

COURSE CATALOG



**Q. P. E. TECHNICAL INSTITUTE
1557 N. GEMINI PLACE
ANAHEIM, CA. 92801
714-778-5518**

WWW.QPETECH.COM

Mission Statement

It is the mission of Q P E Technical Institute to deliver the highest level of educational experience to the student who wishes to acquire the skills necessary to compete in the manufacturing industry. Q P E Technical Institute strives to develop the students analytical approach to problem solving, team building, and the continuous improvement of skills through education.

We strive to maintain a modern facility that houses the equipment and tools required by our faculty to provide an education that meets the expectations of the student, faculty, and community. This educational environment will parallel industrial standards for equipment and techniques.

It is our mission to maintain communication with the manufacturing community in an effort to meet their demands of a skilled workforce. Through this collaboration, a dynamic education curriculum is maintained, ensuring the contemporary approach to skill development.

Course Objectives:

Quality Control Inspector

The objective of this program is to develop skill specifically in the area of dimensional metrology, enabling the student to secure employment in a precision measurement environment.

CNC Machinist

The objective of this program is to provide training in production of components manufactured by the CNC process. Operation, Setup, and programming encompass the three primary skill sets this course addresses.

CAD-CAM Technician

The objective of this program is to provide a higher level of programming competency to the CNC Machinist. This program incorporates the latest software developments to insure the student has exposure to current industry demands for the occupation of programmer.

Manufacturing Technician

The Manufacturing Technician is a hybrid program that incorporates the curriculum of Quality Control Inspector, CNC Machinist, and CAD-CAM Technician. This program provides the student with a broad range of skills that permits employment in any of the three incorporated disciplines. This program accommodates a student that is seeking a complete exposure of component manufacturing.

Effective Period for this Catalog: 1/1/2023 through 12/31/2023

It is the policy of Q P E Technical Institute to provide any prospective student with a catalog at the time of initial school visit. Upon request, the catalog will be made available electronically. A school catalog must be provided prior to enrollment.

Policy for providing a prospective student with a catalog.

It is the policy of Q P E Technical Institute to provide any prospective student with a catalog at the time of initial school visit. Upon request, the catalog will be made available electronically. As a prospective student, you are encouraged to review this catalog prior to signing an enrollment agreement. You are also encouraged to review the School Performance Fact Sheet, which must be provided to you prior to signing an enrollment agreement.

Any Questions a student may have regarding this catalog that have not been satisfactorily answered by the institution may be directed to the Bureau for Private Postsecondary Education at 1747 North Market Blvd. Suite 225, Sacramento, CA 95834, www.bppe.ca.gov, (888) 370-7589 or (916) 431-6959 or by fax (916) 263-1897.

Policy for updating catalog

The catalog will be updated annually. These changes may be made by the use of supplements or inserts accompanying the catalog. If changes in educational programs, educational services, procedures, or policies required to be included in the catalog by statute or regulation are implemented before the issuance of the annually updated catalog, those changes shall be reflected at the time they are made in supplements or inserts accompanying the catalog.

Location of Instruction

All courses offered by Q P E Technical Institute detailed in this catalog will be conducted at 1557 N. Gemini Pl., Anaheim, CA. This facilities occupancy level accommodates thirty (30) students at any time.

Licensure Disclosure

The programs offered at Q P E Technical Institute are not designed to lead to occupations that require licensure in the State of California, Therefore, these programs are not eligible for licensure.

Grievance Procedure

If students have a grievance with any School policy or procedure, they may submit written complaints to the School Director. Written responses will be given within seven working days. If the student is not satisfied with School Director's decision, then the student may contact the Bureau for Private Postsecondary Education at 1747 North Market Blvd. Suite 225, Sacramento, CA 95834, www.bppe.ca.gov, (888) 370-7589 or (916) 431-6959 or by fax (916) 263-1897.

ENROLLMENT REQUIREMENTS

Student may enroll any school day, prior to the beginning of instruction. Instruction begins every Monday. To be admitted, a student must be a high school graduate or the equivalent. If the Student does not have a secondary education or is unable to document this education, the student must provide the passing results of the Wonderlic Basic Skills Test with a minimum score of Verbal – 200/ Quantitative – 210. This examination is approved by the United States Department of Education (USDE). A list of recognized tests may be found at http://www.bppe.ca.gov/schools/usde_tests.pdf.

Students must also be evaluated favorably through an interview and achieve a minimum score of 30 on the Bennett Mechanical Skills test to determine the likelihood of success. The student must possess skills in the English language. If the Students last known education was from a non-English speaking country or demonstrates a lack of comprehension in the English language, the student will be asked to present results of an independently administered English proficiency test. Acceptable tests are the TOEFL (score 60) and the IELTS (score 6). Q P E Technical Institute does not administer these tests. No language services are provided.

Upon enrollment, the student will be asked to list any previous education, training for which enrolled. If it is recent enough, sufficiently thorough and relevant, and satisfactory proficiency through written, oral, or physical testing can be demonstrated, appropriate credit may be allowed at the discretion of the school administration. No fees will be charged for this examination and the results may be appealed to the school Director, M. P. Marek. The student records will document any such action taken. Q P E Technical Institute does not have any transfer or articulation agreements with any other college or university that provides for the transfer of credits earned in the program of instruction.

STUDENT CONDUCT

At the discretion of the school administration, a student may be dismissed from school for serious incidents or repeated incidents of intoxicated or drugged state of behavior, possession of weapons upon school premises, behavior creating a safety hazard to other persons at the school, disobedient or disrespectful behavior to another student, an administrator, or faculty member, or any other stated or determined infraction of conduct.

STUDENT SERVICES

VISA SERVICES

Students from other countries are eligible for enrollment if visa documentation is presented. Q P E Technical Institute does not provide any visa services.

TRANSPORTATION & HOUSING

*Q P E Technical Institute is **NOT RESPONSIBLE** to find or assist students in obtaining housing, transportation, or child care services. Q P E Technical Institute does not have dormitory facilities under its control. Current market research indicates a one bedroom apartment in the general vicinity of the school is approximately \$1250 - \$1850 per month. The utilization, payment, and resolution of problems associated with these services are the responsibility of the student.*

PLACEMENT ASSISTANCE

This institution maintains an active placement counselor. Students are provided with a resume developer that requests a previous employment history, prior schooling, certificates received, and any other pertinent information that can be used to develop their resume. Employment opportunities are reviewed for applicability. The placement counselor will utilize all sources in the generation of job lead such as specific employers who work with the school, printed advertisements, internet job sites, and local employer outreach. The placement counselor will coordinate, when requested, interviews with potential employers. If possible, the student will be preloaded with information peculiar to employer's product or services. The placement counselor will provide references upon request to potential employers. This information may include attendance, test results, communication skills, and demonstrated capabilities. No guarantee for placement may be made.

TUTORING ASSISTANCE

Special assistance for students requiring additional academic instruction in the form of tutoring will be made available and coordinated by the administration. This will include written and verbal instruction as well as access to the Machine Shop, Inspection Room, and CAD-CAM Room.

RECORDS RETENTION

All academic records of enrollees containing pertinent information are maintained for a period of 5 years. This information includes name, address, e-mail address, and telephone number, copy of dated certificate, courses completed, and grades earned. Records permanently maintained by the school include student transcripts, name, address, e-mail address, and telephone number, the degree or certificate awarded, the courses and units on which the certificate of degree was based, and the grades earned by the student in each of those courses. Administrative records including programs and curriculum offered, names, addresses, and educational qualifications of each member of the faculty, and all student performance data shall be maintained for a five-year period. Students wishing to obtain a copy of academic records are required to sign a written request for such documents.

STUDENTS RECEIVING FEDERAL & STATE FUNDING

Q P E Technical Institute participates in state and federal financial aid programs (WIA, TAA). It is the policy of this institution to forward, as requested, student documents related to the successful enrollment and completion of courses to the representative of the funding entity. These documents include signed enrollment agreements, attendance records, earned grades, and resumes.

STUDENT'S RIGHT TO CANCEL

You have the right to cancel the agreement for a course of instruction and obtain a 100 % refund of amount paid for institutional charges, less a registration fee of \$100.00. If the notice of cancellation is made through attendance at the first class session, or the seventh day after enrollment, whichever is later.

Withdrawal may be effectuated by the student's written notice or by the student's conduct, including, but not necessarily limited to, a student's lack of attendance. If a student has received federal student financial aid funds, the student is entitled to a refund of moneys not paid from federal student financial aid program funds.

PROCEDURE FOR CANCELLATION OR ENROLLMENT AGREEMENT

Cancellation shall occur when you give written notice of cancellation at the address of the school shown at the top of the front page of the agreement. You can do this by mail, hand delivery, or telegram. The written notice of cancellation, if sent by mail, is effective when deposited in the mail properly prepaid.

The written notice of cancellation need not take any particular form and, however expressed, it is effective if it shows that you no longer wish to be bound by this agreement. You will be given two "notice of cancellation" forms to use on the first day of class, you can use any written notice that you wish.

If the school has given you any equipment, including books or other materials, you shall return it to the school within 30 days following the date of your notice of cancellation. If you fail to return this equipment, including books, or other materials, in good condition within the 30 day period, the school may deduct its documented cost for the equipment: it is yours to keep without further obligation.

WITHDRAWAL FROM COURSE

1. You have the right to withdraw from a course of instruction at any time. If withdrawal from the course of instruction after the period allowed of cancellation of the agreement, which is until midnight of the seventh business day following the first class you attended. The school will remit a refund less a registration fee, if applicable, not to exceed \$100.00 within 30 days following your withdrawal

2. You are obligated to pay only for educational services received and for unreturned equipment. The refund shall be the amount you paid for instruction minus earned tuition, the registration fee, & STRF as applicable.

The pro rata refund formula below outlines the estimated refund of tuition if you were unable to complete your training program. This refund policy is for students who have completed 60 percent or less of the period of attendance.

REFUND FORMULA

$$\begin{array}{r} \text{Total Program Tuition} \\ \hline \text{Total Program Hours} \end{array} \quad (=) \text{ Tuition Hours}$$

$$\begin{array}{r} \text{Tuition Hours} \\ \times \text{Hours of Attendance} \\ \hline \text{Earned Tuition} \end{array}$$

$$\begin{array}{r} \text{Total Course Charges} \\ (-)\text{Earned Tuition} \\ (-)\text{Registration Fee} \\ (-)\text{STRF (non-refundable)} : \$0 \\ \hline \text{Amount of Refund} \end{array}$$

3. If you obtain equipment, as specified in the agreement as a separate charge, and return it in good condition within 30 days following the date of your withdrawal, the school shall refund the charge for the equipment paid by you. If you fail to return the equipment in good condition, allowing for reasonable wear and tear, with this 30 day period, the school may offset against the refund and the documented cost to the school of that equipment. You shall be liable for the amount, if any, by which the documented cost for equipment exceeds prorated refund amount. The documented cost of the equipment may be less than the amount charged, and the amount the school has charged in the contract. In any event, you will never be charged for more than the equipment charges stated in the contract.

EQUIPMENT LIST OF CHARGES

BRIEFCASE:	\$50.00
TEMPLATE SET:	\$ 7.50
SAFETY GLASSES:	\$ 7.50
CALCULATOR:	\$30.00
PROTRACTOR:	\$15.00
DIAL CALIPER:	\$45.00
PRECISION SCALE:	\$15.00
MICROMETER:	\$35.00
TEST INDICATOR:	\$45.00

4. If the amount that you have paid is more than the amount that you owe for the time you attended, then a refund will be made within 30 days of withdrawal. If the amount that you owe is more than the amount that you have already paid, then you will have to make arrangements to pay.

STUDENT TUITION RECOVERY FUND

The State of California created the Student Tuition Recovery Fund (STRF) to relieve or mitigate economic losses suffered by students in educational programs who are California residents, or are enrolled in a residency programs attending certain schools regulated by the Bureau for Private Postsecondary and Vocational Education.

You must pay the state-imposed assessment for the Student Tuition Recovery Fund (STRF) if all of the following applies to you:

- 1. You are a student in an educational program, who is a California resident, or are enrolled in a residency program, and prepay all or part of your tuition either by cash, guaranteed student loans, or personal loans, and*
- 2. Your total charges are not paid by any third-party payer such as an employer, government program or other payer unless you have a separate agreement to repay the third party.*

You are not eligible for protection from the STRF and you are not required to pay the STRF assessment, if either of the following applies:

- 1. You are not a California resident, or are not enrolled in a residency program, or*
- 2. Your total charges are paid by a third party, such as an employer, government program or other payer, and you have no separate agreement to repay the third party.*

You may be eligible for STRF if you are a California resident or are enrolled in a residency program, prepaid tuition, paid the STRF assessment, and suffered an economic loss as a result of any of the following:

- 1. The school closed before the course of instruction was completed.*
- 2. The school's failure to pay refunds or charges on behalf of a student to a third party for license fees or any other purpose, or to provide equipment or materials for which a charge was collected within 180 days before the closure of the school.*
- 3. The school's failure to pay or reimburse loan proceeds under a federally guaranteed student loan program as required by law or to pay or reimburse proceeds received by the school prior to closure in excess of tuition and other costs.*
- 4. There was a material failure to comply with the Act or this Division within 30 days before the school closed or, if the material failure began earlier than 30 days prior to closure, the period determined by the Bureau.*
- 5. An inability, after diligent efforts to prosecute, prove, and collect on a judgment against the institution for a violation of the Act."*

However, no claim can be paid to any student without a social security number or a taxpayer identification number.

Financial Aid

Q P E Technical Institute offers financial scholarships to qualifying students. Applications for scholarship consideration, including detailed requirements, may be obtained from the admissions representative.

If a student obtains a loan to pay for an educational program, the student will have the responsibility to repay the full amount of the loan plus interest, less the amount of any refund. If the student has received federal student financial aid funds, the student is entitled to a refund of the moneys not paid from federal student financial aid program funds.

NOTICE CONCERNING TRANSFERABILITY OF CREDITS AND CREDENTIALS EARNED AT OUR INSTITUTION

The Transferability of credits you earn at Q P E Technical Institute is at the complete discretion of an institution to which you may seek to transfer. Acceptance of the certificate you earn in the educational program is also at the complete discretion of the institution to which you may seek to transfer. If the certificate that you earn at this institution are not accepted at the institution to which you seek to transfer, you may be required to repeat some or all of your coursework at that institution. For this reason you should make certain that your attendance at this institution will meet your educational goals. This may include contacting an institution to which you may seek to transfer after attending Q P E Technical Institute to determine if your certificate will transfer.

PROGRESS / GRADING SYSTEM

The school's grading system for each class is:

1. Excellent	93	100
2. Above Average	85	92
3. Average	78	84
4. Below Average	70	77
5. Unsatisfactory	69	0

Grade average required for certifying completion of course is a minimum average passing grade of 70.

Conditions for probation for unsatisfactory progress:

When the grade average of a student is unsatisfactory for a calendar month, the student will be placed on probation. If, during the next month, the student's grade average is still unsatisfactory, the student will be dismissed from the training program.

Conditions for re-enrollment:

Re-enrollment or reentrance will be approved only after evidence is shown to the director's satisfaction that conditions, which caused the termination for unsatisfactory progress, have been rectified.

Certificate of Completion:

Upon completion of course work with a passing grade, the student will receive a Certificate of Completion indicating student, course, school, and date of completion.

LICENSE DISCLOSURE STATEMENT

Q P E Technical Institute is a private institution and is licensed to operate by the Bureau for Private Postsecondary Education. This license means the Q P E Technical Institute complies with the minimum state standards set forth by the California Private Postsecondary Education Act of 2009 (California education Code, Title 3, Division 10, Part 59, Chapter 8) and the California Code of Regulations - Title 5 California Code of Regulations Division 7.5. The following are licensed programs of instruction:

MANUFACTURING TECHNICIAN	630	HOURS
CAD/CAM TECHNICIAN	400	HOURS
CNC MACHINIST	400	HOURS
QUALITY CONTROL INSPECTOR	400	HOURS

Q P E Technical Institute does not offer degree programs and is not accredited by an accrediting agency recognized by the United States Department of Education.

Courses start every Monday. The ending date depends upon the length the course. Graduation day is on Friday for all courses.

Prospective enrollees are encouraged to visit the physical facilities of the school and discuss personal, educational and occupational plans with school personnel prior to enrolling and signing of enrollment agreements. QPE currently does not have available sponsored programs, government or otherwise, to provide grants or to pay for portions of tuition fees.

Persons seeking to resolve problems or complaints should first contact the instructor in charge. Requests for further action may be made to the Director or M.P. Marek, President.

The unresolved complaints may be directed to the Bureau for Private Postsecondary Education, 1747 North Market Blvd., Suite 225 Sacramento, CA 95834 Phone: 916-431-6959

A Student or any member of the public may file a complaint about this institution with the Bureau for Private Postsecondary Education by calling (888) 370-7589 or by completing a complaint form, which can be obtained on the bureau's website www.bppe.ca.gov

You may cancel your contract for school, without any penalty of obligation, any time and receive a refund for the part of the course not taken. Refund rights are described in the refund policy in the Enrollment Agreement.

Q P E Technical Institute does not have a pending bankruptcy, is not operating as a debtor in possession, has not filed a petition within the preceding five years, has not had a petition in bankruptcy filed against it with the preceding five years that resulted in reorganization under Chapter 11 of the United states Bankruptcy Code."

All information in the content of this school catalog is current and correct and is so certified as true by: M.P. Marek.

OFFICE HOURS:

Open from: 7:00 AM - 4:30 PM

Days of the week: Monday - Friday

INSTRUCTION HOURS:

Classes on:

Monday from	7:00 AM	to:	2:30	PM
Tuesday from	7:00 AM	to:	2:30	PM
Wednesday from	7:00 AM	to:	2:30	PM
Thursday from	7:00 AM	to:	2:30	PM
Friday from	7:00 AM	to:	12:00	PM

Classes are scheduled on the basis of enrollment. Students will be advised of probable starting dates at the time of enrolling. Important scheduling information (operating hours, holidays, vacations, class schedules, and revisions of them) will be announced to students in advance.

ATTENDANCE POLICY:

Absence- Absence will be considered as excused under the following circumstances: illness, death or birth in the immediate family, and other valid reasons substantiated in writing, and at the discretion of the Records Officer. All other absences will be considered unexcused.

Tardiness- Tardiness is a disruption of a good learning environment and is to be discouraged. Tardiness without legitimate reason on two occasions will be considered as one unexcused absence.

Class Cuts- Class cuts will be considered as unexcused absences.

Academic Probation for Unsatisfactory Attendance- A Student with three unexcused absences will receive written notification of academic probation for a period of one month. Any unexcused absences during such probationary period will be cause for dismissal from the training program. This decision is at the discretion of the Record Officer. This decision may be appealed to the School Director utilizing the grievance procedure.

Make-Up Work- Make-Up work may be required for any absence. However hours of make-up work cannot be accepted as hours of class attendance.

Leave Of Absence- Written requests for leaves of absence will be considered and such leaves may be granted or denied to students at the discretion of the school director. This decision of the school director is final.

**MANUFACTURING TECHNICIAN
630 HOURS, 18 WEEKS**

10 STUDENTS MAXIMUM OCCUPANCY

<u>COURSE CURRICULUM</u>	<u>HOURS</u>
BLUEPRINT READING	40
BASIC MATHEMATICS	20
CALCULATOR FUNCTIONS	20
FUNDAMENTAL TOOLS	20
MACHINE SETUP & OPERATION	40
CUTTING TOOLS & COMPENSATION	20
INTRODUCTION TO PROGRAMMING	30
SHOP TRIGONOMETRY	30
ANSI Y 14.5	40
G & M CODES, CANNED CYCLES	20
PROGRAMMING & SETUP	40
PRODUCTION, DEBUGGING, & EVALUATION	40
MANUFACTURING MATERIALS	10
STATISTICAL PROCESS CONTROL	30
PERSONAL COMPUTER OPERATIONS	20
DRAFTING TECHNIQUES	20
CAM OPERATIONS.	40
SURFACE PLATE SETUPS	40
FIRST ARTICLE INSPECTION	40
OPTICAL INSTRUMENTS	20
COORDINATE MEASURING MACHINES	40
MILITARY & FEDERAL SPECIFICATIONS	10

All of the above elements of the Manufacturing Technician program will be taught through written, verbal, and physical methods. Acceptable completion will be based upon average passing grades of 70 percent on written and verbal tests, shop skill demonstration, and attendance. Tests will be conducted for each of the elements above. There is no comprehensive exam.

COURSE FEES

REGISTRATION	\$ 100.00
TUITION	\$6545.00
MANUALS	\$ 100.00
STUDENT KIT	\$ 250.00
STRF (non-refundable)	\$.00
TOTAL COST/ESTIMATE	\$6995.00

A STRF assessment will be added to the list of total charges at the time of enrollment if applicable. Please refer to page 2 of this catalog to determine eligibility.

**Total charges for a period of attendance shall be no greater than \$6265.00.*

MANUFACTURING TECHNICIAN

OCCUPATIONAL OVERVIEW

When a product is manufactured, its process can be broken down into three primary areas: Design, Development, and verification. It would be advantageous to have skills in all three areas. This would provide the student with the ability to search for employment in any of these areas of the manufacturing process. Taking the primary elements of the groups and combining them would provide such skills. This outstanding program has been developed and provided with great success.

DESIGN – *Establishing the parameters of what is going to be produced. This includes three dimensional evaluation sketches, production drawings, manufacturing instructions and programs. CAD/CAM is the foundation that handles these requirements. The student will learn these skills during the “CAM phase. Generating three dimensional models from customer supplied data or engineering sketches for evaluation. When this process is completed, a full set of detail drawings will need to be generated. An added benefit of these computerized drawings is to generate CNC coded instructions to be provided to the CNC machinist for development.*

DEVELOPMENT – *CNC Machining & Conventional Machining generate the primary support for the development phase. Utilizing design data, the CNC Machining department will develop components from raw materials. Knowledge of machine tools, cutter selection, speeds & feeds, and engineering material enhance the ability to successfully reproduce the intended design.*

VERIFICATION – *The mechanical inspector will utilize all tools necessary to ride meaningful dimensional data to determine conformance to requirements. This is the most important point in the process as proper evaluation cannot be possible without accurate test results.*

CONCLUSION – *A potential employee can be very attractive to employers by riding skills in all areas of the manufacturing process. The manufacturing technician will have the luxury of seeking employment in any or all aspects this process. If a slow period occurs in one area, the employee has the knowledge to allow him/her to float or fluctuate into another area that may hire his or her services.*

All of us can benefit from cross training. Many employers view these skills highly advantageous.

**CAD-CAM TECHNICIAN
400 HOURS, 12 WEEKS**

10 STUDENTS MAXIMUM OCCUPANCY

<u>COURSE CURRICULUM</u>	<u>HOURS</u>
BLUEPRINT READING	40
BASIC MATHEMATICS	20
CALCULATOR FUNCTIONS	20
SHOP TRIGONOMETRY	30
PERSONAL COMPUTER OPERATIONS	20
FUNDAMENTALS OF PROGRAMMING	40
CUTTING TOOLS & COMPENSATION	20
INTRODUCTION TO PROGRAMMING	30
DRAFTING TECHNIQUES	20
CAM OPERATIONS	40
PRODUCTION, DEBUGGING, & EVALUATION	40
ANSY 14.5	40
MANUFACTURING MATERIALS	10
STATISTICAL PROCESS CONTROL	30

All of the above elements of the CAD-CAM Technician program will be taught through written, verbal, and physical methods. Acceptable completion will be based upon average passing grades of 70 percent on written and verbal tests, shop skill demonstration, and attendance. Tests will be conducted for each of the elements above. There is no comprehensive exam.

COURSE FEES

REGISTRATION	\$ 100.00
TUITION	\$4695.00
MANUALS	\$ 100.00
STUDENT KIT	\$ 250.00
STRF (non-refundable)	\$.00
TOTAL COST/ESTIMATE	\$5145.00

A STRF assessment will be added to the list of total charges at the time of enrollment if applicable. Please refer to page 2 of this catalog to determine eligibility.

CAD/CAM

OCCUPATIONAL OVERVIEW

Today, the benefits of computerized manufacturing are being realized by many levels of industry. Processes have increased quality and quantity due to the integration of the computer. But one problem still persists, writing the program. This was typically performed by a programmer possessing a specialized background of computer science. Even so, much troubleshooting was needed to generate an acceptable program. It was not really cost effective to generate a program for a prototype or minimum part run. Until the CAD/CAM was introduced. CAD/CAM increases the productivity of the CNC machine tool.

CAD/CAM (Computer Aided Design/Computer Aided Manufacturing) utilizes the computing aspects of the personal computer. Designing the component on the computer resembles the attributes of CAD. After this is accomplished, this information can be processed into machine language. This code is down loaded into the machine tool computer via cable or floppy disk. The machine tool the executes these instructions giving us a finished product.

The CAD/CAM work station is also capable of operating the machine tool directly, bypassing the machine tool computer. This is called DNC of Direct Numerical Control. In more sophisticated applications, the work station may control as many as ten machine tool.

Tool selection is important. Natural machining experiences enhance the technicians ability to design meaningful part programs. Without these skills, serious errors may occur. A fundamental understanding of the manufacturing process must be obtained. The ability to view the program execution is another advantage of the CAD/CAM. Graphical representation of the machine tool motion allows the operator to view the operation without physically running the machine. This aspect not only saves costly mistakes, but allows the machine tool to continue running production and avoids down time. This allows maximum utilization of the machine tool.

Due to the efficiency of the CAD/CAM, many employers are combining the programming and manufacturing departments. Skilled technicians with knowledge of the CAD/CAM/CNC process will meet these requirements that this new industry demands.

CAD/CAM will control any type of computer controlled equipment. This increases the opportunities for competent CAD/CAM technicians. Mills, lathes, grinding, punches, high pressure water, and laser are a few areas of manufacturing that are benefiting from CAD/CAM.

**QUALITY CONTROL INSPECTOR
400 HOURS, 12 WEEKS**

10 STUDENTS MAXIMUM OCCUPANCY

<u>COURSE CURRICULUM</u>	<u>HOURS</u>
BLUEPRINT READING	40
BASIC MATHEMATICS	20
CALCULATOR FUNCTIONS	20
FUNDAMENTAL TOOLS	40
SURFACE PLATE SETUPS	40
FIRST ARTICLE INSPECTION	40
OPTICAL INSTRUMENTS	20
SHOP TRIGONOMETRY	30
ANSI Y14.5	40
COORDINATE MEASURING MACHINES	40
CALIBRATION	20
MILITARY & FEDERAL SPECIFICATIONS	10
MANUFACTURING MATERIALS	10
STATISTICAL PROCESS CONTROL	30

All of the above elements of the Quality Control Inspection program will be taught through written, verbal, and physical methods. Acceptable completion will be based upon average passing grades of 70 percent on written and verbal tests, shop skill demonstration, and attendance. Tests will be conducted for each of the elements above. There is no comprehensive exam.

COURSE FEES

REGISTRATION	\$ 100.00
TUITION	\$4695.00
MANUALS	\$ 100.00
STUDENT KIT	\$ 250.00
STRF (non-refundable)	\$.00
TOTAL COST/ESTIMATE	\$5145.00

A STRF assessment will be added to the list of total charges at the time of enrollment if applicable. Please refer to page 2 of this catalog to determine eligibility.

QUALITY CONTROL INSPECTOR

OCCUPATIONAL OVERVIEW

Modern production plants are making products at an ever increasing rate of speed. Along with the concern for quantity is the demand for quality. For many years, the inspector's function was to verify conformance to specifications. But the modern inspector is responsible for record keeping, tool calibration, material review, troubleshooting, tool verification, and implementation of SPC (statistical process control) methods. For this reason, training for inspection alone is inadequate. Knowledge of the entire quality control system is essential as well as attractive to prospective employers. Nevertheless, Q.C. personnel are commonly known as inspectors because this is their primary function. Job listings often have separate categories for inspectors and Q. C. personnel when it is actually the same function.

Inspectors verify that products meet standards set by specifications on drawings or blueprints. This verification may be visual or dimensional. The inspector will determine the proper procedure by interpreting blueprints or control drawings. He/She will need a good background in blueprint reading as well as a strong command of measuring equipment. This equipment may range from hand held micrometers & calipers to large computer assisted coordinate measuring machines (CMM). The ability to perform surface plate setups are the primary asset of the inspector. Using height stands, plates, blocks, clamps, rotary tables, and dial indicators allow dimensions to be verified with very close accuracy.

Many new developments in the functions of quality control departments have created an acute demand for trained personnel. Coordinate measuring machines can dramatically increase the speed and precision of which a part may be measured a factor important to managers and owners. But these machines require a thorough understanding of their function and capabilities due to their high cost and susceptibility to breakage. Working inspection personnel must be trained, or experienced individuals will be hired to meet this demand.

Inspector's enjoy an excellent work environment due to the nature of their work. Measuring equipment must be utilized in a temperature and particle controlled atmosphere. Many areas are designated as clean rooms and special garments must be worn prior to entry. Advancement opportunities abound for the inspector including management, engineering, auditing, programming, and consulting.

**CNC MACHINIST
 400 HOURS, 12 WEEKS
 10 STUDENTS MAXIMUM OCCUPANCY**

<u>COURSE CURRICULUM</u>	<u>HOURS</u>
BLUEPRINT READING	40
BASIC MATHEMATICS	20
CALCULATOR FUNCTIONS	20
FUNDAMENTAL TOOLS	20
MACHINE SETUP & OPERATION	40
CUTTING TOOLS & COMPENSATION	20
INTRODUCTION TO PROGRAMMING	30
SHOP TRIGONOMETRY	30
ANSI Y14.5	40
G & M CODES, CANNED CYCLES	20
PROGRAMMING & SETUP	40
PRODUCTION, DEBUGGING, & EVALUATION	40
MANUFACTURING MATERIALS	10
STATISTICAL PROCESS CONTROL	30

All of the above elements of the CNC Machinist program will be taught through written, verbal, and physical methods. Acceptable completion will be based upon average passing grades of 70 percent on written and verbal tests, shop skill demonstration, and attendance. Tests will be conducted for each of the elements above. There is no comprehensive exam.

COURSE FEES

REGISTRATION FEES	\$ 100.00
TUITION	\$ 4695.00
MANUAL	\$ 100.00
STUDENT KIT	\$ 250.00
STRF (non-refundable)	\$.00
TOTAL COST/ESTIMATE	\$5145.00

A STRF assessment will be added to the list of total charges at the time of enrollment if applicable. Please refer to page 2 of this catalog to determine eligibility.

C N C MACHINIST

OCCUPATIONAL OVERVIEW

For decades, batch production was done by skilled workers using machine tools such as milling machines and lathes. Today, CNC (computer numerical control) machine tools that can be programmed to make parts of different dimensions automatically bring the benefits of automation to batch production.

CNC machine tools have two major components: An electronic controller (computer) and a machine tool. The controller directs the mechanisms of the machine tool through the positioning and machining described in the computer program for the job. A program, for example, could contain commands that cause the controller to move a drill bit to certain spots on a work piece and drill a hole at each spot. Although the machining is done automatically, CNC machine tools must be set up and used properly in order to obtain the maximum benefit from their use. These tasks are the job of CNC machinist. There are many variations in a machinist duties, but they generally involve the tasks described.

Working from written instructions or directions from supervisors, the machinist must load the program into the controller, attach the necessary tools, and position the work piece. The way a program is loaded into a controller depends on how it is stored (i.e.: Disk or Tape). During the setup and running of a job, machinists must install the proper tools in the machine. Many CNC machines are equipped with automatic tool changers, so machinists have to load several tools in the proper sequence. Because the machine tool cannot “see” the work piece—it moves and operates in relation to a fixed starting point on the piece – it is critical that the machinist position the work piece correctly or all subsequent machining will be wrong. Machinist also must secure the work piece to the worktable correctly, so the piece does not move while it is machined. The time an operator needs to load the tools and position and secure the work piece may be only a few minutes or several hours, depending on the size of the work piece and complexity of the job.

Machine shops usually are well lighted and ventilated, and the machines on which they work have guards and shields that minimize the machinist’s exposure to moving parts. Although CNC machinist generally work 40 hours a week, overtime is common during periods of high manufacturing activity. CNC machinist may advance to supervisory positions. Machinist who becomes proficient in programming can move to the higher paying job of tool programmer.

STUDENT KIT

Course cost provides each student with a student kit. The kit includes fundamental tools and materials necessary to maintain adequate progression in the course. The tools will allow the student to do homework more efficiently as well as being beneficial when entering the work force.

The Student Kit includes:

High quality expandable briefcase

0 – 6” Dial Caliper with protective case

0 – 12” Precision Scale

0 – 1” Micrometer with protective case

.030” Dial Test Indicator with case

Protractor

Template Set

Safety Glasses

Scientific Calculator with Manual

HOLIDAY PERIODS

*The following is a Holiday Schedule observed by
Q P E Technical Institute:*

NEW YEARS

MARTIN LUTHER KING DAY

PRESIDENTS DAY

GOOD FRIDAY

MEMORIAL DAY

INDEPENDENCE DAY

VETERANS DAY

THANKSGIVING DAY

DAY AFTER THANKSGIVING DAY

*1 week closed during the spring will notify dates
2 weeks closed during the summer will notify dates*

*Closed the week of Christmas
Closed the week after Christmas*

Proper notification will be given if other Holidays are to be taken.

FACULTY

Mr. Michael Marek is the Owner, Director and Instructor at QPE. His educational background is CA State University, Fullerton, CA. Fullerton College, Fullerton, CA., Orange Coast College, Costa Mesa, CA., Riverside College, Riverside, CA., Cypress College, CA., El Dorado High School, Placentia, CA. Mr. Marek has over Thirty-five years of experience in the manufacturing industry.

Mr. Kurt Leisenfelder provides instruction for Quality Control, CNC Machinist, CAD-CAM, and Manufacturing Technician. He received his GED from Loara High School in Anaheim. He received a Certificate in Manufacturing and has been employed at leading machining facilities specializing in Aerospace Technologies. Kurt has been providing instruction at Q P E Technical Institute since 1994.

Mrs. Kris Marek is the Director of Q P E Technical Institute. Mrs. Marek graduated from Esperanza High School in Anaheim. Kris has over twenty five years of experience at QPE Technical Institute, and Thirty years in the manufacturing Industry. She specializes in student and employer relations.

INSTRUCTIONAL FACILITIES

Q P E Technical Institute is located at 1557 North Gemini Place, Anaheim, CA. 92801. Centrally located to virtually all of the southland, one block north of the 91 (Riverside) freeway at the Raymond Ave / East St. exit. The school provides private classrooms & laboratory areas as well as restrooms that are handicap accessible, inside and outside break areas, and fenced private parking and handicap parking. Q P E stays on the leading edge of educational technology by updating equipment and teaching methods. Audio/Visual education is incorporated to enhance the student's grasp of technical concepts.

Equipment utilized for manufacturing instruction includes, CNC Milling centers, CNC Turning center, CNC Swiss Screw machine, Drill Presses, Conventional Lathes, Tool Grinders, Arbor presses, and a significant array of metal cutting tools.

Equipment utilized for CAD-CAM programming included 20 computer workstations contained in a specific room used for lecture and lab. These workstations will be loaded will software that reflects industry demands.

Equipment utilized for Quality Control Inspection is contained in a specific room and includes Surface Plates and Accessories, Optical Comparators, Coordinate Measuring Machine, and an array of auxiliary tools, such as gage blocks, indicators, bore gages, and pin gages. This room also contains completed parts and prints used for lab that reflect those used in industry.

Equipment , tools, and materials replicate standards for industries such as Aerospace, Aircraft, Medical, & Commercial This institution, the facilities it occupies, and the equipment it utilizes, fully comply with any and all federal, state, and local ordinances and regulations, including those requirements as to fire safety, building safety, and health.

LIBRARY RESOURCES

Q P E Technical Institute provides optional resources for learning including our library where student's will find machine specific manuals, industry periodicals, video tape, DVD's, brochure, catalogs, and other related information. This resource is open at all times. A Student may access the library resources by making a verbal request to the instructor or school administrator.