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**Ohio Articulation Number (OAN)  
Course Submission Form  
2005-2006**



College/University Youngstown State University

Course(s) Submitted(Title & Course #) CLTEC 1501/1501L Intro to CLS for  
**(REVISED)**  
Ohio Articulation Number OHL008

Date 5-17-06 Course \_\_\_\_\_ of a \_\_\_\_\_ Course OAN mapping.

Name and title of individual submitting on behalf of the college/university

Name Maria Delost Title Professor & Director of Clinical Laboratory Programs

Address Dept of Health Professions  
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Phone 330-941-1761

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Credit Hours 3 qtr \_\_\_\_\_ sem X

Lecture Hours 2

Laboratory Hours 1 (if applicable)

Pre-Requisites(s) Course work (if applicable) Algebra 1 & 2, High School Chemistry or equivalent

Placement Score (if applicable) NA

(Name of test)

(Domain) (Score)

Catalog/Course Description (Includes Course Title and Course #)

CLTEC 1501/1501L: Introduction to Clinical Laboratory Science. Overview of the clinical laboratory profession, ethics, responsibilities and clinical relevance of laboratory procedures. Prereq.: Algebra 2, high school chemistry

and biology. Concurrent with CLTEC 1501L. 2sh  
 CLTEC 1501L: *Introduction to Clinical Laboratory Science Laboratory*.  
 Phlebotomy, specimen collection and processing, basic clinical laboratory  
 exercises. Three hours of lab per week. Concurrent with CLTEC 1501.  
 Prereq.: Algebra 2, high school chemistry & biology. 1 sh

Texts/Outside Readings/Ancillary Materials

Please see attached syllabus; Text: *Clinical Laboratory Science: The Basics & Routine Techniques*, Linne & Ringsrud. 4<sup>th</sup> edition 1999,  
 Laboratory packet, handouts provided by instructor for lecture Laboratory.

Course Objectives and/or Plan of Work

**Syllabus**

**INTRODUCTION TO CLINICAL LABORATORY TECHNOLOGY CLTEC 1501/1501L Syllabus**  
 Revised Spring 2006

***INSTRUCTOR***

**Joan L. Boyd, Ph.D., M.T.(ASCP)**

***OFFICE***

**Room # 3074**

Professor, Health Professions

Bitonte College of Health & Human Services

Contact Information

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Office Hours

Mondays & Wednesday 2:00 – 4:00 PM

**Telephone: 330-941-3337  
 AM**

**Tuesdays & Thursdays, 11:00 –12:00**

Lecture Sessions: Tuesday & Thursdays 9:30 - 10:20 AM CUSHWA HALL, Room 3071

Laboratory Sessions: Tuesdays & Thursdays, Room 2096, 11:00-1:50

COURSE GOAL

This course is designed to introduce the aspiring Clinical Laboratory Scientist and Clinical Laboratory Technician to the field of Clinical laboratory science and present him or her with the opportunity of surveying some of the basic techniques of laboratory procedures in an organized manner.

COURSE DESCRIPTION:

Overview of the clinical laboratory profession, ethics, responsibilities and clinical relevance of laboratory procedures.  
 Prereq.: High school chemistry, Algebra I and II, and/or Geometry. To be taken concurrently with CLTEC 1501L.

REQUIRED TEXTS AND MATERIALS

1. *Clinical Laboratory Science. The Basics & Routine Techniques*, 4th edition Mosby, 1999.\*Linne and Ringsrud,
2. 501L Lab Manual, Boyd, Delost & Moore.
3. Eye goggles & sharpie marking pencil, purchased in book store
4. Linear graph paper, 10 squares to the centimeter, purchased in book store
5. Lab coats and gloves will be provided

\*Keep Textbook, it will be used in future CLTEC/CLS

### Exam Schedule

1st Exam	20 %	Feb. 28, 2006
2nd Exam	20 %	March 23, 2006
Take Home Exam	5 %	April 13, 2006
Final comprehensive	40 %	Thursday, May 11, 2006 10:30 – 12:30
TOTAL	100	

Exam schedules are subject to change, but students will be notified in advance

### GRADING SCALE FOR LECTURE:

<u>POINTS</u>	<u>PERCENTAGE</u>	<u>LETTER GRADE</u>
360-400	90 - 100%	A
320-358	80 - 89%	B
280-318	70 - 79%	C
240-278	60 - 69%	D (must repeat course)
Less than 240	Less than 60%	F (must repeat course)

Examinations will cover materials from the assigned readings, handouts, and lectures. There will not be make-ups for lab exams, the lab will be utilized by other classes. Failure to take a scheduled lecture exam will result in a "zero" for the examination unless the instructor is notified at least 24 hours in advance with a legitimate excuse. This is the responsibility of the individual student. Extra points will not be given for make-up exams without legitimate reasons.

Policies for academic honesty will be followed according to the policy in the 2005 YSU catalog). Students are encouraged to read this section. In reference to the University Policy for absence from classes in the YSU catalog, "...students must realize that for their welfare they are expected to attend all meetings of a course in which he/she is enrolled." Therefore students will be docked one letter grade for 2 labs missed, 3 labs missed a D. Absentees from lectures will also be considered in the grading and extra points.

### STUDENT RESPONSIBILITIES

#### DISCLAIMER -

All students must sign the informed consent waiver attached before the semester ends, and take the required immunization shots and physical exam. University Health Services will administer immunizations (series of three hepatitis immunizations - \$140) and a physical exam at no charge. Call nurses office at 941-3489 to make an appointment for the injections and the physical exam after the first two weeks of school. You must bring your physical exam form with you to the Health Service offices station, which will be given to you by the instructor teaching the course. All physical exams must be completed before the beginning of the semester and the hepatitis immunization sequence initiated. Students must provide their immunization record to the instructor before they will be allowed to proceed to the next CLTEC Class.

#### LABORATORY FEES:

The materials fee is used to directly support laboratory instruction. Program Coordinators in consultation with faculty will purchase supplies, disposables, equipment and other educational support materials.

## LECTURE SYLLABUS

### LECTURE TOPICS

### REFERENCE (Linne & Ringsrud)

Program Requirements, health policies Handouts, consent physical  
Exams, consent & waiver forms, & insurance forms

Introduction to Clinical Laboratory Science Chapter 1  
History of MT CLIA Regulations, Lab Departments, Personnel  
Testing sites, Medical Legal Issues

Hazards and Universal Precautions Chapter 2  
Safety Standards/Governing Agencies Chapter 4  
Systems of Measurement/Laboratory Equipment  
Glassware and Plastic Ware  
Laboratory Reagent Water  
Weighing, use of Balances, centrifuges & pipettes

Collecting/Processing Specimens Chapter 3

Quality Assurance/Quality Control Chapter 8  
Types of Blood Collection,  
Chain of Custody  
Transport/preservation/Anticoagulants  
**Exam 1, February 28 (Chapters 1-4)**

Laboratory Math Chapter 7  
Proportions, Dilutions, Exponents,  
Significant figures, Solution Concentration

Introduction to Clinical Chemistry, Photometry Chapter 11  
Standards, Controls, Standard Curve  
Reporting and recording results  
Glucose/ Bun, Key terms Handouts

#### **Exam 2, March 23 (Chapters 7, 8 11)**

Microscope-Introduction to Hematology: Chapters 5 & 6  
Formation/function of blood cells Chapter 12  
Hemoglobin, Hematocrit, Indices  
Blood counts, Key terms Handouts

Urinalysis Chapter 14  
Microbiology

**FINAL EXAM April 13, 2006 - COMPREHENSIVE** Chapter 16

## LABORATORY SYLLABUS

### Laboratory Sessions

### Topics

1. Orientation,
  - a) Standard Precautions & Safety, disposal methods.
  - b) Pipette and glassware exercise
  
2. Spectrophotometer, photometers, colorimeters
  - a) Measurement of Copper sulfate solution
  - b) Make dilutions
  - c) Introduction to venipuncture
  - d) Practice tying tourniquet
  
3. Hematology & Continuation of blood drawing preparation
  - a) Preparing needle and vacutainer holder
  - b) Locating the vein
  - c) Practice on blood drawing arm
  
4. Hematology & Continuation of blood drawing practice
  - a) Practice on arm and patient
  - b) Capillary puncture
  - c) Hematocrit & Hemoglobin
  - d) Blood drawing
  - e) Triage specimens
  - f) Make blood smears
  - g) Stain blood smears
  
5. Introduction to Chemistry
  - a) Glucose procedure on Beckman
  - b) Bun procedure on Beckman
  
6. Quality Control
  - a) Levy Jennings Graphs
  - b) QC on refrigerators, freezers, incubator
  
7. Urinalysis Procedures
  - a. Physical
  - b. Chemical
  - c. Microscopics
  
8. Blood Typing
  - a. Forward & Reverse
  - b. RH factor & Phlebotomy
  - c. Specimen preparation
  
9. Introduction to Microbiology
  - a. Throat cultures, set ups, plate cultures
  - b. Gram stain
  - c. Rapid test for Group A Streptococcus

**Midterm Exam Tuesday March 9, 2006**  
**Final Exam May 4, 2006 (Week before Finals)**

Description of Assessment and/or Evaluation of Student Learning

Students are assessed on performance on lecture examinations, laboratory performance and practical examinations

Please see course objectives, which follow.

YOUNGSTOWN STATE UNIVERSITY  
DEPARTMENT OF HEALTH PROFESSIONS  
CLINICAL LABORATORY TECHNOLOGY  
CLTEC 1501/1501L: INTRODUCTION TO CLINICAL LABORATORY ECHNOLOGY  
GENERAL OBJECTIVES

UPON COMPLETION OF THE COURSE, THE STUDENT SHALL BE ABLE TO:

I. PROFESSIONAL ASPECTS

1. Define and differentiate between the following terms:
  - a. licensure
  - b. certification
  - c. accreditation
2. State the name and purpose of each of the following agencies. Identify the role of each in the clinical laboratory or clinical laboratory profession
  - a. NAACLS
  - b. ASCP
  - c. ASCLS
  - d. JCAHO
  - e. CAP
  - f. FDA
3. Maintain a safe and orderly work area in the laboratory.
  - a. Organize reagents and supplies appropriately.
  - b. Demonstrate correct use of reagents, supplies and quality control reagents.

II. LABORATORY SAFETY

1. Locate and describe the use of the laboratory fire extinguishers
2. Locate and describe the use of the eye wash stations.
3. Describe basic first aid measures for
  - a. minor cuts and bleeding
  - b. fainting
  - c. chemical and heat burns
4. Identify the Biohazard Symbol
5. Utilize proper hand-washing techniques
6. State the purpose of and properly use the following personal protective equipment in the clinical laboratory
  - a. barrier precautions
  - b. gloves
  - c. eye protection

7. Properly handle and describe the correct storage of hazardous chemicals.
8. Correctly decontaminate laboratory work areas prior to and at the conclusion of each laboratory session.
9. Dispose of all laboratory waste in the appropriate containers to include sharps, non-contaminated glassware, test tubes, specimens, cultures, slides and other disposable laboratory supplies.
10. Properly practice all infection control measures as required by the policy of the Department of Occupational Health & Safety.
11. Discuss and apply safety regulations related to fire, chemical, and biohazards.

### III, BLOOD COLLECTION

1. Properly identify and approach the patient for blood collection.
2. Demonstrate appropriate use of gloves when collection blood specimens and during laboratory practice.
3. Demonstrate correct technical in skin (capillary) puncture performing a minimum of two capillary punctures with proper technique and minimal instructor intervention.
  - a. Assemble all necessary equipment.
  - b. Properly position patient
  - c. Cleanse site correctly and wipe away the first drop of blood. Indicate why the first drop of blood should not be used in analysis
  - d. Collect blood applying gentle pressure, but no squeezing.
  - e. Label accurately and correctly.
  - f. Apply pressure to site with sterile gauze or cotton.
  - g. Properly dispose used supplies.
  - h. Remove gloves and wash hands
  - i. List reasons when it is necessary to perform capillary puncture.
4. Demonstrate correct technique for phlebotomy (Venipuncture) using the Vacuum tube method with minimal instructor intervention. The student must successfully perform four venipunctures using the vacuum tube technique.
  - a. Name and locate suitable veins for phlebotomy and indicate why certain veins are not appropriate for phlebotomy
  - b. Assemble all necessary equipment.
  - c. Palpate and trace vein's path.
  - d. Properly apply tourniquet
  - e. Cleanse area with alcohol
  - f. Have patient make a fist
  - g. Anchor vein and collect required tube with suitable needle.
  - h. Open patient's hand and release tourniquet
  - i. Apply pressure with sterile gauze or cotton to site
  - j. Label tubes completely
  - k. Properly dispose needle and used supplies
  - l. Remove gloves and wash hands
5. Indicate how the following affect blood collection and describe how each situation could be remedied.
  - a. Patient has an IV in one forearm.
  - b. Patient has burns at phlebotomy sites.
  - c. Patient has a shunt in one wrist.
  - d. Patient's requisition does not match wrist band.

6. ANTICOAGULANTS: State the use, function, purpose, and color of the cap of each of the following anticoagulants

- a. Heparin
- b. E.D.T.A
- c. Sodium Citrate
- d. Sodium Fluoride

7. State which tubes yield serum upon collection and which tubes yield plasma. Differentiate serum from plasma.

a. Identify the layers of which blood settles into when it is coagulated and anticoagulated.

8. Describe the normal appearance of serum or plasma. Describe each of the following appearances and give a reason for each of these appearances.

- a. Icteric
- b. Hemolytic
- c. Lipemic

#### IV. MICROSCOPE

1. Identify and state the purpose of each of the the following parts of the microscope

- a. Light source
- b. Condenser
- c. Iris diaphragm
- d. Magnification system
- e. Low power objectives (4X|10X)
- f. High power objective (40X or 45X 10)
- g. .Oil-Immersion objective (100X 10)
- h. Oculars
- i. Body Tube
- j. Coarse adjustment
- k. Fine adjustment
- l. Mechanical stage
- m. Rheostat
- n. Base
- o. Nose piece

2. Correctly operate the microscope using the following techniques

- a. Aligning the light path
- b. Adjusting the light with the rheostat, diaphragm, and condenser
- c. Focusing first with the coarse adjustment under low power, using the fine adjustment only under high power or with the oil objective.
- d. Cleaning all lenses only with lenses paper when use is completed.
- e. Remove all oil from oil objective with lens paper when use is completed.
- f. Leave microscope with low power objective in place.

#### V. LABORATORY GLASSWARE

1. Identify, describe the function of and correctly use the following containers and receivers

- a. Beakers

- b. Erlenmeyer flasks
  - c. test tubes
  - d. reagent bottles
  - e. Photometry cuvettes
2. Describe volumetric glassware and identify and use the following appropriately.
    - a. volumetric flasks
    - b. graduated cylinders
    - c. pipettes
      1. volumetric
      2. graduated (Mohr and Serological)
  3. Identify, describe the function, and properly use when needed
    - a. Micropipettes
    - b. Unopettes
    - c. automated micropipettes

#### VI. LABORATORY WATER

1. Differentiate between deionized, distilled, and tap water.
2. Locate sources of distilled or deionized water in the laboratory

#### VII. BALANCES

1. Identify the major parts of the analytical balance
2. Operate the analytical balance correctly, accurately weighting materials.

#### VIII. PIPETTING AND SOLUTION PREPARATION

1. Accurately perform the manual pipetting technique:
  - a. Select proper pipet
  - b. Wear gloves if appropriate
  - c. Using suction bulb, draw fluid to desired level
  - d. Adjust bottom of meniscus to calibration mark at eye level
  - e. Drain fluid while holding pipet in vertical position
  - f. When draining is complete, touch pipet tip to inside wall of receiving vessel.
  - g. Place pipet into appropriate vessel.
2. Perform conversions within the metric system and between the metric and English system.
  - a. Give the decimal equivalents of all metric units.
  - b. Relate metric symbols to decimal equivalents.
3. Prepare the following types of solutions correctly, measuring chemicals accurately. Perform calculations for solution preparation, using correct units.
  - a. weight/volume
  - b. volume/volume
  - c. percent
  - d. normal
  - e. molar
4. Properly perform a titration exercise
  - a. determine exact normality of a prepared standard

- b. determine normality of an unknown acid or base by using the equation  $N_a V_a = N_b V_b$
  - c. state and solve the equation for determining normality
5. Relate different concentrations of solutions which contain the same amount of chemical of solute.
  - a. Use the equations  $C_1 V_1 = C_2 V_2$  to determine the unknown concentrations when given the other three parameters

#### IX. CENTRIFUGE

1. Locate at least three different types of centrifuges in the laboratory. State the purpose of each type of centrifuge.
2. Properly balance and use the centrifuge with the instructor's assistance.

#### X. SPECTROPHOTOMETER

1. Explain the basic operation of the spectrophotometer and operate the spectrophotometer properly to include:
  - a. setting the wavelength
  - b. set to "zero" percent transmittance
  - c. set to 100% transmittance with reagent blank
  - d. read absorbance and %T of standards, unknowns, and controls
  - e. handle cuvettes properly
2. State and apply Beer's Law and solve the equation for an unknown concentration
3. Prepare a standard curve by
  - a. read the absorbance of standards
  - b. plot concentration against absorbance or concentration percent transmittance
  - c. determine concentration of an absorbance or percent transmittance and interpreting result on a standard curve.

#### XI. HEMATOCRIT

1. Properly collect and interpret two hematocrits, each to be performed in duplicate:
  - a. Assemble all required supplies
  - b. Select proper microhematocrit tube
  - c. Collect capillary blood using correct technique
  - d. Fill tubes 2/3 to 3/4 full with blood and seal with clay
  - e. Centrifuge in microhematocrit centrifuge for five minutes.
  - f. Read results using a metric ruler or hematocrit reader. Duplicate results should agree within 2%
  - g. Identify sources of error with the manual hematocrit method
2. Identify the red cell column, buffy coat, and plasma layer of whole blood after centrifugation
3. State the reference range for the hematocrit for adult males and adult females
4. State the correct units of measurement for the hematocrit.
5. Define anemia and polycythemia.

6. Explain the clinical relevance of the hematocrit.

## XII. HEMOGLOBIN

1. State the principle of the cyanmethemoglobin procedure.
2. Give the wavelength at which hemoglobins are read
3. State the reference hemoglobin for adult males and adult females
4. State the correct units of measurement for hemoglobin.
5. Perform the hemoglobin procedure without error with values agreeing within 0.5 g/dl of the known value.
6. Relate the clinical significance of the hemoglobin in the diagnosis of disease.
7. Explain the "Rule of Three".

## XIII. MANUAL LEUKOCYTE (WRITE BLOOD CELL) COUNT

1. Name a diluting fluid suitable to perform the manual WBC
2. State the usual dilution for performing manual WBC counts
  - a. Identify the Thoma Pipet:
  - b. Identify the units of volume on the Thoma Pipet
  - c. Determine the dilution of blood when blood is drawn to the 0.5 mark and diluent to the 11.0 mark
  - d. Determine the dilution of blood when blood is drawn to the 1.0 mark and diluent to the 11.0 mark
3. State the volume of:
  - d. one entire side of the hemocytometer
  - e. the four large squares for counting white blood cells
4. Determine the volume correction when given the number of squares counted
5. Calculate the WBC/ul when given the number of cells counted, dilution, and volume correction
6. State the reference leukocyte range per ul for adults.
7. Define and explain the clinical relevance of
  - a. leukemia
  - b. leukocytosis
  - c. leucopenia

## XIV. BLOOD SMEAR AND DIFFERENTIAL WBC COUNT

1. Prepare ten blood smears suitable for performing a differential WBC count with the following criteria:
  - a. cover 1/2-3/4 of slide
  - b. use one quick motion and an angle between 30°-45°.
  - c. attain a "feathered edge" at the thin end
  - d. attain a slide of moderate thickness
2. Stain using the procedure described by the instructor
3. Identify and describe the following types of cells:
  - a. Erythrocytes
  - b. Leukocytes: neutrophils, eosinophils, basophiles lymphocytes and monocytes
  - c. Thrombocytes (platelets)
4. Describe the appearance of normal erythrocytes on a Wright Stained Smear
  - a. Identify and describe two abnormal erythrocyte shapes (i.e., sickle cells, target cells, etc.)

5. State the normal percentage and function of each of the following leukocytes:
  - a. Neutrophils
  - b. Eosinophils
  - c. Basophils
  - d. Lymphocytes
  - e. Monocytes
6. Perform one normal adult differential white cell count with the instructor's assistance.
7. View abnormal hematological slides (microscopic slides or kodachromes) and identify abnormal RBCs and WBCs with the instructor's assistance.
8. Define and differentiate absolute from relative WBC counts.

#### XV. INTRODUCTION TO URINALYSIS

1. Describe the proper method to collect a specimen for a routine urinalysis
2. Perform four complete urinalysis on specimens to includes
  - a. Physical Examination: Color, appearance, odor
  - b. Chemical Examination: Dipsticks and specific gravity
  - c. Sediment Examination
  - d. Identify and discuss sources of error associated with the examination of urine.
3. Give the following normal values, briefly state the principle and relate the clinical significance of abnormal results for urine
  - a. Color, appearance
  - b. Specific gravity
  - c. pH
  - d. glucose
  - e. ketone bodies
  - f. protein
  - g. nitrate
  - h. bilirubin
  - i. urobilinogen
  - j. hemoglobin (blood)
4. Give the normal values and state the significance of finding increased levels of the following in urine
  - a. Erythrocytes
  - b. Leukocytes
5. Briefly describe the following and indicate the significance of each when found in urine
  - a. Casts
  - b. Crystals
  - c. Bacteria

#### XVI. INTRODUCTION TO BLOOD BANKING

1. State the red cell antigens present in the following blood groups
  - a. A
  - b. B
  - c. AB
  - d. O
2. State the antibodies present in the following blood groups
  - a. A
  - b. B

- c. AB
  - d. O
3. Perform four ABO/Rh typings with the assistance of the instructor, correlating the results of the forward and reverse typing.
    - a. Forward Typing:
      - Correctly label tubes and add antisera
      - Add one drop of 3-5% washed red cells
      - Gently mix and centrifuge for 15 seconds
      - Read for hemolysis and agglutination
      - Interpret results
    - b. Reverse Typing:
      - Correctly label tubes and add patient serum
      - Add reverse cells (A<sub>1</sub> and B)
      - Gently mix and centrifuge for 15 seconds
      - Read for hemolysis and agglutination
      - Interpret results
  4. Determine the ABO/Rh blood type when given patient's reactions with antisera and red cells.
  5. Explain how an individual's ABO genotype is inherited.
  6. State the most common and least common blood groups.
  7. Discuss the Rh factor and how it is identified in the laboratory.
    - a. Differentiate Rh negative from Rh positive.

#### XVII. INTRODUCTION TO MICROBIOLOGY

1. Describe the appearance of gram positive and gram negative bacteria on a gram stained smear.
2. Briefly explain the infectious process.
3. Describe and give examples of how the following cause infectious disease.
  - a. bacteria
  - b. viruses
  - c. parasites
  - d. fungi
4. Describe the following morphologies:
  - a. Cocci
  - b. Bacilli
5. Perform five gram stains and accurately interpret the results
6. Observe agar plates for colonial morphology prepared by the instructor.
7. Explain how agar and other culture media are used to grow and identify the growth characteristics of bacteria.

#### XVIII. INTRODUCTION TO CLINICAL CHEMISTRY

1. Describe the uses and general principles of the automated and manual methods of instrumentation.
  - a. Spectrophotometer
  - b. Ion Specific electrode
  - c. Beckman analyzers
2. Describe the instruments used in the clinical chemistry laboratory
3. State the principles, theories and techniques of laboratory procedures for
  - a. Serum Glucose
  - b. BUN
  - c. Electrolytes

4. Demonstrate the use and care of laboratory instruments.
  - a. Beckman Analyzers
  - b. Ion Specific electrodes
5. Prepare the glucose oxidase, BUN, and standard reagents.
6. Describe the use of each of the following are used in the clinical laboratory.
  - a. Standards
  - b. Controls
  - c. Levy Jennings plot
7. Define the following terms.
  - a. Calibration
  - b. Standardization
  - c. Preventative maintenance

OBR Use	Action
Approved	
Additional Information Requested	
Rejected	
Date	

## Ohio Articulation Number Form Directions

This form is used to submit your course information to the Ohio Board of Regents, for all courses that make up OAN requirements. This document is a form, so the only fields that need to be filled in can be. When you open this, make sure the top of the screen, where the name of the document is displayed, says "Document1" or something similar to that. When you open this form from a location other than inside of word, it creates a blank template to fill in. Please fill it in with the appropriate course information from your institution. All of the fields in this document are expandable, and will grow to fit as much data in them as you need. Note that these fields are implemented as MS Word tables. Keep that in mind as you are copying and pasting between your syllabi and this form.

Once you are done entering your course information, you need to save this file. Since Word opened a blank version of this file, you will need to rename it to save it. Under file, choose "Save as" and then enter the name of the file. The naming scheme for this form is Institution-Year-OAN number-Course Title.

Example, if you were ABC Community College, and you were submitting your Calculus110 course, the name of the file would be ABC-2005/06-OMT005-Calculus110. If two (or more) courses are required to fulfill that same OAN, you would submit ABC-2005/06-OMT005-Calculus110Calculus111.

When you are done with your submissions, please send them electronically to the Ohio Board of Regents at [atpanels@regents.state.oh.us](mailto:atpanels@regents.state.oh.us) so we can keep your information on file.

If you encounter any problems or have any questions, please contact any of the individuals listed bellow:

Jim Ginzer (614) 752-9486 [jginzer@regents.state.oh.us](mailto:jginzer@regents.state.oh.us)

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