Dear Prospective Applicant,

Thank you for your interest in Cuyahoga Community College’s Medical Laboratory Technician (MLT) Program. Please review this information carefully. Note that there are specific Mathematics, English, Chemistry, Intro to MLT and Medical Terminology courses necessary prior to admission to the program (pre-requisites). An appointment with a Tri-C academic counselor is recommended to answer your questions and guide you toward your career in Medical Laboratory Technology (MLT) using the program planner sheet.

You are urged to submit your MLT application to the Health Career Enrollment Center (HCEC) at the time you enroll in the final pre-requisite courses. There is often a high demand for the program which may result in delayed entry into the program after applying. A file will be set up in the Health Career Enrollment Center, which will be updated as you complete the required pre-program courses. If you have any questions about the application process, please contact the Health Careers Enrollment Center at (216) 987-4247.

Again, thank you for your interest in Cuyahoga Community College and the MLT Health Careers Program.

Mary Jean Krueger M.S., MT (ASCP) SC
Program Manager
Medical Laboratory Technician Program
Phone: 216-987-4438  Email: MaryJean.Krueger@tri-c.edu

Please send all applications and transcripts to:

Health Careers Enrollment Center
Cuyahoga Community College
Metro Health Careers and Sciences Building 126
2900 Community College Avenue
Cleveland, Ohio  44115-3196
Phone: 216-987-4247

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What exactly is a Medical Laboratory Technician?
The Associate Degreed Medical Laboratory Technician performs a wide variety of complex biochemical, microbiological, serological, hematological and microscopic tests that lead to the diagnosis of diseases and aids physicians in monitoring the progress of the patient’s health. In addition, MLT’s cross match blood, perform quality control in the laboratory, maintain complex biological instruments, and perform phlebotomy. Medical Laboratory Technicians work in a hospital, research, veterinary, reference, or physician’s office laboratories, emergency medical centers, public health facilities, for the American Red Cross or industry. With additional education, jobs may be available in areas such as DNA research, transplant and forensic medicine.

What are the essential cognitive and physical functions necessary for successful completion of course objectives?

In order to meet the program competencies, a student must possess the following characteristics:

SPEAKING/Writing: Possess oral and written competency in the English language necessary to both understand and communicate with instructors, other health care workers, and patients. If ESL student, the TOEFL test must be taken and passed to establish fluency in English.

Hearing: Must be able to hear verbal orders and hear sounds that indicate changing patient status i.e. breath sounds, blood pressure, apical pulse. Must be able to hear alarms on instruments and timers.

Mental Ability: Must be able to learn new procedures and understand directions. Must be able to understand and interpret orders accurately.

Analyze: Must be able to interpret data used in formulating accurate patient assessments, evaluations, and self-evaluation. Make decisions to sufficiently deliver patient care. Must be able to interpret laboratory results and correlate with clinical significance and interpret quality assurance.

Visual: Must be able to observe changes in patient status and unsafe environmental conditions. Have visual acuity sufficient to use microscopes to perform analyses requiring distinguishing structural details and staining characteristics of cells and microorganisms, and have the ability to distinguish colors on procedural test strips and color charts.

Reading: Must be able to read and comprehend written course materials and documentation of patient care and office policies and procedures in the English language. ESL students must pass the TOEFL test in reading.

Calculating: Must be able to administer correct dosage of medications. Must be able to utilize laboratory mathematics in calculations of formulas and reagent preparation.

Smelling: Must be able to detect odors indicating unsafe conditions.

Mobility: Must be able to move freely to observe patients, perform patient emergency care.
DEXTERITY: Must be able to capably perform medical lab procedures. Capable of full manual dexterity of upper extremities, unrestricted movement of both lower extremities, neck, shoulders, back and hips to assist patients in phlebotomy procedures. Possess gross and fine manual dexterity sufficient to handle specimens or reagents, and perform analytical procedures requiring the use of small, delicate tools, equipment, and instruments.

BENDING: Must be able to bend to touch the floor to remove environmental hazards or reagents

LIFTING: Must be able to assist with moving and ambulating patients. Must be able to lift and/or support at least 75 pounds; to reposition, transfer, and ambulate patients safely.

OBJECTIONABLE SPECIMENS: Must be able to handle/process specimens which may be of an objectionable nature and odor.

Are you required to be licensed or certified?
Currently, there is no licensure for MLT’s in Ohio. After successful completion of Tri-C’s MLT Program, students may be eligible to sit for a national certification examination, such as that given by American Society for Clinical Pathology (ASCP). Inquire to the certification agency regarding specific eligibility requirements. The local medical facilities usually require that a medical laboratory technician be certified. Taking a certification examination is NOT a condition for being awarded the Associate of Applied Science Degree.

What is the typical salary for a Medical Laboratory Technician?
Starting salary varies with location and type of facility, however is generally $35,000 to $46,000 in the Cleveland area with a registry certification.

Where can I obtain employment?
Medical Laboratory Technicians work in hospitals, research, veterinary, reference, physician’s office laboratories, emergency medical centers, public health facilities, American Red Cross or for industry. With additional education, jobs are available in areas such as education, sales, protein/DNA research, transplant, and forensic medicine.

How would you describe Tri-C’s MLT Program?
The Medical Laboratory Technology program at Cuyahoga Community College leads to an Associate of Applied Science (A.A.S.) degree that gives students an integrated curriculum of classroom work and an abundance of hands-on, professional experience. The program offers students a solid foundation in mathematics, chemistry, anatomy and physiology, medical laboratory procedures, and medical ethics. This, along with the integrated liberal arts/general education courses and a 576-hour clinical field experience in a N.E. Ohio or Cleveland area hospital, results in a high quality, well-rounded program.

How long is the program?
The MLT Program (AAS degree) is a 24 month program-you cannot complete the course work in less than 21 months. All MLT courses must be taken in the stated sequence. There is no program summer session between first and second year.
What is the structure of the program?
Many courses are taught in the daytime, however, are dependent on the availability of faculty. Some courses have distance-learning lecture components. All labs are hands-on on campus. There are no program classes during the summer between years one and two. The clinical field experience does meet Monday through Fridays, the final fall semester of the program, for 8 hours per day.

Where is the program held?
The MLT program’s MLT technical courses are offered at the Metropolitan Campus, and the general education and science courses may be taken at any of Tri-C’s campuses. The hands-on clinical training is performed in hospital laboratories within a 50 mile radius of Metropolitan Campus.

Can I complete it on a part-time basis?
NO. The program is considered a mostly day program and full time due to the hours of the clinical field experience (~36 hours per week). Early morning hours may be required at times during the clinical field experience. Entry into the program begins each spring semester only, and must be continuous within a two year period.

Is the program offered in the evenings or weekends?
General degree courses may be taken on evenings and weekends but the clinical field experience and most the MLT technical courses are only offered during the daytime hours weekday hours. Some of the MLT lecture courses are offered in the distance learning, internet mode, but may have daytime seminars.

Can I work part-time while in the program?
Students enrolled in the MLT Program are cautioned regarding accepting employment. The intensity and continuity of the program is such that employment may negatively impact coursework responsibilities. The second year fall semester of the program consists of a clinical field experience rotation (~36 hours a week) in an area hospital in addition to a 1 hour seminar and perhaps other associate degree requirement courses.

Can I transfer credits from another college or university?
Generally, yes. Students are encouraged to schedule an appointment with an academic counselor after all transcripts have been forwarded to the college registrar’s office. Students may require a substitution/waiver form in order to match the program requirements.

I already have credits; can I complete the program in less than two years?
The Medical Laboratory Technician Program (AAS degree) is a 24 month program; you cannot complete the course work in less than 24 months due to the clinical field experience rotations. All MLT courses must be taken in the recommended sequence.

What if I am an ESL (English as a Second Language) student?
The ability to communicate verbally and in written form is basic to the provision of health services in a safe and effective manner. Therefore, any student placed in English as a Second Language (ESL) courses through the college’s ESL Assessment procedure (at the college Assessment Center): the student will be required to take and pass the Test of English as a Foreign Language (TOEFL) with a minimum score in Reading 21, Listening 22, Writing 23 and Speaking 24. Arrangements and costs incurred for the TOEFL will be the responsibility of the student.
Can I take the courses Pass/No Pass (P/NP)?
No. The Medical Laboratory Technology (MLT) and Laboratory Phlebotomy (LP) programs require a letter grade for all students who are eligible to elect a pass/no pass score. Credits that are awarded for letter grades are used in the computation of current or cumulative grade point averages needed to progress through these programs. Therefore, all MLT (field experience exempt) and LP curriculum courses, including general degree requirements must reflect a letter grade.

How many students do you accept each year?
15 students may be accepted per year (contingent upon available clinical sites)

When does the Medical Laboratory Technician program start?
The program begins spring semester yearly, application deadline is August 1 (later if spaces remain in the class) of the prior year.

How much does the program cost?
Expected current costs include, but are not limited to:
- Tuition (approximate for in-county) $104.54/credit hr. x 64hrs =~ $6700*
- Laboratory Fees (~10 labs) $500
- Course Fee’s each MLT course (~9 courses @ $55.00 each) $495
- Books and Supplies $1,500
- Liability insurance $12.50
- Background Check ($100) $100
  Total Estimated Cost $9307.50

*Sixty-four credit hours are needed to complete the complete degree requirements. If credits are transferred in from another college/placement tests are used, the cost will be decreased. If a student needs remedial courses to become eligible, the cost will be higher depending on the number of extra courses needed. Textbooks vary in cost, but plan to spend an average of $85 per book per class.

What are some other associated costs? The following costs are also incurred, and are subject to change and not limited to:
- Possible drug screen, (depends on the clinical site) $28
- Professional Liability Insurance from Tri-C, $5
- Physical examination, including vision test (variable) ~150
- Immunizations/titers (including Hepatitis B series) (variable)~$200
- Certification in adult BLS CPR American Heart Assoc. ~$65
- Proof of medical insurance coverage or student health insurance (variable)
- Uniforms (scrubs or uniforms) and leather shoes
- All stationary supplies (ream of paper for printing documents etc.)
- Parking/transportation fees to/from the clinical site, if applicable
- Lab: Lab fees, plus disposable lab coats and gloves, and safety glasses (bookstore)
- Supplemental Fee’s for most MLT courses ~ $55
- Cost of TOEFL test, if ESL student

Is financial aid available?
Generally yes. Students may qualify for financial aid through the usual federal or state programs. For information contact the Tri-C Financial Aid Department at 216-987-4100. Various scholarships through laboratory professional associations and companies may also be available through www.ascp.org or www.ascls.org, or the Tri-C website under “scholarships”.

What steps do I need to take in order to get going?
First you must apply to the college (www.tri-c.edu, use the “apply now” link).
Then either transfer in the appropriate math and English pre-requisites, or visit the assessment center (on each campus) to take the math and English placement tests. Make an appointment with an academic counselor to review your placements, further prerequisites, and review the program planner and create a curriculum plan.

**When should I submit an application?**
The final prerequisite for the program is MLT 1000 Intro to MLT which requires departmental approval from the program manager. When applying to the MLT Program, you may submit your application to the Health Careers Enrollment Center (Metro Campus) during the semester you are finishing your last prerequisite course, or by the summer preceding the fall MLT 1000 course. Completion of the prerequisite courses DOES NOT guarantee acceptance into the program for the current academic year. There is high demand for the program, and applications are accepted on the basis of completion of prerequisites and date of application. The program status is located on the program website, or by contacting the program manager.

**How do I apply to the program?**
Go to [http://www.tri-C.edu/programs/healthcareers/medicallab](http://www.tri-C.edu/programs/healthcareers/medicallab), then to the Health Careers Application link and follow the instructions found there. Once received by the Health Career Enrollment Center, an application file is created for each student, and will only be sent to the program manager for acceptance once all pre-requisites have been completed and the student is enrolled in the MLT 1000 course.

**How will I know if I have a spot in the Medical Laboratory Technician Program for the upcoming spring Semester?**
You are not accepted until you receive a conditional “Letter of Acceptance” from the Program Manager via your Tri-C email account and/or personal account which was given on the application. Students are admitted to the Medical Laboratory Technician Program in the order in which all complete application packets are received and the Entrance Criteria have been met. Applications are accepted throughout the year, application deadline is August 1 of the prior year unless openings still exist. The program begins only in the spring semester annually.

Accepted students will receive a conditional “Letter of Acceptance” in the mail or via Tri-C email from the Program Manager. The student then signs and returns the letter to the program manager by the stated deadline, and the student is placed in the next available class. Acceptance is conditional to the student submitting to a background check and being successfully cleared.

**What are the differences between the Short Term Certificate in Phlebotomy vs. Medical Laboratory Technician Programs?**
The Phlebotomy program trains the student to be proficient in blood collection and processing only. The Medical Laboratory Technician Program prepares the student to obtain an AAS degree, and in addition to blood collection, provides training in hematology, urinalysis, problem solving, microbiology, blood bank and serology, and clinical chemistry.

**What Prerequisite/Core Courses are required before acceptance into the Medical Laboratory Technician Program?**
The following criteria must be met though transfer/placement test, or course:

- ENG 1010 English Composition I (see ESL note below)*
- MATH 1410 Elementary Probability and Statistics
- CHEM 1020 Intro to Organic and Biochemistry
- MLT 1000 Introduction to Medical Laboratory Technology
- MA 1020 Medical Terminology I

1 Students who do not place into MATH-1410 on assessment test must take MATH-0965 or MATH-1240 as a pre-requisite for this program.
2 Enrollment in CHEM-1020 requires students to have either achieved a sufficient score on Chemistry Placement Test or completed CHEM-1010 with "C" or higher. Students with a prior B.S. degree in science/healthcare with chemistry credits should contact the program manager.
Note: Science and Math courses may be no more than 7 years old at time of application to the program. The 7 year rule does not apply to applicants holding biology and or chemistry degrees. Contact program manager.

*ESL Students/TOEFL Test: The ability to communicate verbally and in written form is basic to the provision of health services in a safe and effective manner. Therefore, any student placed in English as a Second Language (ESL) courses through the college’s ESL Assessment procedure (at the college Assessment Center) will additionally be required to take and pass the Test of English as a Foreign Language (TOEFL) with a minimum score in Reading 21, Listening 22, Writing 23 and Speaking 24. Arrangements and costs incurred for the TOEFL will be the responsibility of the student. Submit TOEFL report to the program application. If the student does not achieve this, please contact the ESL department to obtain remediation, and then re-test to obtain these minimums prior to applying to the program.

What GPA is required for the Medical Laboratory Technician Program?
An overall cumulative GPA of 2.5 is required. Successfully complete Core Courses with at least a 2.5 GPA, with no course grade lower than a “C”. Core courses may be repeated once to improve a grade. Once accepted into the program, a minimum grade of C and a 2.5 GPA must be maintained (pass/fails not accepted).

Is there any reason I may not be accepted into the program aside from not meeting the Program Entrance Requirements?
Yes. All students enrolled in health career programs that require students to complete clinical experiences outside the College must complete and pass a background check that includes fingerprinting and court search (BCI), and potentially, a drug screen. For more information: http://www.tri-c.edu/programs/healthcareers/Pages/BackgroundCheckInformation.aspx

Is the program accredited?
Yes, Tri-C’s MLT Program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). NAACLS can be reached at: 5600 N River Rd, Suite 720, Rosemont, IL 60018; Phone: 773-714-8880 or www.NAACLS.org.

Where can I find the Board of Certification exam pass rates?
Please check the program website homepage for the latest information.

Who can I speak to if I have other questions?
You may contact the Program Manager at 216-987-4438 or access the website at http://www.tri-c.edu/programs/healthcareers/medicallab/Pages/default.aspx.

ACCREDITATION AND PARTNERSHIPS

Accredited by:
National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
5600 N River Rd, Suite 720
Rosemont, IL 60018
Phone: 773-714-8880
www.NAACLS.org.

Articulation agreements:
Tri-C maintains agreements with other institutions for transfer of credits from Tri-C such as Cleveland State University, Youngstown State University, Baldwin Wallace and others. These agreements make it easier for Tri-C Medical Laboratory Technology AAS graduates to enroll in these Allied Health Bachelor of Science programs. Please consult the academic advising staff for complete details.
Clinical Field Experience rotation agreements with the following hospitals (subject to change):

- Cleveland Clinic hospitals
- MetroHealth Medical Center
- Parma General Community Hospital
- UH Robinson Memorial Hospital
- University Hospitals (Case Med Ctr. and Richmond Hts.)
- St. Vincent’s Charity Hospital
- St. John Westshore Hospital
- Veterans Administration Medical Center, Louis Stokes
Medical Laboratory Technology Program Entrance Procedures and Criteria

Overview: All requirements for entrance must be completed or student must be enrolled into the final prerequisites in order for the application to be reviewed. The first 15 applicants meeting all requirements (both academic and documentation) will be assigned to the next available class. Upon review of the application the Program Manager will notify eligible candidates with a letter of acceptance or (via Tri-C email account) and the applicant is placed in the next available program opening. Check the program website for Program Status NOTE: Submission of a program application to the Health Career Enrollment Center (HCEC) DOES NOT indicate acceptance into the program.

A. **Apply to the College:** Complete General Cuyahoga Community College application online: [www.tri-c.edu](http://www.tri-c.edu).

B. **Send** the following to Cuyahoga Community College, Office of the Registrar, PO Box 5966, Cleveland, OH 44101:
   a. Official high school transcript or GED certificate.
   b. Official transcript(s) from all colleges/universities previously attended. (Request that the institution forward one (1) to Registrar and one (1) to you so that YOU can also submit one with your completed Health Careers application packet to the Health Careers Enrollment Center).

Note: It may require 8 weeks to evaluate transcripts once they are received. Your application to the Health Career Program will not be complete until transfer credit for core course equivalents is complete.

C. **Complete Core Courses/Prerequisite** Courses required prior to acceptance into program:
   Successfully complete Core Course/Prerequisites, Assessment Test or transfer of equivalent with at least a 2.5 GPA, with no course grade lower than a “C”. Core courses may be repeated once to improve a grade. Science and Math courses may be no more than 7 years old at time of application to the program. The 7 year rule does not apply to applicants holding biology and or chemistry degrees. Contact Program Manager. Once accepted into the program, a minimum grade of C and a 2.5 GPA must be maintained (pass/fails not accepted).

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>ENG 1010</td>
<td>English Composition (see ESL note below)*</td>
</tr>
<tr>
<td>CHEM 1020</td>
<td>Introduction to Organic Chemistry and Biochemistry†</td>
</tr>
<tr>
<td>MLT 1000</td>
<td>Introduction to Medical Laboratory Technology</td>
</tr>
<tr>
<td>MA 1020</td>
<td>Medical Terminology I</td>
</tr>
<tr>
<td>MATH 1410</td>
<td>Elementary Probability and Statistics I²</td>
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†Enrollment in CHEM-1020 requires students to have either achieved a sufficient score on Chemistry Placement Test (at the college Assessment Center) or completed CHEM-1010 with “C” or higher. Students with a prior B.S. degree in science/healthcare with chemistry credits should contact the program manager.

²Students who do not place into MATH-1410 on assessment test must take MATH-0965 or MATH-1240 as a prerequisite for this program.

*ESL Students TOEFL Test:* The ability to communicate verbally and in written form is basic to the provision of health services in a safe and effective manner. Therefore, any student placed in English as a Second Language (ESL) courses through the college’s ESL Assessment procedure (at the college Assessment Center): the student will be required to take and pass the Test of English as a Foreign Language (TOEFL) Internet Based Test (IBT) with a minimum score in Reading 21, Listening 22, Writing 23 and Speaking 24. Arrangements and costs incurred for the TOEFL will be the responsibility of the student. If the student does not achieve this, please contact the ESL department to obtain remediation, and then re-test to obtain these minimums prior to applying. Submit TOEFL report with program application. For more information: [http://www.ets.org](http://www.ets.org)

D. **Complete the Health Careers Program Application found online** (when enrolled in final core courses or prior to entering MLT 1000 in the fall) at: [http://www.tri-c.edu/PROGRAMS/HEALTHCAREERS/Pages/default.aspx](http://www.tri-c.edu/PROGRAMS/HEALTHCAREERS/Pages/default.aspx), and mail along with one copy of your transcript(s) from any other colleges/universities attended. Program application and transcripts should be sent to: Health Careers Enrollment Center, Cuyahoga Community College, 2900 Community College Ave. Cleveland, Ohio 44115. The student needs to notify the Health Career Enrollment Center (HCEC) of course substitutions or waivers either by submitting a copy of their approved substitution form or a note along with their program application letting us know which substitution or waivers are in place. Please label all credentials with your current and maiden name, student number, and date. The responsibility for credential receipt and follow up rests with the applicant. Applicants can readily check the status of required credentials by phone (216-987-4247). After the application is received, requirements are met and verified; the applicant's folder is dated and forwarded to the Program Manager. A conditional acceptance letter will be emailed to the student or sent via Tri-C email account therefore, check it weekly. Admission is not complete until the background check results are approved by the College.

E. **AFTER** the student has replied to the acceptance letter from the program by the Program Manager, the student must successfully complete a **background check**, fingerprinting and Bureau of Criminal Investigation (BCI) records search. A student may be admitted to the Allied Health Career Program at Cuyahoga Community College even if a felony has been
committed. However, there may be instances where a student will not be permitted to test for licensure/certification or be admitted to a clinical setting depending on the guidelines of the outside Accrediting/Certifying Agency or the clinical site affiliate. There is no guarantee of placement at a clinical site. Admission is not complete until receipt of a clear background check by the College. Drug screens may be required to enter a clinical site at the student's expense.

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### Associate of Applied Science Degree in Medical Laboratory Technology

**Effective Fall 2016 catalog:**

#### Admissions Requirements:

<table>
<thead>
<tr>
<th>Pre-Program</th>
<th>Credit Hr.</th>
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<tbody>
<tr>
<td>CHEM-1020 Introduction to Organic &amp; Biochemistry</td>
<td>4</td>
</tr>
<tr>
<td>ENG-1010 English Composition I (see ESL note below)</td>
<td>3</td>
</tr>
<tr>
<td>MA-1020 Medical Terminology I</td>
<td>3</td>
</tr>
<tr>
<td>MATH-1410 Elementary Probability &amp; Statistics I</td>
<td>3</td>
</tr>
<tr>
<td>MLT-1000 Introduction to Medical Laboratory Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

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**First**  
BIO-2331 Anatomy & Physiology I  
MLT-1351 Problem Solving Techniques for Medical Lab  
MLT-1491 Urinalysis/Body Fluids  
MLT-2461 Hematology  
PHIL-1000 Critical Thinking

15

**Second**  
MLT-2501 Clinical Chemistry  
MLT-2471 Immunohematology/Serology  
BIO-2500 General Microbiology (prerequisite for MLT 2482)

14

**Third**  
MLT-2482 Clinical Microbiology  
MLT-2990 Advanced MLT Applications, Capstone Course  
BIO-2341 Anatomy & Physiology II

15

**Fourth**  
MLT-2940 Field Experience (36 daytime contact hours), Capstone Course  
MLT-2980 Professional Development and Life Skills/Seminar

**Total: 64**

**Notes:**

**ESL Students:** Must take TOEFL Internet Based Test (IBT) and obtain minimum scores of: Reading 21, Listening 22, Writing 23 and Speaking 24. If the student does not achieve this, please contact the ESL department to obtain remediation, and then re-test to obtain these minimums prior to applying to the program.

1 Enrollment in CHEM-1020 requires students to have either achieved a sufficient score on Chemistry Placement Test or completed CHEM-1010 with "C" or higher. Students with a prior B.S. degree in science/healthcare with chemistry credits should contact the program manager.

2 Students who do not place into MATH-1410 on assessment test must take MATH-0965 or MATH-1240 as a pre-requisite for this program.

3 Enrollment in BIO-2331 requires either appropriate placement score on Biology Placement Test or a grade of "C" or higher in BIO-1100. BIO-233A and BIO-233B may be taken in place of BIO-2331; BIO-234A and BIO-234B may be taken in place of BIO-2341.