California Institute of Arts & Technology
San Diego, California

GENERAL PURPOSE COMMERCIAL INFORMATION TECHNOLOGY EQUIPMENT, SOFTWARE AND SERVICES

Special Item Numbers (SIN) Products/Services

611420.................................Training Courses

SIN 611420 – INFORMATION TECHNOLOGY TRAINING

Contractor:
California Institute of Arts & Technology
2820 Camino Del Rio S., Ste 100
San Diego, CA 92108
Tel: (877) 559-3621
Fax: (619) 578-2387

Course outlines can be viewed at:
www.ciat.edu

Contract Number: GS-35F-0364Y

General Services Administration
Federal Supply Service

Products and ordering information in this Authorized FSS Information Technology Schedule Pricelist are also available on the GSA Advantage! System.

Agencies can browse GSA Advantage! by accessing the Federal Supply Service’s Home Page via the Internet at http://www.fss.gsa.gov/
Letter from the President / CEO

Welcome to the California Institute of Arts & Technology (CIAT)! Our college was established in 2008 and built on the foundation of providing quality education and value to the student. To date we have taught over 2000 students to become certified or gain skills needed to succeed.

CIAT originated in Northern California and relocated to San Diego to establish our main campus in in 2009. In 2016 we moved to our expanded campus in the beautiful Mission Valley area of San Diego. In 2017, we opened our second campus in National City.

Courses are offered in the classroom and online format and are designed to maximize the use of technology to provide the best possible learning experience.

CIAT's Degree and Certificate program courses teach the skills and practical knowledge required to gain employment or advance in the field of Information Technology. You will receive personalized attention from a small school whose mission is to help you achieve success.

We understand that there are many choices when considering which college fits your needs, and we thank you for considering California Institute of Arts & Technology.

Jamie Doyle

President/Founder
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Why Choose CIAT?
Our college was built on the foundation of providing quality education and value to the student. Whether taken online or in a classroom, each course is designed to maximize the use of the latest technology to give you a more connected learning experience.

CIAT Mission Statement
California Institute of Arts & Technology is committed to personalized service through comprehensive, innovative, and high-quality vocational programs that prepare students for a rewarding profession in growing career fields.

SCHOOL INFORMATION
Accreditation and Approvals
BPPE Approval
California Institute of Arts & Technology is a private institution approved to operate by the California Bureau for Private Postsecondary Education. Approval to operate means the institution is compliant with the minimum standards contained in the California Private Postsecondary Education Act of 2009 (as amended) and Division 7.5 of Title 5 of the California Code of Regulations.

Accreditation
CIAT is accredited by the Accrediting Council for Continuing Education and Training (ACCET). ACCET is listed by the U. S. Department of Education as a nationally recognized accrediting agency.

Other Approvals and Partnerships
1. Approved to offer VA Education benefits
2. Approved to offer Tuition Assistance (TA) benefits
3. Approved to offer MyCAA (Military Spouses)
4. California EDD WIOA Approved
5. GSA Multiple Award Schedule Contract GS35F-0364Y
6. Sallie Mae Student Loan
7. Member of Microsoft IT Academy
8. Member of Cisco Networking Academy
9. CompTIA Authorized Academy
10. VMware Academy
11. Member of EC-Council
12. Member of the National City Chamber of Commerce
13. Official Pearson-VUE Testing Center

Legal Name / Governance
California Institute of Arts & Technology is a State of California Chapter S Corporation. The President/Founder, Jamie Doyle has legal control of the company.

Campus Location and Contact Information
877.559.3621 toll-free
858.505.9650 fax
858.225.4301 phone
info@ciat.edu
2820 Camino Del Rio S., Suite 100, San Diego, CA 92108
401 Mile of Cars Way, Suite 100, National City, CA 91950

CIAT’s Mission Valley campus is located on the ground floor of a three-story office building on the south side of Interstate 8 in the heart of San Diego. Our second South Bay campus is located on the ground floor of a three-story office building off of interstate 5, South of San Diego in National City. Shopping malls, restaurants, and hotels are within a short drive from each campus. We have large classrooms available, large networking lab facilities and large “quiet study” areas with private desks for student use. The included student lounge areas have comfortable seating for quiet relaxation and an eating area with tables, chairs and well stocked vending machines. There are offices for the staff and two dedicated Pearson-VUE test centers in each campus location. More than adequate parking is available and public transportation stops are located directly adjacent to each campus.

Hours of Operation and Availability
Administration Hours: 8:00 AM to 5:00 PM Pacific Time Monday thru Friday. Limited availability on Saturdays from 8:00 AM to 1:00 PM Pacific Time. Closed Sundays and Major Holidays.

On Campus quiet study area and student lounge are available daily, Monday through Friday as well as on Saturdays on the schedule shown below. All times are Pacific Time.

<table>
<thead>
<tr>
<th>Day</th>
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<tbody>
<tr>
<td>Monday</td>
<td>8:00AM – 10:30PM</td>
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<td>Tuesday</td>
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<td>Thursday</td>
<td>8:00AM – 10:30PM</td>
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<tr>
<td>Friday</td>
<td>8:00AM – 4:00PM</td>
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Bankruptcy
The institution has no pending litigation in bankruptcy, is not operating as a debtor in possession, and has not filed a petition within the past five years, or have a petition in bankruptcy filed against it within the preceding five years that resulted in reorganization under Chapter 11 of the United States Bankruptcy Code (11 U.S.C Sec. 1101 et seq.)
ORDERING AND PAYMENT INFORMATION

Special Notice to Agencies
Small Business Participation

SBA strongly supports the participation of small business concerns in the Federal Supply Schedules Program. To enhance Small Business Participation SBA policy allows agencies to include in their procurement base and goals, the dollar value of orders expected to be placed against the Federal Supply Schedules, and to report accomplishments against these goals.

For orders exceeding the micropurchase threshold, FAR 8.404 requires agencies to consider the catalogs/pricelists of at least three schedule contractors or consider reasonably available information by using the GSA Advantage!™ on-line shopping service (www.fss.gsa.gov). The catalogs/pricelists, GSA Advantage!™ and the Federal Supply Service Home Page (www.fss.gsa.gov) contain information on a broad array of products and services offered by small business concerns.

This information should be used as a tool to assist ordering activities in meeting or exceeding established small business goals. It should also be used as a tool to assist in including small, small disadvantaged, and women-owned small businesses among those considered when selecting pricelists for a best value determination.

For orders exceeding the micropurchase threshold, customers are to give preference to small business concerns when two or more items at the same delivered price will satisfy their requirement.

Geographic Scope of Contract
Domestic delivery is delivery within the 48 contiguous states, Alaska, Hawaii, Puerto Rico, Washington, DC, and U.S. Territories. Domestic delivery also includes a port or consolidation point, within the aforementioned areas, for orders received from overseas activities.

Offerors are requested to check one of the following boxes:

- [ ] The Geographic Scope of Contract will be domestic and overseas delivery.
- [ ] The Geographic Scope of Contract will be overseas delivery only.
- [X] The Geographic Scope of Contract will be domestic delivery only.

Ordering and Payment Information
California Institute of Arts & Technology
Claire Park
2820 Camino Del Rio S., Suite 100
San Diego, CA 92108
(858) 256-2291

Contractors are required to accept credit cards for payments equal to or less than the micro-purchase threshold for oral or written delivery orders. Credit cards will be acceptable for payment above the micro-purchase threshold. In addition, information to support wire transfer payments will be provided on invoices.

Liability for Injury or Damage
The Contractor shall not be liable for any injury to Government personnel or damage to Government property arising from the use of equipment maintained by the Contractor, unless such injury or damage is due to the fault or negligence of the Contractor.

Statistical Data for Government Ordering Office Completion of Standard Form 279:
Block 9: G. Order/Modification under Federal Schedule
Block 16: Data Universal Numbering System (DUNS) Number: 829092266
Block 30: Type of Contractor – Small Business- Computer Training
Block 31: Woman-Owned Small Business: No
Block 36: Contractor’s Taxpayer Identification (TIN):
26-3863091
4a. Cage Code: S5A3Q4
4b. Contractor has registered with the Central Contractor Registration Database.

Trade Agreements Act of 1979, as Amended:
All items are U.S. made end products, designated country end products, Caribbean Basin country end products, Canadian end products, or Mexican end products as defined in the Trade Agreements Act of 1979, as amended.

Statement Concerning Availability of Export Packing
Not applicable. Overseas shipment will not be provided under this contract.

Delivery Schedule
a. TIME OF DELIVERY: The Contractor shall deliver to destination within the number of calendar days after receipt of order (ARO), as set forth below:

   SPECIAL ITEM NUMBER DELIVERY TIME (Days ARO)

   132-50 Upon mutual agreement

b. URGENT REQUIREMENTS: When the Federal Supply Schedule contract delivery period does not meet the bona fide urgent delivery requirements of an ordering activity, ordering activities are encouraged, if time permits, to contact the Contractor for the purpose of obtaining accelerated delivery. The Contractor shall reply to the inquiry within 3 workdays after receipt. (Telephonic replies shall be confirmed by the Contractor in writing.) If the Contractor offers an accelerated delivery time acceptable to the ordering activity, any order(s) placed pursuant to the agreed upon accelerated delivery time frame shall be delivered within this shorter delivery time and in accordance with all other terms and conditions of the contract.

APPLICATION FOR ORDERING ACTIVITIES
APPLICABLE TO ALL SPECIAL ITEM NUMBERS

SPECIAL NOTICE TO ALL SPECIAL ITEM NUMBERS

INFORMATION FOR ORDERING ACTIVITIES
APPLICABLE TO ALL SPECIAL ITEM NUMBERS
Discounts
Prices shown are NET Prices; Basic Discounts have been deducted.
  a. PROMPT PAYMENT: 0% - Net 30 days from receipt of invoice or
de date of acceptance, whichever is later.
  b. QUANTITY. None unless otherwise specified in the pricelist.
  c. DOLLAR VOLUME. None unless otherwise specified in the
pricelist.
  d. GOVERNMENT EDUCATIONAL INSTITUTIONS. Government
Educational Institutions are offered the same discounts as all
other Government customers unless otherwise specified in the
pricelist.
  e. OTHER. None unless otherwise specified in the pricelist.

Small Requirements
The minimum dollar value of orders to be issued is $100.00

Maximum Order
The Maximum Order value for the following Special Item Numbers (SINs)
is $25,000:

Special Item Number 132-50 – Training Courses

Ordering Procedures for Federal Supply schedule Contracts
Ordering activities shall use the ordering procedures of Federal
Acquisition Regulation (FAR) 8.405 when placing an order or establishing
a BPA for supplies or services. These procedures apply to all schedules.

  a. FAR 8.405-1 Ordering procedures for supplies, and services not
requiring a statement of work.
  b. FAR 8.405-2 Ordering procedures for services requiring a
statement of work.

Federal Information Technology/
Telecommunication Standards
Requirements:
Ordering activities acquiring products from this Schedule must comply
with the provisions of the Federal Standards Program, as appropriate
(reference: NIST Federal Standards Index). Inquiries to determine
whether or not specific products listed herein comply with Federal
Information Processing Standards (FIPS) or Federal Telecommunication
Standards (FED-STDs), which are cited by ordering activities, shall be
responded to promptly by the Contractor.

Federal Information Processing
Standards Publications (FIPS PIBS):
Information Technology products under this Schedule that do not
conform to Federal Information Processing Standards (FIPS) should not
be acquired unless a waiver has been granted in accordance with the
applicable "FIPS Publication." Federal Information Processing Standards
Publications (FIPS PUBS) are issued by the U.S. Department of
Commerce, National Institute of Standards and Technology (NIST),
pursuant to National Security Act. Information concerning their
availability and applicability should be obtained from the National

Technical Information Service (NTIS), 5285 Port Royal Road, Springfield,
Virginia 22161. FIPS PUBS include voluntary standards when these are
adopted for Federal use. Individual orders for FIPS PUBS should be
referred to the NTIS Sales Office, and orders for subscription service
should be referred to the NTIS Subscription Officer, both at the above
address, or telephone number (703) 487-4650.

Federal Telecommunication Standards
(FED-STDs):
Telecommunication products under this Schedule that do not conform to
Federal Telecommunication Standards (FED-STDs) should not be
acquired unless a waiver has been granted in accordance with the
applicable "FED-STD." Federal Telecommunication Standards are issued
by the U.S. Department of Commerce, National Institute of Standards
and Technology (NIST), pursuant to National Security Act. Ordering
information and information concerning the availability of FED-STDs
should be obtained from the GSA, Federal Supply Service, Specification
Section, 470 East L'Enfant Plaza, Suite 8100, SW, Washington, DC 20407,
telephone number (202)619-8925. Please include a self-addressed
mailing label when requesting information by mail. Information
concerning their applicability can be obtained by writing or calling the
U.S. Department of Commerce, National Institute of Standards and
Technology, Gaithersburg, MD 20899, telephone number (301)975-2833.

Contractor Tasks/ Special Requirements
(C-FSS-370) (NOV 2001)
  a) Security Clearances: The Contractor may be required to
obtain/possess varying levels of security clearances in the
performance of orders issued under this contract. All costs
associated with obtaining/possessing such security clearances
should be factored into the price offered under the Multiple
Award Schedule. GSA S CHEDULE - T ERMS AND C ONDITIONS 5
  b) Travel: The Contractor may be required to travel in
performance of orders issued under this contract. Allowable
travel and per diem charges are governed by Pub .L. 99-234
and FAR Part 31, and are reimbursable by the ordering agency
or can be priced as a fixed price item on orders placed under
the Multiple Award Schedule. The Industrial Funding Fee does
NOT apply to travel and per diem charges.

NOTE: Refer to FAR Part 31.205-46 Travel Costs, for allowable costs
that pertain to official company business travel in regards to this
contract.

  c) Certifications, Licenses and Accreditations: As a commercial
practice, the Contractor may be required to obtain/possess any
variety of certifications, licenses and accreditations for specific
FSC/service code classifications offered. All costs associated with
obtaining/ possessing such certifications, licenses and
accreditations should be factored into the price offered under
the Multiple Award Schedule program.
d) Insurance: As a commercial practice, the Contractor may be required to obtain/possess insurance coverage for specific FSC/service code classifications offered. All costs associated with obtaining/possessing such insurance should be factored into the price offered under the Multiple Award Schedule program.

e) Personnel: The Contractor may be required to provide key personnel, resumes or skill category descriptions in the performance of orders issued under this contract. Ordering activities may require agency approval of additions or replacements to key personnel.

f) Organizational Conflicts of Interest: Where there may be an organizational conflict of interest as determined by the ordering agency, the Contractor’s participation in such order may be restricted in accordance with FAR Part 9.5.

g) Documentation/Standards: The Contractor may be requested to provide products or services in accordance with rules, regulations, OMB orders, standards and documentation as specified by the agency’s order.

h) Data/Deliverable Requirements: Any required data/deliverables at the ordering level will be as specified or negotiated in the agency’s order.

i) Government-Furnished Property: As specified by the agency’s order, the Government may provide property, equipment, materials or resources as necessary.

j) Availability of Funds: Many Government agencies’ operating funds are appropriated for a specific fiscal year. Funds may not be presently available for any orders placed under the contract or any option year. The Government’s obligation on orders placed under this contract is contingent upon the availability of appropriated funds from which payment for ordering purposes can be made. No legal liability on the part of the Government for any payment may arise until funds are available to the ordering Contracting Officer.

Contract Administration for Ordering Activities:

Any ordering activity, with respect to any one or more delivery orders placed by it under this contract, may exercise the same rights of termination as might the GSA Contracting Officer under provisions of FAR 52.212-4, paragraphs (l) Termination for the ordering activity’s convenience, and (m) Termination for Cause (See C.1.)

GSA Advantage!

GSA Advantage! is an on-line, interactive electronic information and ordering system that provides on-line access to vendors’ schedule prices with ordering information. GSA Advantage! will allow the user to perform various searches across all contracts including, but not limited to: (1) Manufacturer; (2) Manufacturer’s Part Number; and (3) Product categories. Agencies can browse GSA Advantage! by accessing the Internet World Wide Web utilizing a browser (ex.: NetScape). The Internet address is http://www.fss.gsa.gov/.

Purchase of Open Market Items Note:

NOTE: Open Market Items are also known as incidental items, noncontract items, non-Schedule items, and items not on a Federal Supply Schedule contract. ODCs (Other Direct Costs) are not part of this contract and should be treated as open market purchases. Ordering Activities procuring open market items must follow FAR 8.402(d).

For administrative convenience, an ordering activity contracting officer may add items not on the Federal Supply Multiple Award Schedule (MAS) -- referred to as open market items -- to a Federal Supply Schedule blanket purchase agreement (BPA) or an individual task or delivery order, only if:

1) All applicable acquisition regulations pertaining to the purchase of the items not on the Federal Supply Schedule have been followed (e.g., publicizing (Part 5), competition requirements (Part 6), acquisition of commercial items (Part 12), contracting methods (Parts 13, 14, and 15), and small business programs (Part 19));

2) The ordering activity contracting officer has determined the price for the items not on the Federal Supply Schedule is fair and reasonable;

3) The items are clearly labeled on the order as items not on the Federal Supply Schedule; and

4) All clauses applicable to items not on the Federal Supply Schedule are included in the order.

Contractor Commitments, Warranties and Representations

a. For the purpose of this contract, commitments, warranties and representations include, in addition to those agreed to for the entire schedule contract:

   1) Time of delivery/installation quotations for individual orders;

   2) Technical representations and/or warranties of products concerning performance, total system performance and/or configuration, physical, design and/or functional characteristics and capabilities of a product/equipment/service/software package submitted in response to requirements which result in orders under this schedule contract.

   3) Any representations and/or warranties concerning the products made in any literature, description, drawings and/or specifications furnished by the Contractor.

b. The above is not intended to encompass items not currently covered by the GSA Schedule contract.

Overseas Activities

The terms and conditions of this contract shall apply to all orders for installation, maintenance and repair of equipment in areas listed in the pricelist outside the 48 contiguous states and the District of Columbia, except as indicated below:
Not Applicable

Upon request of the Contractor, the ordering activity may provide the Contractor with logistics support, as available, in accordance with all applicable ordering activity regulations. Such ordering activity support will be provided on a reimbursable basis, and will only be provided to the Contractor’s technical personnel whose services are exclusively required for the fulfillment of the terms and conditions of this contract.

Blanket Purchase Agreements (BPAS)
The use of BPAs under any schedule contract to fill repetitive needs for supplies or services is allowable. BPAs may be established with one or more schedule contractors. The number of BPAs to be established is within the discretion of the ordering activity establishing the BPA and should be based on a strategy that is expected to maximize the effectiveness of the BPA(s). Ordering activities shall follow FAR 8.405-3 when creating and implementing BPA(s).

Contractor Team Arrangements
Contractors participating in contractor team arrangements must abide by all terms and conditions of their respective contracts. This includes compliance with Clauses 552.238-74, Industrial Funding Fee and Sales Reporting, i.e., each contractor (team member) must report sales and remit the IFF for all products and services provided under its individual contract.

Installation, Deinstallation, Reinstallation
The Davis-Bacon Act (40 U.S.C. 276a-276a-7) provides that contracts in excess of $2,000 to which the United States or the District of Columbia is a party for construction, alteration, or repair (including painting and decorating) of public buildings or public works with the United States, shall contain a clause that no laborer or mechanic employed directly upon the site of the work shall receive less than the prevailing wage rates as determined by the Secretary of Labor. The requirements of the Davis-Bacon Act do not apply if the construction work is incidental to the furnishing of supplies, equipment, or services. For example, the requirements do not apply to simple installation or alteration of a public building or public work that is incidental to furnishing supplies or equipment under a supply contract. However, if the construction, alteration or repair is segregable and exceeds $2,000, then the requirements of the Davis-Bacon Act applies.

The ordering activity issuing the task order against this contract will be responsible for proper administration and enforcement of the Federal labor standards covered by the Davis-Bacon Act. The proper Davis-Bacon wage determination will be issued by the ordering activity at the time a request for quotations is made for applicable construction classified installation, deinstallation, and reinstallation services under SIN 132-8.

Section 508 Compliance
If applicable, Section 508 compliance information on the supplies and services in this contract are available in Electronic and Information Technology (EIT) at the following:

www.calarttech.edu

The EIT standard can be found at: www.Section508.gov/.

Prime Contractor Ordering From Federal Supply Schedules
Prime Contractors (on cost reimbursement contracts) placing orders under Federal Supply Schedules, on behalf of a Federal Agency, shall follow the terms of the applicable schedule and authorization and include with each order —

a) A copy of the authorization from the Agency with whom the contractor has the prime contract (unless a copy was previously furnished to the Federal Supply Schedule contractor); and
b) The following statement:

This order is placed under written authorization from ______ dated __________. In the event of any inconsistency between the terms and conditions of this order and those of your Federal Supply Schedule contract, the latter will govern.

Insurance-Work on a Government Installation (JAN 1997) (FAR 52 228-5)

A. The Contractor shall, at its own expense, provide and maintain during the entire performance of this contract, at least the kinds and minimum amounts of insurance required in the Schedule or elsewhere in the contract.

B. Before commencing work under this contract, the Contractor shall notify the Contracting Officer in writing that the required insurance has been obtained. The policies evidencing required insurance shall contain an endorsement to the effect that any cancellation or any material change adversely affecting the Government’s interest shall not be effective —

1) For such period as the laws of the State in which this contract is to be performed prescribe; or
2) Until 30 days after the insurer or the Contractor gives written notice to the Contracting Officer, whichever period is longer.

C. The Contractor shall insert the substance of this clause, including this paragraph (c), in subcontracts under this contract that require work on a Government installation and shall require subcontractors to provide and maintain the insurance required in the Schedule or elsewhere in the contract. The Contractor shall maintain a copy of all subcontractors’ proofs of required insurance, and shall make copies available to the Contracting Officer upon request.
Software Interoperability
Offerors are encouraged to identify within their software items any component interfaces that support open standard interoperability. An item's interface may be identified as interoperable on the basis of participation in a Government agency-sponsored program or in an independent organization program. Interfaces may be identified by reference to an interface registered in the component registry located at http://www.core.gov.

Advance Payments
A payment under this contract to provide a service or deliver an article for the United States Government may not be more than the value of the service already provided or the article already delivered. Advance or pre-payment is not authorized or allowed under this contract. (31 U.S.C. 3324).

TERMS AND CONDITIONS APPLICABLE TO PURCHASE OF TRAINING COURSES FOR GENERAL PURPOSE COMMERCIAL INFORMATION TECHNOLOGY EQUIPMENT AND SOFTWARE (SPECIAL ITEM NUMBER: 132-50)

Scope
a) The Contractor shall provide training courses normally available to commercial customers, which will permit ordering activity users to make full, efficient use of general purpose commercial IT products. Training is restricted to training courses for those products within the scope of this solicitation.

b) The Contractor shall provide training at the Contractor's facility and/or at the ordering activity's location, as agreed to by the Contractor and the ordering activity.

Order
Written orders, EDI orders (GSA Advantage! and FACNET), credit card orders, and orders placed under blanket purchase agreements (BPAs) shall be the basis for the purchase of training courses in accordance with the terms of this contract. Orders shall include the student's name, course title, course date and time, and contracted dollar amount of the course.

Time of Delivery
The Contractor shall conduct training on the date (time, day, month, and year) agreed to by the Contractor and the ordering activity.

Cancellation and Rescheduling
a. Cancellation Policy. No cancellation penalty is incurred for cancellation made more than five (5) business days prior to the class date. If cancellation occurs two (2) to five (5) business days or less before the class date, a penalty of 50% of the class fee will be charged. For students who cancel one (1) or less business day’s prior or fail to show for a class with no notification, the full fee for the class will be invoiced.

b. Technical Classes. The Government will notify California Institute of Arts & Technology (CIAT) at least 5 business days before the scheduled training date, if a student will be unable to attend a Technical class. CIAT will then permit the Government to either cancel the order or reschedule the training at no additional charge. In the event the training class is rescheduled, the Government will modify its original training order to specify the time and date of the rescheduled training class.

c. In the event the ordering activity fails to cancel or reschedule a Technical training course within the time frame specified in paragraph b, above, the ordering activity will be liable for the full contracted dollar amount of the training course. If the cancellation occurs within 2 business days of the event, 100% of the contacted dollar amount of the training course will be charged. If the cancellation occurs within 5 business days of the event, 50% of the contracted dollar amount of the training course will be charged.

d. The ordering activity reserves the right to substitute one student for another up to the first day of class.

e. In the event the Contractor is unable to conduct training on the date agreed to by the Contractor and the ordering activity, the Contractor must notify the ordering activity at least seventy-two (72) hours before the scheduled training date.

Follow-up Support
The Contractor agrees to provide each student with an asynchronous, self-paced, Web-based version of standard instructor training courses (when available) for a period of 6 months from the completion of the training course. During this period, the student may use the self-paced, Web based version of the class for refresher assistance from the course.

Price for Training
The price that the ordering activity will be charged will be the ordering activity training price in effect at the time of order placement, or the ordering activity price in effect at the time the training course is conducted, whichever is less.

Invoices and payment
Invoices for training shall be submitted by the Contractor after ordering activity completion of the training course. Charges for training must be paid in arrears (31 U.S.C. 3324). PROMPT PAYMENT DISCOUNT, IF APPLICABLE, SHALL BE SHOWN ON THE INVOICE.

Format and Content of Training
a) The Contractor shall provide written materials (i.e., manuals, handbooks, texts, etc.) normally provided with course offerings. Such documentation will become the property of the student upon completion of the training class.
b) **If applicable** For hands-on training courses, there must be a one-to-one assignment of IT equipment to students.

c) The Contractor shall provide each student with a Certificate of Training at the completion of each training course.

d) The Contractor shall provide the following information for each training course offered:

1. The course title and a brief description of the course content, to include the course format (e.g., lecture, discussion, hands-on training);
2. The length of the course;
3. Mandatory and desirable prerequisites for student enrollment;
4. The minimum and maximum number of students per class;
5. The locations where the course is offered;
6. Class schedules; and
7. Price (per student, per class (if applicable)).

e) Rosters: For each private class scheduled, Federal Government agrees to provide CIAT with the number of students, and names, if available, no later than 10 working days prior to each scheduled class. This allows CIAT to allocate the proper resources for the class and simplify the invoice procedure.

f) For those courses conducted at the ordering activity’s location, instructor travel charges (if applicable), including mileage and daily living expenses (e.g., per diem charges) are governed by Pub. L. 99-234 and FAR Part 31.205-46, and are reimbursable by the ordering activity on orders placed under the Multiple Award Schedule, as applicable, in effect on the date(s) the travel is performed. Contractors cannot use GSA city pair contracts. The Industrial Funding Fee does NOT apply to travel and per diem charges.

g) For Online Training Courses, a copy of all training material must be available for electronic download by the students.

“**No Charge**” Training

The Contractor shall describe any training provided with equipment and/or software provided under this contract, free of charge, in the space provided below.

NONE
# California Institute of Arts & Technology GSA Price List

GSA Contract GS-35F-0364Y

<table>
<thead>
<tr>
<th>SIN</th>
<th>Industry Cert. #</th>
<th>Course Name</th>
<th>Credit/ Clock Hours</th>
<th>Min. Quantity</th>
<th>Standard Price</th>
<th>GSA Discount</th>
<th>GSA Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>611420</td>
<td></td>
<td>BACHELOR'S DEGREE IN COMPUTER INFORMATION SYSTEMS (BACIS)</td>
<td>130 Credits</td>
<td>1</td>
<td>$80,550.00</td>
<td>22%</td>
<td>$63,104.00</td>
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<td>611420</td>
<td></td>
<td>AAS IN COMPUTER INFORMATION SYSTEMS-NETWORKING CONCENTRATION (AASIS-NC)</td>
<td>64 Credits</td>
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<td>611420</td>
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<td>AAS IN SOFTWARE DEVELOPMENT (ASD)</td>
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<td>$39,640.00</td>
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<td>CCNA/ CERTIFICATE CISCO NETWORK PROFESSIONAL- ENTERPRISE (CCNA/CCNP-ENT)</td>
<td>40 Credits</td>
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<td>CERTIFICATE IN SOFTWARE DEVELOPMENT (CSD)</td>
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<td>CERTIFICATE AS NETWORKING TECHNICIAN (CNT)</td>
<td>16 Credits</td>
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<td>$9,960.00</td>
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<td>611420</td>
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<td>CERTIFICATE AS COMPUTER TECHNICIAN (CCT)</td>
<td>12 Credits</td>
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<td>$7,470.00</td>
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<td>CERTIFICATE AS CISCO CERTIFIED NETWORK ASSOCIATE (CCNA)</td>
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<td>CERTIFICATE IN CLOUD ADMINISTRATION (CCA)</td>
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<td>CERTIFICATE IN MICROSOFT OFFICE SPECIALIST (BUS)</td>
<td>15 Credits</td>
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<td>CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT- IT COURSE (See below offerings)</td>
<td>4 Credits</td>
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</table>

- **CompTIA ITF+ FC0-U61**: IT Fundamentals
- **CompTIA A+ 220-1001**: Computer Hardware Fundamentals
- **CompTIA A+ 220-1002**: Computer Operating Systems
- **CompTIA NET+ N10-007**: Network Fundamentals Part 1
  - Network Fundamentals Part 2
- **CompTIA SEC+ SY0-501**: Network Security Fundamentals Part 1
  - Network Security Fundamentals Part 2
- **CompTIA Linux+ X0-004**: Installation and Configuration of Linux. Part 1
  - Installation and Configuration of Linux. Part 2
- **CompTIA CASP+ CAS-003**: Advanced Security Practitioner
- **CEH v11**: Certified Ethical Hacker Part 1
  - Certified Ethical Hacker Part 2
- **CISSP v2019 (ISC)2**: Advanced Network Security (CISSIP) Part 1
  - Advanced Network Security (CISSIP) Part 2
- **CISCO CCNA**: CISCO Certified Network Associate Part 1
  - CISCO Certified Network Associate Part 2
| 200-301 | Implementing and Operating Cisco Enterprise Core Technologies Part 1
|         | Implementing and Operating Cisco Enterprise Core Technologies Part 2
| CISCO ENCOR 350-401 | Implementing Cisco Enterprise Routing and Services Part 1
|         | Implementing Cisco Enterprise Routing and Services Part 2
| CISCO ENRASI 300-410 | DevNet Associate Part 1
|         | DevNet Associate Part 2
| CISCO DEVASC 200-901 | Windows Server to Azure Cloud Concepts
| Microsoft Azure AZ-900 | Azure Cloud Administration
| Microsoft Azure AZ-104 | Microsoft Azure Security Technologies
| Microsoft Azure AZ-500 | Amazon Web Services Certified Cloud Practitioner
| AWS Cloud Pract | Amazon Web Services Certified Solutions Architect Associate
| AWS Sol Arc Asso. | Amazon Web Services Certified Solutions Architect Associate
| AWS SysOps Admin | Amazon Web Services Certified Security-Specialty
| AWS Sec Specialty | Amazon Web Services Certified Developer Associate
| AWS Develop Assoc. | Google Cloud Engineer
| Google Cloud Eng. |
Information for Ordering Agencies

1a. AWARDED SPECIAL ITEM NUMBERS (SINs):

<table>
<thead>
<tr>
<th>SIN</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>611420</td>
<td>Information Technology Training</td>
</tr>
</tbody>
</table>

All awarded SINs are approved for Cooperative Purchasing and Recovery Purchasing.

1b. APPROVED PRODUCTS: Not applicable

1c. APPROVED LABOR CATEGORY RATES AND DESCRIPTIONS: See Pages 12-32

2. MAXIMUM ORDER: $750,000

3. MINIMUM ORDER: $100.00

4. GEOGRAPHIC COVERAGE: Services offered Locally, Nationally and/or Worldwide. The geographic scope of this contract is the 48 contiguous states and the District of Columbia, Alaska, Hawaii, and the Commonwealth of Puerto Rico, and, on a worldwide basis, all U.S. Government installations and/or agencies abroad and any foreign country in which the U.S. Government does not prohibit trade.

5. POINT OF PRODUCTION: Not Applicable

6. DISCOUNTS FROM LIST PRICES: Reference Net Pricing included herein.

7. QUANTITY DISCOUNTS: None

8. PROMPT PAYMENT TERMS: None

9a. GOVERNMENT PURCHASE CARD ACCEPTED AT OR BELOW THE MICROPURCHASE TRESHOLD ($3,000). Government Commercial Credit Cards will be acceptable for payment. Contractors are required to accept the Government purchase card for payments equal to or less than the micro-purchase threshold for oral or written delivery orders

9b. GOVERNMENT PURCHASE CARD ACCEPTED ABOVE THE MICROPURCHASE TRESHOLD. Government purchase cards will be acceptable for payment above the micro-purchase threshold. In addition, bank account information for wire transfer payment will be shown on the invoice.

9c. FOREIGN ITEMS: None

10. TIME OF DELIVERY: As negotiated between Contractor and Ordering Office

11a. EXPEDITED DELIVERY: Call for availability and terms.

11c. OVERNIGHT AND 2-DAY-DELIVERY: Call for availability and terms.
11d. **URGENT REQUIREMENTS:** Call for availability and terms.

12. **FOB POINT:** Destination

13a. **ORDERING ADDRESS:** California Institute of Arts & Technology
    401 Mile of Cars Way, Suite 100
    National City, CA 91950
    Phone: 1-877-559-3621
    Fax: 1-858-505-9650
    E-mail: info@ciat.edu
    Website: www.ciat.edu
    GSA Advantage! http://www.gsaadvantage.gov

13b. **ORDERING PROCEDURES:** For supplies and services, the ordering procedures, informationon Blanket Purchase Agreements (BPAs) and a sample BPA can be found at the GSA/FSS Schedule homepage (fss.gsa.gov/schedules).

14. **PAYMENT ADDRESS:** California Institute of Arts & Technology
    401 Mile of Cars Way, Suite 100
    National City, CA 91950

15. **WARRANTY PROVISIONS:** Reference Ordering Procedures for Services; Standard Commercial Warranty for Products

16. **EXPORT PACKING CHARGES:** Not Applicable.

17. **TERMS AND CONDITIONS OF GOVERNMENT PURCHASE CARD ACCEPTANCE:** Government Commercial Credit Cards will be acceptable for payment. Contractors are required to accept the Government purchase card for payments equal to or less than the micro-purchasethreshold for oral or written delivery orders. Government purchase cards will be acceptable for payment above the micro-purchase threshold. In addition, bank account information for wire transfer payments will be shown on the invoice.

18. **TERMS AND CONDITIONS OF RENTAL, MAINTENANCE, AND REPAIR:** Not Applicable

19. **TERMS AND CONDITIONS OF INSTALLATION:** Not Applicable

20a. **TERMS AND CONDITIONS OF REPAIR PARTS:** Not Applicable

20b. **TERMS AND CONDITIONS FOR ANY OTHER SERVICES:** Not Applicable

21. **LIST OF SERVICE AND DISTRIBUTION POINTS:** Not Applicable

22. **LIST OF PARTICIPATING DEALERS:** Not Applicable

23. **PREVENTATIVE MAINTENANCE:** Not Applicable
24. SPECIAL ATTRIBUTES: Not Applicable
25. SECTION 508: Not Applicable
26. DATA UNIVERAL NUMBER SYSTEM (DUNS) NUMBER: 82-909-2266
27. REGISTERED IN THE SYSTEM FOR AWARD MANAGEMENT (SAM) DATABASE: Yes; CAGE Code: 5A3Q
Terms and Conditions Applicable to Purchase of Information Technology Training for General Purpose Commercial Information Technology Equipment and Software (Special Item Number 611420)

1. SCOPE
   a. The Contractor shall provide Information Technology Training normally available to commercial customers, which will permit ordering activity users to make full, efficient use of general purpose commercial IT products. Training is restricted to Information Technology Training for those products within the scope of this solicitation.
   b. The Contractor shall provide training at the Contractor's facility and/or at the ordering activity's location, as agreed to by the Contractor and the ordering activity.

2. ORDER
   Written orders, EDI orders (GSA Advantage! and FACNET), credit card orders, and orders placed under blanket purchase agreements (BPAs) shall be the basis for the purchase of Information Technology Training in accordance with the terms of this contract. Orders shall include the student's name, course title, course date and time, and contracted dollar amount of the course.

3. TIME OF DELIVERY
   The Contractor shall conduct training on the date (time, day, month, and year) agreed to by the Contractor and the ordering activity.

4. CANCELLATION AND RESCHEDULING
   a. The ordering activity will notify the Contractor at least seventy-two (72) hours before the scheduled training date, if a student will be unable to attend. The Contractor will then permit the ordering activity to either cancel the order or reschedule the training at no additional charge. In the event the training class is rescheduled, the ordering activity will modify its original training order to specify the time and date of the rescheduled training class.
   b. In the event the ordering activity fails to cancel or reschedule a training course within the time frame specified in paragraph a, above, the ordering activity will be liable for the contracted dollar amount of the training course. The Contractor agrees to permit the ordering activity to reschedule a student who fails to attend a training class within ninety (90) days from the original course date, at no additional charge.
   c. The ordering activity reserves the right to substitute one student for another up to the first day of class.
   d. In the event the Contractor is unable to conduct training on the date agreed to by the Contractor and the ordering activity, the Contractor must notify the ordering activity at least seventy-two (72) hours before the scheduled training date.

5. FOLLOW-UP SUPPORT
   The Contractor agrees to provide each student with unlimited telephone support or online support for a period of 180 days from the completion of the training course. During this period, the student may contact the Contractor's instructors for refresher assistance and answers to related course curriculum questions.
6. **PRICE FOR TRAINING**
The price that the ordering activity will be charged will be the ordering activity training price in effect at the time of order placement, or the ordering activity price in effect at the time the training course is conducted, whichever is less.

7. **INVOICES AND PAYMENT**
Invoices for training shall be submitted by the Contractor after ordering activity completion of the training course. Charges for training must be paid in arrears (31 U.S.C. 3324). PROMPT PAYMENT DISCOUNT, IF APPLICABLE, SHALL BE SHOWN ON THE INVOICE.

8. **FORMAT AND CONTENT OF TRAINING**
   a. Textbooks are not included as a part of tuition and the student is responsible for purchasing the books. The cost of books varies with each course. Book costs approximately from $20.00 to $200.00 per course. Students will receive a textbook list and curriculum which provides all information required to obtain needed learning resources. Some books are only available through an official source such as Microsoft and EC-Council. Those that are commercially available can be purchased by the student in lieu of buying them from CIAT. Book costs constantly change, so, any costs for books mentioned in this catalog are based on the best estimate of actual cost at the time this catalog was created. Please check our website [https://www.ciat.edu/textbook-list/](https://www.ciat.edu/textbook-list/) for the latest costs for books.
   b. Any software required for a course will be provided by CIAT. This software is provided under licenses that allow for its use only in pursuit of the course. Any other use by the student is in violation of copyright laws and may subject the student to disciplinary action by CIAT and/or other authorities.
   c. Certification Exams are an optional additional expense. Students are responsible for any certification exam costs that are not covered under CIAT’s Certification Exam Policy and must be paid prior to registering for any certification exam. These fees may change with little or no notice. For a schedule of fees, visit PearsonVue.com.
   d. Full Time students are expected to complete each course within a five week period (Term). Students in hybrid format will spend 4.5 hours at least two days per week in the classroom attending lectures and getting hands-on instruction. Students in 100% Online format can expect to receive synchronous and asynchronous time in face-to-face interaction with your online instructor. Additional time will be spent each week on homework, discussion questions, projects, quizzes, exams, labs and other types of lectures.
   e. Online learning is different from classroom-delivered instruction and there are advantages and disadvantages to each. The advantages of IDL are rapidly gaining as technology enables students learning at a distance to feel more connected than ever before.
   f. Students must be self-motivated, have an up-to-date computer, a high-speed Internet connection, and a distraction-free place to study. Faculty and student interaction will be available by online video conference, LMS discussion boards, email, phone, and chat.
   g. CIAT classes use a combination of all or some of the following to provide quality distance learning:
   1. Online Video Lessons
   2. Online Quizzes/Exams
   3. Certification preparation software
   4. Live instructor available for conferences and personal sessions
   5. Online Labs
   6. Discussion questions
   h. In our distance learning classes, all interaction with our instructors is via electronic means, primarily the internet, but your instructor will also exchange communications with you via email, texting and telephone. All emails, texts and voice messages will be answered no later than the next business day. Since all quizzes, tests, projects and labs are completed online, you will know your results immediately upon completion. Final course grades are posted within one week of the course.
completion and may be viewed on the school’s Student Portal database. Students may check their progress at any time using the Student Portal. For those classes where written projects are required, such as essays for the General Education English courses, they are also submitted electronically and will be graded and returned electronically within 5 business days of submission.

9. **TRAINING MATERIALS**

   All Rights Reserved. Copyright law prohibits unauthorized copying of copyrighted materials. The ordering agency acknowledges that students that take the training shall not make or use any unauthorized copies of software or copyrighted material or other materials (whether electronic or hard copy) in violation of license and copyright restrictions.

10. **TRAINING COURSE DESCRIPTION AND PRICING**
CIAT PROGRAMS

APPLIED BACHELOR’S DEGREE PROGRAM

Program Length
Since courses are offered as hybrid or 100% online, the length of time it takes to complete an Applied Bachelor’s Degree program can vary depending on the student’s course load. Each term is 5 weeks long. If the program has 35 required classes, the program length will be 175 weeks (35 classes x 5 weeks). Please check the Program Length section of each program to determine the actual allocated time to complete each program.

Tuition and Fees
Tuition is charged at the rate of $610.00 per semester hour (unit) for technical courses, plus certification exams, which are optional but highly recommended. There are associated lab fees and for detail see under Technology Fees, Page 15. The tuition for General Education courses is also $610.00 per unit. The full tuition can be up to $79,300.00 for the Applied Bachelor’s Degree Program, if all courses, including GE are taken at CIAT. General Education courses may be taken concurrently with technical courses. This could increase the cost per year but will also shorten the time required to obtain your degree.

CIAT does not financially obligate a student for more than twelve (12) months (10 Terms) in any current and active enrollment period. A student may not have more than one enrollment active at any time.

Examination
Each course may have a final examination in order to receive a final letter grade, however, there is no cumulative program examination.

Externship
This program does not participate in the externship.

Flexible Start Times
CIAT’s classroom, guided self-study and online programs offer flexible start opportunities. Classes begin every five weeks. Upon enrollment, an Admissions Advisor will work with you to create a schedule that honors your work and family commitments while still achieving your educational objectives in the shortest practical timeframe. If your circumstances change for any reason, your schedule can be revised to meet your needs.

Delivery Methodology
Full Time students are expected to complete each course within a five week period (Term). Students in hybrid format will spend 4.5 hours at least two days per week in the classroom attending lectures and getting hands-on instruction. Students in 100% Online format can expect to receive synchronous and asynchronous time in face-to-face interaction with your online instructor. Additional time will be spent each week on homework, discussion questions, projects, quizzes, exams, labs and other types of lectures.

Online learning is different from classroom-delivered instruction and there are advantages and disadvantages to each. The advantages of IDL are rapidly gaining as technology enables students learning at a distance to feel more connected than ever before.

Students must be self-motivated, have an up-to-date computer, a high-speed Internet connection, and a distraction-free place to study. Faculty and student interaction will be available by online video conference, LMS discussion boards, email, phone, and chat. CIAT classes use a combination of all or some of the following to provide quality distance learning:
1. Online Video Lessons
2. Online Quizzes/Exams
3. Certification preparation software
4. Live instructor available for conferences and personal sessions
5. Online Labs
6. Discussion questions

In our distance learning classes, all interaction with our instructors is via electronic means, primarily the internet, but your instructor will also exchange communications with you via email, texting and telephone. All emails, texts and voice messages will be answered no later than the next business day. Since all quizzes, tests, projects and labs are completed online, you will know your results immediately upon completion. Final course grades are posted within one week of the course completion and may be viewed on the school’s Student Portal database. Students may check their progress at any time using the Student Portal. For those classes where written projects are required, such as essays for the General Education English courses, they are also submitted electronically and will be graded and returned electronically within 5 business days of submission.

CIAT’s Philosophy for General Education
General education is designed to introduce students to the variety of means through which people comprehend the modern world. General education introduces the content and methodology of the major areas of knowledge. All degree programs include general education requirements. General Education courses may be taken at any time during the student’s attendance at CIAT.

The general education program provides the opportunity for students to develop:

1. Intellectual skills
2. Information Technology
3. Affective and creative capabilities
4. Critical thinking
5. Positive social attitudes
6. Appreciation for cultural diversity that present effective learners and good citizens

Credential Awarded Upon Completion
- Applied Bachelor’s Degree in Computer Information Systems (BACIS)
Applied Bachelor's Degree in Computer Information Systems (BACIS)

130 Semester Hours (750 Lab Hours; 1575 Lecture Hours)
Length: 175 Weeks; SOC Code: 11-3021
GSA Tuition: $61,854.00  Technology Fees: $1,250.00

Description

The Applied Bachelor's Degree in Computer Information Systems (BACIS) provides foundational skills required to install, configure, troubleshoot, and maintain network systems in business environments. Major topics covered include hardware technologies, operating systems, networking, routing, security, and cloud management. This program prepares students for careers in a variety of positions including Information Security Technician, Cyber Security Analysts, Network Administrator, Computer Information Systems Managers and Database Administrator.

As an Applied Bachelor's degree, approximately 75% of the program is dedicated to technical classes with only about 25% focusing on General Education. With a more concentrated focus on these subjects, the student is more likely to succeed in a career in Information Technology when compared to Bachelor of Science degree which may require up to 50%, or more, to be dedicated to General Education.

Economic Outlook and Growth of the Industry

According to the U.S. Department of Labor statistics, employment of Computer Information Systems Manager is expected to grow by 11 percent from 2018 to 2028, which is faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov in 2020, the median annual wage for Computer Information Systems Manager was $151,150.00*.


Program Objectives

Upon completion of the Applied Bachelor's Degree in Computer Information Systems program, the graduate will be able to:

2. Develop security solutions using available technology to prevent or discover vulnerabilities and exploits within enterprise systems.
3. Successfully critique existing security measures for weaknesses in design and implementation using current and new unfolding security threats.
5. Design and Construct Cloud infrastructures.
6. Construct a secure Cloud-based environment.
7. Create new network solutions and/or design improvements on existing networks.
8. Evaluate network performance through procedures, utilities, best practices, and effective troubleshooting methods.
9. Install, configure and support network equipment.
10. Apply public speaking, critical thinking, problem solving, technical writing, and working knowledge of IT security and organizational ethics to facilitate a career in the IT field.
11. Evaluate the historical definitions of technology with their strengths and limitations, and gain understanding in the contemporary perspectives on technology that blur the boundaries of machine and human elements, while applying and analyzing job market awareness, job search, resume writing, and job interviewing for demand positions in the IT field.
12. Develop logical reasoning and mathematical analysis skills needed to create algorithms for general Information Technology applications like simulation, mapping, programming, science and research.

There are many ways that the student can obtain the needed General Education units. Among them are:

1. Successfully completing the course(s) at CIAT.
2. Transferring units from any of the local community colleges in the San Diego area. Please see the Transfer of Credits section under Admissions of this catalog for further information.
3. CLEP testing. The College-Level Examination Program® (CLEP) offers you the opportunity to earn qualifying scores on any of the 33 college subject examinations they offer. Check it out at https://clep.collegeboard.org/ and then ask your Admissions Representative how CIAT can assist you in obtaining CLEP credits toward your CIAT Degree.
4. ACE credits from your military training. Available to our veteran students, even if you are not using the GI Bill®, bring us your JST and we will evaluate it for you.
5. Transfer credits from any accredited institution of higher learning in the United States. Bring us your official transcripts and we will evaluate them for available transferrable credits.

At no charge, we will assist you in completing a credit transfer plan which will identify potential credit transfer paths to complete your general education and other requirements. To request this, contact your Admissions Representative or send an email to studentservicesteam@ciat.edu.

Graduation Requirements
In order to graduate from California Institute of Arts & Technology and receive their Applied Bachelor’s Degree in Computer Information System, the student must successfully:

1. Complete the 12 core lower division technical courses (48 credit hours) with an overall average GPA of minimum 2.0.
2. Complete 6 core upper division technical courses (24 credit hours) with an overall average GPA of minimum 2.0.
3. Complete 7 upper division technical elective courses (28 credit hours) with an overall average GPA of minimum 2.0.
4. Complete a minimum of 30 semester hours of approved General Education courses with an overall average GPA of minimum 2.0.
5. These courses may be completed by:
   a. Successfully completing the course at California Institute of Arts & Technology. A minimum of 36 semester hours must be completed in this manner.
   b. Transferring credit from an accredited institution of higher learning. A maximum 94 semester hours may be completed in this manner.
   c. Challenge Exam of up to eight courses (32 semester hours). Each successfully challenged course will be subtracted from the allowed transfer credits.

Degree Course Plan
This page details the courses needed to complete CIAT’s Applied Bachelor’s Degree in Computer Information Systems Program.
### 12 Lower Division Core Courses Required

**48 Semester Credits**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>IT Fundamentals</td>
<td>3</td>
<td>1</td>
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</tr>
<tr>
<td>101A</td>
<td>Computer Hardware Fundamentals</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>101B</td>
<td>Computer Operating Systems</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>102A</td>
<td>Networking Fundamentals, Part 1</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
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<td>Networking Fundamentals, Part 2</td>
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<td>Network Security, Part 1</td>
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</tr>
<tr>
<td>120B</td>
<td>Network Security, Part 2</td>
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<td>4</td>
</tr>
<tr>
<td>154</td>
<td>Windows &amp; Microsoft 365</td>
<td>3</td>
<td>1</td>
<td>4</td>
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<td>130</td>
<td>Windows Server to Azure Cloud Concepts</td>
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<td>1</td>
<td>4</td>
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<tr>
<td>131</td>
<td>Azure Cloud Administration</td>
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<td>4</td>
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<td>132</td>
<td>AWS Certified Cloud Practitioner</td>
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<td>4</td>
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<tr>
<td>133</td>
<td>Solutions Architect Associate</td>
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### 6 Upper Division Core Courses Required

**24 Semester Credits**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>230A</td>
<td>Installation and Configuration of Linux, Part 1</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>230B</td>
<td>Installation and Configuration of Linux, Part 2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>270A</td>
<td>Cisco Configuration, ICND 1</td>
<td>3</td>
<td>1</td>
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</tr>
<tr>
<td>270B</td>
<td>Cisco Configuration, ICND 2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>280A</td>
<td>Cisco DevNet, Part 1</td>
<td>3</td>
<td>1</td>
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</tr>
<tr>
<td>280B</td>
<td>Cisco DevNet, Part 2</td>
<td>3</td>
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</tr>
</tbody>
</table>

### 7 Upper Division Elective Courses Required

**28 Semester Credits**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLD 330</td>
<td>AWS SysOps Administrator Associate</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>CLD 331</td>
<td>AWS Developer Associate</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>CLD 332</td>
<td>Google Cloud Engineer</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>CLD 333</td>
<td>AWS Database Specialty</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>CLD 334</td>
<td>AWS Security Specialty</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>CLD 335</td>
<td>Microsoft Azure Security Technologies</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>CLD 400</td>
<td>Cloud Administrator Senior Project</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>NET 381A</td>
<td>Implementing and Operating Cisco Enterprise Core Technologies (ENCOR), Part 1</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>NET 381B</td>
<td>Implementing and Operating Cisco Enterprise Core Technologies (ENCOR), Part 2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>NET 382A</td>
<td>Implementing Cisco SD-WAN Solutions, Part 1</td>
<td>3</td>
<td>1</td>
<td>4</td>
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<tr>
<td>NET 382B</td>
<td>Implementing Cisco SD-WAN Solutions, Part 2</td>
<td>3</td>
<td>1</td>
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</tr>
<tr>
<td>NET 383A</td>
<td>Implementing Cisco Enterprise Routing and Services, Part 1</td>
<td>3</td>
<td>1</td>
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<tr>
<td>NET 383B</td>
<td>Implementing Cisco Enterprise Routing and Services, Part 2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>NET 400</td>
<td>Networking Senior Project</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>SEC 340A</td>
<td>Certified Ethical Hacker, Part 1</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>SEC 340B</td>
<td>Certified Ethical Hacker, Part 2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>SEC 350A</td>
<td>Advanced Network Security CISSP, Part 1</td>
<td>3</td>
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<tr>
<td>SEC 350B</td>
<td>Advanced Network Security CISSP, Part 2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Course Number</td>
<td>Course Name</td>
<td>Lecture Credits</td>
<td>Lab Credits</td>
<td>Total Credits</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------</td>
<td>-----------------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>130</td>
<td>Windows Server to Azure Cloud Concepts</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>131</td>
<td>Azure Cloud Administration</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>132</td>
<td>AWS Certified Cloud Practitioner</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

### General Education

**Minimum 30 Semester Credits Required**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEC 400</td>
<td>Cyber Security Senior Project</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

### English Language, Communication and Critical Thinking

**6 Semester Credits minimum required**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG-200</td>
<td>Technical Writing</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>ENG-201</td>
<td>Literature and the Art of the Narrative</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>ENG-210</td>
<td>Public Speaking</td>
<td>3</td>
<td>0</td>
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</tr>
</tbody>
</table>

### Mathematical Concepts and Quantitative Reasoning

**7 Semester Hours minimum required**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH-105</td>
<td>College Algebra</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>MTH-140</td>
<td>Statistics</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>MTH-201</td>
<td>Pre-Calculus</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>MTH-205</td>
<td>Calculus 1</td>
<td>4</td>
<td>0</td>
<td>4</td>
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<tr>
<td>MTH-210</td>
<td>Calculus 2</td>
<td>4</td>
<td>0</td>
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</tr>
</tbody>
</table>

### Arts and Humanities

**6 Semester Hours minimum required**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AHS-305</td>
<td>Technology, Society, and Culture</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>AHS-310</td>
<td>Professional Practice in Ethics</td>
<td>3</td>
<td>0</td>
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</tbody>
</table>

### Social and Behavioral Sciences

**3 Semester Hours minimum required**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBS-110</td>
<td>Introduction to Psychology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SBS-120</td>
<td>Sociology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SBS-201</td>
<td>Economics</td>
<td>3</td>
<td>0</td>
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</table>

### Personal and Professional Development

**5 Semester Hours minimum required**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
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<tbody>
<tr>
<td>PPD-300</td>
<td>Critical Thinking and Problem Solving</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PPD-305</td>
<td>Career and Technology</td>
<td>2</td>
<td>0</td>
<td>2</td>
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</tbody>
</table>

### Natural Physical Sciences

**3 Semester Hours minimum required**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCI-120</td>
<td>General Biology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SCI-130</td>
<td>Principles of Chemistry</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SCI-140</td>
<td>General Physics</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>133</td>
<td>Solutions Architect Associate</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
ASSOCIATE OF APPLIED SCIENCE PROGRAMS

Program Length
Since courses are offered as hybrid or 100% online, the length of time it takes to complete an Associate Degree program can vary depending on the student’s course load. Each term is 5 weeks long. If the program has 20 required classes, the program length will be 100 weeks (20 classes x 5 weeks). Please check the Program Length section of each program to determine the actual allocated time to complete each program.

Tuition and Fees
Tuition is charged at the rate of $610.00 per semester hour (unit) for technical courses, plus certification exams, which are optional but highly recommended. There are associated lab fees and for detail see under Technology Fees, Page 15. The tuition for General Education courses is also $610.00 per unit. The full tuition can be up to $45,750.00 for the Degree Program, if all courses, including GE are taken at CIAT. General Education courses may be taken concurrently with technical courses. This could increase the cost per year but will also shorten the time required to obtain your degree.

CIAT does not financially obligate a student for more than twelve (12) months (10 Terms) in any current and active enrollment period. A student may not have more than one enrollment active at any time.

Examination
Each course may have a final examination in order to receive a final letter grade, however, there is no cumulative program examination.

CIAT’s Philosophy for General Education
General education is designed to introduce students to the variety of means through which people comprehend the modern world. General education introduces the content and methodology of the major areas of knowledge. All degree programs include general education requirements. General Education courses may be taken at any time during the student’s attendance at CIAT. Up to two General Education courses may be taken concurrent with technical courses.

The general education program provides the opportunity for students to develop:

7. Intellectual skills
8. Information Technology
9. Affective and creative capabilities
10. Critical thinking
11. Positive social attitudes
12. Appreciation for cultural diversity that present effective learners and good citizens

Major
- Associates of Applied Science Degree in Information Systems – Networking Concentration (AASCIS-NC)
- Associates of Applied Science in Software Development (ASD)
Associate of Applied Science Degree in Computer Information Systems Networking Concentration (AASCIS-NC)

64 Semester Hours (360 Lab Hours; 780 Lecture Hours)
Length: 85 Weeks; SOC Code: 15-1142
GSA Tuition: $30,451.20  Technology Fees: $600.00

Description

The AASCIS-NC Program provides foundational skills required to install, configure, troubleshoot, and maintain network systems in business environments. Major topics covered include hardware technologies, operating systems, networking, routing, security, and server management. This program prepares students for careers in a variety of positions including Information Security Technician, LAN Administrator, Junior Network Administrator, Technical Support Specialist, PC Technician and IT Support Team Lead.

As an Applied Science degree, approximately 75% of the program is dedicated to technical classes with only about 25% focusing on General Education. With a more concentrated focus on these subjects, the student is more likely to succeed in a career in Information Technology when compared to Associate of Science degree which may require up to 50%, or more, to be dedicated to General Education.

Economic Outlook and Growth of the Industry

According to the U.S. Department of Labor statistics, employment of computer network support specialists is expected to grow by 17 percent from 2020 to 2030, which is faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov in 2020, the median annual wage for System Administrator was $84,810.00.*


Program Objectives

Upon completion of the Associate of Applied Science in Computer Information Systems - Networking Concentration Program, the graduate as a Security Technician, LAN Administrator, Junior Network Administrator, Technical Support Specialist, PC Technician and IT Support Team Lead will be able to:

1. Discuss computer operating systems and hardware fundamentals
2. Perform essential steps in PC installation, configuration, troubleshooting and repair
3. Install, Configure and troubleshoot basic networking hardware, protocols and services
4. Discuss network infrastructure, cryptography, assessments and audits within networks and networking environments
5. Perform installation, configuration and troubleshooting of various operating systems and network operating systems
6. Demonstrate speaking, listening, writing, reading and research skills to be able to document a project scope or create a user manual for a new database in the IT field.
7. Enhance and examine human thought processes and behaviors in diverse populations, cultures and technical IT settings.
8. Develop analytical, critical thinking, quantitative and problem-solving skills for subnetworking, and probability for estimating risks of downtime/uptime.
There are many ways that the student can obtain the needed General Education units. Among them are:

6. Successfully completing the course(s) at CIAT.
7. Transferring units from any of the local community colleges in the San Diego area. Please see the Transfer of Credits section under Admissions of this catalog for further information.
8. CLEP testing. The College-Level Examination Program® (CLEP) offers you the opportunity to earn qualifying scores on any of the 33 college subject examinations they offer. Check it out at https://clep.collegeboard.org/ and then ask your Admissions Representative how CIAT can assist you in obtaining CLEP credits toward your CIAT Degree.
9. ACE credits from your military training. Available to our veteran students, even if you are not using the GI Bill®, bring us your JST and we will evaluate it for you.
10. Transfer credits from any accredited institution of higher learning in the United States. Bring us your official transcripts and we will evaluate them for available transferrable credits.

At no charge, we will assist you in completing a credit transfer plan which will identify potential credit transfer paths to complete your general education and other requirements. To request this, contact your Admissions Representative or send an email to studentservicesteam@ciat.edu.

Graduation Requirements
In order to graduate from California Institute of Arts & Technology and receive their Associate of Applied Science Degree in Computer Information Systems – Network Concentration, the student must successfully:

6. Complete the 8 core technical courses (32 semester hours) with an overall average GPA of minimum 2.0.
7. Complete 7 technical elective courses (28 semester hours) with an overall average GPA of minimum 2.0.
8. Complete a minimum of 15 semester hours of approved General Education courses with an overall average GPA of minimum 2.0.
9. These courses may be completed by:
   a. Successfully completing the course at California Institute of Arts & Technology. A minimum of 24 semester hours must be completed in this manner
   b. Transferring credit from an accredited institution of higher learning. A maximum 51 semester hours may be completed in this manner.
   c. Challenge Exam of up to four courses (16 semester hours). Each successfully challenged course will be subtracted from the allowed transfer credits.

Degree Course Plan
This page details the courses needed to complete CIAT’s Associate of Applied Sciences in Computer Information Systems Degree Program.

<table>
<thead>
<tr>
<th>12 Lower Division Core Courses Required</th>
<th>48 Semester Credits</th>
</tr>
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<tbody>
<tr>
<td>Course Number</td>
<td>Course Name</td>
</tr>
<tr>
<td>100</td>
<td>IT Fundamentals</td>
</tr>
<tr>
<td>101A</td>
<td>Computer Hardware Fundamentals</td>
</tr>
<tr>
<td>101B</td>
<td>Computer Operating Systems</td>
</tr>
<tr>
<td>102A</td>
<td>Networking Fundamentals, Part 1</td>
</tr>
<tr>
<td>102B</td>
<td>Networking Fundamentals, Part 2</td>
</tr>
<tr>
<td>120A</td>
<td>Network Security, Part 1</td>
</tr>
<tr>
<td>120B</td>
<td>Network Security, Part 2</td>
</tr>
<tr>
<td>154</td>
<td>Windows &amp; Microsoft 365</td>
</tr>
<tr>
<td>Course Number</td>
<td>Course Name</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>130</td>
<td>Windows Server to Azure Cloud Concepts</td>
</tr>
<tr>
<td>131</td>
<td>Azure Cloud Administration</td>
</tr>
<tr>
<td>132</td>
<td>AWS Certified Cloud Practitioner</td>
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</tbody>
</table>

**General Education**  
**Minimum 16 Semester Credits Required**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
</table>
| **English Language, Communication and Critical Thinking**  
3 Semester Credits minimum required |
| Technical Writing                          | 3               | 0           | 3             |
| Literature and the Art of the Narrative    | 3               | 0           | 3             |
| Public Speaking                            | 3               | 0           | 3             |

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
</table>
| **Mathematical Concepts and Quantitative Reasoning**  
7 Semester Hours minimum required |
| College Algebra                            | 3               | 0           | 3             |
| Statistics                                 | 4               | 0           | 4             |
| Pre-Calculus                               | 4               | 0           | 4             |
| Calculus 1                                 | 4               | 0           | 4             |
| Calculus 2                                 | 4               | 0           | 4             |

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social and Behavioral Sciences</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to Psychology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Sociology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Economics</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Natural Physical Sciences</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Biology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Principles of Chemistry</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>General Physics</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Solutions Architect Associate</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
Associate of Applied Science in Software Development (ASD)

64 Semester (360 Lab Hours; 780 Lecture Hours)
Length: 85 Weeks; SOC Code: 15-1132, 15-1133
GSA Tuition: $30,451.20  Technology Fees: $600.00

Description
The ASD program presents the fundamentals of software design and highlights the distinctions between historically significant programming paradigms. Topics covered include software design, layers of software architecture, programming languages, hardware and software, Internet architecture, app development, web development, systems development and administration, client/server architecture, data structures, data modeling, and databases.

The scope of material will range from the origins of the modern programming era, to long-standing technologies which continue to be a primary force in modern operations, through to newer technologies which are in high demand. Students will be empowered to understand the ever-expanding world of software engineering technologies, their place in that world, and how best to guide themselves to their individual goals upon completion.

Successful graduates will be fully prepared and qualified for positions as software developers and fluent in the use of various technologies and computer programming languages and protocols including (dependent on course selection):

<table>
<thead>
<tr>
<th>C</th>
<th>Python</th>
<th>Swift</th>
</tr>
</thead>
<tbody>
<tr>
<td>C++</td>
<td>C#</td>
<td>Linux Bash</td>
</tr>
<tr>
<td>SQL</td>
<td>.NET Framework</td>
<td>Mongo DB</td>
</tr>
<tr>
<td>HTML</td>
<td>T-SQL</td>
<td>Ember JS</td>
</tr>
<tr>
<td>CSS</td>
<td>ASP.NET MVC</td>
<td>Angular JS</td>
</tr>
<tr>
<td>JavaScript</td>
<td>Java</td>
<td>Node JS</td>
</tr>
<tr>
<td>HTTP</td>
<td>Objective-C</td>
<td>Ruby on Rails</td>
</tr>
</tbody>
</table>

Depending on course selection, students will also acquire practical, hands-on knowledge of many in-demand, industry standard technologies including:

<table>
<thead>
<tr>
<th>Microsoft Azure</th>
<th>Oracle MySQL</th>
<th>Raspberry Pi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Studio</td>
<td>SQLite</td>
<td>Git and GitHub</td>
</tr>
<tr>
<td>SQL Studio</td>
<td>Linux</td>
<td>Android</td>
</tr>
<tr>
<td>Microsoft PowerShell</td>
<td>Apache</td>
<td>Android Studio</td>
</tr>
<tr>
<td>Microsoft HoloLens</td>
<td>Nginx</td>
<td>Google VR</td>
</tr>
<tr>
<td>Unity 3D</td>
<td>Heroku</td>
<td>iOS</td>
</tr>
</tbody>
</table>

All premium software will be available at no charge to students through their school Microsoft Imagine account.

Economic Outlook and Growth of the Industry
The Bureau of Labor Statistics shows that software developers are projected to grow 22 percent from 2020-2030, much faster than the average for all occupations. Employment of applications developers is projected to grow 23 percent, and employment of systems developers is projected to grow 20 percent. The pay range for this field is noted to be 66,730 – 152,799 annually. Median pay is common at 100,977 and is normally 22% higher than the national average. According to bls.gov in 2020, the median annual wage for Software Developer was $110,140.*
Objectives

Upon completion of the degree in Software Development program, the graduate will be able to:

1. Analyze users’ needs, then design, test, and develop software to meet those needs
2. Recommend software upgrades for customers’ existing programs and systems
3. Design each piece of the application or system and plan how the pieces will work together
4. Create flowcharts and other models that instruct programmers how to write the software’s code
5. Ensure that the software continues to function normally through software maintenance and testing
6. Document every aspect of the application or system as a reference for future maintenance and upgrades
7. Collaborate with other computer specialists to create optimum software
8. Demonstrate speaking, listening, writing, reading and research skills to be able to document a project scope or create a user manual for a new database in the IT field.
9. Enhance and examine human thought processes and behaviors in diverse populations, cultures and technical IT settings.
10. Develop analytical, critical thinking, quantitative and problem-solving skills for subnetting, and probability for estimating risks of downtime/uptime.

There are many ways that the student can obtain the needed General Education units. Among them are:

1. Successfully completing the course(s) at CIAT.
2. Transferring units from any of the local community colleges in the San Diego area. Please see the Transfer of Credits section under Admissions of this catalog for further information.
3. CLEP testing. The College-Level Examination Program® (CLEP) offers you the opportunity to earn qualifying scores on any of the 33 college subject examinations they offer. Check it out at https://clep.collegeboard.org/ and then ask your Admissions Representative how CIAT can assist you in obtaining CLEP credits toward your CIAT Degree.
4. ACE credits from your military training. Available to our veteran students, even if you are not using the GI Bill®, bring us your JST and we will evaluate it for you.
5. Transfer credits from any accredited institution of higher learning in the United States. Bring us your official transcripts and we will evaluate them for available transferrable credits.

At no charge, we will assist you in completing a credit transfer plan which will identify potential credit transfer paths to complete your general education and other requirements. To request this, contact your Admissions Representative or send an email to studentservices@ciat.edu.

Graduation Requirements

In order to graduate from California Institute of Arts & Technology and receive their Associate of Applied Science in Software Development, the student must successfully:

1. Complete the 6 core technical courses (24 semester hours) with an overall average GPA of minimum 2.0.
2. Complete 6 technical elective courses (24 semester hours) with an overall average GPA of minimum 2.0.
3. Complete a minimum of 15 semester hours of approved General Education courses with an overall average GPA of minimum 2.0.
4. These courses may be completed by:
   a. Successfully completing the course at California Institute of Arts & Technology. A minimum of 23 semester hours must be completed in this manner.
b. Transferring credit from an accredited institution of higher learning. A maximum 40 semester hours may be completed in this manner.

c. Challenge Exam of up to four courses (16 semester hours). Each successfully challenged course will be subtracted from the allowed transfer credits.

Degree Course Plan

This page details the courses needed to complete CIAT’s Associate of Applied Sciences in Computer Information Systems Degree Program.

### 6 Core Courses Required
#### 24 Semester Credits

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASD101</td>
<td>Python Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>ASD102</td>
<td>Object-Oriented Programming with C++</td>
<td>4</td>
</tr>
<tr>
<td>ASD103</td>
<td>Relational Database Management Systems and SQL</td>
<td>4</td>
</tr>
<tr>
<td>ASD150</td>
<td>Operating System Concepts</td>
<td>4</td>
</tr>
<tr>
<td>ASD170</td>
<td>Front-End Development with HTML and CSS</td>
<td>4</td>
</tr>
<tr>
<td>ASD190</td>
<td>Internet Architecture with PHP and other OSS</td>
<td>4</td>
</tr>
</tbody>
</table>

### 6 Elective Courses Required
#### 24 Semester Credits

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASD210</td>
<td>Intermediate Python</td>
<td>4</td>
</tr>
<tr>
<td>ASD215</td>
<td>C# Business Programming</td>
<td>4</td>
</tr>
<tr>
<td>ASD220</td>
<td>Linux Administration and Shell Scripting</td>
<td>4</td>
</tr>
<tr>
<td>ASD225</td>
<td>Windows Development and Administration</td>
<td>4</td>
</tr>
<tr>
<td>ASD227</td>
<td>iOS Programming</td>
<td>4</td>
</tr>
<tr>
<td>ASD230</td>
<td>Open Source Servers</td>
<td>4</td>
</tr>
<tr>
<td>ASD235</td>
<td>SQL Server, T-SQL and PL/SQL</td>
<td>4</td>
</tr>
<tr>
<td>ASD247</td>
<td>Android App Development</td>
<td>4</td>
</tr>
<tr>
<td>ASD255</td>
<td>Web Development with ASP.NET</td>
<td>4</td>
</tr>
<tr>
<td>ASD260</td>
<td>MEAN Stack Development</td>
<td>4</td>
</tr>
<tr>
<td>ASD265</td>
<td>Cloud Computing with Microsoft Azure</td>
<td>4</td>
</tr>
<tr>
<td>ASD267</td>
<td>Virtual Reality</td>
<td>4</td>
</tr>
<tr>
<td>ASD277</td>
<td>Internet of Things</td>
<td>4</td>
</tr>
<tr>
<td>ASD280</td>
<td>Django Framework</td>
<td>4</td>
</tr>
<tr>
<td>ASD290</td>
<td>Ruby on Rails Framework</td>
<td>4</td>
</tr>
<tr>
<td>ASD295</td>
<td>Augmented Reality</td>
<td>4</td>
</tr>
<tr>
<td>280A</td>
<td>Cisco DevNet, Part 1</td>
<td>4</td>
</tr>
<tr>
<td>280B</td>
<td>Cisco DevNet, Part 2</td>
<td>4</td>
</tr>
</tbody>
</table>

### General Education
#### Minimum 16 Semester Credits Required

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Name</th>
<th>Lecture Credits</th>
<th>Lab Credits</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language, Communication and Critical Thinking</td>
<td>3 Semester Credits minimum required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENG-200</td>
<td>Technical Writing</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>ENG-201</td>
<td>Literature and the Art of the Narrative</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>ENG-210</td>
<td>Public Speaking</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

### Mathematical Concepts and Quantitative Reasoning
#### 7 Semester Hours minimum required
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH-105</td>
<td>College Algebra</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>MTH-140</td>
<td>Statistics</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>MTH-201</td>
<td>Pre-Calculus</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>MTH-205</td>
<td>Calculus 1</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>MTH-210</td>
<td>Calculus 2</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

**Social and Behavioral Sciences**

*3 Semester Hours minimum required*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBS-110</td>
<td>Introduction to Psychology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SBS-120</td>
<td>Sociology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SBS-201</td>
<td>Economics</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

**Natural Physical Sciences**

*3 Semester Hours minimum required*

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCI-120</td>
<td>General Biology</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SCI-130</td>
<td>Principles of Chemistry</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>SCI-140</td>
<td>General Physics</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>
CERTIFICATE PROGRAMS

General Information on Certificate Programs

Program Length
The length of time it takes to complete any Certificate program can vary depending on the student’s course load (it is based on 5 weeks per course). Please check the Program Length section of each Program to determine the actual allocated time to complete each program.

Tuition and Fees
Tuition is charged at the rate of $610.00 per 15 lecture clock hour unit or 30 lab clock hour units. For the Microsoft Office programs, tuition is charged at a flat rate of $1995.00 per course.

Examination
Each course may have a final examination in order to receive a final letter grade, however, there is no cumulative program examination.

Certificate Programs
- Certificate in Computer Information Systems – Networking Concentration (CCIS-NC)
- Cisco Certified Network Associate/ Certificate as Cisco Networking Professional, Enterprise (CCNP/CCNA-ENT)
- Certificate as Cisco Certified Network Associate (CCNA)
- Certificate as Networking Technician (CNT)
- Certificate as Cloud Administration (CCA)
- Certificate as Computer Technician (CCT)
- Certificate in Software Development (CSD)
- Certificate in Microsoft Office Specialist (MOS)
Certificate in Computer Information Systems – Networking Concentration (CCIS-NC)

32 Semester Hours (240 Lab Hours; 360 Lecture Hours)
Length: 40 Weeks; SOC Code: 15-1142
GSA Tuition: $15,225.60  Technology Fees: $400.00

Description
The Certificate in Computer Information Systems - Networking Concentration program provides the foundational skills required to install, configure, troubleshoot, and maintain network systems in business environments. Major topics covered include hardware technologies, operating systems, networking, routing, security, and server management. This program prepares students for careers in a variety of positions including Information Security Technician, LAN Administrator, Junior Network Administrator, Technical Support Specialist, and PC Technician.

Economic Outlook and Growth of the Industry
According to the U.S. Department of Labor statistics, employment of computer systems is expected to grow by 9 percent from 2020 to 2030, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov, median annual wages of networking and PC administrative personnel systems were $84,810 in 2020.*


Program Objectives
Upon completion of the Certificate in Computer Information Systems - Networking Concentration Program, the graduate as Information Security Technician, LAN Administrator, Junior Network Administrator, Technical Support Specialist, and PC Technician will be able to:

1. Discuss computer operating systems and hardware fundamentals
2. Perform essential steps in PC installation, configuration, troubleshooting and repair
3. Install, Configure and troubleshoot basic networking hardware, protocols and services
4. Discuss network infrastructure, cryptography, assessments and audits within networks and networking environments
5. Perform installation, configuration and troubleshooting of various operating systems and network operating systems

CCIS-NC Course Plan
This table details the courses required for completion of CIAT’s Certificate in Computer Information Systems – Networking Concentration Program:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>IT Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>101A</td>
<td>Computer Hardware Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>101B</td>
<td>Computer Operating Systems</td>
<td>4</td>
</tr>
<tr>
<td>102A</td>
<td>Networking Fundamentals, Part 1</td>
<td>4</td>
</tr>
<tr>
<td>102B</td>
<td>Networking Fundamentals, Part 2</td>
<td>4</td>
</tr>
<tr>
<td>120A</td>
<td>Network Security, Part 1</td>
<td>4</td>
</tr>
<tr>
<td>120B</td>
<td>Network Security, Part 2</td>
<td>4</td>
</tr>
<tr>
<td>132</td>
<td>AWS Certified Cloud Practitioner</td>
<td>4</td>
</tr>
</tbody>
</table>
Cisco Certified Network Associate / Certificate as Cisco Networking Professional – Enterprise (CCNA/CCNP-ENT)
40 Semester Credit Hours (300 Lab Hours; 450 Lecture Hours)
Length: 50 Weeks; SOC Code: 15-1142
GSA Tuition: $19,032.00 Technology Fees: $500.00

Description
Successful graduates will be fully prepared and qualified for positions as network security technicians and administrators for Cisco network systems. In addition to preparing the student for the vendor neutral Network+ certifications, this program prepares the student to achieve the Cisco Certified Network Professional (CCNP) certification by successfully passing the following Cisco certification exams:

1. Networking Fundamentals, Part 1
2. Networking Fundamentals, Part 2
3. Cisco Configuration, ICND1
4. Cisco Configuration, ICND2
5. Cisco DevNet
6. Implementing and Operating Cisco Enterprise Core Technologies (ENCOR)
7. Implementing Cisco Enterprise Routing and Services

Economic Outlook and Growth of the Industry
According to the Bureau of Labor Statistics, Occupational Outlook Handbook, 2020 edition, Computer Network Systems, Systems and Database Administrators employment expected to grow by 9 percent from 2020 to 2030, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov, the median annual wages of Information Security Analyst was $103,590 in 2020.*


Program Objectives
Upon completion of the Certificate in Cisco Network Professional-Security Specialist program, the graduate will be able to:

1. Describe fundamentals and theory of computer networking systems and how they are applied in various business situations
2. Provide network security for day to day business operations
3. Implement and support Cisco firewalls.
4. Implement and support Cisco Intrusion Prevention Systems
5. Manage and administer Virtual Private Networks using Cisco components.

CCNA/CCNP-ENT Course Plan
This table details the courses required for completion of CIAT’s Certificate as Cisco Networking Professional/Certificate as Cisco Certified Network Associate-Security Specialist Program:
## 10 Courses Required (40 Semester Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>102A</td>
<td>Networking Fundamentals, Part 1</td>
<td>4</td>
</tr>
<tr>
<td>102B</td>
<td>Networking Fundamentals, Part 2</td>
<td>4</td>
</tr>
<tr>
<td>270A</td>
<td>CISCO Certified Network Associate, Part 1</td>
<td>4</td>
</tr>
<tr>
<td>270B</td>
<td>CISCO Certified Network Associate, Part 2</td>
<td>4</td>
</tr>
<tr>
<td>280A</td>
<td>Cisco DevNet, Part 1</td>
<td>4</td>
</tr>
<tr>
<td>280B</td>
<td>Cisco DevNet, Part 2</td>
<td>4</td>
</tr>
<tr>
<td>NET 381A</td>
<td>Implementing and Operating Cisco Enterprise Core Technologies (ENCOR), Part 1</td>
<td>4</td>
</tr>
<tr>
<td>NET 381B</td>
<td>Implementing and Operating Cisco Enterprise Core Technologies (ENCOR), Part 2</td>
<td>4</td>
</tr>
<tr>
<td>NET 383A</td>
<td>Implementing Cisco Enterprise Routing and Services, Part 1</td>
<td>4</td>
</tr>
<tr>
<td>NET 383B</td>
<td>Implementing Cisco Enterprise Routing and Services, Part 2</td>
<td>4</td>
</tr>
</tbody>
</table>
Certificate as Cisco Certified Network Associate (CCNA)

150 Clock Hours (60 Lab Hours; 90 Lecture Hours)
Length: 10 Weeks; SOC Code: 15-1142
GSA Tuition: $3,806.40    Technology Fees: $100.00

Description
Successful graduates will be fully prepared and qualified for entry level positions as network administrators for Cisco network systems. In addition to preparing the student for the vendor neutral CompTIA Network+ certification, this program prepares the student to achieve the Cisco Certified Network Associate certification by successfully passing the following Cisco certification exams:

1. Cisco Configuration, ICND1
2. Cisco Configuration, ICND2

Economic Outlook and Growth of the Industry
According to the Bureau of Labor Statistics, Occupational Outlook Handbook, 2020 edition, Computer Network Systems, Systems and Database Administrators employment expected to grow by 9 percent from 2020 to 2030, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov, the median annual wages of Network and Computer Systems Administrator was $84,810 in 2020.*


Program Objectives
Upon completion of the Certificate in Cisco Network Professional-Security Specialist program, the graduate will be able to:

1. Describe fundamentals and theory of computer networking systems and how they are applied in various business situations
2. Install medium-size Cisco routed and switched networks.
5. Troubleshoot medium-size Cisco routed and switched networks.
6. Implement and verify connections to remote sites in a WAN.

CCNA Course Plan
This table details the courses required for completion of CIAT’s Certificate as Cisco Network Associate Program:

<table>
<thead>
<tr>
<th>2 Courses Required (150 Clock Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>270A</td>
</tr>
<tr>
<td>270B</td>
</tr>
</tbody>
</table>
Certificate as Networking Technician (CNT)
16 Semester Credit Hours (120 Lab Hours; 180 Lecture Hours)
Length: 20 Weeks; SOC Code: 15-1122
GSA Tuition: $7,612.80    Technology Fees: $200.00

Description
The Certificate as Networking Technician is designed for the Computer Network Technician who wants to expand their competence into the area of computer security. It provides the foundational skills required to install, configure, troubleshoot, and maintain network systems in business environments. Major topics covered include Cisco hardware technologies, operating systems, networking, routing, local area network (LAN) security, wireless network security, and authentication, encryption and authorization techniques. This program prepares students for a career in computer security as an Information Security Technician.

Economic Outlook and Growth of the Industry
According to the Bureau of Labor Statistics, Occupational Outlook Handbook, 2020 edition, Computer Network Systems, Systems and Database Administrators employment expected to grow by 9 percent from 2020 to 2030, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov, the median annual wages of Computer Support Specialist was $55,510 in 2020.*


Program Objectives
Upon completion of the Certificate as Networking Technician Program, the graduate as an Information Security Technician will be able to:

1. Discuss network infrastructure, cryptography, assessments and audits within networks and networking environments.
2. Perform installation, configuration and troubleshooting of various network security systems.
3. Conduct security audits and take action to correct weaknesses discovered.
4. Advise coworkers on Social Engineering threats and defenses.

CNT Course Plan
This table details the courses required for completion of CIAT’s Certificate as Networking Technician Program:

<table>
<thead>
<tr>
<th>4 Courses Required (16 Semester Credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>102A  Networking Fundamentals, Part 1 4</td>
</tr>
<tr>
<td>102B  Networking Fundamentals, Part 2 4</td>
</tr>
<tr>
<td>270A  CISCO Certified Network Associate, Part 1 4</td>
</tr>
<tr>
<td>270B  CISCO Certified Network Associate, Part 2 4</td>
</tr>
</tbody>
</table>
Certificate in Cloud Administration (CCA)
16 Semester Credit Hours (120 Lab Hours; 180 Lecture Hours)
Length: 20 weeks; SOC Code: 15-1152
GSA Tuition: $7,612.80 Technology Fees: $200.00

Description
The Certificate in Cloud Administration is designed for the Computer Service Technician who wants to expand their competence into the area of computer networking on premise and in the cloud. It provides the foundational skills required to install, configure, troubleshoot, and maintain network server systems and cloud management in business environments. Major topics covered include hardware technologies, operating systems, networking, security, cloud models and cloud solutions management. This program prepares students for careers in a variety of positions including LAN Administrator, Junior Network Administrator and Technical Support Specialist.

Economic Outlook and Growth of the Industry
According to the Bureau of Labor Statistics, Occupational Outlook Handbook, 2020 edition, Computer Network Systems, Systems and Database Administrators employment expected to grow by 9 percent from 2020 to 2030, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov, the median annual wages of Information Security Analyst was $103,590 in 2020.*


Program Objectives
Upon completion of the Certificate in Cloud Administration Program, the graduate will be able to:

1. Install, upgrade, and migrate Windows Server in host and compute environments on servers and workloads.
2. Install Windows Server features and roles; install and configure Windows Server Core; manage Windows Server Core installations using GUI and Windows PowerShell.
3. Create, direct, and manage Active Directory services.
4. Install and configure Hyper-V and Virtual Machines.
5. Migrate virtual servers to Microsoft Azure™ cloud.
6. Create, manage, and maintain cloud resources and services in major providers like Microsoft Azure™ and AWS™.
7. Budget expenditures for cloud products that provide solutions to today’s modern businesses.

CCA Course Plan
This table details the courses required for completion of CIAT’s Certificate as Certificate in Cloud Administration Program:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>130</td>
<td>Windows Server to Azure Cloud Concepts</td>
<td>4</td>
</tr>
<tr>
<td>131</td>
<td>Azure Cloud Administration</td>
<td>4</td>
</tr>
<tr>
<td>132</td>
<td>AWS Certified Cloud Practitioner</td>
<td>4</td>
</tr>
<tr>
<td>133</td>
<td>Solutions Architect Associate</td>
<td>4</td>
</tr>
</tbody>
</table>
Certificate as Computer Technician (CCT)
12 Semester Credit Hours (90 Lab Hours; 135 Lecture Hours)
Length: 15 weeks; SOC Code: 15-1152
GSA Tuition: $5,709.60    Technology Fees: $150.00

Description
The Certificate as Computer Technician program provides the foundational skills required to install, configure, troubleshoot, and maintain computer systems in business environments. Major topics covered include hardware technologies, operating systems, networking and security. This program prepares students for entry level positions as a Technical Support Specialist, Help Desk Technician or PC Technician.

Economic Outlook and Growth of the Industry
According to the Bureau of Labor Statistics, Occupational Outlook Handbook, 2020 edition, Computer Network Systems, Systems and Database Administrators employment expected to grow by 9 percent from 2020 to 2030, which is much faster than the average for all occupations. Demand for these workers will increase as organizations continue to adopt and integrate increasingly sophisticated technologies and as the need for information security grows. According to bls.gov, the median annual wages of Computer Support Specialists was $55,510 in 2020.*


Program Objectives
Upon completion of the Certificate as Computer Technician Program, the graduate will be able to:

1. Discuss computer operating systems and hardware fundamentals
2. Perform essential steps in PC installation, configuration, troubleshooting and repair
3. Install, Configure and troubleshoot basic networking hardware, protocols and services
4. Discuss network infrastructure, cryptography, assessments and audits within networks and networking environments
5. Perform installation, configuration and troubleshooting of various operating systems and network operating systems

CCT Course Plan
This table details the courses required for completion of CIAT’s Certificate as Computer Technician Program:

<table>
<thead>
<tr>
<th>3 Courses Required (12 Semester Credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 IT Fundamentals</td>
</tr>
<tr>
<td>101A Computer Hardware Fundamentals</td>
</tr>
<tr>
<td>101B Computer Operating Systems</td>
</tr>
</tbody>
</table>
Certificate in Software Development (CSD)
24 Semester Credit Hours (180 Lab Hours; 270 Lecture Hours)
Length: 30 Weeks; SOC Code: 15-1132
GSA Tuition: $11,419.20 Technology Fees: $300.00

Description
Successful graduates will be prepared for entry-level employment as application developers and they will be certified as fluent in the use of:

1. C++
2. C#
3. Android
4. iOS Programming
5. Phyton

Economic Outlook and Growth of the Industry
According to the Bureau of Labor Statistics, Occupational Outlook Handbook, 2020 edition, employment in the Software Development field is expected to grow much faster than the average for all occupations and add 1,847,900 new jobs over the 2020-30 decade According to bls.gov in 2020, the median annual wage for Software Developer was $110,140.+


Program Objective
Upon completion of the Certificate in Software Development program, the graduate will be able to:

1. Analyze users’ needs, then design, test, and develop software to meet those needs
2. Recommend software upgrades for customers’ existing programs and systems
3. Design each piece of the application or system and plan how the pieces will work together
4. Create flowcharts and other models that instruct programmers how to write the software’s code
5. Ensure that the software continues to function normally through software maintenance and testing
6. Document every aspect of the application or system as a reference for future maintenance and upgrades
7. Collaborate with other computer specialists to create optimum software

CSD Course Plan
This table details the courses required for completion of CIAT’s Certificate as Software Development Program:

<table>
<thead>
<tr>
<th>6 Courses Required (24 Semester Credits)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ASD-101 Python Fundamentals</td>
<td>4</td>
</tr>
<tr>
<td>ASD-102 Object-Oriented Programming with C++</td>
<td>4</td>
</tr>
<tr>
<td>ASD-103 Relational Database Management Systems and SQL</td>
<td>4</td>
</tr>
<tr>
<td>ASD-210 Intermediate Python</td>
<td>4</td>
</tr>
<tr>
<td>ASD-170 Front-End Development with HTML and CSS</td>
<td>4</td>
</tr>
<tr>
<td>ASD-190 Internet Architecture with PHP and other OSS</td>
<td>4</td>
</tr>
</tbody>
</table>
Certificate as Microsoft Office Specialist (MOS)
15 Semester Credit Hours (225 Lecture Hours)
Length: 25 weeks; SOC Code: 43-4199, 43-9199
GSA Tuition: $7,780.50

Description
Successful graduates will be certified as proficient in the use of the following Microsoft Office component programs:

1. Microsoft Word
2. Microsoft Excel
3. Microsoft PowerPoint
4. Microsoft Outlook
5. Microsoft Access

Economic Outlook and Growth of the Industry
According to the Bureau of Labor Statistics, Occupational Outlook Handbook, 2020 edition, employment in the Administrative field is expected to grow about as fast as the average for all occupations, with a greater than average growth of Administrative Assistants needed in the Medical Office field and add 3,363,900 new jobs over the 2020-30 decade. Median annual wages of secretaries and administrative assistants were $40,990 in 2020.*


Program Objective
Upon completion of the Microsoft Office Specialist Certificate program, the graduate will be able to:

1. Create documents and correspondence utilizing Microsoft Word
2. Create spreadsheets and graphs utilizing Microsoft Excel
3. Create audio-visual presentations and “slideshows” utilizing Microsoft PowerPoint
4. Manage emails, appointments and schedules utilizing Microsoft Outlook
5. Create, maintain and query a relational database utilizing Microsoft Access

MOS Course Plan
This table details the courses required for completion of CIAT’s Certificate as Microsoft Office Specialist:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBUS101</td>
<td>Word Processing Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>CBUS102</td>
<td>Creating and Using Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>CBUS103</td>
<td>Presentation Applications</td>
<td>3</td>
</tr>
<tr>
<td>CBUS104</td>
<td>Database Management</td>
<td>3</td>
</tr>
<tr>
<td>CBUS105</td>
<td>Business and Email Management</td>
<td>3</td>
</tr>
</tbody>
</table>