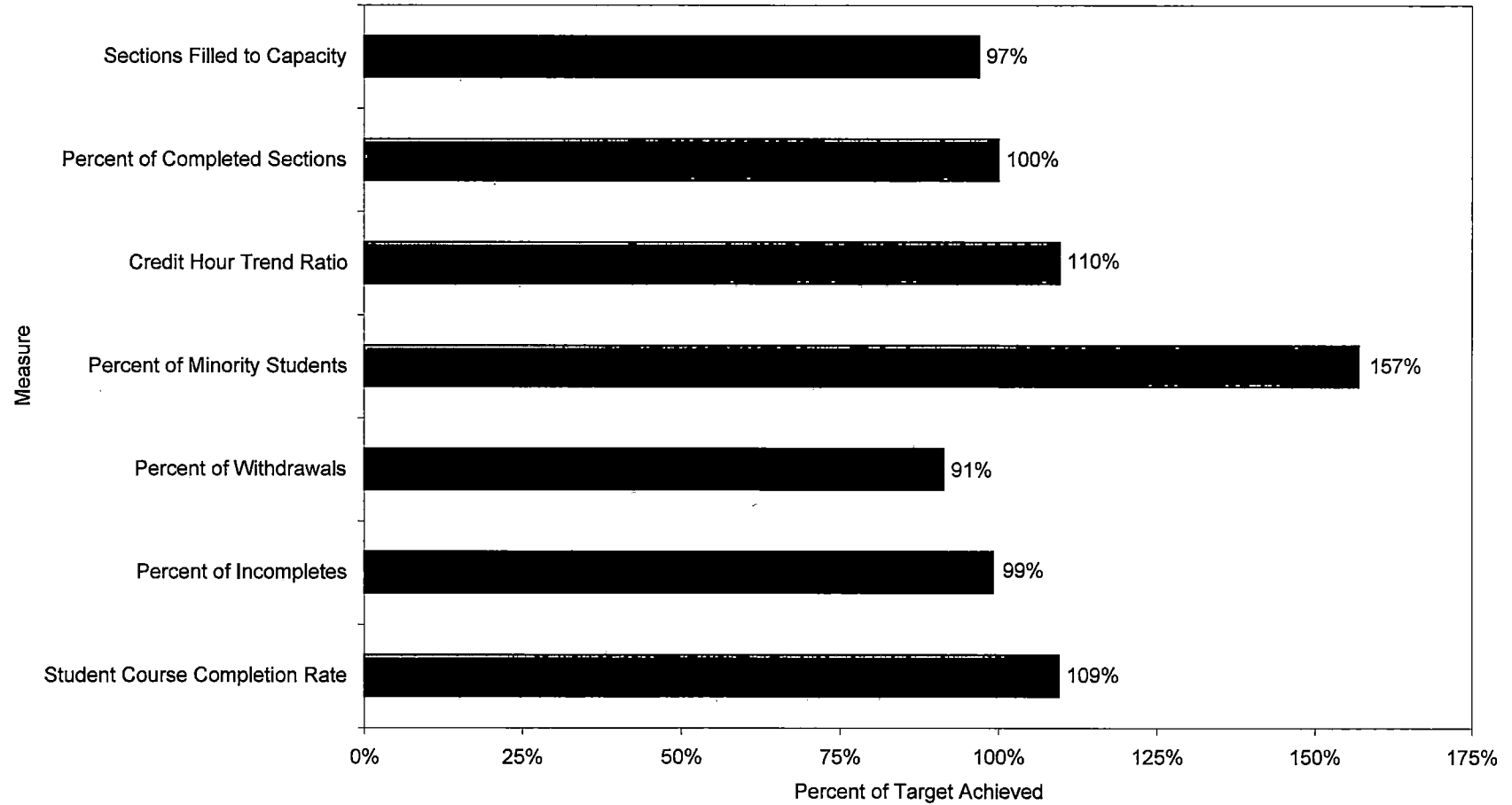


Chart: Percent of Target Achieved by Measure

| Measure | Percent of Target Achieved |
|---|---|
| Sections Filled to Capacity | 97% |
| Percent of Completed Sections | 100% |
| Credit Hour Trend Ratio | 110% |
| Percent of Minority Students | 157% |
| Percent of Withdrawals | 91% |
| Percent of Incompletes | 99% |
| Student Course Completion Rate | 109% |

# Oakland Community College
# Program Dashboard Report
# 2005-06

## Medical Assisting MDA
## Dashboard Score: 10.58

| Measures | Current Score | Benchmarks Trouble Score | Target Score | Percent of Target Achieved | Weight | Weighted Score |
|---|---|---|---|---|---|---|
| Sections Filled to Capacity | 87.2% | 75.0% | 90.0% | 96.9% | 18.0% | 1.74 |
| Percent of Completed Sections | 90.0% | 75.0% | 90.0% | 100.0% | 14.2% | 1.42 |
| Credit Hour Trend Ratio | 1.37 | 0.71 | 1.25 | 109.6% | 15.3% | 1.68 |
| Percent of Minority Students | 29.5% | 16.9% | 18.8% | 156.9% | 6.1% | 0.96 |
| Percent of Withdrawals | 8.7% | 15.0% | 0.0% | 91.3% | 12.0% | 1.10 |
| Percent of Incompletes | 0.9% | 3.0% | 0.0% | 99.1% | 7.9% | 0.78 |
| Student Course Completion Rate | 82.1% | 60.0% | 75.0% | 109.5% | 26.5% | 2.90 |

# Program Dashboard
# Detail Report

**Prefix**  MDA
**Title**   Medical Assisting

| | Program | | | College Wide |
| --- | --- | --- | --- | --- |
| | **2005-06** | **2004-05** | **2003-04** | **2005-06** |
| **Sections Filled to Capacity** | 87.2% | 81.1% | 79.4% | 83.2% |
| **Percent of Completed Sections** | 90.0% | 100.0% | 80.0% | 86.6% |
| **Headcount Trend Ratio** | 1.43 | 1.27 | 1.26 | 1.02 |
| **Credit Hour Trend Ratio** | 1.37 | 1.28 | 1.26 | 1.02 |
| **Percent of Minority Students** | 29.5% | 29.3% | 26.9% | 27.9% |
| **Percent of Withdrawals** | 8.7% | 13.9% | 11.8% | 17.8% |
| **Percent of Incompletes** | 0.9% | 0.6% | 1.0% | 1.6% |
| **Student Course Completion Rate** | 82.1% | 78.8% | 80.8% | 68.2% |
| **Dashboard Score** | 10.58 | 10.27 | 9.91 | |

# Sections Filled to Capacity

**Prefix**       MDA

**Prefix Title**   Medical Assisting

|  | 2005-06 | 2004-05 | 2003-04 |
|---|---|---|---|
| **Total Students** | 836 | 505 | 510 |
| **Total Capacity** | 959 | 623 | 642 |
| **Sections Filled To Capacity** | 87.2% | 81.1% | 79.4% |

**Definition:**

The percent of all available seats which are filled on the terms official census date. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

**Methodology:**

Total number of sections (credit courses only) that are filled to their designated capacity e.g. allocated seats divided by the total number of available seats in all sections throughout the academic year (July 1 through June 30). In other words, how many sections are filled to their capacity on the sections 1/10 day out of all sections? Include sections that are more than filled / overflowing in calculation.

One-Tenth Day data shows the capacity filled numbers at approximately 3 weeks after the Fall and Winter terms begin; and 1 week after the Summer I and II terms begin. This data will not provide additional enrollment data if the sections begin after the one-tenth day.

While a section may only have a few students enrolled in it the college is able to designate some sections as 'full' so that they are not cancelled (per OCCFA Master Agreement). Therefore some disciplines may show low fill capacity rates, and the college never cancelled the sections or condense the students into fewer sections offering the same course.

# Percent of Completed Sections

**Prefix**        MDA

**Prefix Title**    Medical Assisting

|  | **2005-06** | **2004-05** | **2003-04** |
|---|---|---|---|
| **Active Sections** | 36 | 31 | 24 |
| **Cancelled Sections** | 4 | 0 | 6 |
| **Total Sections** | 40 | 31 | 30 |
| **Percent of Completed Sections** | 90.0% | 100.0% | 80.0% |

**Definition:**

Of all offered sections, the percent of sections that are completed (not cancelled). Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session, after grades are posted.

**Methodology:**

Annually, the total number of offered credit sections that are completed. Formula = number of completed credit sections divided by the total number of offered credit sections. In other words, the percent of these sections that are not cancelled.

# Headcount Trend Ratio

**Prefix**      MDA

**Prefix Title**    Medical Assisting

|  | 2005-06 | 2004-05 | 2003-04 |
|---|---|---|---|
| **Headcount Year 1** | 280 | 255 | 296 |
| **Headcount Year 2** | 510 | 280 | 255 |
| **Headcount Year 3** | 539 | 510 | 280 |
| **Headcount Year 4** | 847 | 539 | 510 |
| **Headcount Period 1** | 443 | 348 | 277 |
| **Headcount Period 2** | 632 | 443 | 348 |
| **Headcount Ratio** | 1.43 | 1.27 | 1.26 |

**Definition:**

Trend in student headcount based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term. (Note: this measure is not used in the calculation of the Program Dashboard score since it parallels trends depicted in Credit Hours.)

**Methodology:**

In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student headcount.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

# Credit Hour Trend Ratio

**Prefix**        MDA

**Prefix Title**    Medical Assisting

|  | **2005-06** | **2004-05** | **2003-04** |
|---|---|---|---|
| **Credit Hour Year 1** | 797 | 720 | 857 |
| **Credit Hour Year 2** | 1,483 | 797 | 720 |
| **Credit Hour Year 3** | 1,563 | 1,483 | 797 |
| **Credit Hour Year 4** | 2,200 | 1,563 | 1,483 |
| **Credit Hour Period 1** | 1,281 | 1,000 | 791 |
| **Credit Hour Period 2** | 1,749 | 1,281 | 1,000 |
| **Credit Hour Ratio** | 1.37 | 1.28 | 1.26 |

**Definition:**

Trend in student credit hours based on a three year rolling average. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

**Methodology:**

In order to establish a meaningful enrollment statistic which applies to large as well as small disciplines/programs a "ratio" was calculated based on a three year rolling average of student credit hours.

The formula used to calculate this measure involves three simple steps:

a. Year 1 + Year 2 + Year 3 / 3 = Period 1
b. Year 2 + Year 3 + Year 4 / 3 = Period 2
c. Period 2 / Period 1 = Ratio

If the ratio is greater than "1" this means there has been an enrollment increase. On the other hand, if the ratio is less than "1" this translates into an enrollment decline. The larger the number the larger the enrollment increase. Likewise, the lower the number the greater the enrollment decline.

# Percent of Minority Students

**Prefix**        MDA

**Prefix Title**   Medical Assisting

|  | **2005-06** | **2004-05** | **2003-04** |
|---|---|---|---|
| **Minority Students** | 131 | 103 | 94 |
| **Total Students** | 444 | 352 | 350 |
| **Percent of Minority Students** | 29.5% | 29.3% | 26.9% |

**Definition:**

The percent of students who are minority. Minority status is self-reported by the student and includes: African American, Asian, Hispanic, Native American Indian and Other. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: One-tenth-day of each term.

**Methodology:**

Percentages are based on those students enrolled on the terms official census date (one tenth day) and excludes missing data.

# Percent of Withdrawals

**Prefix**     MDA

**Prefix Title**   Medical Assisting

|  | **2005-06** | **2004-05** | **2003-04** |
|---|---|---|---|
| **Total Withdrawals** | 71 | 69 | 57 |
| **Total Grades** | 812 | 496 | 485 |
| **Percent of Withdrawals** | 8.7% | 13.9% | 11.8% |

**Definition:**

The percent of students who withdraw from their course after the term begins. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

**Methodology:**

Percent of withdrawals is derived by dividing the total number of student initiated withdrawals by the total number of grades and marks awarded throughout the academic year. The Withdrawal-Passing (WP), and Withdrawal-Failing (WF) are considered Withdrawals (W). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

# Percent of Incompletes

**Prefix**        MDA

**Prefix Title**    Medical Assisting

|  | **2005-06** | **2004-05** | **2003-04** |
|---|---|---|---|
| **Total Incompletes** | 7 | 3 | 5 |
| **Total Grades** | 812 | 496 | 485 |
| **Percent of Incompletes** | 0.9% | 0.6% | 1.0% |

**Definition:**

The percent of students who receive an incomplete in their course. Time Frame: Academic Year (Summer II, Fall, Winter, Summer I). Data Source: End of session files, after grades are posted.

**Methodology:**

Percent of incompletes is derived by dividing the total number of incompletes by the total number of grades and marks awarded throughout the academic year. The Continuous Progress (CP) grade is considered an Incomplete (I). Meanwhile, calculations exclude: Audit (AU), Not Attended (N), and Not Reported (NR).

# Student Course Completion Rate

**Prefix**       MDA

**Prefix Title**   Medical Assisting

|                                     | **2005-06** | **2004-05** | **2003-04** |
|-------------------------------------|-------------|-------------|-------------|
| **Successful Grades**               | 667         | 391         | 392         |
| **Total Student Grades**            | 812         | 496         | 485         |
| **Student Course Completion Rate**  | 82.1%       | 78.8%       | 80.8%       |

**Definition:**

The percent of students who successfully complete a course with a grade of "C" or higher.  Time Frame: Academic Year (Summer II, Fall, Winter, Summer I).  Data Source: End of session files, after grades are posted.

**Methodology:**

Student success rates are based on end of session data after all grades have been posted.  Data includes grades from the entire academic year (Summer II, Fall, Winter, and Summer I).  The following grades/marks are excluded from the calculation: Audit (AU), Not Attended (N) and Not Reported (NR).

OAKLAND
COMMUNITY
COLLEGE

# Credit Hour Trends Report
# Medical Assisting
# MDA
# 2006-07

Prepared by:

Oakland Community College

Office of Institutional Research

August 13, 2007

# Oakland Community College
## Ten-Year Trend in Student Credit Hours
## Medical Assisting
## 1996-97 through 2006-07

| | 1996-97 SCH | 1997-98 SCH | 1998-99 SCH | 1999-00 SCH | 2000-01 SCH | 2001-02 SCH | 2002-03 SCH | 2003-04 SCH | 2004-05 SCH | 2005-06 SCH | 2006-07 SCH | 5-Year % Change | 10-Year % Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Medical Assisting | 1,044 | 981 | 838 | 715 | 796 | 689 | 769 | 1,492 | 1,450 | 2,184 | 2,615 | 279.5 | 150.5 |
| College Wide Totals | 443,471 | 431,521 | 440,448 | 438,997 | 453,054 | 447,928 | 478,827 | 468,777 | 472,892 | 487,597 | 483,681 | 8.0 | 9.1 |

8/13/2007
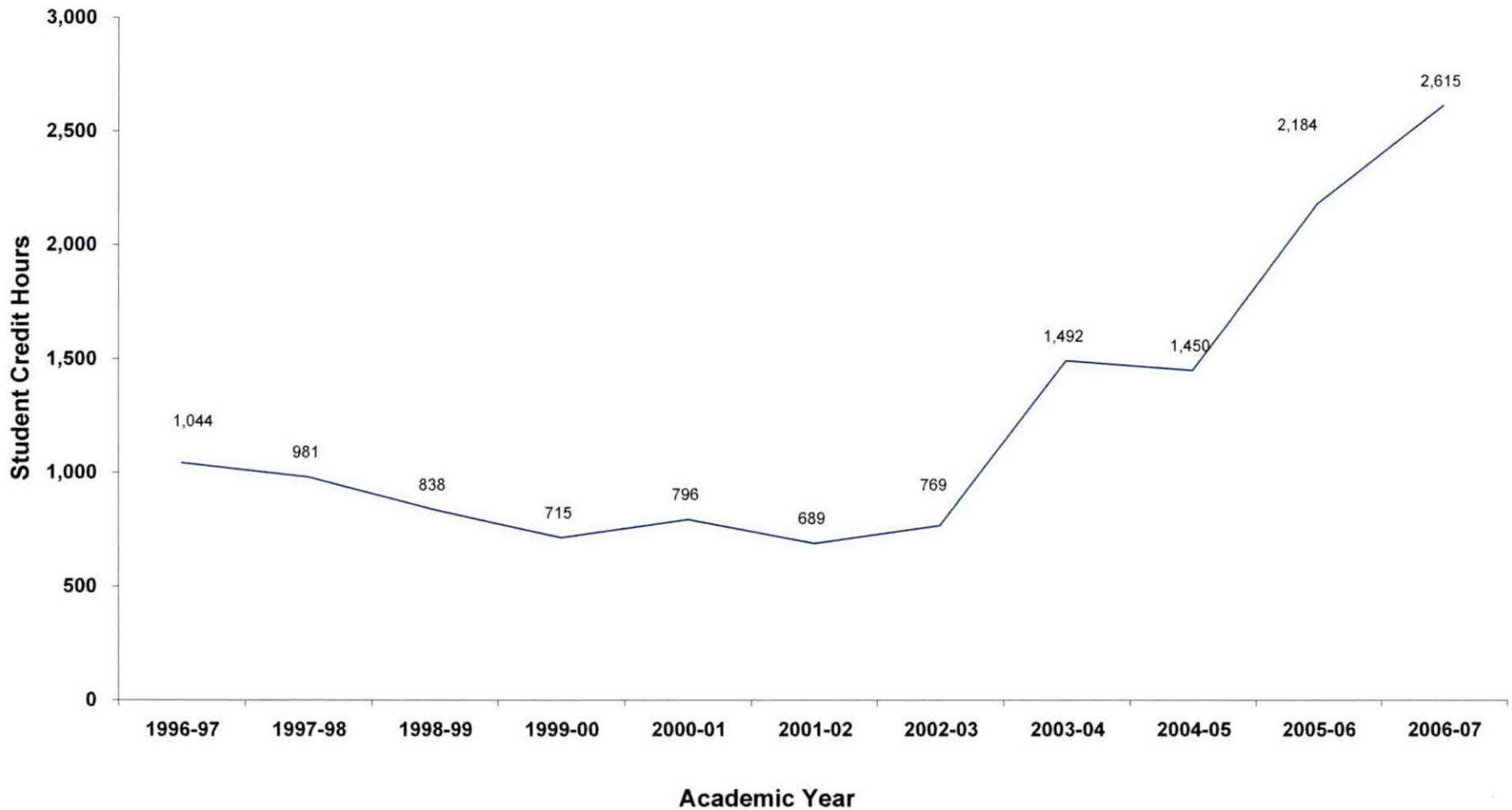
# Oakland Community College
## Ten-Year Trend in Student Credit Hours
## College-Wide
## 1995-96 through 2004-05
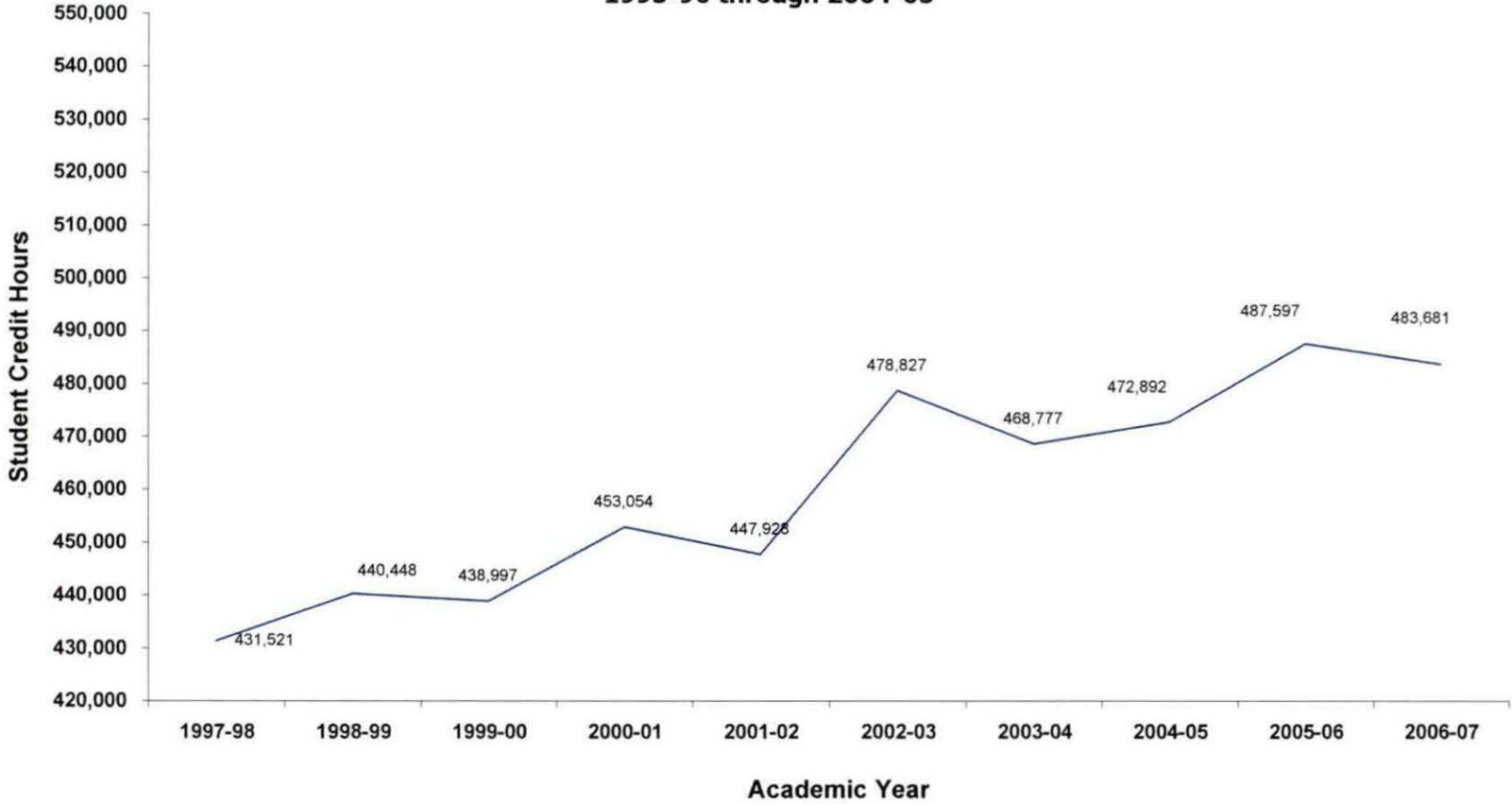


| 1997-98 | 1998-99 | 1999-00 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 431,521 | 440,448 | 438,997 | 453,054 | 447,928 | 478,827 | 468,777 | 472,892 | 487,597 | 483,681 |

8/13/2007

OAKLAND
COMMUNITY
COLLEGE

# Degree Trends Report

# Medical Assisting

# MDA

# 2005-06

**Prepared by:**
**Oakland Community College**
**Office of Institutional Research**
**August 30, 2007**

# Oakland Community College
## Associate Degrees and Certificates Awarded
## Medical Assisting
## 1996-97 through 2005-06
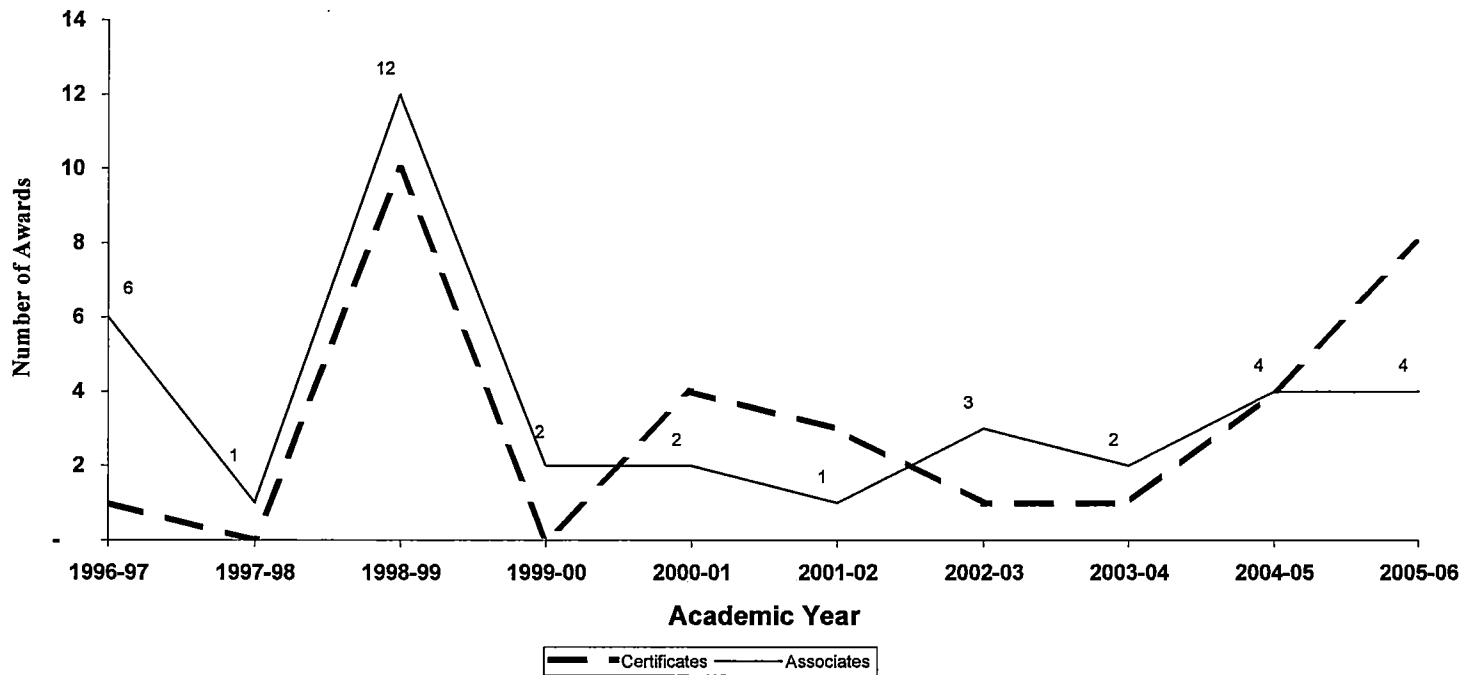


| Academic Yr. | Certificates | Associates |
|---|---|---|
| 1996-97 | 1 | 6 |
| 1997-98 | 0 | 1 |
| 1998-99 | 10 | 12 |
| 1999-00 | 0 | 2 |
| 2000-01 | 4 | 2 |
| 2001-02 | 3 | 1 |
| 2002-03 | 1 | 3 |
| 2003-04 | 1 | 2 |
| 2004-05 | 4 | 4 |
| 2005-06 | 8 | 4 |

# Oakland Community College
## Associate Degrees and Certificates Awarded
## Medical Assisting, Medical Insurance Coding & Billing
## 1996-97 through 2005-06
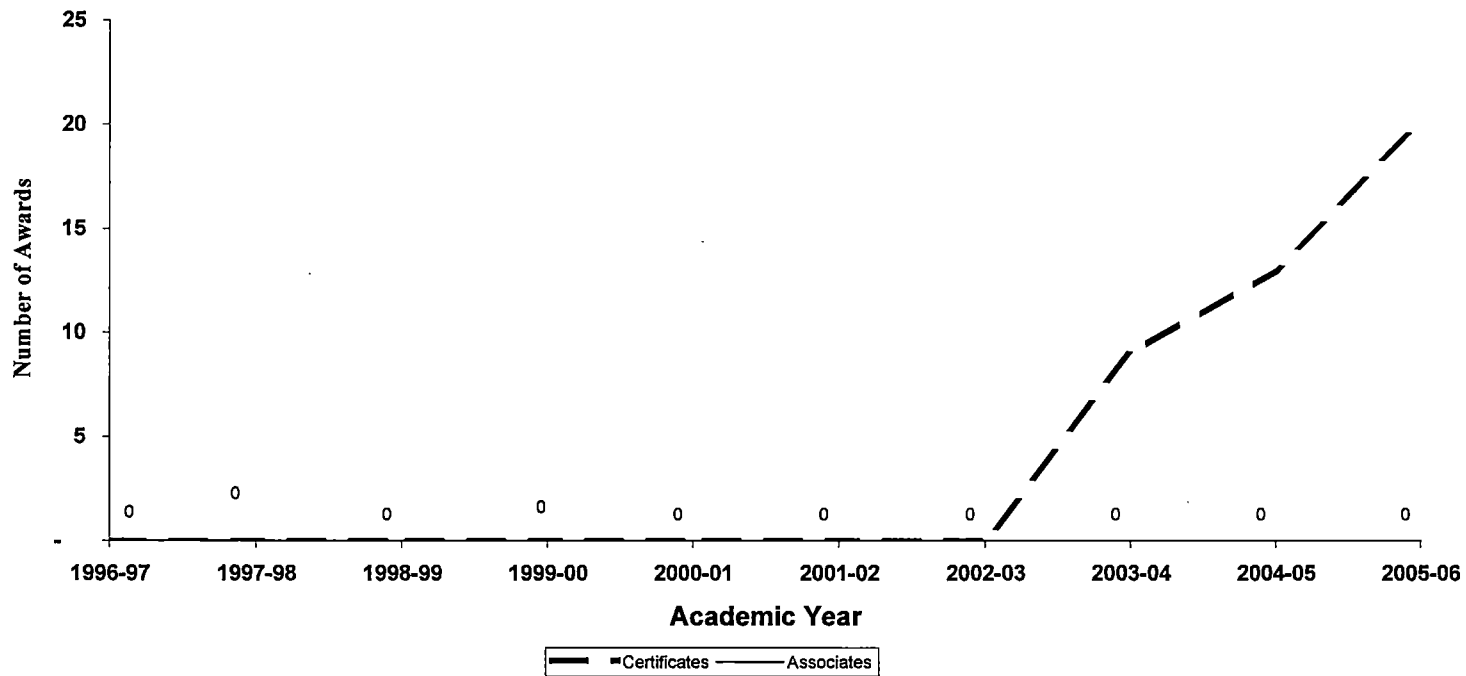


| Academic Yr. | Certificates | Associates |
|---|---|---|
| 1996-97 | 0 | 0 |
| 1997-98 | 0 | 0 |
| 1998-99 | 0 | 0 |
| 1999-00 | 0 | 0 |
| 2000-01 | 0 | 0 |
| 2001-02 | 0 | 0 |
| 2002-03 | 0 | 0 |
| 2003-04 | 9 | 0 |
| 2004-05 | 13 | 0 |
| 2005-06 | 20 | 0 |

# Oakland Community College
## Associate Degrees and Certificates Awarded
## Medical Assisting: Medical Office Administrative Procedures, C of A
## 1996-97 through 2005-06

Number of Awards

| Academic Yr. | Certificates | Associates |
|---|---|---|
| 1996-97 | 0 | 0 |
| 1997-98 | 0 | 0 |
| 1998-99 | 0 | 0 |
| 1999-00 | 0 | 0 |
| 2000-01 | 0 | 0 |
| 2001-02 | 0 | 0 |
| 2002-03 | 0 | 0 |
| 2003-04 | 0 | 0 |
| 2004-05 | 5 | 0 |
| 2005-06 | 2 | 0 |

# Oakland Community College
## Associate Degrees and Certificates Awarded
## Medical Assisting, Medical Office Clinical Procedures
## 1996-97 through 2005-06
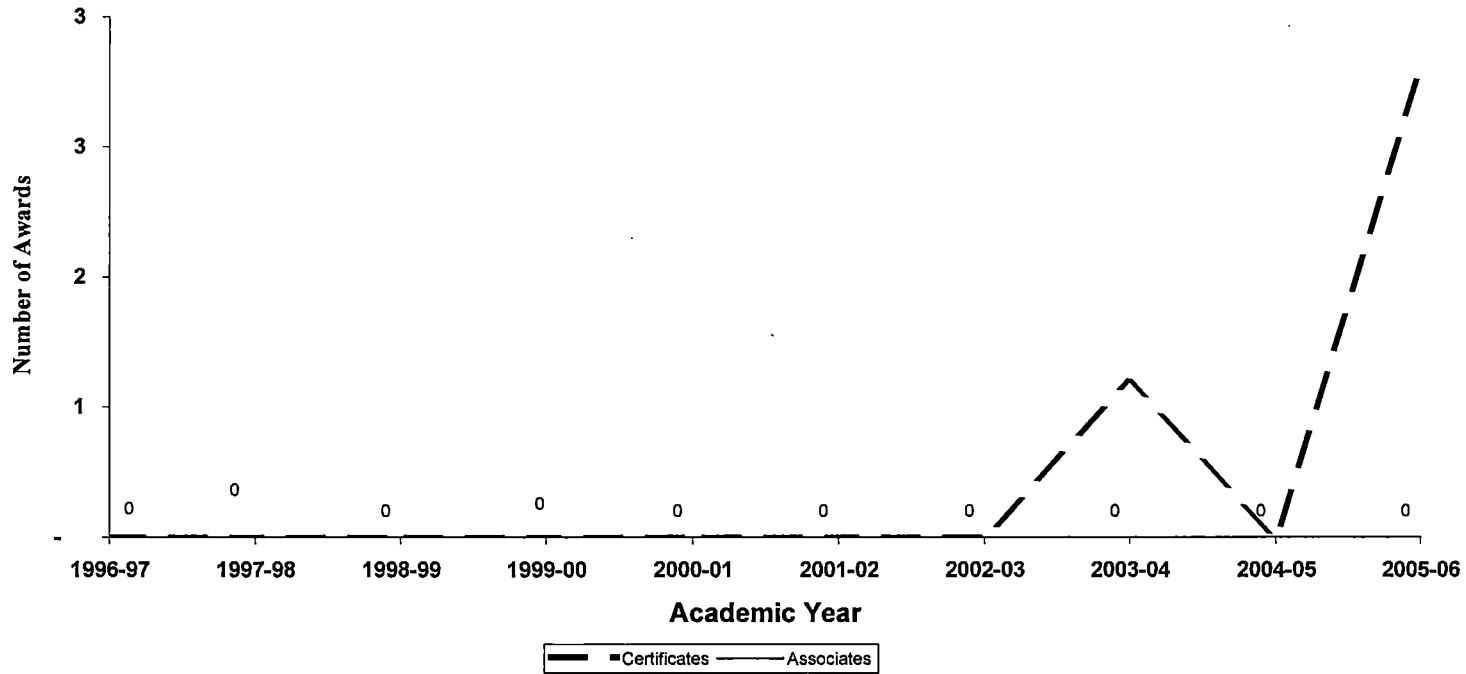


| Academic Yr. | Certificates | Associates |
|---|---|---|
| 1996-97 | 0 | 0 |
| 1997-98 | 0 | 0 |
| 1998-99 | 0 | 0 |
| 1999-00 | 0 | 0 |
| 2000-01 | 0 | 0 |
| 2001-02 | 0 | 0 |
| 2002-03 | 0 | 0 |
| 2003-04 | 1 | 0 |
| 2004-05 | 0 | 0 |
| 2005-06 | 3 | 0 |

8/30/2007

# Oakland Community College
## Associate Degrees and Certificates Awarded
## Medical Assisting, Medical Ophthalmic Assisting
## 1996-97 through 2005-06



| Academic Yr. | Certificates | Associates |
|---|---|---|
| 1996-97 | 0 | 0 |
| 1997-98 | 0 | 0 |
| 1998-99 | 0 | 0 |
| 1999-00 | 0 | 0 |
| 2000-01 | 0 | 0 |
| 2001-02 | 0 | 0 |
| 2002-03 | 0 | 0 |
| 2003-04 | 0 | 0 |
| 2004-05 | 0 | 0 |
| 2005-06 | 2 | 0 |

8/30/2007

# Oakland Community College
## Associate Degrees and Certificates Awarded
## Medical Assisting, Phlebotomy
## 1996-97 through 2005-06
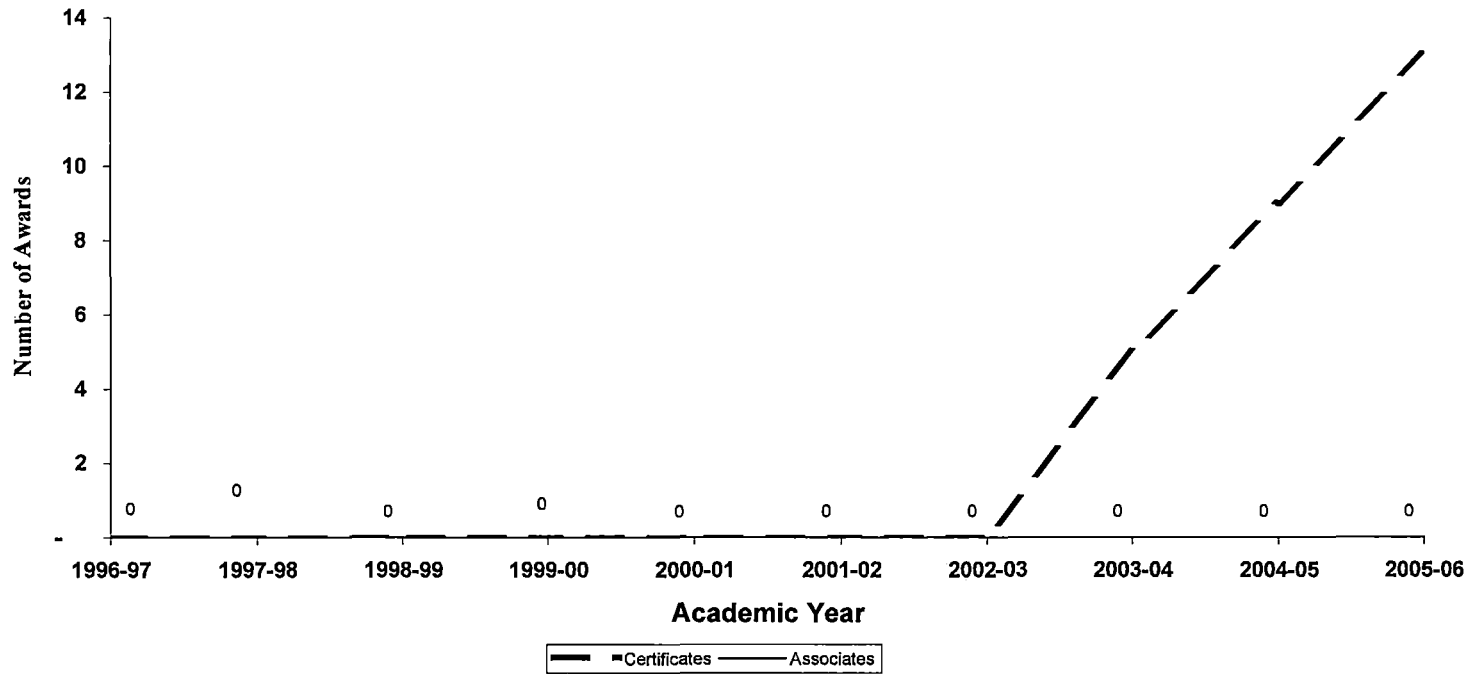


| Academic Yr. | Certificates | Associates |
|---|---|---|
| 1996-97 | 0 | 0 |
| 1997-98 | 0 | 0 |
| 1998-99 | 0 | 0 |
| 1999-00 | 0 | 0 |
| 2000-01 | 0 | 0 |
| 2001-02 | 0 | 0 |
| 2002-03 | 0 | 0 |
| 2003-04 | 5 | 0 |
| 2004-05 | 9 | 0 |
| 2005-06 | 13 | 0 |

8/30/2007

# Oakland Community College
## Associate Degrees and Certificates Awarded
## College-Wide
## 1996-97 through 2005-06



**Number of Awards**

Degrees data points:
- 1996-97: 1,879
- 1997-98: 1,483
- 1998-99: 2,028
- 1999-00: 1,657
- 2000-01: 1,543
- 2001-02: 1,592
- 2002-03: 1,692
- 2003-04: 1,864
- 2004-05: 1,908
- 2005-06: 1,824

Certificates data points:
- 1996-97: 88
- 1997-98: 69
- 1998-99: 161
- 1999-00: 88
- 2000-01: 117
- 2001-02: 138
- 2002-03: 127
- 2003-04: 151
- 2004-05: 160
- 2005-06: 202

**Academic Year**

Certificates — Degrees
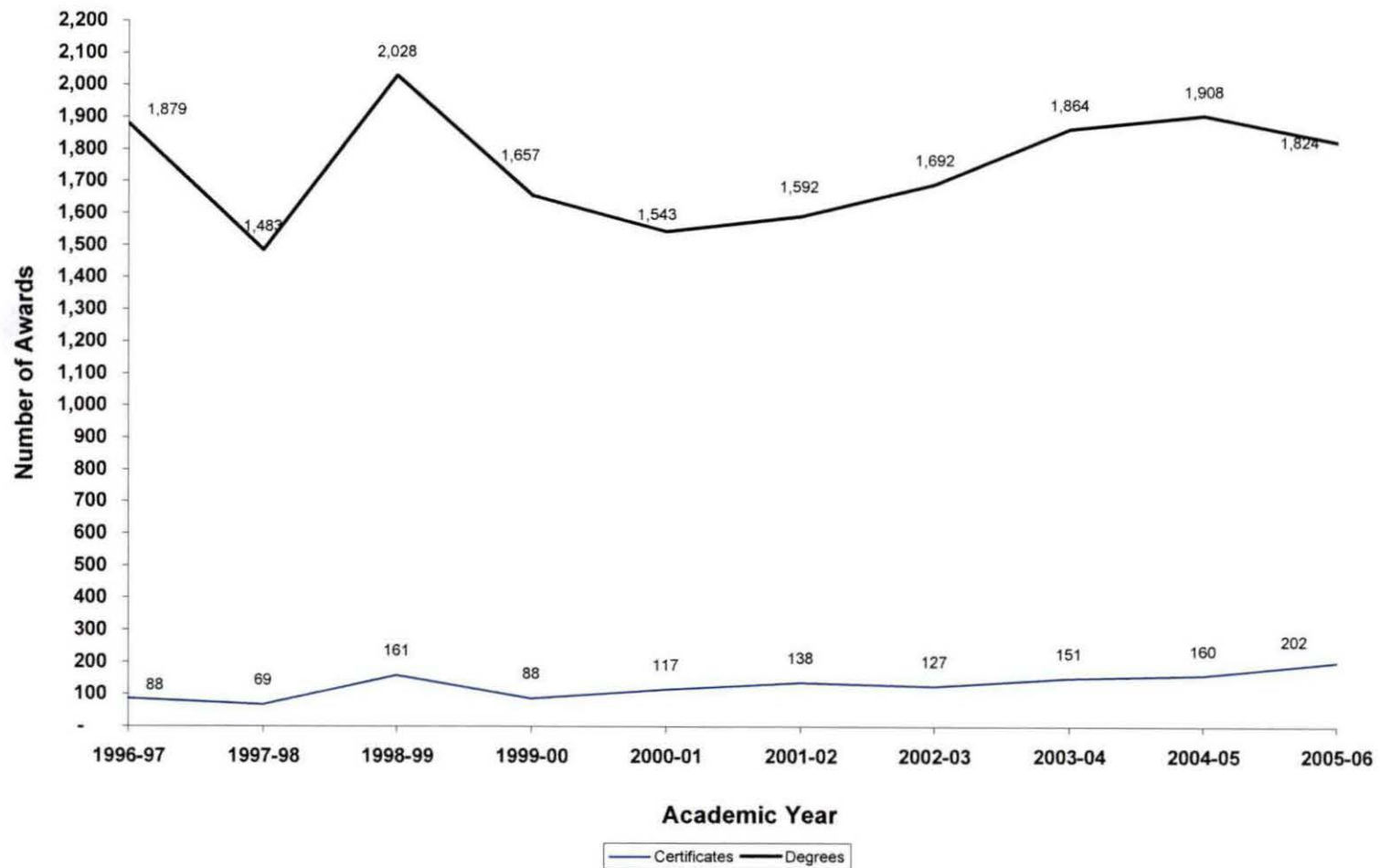
# Occupational Projections
## (2006 – 2011)

The following projections are for those occupations most closely associated with this program. However, the extent to which specific OCC programs lead to jobs reflected within a given Standard Occupational Code (SOC) is dependent upon the way in which the U.S. Department of Labor groups specific occupations.

Occupational projections are presented at the "Detailed Standard Occupational Code" level according to the U.S. Department of Labor.

Projections are subject to change based on emerging economic, political and social forces.

These projections reflect the four county region of Oakland, Macomb, Livingston and Wayne counties.

Projections are based on data from 24 major data sources, including the U.S. Department of Commerce, Bureau of Labor Statistics (BLS), Internal Revenue Service (IRS), and Census data. To forecast occupational demand at the county level, BLS data are regionalized and adjusted for emerging technological changes, the age of workers by occupation, and other factors affecting occupational demand.

This information was obtained from CCbenefits Inc. Community College Strategic Planner (CCSP).

Data presented in the following tables include:
- Base Year: Current number of jobs in 2006.
- Five Year: Number of projected jobs in 2011.
- New Jobs: Projected number of new jobs between 2006 and 2011.
- Replacement Jobs: Projected number of replacement jobs between 2006 and 2011.
- % New Jobs: Percent of projected new jobs in 2011 using 2006 as the base year.
- % Replacement Jobs: Percent of projected replacement jobs in 2011 using 2006 as the base year.
- % New and Replacement Jobs: Percent of projected new and replacement jobs in 2011 using 2006 as the base year.
- Earnings: Average annual earnings within the SOC code in 2006.

Note: Percent change figures must be interpreted carefully since they are based on actual number of jobs. In some cases the actual number of jobs may be quite low, thereby giving a misleading picture if only the percentage was considered.

# Medical Assisting Occupation Projections
## 2006 - 2011

| SOC Code | Name | Base Year | Five Year | New Jobs | Rplmnt Jobs | % New Jobs | % Rplmnt Jobs | % New & Rplmnt | Earnings Average | Earnings Median |
|---|---|---|---|---|---|---|---|---|---|---|
| 11-3011 | Administrative Services Managers | 3,437 | 3,647 | 210 | 334 | 6.1% | 9.7% | 15.8% | $37.95 | $34.51 |
| 11-9111 | Medical and Health Services Managers | 3,710 | 3,811 | 101 | 362 | 2.7% | 9.8% | 12.5% | $36.73 | $32.01 |
| 29-1199 | Health Diagnosing and Treating Practitioners, All Other | 1,836 | 1,929 | 93 | 199 | 5.1% | 10.8% | 15.9% | $43.00 | $33.67 |
| 29-2011 | Medical and Clinical Laboratory Technologists | 1,990 | 1,958 | -32 | 268 | -1.6% | 13.5% | 11.9% | $23.32 | $23.41 |
| 29-2012 | Medical and Clinical Laboratory Technicians | 2,835 | 2,925 | 90 | 382 | 3.2% | 13.4% | 16.6% | $16.49 | $13.54 |
| 29-2071 | Medical Records and Health Information Technicians | 2,535 | 2,708 | 173 | 181 | 6.8% | 7.2% | 14.0% | $15.56 | $14.31 |
| 31-9092 | Medical Assistants | 7,422 | 8,981 | 1,559 | 687 | 21.0% | 9.3% | 30.3% | $12.50 | $12.15 |
| 31-9093 | Medical Equipment Preparers | 680 | 694 | 14 | 63 | 2.1% | 9.2% | 11.3% | $12.73 | $12.27 |
| 31-9094 | Medical Transcriptionists | 1,312 | 1,437 | 125 | 121 | 9.5% | 9.3% | 18.8% | $15.27 | $14.96 |
| 31-9099 | Healthcare Support Workers, All Other | 3,427 | 3,501 | 74 | 317 | 2.2% | 9.2% | 11.4% | $13.82 | $12.68 |
| 43-1011 | First-Line Supervisors/Managers of Office and Administrative Support | 20,640 | 21,365 | 725 | 2,214 | 3.5% | 10.7% | 14.2% | $21.88 | $19.92 |
| 43-6013 | Medical Secretaries | 7,201 | 7,508 | 307 | 690 | 4.3% | 9.5% | 13.8% | $12.83 | $12.12 |
| Totals: | | 57,025 | 60,464 | 3,439 | 5,818 | | | | | |

**SOC Code 11-3011**

Name     Administrative Services Managers

Definition

Plan, direct, or coordinate supportive services of an organization, such as recordkeeping, mail distribution, telephone operator/receptionist, and other office support services. May oversee facilities planning and maintenance and custodial operations. Exclude "Purchasing Managers" (11-3061).
Examples: Facilities Manager, Space Officer

**SOC Code 11-9111**
Name      Medical and Health Services Managers

Definition
Plan, direct, or coordinate medicine and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.
Examples: Director of Occupational Therapy, Medical Records Administrator, Public Health Administrator


**SOC Code 29-1199**
Name      Health Diagnosing and Treating Practitioners, All Other

Definition
All health diagnosing and treating practitioners not listed separately.
Examples: Acupuncturist, Homeopathic Doctor, Hypnotherapist


**SOC Code 29-2011**
Name      Medical and Clinical Laboratory Technologists

Definition
Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.
Examples: Blood Bank Technologist, Cytotechnologist, Immunohematologist


**SOC Code 29-2012**
Name      Medical and Clinical Laboratory Technicians

Definition
Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.
Examples: Blood Bank Technician, Cytotechnician, Serology Technician

**SOC Code 29-2071**
Name      Medical Records and Health Information Technicians

Definition
Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system. Process, maintain, compile, and report patient information for health requirements and standards.
Examples: Disability Rater, Medical Records Specialist, Medical Library Historian


**SOC Code 31-9092**
Name      Medical Assistants

Definition
Perform administrative and certain clinical duties under the direction of physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician. Exclude "Physician Assistants" (29-1071).
Examples: Morgue Attendant, Ophthalmic Aide, Physicians Aide


**SOC Code 31-9093**
Name      Medical Equipment Preparers

Definition
Prepare, sterilize, install, or clean laboratory or healthcare equipment. May perform routine laboratory tasks and operate or inspect equipment.
Examples: Bandage Maker, Hot Packer, Sterilizer


**SOC Code 31-9094**
Name      Medical Transcriptionists

Definition
Use transcribing machines with headset and foot pedal to listen to recordings by physicians and other healthcare professionals dictating a variety of medical reports, such as emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries. Transcribe dictated reports and translate medical jargon and abbreviations into their expanded forms. Edit as necessary and return reports in either printed or electronic form to the dictator for review and signature, or correction.
Examples: Medical Stenographer

**SOC Code 31-9099**
Name      Healthcare Support Workers, All Other

<u>Definition</u>
All healthcare support workers not listed separately.
Examples: Phlebotomist, Reducing Salon Attendant


**SOC Code 43-1011**
Name      First-Line Supervisors/Managers of Office and Administrative Support Workers

<u>Definition</u>
Supervise and coordinate the activities of clerical and administrative support workers.
Examples: Claims Supervisor, Stock Room Manager, Teller Supervisor


**SOC Code 43-6013**
Name      Medical Secretaries

<u>Definition</u>
Perform secretarial duties utilizing specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties include scheduling appointments, billing patients, and compiling and recording medical charts, reports, and correspondence.
Examples: Psychiatric Secretary, Dental Secretary

# Occupational Skills Analysis

This report provides detailed information on the knowledge, skills and abilities required for a given occupation. Consideration of these different competencies and levels of attainment while designing and reviewing curriculum will ensure that students are adequately prepared for employment.

Tables in the Job Skills report include:

- *Competency* which is required of the occupation. This is a subcategory of knowledge, skill, or ability.

- *Importance* of the competency to the occupation (in general terms)

  - Not important
  - Somewhat important
  - Important
  - Very important
  - Extremely important

- *Importance* of the competency to the occupation (in specific terms).

  - 0 to 20 = not important
  - 21 to 40 = somewhat important
  - 41 to 60 = important
  - 61 to 80 = very important
  - 81 to 100 = extremely important

- *Level of Attainment* in the competency required by the occupation:

  - Basic = 0 to 24
  - Intermediate = 25 to 49
  - Advanced = 50 to 74
  - Expert = 75 to 100

# Occupational Skills Analysis
## 11-3011.00 - Administrative Services Managers

Plan, direct, or coordinate supportive services of an organization, such as recordkeeping, mail distribution, telephone operator/receptionist, and other office support services. May oversee facilities planning and maintenance and custodial operations.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Clerical | Important | 69 | Advanced | 71 |
| Customer and Personal Service | Important | 66 | Advanced | 67 |
| *Personnel and Human* Resources | Important | 66 | Advanced | 65 |
| Mathematics | Important | 54 | Advanced | 58 |
| Administration and Management | Important | 68 | Advanced | 57 |
| English Language | Important | 66 | Advanced | 51 |
| Economics and Accounting | Somewhat Important | 48 | Intermediate | 49 |
| Computers and Electronics | Somewhat Important | 44 | Intermediate | 48 |
| Public Safety and Security | Somewhat Important | 45 | Intermediate | 47 |
| Law and Government | Important | 56 | Intermediate | 44 |
| Psychology | Somewhat Important | 31 | Intermediate | 41 |
| Communications and Media | Somewhat Important | 45 | Intermediate | 38 |
| Education and Training | Somewhat Important | 35 | Intermediate | 37 |
| Production and Processing | Somewhat Important | 42 | Intermediate | 35 |
| Transportation | Somewhat Important | 31 | Intermediate | 32 |
| Sales and Marketing | Somewhat Important | 30 | Intermediate | 30 |
| Sociology and Anthropology | Not Important | 19 | Intermediate | 27 |
| Chemistry | Not Important | 16 | Basic | 24 |
| Mechanical | Not Important | 17 | Basic | 23 |
| Food Production | Not Important | 17 | Basic | 19 |
| Engineering and Technology | Not Important | 18 | Basic | 19 |
| Foreign Language | Not Important | 12 | Basic | 17 |
| Therapy and Counseling | Not Important | 13 | Basic | 17 |
| Telecommunications | Not Important | 18 | Basic | 16 |
| Medicine and Dentistry | Not Important | 11 | Basic | 12 |
| Physics | Not Important | 9 | Basic | 11 |
| Philosophy and Theology | Not Important | 8 | Basic | 10 |
| Geography | Not Important | 6 | Basic | 8 |
| Design | Not Important | 4 | Basic | 4 |
| Building and Construction | Not Important | 3 | Basic | 4 |
| History and Archeology | Not Important | 3 | Basic | 4 |
| Biology | Not Important | 2 | Basic | 2 |
| Fine Arts | Not Important | 1 | Basic | 1 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Coordination | Very Important | 82 | Expert | 76 |
| Monitoring | Important | 73 | Advanced | 71 |
| Speaking | Very Important | 75 | Advanced | 69 |
| Service Orientation | Very Important | 80 | Advanced | 68 |
| Active Listening | Very Important | 78 | Advanced | 67 |
| Writing | Very Important | 75 | Advanced | 67 |
| Reading Comprehension | Very Important | 82 | Advanced | 66 |
| Active Learning | Very Important | 76 | Advanced | 65 |
| Critical Thinking | Important | 72 | Advanced | 63 |
| Management of Personnel Resources | Important | 71 | Advanced | 63 |
| Social Perceptiveness | Very Important | 85 | Advanced | 62 |
| Time Management | Very Important | 85 | Advanced | 61 |
| Mathematics | Important | 60 | Advanced | 58 |
| Instructing | Very Important | 75 | Advanced | 58 |
| Management of Financial Resources | Important | 70 | Advanced | 57 |
| Judgment and Decision Making | Important | 65 | Advanced | 52 |
| Learning Strategies | Somewhat Important | 49 | Advanced | 50 |
| Complex Problem Solving | Important | 51 | Intermediate | 49 |
| Negotiation | Somewhat Important | 44 | Intermediate | 41 |
| Operations Analysis | Somewhat Important | 36 | Intermediate | 40 |
| Equipment Selection | Somewhat Important | 33 | Intermediate | 39 |
| Operation and Control | Somewhat Important | 47 | Intermediate | 38 |
| Persuasion | Somewhat Important | 41 | Intermediate | 37 |
| Troubleshooting | Somewhat Important | 33 | Intermediate | 37 |
| Management of Material Resources | Somewhat Important | 39 | Intermediate | 37 |
| Programming | Somewhat Important | 33 | Intermediate | 37 |
| Operation Monitoring | Somewhat Important | 33 | Intermediate | 34 |
| Systems Evaluation | Somewhat Important | 38 | Intermediate | 32 |
| Quality Control Analysis | Somewhat Important | 25 | Intermediate | 28 |
| Systems Analysis | Somewhat Important | 35 | Intermediate | 28 |
| Technology Design | Not Important | 18 | Basic | 24 |
| Equipment Maintenance | Not Important | 23 | Basic | 23 |
| Installation | Not Important | 17 | Basic | 20 |
| Repairing | Not Important | 18 | Basic | 18 |
| Science | Not Important | 18 | Basic | 16 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Near Vision | Important | 63 | Advanced | 63 |
| Oral Expression | Very Important | 85 | Advanced | 61 |
| Written Expression | Very Important | 75 | Advanced | 59 |
| Oral Comprehension | Very Important | 85 | Advanced | 54 |
| Written Comprehension | Very Important | 75 | Advanced | 54 |
| Speech Recognition | Very Important | 75 | Advanced | 52 |
| Problem Sensitivity | Important | 72 | Advanced | 52 |
| Deductive Reasoning | Important | 53 | Intermediate | 48 |
| Information Ordering | Important | 66 | Intermediate | 46 |
| Originality | Somewhat Important | 44 | Intermediate | 46 |
| Speech Clarity | Very Important | 75 | Intermediate | 46 |
| Inductive Reasoning | Important | 63 | Intermediate | 46 |
| Fluency of Ideas | Somewhat Important | 38 | Intermediate | 45 |
| Far Vision | Somewhat Important | 41 | Intermediate | 43 |
| Category Flexibility | Somewhat Important | 47 | Intermediate | 43 |
| Number Facility | Somewhat Important | 38 | Intermediate | 43 |
| Memorization | Somewhat Important | 35 | Intermediate | 43 |
| Visualization | Somewhat Important | 31 | Intermediate | 39 |
| Time Sharing | Somewhat Important | 38 | Intermediate | 38 |
| Auditory Attention | Somewhat Important | 31 | Intermediate | 36 |
| Perceptual Speed | Somewhat Important | 31 | Intermediate | 34 |
| Mathematical Reasoning | Somewhat Important | 35 | Intermediate | 34 |
| Selective Attention | Important | 53 | Intermediate | 34 |
| Control Precision | Somewhat Important | 25 | Intermediate | 32 |
| Trunk Strength | Somewhat Important | 38 | Intermediate | 30 |
| Finger Dexterity | Somewhat Important | 41 | Intermediate | 30 |
| Depth Perception | Somewhat Important | 31 | Intermediate | 29 |
| Flexibility of Closure | Somewhat Important | 31 | Intermediate | 27 |
| Speed of Closure | Somewhat Important | 31 | Intermediate | 27 |
| Visual Color Discrimination | Not Important | 16 | Basic | 23 |
| Multilimb Coordination | Somewhat Important | 25 | Basic | 23 |
| Arm-Hand Steadiness | Not Important | 19 | Basic | 23 |
| Hearing Sensitivity | Somewhat Important | 25 | Basic | 21 |
| Manual Dexterity | Somewhat Important | 28 | Basic | 21 |
| Wrist-Finger Speed | Not Important | 3 | Basic | 7 |
| Extent Flexibility | Not Important | 6 | Basic | 7 |
| Spatial Orientation | Not Important | 13 | Basic | 7 |
| Static Strength | Not Important | 9 | Basic | 5 |
| Reaction Time | Not Important | 0 | Basic | 0 |
| Stamina | Not Important | 0 | Basic | 0 |
| Sound Localization | Not Important | 0 | Basic | 0 |
| Speed of Limb Movement | Not Important | 0 | Basic | 0 |
| Night Vision | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Peripheral Vision | Not Important | 0 | Basic | 0 |
| Gross Body Coordination | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Response Orientation | Not Important | 0 | Basic | 0 |
| Gross Body Equilibrium | Not Important | 0 | Basic | 0 |
| Dynamic Strength | Not Important | 0 | Basic | 0 |
| Glare Sensitivity | Not Important | 0 | Basic | 0 |
| Rate Control | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

**Occupational Skills Analysis**
**11-9111.00 - Medical and Health Services Managers**

Plan, direct, or coordinate medicine and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Customer and Personal Service | Very Important | 90 | Expert | 76 |
| Education and Training | Important | 73 | Advanced | 71 |
| English Language | Very Important | 81 | Advanced | 69 |
| Therapy and Counseling | Important | 69 | Advanced | 69 |
| Computers and Electronics | Important | 73 | Advanced | 67 |
| Psychology | Important | 65 | Advanced | 64 |
| Administration and Management | Very Important | 86 | Advanced | 63 |
| Personnel and Human Resources | Very Important | 81 | Advanced | 62 |
| Mathematics | Important | 63 | Advanced | 58 |
| Medicine and Dentistry | Important | 74 | Advanced | 56 |
| Public Safety and Security | Important | 74 | Advanced | 56 |
| Communications and Media | Important | 58 | Advanced | 56 |
| Production and Processing | Important | 57 | Advanced | 55 |
| Sociology and Anthropology | Important | 55 | Advanced | 53 |
| Sales and Marketing | Somewhat Important | 44 | Advanced | 53 |
| Philosophy and Theology | Somewhat Important | 45 | Advanced | 52 |
| Biology | Somewhat Important | 35 | Intermediate | 49 |
| Law and Government | Important | 72 | Intermediate | 46 |
| Chemistry | Somewhat Important | 42 | Intermediate | 46 |
| Economics and Accounting | Important | 56 | Intermediate | 42 |
| Telecommunications | Somewhat Important | 43 | Intermediate | 38 |
| Physics | Somewhat Important | 29 | Intermediate | 32 |
| Clerical | Somewhat Important | 41 | Intermediate | 30 |
| Building and Construction | Somewhat Important | 25 | Basic | 24 |
| Design | Not Important | 19 | Basic | 24 |
| Engineering and Technology | Not Important | 24 | Basic | 22 |
| Transportation | Not Important | 15 | Basic | 16 |
| Mechanical | Not Important | 9 | Basic | 15 |
| Food Production | Not Important | 19 | Basic | 14 |
| Foreign Language | Not Important | 16 | Basic | 12 |
| History and Archeology | Not Important | 12 | Basic | 8 |
| Geography | Not Important | 1 | Basic | 1 |
| Fine Arts | Not Important | 1 | Basic | 1 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Critical Thinking | Very Important | 86 | Expert | 83 |
| Monitoring | Very Important | 84 | Expert | 82 |
| Reading Comprehension | Very Important | 89 | Expert | 81 |
| Learning Strategies | Very Important | 78 | Expert | 80 |
| Active Learning | Very Important | 81 | Expert | 79 |
| Active Listening | Very Important | 95 | Expert | 77 |
| Coordination | Very Important | 80 | Expert | 76 |
| Speaking | Very Important | 85 | Expert | 76 |
| Service Orientation | Very Important | 82 | Expert | 75 |
| Persuasion | Very Important | 76 | Expert | 75 |
| Social Perceptiveness | Very Important | 79 | Expert | 75 |
| Time Management | Very Important | 83 | Advanced | 73 |
| Judgment and Decision Making | Very Important | 83 | Advanced | 73 |
| Instructing | Very Important | 75 | Advanced | 72 |
| Writing | Very Important | 81 | Advanced | 72 |
| Management of Personnel Resources | Very Important | 80 | Advanced | 70 |
| Systems Evaluation | Important | 63 | Advanced | 66 |
| Management of Material Resources | Important | 62 | Advanced | 66 |
| Complex Problem Solving | Important | 71 | Advanced | 64 |
| Quality Control Analysis | Important | 63 | Advanced | 64 |
| Operations Analysis | Important | 64 | Advanced | 62 |
| Management of Financial Resources | Important | 65 | Advanced | 61 |
| Mathematics | Important | 62 | Advanced | 61 |
| Equipment Selection | Important | 62 | Advanced | 60 |
| Negotiation | Important | 62 | Advanced | 56 |
| Science | Important | 52 | Advanced | 54 |
| Troubleshooting | Important | 54 | Advanced | 51 |
| Operation Monitoring | Important | 51 | Advanced | 51 |
| Systems Analysis | Important | 53 | Advanced | 50 |
| Operation and Control | Somewhat Important | 43 | Intermediate | 47 |
| Technology Design | Somewhat Important | 44 | Intermediate | 46 |
| Equipment Maintenance | Somewhat Important | 33 | Intermediate | 31 |
| Programming | Somewhat Important | 32 | Intermediate | 31 |
| Repairing | Not Important | 23 | Intermediate | 28 |
| Installation | Somewhat Important | 26 | Intermediate | 26 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Oral Comprehension | Very Important | 81 | Advanced | 71 |
| Oral Expression | Very Important | 78 | Advanced | 68 |
| Deductive Reasoning | Very Important | 78 | Advanced | 66 |
| Written Comprehension | Very Important | 78 | Advanced | 64 |
| Written Expression | Very Important | 75 | Advanced | 63 |
| Problem Sensitivity | Very Important | 78 | Advanced | 63 |
| Inductive Reasoning | Very Important | 78 | Advanced | 59 |
| Near Vision | Important | 66 | Advanced | 59 |
| Mathematical Reasoning | Important | 63 | Advanced | 57 |
| Originality | Important | 56 | Advanced | 57 |
| Speech Clarity | Important | 69 | Advanced | 57 |
| Category Flexibility | Important | 66 | Advanced | 55 |
| Information Ordering | Important | 72 | Advanced | 54 |
| Speech Recognition | Important | 72 | Advanced | 54 |
| Number Facility | Somewhat Important | 41 | Advanced | 52 |
| Flexibility of Closure | Important | 50 | Advanced | 50 |
| Fluency of Ideas | Important | 53 | Intermediate | 48 |
| Far Vision | Somewhat Important | 44 | Intermediate | 46 |
| Memorization | Somewhat Important | 35 | Intermediate | 46 |
| Perceptual Speed | Important | 53 | Intermediate | 45 |
| Visualization | Somewhat Important | 35 | Intermediate | 43 |
| Time Sharing | Important | 56 | Intermediate | 43 |
| Speed of Closure | Somewhat Important | 38 | Intermediate | 41 |
| Selective Attention | Important | 56 | Intermediate | 39 |
| Trunk Strength | Somewhat Important | 35 | Intermediate | 30 |
| Auditory Attention | Somewhat Important | 31 | Intermediate | 30 |
| Finger Dexterity | Somewhat Important | 31 | Intermediate | 30 |
| Manual Dexterity | Not Important | 22 | Intermediate | 25 |
| Depth Perception | Somewhat Important | 31 | Intermediate | 25 |
| Control Precision | Not Important | 19 | Basic | 23 |
| Visual Color Discrimination | Not Important | 19 | Basic | 21 |
| Hearing Sensitivity | Not Important | 22 | Basic | 20 |
| Gross Body Coordination | Not Important | 19 | Basic | 20 |
| Speed of Limb Movement | Not Important | 16 | Basic | 16 |
| Stamina | Not Important | 19 | Basic | 14 |
| Arm-Hand Steadiness | Not Important | 13 | Basic | 14 |
| Wrist-Finger Speed | Not Important | 6 | Basic | 9 |
| Extent Flexibility | Not Important | 3 | Basic | 4 |
| Spatial Orientation | Not Important | 3 | Basic | 4 |
| Reaction Time | Not Important | 0 | Basic | 0 |
| Sound Localization | Not Important | 0 | Basic | 0 |
| Night Vision | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Static Strength | Not Important | 0 | Basic | 0 |
| Peripheral Vision | Not Important | 0 | Basic | 0 |
| Multilimb Coordination | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Response Orientation | Not Important | 0 | Basic | 0 |
| Gross Body Equilibrium | Not Important | 0 | Basic | 0 |
| Dynamic Strength | Not Important | 0 | Basic | 0 |
| Glare Sensitivity | Not Important | 0 | Basic | 0 |
| Rate Control | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

# Occupational Skills Analysis
## 29-2011.00 - Medical and Clinical Laboratory Technologists

Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Biology | Very Important | 88 | Expert | 87 |
| Chemistry | Very Important | 91 | Advanced | 69 |
| Mathematics | Very Important | 75 | Advanced | 60 |
| English Language | Very Important | 88 | Advanced | 59 |
| Customer and Personal Service | Important | 72 | Advanced | 59 |
| Computers and Electronics | Very Important | 80 | Advanced | 58 |
| Education and Training | Important | 57 | Advanced | 52 |
| Mechanical | Important | 53 | Advanced | 51 |
| Public Safety and Security | Very Important | 78 | Advanced | 51 |
| Clerical | Somewhat Important | 41 | Intermediate | 41 |
| Design | Somewhat Important | 42 | Intermediate | 35 |
| Psychology | Somewhat Important | 38 | Intermediate | 34 |
| Physics | Somewhat Important | 28 | Intermediate | 32 |
| Communications and Media | Somewhat Important | 37 | Intermediate | 31 |
| Medicine and Dentistry | Somewhat Important | 42 | Intermediate | 31 |
| Engineering and Technology | Somewhat Important | 40 | Intermediate | 26 |
| Personnel and Human Resources | Somewhat Important | 28 | Basic | 22 |
| Administration and Management | Not Important | 17 | Basic | 18 |
| Law and Government | Not Important | 16 | Basic | 18 |
| Telecommunications | Somewhat Important | 32 | Basic | 17 |
| Production and Processing | Not Important | 19 | Basic | 17 |
| Sociology and Anthropology | Not Important | 13 | Basic | 14 |
| Economics and Accounting | Not Important | 13 | Basic | 12 |
| Transportation | Not Important | 12 | Basic | 11 |
| Therapy and Counseling | Not Important | 10 | Basic | 9 |
| Sales and Marketing | Not Important | 8 | Basic | 8 |
| Foreign Language | Not Important | 7 | Basic | 7 |
| Geography | Not Important | 8 | Basic | 6 |
| Philosophy and Theology | Not Important | 4 | Basic | 6 |
| History and Archeology | Not Important | 4 | Basic | 4 |
| Fine Arts | Not Important | 4 | Basic | 3 |
| Food Production | Not Important | 2 | Basic | 2 |
| Building and Construction | Not Important | 2 | Basic | 2 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Equipment Maintenance | Very Important | 88 | Expert | 79 |
| Quality Control Analysis | Very Important | 94 | Advanced | 72 |
| Critical Thinking | Very Important | 79 | Advanced | 71 |
| Reading Comprehension | Very Important | 87 | Advanced | 70 |
| Operation Monitoring | Very Important | 80 | Advanced | 69 |
| Active Learning | Important | 71 | Advanced | 68 |
| Instructing | Important | 67 | Advanced | 68 |
| Science | Very Important | 79 | Advanced | 66 |
| Operation and Control | Very Important | 81 | Advanced | 66 |
| Troubleshooting | Very Important | 84 | Advanced | 65 |
| Active Listening | Important | 72 | Advanced | 64 |
| Monitoring | Important | 70 | Advanced | 62 |
| Equipment Selection | Important | 66 | Advanced | 62 |
| Judgment and Decision Making | Important | 65 | Advanced | 59 |
| Complex Problem Solving | Important | 71 | Advanced | 59 |
| Speaking | Important | 64 | Advanced | 58 |
| Learning Strategies | Important | 64 | Advanced | 58 |
| Time Management | Important | 70 | Advanced | 57 |
| Writing | Important | 57 | Advanced | 57 |
| Repairing | Important | 61 | Advanced | 56 |
| Mathematics | Important | 66 | Advanced | 55 |
| Coordination | Important | 62 | Advanced | 54 |
| Service Orientation | Important | 51 | Advanced | 52 |
| Social Perceptiveness | Somewhat Important | 44 | Intermediate | 46 |
| Operations Analysis | Somewhat Important | 39 | Intermediate | 40 |
| Management of Personnel Resources | Somewhat Important | 37 | Intermediate | 40 |
| Systems Analysis | Somewhat Important | 40 | Intermediate | 39 |
| Systems Evaluation | Somewhat Important | 38 | Intermediate | 38 |
| Persuasion | Somewhat Important | 26 | Intermediate | 34 |
| Negotiation | Somewhat Important | 30 | Intermediate | 32 |
| Installation | Somewhat Important | 27 | Intermediate | 32 |
| Technology Design | Somewhat Important | 30 | Intermediate | 29 |
| Management of Material Resources | Somewhat Important | 31 | Intermediate | 29 |
| Management of Financial Resources | Not Important | 15 | Basic | 14 |
| Programming | Not Important | 4 | Basic | 4 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Near Vision | Very Important | 88 | Expert | 79 |
| Oral Comprehension | Important | 69 | Advanced | 73 |
| Inductive Reasoning | Very Important | 81 | Advanced | 73 |
| Oral Expression | Very Important | 78 | Advanced | 70 |
| Problem Sensitivity | Very Important | 88 | Advanced | 70 |
| Flexibility of Closure | Important | 69 | Advanced | 66 |
| Written Comprehension | Very Important | 78 | Advanced | 66 |
| Category Flexibility | Important | 69 | Advanced | 63 |
| Information Ordering | Important | 72 | Advanced | 61 |
| Finger Dexterity | Important | 66 | Advanced | 61 |
| Deductive Reasoning | Very Important | 75 | Advanced | 61 |
| Written Expression | Important | 63 | Advanced | 59 |
| Arm-Hand Steadiness | Important | 63 | Advanced | 59 |
| Fluency of Ideas | Important | 56 | Advanced | 54 |
| Perceptual Speed | Important | 66 | Advanced | 52 |
| Visual Color Discrimination | Important | 66 | Advanced | 52 |
| Visualization | Important | 50 | Advanced | 50 |
| Selective Attention | Important | 63 | Advanced | 50 |
| Mathematical Reasoning | Important | 53 | Intermediate | 48 |
| Originality | Important | 50 | Intermediate | 48 |
| Memorization | Important | 56 | Intermediate | 48 |
| Control Precision | Important | 50 | Intermediate | 46 |
| Number Facility | Important | 53 | Intermediate | 46 |
| Speech Clarity | Important | 63 | Intermediate | 46 |
| Speed of Closure | Important | 53 | Intermediate | 46 |
| Far Vision | Important | 50 | Intermediate | 45 |
| Manual Dexterity | Somewhat Important | 47 | Intermediate | 41 |
| Speech Recognition | Important | 60 | Intermediate | 41 |
| Time Sharing | Somewhat Important | 41 | Intermediate | 39 |
| Hearing Sensitivity | Somewhat Important | 47 | Intermediate | 38 |
| Depth Perception | Somewhat Important | 47 | Intermediate | 38 |
| Reaction Time | Somewhat Important | 35 | Intermediate | 36 |
| Wrist-Finger Speed | Somewhat Important | 38 | Intermediate | 36 |
| Multilimb Coordination | Somewhat Important | 41 | Intermediate | 36 |
| Trunk Strength | Somewhat Important | 41 | Intermediate | 34 |
| Auditory Attention | Somewhat Important | 38 | Intermediate | 32 |
| Static Strength | Somewhat Important | 35 | Intermediate | 32 |
| Rate Control | Somewhat Important | 41 | Intermediate | 32 |
| Speed of Limb Movement | Somewhat Important | 31 | Intermediate | 27 |
| Response Orientation | Somewhat Important | 31 | Intermediate | 25 |
| Dynamic Strength | Not Important | 22 | Intermediate | 25 |
| Stamina | Somewhat Important | 38 | Basic | 23 |
| Extent Flexibility | Somewhat Important | 25 | Basic | 23 |
| Gross Body Coordination | Somewhat Important | 25 | Basic | 21 |
| Gross Body Equilibrium | Not Important | 19 | Basic | 16 |
| Night Vision | Not Important | 6 | Basic | 7 |
| Glare Sensitivity | Not Important | 6 | Basic | 5 |
| Peripheral Vision | Not Important | 6 | Basic | 4 |
| Spatial Orientation | Not Important | 3 | Basic | 2 |
| Sound Localization | Not Important | 3 | Basic | 2 |
| Dynamic Flexibility | Not Important | 3 | Basic | 2 |
| Explosive Strength | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Clerical | Important | 56 | Advanced | 51 |
| Medicine and Dentistry | Important | 55 | Intermediate | 43 |
| Customer and Personal Service | Important | 61 | Intermediate | 43 |
| Education and Training | Somewhat Important | 46 | Intermediate | 42 |
| Therapy and Counseling | Somewhat Important | 44 | Intermediate | 39 |
| Biology | Somewhat Important | 36 | Intermediate | 36 |
| Mathematics | Somewhat Important | 30 | Intermediate | 36 |
| Chemistry | Somewhat Important | 31 | Intermediate | 35 |
| Computers and Electronics | Somewhat Important | 31 | Intermediate | 30 |
| Public Safety and Security | Somewhat Important | 40 | Intermediate | 30 |
| English Language | Somewhat Important | 28 | Intermediate | 26 |
| Administration and Management | Somewhat Important | 34 | Intermediate | 25 |
| Sales and Marketing | Not Important | 24 | Basic | 23 |
| Psychology | Not Important | 19 | Basic | 23 |
| Personnel and Human Resources | Somewhat Important | 30 | Basic | 22 |
| Production and Processing | Not Important | 18 | Basic | 21 |
| Economics and Accounting | Not Important | 22 | Basic | 20 |
| Philosophy and Theology | Not Important | 9 | Basic | 20 |
| Sociology and Anthropology | Not Important | 13 | Basic | 15 |
| Engineering and Technology | Not Important | 12 | Basic | 14 |
| Physics | Not Important | 11 | Basic | 13 |
| Mechanical | Not Important | 11 | Basic | 13 |
| Communications and Media | Not Important | 9 | Basic | 11 |
| Foreign Language | Not Important | 8 | Basic | 9 |
| Law and Government | Not Important | 7 | Basic | 8 |
| Telecommunications | Not Important | 9 | Basic | 5 |
| Transportation | Not Important | 2 | Basic | 2 |
| Geography | Not Important | 1 | Basic | 1 |
| Design | Not Important | 1 | Basic | 1 |
| Building and Construction | Not Important | 1 | Basic | 1 |
| History and Archeology | Not Important | 0 | Basic | 0 |
| Food Production | Not Important | 0 | Basic | 0 |
| Fine Arts | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Monitoring | Important | 69 | Advanced | 71 |
| Active Listening | Very Important | 75 | Advanced | 70 |
| Reading Comprehension | Very Important | 82 | Advanced | 70 |
| Instructing | Important | 70 | Advanced | 68 |
| Active Learning | Important | 67 | Advanced | 68 |
| Equipment Maintenance | Important | 70 | Advanced | 67 |
| Science | Important | 71 | Advanced | 65 |
| Writing | Important | 67 | Advanced | 64 |
| Time Management | Important | 70 | Advanced | 64 |
| Troubleshooting | Important | 67 | Advanced | 63 |
| Judgment and Decision Making | Important | 69 | Advanced | 63 |
| Critical Thinking | Important | 67 | Advanced | 62 |
| Speaking | Important | 73 | Advanced | 61 |
| Learning Strategies | Important | 60 | Advanced | 58 |
| Social Perceptiveness | Important | 56 | Advanced | 58 |
| Equipment Selection | Important | 54 | Advanced | 58 |
| Coordination | Important | 64 | Advanced | 57 |
| Quality Control Analysis | Important | 66 | Advanced | 57 |
| Service Orientation | Important | 58 | Advanced | 57 |
| Operation and Control | Important | 56 | Advanced | 54 |
| Mathematics | Important | 59 | Advanced | 54 |
| Operation Monitoring | Important | 64 | Advanced | 53 |
| Complex Problem Solving | Important | 53 | Intermediate | 49 |
| Negotiation | Somewhat Important | 48 | Intermediate | 47 |
| Persuasion | Somewhat Important | 40 | Intermediate | 43 |
| Installation | Somewhat Important | 43 | Intermediate | 43 |
| Systems Evaluation | Somewhat Important | 34 | Intermediate | 41 |
| Systems Analysis | Somewhat Important | 36 | Intermediate | 40 |
| Management of Material Resources | Somewhat Important | 42 | Intermediate | 39 |
| Repairing | Somewhat Important | 40 | Intermediate | 37 |
| Management of Personnel Resources | Somewhat Important | 34 | Intermediate | 34 |
| Operations Analysis | Somewhat Important | 34 | Intermediate | 34 |
| Technology Design | Somewhat Important | 31 | Intermediate | 32 |
| Programming | Not Important | 21 | Basic | 19 |
| Management of Financial Resources | Somewhat Important | 28 | Basic | 16 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Near Vision | Very Important | 85 | Expert | 79 |
| Inductive Reasoning | Very Important | 78 | Advanced | 71 |
| Written Comprehension | Important | 72 | Advanced | 68 |
| Oral Expression | Important | 69 | Advanced | 64 |
| Finger Dexterity | Important | 69 | Advanced | 64 |
| Problem Sensitivity | Very Important | 75 | Advanced | 64 |
| Oral Comprehension | Very Important | 75 | Advanced | 64 |
| Flexibility of Closure | Important | 69 | Advanced | 63 |
| Visual Color Discrimination | Important | 72 | Advanced | 63 |
| Written Expression | Important | 60 | Advanced | 61 |
| Arm-Hand Steadiness | Important | 72 | Advanced | 61 |
| Information Ordering | Important | 72 | Advanced | 59 |
| Deductive Reasoning | Very Important | 78 | Advanced | 57 |
| Category Flexibility | Important | 60 | Advanced | 55 |
| Control Precision | Important | 60 | Advanced | 55 |
| Far Vision | Important | 53 | Advanced | 54 |
| Fluency of Ideas | Important | 50 | Advanced | 50 |
| Speech Clarity | Important | 66 | Intermediate | 48 |
| Speech Recognition | Important | 56 | Intermediate | 46 |
| Selective Attention | Important | 56 | Intermediate | 46 |
| Memorization | Important | 50 | Intermediate | 46 |
| Perceptual Speed | Important | 60 | Intermediate | 45 |
| Mathematical Reasoning | Important | 56 | Intermediate | 45 |
| Number Facility | Important | 50 | Intermediate | 45 |
| Reaction Time | Somewhat Important | 38 | Intermediate | 43 |
| Manual Dexterity | Somewhat Important | 44 | Intermediate | 43 |
| Originality | Somewhat Important | 44 | Intermediate | 41 |
| Speed of Closure | Somewhat Important | 47 | Intermediate | 41 |
| Visualization | Somewhat Important | 47 | Intermediate | 39 |
| Depth Perception | Somewhat Important | 47 | Intermediate | 39 |
| Trunk Strength | Somewhat Important | 41 | Intermediate | 38 |
| Rate Control | Somewhat Important | 44 | Intermediate | 38 |
| Wrist-Finger Speed | Somewhat Important | 28 | Intermediate | 32 |
| Hearing Sensitivity | Somewhat Important | 38 | Intermediate | 30 |
| Multilimb Coordination | Somewhat Important | 38 | Intermediate | 30 |
| Time Sharing | Somewhat Important | 38 | Intermediate | 30 |
| Auditory Attention | Somewhat Important | 38 | Intermediate | 29 |
| Static Strength | Somewhat Important | 28 | Intermediate | 25 |
| Response Orientation | Somewhat Important | 31 | Intermediate | 25 |
| Stamina | Not Important | 22 | Basic | 20 |
| Speed of Limb Movement | Not Important | 19 | Basic | 18 |
| Gross Body Coordination | Not Important | 19 | Basic | 18 |
| Night Vision | Not Important | 3 | Basic | 7 |
| Glare Sensitivity | Not Important | 3 | Basic | 5 |
| Extent Flexibility | Not Important | 3 | Basic | 2 |
| Peripheral Vision | Not Important | 3 | Basic | 2 |
| Gross Body Equilibrium | Not Important | 3 | Basic | 2 |
| Spatial Orientation | Not Important | 0 | Basic | 0 |
| Sound Localization | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Dynamic Strength | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system. Process, maintain, compile, and report patient information for health requirements and standards.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Clerical | Very Important | 75 | Advanced | 70 |
| Customer and Personal Service | Important | 69 | Intermediate | 49 |
| English Language | Important | 61 | Intermediate | 42 |
| Computers and Electronics | Important | 59 | Intermediate | 42 |
| Administration and Management | Somewhat Important | 49 | Intermediate | 41 |
| Personnel and Human Resources | Somewhat Important | 36 | Intermediate | 33 |
| Education and Training | Somewhat Important | 32 | Intermediate | 33 |
| Mathematics | Somewhat Important | 41 | Intermediate | 29 |
| Medicine and Dentistry | Somewhat Important | 31 | Intermediate | 28 |
| Sales and Marketing | Not Important | 20 | Basic | 19 |
| Communications and Media | Not Important | 23 | Basic | 18 |
| Foreign Language | Somewhat Important | 46 | Basic | 17 |
| Public Safety and Security | Somewhat Important | 25 | Basic | 16 |
| Law and Government | Not Important | 23 | Basic | 16 |
| Philosophy and Theology | Not Important | 17 | Basic | 14 |
| Psychology | Not Important | 16 | Basic | 12 |
| Production and Processing | Not Important | 14 | Basic | 11 |
| Biology | Not Important | 12 | Basic | 11 |
| Economics and Accounting | Not Important | 14 | Basic | 11 |
| Telecommunications | Somewhat Important | 33 | Basic | 10 |
| Therapy and Counseling | Not Important | 9 | Basic | 8 |
| Transportation | Not Important | 8 | Basic | 5 |
| Sociology and Anthropology | Not Important | 5 | Basic | 5 |
| Geography | Not Important | 3 | Basic | 3 |
| Design | Not Important | 3 | Basic | 3 |
| Engineering and Technology | Not Important | 3 | Basic | 2 |
| Mechanical | Not Important | 3 | Basic | 2 |
| Chemistry | Not Important | 2 | Basic | 2 |
| Physics | Not Important | 2 | Basic | 2 |
| History and Archeology | Not Important | 2 | Basic | 1 |
| Fine Arts | Not Important | 1 | Basic | 1 |
| Building and Construction | Not Important | 1 | Basic | 1 |
| Food Production | Not Important | 1 | Basic | 0 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Reading Comprehension | Very Important | 83 | Advanced | 65 |
| Active Listening | Very Important | 91 | Advanced | 65 |
| Critical Thinking | Important | 65 | Advanced | 62 |
| Instructing | Important | 67 | Advanced | 59 |
| Learning Strategies | Important | 63 | Advanced | 58 |
| Active Learning | Important | 67 | Advanced | 57 |
| Time Management | Very Important | 75 | Advanced | 56 |
| Monitoring | Important | 56 | Advanced | 56 |
| Speaking | Important | 71 | Advanced | 55 |
| Writing | Important | 70 | Advanced | 52 |
| Social Perceptiveness | Important | 65 | Advanced | 50 |
| Systems Evaluation | Important | 53 | Advanced | 50 |
| Service Orientation | Important | 62 | Advanced | 50 |
| Judgment and Decision Making | Important | 63 | Advanced | 50 |
| Coordination | Important | 50 | Intermediate | 48 |
| Persuasion | Somewhat Important | 40 | Intermediate | 41 |
| Equipment Selection | Somewhat Important | 44 | Intermediate | 41 |
| Negotiation | Somewhat Important | 45 | Intermediate | 41 |
| Management of Personnel Resources | Somewhat Important | 42 | Intermediate | 38 |
| Operations Analysis | Somewhat Important | 39 | Intermediate | 37 |
| Complex Problem Solving | Important | 51 | Intermediate | 37 |
| Operation and Control | Somewhat Important | 44 | Intermediate | 35 |
| Systems Analysis | Somewhat Important | 40 | Intermediate | 35 |
| Management of Material Resources | Somewhat Important | 38 | Intermediate | 34 |
| Troubleshooting | Somewhat Important | 41 | Intermediate | 33 |
| Quality Control Analysis | Important | 51 | Intermediate | 33 |
| Mathematics | Somewhat Important | 37 | Intermediate | 30 |
| Science | Somewhat Important | 26 | Basic | 23 |
| Management of Financial Resources | Somewhat Important | 30 | Basic | 23 |
| Operation Monitoring | Somewhat Important | 26 | Basic | 22 |
| Equipment Maintenance | Not Important | 24 | Basic | 20 |
| Technology Design | Not Important | 12 | Basic | 16 |
| Installation | Not Important | 12 | Basic | 15 |
| Programming | Not Important | 13 | Basic | 11 |
| Repairing | Not Important | 7 | Basic | 6 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Near Vision | Important | 69 | Advanced | 61 |
| Oral Comprehension | Very Important | 81 | Advanced | 57 |
| Oral Expression | Very Important | 75 | Advanced | 55 |
| Information Ordering | Very Important | 75 | Advanced | 55 |
| Written Comprehension | Very Important | 78 | Advanced | 55 |
| Category Flexibility | Important | 66 | Advanced | 54 |
| Written Expression | Important | 63 | Advanced | 52 |
| Deductive Reasoning | Important | 60 | Advanced | 50 |
| Speech Recognition | Important | 66 | Intermediate | 48 |
| Problem Sensitivity | Important | 60 | Intermediate | 48 |
| Inductive Reasoning | Important | 53 | Intermediate | 48 |
| Perceptual Speed | Somewhat Important | 44 | Intermediate | 43 |
| Selective Attention | Important | 60 | Intermediate | 41 |
| Speech Clarity | Important | 69 | Intermediate | 41 |
| Originality | Somewhat Important | 41 | Intermediate | 39 |
| Memorization | Somewhat Important | 38 | Intermediate | 38 |
| Speed of Closure | Somewhat Important | 31 | Intermediate | 38 |
| Finger Dexterity | Somewhat Important | 47 | Intermediate | 34 |
| Number Facility | Somewhat Important | 31 | Intermediate | 34 |
| Flexibility of Closure | Somewhat Important | 41 | Intermediate | 32 |
| Time Sharing | Somewhat Important | 35 | Intermediate | 32 |
| Manual Dexterity | Somewhat Important | 41 | Intermediate | 30 |
| Wrist-Finger Speed | Somewhat Important | 25 | Intermediate | 30 |
| Auditory Attention | Somewhat Important | 35 | Intermediate | 29 |
| Fluency of Ideas | Somewhat Important | 28 | Intermediate | 29 |
| Mathematical Reasoning | Somewhat Important | 31 | Intermediate | 29 |
| Visualization | Somewhat Important | 25 | Intermediate | 29 |
| Trunk Strength | Somewhat Important | 31 | Intermediate | 25 |
| Far Vision | Somewhat Important | 25 | Intermediate | 25 |
| Arm-Hand Steadiness | Somewhat Important | 31 | Intermediate | 25 |
| Static Strength | Somewhat Important | 35 | Basic | 23 |
| Extent Flexibility | Not Important | 19 | Basic | 21 |
| Multilimb Coordination | Somewhat Important | 28 | Basic | 21 |
| Visual Color Discrimination | Somewhat Important | 25 | Basic | 18 |
| Control Precision | Not Important | 16 | Basic | 18 |
| Hearing Sensitivity | Not Important | 16 | Basic | 16 |
| Gross Body Coordination | Not Important | 22 | Basic | 16 |
| Dynamic Strength | Not Important | 16 | Basic | 11 |
| Stamina | Not Important | 13 | Basic | 9 |
| Gross Body Equilibrium | Not Important | 13 | Basic | 9 |
| Reaction Time | Not Important | 3 | Basic | 5 |
| Sound Localization | Not Important | 3 | Basic | 2 |
| Spatial Orientation | Not Important | 0 | Basic | 0 |
| Speed of Limb Movement | Not Important | 0 | Basic | 0 |
| Night Vision | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Peripheral Vision | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Depth Perception | Not Important | 0 | Basic | 0 |
| Response Orientation | Not Important | 0 | Basic | 0 |
| Glare Sensitivity | Not Important | 0 | Basic | 0 |
| Rate Control | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

## Occupational Skills Analysis
### 31-9092.00 - Medical Assistants

Perform administrative and certain clinical duties under the direction of physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Customer and Personal Service | Important | 69 | Advanced | 67 |
| English Language | Very Important | 75 | Advanced | 58 |
| Clerical | Important | 56 | Advanced | 56 |
| Medicine and Dentistry | Important | 64 | Advanced | 54 |
| Psychology | Somewhat Important | 37 | Intermediate | 49 |
| Therapy and Counseling | Somewhat Important | 47 | Intermediate | 43 |
| Education and Training | Somewhat Important | 41 | Intermediate | 41 |
| Mathematics | Somewhat Important | 43 | Intermediate | 38 |
| Administration and Management | Somewhat Important | 40 | Intermediate | 34 |
| Chemistry | Somewhat Important | 34 | Intermediate | 32 |
| Biology | Somewhat Important | 29 | Intermediate | 31 |
| Computers and Electronics | Somewhat Important | 31 | Intermediate | 29 |
| Public Safety and Security | Somewhat Important | 38 | Intermediate | 26 |
| Sales and Marketing | Somewhat Important | 27 | Basic | 22 |
| Economics and Accounting | Not Important | 21 | Basic | 19 |
| Personnel and Human Resources | Somewhat Important | 27 | Basic | 19 |
| Law and Government | Not Important | 22 | Basic | 19 |
| Telecommunications | Somewhat Important | 34 | Basic | 16 |
| Physics | Not Important | 16 | Basic | 16 |
| Foreign Language | Not Important | 20 | Basic | 15 |
| Transportation | Not Important | 21 | Basic | 15 |
| Geography | Not Important | 10 | Basic | 14 |
| Communications and Media | Not Important | 14 | Basic | 13 |
| Philosophy and Theology | Not Important | 9 | Basic | 12 |
| Production and Processing | Not Important | 12 | Basic | 11 |
| Sociology and Anthropology | Not Important | 11 | Basic | 11 |
| Mechanical | Not Important | 8 | Basic | 9 |
| Engineering and Technology | Not Important | 11 | Basic | 6 |
| Design | Not Important | 4 | Basic | 4 |
| Fine Arts | Not Important | 1 | Basic | 3 |
| History and Archeology | Not Important | 0 | Basic | 0 |
| Food Production | Not Important | 0 | Basic | 0 |
| Building and Construction | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Active Listening | Very Important | 87 | Advanced | 73 |
| Social Perceptiveness | Very Important | 78 | Advanced | 71 |
| Instructing | Very Important | 78 | Advanced | 69 |
| Reading Comprehension | Very Important | 75 | Advanced | 68 |
| Service Orientation | Important | 72 | Advanced | 67 |
| Learning Strategies | Important | 67 | Advanced | 64 |
| Speaking | Very Important | 79 | Advanced | 62 |
| Active Learning | Important | 72 | Advanced | 62 |
| Coordination | Important | 64 | Advanced | 59 |
| Mathematics | Important | 59 | Advanced | 58 |
| Writing | Important | 65 | Advanced | 58 |
| Time Management | Important | 69 | Advanced | 57 |
| Monitoring | Important | 64 | Advanced | 55 |
| Critical Thinking | Important | 64 | Advanced | 55 |
| Operation and Control | Important | 54 | Advanced | 51 |
| Troubleshooting | Important | 60 | Intermediate | 49 |
| Persuasion | Somewhat Important | 41 | Intermediate | 49 |
| Judgment and Decision Making | Important | 54 | Intermediate | 48 |
| Operation Monitoring | Important | 56 | Intermediate | 47 |
| Negotiation | Somewhat Important | 45 | Intermediate | 46 |
| Complex Problem Solving | Somewhat Important | 48 | Intermediate | 45 |
| Science | Important | 50 | Intermediate | 42 |
| Equipment Selection | Somewhat Important | 45 | Intermediate | 41 |
| Systems Analysis | Somewhat Important | 31 | Intermediate | 34 |
| Equipment Maintenance | Somewhat Important | 36 | Intermediate | 33 |
| Quality Control Analysis | Somewhat Important | 37 | Intermediate | 33 |
| Systems Evaluation | Somewhat Important | 31 | Intermediate | 33 |
| Operations Analysis | Somewhat Important | 26 | Intermediate | 32 |
| Technology Design | Somewhat Important | 30 | Intermediate | 28 |
| Management of Financial Resources | Not Important | 20 | Intermediate | 26 |
| Management of Personnel Resources | Not Important | 24 | Intermediate | 25 |
| Management of Material Resources | Somewhat Important | 25 | Basic | 24 |
| Installation | Not Important | 22 | Basic | 20 |
| Repairing | Not Important | 20 | Basic | 18 |
| Programming | Not Important | 12 | Basic | 7 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Oral Comprehension | Very Important | 88 | Advanced | 64 |
| Oral Expression | Very Important | 85 | Advanced | 61 |
| Written Comprehension | Important | 66 | Advanced | 59 |
| Near Vision | Important | 72 | Advanced | 54 |
| Arm-Hand Steadiness | Important | 60 | Advanced | 52 |
| Information Ordering | Important | 69 | Advanced | 50 |
| Deductive Reasoning | Important | 63 | Advanced | 50 |
| Written Expression | Important | 66 | Intermediate | 48 |
| Problem Sensitivity | Important | 69 | Intermediate | 48 |
| Speech Recognition | Important | 69 | Intermediate | 46 |
| Speech Clarity | Very Important | 78 | Intermediate | 45 |
| Inductive Reasoning | Somewhat Important | 47 | Intermediate | 45 |
| Selective Attention | Important | 50 | Intermediate | 41 |
| Category Flexibility | Somewhat Important | 41 | Intermediate | 39 |
| Finger Dexterity | Somewhat Important | 38 | Intermediate | 38 |
| Time Sharing | Important | 53 | Intermediate | 38 |
| Trunk Strength | Important | 50 | Intermediate | 36 |
| Multilimb Coordination | Somewhat Important | 41 | Intermediate | 36 |
| Memorization | Somewhat Important | 41 | Intermediate | 36 |
| Manual Dexterity | Somewhat Important | 41 | Intermediate | 34 |
| Control Precision | Somewhat Important | 38 | Intermediate | 34 |
| Originality | Somewhat Important | 31 | Intermediate | 30 |
| Auditory Attention | Somewhat Important | 28 | Intermediate | 29 |
| Perceptual Speed | Somewhat Important | 28 | Intermediate | 25 |
| Visual Color Discrimination | Somewhat Important | 28 | Intermediate | 25 |
| Visualization | Somewhat Important | 25 | Intermediate | 25 |
| Gross Body Coordination | Somewhat Important | 31 | Intermediate | 25 |
| Speed of Closure | Somewhat Important | 25 | Intermediate | 25 |
| Extent Flexibility | Somewhat Important | 31 | Basic | 23 |
| Far Vision | Not Important | 22 | Basic | 21 |
| Fluency of Ideas | Not Important | 22 | Basic | 21 |
| Static Strength | Somewhat Important | 28 | Basic | 21 |
| Depth Perception | Somewhat Important | 28 | Basic | 21 |
| Flexibility of Closure | Not Important | 22 | Basic | 20 |
| Stamina | Somewhat Important | 28 | Basic | 20 |
| Mathematical Reasoning | Not Important | 19 | Basic | 18 |
| Hearing Sensitivity | Not Important | 13 | Basic | 14 |
| Number Facility | Not Important | 16 | Basic | 14 |
| Speed of Limb Movement | Not Important | 16 | Basic | 13 |
| Spatial Orientation | Not Important | 16 | Basic | 7 |
| Dynamic Strength | Not Important | 9 | Basic | 7 |
| Response Orientation | Not Important | 6 | Basic | 5 |
| Reaction Time | Not Important | 6 | Basic | 4 |
| Wrist-Finger Speed | Not Important | 3 | Basic | 4 |
| Gross Body Equilibrium | Not Important | 3 | Basic | 2 |
| Sound Localization | Not Important | 0 | Basic | 0 |
| Night Vision | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Peripheral Vision | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Glare Sensitivity | Not Important | 0 | Basic | 0 |
| Rate Control | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

Prepare, sterilize, install, or clean laboratory or healthcare equipment. May perform routine laboratory tasks and operate or inspect equipment.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Customer and Personal Service | Important | 64 | Advanced | 56 |
| Education and Training | Important | 56 | Advanced | 53 |
| English Language | Important | 70 | Advanced | 51 |
| Chemistry | Somewhat Important | 46 | Intermediate | 48 |
| Administration and Management | Important | 58 | Intermediate | 44 |
| Production and Processing | Important | 56 | Intermediate | 43 |
| Biology | Somewhat Important | 37 | Intermediate | 38 |
| Mathematics | Somewhat Important | 39 | Intermediate | 36 |
| Public Safety and Security | Somewhat Important | 42 | Intermediate | 34 |
| Computers and Electronics | Somewhat Important | 34 | Intermediate | 33 |
| Medicine and Dentistry | Somewhat Important | 40 | Intermediate | 32 |
| Clerical | Somewhat Important | 38 | Intermediate | 31 |
| Mechanical | Somewhat Important | 35 | Intermediate | 31 |
| Communications and Media | Somewhat Important | 38 | Intermediate | 31 |
| Psychology | Somewhat Important | 25 | Intermediate | 27 |
| Engineering and Technology | Not Important | 24 | Basic | 23 |
| Physics | Not Important | 22 | Basic | 21 |
| Personnel and Human Resources | Somewhat Important | 33 | Basic | 21 |
| Law and Government | Not Important | 24 | Basic | 20 |
| Transportation | Somewhat Important | 25 | Basic | 18 |
| Economics and Accounting | Not Important | 21 | Basic | 17 |
| Philosophy and Theology | Not Important | 15 | Basic | 16 |
| Design | Not Important | 16 | Basic | 15 |
| Telecommunications | Somewhat Important | 26 | Basic | 15 |
| Sociology and Anthropology | Not Important | 14 | Basic | 14 |
| Therapy and Counseling | Not Important | 11 | Basic | 13 |
| Foreign Language | Not Important | 15 | Basic | 11 |
| Sales and Marketing | Not Important | 11 | Basic | 10 |
| History and Archeology | Not Important | 12 | Basic | 10 |
| Building and Construction | Not Important | 8 | Basic | 8 |
| Food Production | Not Important | 8 | Basic | 8 |
| Fine Arts | Not Important | 7 | Basic | 7 |
| Geography | Not Important | 5 | Basic | 5 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Operation Monitoring | Very Important | 77 | Advanced | 68 |
| Active Learning | Important | 69 | Advanced | 64 |
| Monitoring | Important | 65 | Advanced | 64 |
| Learning Strategies | Important | 68 | Advanced | 63 |
| Instructing | Important | 74 | Advanced | 61 |
| Service Orientation | Important | 63 | Advanced | 58 |
| Reading Comprehension | Important | 74 | Advanced | 58 |
| Critical Thinking | Important | 62 | Advanced | 54 |
| Coordination | Important | 58 | Advanced | 54 |
| Social Perceptiveness | Important | 55 | Advanced | 53 |
| Equipment Selection | Important | 59 | Advanced | 53 |
| Quality Control Analysis | Important | 63 | Advanced | 53 |
| Equipment Maintenance | Important | 56 | Advanced | 52 |
| Active Listening | Very Important | 76 | Advanced | 50 |
| Management of Material Resources | Important | 54 | Advanced | 50 |
| Time Management | Important | 56 | Advanced | 50 |
| Complex Problem Solving | Important | 60 | Intermediate | 49 |
| Operation and Control | Important | 62 | Intermediate | 48 |
| Speaking | Important | 70 | Intermediate | 46 |
| Management of Personnel Resources | Important | 52 | Intermediate | 46 |
| Writing | Important | 59 | Intermediate | 46 |
| Judgment and Decision Making | Important | 51 | Intermediate | 46 |
| Troubleshooting | Important | 51 | Intermediate | 44 |
| Systems Evaluation | Somewhat Important | 40 | Intermediate | 42 |
| Operations Analysis | Somewhat Important | 40 | Intermediate | 42 |
| Management of Financial Resources | Somewhat Important | 41 | Intermediate | 39 |
| Science | Somewhat Important | 40 | Intermediate | 38 |
| Persuasion | Somewhat Important | 32 | Intermediate | 36 |
| Systems Analysis | Somewhat Important | 40 | Intermediate | 36 |
| Repairing | Somewhat Important | 34 | Intermediate | 36 |
| Mathematics | Somewhat Important | 41 | Intermediate | 34 |
| Installation | Somewhat Important | 29 | Intermediate | 31 |
| Technology Design | Somewhat Important | 36 | Intermediate | 30 |
| Negotiation | Somewhat Important | 33 | Intermediate | 29 |
| Programming | Not Important | 13 | Basic | 12 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Oral Comprehension | Important | 63 | Advanced | 54 |
| Oral Expression | Somewhat Important | 47 | Advanced | 50 |
| Information Ordering | Important | 56 | Intermediate | 46 |
| Deductive Reasoning | Somewhat Important | 47 | Intermediate | 46 |
| Written Comprehension | Somewhat Important | 41 | Intermediate | 46 |
| Near Vision | Important | 63 | Intermediate | 46 |
| Problem Sensitivity | Important | 69 | Intermediate | 45 |
| Inductive Reasoning | Somewhat Important | 47 | Intermediate | 43 |
| Trunk Strength | Somewhat Important | 38 | Intermediate | 39 |
| Written Expression | Important | 50 | Intermediate | 39 |
| Visualization | Somewhat Important | 31 | Intermediate | 39 |
| Manual Dexterity | Somewhat Important | 44 | Intermediate | 38 |
| Perceptual Speed | Somewhat Important | 35 | Intermediate | 38 |
| Finger Dexterity | Somewhat Important | 35 | Intermediate | 38 |
| Speech Recognition | Somewhat Important | 44 | Intermediate | 38 |
| Speech Clarity | Somewhat Important | 41 | Intermediate | 38 |
| Category Flexibility | Somewhat Important | 41 | Intermediate | 36 |
| Selective Attention | Somewhat Important | 38 | Intermediate | 36 |
| Arm-Hand Steadiness | Somewhat Important | 41 | Intermediate | 36 |
| Extent Flexibility | Somewhat Important | 28 | Intermediate | 34 |
| Control Precision | Somewhat Important | 35 | Intermediate | 34 |
| Static Strength | Somewhat Important | 35 | Intermediate | 32 |
| Flexibility of Closure | Somewhat Important | 35 | Intermediate | 30 |
| Rate Control | Somewhat Important | 28 | Intermediate | 25 |
| Far Vision | Not Important | 19 | Basic | 23 |
| Auditory Attention | Somewhat Important | 25 | Basic | 23 |
| Multilimb Coordination | Not Important | 22 | Basic | 23 |
| Stamina | Not Important | 19 | Basic | 20 |
| Fluency of Ideas | Not Important | 16 | Basic | 20 |
| Originality | Not Important | 16 | Basic | 20 |
| Memorization | Not Important | 16 | Basic | 20 |
| Hearing Sensitivity | Not Important | 16 | Basic | 18 |
| Reaction Time | Not Important | 16 | Basic | 18 |
| Number Facility | Not Important | 19 | Basic | 18 |
| Gross Body Coordination | Not Important | 19 | Basic | 18 |
| Depth Perception | Not Important | 16 | Basic | 16 |
| Dynamic Strength | Not Important | 13 | Basic | 16 |
| Time Sharing | Not Important | 13 | Basic | 14 |
| Speed of Closure | Not Important | 13 | Basic | 14 |
| Wrist-Finger Speed | Not Important | 13 | Basic | 13 |
| Visual Color Discrimination | Not Important | 16 | Basic | 13 |
| Mathematical Reasoning | Not Important | 19 | Basic | 13 |
| Response Orientation | Not Important | 9 | Basic | 9 |
| Speed of Limb Movement | Not Important | 9 | Basic | 7 |
| Gross Body Equilibrium | Not Important | 6 | Basic | 7 |
| Spatial Orientation | Not Important | 0 | Basic | 0 |
| Sound Localization | Not Important | 0 | Basic | 0 |
| Night Vision | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Peripheral Vision | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Glare Sensitivity | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

## Occupational Skills Analysis
## 31-9094.00 - Medical Transcriptionists

Use transcribing machines with headset and foot pedal to listen to recordings by physicians and other healthcare professionals dictating a variety of medical reports, such as emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries. Transcribe dictated reports and translate medical jargon and abbreviations into their expanded forms. Edit as necessary and return reports in either printed or electronic form to the dictator for review and signature, or correction.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Clerical | Very Important | 85 | Advanced | 74 |
| English Language | Very Important | 94 | Advanced | 71 |
| Computers and Electronics | Important | 60 | Advanced | 53 |
| Administration and Management | Somewhat Important | 35 | Intermediate | 36 |
| Medicine and Dentistry | Somewhat Important | 48 | Intermediate | 36 |
| Customer and Personal Service | Somewhat Important | 32 | Intermediate | 34 |
| Education and Training | Not Important | 20 | Basic | 21 |
| Personnel and Human Resources | Not Important | 21 | Basic | 20 |
| Law and Government | Not Important | 17 | Basic | 19 |
| Telecommunications | Not Important | 23 | Basic | 16 |
| Therapy and Counseling | Not Important | 14 | Basic | 15 |
| Psychology | Not Important | 14 | Basic | 14 |
| Public Safety and Security | Not Important | 17 | Basic | 14 |
| Communications and Media | Not Important | 12 | Basic | 13 |
| Mathematics | Not Important | 12 | Basic | 11 |
| Biology | Not Important | 6 | Basic | 8 |
| Sociology and Anthropology | Not Important | 8 | Basic | 8 |
| Foreign Language | Not Important | 5 | Basic | 5 |
| Geography | Not Important | 4 | Basic | 4 |
| Philosophy and Theology | Not Important | 3 | Basic | 4 |
| Production and Processing | Not Important | 4 | Basic | 3 |
| History and Archeology | Not Important | 3 | Basic | 3 |
| Design | Not Important | 2 | Basic | 2 |
| Engineering and Technology | Not Important | 1 | Basic | 2 |
| Mechanical | Not Important | 3 | Basic | 2 |
| Economics and Accounting | Not Important | 3 | Basic | 2 |
| Chemistry | Not Important | 1 | Basic | 2 |
| Building and Construction | Not Important | 1 | Basic | 1 |
| Transportation | Not Important | 1 | Basic | 0 |
| Physics | Not Important | 0 | Basic | 0 |
| Sales and Marketing | Not Important | 0 | Basic | 0 |
| Food Production | Not Important | 0 | Basic | 0 |
| Fine Arts | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Active Listening | Very Important | 92 | Expert | 81 |
| Reading Comprehension | Very Important | 86 | Advanced | 74 |
| Time Management | Important | 68 | Advanced | 57 |
| Writing | Important | 66 | Advanced | 55 |
| Learning Strategies | Important | 57 | Advanced | 55 |
| Critical Thinking | Important | 56 | Advanced | 54 |
| Active Learning | Important | 63 | Advanced | 54 |
| Monitoring | Important | 56 | Intermediate | 46 |
| Judgment and Decision Making | Somewhat Important | 43 | Intermediate | 41 |
| Instructing | Somewhat Important | 34 | Intermediate | 38 |
| Coordination | Somewhat Important | 42 | Intermediate | 38 |
| Equipment Selection | Somewhat Important | 41 | Intermediate | 34 |
| Complex Problem Solving | Somewhat Important | 34 | Intermediate | 31 |
| Quality Control Analysis | Somewhat Important | 37 | Intermediate | 30 |
| Troubleshooting | Somewhat Important | 29 | Intermediate | 28 |
| Speaking | Somewhat Important | 30 | Intermediate | 27 |
| Social Perceptiveness | Not Important | 24 | Intermediate | 26 |
| Operation and Control | Not Important | 24 | Basic | 23 |
| Mathematics | Not Important | 24 | Basic | 23 |
| Equipment Maintenance | Not Important | 24 | Basic | 19 |
| Service Orientation | Not Important | 22 | Basic | 18 |
| Technology Design | Not Important | 15 | Basic | 17 |
| Operations Analysis | Not Important | 13 | Basic | 16 |
| Persuasion | Not Important | 15 | Basic | 16 |
| Negotiation | Not Important | 15 | Basic | 16 |
| Operation Monitoring | Not Important | 15 | Basic | 13 |
| Installation | Not Important | 13 | Basic | 12 |
| Systems Analysis | Not Important | 11 | Basic | 11 |
| Management of Material Resources | Not Important | 13 | Basic | 11 |
| Science | Not Important | 20 | Basic | 10 |
| Systems Evaluation | Not Important | 9 | Basic | 10 |
| Management of Financial Resources | Not Important | 8 | Basic | 9 |
| Management of Personnel Resources | Not Important | 9 | Basic | 9 |
| Repairing | Not Important | 8 | Basic | 8 |
| Programming | Not Important | 7 | Basic | 7 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Oral Comprehension | Very Important | 81 | Advanced | 61 |
| Written Expression | Important | 69 | Advanced | 57 |
| Oral Expression | Important | 66 | Advanced | 55 |
| Speech Recognition | Important | 66 | Advanced | 55 |
| Written Comprehension | Important | 72 | Advanced | 55 |
| Near Vision | Important | 66 | Advanced | 52 |
| Deductive Reasoning | Important | 60 | Intermediate | 46 |
| Selective Attention | Important | 56 | Intermediate | 45 |
| Inductive Reasoning | Important | 56 | Intermediate | 45 |
| Finger Dexterity | Important | 66 | Intermediate | 43 |
| Flexibility of Closure | Important | 50 | Intermediate | 41 |
| Information Ordering | Important | 50 | Intermediate | 41 |
| Perceptual Speed | Important | 50 | Intermediate | 41 |
| Category Flexibility | Somewhat Important | 47 | Intermediate | 41 |
| Problem Sensitivity | Important | 50 | Intermediate | 39 |
| Speech Clarity | Important | 50 | Intermediate | 39 |
| Far Vision | Somewhat Important | 31 | Intermediate | 30 |
| Manual Dexterity | Somewhat Important | 38 | Intermediate | 30 |
| Auditory Attention | Somewhat Important | 35 | Intermediate | 29 |
| Control Precision | Somewhat Important | 35 | Intermediate | 29 |
| Memorization | Somewhat Important | 38 | Intermediate | 29 |
| Arm-Hand Steadiness | Somewhat Important | 35 | Intermediate | 29 |
| Fluency of Ideas | Somewhat Important | 31 | Intermediate | 27 |
| Originality | Somewhat Important | 25 | Intermediate | 25 |
| Speed of Closure | Somewhat Important | 28 | Intermediate | 25 |
| Time Sharing | Somewhat Important | 28 | Basic | 23 |
| Hearing Sensitivity | Not Important | 22 | Basic | 21 |
| Mathematical Reasoning | Somewhat Important | 25 | Basic | 20 |
| Visual Color Discrimination | Not Important | 19 | Basic | 18 |
| Rate Control | Not Important | 22 | Basic | 18 |
| Reaction Time | Not Important | 19 | Basic | 14 |
| Wrist-Finger Speed | Not Important | 22 | Basic | 14 |
| Number Facility | Not Important | 16 | Basic | 13 |
| Visualization | Not Important | 13 | Basic | 11 |
| Trunk Strength | Not Important | 9 | Basic | 7 |
| Multilimb Coordination | Not Important | 6 | Basic | 5 |
| Speed of Limb Movement | Not Important | 3 | Basic | 4 |
| Static Strength | Not Important | 3 | Basic | 2 |
| Stamina | Not Important | 0 | Basic | 0 |
| Extent Flexibility | Not Important | 0 | Basic | 0 |
| Spatial Orientation | Not Important | 0 | Basic | 0 |
| Sound Localization | Not Important | 0 | Basic | 0 |
| Night Vision | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Peripheral Vision | Not Important | 0 | Basic | 0 |
| Gross Body Coordination | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Depth Perception | Not Important | 0 | Basic | 0 |
| Response Orientation | Not Important | 0 | Basic | 0 |
| Gross Body Equilibrium | Not Important | 0 | Basic | 0 |
| Dynamic Strength | Not Important | 0 | Basic | 0 |
| Glare Sensitivity | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

Supervise and coordinate the activities of clerical and administrative support workers.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Customer and Personal Service | Very Important | 79 | Advanced | 72 |
| Education and Training | Important | 62 | Advanced | 66 |
| Administration and Management | Important | 72 | Advanced | 66 |
| Clerical | Important | 61 | Advanced | 65 |
| Mathematics | Important | 63 | Advanced | 61 |
| English Language | Important | 69 | Advanced | 58 |
| Computers and Electronics | Important | 55 | Advanced | 56 |
| Personnel and Human Resources | Important | 57 | Advanced | 53 |
| Economics and Accounting | Important | 51 | Intermediate | 47 |
| Sales and Marketing | Somewhat Important | 37 | Intermediate | 43 |
| Psychology | Somewhat Important | 41 | Intermediate | 40 |
| Law and Government | Somewhat Important | 41 | Intermediate | 40 |
| Communications and Media | Somewhat Important | 42 | Intermediate | 39 |
| Public Safety and Security | Somewhat Important | 43 | Intermediate | 36 |
| Production and Processing | Somewhat Important | 32 | Intermediate | 33 |
| Sociology and Anthropology | Somewhat Important | 26 | Intermediate | 28 |
| Therapy and Counseling | Not Important | 23 | Intermediate | 27 |
| Philosophy and Theology | Not Important | 20 | Basic | 24 |
| Telecommunications | Somewhat Important | 29 | Basic | 21 |
| Transportation | Not Important | 20 | Basic | 19 |
| Geography | Not Important | 16 | Basic | 19 |
| Design | Not Important | 13 | Basic | 17 |
| Engineering and Technology | Not Important | 14 | Basic | 14 |
| Foreign Language | Not Important | 15 | Basic | 14 |
| History and Archeology | Not Important | 12 | Basic | 13 |
| Chemistry | Not Important | 9 | Basic | 10 |
| Mechanical | Not Important | 10 | Basic | 9 |
| Medicine and Dentistry | Not Important | 12 | Basic | 9 |
| Fine Arts | Not Important | 9 | Basic | 8 |
| Physics | Not Important | 5 | Basic | 6 |
| Biology | Not Important | 6 | Basic | 6 |
| Building and Construction | Not Important | 7 | Basic | 6 |
| Food Production | Not Important | 4 | Basic | 5 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Monitoring | Very Important | 76 | Advanced | 71 |
| Active Listening | Very Important | 81 | Advanced | 69 |
| Speaking | Very Important | 80 | Advanced | 69 |
| Management of Personnel Resources | Important | 74 | Advanced | 69 |
| Critical Thinking | Very Important | 77 | Advanced | 68 |
| Reading Comprehension | Very Important | 79 | Advanced | 67 |
| Judgment and Decision Making | Important | 73 | Advanced | 66 |
| Instructing | Important | 70 | Advanced | 65 |
| Learning Strategies | Important | 60 | Advanced | 64 |
| Time Management | Very Important | 76 | Advanced | 64 |
| Social Perceptiveness | Important | 70 | Advanced | 63 |
| Active Learning | Important | 69 | Advanced | 63 |
| Writing | Important | 65 | Advanced | 63 |
| Service Orientation | Important | 67 | Advanced | 63 |
| Persuasion | Important | 60 | Advanced | 61 |
| Negotiation | Important | 65 | Advanced | 60 |
| Complex Problem Solving | Important | 66 | Advanced | 60 |
| Management of Financial Resources | Important | 63 | Advanced | 60 |
| Coordination | Important | 63 | Advanced | 60 |
| Equipment Selection | Important | 54 | Advanced | 55 |
| Mathematics | Important | 61 | Advanced | 53 |
| Management of Material Resources | Somewhat Important | 47 | Advanced | 51 |
| Operations Analysis | Somewhat Important | 46 | Intermediate | 49 |
| Systems Evaluation | Somewhat Important | 47 | Intermediate | 48 |
| Systems Analysis | Somewhat Important | 48 | Intermediate | 48 |
| Quality Control Analysis | Somewhat Important | 40 | Intermediate | 40 |
| Troubleshooting | Somewhat Important | 38 | Intermediate | 36 |
| Operation and Control | Somewhat Important | 35 | Intermediate | 36 |
| Technology Design | Somewhat Important | 34 | Intermediate | 32 |
| Installation | Somewhat Important | 26 | Intermediate | 25 |
| Operation Monitoring | Somewhat Important | 26 | Intermediate | 25 |
| Equipment Maintenance | Not Important | 22 | Basic | 22 |
| Repairing | Not Important | 21 | Basic | 22 |
| Programming | Not Important | 20 | Basic | 17 |
| Science | Not Important | 16 | Basic | 16 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Oral Expression | Very Important | 98 | Advanced | 64 |
| Written Expression | Very Important | 85 | Advanced | 62 |
| Oral Comprehension | Very Important | 90 | Advanced | 61 |
| Written Comprehension | Very Important | 81 | Advanced | 60 |
| Near Vision | Very Important | 81 | Advanced | 59 |
| Memorization | Important | 56 | Advanced | 56 |
| Number Facility | Important | 71 | Advanced | 56 |
| Speech Clarity | Very Important | 77 | Advanced | 52 |
| Information Ordering | Important | 60 | Advanced | 51 |
| Mathematical Reasoning | Important | 69 | Advanced | 51 |
| Speech Recognition | Important | 63 | Advanced | 51 |
| Fluency of Ideas | Important | 63 | Intermediate | 48 |
| Problem Sensitivity | Important | 63 | Intermediate | 48 |
| Deductive Reasoning | Important | 58 | Intermediate | 48 |
| Inductive Reasoning | Important | 60 | Intermediate | 46 |
| Originality | Important | 50 | Intermediate | 45 |
| Perceptual Speed | Somewhat Important | 48 | Intermediate | 44 |
| Wrist-Finger Speed | Somewhat Important | 46 | Intermediate | 44 |
| Category Flexibility | Important | 50 | Intermediate | 43 |
| Time Sharing | Important | 60 | Intermediate | 42 |
| Speed of Closure | Somewhat Important | 42 | Intermediate | 40 |
| Selective Attention | Important | 56 | Intermediate | 36 |
| Flexibility of Closure | Somewhat Important | 33 | Intermediate | 35 |
| Finger Dexterity | Somewhat Important | 44 | Intermediate | 34 |
| Manual Dexterity | Somewhat Important | 40 | Intermediate | 31 |
| Extent Flexibility | Somewhat Important | 35 | Intermediate | 31 |
| Auditory Attention | Somewhat Important | 46 | Intermediate | 30 |
| Arm-Hand Steadiness | Somewhat Important | 33 | Intermediate | 30 |
| Trunk Strength | Somewhat Important | 48 | Intermediate | 27 |
| Static Strength | Somewhat Important | 25 | Intermediate | 27 |
| Spatial Orientation | Somewhat Important | 35 | Intermediate | 26 |
| Visualization | Somewhat Important | 33 | Intermediate | 26 |
| Response Orientation | Somewhat Important | 31 | Intermediate | 26 |
| Hearing Sensitivity | Not Important | 13 | Basic | 24 |
| Far Vision | Not Important | 17 | Basic | 23 |
| Reaction Time | Not Important | 19 | Basic | 21 |
| Sound Localization | Not Important | 21 | Basic | 21 |
| Control Precision | Not Important | 19 | Basic | 21 |
| Multilimb Coordination | Somewhat Important | 25 | Basic | 21 |
| Peripheral Vision | Not Important | 21 | Basic | 20 |
| Depth Perception | Not Important | 8 | Basic | 20 |
| Visual Color Discrimination | Not Important | 13 | Basic | 19 |
| Speed of Limb Movement | Not Important | 15 | Basic | 15 |
| Explosive Strength | Not Important | 6 | Basic | 15 |
| Glare Sensitivity | Not Important | 10 | Basic | 15 |
| Night Vision | Not Important | 8 | Basic | 13 |
| Gross Body Coordination | Not Important | 6 | Basic | 13 |
| Gross Body Equilibrium | Not Important | 8 | Basic | 12 |
| Dynamic Flexibility | Not Important | 2 | Basic | 11 |
| Dynamic Strength | Not Important | 6 | Basic | 11 |
| Stamina | Not Important | 15 | Basic | 10 |
| Rate Control | Not Important | 2 | Basic | 7 |

Source: O*NET Database 11

Perform secretarial duties utilizing specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties include scheduling appointments, billing patients, and compiling and recording medical charts, reports, and correspondence.

## Occupational Knowledge

| Knowledge | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Customer and Personal Service | Very Important | 84 | Advanced | 72 |
| English Language | Very Important | 77 | Advanced | 65 |
| Clerical | Very Important | 81 | Advanced | 64 |
| Computers and Electronics | Important | 60 | Advanced | 59 |
| Communications and Media | Important | 52 | Intermediate | 46 |
| Education and Training | Somewhat Important | 44 | Intermediate | 46 |
| Telecommunications | Important | 59 | Intermediate | 45 |
| Administration and Management | Somewhat Important | 38 | Intermediate | 36 |
| Public Safety and Security | Somewhat Important | 34 | Intermediate | 34 |
| Mathematics | Somewhat Important | 44 | Intermediate | 32 |
| Transportation | Somewhat Important | 36 | Intermediate | 31 |
| Medicine and Dentistry | Somewhat Important | 30 | Basic | 24 |
| Philosophy and Theology | Somewhat Important | 28 | Basic | 21 |
| Sociology and Anthropology | Not Important | 10 | Basic | 21 |
| Food Production | Not Important | 16 | Basic | 19 |
| Economics and Accounting | Not Important | 16 | Basic | 14 |
| Law and Government | Not Important | 12 | Basic | 13 |
| Production and Processing | Not Important | 9 | Basic | 10 |
| Psychology | Not Important | 9 | Basic | 9 |
| Personnel and Human Resources | Not Important | 9 | Basic | 7 |
| Therapy and Counseling | Not Important | 5 | Basic | 7 |
| Geography | Not Important | 5 | Basic | 5 |
| Mechanical | Not Important | 6 | Basic | 3 |
| Foreign Language | Not Important | 5 | Basic | 3 |
| Chemistry | Not Important | 2 | Basic | 3 |
| Sales and Marketing | Not Important | 3 | Basic | 3 |
| Biology | Not Important | 3 | Basic | 3 |
| Engineering and Technology | Not Important | 2 | Basic | 2 |
| History and Archeology | Not Important | 1 | Basic | 1 |
| Design | Not Important | 1 | Basic | 0 |
| Fine Arts | Not Important | 0 | Basic | 0 |
| Physics | Not Important | 0 | Basic | 0 |
| Building and Construction | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

## Occupational Skills

| Skill | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Reading Comprehension | Very Important | 89 | Advanced | 68 |
| Active Listening | Very Important | 90 | Advanced | 68 |
| Writing | Important | 56 | Advanced | 63 |
| Speaking | Very Important | 82 | Advanced | 62 |
| Social Perceptiveness | Important | 53 | Advanced | 60 |
| Time Management | Important | 66 | Advanced | 58 |
| Instructing | Important | 57 | Advanced | 57 |
| Coordination | Important | 70 | Advanced | 56 |
| Active Learning | Important | 69 | Advanced | 55 |
| Learning Strategies | Important | 54 | Advanced | 54 |
| Equipment Selection | Somewhat Important | 36 | Advanced | 53 |
| Service Orientation | Important | 55 | Intermediate | 48 |
| Management of Personnel Resources | Somewhat Important | 29 | Intermediate | 45 |
| Monitoring | Somewhat Important | 42 | Intermediate | 45 |
| Management of Material Resources | Somewhat Important | 45 | Intermediate | 42 |
| Judgment and Decision Making | Somewhat Important | 38 | Intermediate | 41 |
| Operation and Control | Somewhat Important | 43 | Intermediate | 39 |
| Negotiation | Somewhat Important | 32 | Intermediate | 36 |
| Critical Thinking | Somewhat Important | 34 | Intermediate | 35 |
| Quality Control Analysis | Not Important | 23 | Intermediate | 30 |
| Installation | Not Important | 16 | Intermediate | 28 |
| Equipment Maintenance | Not Important | 22 | Intermediate | 28 |
| Operation Monitoring | Not Important | 15 | Intermediate | 27 |
| Technology Design | Not Important | 20 | Intermediate | 26 |
| Persuasion | Somewhat Important | 25 | Intermediate | 25 |
| Repairing | Not Important | 16 | Basic | 24 |
| Systems Evaluation | Somewhat Important | 25 | Basic | 24 |
| Complex Problem Solving | Not Important | 22 | Basic | 23 |
| Mathematics | Somewhat Important | 26 | Basic | 22 |
| Operations Analysis | Not Important | 18 | Basic | 20 |
| Troubleshooting | Not Important | 19 | Basic | 18 |
| Management of Financial Resources | Not Important | 16 | Basic | 16 |
| Systems Analysis | Not Important | 13 | Basic | 13 |
| Science | Not Important | 15 | Basic | 9 |
| Programming | Not Important | 5 | Basic | 6 |

Source: O*NET Database 11

## Occupational Abilities

| Ability | Importance | Imp (0-100) | Level | Lvl (0-100) |
|---|---|---|---|---|
| Near Vision | Important | 72 | Advanced | 61 |
| Oral Comprehension | Very Important | 88 | Advanced | 54 |
| Oral Expression | Very Important | 78 | Advanced | 52 |
| Information Ordering | Important | 72 | Advanced | 52 |
| Written Comprehension | Important | 56 | Advanced | 52 |
| Speech Recognition | Important | 66 | Advanced | 50 |
| Category Flexibility | Important | 50 | Intermediate | 48 |
| Problem Sensitivity | Important | 53 | Intermediate | 45 |
| Deductive Reasoning | Important | 50 | Intermediate | 45 |
| Written Expression | Important | 53 | Intermediate | 43 |
| Speech Clarity | Very Important | 75 | Intermediate | 43 |
| Inductive Reasoning | Important | 50 | Intermediate | 39 |
| Originality | Somewhat Important | 38 | Intermediate | 38 |
| Time Sharing | Important | 53 | Intermediate | 38 |
| Number Facility | Somewhat Important | 35 | Intermediate | 36 |
| Selective Attention | Important | 53 | Intermediate | 36 |
| Auditory Attention | Somewhat Important | 35 | Intermediate | 34 |
| Finger Dexterity | Somewhat Important | 44 | Intermediate | 34 |
| Fluency of Ideas | Somewhat Important | 35 | Intermediate | 34 |
| Trunk Strength | Somewhat Important | 31 | Intermediate | 32 |
| Perceptual Speed | Somewhat Important | 41 | Intermediate | 32 |
| Memorization | Somewhat Important | 31 | Intermediate | 30 |
| Mathematical Reasoning | Somewhat Important | 38 | Intermediate | 29 |
| Speed of Closure | Somewhat Important | 25 | Intermediate | 29 |
| Far Vision | Not Important | 22 | Intermediate | 27 |
| Manual Dexterity | Somewhat Important | 31 | Intermediate | 27 |
| Flexibility of Closure | Somewhat Important | 28 | Intermediate | 25 |
| Arm-Hand Steadiness | Somewhat Important | 35 | Intermediate | 25 |
| Wrist-Finger Speed | Not Important | 16 | Basic | 23 |
| Control Precision | Not Important | 22 | Basic | 21 |
| Hearing Sensitivity | Not Important | 19 | Basic | 20 |
| Gross Body Coordination | Somewhat Important | 25 | Basic | 18 |
| Visual Color Discrimination | Not Important | 19 | Basic | 16 |
| Visualization | Not Important | 16 | Basic | 16 |
| Static Strength | Somewhat Important | 25 | Basic | 16 |
| Multilimb Coordination | Not Important | 22 | Basic | 16 |
| Stamina | Not Important | 22 | Basic | 14 |
| Speed of Limb Movement | Not Important | 19 | Basic | 14 |
| Depth Perception | Not Important | 13 | Basic | 9 |
| Extent Flexibility | Not Important | 3 | Basic | 4 |
| Response Orientation | Not Important | 6 | Basic | 4 |
| Reaction Time | Not Important | 6 | Basic | 2 |
| Sound Localization | Not Important | 3 | Basic | 2 |
| Spatial Orientation | Not Important | 0 | Basic | 0 |
| Night Vision | Not Important | 0 | Basic | 0 |
| Dynamic Flexibility | Not Important | 0 | Basic | 0 |
| Peripheral Vision | Not Important | 0 | Basic | 0 |
| Explosive Strength | Not Important | 0 | Basic | 0 |
| Gross Body Equilibrium | Not Important | 0 | Basic | 0 |
| Dynamic Strength | Not Important | 0 | Basic | 0 |
| Glare Sensitivity | Not Important | 0 | Basic | 0 |
| Rate Control | Not Important | 0 | Basic | 0 |

Source: O*NET Database 11

# Program Assessment Plan

## Medical Assisting

**Statement of Purpose**

This program is designed to prepare an individual for an entry-level position as a Medical Assistant in a private medical office, clinic or other healthcare facility. Clinical, Administrative and Trans disciplinary skills are included. The program also prepares the student for the nation A.A.M.A. certification exam.

**Catalog Description**

The Medical Assisting Certificate program is designed to prepare an individual for an entrylevel position as a Medical Assistant in a private medical office, clinic or other health care facility. Both clinical and administrative skills are included in the course work. On-the-job experience is provided by a total of 210 hours of externship placement with a licensed health care practitioner. The student may choose to complete an Associate in Applied Science Degree after completion of the Certificate in Medical Assisting. Upon completion of the certificate program the student will be prepared for the American Association of Medical Assistant's (AAMA) national certification exam to become a Certified Medical Assistant (CMA). The program also provides continuing education for employed medical assistants. The business administration area of instruction
will include medical law and ethics; scheduling appointments;telephone practices; processing mail; oral and written communication skills; including medical transcription, reports and manuscripts; responsibilities of office care and management; patient and insurance billing; financial records; payroll records and banking; and safety precautions. Students will also use word processing skills to develop job descriptions and office policy manuals. The clinical area of instruction will include Universal Standards, preparing the patient for exam; obtaining vital signs and medical histories; assisting with exams, treatments and surgeries; performing routine laboratory procedures; EKGs and other diagnostic procedures; sterilization procedures; instructing patients in preparation for x-rays and laboratory tests; venipuncture; administration of medications; proper charting and documentation; first aid; and patient education. The Medical Assisting one-year Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board (CRB) of the American Association of Medical Assistants' Endowment (AAMAE).

# Program Assessment Plan
## Medical Assisting

**Learning Outcomes**

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

| Benchmark | Assessment Method | Timeline |
|---|---|---|
| **1.** Annual review by program faculty will show 80% of students will demonstrate proficiency in each course in each MDA course in both theory and skill with a grade of 78% or higher. | Written and practical exams are used to demonstrate competency in each area as recommended by the AAMAE's Medical Assistant Role Delineation. Mid-terms, Finals and lab evaluations are utilized. Under direct supervision of the Instructor or Clinical Instructor, students demonstrate competency in clinical skills as designated by the AAMA Medical Assistant Role Delineation. | 11/07 |
| **2.** Annual review will show 80% of the graduates will pass the AAMA certification exam at the proficiency level of >= 500 as determined by the AAMA. | AAMA national CMA certification exam results. | 11/07 |
| **3.** Annual review will show OCC graduate AAMA certification scores above 80 percentile compared to other students in the nation. | AAMA national certification results. | 11/07 |
| **4.** | | |
| **5.** | | |

# Program Assessment Plan
## Medical Assisting

**Learning Outcomes**

During 210 hours of externship in health care facilities students will demonstrate proficiency in effective interpersonal communication, rendering patient care in a safe and compassionate manner, during office administration, and clinical practice.

| | Benchmark | Assessment Method | Timeline |
|---|---|---|---|
| 1. | Annual review by program faculty will show 80% of students will successfully complete externships with a final evaluation by the clinical site supervisor, documenting competencies according the "AAMA Role Delineation Study" of 78% or higher. | Clinical facility externships site evaluations are completed by site supervisors. Site supervisors evaluate students on the practical skills demonstrated during the externship experience. | 11/07 |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |

# Program Assessment Plan
## Medical Assisting

**Learning Outcomes**

Graduates will competently perform administrative, clinical and trans disciplinary skills as outlined by the AAMA Medical Assistant Role Delineation.

| Benchmark | Assessment Method | Timeline |
|---|---|---|
| **1.** Annual review by the program faculty will show 80% of graduates and employers surveyed will report satisfactory or better, on a scale of 1-5 (very good to very poor) according to the AAMA Medical Assistant Role Delineations, regarding, employability preparation and education received. | Graduate and employer survey. Number of graduates will determine if this is appropriate method. | 11/07 |
| **2.** | | |
| **3.** | | |
| **4.** | | |
| **5.** | | |

# Program Findings Report

## Medical Assisting

### 7-1-06 to 8-31-07

**Statement of Purpose**

This program is designed to prepare an individual for an entry-level position as a Medical Assistant in a private medical office, clinic or other healthcare facility. Clinical, Administrative and Trans disciplinary skills are included. The program also prepares the student for the nation A.A.M.A. certification exam.

**Catalog Description**

The Medical Assisting Certificate program is designed to prepare an individual for an entry-level position as a Medical Assistant in a private medical office, clinic or other healthcare facility. Both clinical and administrative skills are included in the course work. On-the-job experience is provided by a total of 210 hours of externship placement with a licensed healthcare practitioner. The student may choose to complete an Associate In Applied Science Degree after completion of the Certificate in Medical Assisting.

Upon completion of the certificate program the student will be prepared for the American Association of Medical Assistant's (AAMA) national certification exam to become a Certified Medical Assistant (CMA). The program also provides continuing education for employed medical assistants.

The business administration area of instruction will include medical law and ethics; scheduling appointments; telephone practices; processing mail; oral and written communication skills; including medical transcription, reports and manuscripts; responsibilities of office care and management; patient and insurance billing; financial records; payroll records and banking; and safety precautions. Students will also use word processing skills to develop job descriptions and office policy manuals.

The clinical area of instruction will include Universal Standards, preparing the patient for exam; obtaining vital signs and medical histories; assisting with exams, treatments and surgeries; performing routine laboratory procedures; EKGs and other diagnostic procedures; sterilization procedures; instructing patients in preparation for x-rays and laboratory tests; venipuncture; administration of medications; proper charting and documentation; first aid; and patient education.

The Medical Assisting one-year Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board (CRB) of the American Association of Medical Assistants' Endowment (AAMAE).

# Program Findings Report
## Medical Assisting
### 7-1-06 to 8-31-07

**Learning Outcome ID**    671

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

**Benchmark 1**

Annual review by program faculty will show 80% of students will demonstrate proficiency in each course in both theory and skill with a grade of 78% or higher.

| Assessment Method 1 | Findings 1 | Benchmark Met 1 | | Dates |
|---|---|---|---|---|
| Written and practical exams are used to demonstrate competency in each area as recommended by the AAMAE's Medical Assistant Role Delineation.  Mid-terms, Finals and lab evaluations are utilized.  Under direct supervision of the Instructor or Clinical Instructor, students demonstrate competency in clinical skills as designated by the AAMA Medical Assistant Role Delineation. | All courses were measured with only one class falling below the benchmark of 80% passing. MDA 1170 – Medical Assisting Laboratory Procedures measured a 71% passing rate. | No | **Assessed** | 11/06 |
| | | | **Received** | 11/06 |

# Program Findings Report

## Medical Assisting

### 7-1-06 to 8-31-07

**Learning Outcome ID** 671

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

**Benchmark 1**

Annual review will show 80% of students will demonstrate proficiency in each course with a grade of 78% or better.

| Assessment Method 1 | Findings 1 | Benchmark Met 1 | | Dates |
|---|---|---|---|---|
| Written and practical exams are used to demonstrate competency in each area as recommended by the AAMAE's Medical Assistant Role Delineation. Mid-terms, Finals and Lab evaluations are utilized. Under direct supervision of the Instructor or Clinical Instructor, students demonstrate competency in clinical skills as designated by the AAMA Medical Assistant Role Delineation. | Assessment not implemented. | Unknown | **Assessed** **Received** | 06/05 07/06 |

**Learning Outcome ID** 671

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

**Benchmark 2**

Annual review will show 80% of the graduates will pass the AAMA certification exam at the proficiency level of >= 500 as determined by the AAMA.

| Assessment Method 2 | Findings 2 | Benchmark Met 2 | | Dates |
|---|---|---|---|---|
| AAMA national CMA certification exam results. | There were 11 June graduates. All grads took the national exam to become a CMA and passed at the proficiency level of 500 or above. | Yes | **Assessed** **Received** | 11/06 11/06 |

# Program Findings Report
## Medical Assisting
### 7-1-06 to 8-31-07

**Learning Outcome ID** 671

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

**Benchmark 2**

Annual review will show 80% of the graduates will pass the AAMA certification exam.

| Assessment Method 2 | Findings 2 | Benchmark Met 2 | | Dates |
|---|---|---|---|---|
| AAMA national CMA certification exam results | Assessment not implemented. | Unknown | **Assessed** | 06/05 |
| | | | **Received** | 07/06 |

**Learning Outcome ID** 671

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

**Benchmark 3**

Annual review will show OCC graduate AAMA certification scores above 80 percentile compared to other students in the nation.

| Assessment Method 3 | Findings 3 | Benchmark Met 3 | | Dates |
|---|---|---|---|---|
| AAMA national certification results. | The average national score was 500. OCC's average student exam score was 615, which put OCC students at the 99th percentile in the nation. | Yes | **Assessed** | 11/06 |
| | | | **Received** | 11/06 |

# Program Findings Report
## Medical Assisting
### 7-1-06  to  8-31-07

**Learning Outcome ID**    671

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

**Benchmark 3**

Annual review will show OCC graduate AAMA certification scores above 80 percentile.

| Assessment Method 3 | Findings 3 | Benchmark Met 3 | | Dates |
|---|---|---|---|---|
| AAMA national certification results. | Assessment not implemented. | Unknown | **Assessed** | 06/05 |
| | | | **Received** | 07/06 |

# Program Findings Report
## Medical Assisting
## 7-1-06 to 8-31-07

**Learning Outcome ID**   672

During 210 hours of externship in health care facilities students will demonstrate proficiency in effective interpersonal communication, rendering patient care in a safe and compassionate manner, during office administration, and clinical practice.

**Benchmark 1**

Annual review by program faculty will show 80% of students will successfully complete externships with a final evaluation by the clinical site supervisor, documenting competencies according the "AAMA Role Delineation Study" of 78% or higher.

| Assessment Method 1 | Findings 1 | Benchmark Met 1 | Dates |
|---|---|---|---|
| Clinical facility externships site evaluations are completed by site supervisors. Site supervisors evaluate students on the practical skills demonstrated during the externship experience. | Examples of the assessment are:<br>Respond to and initiate written communications<br>Recognize and respond to verbal communications<br>Recognize and respond to nonverbal communications<br>Demonstrate telephone techniques<br>Identify and respond to issues of confidentiality<br>Perform within legal and ethical boundaries<br>Establish and maintain the medical record<br>Document appropriately<br>Demonstrate knowledge of federal and state health legislation and regulations | Yes | **Assessed**   11/06<br>**Received**   11/06 |

# Program Findings Report

## Medical Assisting

## 7-1-06 to 8-31-07

**Learning Outcome ID**   672

During 210 hours of externship in health care facilities students will demonstrate proficiency in effective interpersonal communication, rendering patient care in a safe and compassionate manner, during office administration, and clinical practice.

**Benchmark 1**

Annual review will show 80% of students will successfully complete externships with a final evaluation by the site supervisor of 78% or better.

| Assessment Method 1 | Findings 1 | Benchmark Met 1 | | Dates |
|---|---|---|---|---|
| Externship site evaluations of students by, site supervisors. Site supervisors evaluate students on the practical skills demonstrated in the externship experience. | Assessment not implemented. | Unknown | **Assessed** | 06/05 |
| | | | **Received** | 07/06 |

# Program Findings Report
## Medical Assisting
### 7-1-06 to 8-31-07

**Learning Outcome ID**   673

Graduates will competently perform administrative, clinical and trans disciplinary skills as outlined by the AAMA Medical Assistant Role Delineation.

**Benchmark 1**

Annual review by the program faculty will show 80% of graduates and employers surveyed will report satisfactory or better, on a scale of 1-5 (very good to very poor) according to the AAMA Medical Assistant Role Delineations, regarding, employability preparation and education received.

| Assessment Method 1 | Findings 1 | Benchmark Met 1 | | Dates |
|---|---|---|---|---|
| Graduate and employer survey. Number of graduates will determine if this is appropriate method. | The most recent survey of the six graduates from 04/05 resulted in three responses (50% response rate).  All responses according to preparation for employment in the competencies according to the AAMA Role Delineation were positive.<br>The most recent survey of employers from that same graduate class produced two responses.<br>All areas were positive for employee preparation according to the AAMA competencies from the Role Delineation Chart. | Yes | **Assessed** 11/06<br>**Received** 11/06 | |

# Program Findings Report

## Medical Assisting

### 7-1-06  to  8-31-07

**Learning Outcome ID**   673

Graduates will competently perform administrative, clinical and trans disciplinary skills as outlined by the AAMA Medical Assistant Role Delineation.

**Benchmark 1**

Annual review will show 80% of graduates surveyed will report satisfactory or better, according to the AAMA Medical Assistant Role Delineation, regarding, employability preparation and education received.

| Assessment Method 1 | Findings 1 | Benchmark Met 1 | | Dates |
|---|---|---|---|---|
| Graduate survey.  Number of graduates will determine if this is appropriate method. | Assessment not implemented. | Unknown | **Assessed** | 06/05 |
| | | | **Received** | 07/06 |

**Learning Outcome ID**   673

Graduates will competently perform administrative, clinical and trans disciplinary skills as outlined by the AAMA Medical Assistant Role Delineation.

**Benchmark 2**

No benchmark provided.

| Assessment Method 2 | Findings 2 | Benchmark Met 2 | | Dates |
|---|---|---|---|---|
| Employer survey. | Assessment not implemented. | Unknown | **Assessed** | 06/06 |
| | | | **Received** | 05/07 |

# Program Findings Report
## Medical Assisting
### 7-1-06  to  8-31-07

**Learning Outcome ID**   673

Graduates will competently perform administrative, clinical and trans disciplinary skills as outlined by the AAMA Medical Assistant Role Delineation.

**Benchmark 2**

Annual review will show 80% of employers surveyed will report satisfactory or better, according to the AAMA Medical Assistant Role Delineation, regarding, readiness of graduates for employment and training received.

| Assessment Method 2 | Findings 2 | Benchmark Met 2 | | Dates |
|---|---|---|---|---|
| Employer survey. | Assessment not implemented. | Unknown | **Assessed** | 06/05 |
| | | | **Received** | 07/06 |

# Program Assessment Findings
## Medical Assisting

**Catalog Description**

The Medical Assisting Certificate program is designed to prepare an individual for an entry-level position as a Medical Assistant in a private medical office, clinic or other healthcare facility. Both clinical and administrative skills are included in the course work. On-the-job experience is provided by a total of 210 hours of externship placement with a licensed healthcare practitioner. The student may choose to complete an Associate In Applied Science Degree after completion of the Certificate in Medical Assisting.

Upon completion of the certificate program the student will be prepared for the American Association of Medical Assistant's (AAMA) national certification exam to become a Certified Medical Assistant (CMA). The program also provides continuing education for employed medical assistants.

The business administration area of instruction will include medical law and ethics; scheduling appointments; telephone practices; processing mail; oral and written communication skills; including medical transcription, reports and manuscripts; responsibilities of office care and management; patient and insurance billing; financial records; payroll records and banking; and safety precautions. Students will also use word processing skills to develop job descriptions and office policy manuals.

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The Medical Assisting one-year Certificate Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), on recommendation of the Curriculum Review Board (CRB) of the American Association of Medical Assistants' Endowment (AAMAE).

**Program Statement of Purpose**

This program is designed to prepare an individual for an entry-level position as a Medical Assistant in a private medical office, clinic or other healthcare facility. Clinical, Administrative and Trans disciplinary skills are included. The program also prepares the student for the nation A.A.M.A. certification exam.

**Learning Outcome**

Students will demonstrate proficiency in Administrative, Clinical and Trans disciplinary competencies.

**Benchmark 1**

Annual review by program faculty will show 80% of students will demonstrate proficiency in each course in both theory and skill with a grade of 78% or higher.

**Assessment Method 1**

Written and practical exams are used to demonstrate competency in each area as recommended by the AAMAE's Medical Assistant Role Delineation. Mid-terms, Finals and lab evaluations are utilized. Under direct supervision of the Instructor or Clinical Instructor, students demonstrate competency in clinical skills as designated by the AAMA Medical Assistant Role Delineation.

**Benchmark Scheduled To Be Assessed:**                      11/1/2006

**Assessment Results Sent To Office of Assessment Effectiveness:**     12/1/2006

**Findings 1**

All courses were measured with only one class falling below the benchmark of 80% passing. MDA 1170 – Medical Assisting Laboratory Procedures measured a 71% passing rate.

**Will changes be made to the way in which the information is presented to students as a result of these findings?** Yes

**If Yes, specifically what changes will be made?**

There will be a textbook change starting with the next rotation of MDA 1170.

**When will these changes be completed?** 1/1/2007

Marketing Plan

Oakland Community College
Medical Assisting
Certificates of Achievement

July 2003 – July 2005

EXECUTIVE SUMMARY

When examined in late 2002, the Oakland Community College Medical Assisting Program was found to be an ill fit in a crowded and confusing marketplace. It simply could not be expected to compete against the predominant market leaders, the trade schools that offered training in a short amount of time. As a result of those startling findings, the college has taken great strides to repackage the product into a series of shorter modular training packages, essentially offering a more competitive product. The time has come now to introduce the product – Certificates of Achievements - to the marketplace, and to reap the benefits of a better fit.

While the college can change the product it offers, there are some things it cannot change – such as the pay scale and lack of value that employers put on the training. But the new product offers many benefits including the opportunity to market what is essentially a group of options or a "mini-cluster." Students can now determine the specific skills they want, what area to specialize in or even the option of continuing on to meet the requirements of the associates degree. This new approach in customized training will prove its value with a variety of target markets.

The focus of this two-year plan is to identify and reach out to those markets best suited for this type of training. These markets include those who need employment in the short term, those looking to re-enter the workforce and those interested in the medical field but are not interested in a four-year degree or more. The messages that OCC offers training that is flexible, short –term and affordable combined with the growing need for Medical Assistants will resound with these target groups. An investment of $30,000 over the next two years is needed to not only raise awareness of the benefits of the OCC Medical Assistant program, but also to firmly establish a hold in the marketplace.

## TABLE OF CONTENTS

## REVIEW OF FINDINGS

In August 2002 the program marketing committee conducted a comprehensive review of the OCC Medical Assisting program. The assessment included a historical perspective of the number of degrees and certificates granted, a situational analysis of the program's position in the marketplace and an analysis of the competition. In addition, research was compiled on the labor market through surveys of employers, interviews with members of medical associations and boards, and focus groups with working medical assistants.

It was determined that without changes to the OCC product, extensive marketing efforts would be futile. The resulting plan called for limited marketing of the existing product to internal and restrictive geographical markets, with a focus on repackaging the product before expanding to new markets. The results of the research have not changed significantly over the last seven months and still serve as the basis for this longer-term marketing plan.

## HISTORY

The MDA program granted 57 degrees over the past ten years. When looking at a ten-year trend, the most significant decline occurred in the past five years. During that period, there has been a 24% decrease in credit hours and a 75% decline in the number of degrees awarded. Credit hour enrollment peaked in 1994-95 with 1,359 credit hours. Since that period hours have decreased 24% to 796 total credit hours in 2000-01. The program awarded only four certificates and two degrees in the academic year 2000-01. It currently ranks 53rd out of 69 OCC programs that granted degrees in 2000-01.

SITUATIONAL ANALYSIS

The Medical Assisting marketplace has not changed since it was first examined in August 2002. The market continues to be dominated by the private career schools that have a strong presence in southeast Oakland and Wayne counties. While the program does benefit from OCC's name recognition with students and employers, it was found that the products offered by the college - particularly the extended associate degree - were not competitive. For students, the shorter training options at the career schools are more attractive. Employers showed no preference for a two-year degree over other types of training. (Figure 1)

Based on the situational analysis, the marketing committee recommended that the MA Program repackage its product into smaller skills components in order to be more competitive. The department worked diligently and quickly to follow through with this recommendation, and created five mini certificates recently approved by the college. This product re-tuning is now the program's greatest opportunity to increase market share.

*Figure 1 – SWOT Analysis*

|  | Strength | Weakness | Opportunity | Threat |
|---|---|---|---|---|
| Program | CAAHEP accreditation<br><br>OCC name recognition<br><br>Ophthalmology option | Low number of degrees/certificates granted<br><br>Career schools have better image with employers | New product: individual certificates of achievement<br><br>Emphasize Affordability, short completion time | Assoc. Degree not required for employment/ low valuation |
| Students | High employment rate of graduates in the field (within three months) | Low completion rate<br><br>Minority students under-represented | Target minority population | Students shopping patterns – want quick product, cost not a factor |
| Location | HL service area penetration high | Offered only at Highland Lakes | Increase locations, offer courses at SF | Competitors have multi-campuses |
| Competition | Shorter term programs appeal to market | Career school & university programs are costly | Only Ross has presence in Livingston County | Competitors have 91% of market share<br><br>Competitors market aggressively |
| Labor Market | Plenty of jobs – expected growth through 2008 | Low hourly wage ($11/hr.)<br>Little opportunity for advancement | Specialized training for Ophthalmology assistants | Employers do not value certification or degree credential |

NEW PRODUCTS

The five new components that OCC will offer beginning in the Fall, 2003 semester are:

- Phlebotomy

- Medical Insurance Coding & Billing

- Opthalmic Assisting

- Medical Office Clinical Procedures

- Medical Office Administrative Procedures.

Potential students seeking to obtain marketable skills in a short amount of time will view the new shorter program options as a benefit. The awarding of certificates will also benefit the program in terms of number of successful completors. Previously, the program awarded certificates of achievement for individual skill sets but the certificates were not sanctioned by the college. Now that the department has taken the program options through the curriculum review process, the certificates will provide a more accurate tracking measurement of graduates other than traditional associate degree or one-year certificate completors. The new program options consist of 4 – 8 courses, resulting in 10 – 20 credits. The approved program options are shown in Figure 2.

*Program Options: Figure 2*

**Phlebotomy**

| Required courses | | Credits |
|---|---|---|
| MED 1103 | Medical Terminology | 3 |
| MDA 1250 | Phlebotomy | 1 |
| MDA 1170 | Medical Laboratory Procedures | 3 |
| MDA 1350 | Medical Law & Ethics | 3 |
| | Total Credits | 10 |

*(Figure 2 – cont'd)*

**Medical Office Administrative Procedures**

| Required courses | | Credits |
|---|---|---|
| MED 1103 | Medical Terminology | 3 |
| MDA 1051 | Medical Assisting – Administrative Procedures | 4 |
| MDA 1350 | Medical Law & Ethics | 3 |
| CIS 1000 | Computer Literacy | 1 |
| BIS 2100 | Advanced Applications | 1 |
| BIS 2170 | Introduction to an Integrated Package | 1 |
| | Total Credits | 13 |

**Medical Insurance Coding & Billing**

| Required courses | | Credits |
|---|---|---|
| MED 1103 | Medical Terminology | 3 |
| MDA 1350 | Medical Law & Ethics | 3 |
| MDA 2380 | Medical Office Insurance Coding and Billing | 4 |
| CIS 1000 | Computer Literacy | 1 |
| BIS 2107 | Introduction to an Integrated Package | 1 |
| BIS 2108 | Applications of an Integrated Package | 1 |
| | Total Credits | 16 |

**Opthalmic Assisting**

| Required courses | | Credits |
|---|---|---|
| MED 1103 | Medical Terminology | 3 |
| MDA 1250 | Phlebotomy | 1 |
| MDA 1350 | Medical Law & Ethics | 3 |
| MDA 2010 | Medical Office Medications | 3 |
| MDA 2410 | Ophthalmic Assisting I | 3 |
| MDA 2420 | Ophthalmic Assisting II | 3 |
| | Total Credits | 16 |

**Medical Office Clinical Procedures**

| Required courses | | Credits |
|---|---|---|
| MED 1103 | Medical Terminology | 3 |
| MDA 1140 | Medical Assisting Clinical Procedures | 3 |
| MDA 1170 | Medical Assisting Laboratory Procedures | 3 |
| MDA 1200 | Basic X-ray Techniques and Spirometry | 1 |
| MDA 1250 | Phlebotomy | 1 |
| MDA 1350 | Medical Law & Ethics | 3 |
| MDA 1570 | Basic Electrocardiography | 3 |
| MDA 2010 | Medical Office Medications | 3 |
| | Total Credits | 20 |

COMPETITORS

In the research conducted in 2002, 11 competitors were identified. They consist of 4-year colleges, community colleges and the career schools.

<u>4-year Colleges</u>
Baker

<u>Community Colleges</u>
Henry Ford Community College
Macomb Community College
Oakland Community College
Schoolcraft Community College

<u>Career Schools</u>
Carnegie Institute
Detroit Business Institute
Dorsey Business School
Lawton School
Metro Technical Institute
National Institute of Technology
Ross Medical Education Center

The key competitors and the focus of this marketing plan are the career schools, which graduate 91% of the medical assistants in southeast Michigan. As seen in IPEDS data, the top producer of graduates in 2001 was National Institute of Technology, with 274. Located in Southfield, NIT is owned by Corinthian Schools, Inc., which operates over 55 career schools nationwide. The NIT medical assisting program consists of 720 clock hours of hands-on training and students complete in eight months.

The Ross Medical Education system is the second highest producer of graduates, with 262. Ross has locations in Macomb, Livingston, Washtenaw, Genesee, Wayne and Ingham counties. It has been in the marketplace for 25 years and has high name recognition. Although it no longer offers classes in Oakland County, Ross recruits heavily from the area. Students may take the Ross medical assisting program days or evenings and complete in 30 weeks.

Combined, NIT and Ross account for 60% of the market. They continue to have a strong marketing presence, primarily through television ads airing on local and cable stations throughout the day.

COMPETITIVE POSITIONING

With the shorter program options, OCC is now more prepared to compete with the career schools in each of the four "P's of marketing": product, price, place and promotion. As stated before, significant changes have been made to the product offering. Four of the five options – Medical Insurance Coding & Billing; Phlebotomy; Opthalmic Assisting; and Medical Office Administrative Procedures – are designed so that students can complete all required courses for one certificate in a single semester. Only Medical Office Clinical Procedures, which consists of eight classes, would take two or more semesters. Thus, the completion time is now a matter of months, as opposed to years. (Appendix 1). The shorter timeframe, combined with the substantial cost difference could make for a very competitive message.

In addition to a shorter completion time, the OCC offerings also feature a competitive positioning advantage in the area of price. Although it was found that students tended not to compare costs, the issue of pricing is veiled by competitors that offer financial assistance and tuition payment plans. The career schools engage in more personal selling and the approach is hard sell. Students are given tours, meet with program supervisors and in some cases are pressured to register before they leave the appointment. The cost for training at NIT is $8,850. A student completing the program at Ross will pay $7,000. The cost doubles when pursuing an associate degree at Baker. In comparison, an in-district student choosing the phlebotomy option at OCC would pay

approximately only $517. The cost to complete all options at OCC is approximately

$3,722.40 – half of the cost of the competition. (Figure 3) The messages that are

conveyed by all career schools are that the training is quick and jobs are plentiful. OCC's

competitive message is that the training is quick, very affordable, and jobs are plentiful.

With five campuses, OCC has the advantage over the career schools when it

comes to place. To compete with Dorsey and NIT and others, OCC's Medical Assisting

certificates need to be offered at the Southfield Campus in addition to Highland Lakes.

The Southfield Campus is geographically located in the more densely populated center of

Oakland County, where the competition continues to draw its market share. The

Southfield Campus also is already established as a medical training site, as many OCC

health professions and technologies programs are offered there. It is recommended that

the MDA certificates begin to be offered at Southfield in Winter 2003. The new location

would be advertised to the surrounding area with newspaper ads in local and major

papers.

Now that OCC's MDA program has the positioning edge in the areas of product,

price and place, the attention of this plan can turn to the final "p", promotion.

*Figure 3 – Competitive Analysis*

| School | Product | Accreditation | Length of Program | Location | Cost | # of graduates (2001) |
|--------|---------|---------------|-------------------|----------|------|-----------------------|
| Baker | Associate Applied Science | CAAHEP | 2 years | Auburn Hills Flint Clinton Twp. | $14,020 | 24 |
| Carnegie | Diploma | CAAHEP ACCSCT* | 1 year | Troy | $7,675 | 56 |
| Detroit Business Inst. | Diploma | ACICS** | 8 months | Southfield | $6,400 | 32 |
| Dorsey | Diploma | ACICS | 1 year | Madison Hts. Roseville Southgate Wayne | $8,000 - $9, 000 | 86 |
| HFCC | Certificate | CAAHEP | 1 year | Dearborn | $2,347 | 5 |
| Lawton School | Diploma | ACCSCT | 34 weeks | Southfield | $6,000 | 79 |
| MCC | Associate Applied Science Certificate | CAAHEP | 2 yrs. <br><br> 1 yr. | Clinton Twp. | $3,6636 <br><br> $2,292 | 32 |
| Metro Technical Inst. | Diploma | ACCSCT | 9 months | Oak Park | $6,500 | 32 |
| National Inst. Technology | Diploma | CAAHEP ACCSCT | 8 months | Southfield Dearborn | $8,850 | 274 |
| OCC | Associate Applied Science; Certificate <br><br> **Certificates Of Completion** | CAAHEP | 2 yrs. <br><br> 1 yr. <br><br> **4 – 8 months** | Waterford | $4,129 <br><br> $2,670 <br><br> **$517 - $1,034** | 6 |
| Ross | Diploma | ABHES ACCSCT | 30 weeks | Warren Brighton Flint Lansing Redford Ann Arbor | $7,000 | 262 |
| Schoolcraft | Certificate | CAAHEP | 1 year | Livonia | $2,700 | 5 |

TARGET MARKET

Among the benefits that the MDA career track offers is that there is high demand

for assistants, and it provides entry into the medical field without a four-year degree.

Another attractive element is that the most common jobs for MAs in doctors' offices,

clinics and hospitals offer flexible schedules, full or part time. Using these characteristics,

target markets can be defined as follows:

1.) Employable:    These are people who are currently not working, and are seeking

jobs for financial reasons. This group needs to work, and cannot

invest in long-term training options.


2.) Returnees:    This group consists of women who desire to work, but also want a

job that they can fit around their family life. These women have

younger children, and are either ready to re-enter the workforce

now or are ready to begin training to prepare to enter the work

force in the near future.


Traditionally, the typical MDA student is female (96%). There is no evidence to

suggest that males represent a market for this program. Therefore, all suggested targets

for this plan are female.

STRATEGIES

Three distinct strategies have been identified to raise awareness of the new MDA program options. The strategies will use traditional mass media, internal marketing components, and also test the use of targeted marketing with smaller groups.

I.     Newspaper & Employment Outreach

    a.)     The primary effort of the marketing plan will be to reach those seeking employment in the medical field. This target market, the Employable, are defined as those actively seeking a job and may be reached through common vehicles used in the job search including classifies ads and the Michigan Works offices.

    b.)     Mass media campaign: The MDA program can reach out directly to this population by marketing in vehicles designed for job seekers. The primary vehicles are the Sunday Detroit News and Free Press classified section, its companion publication MICareerBuilder, and other regional newspapers including the Observer & Eccentric and the Oakland Press. Display ads would be scheduled to begin in these publications in August 2003, and will continue on a pulsing schedule throughout the two years of the plan. (A detailed timeline is given in the next section of the plan.) The ads will stress the short completion time and low cost compared to the competition. The use of this medium was tested in May 2003, when the Health Professions and Technologies programs held a career fair. The newspaper ads resulted in a high, and

12

immediate, response rate. It is recommended that a total of $20,000 be allocated for newspaper display ads over the course of two years.

c.) OCC's Workforce Development group is also a valuable internal link to this audience. The Recruitment, Screening and Certification department works with job seekers as well as employers. Its work with the Work First program would be a nice fit for the MDA program.

Work First clients are in need of short- term training options that result in:

* skills leading to immediate employment opportunities

* credentials (transcripted on student records)

* options to continue education part-time

The MDA certificates of achievements fulfill all of these requirements and thus could be very attractive to this population. The MDA program director needs to partner with the Workforce Development group to develop strategies to best promote the available training options.

## II. Direct Marketing:

While the newspaper ad strategy will cover a large market, a pilot strategy will be implemented to test the effectiveness of targeting the MA certificates to a more specific group. This group will reflect the profile of current MDA students who are female, may be single heads of households or have young children about to enter school. Using census data, the college's Office of Institutional Research will compile a mailing list of a minimum of 10,000 names. The list will consist of women in various Oakland County zip codes surrounding the Highland and Southfield. These women would receive a postcard with the message that the training is quick, affordable and jobs are waiting. Delivery of the postcard would be scheduled for October, and would stress that most options can be completed in the upcoming winter semester. A benchmark for the mailing of a 5% response rate will be established. If it is successful, the marketing plan will be reviewed for Year II and some advertising money may be transferred to conduct a second postcard mailing.

Costs: A budget of $5,000 should be allocated for this mailing.

## III. Marketing Support

A budget must be allocated for the creation and printing of a customized brochure explaining the five new certificate options and the career opportunities. This brochure may be used for the workforce development initiatives as well as a general piece used by the Medical Assisting department in response to inquiries. The recommended budget iss $5000.00

In addition to a new brochure, a broad advertising campaign and a targeted direct mail initiative, the college will continue to support the Medical Assisting department with

the establishment of a website and inclusion in all marketing efforts which promote the

Health Professions and Technologies cluster.

The MDA program coordinator will provide materials for the website

immediately upon acceptance of the marketing plan. The website address will then be

included on all marketing materials and messages through July 2005.


TIMELINE

Following is a timeline for execution of the marketing strategies. Evaluation will

be conducted of each strategy following implementation.

Year I: July 2003 – July 2004

| July 2003 | Adoption of marketing plan & budget |
|---|---|
| August | Newspaper ads in Detroit News & Oakland Press ($2500)<br>Obtain mail list from IR<br>Design postcards for direct marketing strategy (graphics) |
| Sept | Classes begin at HL<br>Evaluate: response from newspaper ads/report to PMT<br>Design brochure  (graphics) |
| October | Newspaper ads ($2,000)<br>Direct Marketing mailing hits homes  ($5,000)<br>(promote classes at HL& SF for winter)<br>Brochure printed      ($5,000) |
| November | Newspaper ads     ($2,000)<br>Website completed<br>Distribute brochure to counselors, etc. |
| Dec | Evaluate response to direct mail/newspaper ads<br>Report to PMT |
| Jan | Begin offering classes at SF<br>Measure enrollment response 1/10 day count |
| Feb | PMT: 6-month benchmark assessment report |
| March | Work First initiative (with Workforce Development) |

| | | |
|---|---|---|
| April | Newspaper ads | ($2000) |
| May | | |
| June | Newspaper ads | ($1500) |
| July | Evaluate 1st year initiatives | |
| August | Newspaper ads | ($2500) |
| Sept. | Evaluate newspaper ad response<br>Enrollment report: 1/10 day count | |
| Oct. | Newspaper ads | ($2000) |
| | Promote winter offering at HL & SF | |
| Nov. | Newspaper ads | ($2000) |
| | Promote winter offering at HL& SF | |
| Dec. | Evaluate response to newspaper ads<br>Report to PMT | |
| Jan. 2005 | Offer classes at SF & HL<br>18 month benchmark assessment | |
| Feb. | Newspaper ads | ($1000) |
| March | Newspaper ads | ($1500) |
| April | Newspaper ads | ($1000) |
| May | | |
| June | | |
| July | Final assessment report of two-year marketing plan | |

FINANCIAL ANALYSIS

The single most important task when rolling out a new product is to get the word

out, and to do so comes with a price tag. The cost of the strategies totals $30,000 over a

period of two years.

Year I:          July 2003 – July 2004

          $5,000          brochure development

          $5,000          target mailing initiative

          $10,000          newspaper ads/Workforce development activities

          $20,000

Year II:          July 2004 – July 2005

          $10,000          newspaper ads


This investment will not only get the word out, but will raise awareness with

those most likely to seek out the shorter-term medical assisting training. Research has

proven that the market for the MDA training is broad, and not easy to segment.

Therefore, the use of mass media seems to be the most appropriate and requires the

largest percentage of the proposed budget. Swift adoption of the plan and the entire

proposed budget is crucial for the product to begin to take hold in the marketplace.


GOALS & OBJECTIVES

While the objective of introducing a new product to the marketplace often is

achieved through building awareness and image, the measurement of success will be

actual response to the messages and enrollment in MDA courses.

Benchmarks will be set in the following manner:

1.)     Response rates:

A.) Newspaper and Employment Outreach

The newspaper ad campaigns are clustered so as to maximize the awareness of the MDA certificates just prior to the start of the fall and winter semesters. After each campaign, the program will track response rates in the form of telephone and website inquiries. These measurements will occur in September and December 2003, and again in September and December 2004. A response rate of 3 percent is desirable for each independent campaign. If the response rate is not 3 percent or higher, changes may be made to the media buys for the following campaign. For example, it may be found that local papers elicit more response than the Detroit News and Free Press in certain zip codes, or vice versa.

B.) Direct Marketing Response

Following the direct marketing of the postcard to the identified list in October, a measure of response will be taken. Responses will be tracked through a pilot phone number. A 5% response rate is the minimum that will be considered successful. The program coordinator will provide a report on the success of the mailing to the program marketing team in December 2003.

2.)  Enrollment measures

With promotional strategies in place beginning summer 2003, it is expected that enrollment may be impacted as early as Fall 2003. Measurements will be taken for each semester, using the 1/10 official

count. The enrollment measurement will be defined as total number of students taking each course with the prefix "MDA", with the exception of MDA 1350. (MDA 1350, Medical Law and Ethics, is not exclusive to MDA; students in all health programs, including nursing are required to take this class.) Enrollment will be measured each semester a course is offered, beginning with the Winter semester. For Winter 2004, an increase of 40% over Winter 2003 is expected with the new class offerings at Southfield, the direct mail postcard campaign and consistent newspaper ads. A cumulative increase of 60% is expected in the first year of the plan; followed by an increase of an additional 40% in Year 2.

# APPENDIX 1

## MEDICAL ASSISTING OPTIONS

Students who choose to pursue one of the Medical Assisting Options should meet with the Program Coordinator to declare their intent.

The options to the Medical Assisting Program are designed for students who require marketable skills for employment. Students completing any of the options may continue their college education, and upon successful completion of designated courses with a C or better, receive their One-year Certificate or Associate Degree in Applied Science. The options are the first "building-block" toward that goal.

*Most of the options can be completed in one semester, but students may continue at their own pace.*

### MEDICAL OFFICE ADMINISTRATIVE PROCEDURES
*(This option can be completed in the Fall Semester.)*

Required courses:
Offered

| | | | |
|---|---|---|---|
| MED 1103 | Medical Terminology | 3 | F/W/S |
| MDA 1051 | Administrative Procedures #1 | 4 | F |
| MDA 1350 | Medical Law and Ethics | 3 | F/W |
| CIS 1000 | Word Processing Applications | 1 | F |
| BIS 2100* | Advanced Applications | | |
| | *Medical Transcription *(Highland Lakes Campus Only)* | 1 | F |
| BIS 2107* | Introduction to an Integrated Package | | |
| | *Computerized Office Billing Pkg *(Highland Lakes Campus Only)* | 1 | F |
| | TOTAL CREDITS | 13 | |

## MEDICAL OFFICE CLINICAL PROCEDURES
### *(This option can be completed in two semesters - Fall and Winter)*
Required courses:

| | | | |
|---|---|---|---|
| MED 1103 | Medical Terminology | 3 | F/W/S |
| MDA 1140 | Medical Assisting Clinical Procedures I | 3 | F |
| MDA 1200 | Basic X-ray and Spirometry | 1 | F |
| MDA 1250 | Phlebotomy | 1 | F/W |
| MDA 1170 | Medical Assisting Laboratory Procedures | 3 | W |
| MDA 1570 | Basic Electrocardiography | 3 | F |
| MDA 2010 | Medical Office Medications | 3 | W |
| MDA 1350 | Medical Law and Ethics | 3 | F/W |
| | TOTAL CREDITS | 20 | |

**Note: The student must meet with a counselor to verify eligibility to receive a Certificate of Achievement.**

**® A student must achieve a minimum grade of "C" to <u>successfully complete a required course.</u>**

MEDICAL INSURANCE CODING & BILLING
*(This option can be completed in the Winter Semester.)*
Required courses:

| | | | |
|---|---|---|---|
| CIS 1000 | Computer Literacy | 1 | F/W |
| MED 1103 | Medical Terminology | 3 | F/W/S |
| MDA 1350 | Medical Law and Ethics | 3 | F/W |
| MDA 2380 | Medical Office Coding & Insurance Billing | 4 | W |
| BIS 2107* | Introduction to an Integrated Package | | |
| | *Computerized Office Billing *(Highland Lakes Campus Only)* | 1 | F/W |
| BIS 2108 | Integrated Package Applications | | |
| | *BCBS Computer Billing Package *(Highland Lakes Campus Only)* | 1 | W |
| | TOTAL CREDITS | 13 | |

PHLEBOTOMY
*(This option can be completed in the Winter Semester.)*
Required courses:

| | | | |
|---|---|---|---|
| MED 1103 | Medical Terminology | 3 | F/W/S |
| MDA 1250 | Phlebotomy | 1 | F/W |
| MDA 1170 | Medical Assisting Laboratory Procedures | 3 | W |
| MDA 1350 | Medical Law and Ethics | 3 | F/W |
| | TOTAL CREDITS | 10 | |

OPHTHALMIC ASSISTING
*(This option can be completed in the Winter Semester.)*
Required courses:

| | | | |
|---|---|---|---|
| MED 1103 | Medical Terminology | 3 | F/W/S |
| MDA 1250 | Phlebotomy | 1 | F/W |
| MDA 2010 | Medical Office Medications | 3 | W |
| MDA 2410 | Ophthalmic Assisting Procedures I | 3 | F/W |
| MDA 2420 | Ophthalmic Assisting Procedures II | 3 | F/W |
| MDA 1350 | Medical Law and Ethics | 3 | F/W |
| | TOTAL CREDITS | 16 | |

**Note:** The student must meet with a counselor to verify eligibility to receive a Certificate of Achievement.

® A student must achieve a minimum grade of "C" to <u>successfully complete a required course.</u>

**OAKLAND
COMMUNITY
COLLEGE**

### Curriculum Review Committee

Medical Assisting
Faculty Coordinator: Karen Kittle
December 7, 2007

- Appears there has been an issue for MDA students to be able to register due to priority registration (not enough credits), and waitlist students for other Allied Health program. Faculty coordinator has worked with College Curriculum Committee and the Dean to address this issue.
- MDA will reconsider offering administrative courses and lab courses at SF. Faculty coordinator will work with the Southfield Dean and the Dean of Allied Health. If program is to be increases the college will need to support the added need for faculty, resources, and support for an expanding accreditation process.
- Consider adding sections of Phlebotomy and Medical Billing and Coding to meet the student needs.
- The MDA website needs to be update and CRC recommends the faculty coordinator work with the Office of Assessment & Effectiveness.
- Course Description for MDA 2010 needs revision, and MDA 2460 needs prerequisite update.
- Consider an entrance exam (assessment) for all Allied Heath programs to determine if students might need to develop more critical thinking skills before entrance into the program.
- Consider placing into the program catalogue description a strong recommendation for a required level of Math, English and Critical Thinking skills necessary to be a successful student.

**Curriculum Review Committee**

Medical Assisting
Faculty Coordinator: Karen Kittle
December 7, 2007

- Appears there has been an issue for MDA students to be able to register due to priority registration (not enough credits), and waitlist students for other Allied Health program. Faculty coordinator has worked with College Curriculum Committee and the Dean to address this issue.
- MDA will reconsider offering administrative courses and lab courses at SF. Faculty coordinator will work with the Southfield Dean and the Dean of Allied Health. If program is to be increases the college will need to support the added need for faculty, resources, and support for an expanding accreditation process.
- Will schedule a meeting with Dr. Boulos this fall to discuss this possibility.
- Consider adding sections of Phlebotomy and Medical Billing and Coding to meet the student needs.
- A section of phlebotomy was added Spring 08. Additional Billing and Coding courses would be irresponsible on our end to put so many out into the community looking for jobs.
- The MDA website needs to be update and CRC recommends the faculty coordinator work with the Office of Assessment & Effectiveness.
- This has been completed thanks to the hard work of Marty Orlowski and his department.
- Course Description for MDA 2010 needs revision, and MDA 2460 needs prerequisite update.
- Curriculum changes to MDA hope to be started this academic year.
- Consider an entrance exam (assessment) for all Allied Heath programs to determine if students might need to develop more critical thinking skills before entrance into the program.
- There is ongoing discussion regarding this issue between the Health Professions and Technology Department.
- Consider placing into the program catalogue description a strong recommendation for a required level of Math, English and Critical Thinking skills necessary to be a successful student.
- This is under consideration; but, considering all skills (lifting, eyesight, hearing, and communication both written and verbal, etc., all located in a list in the program handbook) the description of the program in the catalog could just keep growing and growing. I wonder if the catalog is the right place for all that is expected.