### Associate Degrees and Certificates at Hartnell College

**Program** | **Certificate** | **Program** | **Certificate**
--- | --- | --- | ---
Addiction Studies | AA | General Studies: | AA
Administration of Justice for Transfer | AS-T | Ethnic Groups in the United States Emphasis | AA
Administration of Justice | AS | Humanities Emphasis | AS-T
Advanced Automotive Technology | AS | Language and Rationality Emphasis | AS
Advanced Diesel Technology | AS | Natural Science Emphasis | AS-T
Agriculture Business for Transfer | AS-T | Social and Behavioral Sciences Emphasis | AS
Agriculture Plant Science for Transfer | AS-T | Geology for Transfer | AS
Agriculture with Emphasis | AS | History for Transfer | AS-T
Business Emphasis | AS | Kinesiology for Transfer | AS
Production Emphasis | AS | Kinesiology | AA
Food Safety | AS | Intersegmental General Education Transfer | AS
Astronomy | AS | Anthropology Emphasis | AA
Basic English | AS | Culture and Society Emphasis | AA
Biology for Transfer | AS-T | Humanities Emphasis | AA
Biology | AS | Languages and Literature Emphasis | AA
Business Administration for Transfer | AS-T | Philosophy | AA
Business Office Technology: | Bookkeeping | Political Science Emphasis | AA
Business Information Worker Level 1 | AS-T | Psychology Emphasis | AA
Business Information Worker Level 2 | AS | Social and Social Sciences Emphasis | AA
Information Processing | AS | Mathematics for Transfer | AS-T
Chemistry for Transfer | AS-T | Music for Transfer | AA-T
Chicano Studies | AA | Music | AA
Communication Studies for Transfer | AS-T | Nursing: | AS
Computer Science for Transfer | AA | Registered Nursing | AS
Computer Science and Information Systems: | AS-T | Vocational Nursing | AS
Computer Science Option | AS | Photography | AA
Digital Web and Mobile Development | AS | Physics for Transfer | AS-T
Mobile Development Option | AS | Political Science for Transfer | AA-T
Web Development Option | AS | Psychology for Transfer | AA-T
Network and Security Option | AS | Psychology | AA
Construction Management and Architecture | AS | Public Health Science for Transfer | AS-T
CSU/General Education Breadth | AS | Respiratory Care Practitioner | AS
Digital Arts | AA | Social Justice for Transfer | AA-T
Early Childhood Education for Transfer | AS-T | Sociology for Transfer | AA-T
Early Childhood Education | AS | Spanish for Transfer | AA-T
Economics for Transfer | AA-T | Spanish | AA
Elementary Teacher Preparation for Transfer | AA-T | Studio Arts for Transfer | AA-T
Engineering | AS | Theatre Arts for Transfer | AA-T
English for Transfer | AA-T | Theatre Arts and Cinema | AA

**Associate Degree (AA or AS) programs allow students the benefits of a general college education and the option of choosing occupational training. Liberal arts, or concentration in a discipline in the College. The Associate in Arts for Transfer (AA-T) and the Associate in Science for Transfer (AS-T) are intended for students who plan to transfer and complete a bachelor’s degree in a similar major at a CSU campus. In addition, Hartnell College offers a variety of programs designed to develop and upgrade vocational proficiency and for which Certificates of Achievement are offered.**

**Students must submit a Petition for Associate Degree/Certificate of Achievement to be evaluated for eligibility to be awarded a Degree or Certificate. Deadlines for filing the Petition are noted in the Schedule of Classes and are posted in the Admissions and Records Office. To be awarded a Certificate of Achievement from Hartnell College, it is required that at least half of the required number of units be taken at Hartnell College.**

**Not all courses required for listed programs may be offered during this catalog cycle. Please contact a counselor for current Information (831) 755-6820.**
ADDICTION STUDIES

PROGRAMS

- Associate of Arts (A.A.)
- Certificate of Achievement

DESCRIPTION

The Hartnell College Associate Degree in Addiction Studies provides students with the academic preparation needed for employment in the substance abuse field. The curriculum is designed to meet the California Association of Alcoholism and Drug Abuse Counselors (CAADAC) requirements and pending legislative regulations requiring 350 hours of approved alcohol and drug classroom education, 45 hours of supervised practicum and 255 hours of supervised work experience.

Students who wish to continue their course of study to a 4-year setting are recommended to complete the Associate of Arts Degree program, which includes both the general education requirements and major courses in Addiction Studies. Completion of additional requirements for transfer may be required. It is recommended that students take AOD courses in numeric order. AOD 1-6 and 11 must be completed before enrolling in AOD 10 (Chemical Dependency Practicum Seminar) and AOD 99 (Practicum in Chemical Dependency).

Career opportunities for certified Alcohol and Drug Counselors include: counselors in social model county residential treatment programs; counselors in pre-treatment, inpatient, outpatient, and aftercare programs; counselors in hospital-based chemical dependency community prevention and education programs; recovery/relapse prevention counseling in the private sector; counselors in recovery home/sober living environments. California state laws require that individuals who are providing services in an alcohol or drug abuse setting be registered by an accredited agency that is recognized by the Department of Health Care Services. Students may obtain a registration manual, which contains information on academic requirements, procedures, forms, examination schedules, and fees by going to the CCAPP website (https://www.ccapp.us/) and clicking on "certification" where an order form and other information are provided.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Community Prevention & Education Counselor
- Mental Health Counselor
- Probation Officer
- Social Worker
- Substance Abuse Counselor in residential treatment programs, pre-treatment, inpatient, outpatient, and aftercare programs
- Therapist

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.assist.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers. https://www.hartnell.edu/students/fa/net-price-calculator.html
ADDITION STUDIES (AA.ADD)

ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate proficiency in each of the core functions and performance domains of substance abuse counselors.
- function as ethical and competent entry-level substance abuse counselors, with an understanding of and sensitivity to the diverse populations which they will serve.

Required Major Courses (31 units)

- AOD-1 – Fundamentals of Chemical Dependency 3.0
- AOD-2 – Pharmacology and Physiology of Alcohol and Other Drugs 3.0
- AOD-3 – Introduction to Case Management and Treatment Planning 3.0
- AOD-4 – Counseling Diverse Populations 3.0
- AOD-5 – Legal/Ethical Considerations and Professional Growth 3.0
- AOD-6 – Prevention, Education, and Relapse Prevention 3.0
- AOD-7 – Individual, Group, and Family Counseling 3.0
- AOD-9 – Co-Occurring Disorders 3.0
- AOD-10 – Chemical Dependency Practicum Seminar 3.0
- AOD-99 – Practicum in Chemical Dependency 4.0

Major Electives (Complete 9 units)

- PSY-2 – General Psychology 3.0
- PSY-6 – Social Psychology 3.0
- PSY-22 – Abnormal Psychology 3.0
- PSY-33 – Personal and Social Adjustment 3.0
- PSY-41 – Psychology of Human Relations 3.0
- SOC-1 – Introduction to Sociology 3.0
- SOC-41 – Marriage and the Family 3.0

SUBTOTAL: 40 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59)  MAT-123 or higher

- Natural Sciences  Social & Behavioral Sciences  Humanities
- Ethnic Groups in the US  Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
## ADDICTION STUDIES (CT.ADD)

### CERTIFICATE OF ACHIEVEMENT

<table>
<thead>
<tr>
<th>Program Outcomes: Upon successful completion of this program a student will be able to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ demonstrate proficiency in each of the core functions and performance domains of substance abuse counselors.</td>
</tr>
<tr>
<td>▪ function as ethical and competent entry-level substance abuse.</td>
</tr>
</tbody>
</table>

### Required Major Courses (27 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOD-1</td>
<td>Fundamentals of Chemical Dependency</td>
<td>3.0</td>
</tr>
<tr>
<td>AOD-2</td>
<td>Pharmacology and Physiology of AOD</td>
<td>3.0</td>
</tr>
<tr>
<td>AOD-3</td>
<td>Intro to Case Management and Treatment Planning</td>
<td>3.0</td>
</tr>
<tr>
<td>AOD-4</td>
<td>Counseling Diverse Populations</td>
<td>3.0</td>
</tr>
<tr>
<td>AOD-5</td>
<td>Legal/Ethical Considerations &amp; Professional Growth</td>
<td>3.0</td>
</tr>
<tr>
<td>AOD-6</td>
<td>Prevention, Education, and Relapse Prevention</td>
<td>3.0</td>
</tr>
<tr>
<td>AOD-7</td>
<td>Individual, Group, and Family Counseling</td>
<td>3.0</td>
</tr>
<tr>
<td>AOD-9</td>
<td>Co-Occurring Disorders</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-2</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Major Electives (Complete 9 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY-25</td>
<td>Developmental Psychology-Lifespan</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-33</td>
<td>Personal and Social Adjustment</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-41</td>
<td>Psychology of Human Relations</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Other Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG-101*</td>
<td>Intermediate Composition and Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESL-101*</td>
<td>Academic Writing and Reading II</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT-121**</td>
<td>Elementary Algebra</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**TOTAL: 36 UNITS**

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.  
**Eligibility for MAT-123 or any higher level math class fulfills this requirement.

### GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:  
[http://www.hartnell.edu/gainful-employment-certificate-programs-0](http://www.hartnell.edu/gainful-employment-certificate-programs-0)

### FINANCIAL AID

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[https://www.hartnell.edu/students/fa/net-price-calculator.html](https://www.hartnell.edu/students/fa/net-price-calculator.html)
LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Attorney
- Correctional Officer
- Criminal Investor
- Deputy Sheriff
- Detective
- Law Enforcement Agent
- Military Officer
- Parole Agent
- Paralegal/Legal Assistant
- Police Officer
- Probation Officer
- Public Defender
- Social Worker

ADMINISTRATION OF JUSTICE

PROGRAMS

- Associate in Science for Transfer (A.S.-T)
- Associate of Science (A.S.)
- Certificate of Achievement

DESCRIPTION

The Associate in Science Degree in Administration of Justice for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate Administration of Justice, Criminal Justice, or Criminology degree programs at a California State University (CSU) campus. This degree provides the lower division Administration of Justice major courses required at many CSUs while exposing students to the core principles and practices in the field of Administration of Justice. The AS-T degree will enable students to develop a strong foundation in the theory and practice of law enforcement and law enforcement investigation, the origin and application of criminal law, the various components of the criminal justice system, the structure of the various court systems, and trial process. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

The Administration of Justice Associate Degree program is particularly suited for students seeking employment in criminal justice and paralegal/legal assistantship, and it incorporates advanced career training, as well as supporting transfer. Criminal justice courses have a broad focus and encompass effective patrol services, the prosecution and defense of criminal offenders, and the incarceration process. Paralegal/legal assistantship courses overview the preparation of cases for court under the supervision of an attorney. The Associate degree in Administration of Justice offers specialized electives to enhance a student’s career opportunities.

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
CSU System Information – http://www2.calstate.edu

FINANCIAL AID

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Program Outcomes: Upon successful completion of this program a student will be able to:

- analyze the United States legal system, describing the sources of law, the branches of government, and the federal and state course systems.
- analyze cases to ascertain legal precedents and apply them to hypothetical facts patterns.
- Select and apply the appropriate peacekeeping strategy in a multicultural community.

Required Major Courses (6 units)
- ADJ-1 – Introduction to Administration of Justice 3.0
- ADJ-3 – Concepts of Criminal Law 3.0

Major Electives A (Complete 6 units)
- ADJ-2 – Community Relations & the Justice System 3.0
- ADJ-4 – Criminal Evidence 3.0
- ADJ-5 – Criminal Court Process 3.0
- ADJ-8 – Criminal Investigation 3.0
- ADJ-10 – Juvenile Procedure 3.0

Major Electives B (Complete 6 units)
- ADJ-10 – Juvenile Procedures 3.0
- ADJ-51 – Criminology 3.0
- MAT-13 – Elementary Statistics 5.0
- SOC-1 – Introduction to Sociology 3.0
- PSY-2 – General Psychology 3.0

SUBTOTAL: 18 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
ADMINISTRATION OF JUSTICE (AS.ADJ)

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

- analyze the United States legal system, describing the sources of law, the branches of government, and the federal and state court systems.
- evaluate judicial opinions to determine legal precedents and apply them to hypothetical fact patterns.
- recognize constitutional principles present in the prosecution and defense of criminal offenders;
- describe the incarceration process.
- demonstrate effective law enforcement report writing skills.
- compare and contrast legal and illegal narcotics and dangerous drugs.
- select and apply the appropriate peacekeeping strategy in a multicultural community.

<table>
<thead>
<tr>
<th>Criminal Justice</th>
<th>Complete 3 courses from ADJ-8, ADJ-10, ADJ-30, ADJ-33, ADJ-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paralegal/Legal Assistant</td>
<td>Complete ADJ-25, ADJ-34, and ADJ-36; complete as a general elective BUS-18 Legal Environment of Business</td>
</tr>
</tbody>
</table>

Required Major Courses (21 units)

- ADJ-1 – Introduction to Administration of Justice 3.0
- ADJ-2 – Community Relations & the Justice System 3.0
- ADJ-3 – Concepts of Criminal Law 3.0
- ADJ-4 – Criminal Evidence 3.0
- ADJ-5 – Criminal Court Process 3.0
- ADJ-11 – Law Enforcement Report Writing 3.0
- ADJ-21A – Narcotics and Dangerous Drugs 3.0

Major Electives (Complete 9 units)

- ADJ-8 – Criminal Investigation 3.0
- ADJ-10 – Juvenile Procedures 3.0
- ADJ-25 – Introduction to Paralegal/Legal Assistantship 3.0
- ADJ-30 – Sexual Assault Investigation 3.0
- ADJ-33 – Constitutional Law for Criminal Justice 3.0
- ADJ-34 – Civil Litigation 3.0
- ADJ-36 – Legal Research and Writing 3.0
- ADJ-51 – Criminology 3.0
- ADJ-102 – PC 832 Arrest and Firearms 3.5

SUBTOTAL: 30 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
**Program Outcomes:** Upon successful completion of this program a student will be able to:

- analyze the United States legal system, describing the sources of law, the branches of government, and the federal and state court systems;
- evaluate judicial opinions to determine legal precedents and apply them to hypothetical fact patterns;
- recognize constitutional principles present in the prosecution and defense of criminal offenders;
- describe the incarceration process;
- demonstrate effective law enforcement report writing skills;
- compare and contrast legal and illegal narcotics and dangerous drugs;
- select and apply the appropriate peacekeeping strategy in a multicultural community.

**Required Major Courses (21 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADJ-1</td>
<td>Introduction to Administration of Justice</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ-2</td>
<td>Community Relation &amp; the Justice System</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ-3</td>
<td>Concepts of Criminal Law</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ-4</td>
<td>Criminal Evidence</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ-5</td>
<td>Criminal Court Process</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ-11</td>
<td>Law Enforcement Report Writing</td>
<td>3.0</td>
</tr>
<tr>
<td>ADJ-21A</td>
<td>Narcotics and Dangerous Drugs</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Other Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG-1A</td>
<td>College Composition and Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT-106*</td>
<td>Integrated Mathematics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**TOTAL: 21 UNITS**

*Eligibility for MAT-123 or any higher level math class fulfills this requirement.*

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**GAINFUL EMPLOYMENT INFORMATION:**

See the certificate program cost and the employment outlook for graduates by clicking the link below:

[https://www.hartnell.edu/academics-affairs/gecp/](https://www.hartnell.edu/academics-affairs/gecp/)

**FINANCIAL AID**

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[https://www.hartnell.edu/students/fa/net-price-calculator.html](https://www.hartnell.edu/students/fa/net-price-calculator.html)
ADVANCED AUTOMOTIVE TECHNOLOGY

PROGRAM

- Associate of Science (A.S.)

DESCRIPTION

The Advanced Automotive Technology Program is designed to provide students with the skills and knowledge necessary to succeed as technicians in a professional auto repair shop. The curriculum provides classroom and hands-on learning experience in a state-of-the-art laboratory which provides students with the opportunity to apply the basic theories of automotive technology. Diagnosis and repair procedures performed on vehicles enable students to develop the skill levels required for placement in the automotive technology industry. Additionally, the program also offers Snap-On certifications that are industry recognized.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Automotive Mechanic
- Diesel Service Technician
- Shop Foreman
- Small Engine Mechanic
- Tractor Engine Mechanic
- Transmission Specialist
- Truck Technician

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

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FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

- apply knowledge of personal and environmental safety practices to promote a safe work environment and environmental responsibility.
- apply appropriate automotive theories, concepts, principles, methods, and laboratory skills to an automotive repair setting.
- research applicable vehicle and service information using automotive manuals in print and electronic formats, pertinent websites, and diagnostic equipment to identify, analyze, propose correction, and correct problems of all major automotive systems.
- acquire Snap-On industry-recognized certifications.
- demonstrate basic computer literacy skills.

Required Major Courses (44 units)

- AAT-100 – Introduction to Automotive Repair 4.0
- AAT-101 – Engine Rebuild 4.0
- AAT-110 – Climate Control 4.0
- AAT-120 – Electrical and Electronic Systems 4.0
- AAT-121 – Electronic Systems and Controls 4.0
- AAT-130 – Engine Performance 4.0
- AAT-140 – Brake Systems 4.0
- AAT-141 – Steering and Suspension 4.0
- AAT-150 – Manual Transmissions and Drivetrain 4.0
- AAT-151 – Automatic Transmissions 4.0
- BUS-43 – Business Info Systems and Info Literacy 4.0

OR

- BUS-50 – Introduction to PC Applications 4.0

SUBTOTAL: 44 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 65 UNITS
ADVANCED DIESEL TECHNOLOGY

PROGRAM

- Associate of Science (A.S.)

DESCRIPTION

The Advanced Diesel Technology program is designed to provide students with the skills and knowledge required to succeed as technicians in the field of heavy-duty diesel equipment, transportation and agriculture industries, or related industries. The curriculum provides both theoretical and hands-on learning experiences that provide students with the opportunity to apply the learned skills in a variety of different areas, such as transportation, and agriculture equipment. Diagnosis and repair procedures performed on heavy-duty diesel equipment enable students to develop the skills required for placement in the heavy duty diesel technology industry.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Automotive Service Technician and Mechanic
- Bus and Truck Mechanic
- Diesel Engine Specialist
- Diesel Service Technician
- Engine Builder
- Industrial Repair
- Locomotive Service and Repair
- Parts Manager
- Retail Service Technician
- Service Advisor
- Shop Manager
- Specialty Shop Technician

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

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https://www.hartnell.edu/students/fa/net-price-calculator.html
ADVANCED DIESEL TECHNOLOGY (AS.ADT)

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:
- accurately complete work orders that relate to equipment/engines/motors manifesting problems, suggest corrective actions, and complete repairs.
- apply knowledge of personal and environmental safety practices to promote a safe work environment and environmental responsibility.
- research applicable equipment and service information using heavy-duty equipment manuals in print and electronic formats, pertinent websites, and diagnostic equipment to identify, analyze, and correct problems of all major heavy-duty equipment systems.
- acquire Snap-on industry-recognized industry recognized certifications.
- demonstrate basic computer literacy skills.

Required Major Courses (44 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT-100</td>
<td>Diesel Engine Technology</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-101</td>
<td>Diesel Engine Rebuild</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-110</td>
<td>Electrical and Electronic Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-111</td>
<td>Electrical Systems and Controls</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-120</td>
<td>Climate Control</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-121</td>
<td>Preventative Maintenance</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-130</td>
<td>Brake Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-131</td>
<td>Steering and Suspension Systems</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-140</td>
<td>Power Drivetrain</td>
<td>4.0</td>
</tr>
<tr>
<td>ADT-141</td>
<td>Automatic Transmissions</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS-43</td>
<td>Business Info Systems and Info Literacy</td>
<td>4.0</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-50</td>
<td>Introduction to PC Applications</td>
<td>4.0</td>
</tr>
</tbody>
</table>

SUBTOTAL: 44 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 65 UNITS
AGRICULTURE BUSINESS

PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Associate in Science in Agriculture Business for Transfer degree aligns with the CSU Bachelor of Science in Agriculture Business. The Associate in Science in Agriculture Business for Transfer degree is designed to provide students with the common core of lower division courses required to transfer and pursue a baccalaureate degree in Agriculture Business or Agribusiness Management. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Field Production Supervisor
- Harvest Supervisor
- Labor Contractor
- Pest Control Advisor
- Produce Sales
- Product Manager
- Production Specialist
- Quality Control Supervisor
- Supplies and Services Sales

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
**Program Outcomes:** Upon successful completion of this program a student will be able to:
- demonstrate problem-solving techniques and critical thinking skills while engaged in job situations.
- prepare and deliver business documents and use math skills in appropriate form, format and language essential for career success in an agriculture
- demonstrate professional and personal development of work habits and safety practices.

**Required Major Courses (17 units)**
- ABT-90 – Soil Science 3.0
- ABT-53 – Agribusiness Economics 3.0
- ABT-58 – Agriculture Laws and Regulations 3.0
- ECO-1 – Principles of Macroeconomics 3.0
- MAT-13 – Elementary Statistics 5.0

**Major Electives (Complete 9 units)**
- ABT-49 – Introduction Agriculture Business 3.0
- ABT-52 – Sales & Service in Agribusiness 3.0
- ABT-57 – Agriculture Computer Applications 3.0
- ABT-92 – Plant Science 3.0

**Recommended Major Electives (None required)**
- BUS-1A – Financial Accounting 4.0
- CHM-22 – The Science of Chemistry 4.0

**SUBTOTAL: 26 UNITS**

**General Education –Required Courses**

Students must complete the following General Education Plans:
- **CSU-GE** (see page 63) 39 units
- **IGETC** (see page 65) 37 units

*Students can double-count required courses and courses for General Education*

- **Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.**

**TOTAL: 60 UNITS**
AGRICULTURE PLANT SCIENCE

PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Associate in Science in Agriculture Plant Science for Transfer degree aligns with the CSU Bachelor of Science in Plant Science. The Associate in Science in Agriculture Plant Science for Transfer degree is designed to provide students with the common core of lower division courses required to transfer and pursue a baccalaureate degree in Plant Science. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Agronomist
- Biotechnologist
- Field Advisor
- Greenhouse Manager
- Soil Scientist

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:
- identify food and fiber crops and their economic importance to the local and state economy.
- understand the relationships between plant, soil, and water, and their impact on plant health, nutrition and the environment.
- identify common problems in crop production and provide recommendations to improve quality and yields.

<table>
<thead>
<tr>
<th>Required Major Courses (21-24 units)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ ABT-90 – Soil Science</td>
<td>3.0</td>
</tr>
<tr>
<td>□ CHM-22 – Introduction to Chemistry</td>
<td>4.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>CHM-1A – General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>□ ABT-53 – Agribusiness Economics</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>ECO-5 – Principles of Microeconomics</td>
<td>3.0</td>
</tr>
<tr>
<td>□ MAT-13 – Elementary Statistics</td>
<td>5.0</td>
</tr>
<tr>
<td>□ ABT-92 – Plant Science</td>
<td>3.0</td>
</tr>
<tr>
<td>□ MFGT-71 – Agricultural and Industrial Equipment</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>CHM-12A – Organic Chemistry</td>
<td>5.0</td>
</tr>
</tbody>
</table>

**SUBTOTAL: 21-24 UNITS**

General Education –Required Courses

*Students must complete the following General Education Plans:*

- **CSU-GE** *(see page 63)* 39 units
- **IGETC** *(see page 65)* 37 units

*Students can double-count required courses and courses for General Education*

- Electives *(Courses Numbered 1-99)* required when degree units plus GE units total fewer than 60.

**TOTAL: 60 UNITS**
AGRICULTURE WITH AN AREA OF EMPHASIS

PROGRAMS

- Associate of Science (A.S.)
- Certificates of Achievement

DESCRIPTION

The Associate of Science degree in Agriculture is intended for students interested in a wide range of career and educational pathways. Those who are interested in farm management, harvest operations, agriculture research, and other areas of production agriculture would benefit from this degree. Several areas of emphasis create career pathways for students wanting to work in Agriculture, or eventually transfer to a specialized higher degree.

Students should consider this degree in order to function in a dynamic environment that deals with crops and management of crops from seed to harvest. Agriculture Production deals with all areas of agriculture production. Jobs in research, management, and development are readily available for those who excel in this degree.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Food Safety Coordinator
- Product Business Manager
- Ranch Assistant
- Sales Representative

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
AGRICULTURE WITH AN AREA OF EMPHASIS (AS.AGRI)

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

- describe and employ current growing practices in the area of desired study.
- distinguish and propose inputs and controls needed to produce a consistently healthy crop in an area of study.
- recognize and evaluate how agriculture is in a progressively changing flux of knowledge and innovation.
- relate why sustainable agriculture is the cornerstone of future growing trends.

Required Major Courses (17-20 units)

- ABT-110 – Careers in Agriculture and Technology 2.0
- ABT-58 – Agriculture Laws and Regulations 3.0
- ABT-90 – Soil Science 3.0
- ABT-92 – Plant Science 3.0
- ABT-94 – Agriculture Enterprise Project 2.0
- ABT-99 – Occupational Cooperative Work Experience (3 units recommended) 1.0-3.0
- ABT-57 – Agriculture Computer Applications 3.0

OR

- BUS-43 – Business Information Systems and Information Literacy 4.0

OR

- BUS-50 – Introduction to PC Applications 4.0

Required Major Courses (Complete ONE AREA OF emphasis 18-19 units)

- AGRICULTURE BUSINESS 18.0
  - ABT-49, 52, 54, 80, 91
  - ABT-53 OR ECO-5

- SUSTAINABLE CROP MANAGEMENT 18.0
  - ABT-80, 81, 82, 83, 98
  - Complete 1 course ABT-41, 93, 95, 96, 97

- FOOD SAFETY 15.0
  - ABT-130, 131, 132, 133, 134, 135, 80,
  - ABT-96 OR ABT-97

- HORTICULTURAL TECHNICIAN 18.0-19.0
  - ABT-80, 81, 82, 83, 98
  - Complete 1 course BIO-59, CHM-22, 23

- PRECISION IRRIGATION 18.0
  - ABT-80, 91, 98, 130, 134, 160
  - Complete 1 course ABT-95, 96, 97

- SMALL FARM OPERATION AND MANAGEMENT 18.0
  - ABT-41, 80, 91, 101, 102, 103, 104, 105, 134

- AGRICULTURE TECHNOLOGY EMPHAIS 18.0
  - ABT-66, 67, 91, ADT-100, MFGT-75, 150

SUBTOTAL: 35-39 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59)  MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
Program Outcomes: Upon successful completion of this program a student will be able to:

- describe and employ current growing practices in the area of desired study.
- distinguish and propose inputs and controls needed to produce a consistently healthy crop in an area of study.
- recognize and evaluate how agriculture is in a progressively changing flux of knowledge and innovation.
- relate why sustainable agriculture is the cornerstone of future growing trends.

Required Major Courses (21-24 units)

- ABT-110 – Careers in Agriculture and Technology 2.0
- ABT-49 – Introduction to Agriculture Business 3.0
- ABT-54 – Agriculture Marketing 3.0
- ABT-58 – Agriculture Laws & Regulations 3.0
- ABT-90 – Soil Science 3.0
- ABT-92 – Plant Science 3.0
- ABT-99 – Cooperative Work Experience 1.0-3.0
- ABT-57 – Agriculture Computer Applications 3.0
  
  OR
  
  BUS-43 – Business Info Systems and Info Literacy 4.0
  
  OR
  
  BUS-50 – Introduction to PC Applications 4.0

Major Electives (Complete 6 units)

- ABT-52 – Sales & Services in Agribusiness 3.0
- ABT-53 – Agribusiness Economic 3.0
  
  OR
  
  ECO-5 – Principles of Microeconomics
- ABT-80 – Introduction to Sustainable Agriculture & Food 3.0
- ABT-160 – Introduction to Agriculture 3.0
- BUS-1A – Financial Accounting 4.0
- BUS-18 – The Legal Environment of Business 3.0

Other Required Courses

- ENG-101* – Intermediate Composition and Reading 3.0
  
  OR
  
  ESL-101* – Academic Writing and Reading II 5.0
- MAT-121** – Elementary Algebra 5.0

TOTAL: 27-30 UNITS

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.
AGRICULTURE PRODUCTION (CT.AGRP)

CERTIFICATE OF ACHIEVEMENT

Program Outcomes: Upon successful completion of this program a student will be able to:
- describe and employ current growing practices in the area of desired study.
- distinguish and propose inputs and controls needed to produce a consistently healthy crop in an area of study.
- recognize and evaluate how agriculture is in a progressively changing flux of knowledge and innovation.
- relate why sustainable agriculture is the cornerstone of future growing trends.

Required Major Courses (15-18 units)

- ABT-110 – Careers in Agriculture and Technology 2.0
- ABT-58 – Agriculture Laws and Regulations 3.0
- ABT-90 – Soil Science 3.0
- ABT-92 – Plant Science 3.0
- ABT-99 – Cooperative Work Experience 1.0-3.0
- ABT-57 – Agriculture Computer Applications 3.0
  OR
  - BUS-43 – Business Information Systems and Info Literacy 4.0
  OR
  - BUS-50 – Introduction to PC Applications 4.0

Major A Electives (Complete 6 units)

- ABT-91 – Irrigation Practices and Materials 3.0
- ABT-95 – Introduction to Small Fruit Science 3.0
- ABT-96 – Vegetable Crop Production 3.0
- ABT-97 – Vineyard Production & Management 3.0
- ABT-98 – Fertilizers & Plant Nutrition 3.0

Major B Electives (Complete 6 units)

- ABT-41 – Pesticide Applicator Certification Training 3.0
- ABT-66 – Intro to Geographic Information System 3.0
- ABT-67 – Intermediate GIS w/Applications to Agriculture 4.0
- ABT-80 – Introduction to Sustainable Agriculture & Food 3.0
- ABT-81 – Integrated Pest Management Principles in Entomology 3.0
- ABT-82 – Integrated Pest Management Principles in Weed Science 3.0
- ABT-83 – Integrated Pest Management Principles in Plant Pathology 3.0
- ABT-93 – Product Processing and Cooling 3.0
- ABT-160 – Introduction to Agriculture 3.0
- AIT-70 – Introduction to Mechanized Agriculture 3.0
  OR
  - AIT-71 – Agricultural and Industrial Equipment Operation
  OR
  - AIT-75 – Agricultural Machinery Management
- ABT-101 – Organic Vegetable Production 1.5
- ABT-102 – Organic Field Production Methods 1.5
- ABT-103 – Ag Planning and Recordkeeping for Small Farmers 1.5
- ABT-104 – Ag Business Development for New Organic Farmers 1.5
- ABT-105 – Marketing Opportunities and Growth for Organic Farming 1.5
- ABT-130 – Introduction to Food Safety 1.5

Other Required Courses

- ENG-101* – Intermediate Composition and Reading 3.0
  OR
  - ESL-101* – Academic Writing and Reading II 5.0
  - MAT-121** – Elementary Algebra 5.0

TOTAL: 27-30 UNITS

**Eligibility for MAT-123 or any higher level math course fulfills this requirement.

GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:
https://www.hartnell.edu/academics-affairs/gecp/

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- describe and employ current growing practices in the area of desired study.
- distinguish and propose inputs and controls needed to produce a consistently healthy crop in an area of study.
- recognize and evaluate how agriculture is in a progressively changing flux of knowledge and innovation.
- relate why sustainable agriculture is the cornerstone of future growing trends.

Required Major Courses (12 units)

- ABT-58 – Agriculture Laws and Regulations 3.0
- ABT-130 – Introduction to Food Safety 1.5
- ABT-131 – Agricultural Practices for Food Safety 1.5
- ABT-132 – Food Safety Management 1.5
- ABT-133 – Facility Management for Food Safety 1.5
- ABT-134 – Environmental Effects on Food Borne 1.5
- ABT-135 – Introduction to Food Microbiology 1.5

Other Required Courses

- ENG-101* – Intermediate Composition and Reading 3.0
  OR
  ESL-101* – Academic Writing and Reading II 5.0
- MAT-106** – Integrated Mathematics 3.0

TOTAL: 12 UNITS

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.
ASTRONOMY PROGRAM

- Associate of Science (A.S.)

DESCRIPTION

The Astronomy program introduces students to the physical properties and processes that govern celestial bodies in the Universe. Students may take astronomy courses to satisfy their physical science requirements or to transfer to the university with a major in astronomy/astrophysics or double major in astronomy and physics. Transfer level astronomy curricula stress very strong preparation in physics and mathematics. While most astronomy courses will be taken at the upper division or graduate level, exposure to lower division astronomy courses will assist in exploring the major. Students planning to transfer may need to complete additional coursework and/or select specific electives required by the transfer institution and should consult with a Hartnell College counselor to identify required courses at their target university.

Students who complete a B.S. degree in astronomy will be qualified to enter a teaching credential program, operate a planetarium, and assist at an observatory. With an M.S. degree, students can teach astronomy or physics at a community college, be a telescope operator at a major observatory, or work in industry. A Ph.D. qualifies students for a career in research at a university, space agency, or observatory.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Astronomer
- Astronomy/Physics Professor
- Astrophysicist
- Observatory Director
- Planetarium Director
- Research Scientist
- Science Teacher

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
# ASTRONOMY (AS.AST)

## ASSOCIATE OF SCIENCE

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- explain basic astronomical phenomena and why they occur.
- apply the laws of physics and solve mathematical problems to explain the physical properties and processes that govern celestial bodies in the Universe.
- explain and discuss the impact and history of scientific theories.
- demonstrate proficiency in applying scientific procedures for making observations, measurements, and calculations typical of modern scientific research.

### Required Major Courses (34 units)

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</tr>
</thead>
<tbody>
<tr>
<td>AST-1</td>
<td>Introduction to Astronomy</td>
<td>3.0</td>
</tr>
<tr>
<td>AST-1L</td>
<td>Astronomy Laboratory</td>
<td>1.0</td>
</tr>
<tr>
<td>PHY-4A</td>
<td>General Physics I/Mechanics</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY-4B</td>
<td>General Physics II/Electricity and Magnesium</td>
<td>4.0</td>
</tr>
<tr>
<td>PHY-4C</td>
<td>General Physics III/ Waves, Heat and Modern Physics</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT-3A</td>
<td>Analytic Geometry and Calculus I</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT-3B</td>
<td>Analytic Geometry and Calculus II</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT-3C</td>
<td>Analytic Geometry and Calculus III</td>
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</tr>
<tr>
<td>MAT-4</td>
<td>Linear Algebra</td>
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</tr>
<tr>
<td>MAT-5</td>
<td>Differential Equations</td>
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### Major Electives (Complete 1 course – 4-5 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM-1A</td>
<td>General Chemistry I</td>
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</tr>
<tr>
<td>CSS-1</td>
<td>Introduction to Computer Science and Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS-4</td>
<td>Introduction to Scientific Programming</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**SUBTOTAL: 38-39 UNITS**

### General Education – Required Courses

*Students must complete one of the following General Education Plans:*

- **CSU-GE** *(see page 63)* 39 units
- **IGETC** *(see page 65)* 37 units

*Students can double-count required courses and courses for General Education*

- **Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.**

**TOTAL: 60 ≤ UNITS**
BASIC ENGLISH PROGRAM

- Certificate of Competency

DESCRIPTION

The Basic English Certificate of Competency is awarded with successful completion of ESL 610, 615, 620, and 625. This noncredit program is intended for non-native speakers of English, with the focus on vocabulary, listening, pronunciation, and basic writing tasks. Students will learn and practice communication skills for everyday situations—home, work, school, and the community. Students should be able to read and write in their first language in order to participate successfully. Completion of this program will prepare students for low intermediate level credit/academic ESL courses.

PROGRAM GOALS AND OBJECTIVES:

This noncredit program will prepare non-native speakers to enroll in and succeed at low-intermediate level credit/academic ESL courses, or to communicate more effectively at work and in the community. The program-level learning outcome is “Given an everyday situation, a student will be able to communicate both in spoken and written English about self, family, work, and school at a high-beginning level.” Course materials for this program will be approximately $70.

REQUIRED COURSES

- ESL-610 – Beginning ESL: Speaking & Listening
- ESL-615 – High-Beginning ESL: Speaking & Listening
- ESL-620 – Beginning ESL: Reading and Writing
- ESL-625 – High-Beginning ESL: Reading and Writing

GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:

http://www.hartnell.edu/gainful-employment-certificate-programs-0

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
BIOLOGY

PROGRAMS

- Associate in Science for Transfer (A.S.-T)
- Associate of Science (A.S.)

DESCRIPTION

The Biology program offers degrees that are intended to create interest and enrichment through the study of living organisms and the basic biological principles. The major courses provide a strong background in the biological sciences for students transferring to four-year institutions who are interested in careers such as agriculture, health, research, and teaching.

The Biology program offers two associate degrees: The AS degree (associate degree in biological sciences) and the AS-T degree (associate degree in biological sciences for transfer). The AS degree does not require calculus, but includes other mathematics courses that meet transfer requirements for certain institutions. The AS-T provides a clearly articulated curriculum, including first-semester calculus, for students who wish to transfer to baccalaureate degree programs at California State University (CSU) campuses.

Baccalaureate programs in biology include a wide array of specialties including but not limited to: animal or plant science, biochemistry, bioinformatics, cell and molecular biology, environmental biology, human biology, and microbiology. The preparation for different specialties will vary. For detailed requirements for individual programs at four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Animal Scientist
- Biologist
- Botanist
- Ecologist
- Environmental Scientist
- Natural Resource Manager
- Nature Conservationist
- Public Health Worker
- Research/Professor
- Water Quality Technician
- Wildlife Biologist
- Wildlife Resource Worker

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- apply the scientific method to problem solving, devising a research plan, and evaluating data and findings.
- describe the structure and function of biological molecules, cells and organelles, and tissues and organ systems of plants and animals.
- apply the principles of heredity at the molecular, cellular, and organismal levels.
- explain the mechanism and evidence of evolution through natural selection.
- apply taxonomic principles to the classification of organisms.
- describe the flow of energy within organisms and within ecosystems.

Required Major Courses (29 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-1</td>
<td>Fundamental Biological Concepts</td>
<td>5.0</td>
</tr>
<tr>
<td>BIO-2</td>
<td>General Zoology</td>
<td>5.0</td>
</tr>
<tr>
<td>BIO-3</td>
<td>General Botany</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM-1A</td>
<td>General Physics</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM-1B</td>
<td>General Physics</td>
<td>5.0</td>
</tr>
<tr>
<td>MAT-3A</td>
<td>Analytic Geometry and Calculus I</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Required Courses (Select 1 series 8 units)

- PHY-2A – College Physics I
- PHY-2B – College Physics II

OR

- PHY-4A – General Physics I/Mechanics
- PHY-4B – General Physics I/Electricity and Magnetism

Recommended Major Electives (None Required)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM-12A</td>
<td>Organic Chemistry I</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM-12B</td>
<td>Organic Chemistry II</td>
<td>5.0</td>
</tr>
<tr>
<td>MAT-13</td>
<td>Elementary Statistics</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT-3B</td>
<td>Analytic Geometry and Calculus II</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT-3C</td>
<td>Analytic Geometry and Calculus III</td>
<td>4.0</td>
</tr>
</tbody>
</table>

SUBTOTAL: 37 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE for STEM (see page 63) 33 units
- IGETC for STEM (see page 65) 31 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
## Program Outcomes:
Upon successful completion of this program a student will be able to:
- apply the scientific method to problem solving, devising a research plan, and evaluating data and findings.
- describe the structure and function of biological molecules, cells and organelles, and tissues and organ systems of plants and animals.
- apply the principles of heredity at the molecular, cellular, and organismal levels.
- explain the mechanism and evidence of evolution through natural selection.
- apply taxonomic principles to the classification of organisms.
- describe the flow of energy within organisms and within ecosystems.

### Required Major Courses (34 units)
- BIO-1 – Fundamental Biological Concepts 5.0
- BIO-2 – Community Relation and the Justice System 5.0
- BIO-3 – Concepts of Criminal Law 5.0
- CHM-1A – General Chemistry 5.0
- CHM-1B – General Chemistry 5.0
- MAT-13 – Elementary Statistics 5.0
- MAT-25 – Pre-Calculus 4.0

### Major Electives (Select 1 series 8-12 units)
- PHY-2A/2B – College Physics 8.0
- PHY-4A/4B/4C – General Physics 12.0

### Recommended Major Electives (None Required)
- CHM-12A – Organic Chemistry I 5.0
- CHM-12B – Organic Chemistry II 5.0
- MAT-3A – Analytic Geometry and Calculus I 4.0
- MAT-3B – Analytic Geometry and Calculus II 4.0
- MAT-3C – Analytic Geometry and Calculus III 4.0

**SUBTOTAL: 42-46 UNITS**

### General Education – Required Courses
Students must complete one of the following General Education Plans:

**HCCD GE** (see page 59) MAT-13 and MAT-25

- Natural Sciences  Social & Behavioral Sciences  Humanities
- Ethnic Groups in the US  Language and Rationality

**SUBTOTAL: 21 UNITS**

*Students can double-count required courses and courses for General Education*

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

**TOTAL: 63-67 UNITS**
BUSINESS ADMINISTRATION

PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Associate in Science in Business Administration for Transfer degree aligns with the CSU Bachelor of Science in Business Administration. The Associate in Science in Business Administration for Transfer degree is designed to provide students with the common core of lower division courses required to transfer and pursue a baccalaureate degree in Business Administration. This includes four-year business degrees with options such as accounting, finance, human resources management, international business, management, operations management, and marketing. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Accounting
- Chief Executive
- Cost Estimator
- Customer Service Management
- Entrepreneur/Business Owner
- Financial Planner/Advisor
- General & operations Manager
- Human Resources
- Insurance
- Marketing
- Sales Manager
- Social/Community Service Manager
- Supply Chain Manager

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE IN SCIENCE FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:
- define information needs, identify the scope and level of information needed, and access information effectively and efficiently using appropriate electronic tools in a business environment to make and communicate sound decisions.
- interpret, analyze, and use quantitative and logical reasoning to evaluate and solve business problems.

Required Major Courses (21 units)
- BUS-1A – Financial Accounting 4.0
- BUS-1B – Managerial Accounting 4.0
- BUS-18 – The Legal Environment of Business 4.0
- BUS-32 – Introduction to Business 3.0
- ECO-1 – Macroeconomics 3.0
- ECO-5 – Microeconomics 3.0

Required Major Courses (Complete 4 units)
- BUS-43 – Business Info Systems & Info Literacy 4.0
- BUS-50 – Introduction to PC Applications 4.0

Major Electives (Complete 3-5 units)
- MAT-2 – Calculus for Managerial, Life & Social Science 4.0
- MAT-13 – Elementary Statistics 5.0
- MAT-16 – Finite Mathematics 3.0

SUBTOTAL: 28-30 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education
- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

A Degree With A Guarantee.com
Associate Degree for Transfer

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:
1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
BUSINESS INFORMATION WORKER PROGRAMS

- Certificates of Achievement

DESCRIPTION

BUSINESS INFORMATION WORKER LEVEL 1
This certificate prepares students with basic office skills to perform entry-level business office related tasks. Course offerings introduced the students to concepts such as customer service, office procedures and business communication. In addition, students acquire beginning technology skills that include word processing, spreadsheets, preparation software, personnel management software, and computer literacy.

BUSINESS INFORMATION WORKER LEVEL 2
This certificate is a continuation of the Business Office Professional pathway building on the courses already completed for the Level 1 certificate. Additional courses taken provide a continued focus on the development of office and technology skills including career management, filing procedures and record management, and computer applications including MS Word and personal management software.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Administrative Assistant
- Billing and Posting Clerks
- Customer Service Representatives
- Executive Secretaries and Executive Administrative Assistants
- File Clerks
- Secretary

GAINFUL EMPLOYMENT INFORMATION:
See the certificate program cost and the employment outlook for graduates by clicking the link below:
http://www.hartnell.edu/gainful-employment-certificate-programs-0

FINANCIAL AID
Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.
https://www.hartnell.edu/students/fa/net-price-calculator.html
BUSINESS INFORMATION WORKER LEVEL-1 (CT.BIW1)

CERTIFICATE OF ACHIEVEMENT

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate the ability to use office related computer application software such as ms word, excel, powerpoint, and access.
- demonstrate knowledge of basic entry-level office computer skills and processes (keyboarding and 10-key)
- demonstrate basic oral and written business communication skills
- efficiently use a computer to perform basic office tasks including electronic file management.

Required Major Courses (17 units)

- [ ] BUS-50 – Introduction to PC Applications 4.0
- [ ] BUS-110 – Beginning Keyboarding and Formatting 2.0
- [ ] BUS-131 - Business English 3.0
- [ ] BUS-151 – Business Math 3.0
- [ ] BUS-135 – Professional Office skills 4.0
- [ ] BUS-172 – Machine Calculations 1.0

**TOTAL: 17 UNITS**

GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:

http://www.hartnell.edu/gainful-employment-certificate-programs-0

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
BUSINESS INFORMATION WORKER LEVEL-2 (CT.BIW2)

CERTIFICATE OF ACHIEVEMENT

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- successfully demonstrate oral and written skills used in the job searching process.
- create, edit and format a variety of business documents.
- demonstrate proficiency in using personal management software.
- demonstrate ability to use a variety of record management techniques.

**Required Major Courses (11 units)**
- BUS-136 – Personal Information Management 2.0
- BUS-150.15 – Word Processing 3.0
- BUS-173 – Filing Procedures and Records Management 3.0
- BUS-190 – Career Management 3.0

**Total:** 11 UNITS

---

**Gainful Employment Information:**
See the certificate program cost and the employment outlook for graduates by clicking the link below:
http://www.hartnell.edu/gainful-employment-certificate-programs-0

**Financial Aid**
Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
BUSINESS OFFICE TECHNOLOGY

PROGRAMS

- Associate in Science (A.S.)
- Certificates of Achievement

DESCRIPTION

The Business Office Technology programs promote the economic development of the community; provide for lifelong learning and academic excellence through course content, application, and technology; serve diverse populations; encourage positive work ethic; and meet workforce needs through skills development, training, and personal growth.

The Business Office Technology programs offer training in keyboarding, office software applications, filing and records management, accounting (Bookkeeping Certificate), customer service, and business English and math applications. Students are prepared for career opportunities in administrative support, bookkeeping and data entry, customer service and other entry-level office positions.

As a result of ongoing changes in technology, the need to expand competencies, and changing transfer requirements, certificate and degree requirements may also change. If you note changes in degrees or certificate requirements, or if courses are not offered in a particular semester, please consult with a counselor or faculty on how best to complete the program in which you are enrolled.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Account Clerk
- Administrative Support
- Bank Teller
- Billing Clerk
- Bookkeeping
- Customer Service
- Data Entry
- Executive Secretary/Assistant
- File and Records Clerk
- Information Clerk
- Office Manager
- Payroll Clerk
- Typist

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:
- demonstrate proficiency in selecting and using appropriate business software applications and tools.
- prepare and deliver business documents and presentations in appropriate form, format, and language.
- solve problems and make decisions collaboratively or independently.

Required Major Courses (36 units)
- BUS-50 – Introduction to PC Applications 4.0
- BUS-111 – Intermediate Office Skills 3.0
- BUS-128 – Professionalism in the Workplace 2.0
- BUS-129 – Practical Customer Service Skills 2.0
- BUS-131 – Business English 3.0
- BUS-140A & B – Keyboarding Speed and Accuracy 1.0
- BUS-150.15 – Word Processing 3.0
- BUS-172 – Machine Calculations and Records Management 3.0
- BUS-173 – Filing Procedures and Records Management 3.0
- BUS-175 – Business Communications 3.0
- BUS-177 – Proofreading and Editing Skills 3.0
- BUS-190 – Career Management 2.0
- BUS-194 – Human Relations in Business 3.0
- COM-5 – Professional & Leadership Communications 3.0

Recommended Major Electives (None Required)
- BUS-32 – Introduction to Business 3.0
- BUS-151 – Business Mathematics 3.0

SUBTOTAL: 36 UNITS

General Education –Required Courses
Students must complete one of the following General Education Plans:
- HCCD GE (see page 59) MAT-123 or higher
- Natural Sciences  Social & Behavioral Sciences  Humanities
- Ethnic Groups in the US  Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education
- Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
### Program Outcomes

Upon successful completion of this program a student will be able to:

- demonstrate proficiency in selecting and using appropriate business software applications and tools.
- prepare and deliver business documents and presentations in appropriate form, format, and language.
- solve problems and make decisions collaboratively or independently.

### Required Major Courses (30 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS-50</td>
<td>Introduction to PC Applications</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS-110</td>
<td>Beginning Keyboarding &amp; Document Formatting</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td>BUS-110A – Beginning Keyboarding</td>
<td>1.0</td>
</tr>
<tr>
<td>AND</td>
<td>BUS-110B – Beginning Formatting and Document Processing</td>
<td>2.0</td>
</tr>
<tr>
<td>BUS-128</td>
<td>Professionalism in the Workplace</td>
<td>2.0</td>
</tr>
<tr>
<td>BUS-129</td>
<td>Practical Customer Service Skills</td>
<td>2.0</td>
</tr>
<tr>
<td>BUS-131</td>
<td>Business English</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-150.25</td>
<td>Electronic Spreadsheets</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-152</td>
<td>Introduction to Accounting</td>
<td>4.0</td>
</tr>
<tr>
<td>BUS-154</td>
<td>Computerized Accounting</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-172</td>
<td>Business Machine Calculations</td>
<td>1.0</td>
</tr>
<tr>
<td>BUS-173</td>
<td>Filing Procedures and Records Management</td>
<td>3.0</td>
</tr>
<tr>
<td>BUS-190</td>
<td>Career Management</td>
<td>2.0</td>
</tr>
</tbody>
</table>

### Other Required Courses

- ENG-101* – Intermediate Composition and Reading 3.0
- ESL-101 – Academic Writing and Reading II 5.0
- BUS-151** – Business Mathematics 3.0

**TOTAL: 30 UNITS**

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.
### Program Outcomes:
Upon successful completion of this program a student will be able to:
- demonstrate proficiency in selecting and using appropriate business software application and tools.
- prepare and deliver business documents and presentations in appropriate form, format, and language.
- solve problems and make decisions collaboratively or independently.

### Required Major Courses (27 units)
- BUS-50 – Introduction to PC Applications: 4.0
- BUS-111 – Intermediate Office Skills: 3.0
- BUS-128 – Professionalism in the Workplace: 2.0
- BUS-129 – Practical Customer Service Skills: 2.0
- BUS-131 – Business English: 3.0
- BUS-140A & B – Keyboarding Speed and Accuracy: 1.0
- BUS-150.15 – Word Processing: 3.0
- BUS-172 – Business Machine Calculations: 1.0
- BUS-173 – Filing Procedures and Records Management: 3.0
- BUS-177 – Proofreading and Editing Skills: 3.0
- BUS-190 – Career Management: 2.0

### Other Required Courses
- ENG-101* – Intermediate Composition and Reading: 3.0
- OR
- ESL-101 – Academic Writing and Reading II: 5.0
- BUS-151** – Business Mathematics: 3.0

**TOTAL: 27 UNITS**

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.
CHEMISTRY
PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Chemistry program at Hartnell College is designed to meet the needs of the diverse community of interests served by the community college. A full program of chemistry for the aspiring professional scientist is offered through general chemistry and a two-semester course in organic chemistry. A separate track is offered for nursing and allied health students which includes general inorganic, organic and biochemistry. The Chemistry discipline also has a strong commitment to the student with little or no prior chemistry background. The entire program is taught with a strong laboratory emphasis, and in the more advanced classes, students receive hands-on experience with a wide variety of instruments.

Four-year graduates in chemistry are qualified for positions in research, industry, education, engineering, and the allied medical fields.

The Associate in Science degree in Chemistry for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate degree programs at a California State University (CSU) campus. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Biochemist
- Chemical Laboratory Technician
- Chemist
- Clinical Researchers
- Food Chemist
- Hydrologist
- Molecular Biologist
- Natural Science Manager
- Organic Chemist
- Pharmacologist
- Plastic Engineer
- Pollution Control Chemist
- Product Tester
- Quality Assurance Manager
- Soil Scientist
- Teacher/Professor
- Toxicologist

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:
- apply appropriate chemical theories, concepts, principles, methods, and laboratory skills to relevant science and engineering settings.
- demonstrate competence in chemistry laboratory techniques and experimental methods.

Required Major Courses (36 units)
- CHM-1A – General Chemistry I 5.0
- CHM-1B – General Chemistry II 5.0
- CHM-12A – Organic Chemistry I 5.0
- CHM-12B – Organic Chemistry II 5.0
- PHY-4A – General Physics/Mechanics 4.0
- PHY-4B – General Physics/Electricity & Magnetism 4.0
- MAT-3A – Analytic Geometry and Calculus I 4.0
- MAT-3B – Analytic Geometry and Calculus II 4.0

Recommended Major Electives (None Required)
- MAT-3C – Analytic Geometry and Calculus III 4.0
- MAT-4 – Linear Algebra 3.0
- MAT-5 – Differential Equations 3.0
- PHY-4C – General Physics/Waves, Heat, Light 4.0

SUBTOTAL: 36 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

IGETC for STEM (see page 65) 31 units

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students major or have a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
CHICANX STUDIES

PROGRAM

- Associate of Arts (A.A.)

DESCRIPTION

The Chicanx Studies Program provides organized studies in the heritage of Chicanx culture and community to foster and expand a general understanding of this group. The Chicanx degree courses give students the opportunity to develop competence in an understanding of the language, history, and culture as well as current issues affecting the community. Completion of the Chicanx major enhances students’ employment opportunities and careers in schools, community groups, governmental agencies, and the private sector.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Community and Union Organizer
- Community Liaison
- Counselor
- Cultural Anthropologist
- Grant Writer
- Lawyer
- Professor/teacher
- Public Health
- Public Policy
- Social Work
- Sociologist

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
CHICANX STUDIES (AA.CHX)

ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate knowledge of Chicanx in the United States including an evaluation of the political experiences with respect to local and national leaders.
- apply critical thinking skills in reading, comprehending, and interpreting Chicanx studies scholarship including major contributors who have influenced the course of study, policy and or culture.
- demonstrate knowledge of Chicanx culture including an analysis in cultural expressions including but not limited to contemporary culture, literature or cinema.
- distinguish variations within the Chicanx community with respect to class, gender, ethnicity, race, and sexuality.

Required Major Courses (14 units)

- ETH-1 – Introduction to Ethnic Studies 3.0
- ETH-3 – Chicanos in American Society 3.0
- ETH-4 – Chicano Culture 3.0
- SPA-1 – Elementary Spanish 5.0

OR

- SPA-1X – Elementary Spanish Speakers 5.0

OR

- SPA-1S – elementary Spanish for Chicano Students 5.0

Major Electives (Complete 6 units)

- ETH-2 – Chicano Leadership 3.0
- ETH-5/POL-5 – Chicano Politics 3.0
- ETH-6 – La Chicana 3.0
- ETH-7 – Chicano Theatre 3.0
- ETH-12 – Chicano Cinema 3.0
- HIS-49A– Chicano History A 3.0

OR

- HIS-49B – Chicano History B

SUBTOTAL: 20 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
COMMUNICATION STUDIES

PROGRAM

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

The Associate in Arts in Communication Studies for Transfer allows students to focus their major course work and required electives to meet the needs of business, interpersonal, and public communication; and to demonstrate communicative competence. A degree in Communication Studies can lead to a career (or further study) in public relations, teaching, consulting, broadcasting, law ministry, public administration or any field in which communication skills are highly valued. Upon successful completion of the Associate in Arts in Communication Studies for Transfer, a student should be able to: conceive, develop and deliver a focused, cogent, and clear presentation; explain the transactional and transformative nature of human communication; and research, organize and write a paper concerning the development, implementation, and effective use of various communication theories.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Account Representative
- Advertising
- Advocate
- Announcer
- Broadcaster
- Consultant
- Corporate Communications Officer
- Director/Producer
- Editor
- Journalist
- Lawyer
- Marketing
- Negotiator
- Public Administration
- Public Relations
- Researcher
- Sales Representative
- Speech Writer
- Teacher

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- conceive, develop and deliver a focused, cogent, and clear oral presentation.
- explain the transactional and transformative nature of human communication.
- research, organize, and write a paper concerning the development, implementation, and effective use of various communication theories.

Required Major Courses (15 units)
- COM-1 – Introduction to Public Speaking 3.0
- COM-2 – Argumentation and Debate 3.0
- COM-3 – Survey of Human Communication 3.0
- COM-4 – Intercultural Communication 3.0
- COM-8 – Interpersonal Communication 3.0

Major Electives (Complete 3 units)
- ANT-2 – Introduction to Anthropology Cultural 3.0
- COM-5 – Professional & Leadership Communication 3.0
- ENG-2 – Critical Thinking and Writing 3.0
- PSY-2 – General Psychology 3.0
- SOC-1 – Introduction to Sociology 3.0

SUBTOTAL: 18 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education
- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
COMPUTER SCIENCE FOR TRANSFER

PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Computer Science and Information Systems program offers courses that are intended to create interests and enrichment through the study of computer science fundamentals, programming concepts, and hardware. The major courses provide a strong well-rounded background in computer science for students transferring to four-year institutions who are interested in careers such as software developers, software engineers, researchers and teachers.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Administrator
- Computer Science Teacher
- Network and Computer Systems
- Programmer Analyst
- Software Developer
- Web Developer

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate the ability to communicate effectively with technical and non-technical colleagues through presentations and reports, and work effectively on a team project.
- design and construct significant computer application(s) using current programming languages and operating systems.
- describe the organization and operation of a computer architecture with respect to numerical representations and computations, digital logic, and computer components.
- demonstrate the ability to evaluate algorithms, select from a range of possible options, provide justification for that selection, and implement the algorithm using an appropriate programming language and context.
- demonstrate the ability to solve discrete mathematical problems, describe and apply discrete structures and logic principles, perform run-time analysis on algorithms and prove algorithm correctness.

Required Major Courses (33 units)

- CSS-2A – Object Oriented Programming 4.0
- CSS-2B – Data Structures and Algorithms 4.0
- CSS-3 – Computer Architecture and Assembly 4.0
- CSS-7 – Discrete Structures 4.0
- MAT-3A – Analytic Geometry and Calculus I 4.0
- MAT-3B – Analytic Geometry and Calculus II 4.0
- PHY-4A – General Physics I/Mechanics 4.0
- BIO-1 – Fundamental Biological Concepts 5.0

**SUBTOTAL: 33 UNITS**

General Education – Required Courses

*Students must complete the following General Education Plans:*

- IGETC (see page 65) 37 units

*Students can double-count required courses and courses for General Education*

**Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.**

**TOTAL: 60 UNITS**

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**Associate Degree for Transfer**

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   - The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   - A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
COMPUTER SCIENCE AND INFORMATION SYSTEMS
COMPUTER SCIENCE OPTION

PROGRAMS

- Associate of Science (A.S.)
- Certificate of Achievement

DESCRIPTION

The Computer Science and Information Systems program prepares students taking the Computer Science Option with the lower-division major preparation required at most universities for advancement to upper-division coursework for the Bachelor’s Degree with a major in Computer Science or Information Systems fields. The scientific and technical skills acquired through this study serve to prepare students for high demand careers in computing, such as software developer, computer programmer, and software engineer.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Computer & Information System Managers
- Computer Programmers
- Computer Systems Engineer
- Software Developers
- Software Quality Assurance Engineers & Testers
- Web Administrator
- Web Developer

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

- accurately communicate their work in a technical and non-technical context.
- design and construct significant computer application(s) using current programming languages, computer architectures, and operating systems.
- describe the organization and operation of a computer architecture with respect to numerical representation and computations, digital logic, and computer components.
- demonstrate the ability to evaluate algorithms, select from a range of possible options, provide justification for that selection, and implement the algorithm in a programming context.

Required Major Courses (20 units)

- CSS-1 – Introduction to Computer Science and Programming Fundamentals 4.0
- CSS-2A – Object Oriented Programming 4.0
- CSS-2B – Data Structures and Algorithms 4.0
- CSS-3 – Computer Architecture and Assembly Language Programming 4.0
- CSS-7 – Discrete Structures 4.0

SUBTOTAL: 20 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-3A or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
CERTIFICATE OF ACHIEVEMENT

**Program Outcomes:** Upon successful completion of this program a student will be able to:

- accurately communicate their work in a technical and non-technical context.
- design and construct significant computer application(s) using current programming languages, computer architectures, and operating systems.
- describe the organization and operation of a computer architecture with respect to numerical representation and computations, digital logic, and computer components.
- demonstrate the ability to evaluate algorithms, select from a range of possible options, provide justification for that selection, and implement the algorithm in a programming context.

**Required Major Courses (19 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS-1</td>
<td>Introduction to Computer Science and Programming</td>
<td>3.0</td>
</tr>
<tr>
<td>CSS-2A</td>
<td>Object Oriented Programming</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS-2B</td>
<td>Data Structures Algorithms</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS-3</td>
<td>Computer Architecture and Assembly Language</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS-7</td>
<td>Discrete Structures</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**Major Electives (Complete 8 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSS-120A</td>
<td>Introduction to Networks</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS-122</td>
<td>Computer Security Principles</td>
<td>4.0</td>
</tr>
<tr>
<td>CSS-125</td>
<td>Storage Management and Virtualization</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT-3B</td>
<td>Analytic Geometry and Calculus II</td>
<td>4.0</td>
</tr>
</tbody>
</table>

**Other Required Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG-101*</td>
<td>Intermediate Composition and Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESL-101*</td>
<td>Academic Writing &amp; Reading II</td>
<td>5.0</td>
</tr>
<tr>
<td>MAT-123**</td>
<td>Intermediate Algebra</td>
<td>5.0</td>
</tr>
</tbody>
</table>

**TOTAL: 27 UNITS**

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Completion of MAT-123 or any higher level math class fulfills this requirement.**

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**Gainful Employment Information:**

See the certificate program cost and the employment outlook for graduates by clicking the link below:
[http://www.hartnell.edu/gainful-employment-certificate-programs-0](http://www.hartnell.edu/gainful-employment-certificate-programs-0)

**Financial Aid**

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

[https://www.hartnell.edu/students/fa/net-price-calculator.html](https://www.hartnell.edu/students/fa/net-price-calculator.html)
COMPUTER SCIENCE AND INFORMATION SYSTEMS
DIGITAL WEB AND MOBILE DEVELOPMENT

PROGRAMS

- Associate of Science (A.S.)
- Certificates of Achievement

DESCRIPTION

The Digital Web and Mobile Development program is designed for students who are interested in entering the fast-paced fields of web development and mobile app development. A student will learn the latest in web languages, basic web and mobile programming and appropriate use of digital media by building a digital portfolio of their work. Students can focus on either web development or mobile app development through the certificate program or combine the two disciplines for an Associate’s degree. Many of these courses are offered in the online environment to accommodate those students who are presently employed. The web and mobile degree option emphasizes the following competencies: managing the development of a project, delivery of comprehensive, integrated digital media via the web or mobile application. Students will also develop a set of customer liaison skills as they integrating all facets of digital media into an effective web or mobile application. As a result of ongoing changes in technology, the need to expand competencies, and changing transfer requirements, certificate and degree requirements may also change. If you note changes in degrees or certificate requirements, or if courses are not offered in a particular semester, please consult with a counselor or faculty member on how best to complete the program in which you are enrolled.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Advertising Sales Representative or Executive
- Graphic Designer
- Marketing Manager
- Public relations Specialist
- Web Developer

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE OF SCIENCE

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- anticipate, identify and solve technical and design issues by applying current design standards
- apply knowledge in a variety of computer proficiency areas including web languages, software applications, file transfer protocol, and web and app configuration.

### Required Major Courses (14 units)
- [ ] BUS-32 – Introduction to Business 3.0
- [ ] CSS-25 – Multimedia Integration 3.0
- [ ] CSS-27 – Project Management using Microsoft Project 4.0
- [ ] CSS-64 – HTML 5 and CSS3 – Web Development 4.0

### Major Electives A (Complete 8 units)
- [ ] CSS-26 – Dreamweaver 4.0
- [ ] CSS-74 – Wordpress for Websites 4.0
- [ ] CSS-76 – Android App Development Using Java 4.0
- [ ] CSS-86 – Flash Design 4.0

### Major Electives B (Complete an additional 8 units)
- [ ] CSS-29 – Programming for Multimedia 4.0
- [ ] CSS-76 – Android App Development Using Java 4.0
- [ ] CSS-65 – Introduction to IOS App Development 4.0
- [ ] CSS-78 – Mobile Game Design 4.0
- [ ] CSS-84 – Beginning Digital Cartooning in Flash 4.0

**SUBTOTAL: 30 UNITS**

### General Education – Required Courses

*Students must complete one of the following General Education Plans:*  
HCCD GE (see page 59)  
MAT-123 or higher  
- [ ] Natural Sciences  
- [ ] Social & Behavioral Sciences  
- [ ] Humanities  
- [ ] Ethnic Groups in the US  
- [ ] Language and Rationality  

**SUBTOTAL: 21 UNITS**

*Students can double-count required courses and courses for General Education*

- **Electives (Courses Numbered 1-199)** required when degree units plus GE units total fewer than 60.

**TOTAL: 60 UNITS**
COMPUTER SCIENCE AND INFORMATION SYSTEMS
MOBILE DEVELOPMENT OPTION (CT.MD)

CERTIFICATE OF ACHIEVEMENT

Program Outcomes: Upon successful completion of this program a student will be able to:
- anticipate, identify and solve technical and design issues by applying current design standards
- apply knowledge in a variety of computer proficiency areas including web languages, software applications, file transfer protocol, and web and app configuration.

Required Major Courses (14 units)
- BUS-32 – Introduction to Business 3.0
- CSS-25 – Multimedia Integration 3.0
- CSS-27 – Project Management using Microsoft Project 4.0
- CSS-64 – HTML 5 and CSS3 – Web Development 4.0

Major Electives (Complete 8 units)
- CSS-76 – Android App Development Using Java 4.0
- CSS-65 – Introduction IOS App Development 4.0

Other Required Courses
- ENG-101* – Intermediate Composition and Reading 3.0
  OR
  ESL-101* – Academic Writing & Reading II 5.0
- MAT-123** – Intermediate Algebra 5.0

TOTAL: 22 UNITS

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.
**Eligibility for MAT-123 or any higher level math class fulfills this requirement.

GAINFUL EMPLOYMENT INFORMATION:
See the certificate program cost and the employment outlook for graduates by clicking the link below:
http://www.hartnell.edu/gainful-employment-certificate-programs-0

FINANCIAL AID
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https://www.hartnell.edu/students/fa/net-price-calculator.html
## Program Outcomes
Upon successful completion of this program a student will be able to:
- anticipate, identify and solve technical and design issues by applying current design standards
- apply knowledge in a variety of computer proficiency areas including web languages, software applications, file transfer protocol, and web and app configuration.

### Required Major Courses (14 units)
- **BUS-32** – Introduction to Business 3.0
- **CSS-25** – Multimedia Integration 3.0
- **CSS-27** – Project Management using Microsoft Project 4.0
- **CSS-64** – HTML 5 and CSS3 – Web Development 4.0

### Major Electives (Complete 8 units)
- **CSS-26** – Dreamweaver 4.0
- **CSS-74** – Wordpress for Websites 4.0

### Other Required Courses
- **ENG-101*** – Intermediate Composition and Reading 3.0
- **ESL-101*** – Academic Writing & Reading II 5.0
- **MAT-123** – Intermediate Algebra 5.0

**TOTAL: 22 UNITS**

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.

### Gainful Employment Information:
See the certificate program cost and the employment outlook for graduates by clicking the link below:
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### Financial Aid
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[https://www.hartnell.edu/students/fa/net-price-calculator.html](https://www.hartnell.edu/students/fa/net-price-calculator.html)
COMPUTER SCIENCE AND INFORMATION SYSTEMS
NETWORK AND SECURITY OPTION

PROGRAMS
- Associate of Science (A.S.)
- Certificate of Achievement

DESCRIPTION
The Associate of Science in Computer Science and Information Systems - Network and Security Option prepares students for employment in the network and security field. It is designed for students interested in becoming network and security specialists in a business that uses networks or information systems. Upon completing the program students will be prepared to take industry-recognized certifications that include: A+ certificate, CCENT, CCNA, Network+, Security+, and Linux+.

LEADS TO CAREER OPPORTUNITIES SUCH AS:
- Computer and Information Systems Managers
- Computer Network Architects
- Computer Network Support Specialists
- Database Administrators
- Information Security Analysts
- Network and Computer Systems
- System Administrator
- Telecommunications Engineering Specialists

TRANSFER PREPARATION
Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES
www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
CSU System Information - http://www2.calstate.edu

FINANCIAL AID
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https://www.hartnell.edu/students/fa/net-price-calculator.html
COMPUTER SCIENCE AND INFORMATION SYSTEMS
NETWORK AND SECURITY OPTION (AS.PCN)

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:
- design, plan, and implement a small office network, incorporating current industry standards for performance, reliability, and security.
- accurately communicate their work in a technical and non-technical context.
- assemble and configure a computer, install operating systems and software, and troubleshoot hardware, software and networking problems.
- configure business and enterprise networking, storage and virtual equipment (servers and network devices), to create a reliable, secure, and efficient networking infrastructure.

Required Major Courses (40 units)

- CSS-1 – Introduction to Computer Science & Programming Fundamentals 4.0
- CSS-120A – Introduction to Networks 4.0
- CSS-120B – Routing and Switching Essentials 4.0
- CSS-120C – Scaling Networks 4.0
- CSS-120D – Connecting Networks 4.0
- CSS-122 – Computer Security Principles 4.0
- CSS-123 – Network Security Principles 4.0
- CSS-124 – Systems and Network Administration 4.0
- CSS-125 – Storage Management and Virtualization 4.0
- CSS-169 – Computer Maintenance and Repair 4.0

SUBTOTAL: 40 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 61 UNITS
CERTIFICATE OF ACHIEVEMENT

**Program Outcomes:** Upon successful completion of this program a student will be able to:

- accurately communicate their work in a technical and non-technical context.
- design and construct significant computer application(s) using current programming languages, computer architectures, and operating systems.
- describe the organization and operation of a computer architecture with respect to numerical representation and computations, digital logic, and computer components.
- demonstrate the ability to evaluate algorithms, select from a range of possible options, provide justification for that selection, and implement the algorithm in a programming context.

**Required Major Courses (40 units)**

- CSS-1 – Introduction to Computer Science and Programming 4.0
  OR
  CSS-44 – Computer Science and Information Systems 4.0
- CSS-120A – Introduction to Networks 4.0
- CSS-120B – Routing and Switching Networks 4.0
- CSS-120C – Scaling Networks 4.0
- CSS-120D – Connecting Networks 4.0
- CSS-122 – Computer Security Principles 4.0
- CSS-123 – Network Security Principles 4.0
- CSS-124 – Systems and Network Administration 4.0
- CSS-125 – Storage Management and Virtualization 4.0
- CSS-169 – Computer Maintenance and Repair 4.0

**Other Required Courses**

- ENG-101* – Intermediate Composition and Reading 3.0
  OR
  ESL-101* – Academic Writing & Reading II 5.0
- MAT-123** – Intermediate Algebra 5.0

**TOTAL: 40 UNITS**

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Completion of MAT-123 or any higher level math class fulfills this requirement.
CONSTRUCTION MANAGEMENT and ARCHITECTURE

PROGRAM

- Associate of Science (A.S.)

DESCRIPTION

The Associate of Science Degree in Construction Management and Architecture provides a comprehensive introduction to the construction management profession and professional architectural studies. Students select an Associate of Science Degree emphasis in either Construction Management or Architecture, which share interdisciplinary core courses. Licensed professionals instruct students in principles of sustainability, fundamental construction field skills and methods, construction management principles, and architectural design theory. Under practical field and professional studio conditions, students apply current leading industry construction techniques, and computer-aided design and management technologies.

Construction Management Emphasis:
The Construction Management emphasis provides the basic practical construction skills and advanced technical knowledge necessary to enter directly into a professional construction management career. Licensed contractors instruct students in lecture, field practice, and studio settings.

Architecture Emphasis:
The Architecture emphasis provides a basic practical knowledge of field construction skills and practices, sustainable building design principles, together with the basic visual communication skills and digital computer drawing skills necessary for entry-level architectural drafting employment and first-year architectural design transfer credits for a university architectural program.

LEADS TO CAREER OPPORTUNITIES SUCH AS:
- Auditor
- Certification Manager
- Commissioner
- Construction Manager
- Green Building Designer
- Inspector
- Sustainable Building Designer

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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CONSTRUCTION MANAGEMENT and ARCHITECTURE (AS.CMA)

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

Construction Management Emphasis:
- identify and select alternate construction education pathways and construction career opportunities.
- apply basic levels of knowledge and experience in construction craft skills and commercial business operations necessary to effectively manage small commercial and residential construction project activities.
- analyze and apply standard construction contract terms, conditions, plans, specifications, costing formats, and basic regulatory requirements applicable to a range of construction activities.
- apply basic construction management methods to monitor and control compliance with contract requirements for price, time schedule, specifications, and safety on small projects.

Architecture Emphasis:
- identify and select alternate architectural education pathways and architectural career opportunities.
- apply basic principles of commercial and residential construction materials and methods to architectural design.
- apply basic architectural design principles to generate an architectural design solution to a specific set of constraints.
- describe and apply sustainable environmental design principles to architectural design solutions.
- apply manual and digital techniques to produce drawings and three-dimensional models documenting architectural and engineering designs.

Required Major Courses (20 units)
- [ ] CMA-51 – Introduction to Construction Management and Architecture 3.0
- [ ] CMA-55 – Introduction to Structural Design and Codes 3.0
- [ ] CMA-57 – Construction Law and Contracts 3.0
- [ ] CMA-61 – Construction Field Practice: Layout, Foundations & Framing 4.0
- [ ] CMA-62 – Construction Field Practice: Exterior and Interior Finish 4.0
- [ ] CMA-81 – Computer Aided Drafting and Design I 3.0

Required Major Courses (Complete one emphasis 15 units)
- [ ] CONSTRUCTION MANAGEMENT – CMA-52, 53, 54, 56, 91 15.0
- [ ] ARCHITECTURE – CMA-70, 71, 72, 82, 83 15.0

Major Elective Courses (Complete 3 units from the same emphasis as above)
- [ ] CONSTRUCTION MANAGEMENT – CMA-63, 64, 65, 66, 84, 90, EGN-11 3.0
- [ ] ARCHITECTURE – CMA-53, 84, 90, 91, EGN-11 3.0

SUBTOTAL: 38 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher
- [ ] Natural Sciences
- [ ] Social & Behavioral Sciences
- [ ] Humanities
- [ ] Ethnic Groups in the US
- [ ] Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

[ ] Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
The Certificate of Achievement in California State University General Education Breadth (CSU-GE), developed by the Counseling Discipline, will be awarded upon completion of the CSU GE Breadth requirements as outlined on the catalog year’s CSU-GE Breadth sheet. Students must complete a minimum of 39 units, which are distributed among five areas. CSU-GE Breadth Sheet requirements are designed to be taken with a major area of concentration and elective courses in preparation for transfer to a California State University. This certificate recognizes the completion of lower-division general education requirements for the CSU. For many majors, students are encouraged to complete the CSU GE pattern; however, it is not required for admission to the CSU. An official petition must be filed with the Admission and Records Office prior to the graduation deadlines as stated in the Academic Calendar. Certification of the CSU-GE Breadth will be indicated on the student’s transcript.

**CSU-GE for STEM or IGETC-CSU for STEM**

IGETC for STEM or CSU-GE for STEM is applicable for the (AS-T) Biology for Transfer degree only at the time of the catalog publication.

IGETC-CSU for STEM- All Areas will be completed with minimum units/courses as required and listed on IGETC except AREAS 3 and 4, which is approved with 6 units/2 courses. CSU-GE for STEM- All AREAS will be completed with minimum units/courses as required and listed on CSU-GE except AREAS C and D, which is approved with 6 units/2 courses. These GE courses are not waived but will be completed after transfer. Students completing the CSU-GE or IGETC-CSU for STEM will not receive a Certificate of Achievement, which requires a full certification of areas; however, students can request a partial certification be sent to their transfer institution by completing the appropriate form and submitting to Admissions and Records.
DIGITAL ARTS

PROGRAMS

- Associate of Arts (A.A.)
- Certificate of Achievement

DESCRIPTION

The Digital Arts program offers a certificate and associate degree in Digital Arts. Classes include training in graphic design, digital graphics, 2D digital illustration, 2D digital photographic imaging, digital video and audio editing, 2D and 3D digital animation, 3D modeling, storyboard development for animation and interactive digital media interface design. The AA degree in Digital Arts offers 3 tracks of specialization; graphic design for print, screen and time-based, digital photography and video, or digital animation and illustration. An imaginative blend of art, design, photography, video, animation and illustration is applied to producing digital media presentations for business, education, entertainment, telecommunication and medical industries.

Graduates in Digital Arts are qualified for positions in graphic design, digital art, web design, game design, 2D illustration, digital photographic imaging, audio engineering, video editing, digital video, or digital media interface design. Graduates in Digital Arts with animation specialization are qualified for positions in 3D digital art, game design, storyboard art, 3D modeling, character animation, digital 3D broadcast logo design, digital 3D volumetrics, 3D animation and compositing, 2D digital art, 2D compositing, 2D chroma key, 2D texture painting, or rotoscoping.

For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Art Director
- Art Marketing Director
- Design Studio Manager
- Freelancer
- Game Designer
- Graphic Designer
- Layout Artist
- Multimedia Artist and Animator
- Photographer
- Publications Designer
- Web Designer

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
**DIGITAL ARTS (AA.DA)**

**ASSOCIATE OF ARTS**

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- demonstrate effective technical proficiency in the creation of digital artwork or projects
- design effective visual communication for print, animation, and interactive media.
- structure visual information utilizing digital design aesthetic principles.
- appraise and analyze the influence of digital art and artists on the lives of all individuals, cultures, and societies.

<table>
<thead>
<tr>
<th>Graphic Design</th>
<th>Complete 2-courses from ART-12A, ART-78, ART-84, and PHO-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Photography/Video</td>
<td>Complete 2 courses from PHO-1, PHO-2, ART-12A, and ART-84</td>
</tr>
<tr>
<td>Digital Animation/Illustration</td>
<td>Complete 2 courses from ART-73, ART-3, ART-13 and ART-84</td>
</tr>
</tbody>
</table>

**Required Major Courses (21 units)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-70 – Introduction to Graphic Design/Computer Graphics</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-71 – Introduction to 2D Digital Illustration</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-72 – Introduction to Digital Arts</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-74 – Digital 3D Design and Modeling</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-76 – Introduction to 3D Digital Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-77 – Introduction to Digital Video and Video Editing</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-80 – Introduction to Digital Photography and Photographic Imaging</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Major Electives (Complete 6 units)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART-3 – Drawing and Composition</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-12A – Design</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-13 – Three-Dimensional Design</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-73 – Introduction to Digital Illustration for Animation</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-78 – Motion Graphics and Design Principles</td>
<td>3.0</td>
</tr>
<tr>
<td>ART-84 – Digital Art Portfolio and Business Practices</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO-1 – Introduction to Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>PHO-2 – Beginning black and White Photography</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**SUBTOTAL: 27 UNITS**

**General Education – Required Courses**

*Students must complete one of the following General Education Plans:*

- **HCCD GE** (see page 59) MAT-123 or higher
  - Natural Sciences
  - Social & Behavioral Sciences
  - Humanities
  - Ethnic Groups in the US
  - Language and Rationality

**SUBTOTAL: 21 UNITS**

*Students can double-count required courses and courses for General Education*

- **Electives (Courses Numbered 1-199)** required when degree units plus GE units total fewer than 60.

**TOTAL: 60 UNITS**
DIGITAL ARTS (CT.DA)

CERTIFICATE OF ACHIEVEMENT

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate effective technical proficiency in the creation of digital artwork or projects.
- design effective visual communication for print, animation, and interactive media.
- structure visual information utilizing digital design aesthetic principles.
- appraise and analyze the influence of digital art and artists on the lives of all individuals, cultures, and societies.

Required Major Courses (21 units)

- ART-70 – Introduction to Graphic Design/Computer Graphic 3.0
- ART-71 – Introduction to 2D Digital Illustration 3.0
- ART-72 – Introduction to Digital Arts 3.0
- ART-74 – Digital Three Dimensional Design and Modeling 3.0
- ART-76 – Introduction to 3D Digital Animation 3.0
- ART-77 – Introduction to Digital Video and Video Editing 3.0
- ART-80 – Introduction to Digital Photographic Imaging 3.0

Major Electives (Complete 3 units)

- ART-12A – Design 3.0
- ART-13 – Three Dimensional Design 3.0
- ART-73 – Introduction to Digital Illustration Animation 3.0
- ART-78 – Motion Graphics and Design Principles 3.0
- ART-84 – Digital Art Portfolio & Business Practices 1.0-3.0
- PHO-1 – Introduction to Photography 3.0

Other Required Courses

- ENG-101* – Intermediate Composition and Reading 3.0
  OR
- ESL-101* – Academic Writing and Reading II 3.0
- MAT-106** – Integrated Mathematics 3.0

TOTAL: 24 UNITS

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.

GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:
http://www.hartnell.edu/gainful-employment-certificate-programs-0

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
EARLY CHILDHOOD EDUCATION

PROGRAMS

- Associate in Science for Transfer (A.S.-T)
- Associate of Science (A.S.)
- Certificate of Achievement

DESCRIPTION

ASSOCIATE DEGREE FOR TRANSFER
The Associate in Science degree in Early Childhood Education (ECE) for Transfer provides a clearly articulated curricular track for students who wish to transfer to a CSU campus, while also serving the diverse needs of students interested in the breadth and depth of the field of early childhood education. Additionally, this degree exposes students to the core principles and practices of the field in order to build a foundation for their future personal, academic, or vocational paths.

The degree was designed to facilitate students’ successful transfer to certain California State University (CSU) campuses that prepare them for advanced study in a variety of graduate programs, as well as a variety of careers such as teaching, Child Development Specialist, Program Directors, and Child Life Specialists. With a BA in ECE/Child Development, students are eligible for the Master Teacher and Site Supervisor levels of the CA Child Development Permit, using the Alternative Qualifications category.

ASSOCIATE DEGREE
The Early Childhood Education (ECE) program offers a comprehensive course of study to prepare students for career and job opportunities in early education and care of young children from diverse family backgrounds. Includes instruction in parent education as well as preparation for employment in child development centers, family child-care settings, preschools, before- and after-school care programs, programs for children with special needs, and other ECE related-programs in the community.

The ECE curriculum provides coursework with specializations in the administration of ECE programs, infant/toddler development and care, advanced ECE curriculum, and special needs. Students will be eligible to meet the Department of Social and Employment Services Title 22 and Education Code Title 5 licensing regulations for teaching personnel and administrative staff in private and public child development programs and agencies.

As a result of ongoing changes in laws, mandates, and licensing regulations for teaching personnel and ECE programs, the information in the Permit table is subject to change. It is important for students to consult with a counselor to develop an educational plan for the desired permit or credential.

LEADS TO CAREER OPPORTUNITIES SUCH AS:
- Child Development Specialist
- Community Service Agent
- Curriculum Specialist
- Day Care Administrator
- Early Intervention Specialist
- Kindergarten Teacher
- Parenting Educator
- Preschool Teacher
- Social Worker
- Teacher Assistant
- Tutor

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers. https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- plan and organize activities in a safe and healthy learning environment for optimum development of all young children in groups of 12 to 24 children.
- assess and evaluate all children and learning environments to write reports according to state mandated guidelines.
- work with families and their children to build respectful, supportive relationships for optimum growth and development of young children.
- connect with community agencies and programs to support children, families, and the early education and care profession.

Required Major Courses (25 units)

- ECE-1 – Principles and Practices of Teaching Young Children 3.0
- ECE-2 – Child, Family, School & Community Relations 3.0
- ECE-4 – Introduction to Curriculum 3.0
- ECE-6 – Child Growth and Development 3.0
- ECE-10 – Observation and Assessment 3.0
- ECE-12 – Practicum: Field Teaching Experience 4.0
- ECE-19 – Health, Safety, and Nutrition in Early Childhood 3.0
- ECE-53 – Teaching in a Diverse Society 3.0

Subtotal: 25 units

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

Total: 60 units
EARLY CHILDHOOD EDUCATION (AS.ECE)

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:
- plan and organize activities, providing a safe and healthy learning environment, for optimum development of all young children in groups of 12 to 24 children.
- assess and evaluate all children and learning environments to write reports according to state and federally mandated guidelines.
- work with families and their children to build respectful, supportive relationships for optimum growth and development of young children
- connect with community agencies and programs to support children, families, and the early education and care profession.

Child Development Permit issued by the Commission on Teaching Credentialing (CTC) – Educational and Experience Day Requirements

<table>
<thead>
<tr>
<th>Role</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Assistant</td>
<td>Requires any 6 ECE units</td>
</tr>
<tr>
<td>Associate Teacher</td>
<td>Requires 12 core ECE units (ECE 1, ECE 2, ECE 4, ECE 6) and 50 days of experience at 3+ hours per day (ECE 12 and 14 additional experience days)</td>
</tr>
<tr>
<td>Teacher</td>
<td>Requires 24 ECE units (including 12 core ECE units) plus 16 General Education units (a minimum of one course in each of these 4 areas: humanities and/or fine arts, social sciences, math and/or science, and English and/or language arts) and 175 days of experience at 3+ hours per day</td>
</tr>
<tr>
<td>Master Teacher</td>
<td>Teacher level permit requirements plus ECE 71, 350 days of experience at 3+ hours per day, and six ECE units from the following specializations:</td>
</tr>
<tr>
<td>Curriculum</td>
<td>Select 6 units from ECE 11, ECE 54</td>
</tr>
<tr>
<td>Infant/Toddler</td>
<td>Select 6 units from ECE 20, ECE 21</td>
</tr>
<tr>
<td>Special Needs</td>
<td>Select 6 units from ECE 26, ECE 27</td>
</tr>
<tr>
<td>Site Supervisor</td>
<td>Requires an AS with 24 ECE units, ECE 70A, ECE 70B, ECE 71 and 350 days of experience at 3+ hours per day, including at least 100 days of supervising adults</td>
</tr>
<tr>
<td>Program Director</td>
<td>Requires a BA with 24 ECE units, ECE 70A, ECE 70B, ECE 71 and Site Supervisor status with one program year of Site Supervisor experience</td>
</tr>
</tbody>
</table>

Required Major Courses (25 units)

- ECE-1 – Principles and Practices of Teaching Young Children 3.0
- ECE-2 – Child, Family, School & Community Relations 3.0
- ECE-4 – Introduction to Curriculum 3.0
- ECE-6 – Child Growth and Development 3.0
- ECE-10 – Observation and Assessment 3.0
- ECE-53 – Teaching in a Diverse Society 3.0
- ECE-19 – Health, Safety and Nutrition in Early Childhood 3.0
- ECE-12 – Practicum: Field Teaching Experience 4.0

Major Electives (Complete 6 units)

- ECE-11 – Cognitive Activities and Materials 3.0
- ECE-54 – Language and Early Literacy Curriculum 3.0
- ECE-9 – Creative Expressions and play in Early Childhood 3.0
- ECE-20 – Infant and toddler Development 3.0
- ECE-21 – Infant Toddler Group Care 3.0
- ECE-26 – Children with Special Needs 3.0
- ECE-27 – Principles and Practices in Guiding Children’s Behavior 3.0
- ECE-70A – Administration I: Programs in ECE 3.0
- ECE-70B – Advanced Administration II: 3.0
- ECE-71 – Adult Supervision and Mentoring in ECE Settings 3.0

SUBTOTAL: 31 UNITS

General Education – Required Courses - Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher
- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
# EARLY CHILDHOOD EDUCATION (CT.ECE)

## CERTIFICATE OF ACHIEVEMENT

**Program Outcomes:** Upon successful completion of this program a student will be able to:

- plan and organize activities, providing a safe and healthy learning environment, for optimum development of all young children in groups of 12 to 24 children.
- assess and evaluate all children and learning environments to write reports according to state and federally mandated guidelines.
- work with families and their children to build respectful, supportive relationships for optimum growth and development of young children.
- connect with community agencies and programs to support children, families, and the early education and care profession.

### Required Major Courses (23 units)

- **ECE-1** – Principles and Practices of Teaching Young Children 1.0
- **ECE-2** – Child, Family, School & Community Relations 3.0
- **ECE-4** – Introduction to Curriculum 3.0
- **ECE-6** – Child Growth & Development 3.0
- **ECE-10** – Observation and Assessment 3.0
- **ECE-12** – Practicum: Field Teaching Experience 4.0
- **ECE-19** – Health, Safety and Nutrition in ECE Programs 3.0
- **ECE-53** – Teaching in a Diverse Society 3.0

### Other Required Courses

- **ENG-101*** – Intermediate Composition and Reading 3.0
  - OR
  - **ESL-101*** – Academic Writing & Reading II 5.0
- **MAT-106**** – Integrated Mathematics 3.0

**TOTAL: 23 UNITS**

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or higher level math class fulfills this requirement.

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### GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:

[http://www.hartnell.edu/gainful-employment-certificate-programs-0](http://www.hartnell.edu/gainful-employment-certificate-programs-0)

### FINANCIAL AID

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[https://www.hartnell.edu/students/fa/net-price-calculator.html](https://www.hartnell.edu/students/fa/net-price-calculator.html)
ECONOMICS PROGRAM

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

The Associate in Arts degree in Economics for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate Economics degree programs at a California State University (CSU) campus. This degree provides the lower division economics major courses required at many CSUs while exposing students to the core principles of the economics field. Economics is the study of how people choose to use scarce resources to produce goods and services and how they make allocation decisions to satisfy their wants and needs. In pursuing the Associate in Arts in Economics for Transfer degree, students acquire skills to analyze problems and then to use sound reasoning to make decisions. Students majoring in economics develop critical thinking, problem solving, and communication skills. As economic majors, students have learning opportunities that are relevant to many types of careers, including economists, public policy, government agencies and government related organizations (for example, the Federal Reserve System and the Bureau of Labor Statistics), business, finance, data analysis, accounting and education. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITES SUCH AS:

- Actuary
- Auditor
- Business Manager
- Credit Analyst/Loan Officer
- Economist
- Financial Planner/Analyst
- Government Administrator
- Healthcare Administrator
- Institutional Research Director
- Journalist
- Teacher

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- apply economic theories and economic reasoning to real life situations using the concepts of scarcity, opportunity cost and supply and demand for individual (micro) and collective (macro) decision-making.
- evaluate the goal, limitations, and mechanics of government intervention such as regulation, taxation, tariffs, quotas, and monetary and fiscal policies.

Required Major Courses (15 units)

- ECO-1 – Principles of Macroeconomics 3.0
- ECO-5 – Principles of Microeconomics 3.0
- MAT-2 – Calculus for Managerial Life, & Social Science 4.0
OR
- MAT-3A – Analytic Geometry and Calculus I 4.0
- MAT-13 – Elementary Statistics 5.0

Major Electives A (Complete 1 course 3-4 units)

- BUS-1A – Financial Accounting 4.0
- BUS-1B – Managerial Accounting 4.0
- BUS-43 – Business Info Systems & Info Literacy 4.0
- ECO-10 – Introduction to Economics 3.0
- MAT-3B – Analytic Geometry and Calculus II 4.0
- MAT-16 – Finite Mathematics 3.0

Major Electives B (Complete 1 course 3-4 units)

- Any list A courses not already used 3.0-4.0
- MAT-3C – Analytic Geometry and Calculus II 4.0
- MAT-4 – Linear Algebra 4.0

SUBTOTAL: 21-23 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
ELEMENTARY TEACHER EDUCATION

PROGRAM

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

The A.A. Degree in Elementary Teacher Education is intended for students who plan to complete a bachelor’s degree at a transfer institution in preparation for a California Multiple Subject Teaching Credential. Most students pursue this credential with the goal of becoming an elementary school or special education teacher.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Counselor
- Curriculum Specialist
- Day Care Administrator
- Elementary School Administrator
- Elementary School Teacher
- Resource Teacher
- Special Education Teacher
- Speech Pathologist
- Training Specialist
- Tutor

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- clarify and articulate career goals of becoming a teacher.
- demonstrate a basic grasp of the disciplines most commonly taught in elementary schools in California, including physical science, biology, art, and literature in a cultural or geographic context, world geography, United States history, and United States government.
- transfer into the traditional Liberal Studies major.

Required Major Courses (41 units)

- BIO-10 – General Biology 4.0
- COM-1 – Introduction to Public Speaking 3.0
- EDU-1 – Introduction to Education in a Changing World 3.0
- ENG-1A – College Composition and Reading 3.0
- ENG-1B – College Literature and Writing 3.0
- ENG-2 – Critical Thinking and Writing 3.0
- ECE-6 – Child Development 3.0
- GEG-10 – Geography and World Affairs 3.0
- GEL-1 – Physical Geology 4.0
- HIS-5A – World History A 3.0
- HIS-17A – United States History A 3.0
- MAT-12 – Number Systems 3.0
- POL-1 – American Political Institutions 3.0

Required Major Courses (Complete 1 course 4-8 units)

- PHY-32 – Survey of Chemistry and Physics 4.0
- OR
- CHM-22 – The Science of Chemistry 8.0
- AND
- PHY-10 – Introduction to Physics

Major Electives (Complete 3 units)

- ART-10 – Art Appreciation 3.0
- MUS-1A – Music Appreciation-Historical Perspective 3.0
- TAC-1 – Introduction to Theatre 3.0

SUBTOTAL: 48-52 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
ENGINEERING

PROGRAMS

- Associate of Science (A.S.)

DESCRIPTION

Engineering is the science and art of applying scientific and mathematical principles, experience, judgment, and common sense to design things that benefit society. Engineers are problem-solvers who make things work faster, cheaper, and more efficiently. Technologies developed by engineers improve the ways that we live, communicate, work, travel, stay healthy, and entertain ourselves. From computer chips to cellphones and buildings to automobiles, engineering makes every aspect of our modern life possible.

Hartnell College offers a two-year lower division engineering program that prepares students for transfer in all engineering disciplines to colleges and universities in California and across the United States. The Associate in Science in Engineering offers course work in all fields of engineering from civil through mechanical and electrical and computer engineering. Students who are seeking to transfer to a four-year university and complete their Bachelor of Science in Engineering can find the courses needed to transfer in the Engineering program, as can students who are seeking employment in related fields as engineering technologists, surveyors, or construction managers. Positions for which four-year graduates in engineering are qualified can be found in the fields of engineering, engineering technology, construction management, business, programming, teaching, and research.

The first two years of the engineering curriculum at most colleges and universities have a shared core of mathematics and physics plus a programming course. Beyond that, there is specialization in several areas. As there are different disciplines within engineering, four different tracks have been developed, and each one feeds into one or more majors at the baccalaureate level. The fifth track is appropriate for engineering majors who are not explicitly listed in the first four tracks, such as chemical engineering or biomedical engineering. The five discipline clusters are:

1. Mechanical, Aerospace, and Manufacturing Engineering
2. Civil Engineering
3. Electrical Engineering
4. Computer and Software Engineering
5. General Engineering

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Aerospace Engineer
- Architectural Engineer
- Automotive Engineer
- Biochemical Engineer
- Biomedical Engineer
- Chemical Engineer
- Civil Engineer
- Computer Engineer
- Construction Engineer
- Industrial Engineer
- Manufacturing Engineer
- Materials Engineer
- Mechanical Engineer
- Mechatronics Engineer
- Nuclear Engineer
- Petroleum Engineer
- Robotic Engineer
- Software Engineer
- Structural Engineer

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.assist.org – CSU and UC Articulation Agreements and Major Search Engine

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FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
## ENGINEERING (AS.EGN)

### ASSOCIATE OF SCIENCE

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- employ science and mathematical skills commonly used in engineering fields.
- design a system, component, or process to meet engineering requirements.
- examine engineering problems and determine a strategy.
- describe and differentiate modern engineering tools and practices.

### SELECT ONE EMPHASIS TO FOLLOW

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Units</th>
<th>Mechanical/Aerospace/Manufacturing</th>
<th>Civil</th>
<th>Electrical</th>
<th>Computer/Software</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>EGN-1L – Introduction to Engineering Lab</td>
<td>1</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>EGN-2 – Engineering Graphics</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>EGN-4 – Materials Science and Engineering</td>
<td>4</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EGN-5 – Programming and Problem-Solving in MATLAB</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>EGN-6 – Circuit Analysis</td>
<td>4</td>
<td>X</td>
<td></td>
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<td>EGN-7L – Computer Interface with the Physical World Laboratory</td>
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<td>EGN-8 – Statics</td>
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<td>EGN-11 – Surveying</td>
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<td>BIO-1 – Fundamental Biological Concepts</td>
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<td>BIO-2 – General Zoology</td>
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<td>BIO-3 – General Botany</td>
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<td>CHM-1B – General Chemistry II</td>
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<td>CHM-12A – Organic Chemistry I</td>
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<td>CHM-12B – Organic Chemistry I</td>
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<td>PHY-4C – General Physics III/ Waves, Heat, Light, Sound, and Modern Physics</td>
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<td>MAT-3C – Analytical Geometry and Calculus III</td>
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<td>CSS-1 – Intro to Computer Science &amp; Programming Fundamentals</td>
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<td>CSS-2A – Object Oriented Programming</td>
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<tr>
<td>CSS-2B – Data Structures and Algorithms</td>
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<tr>
<td>CSS-3 – Computer Architecture and Assembly Language Programming</td>
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<td>CSS-7 – Discrete Structures</td>
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</tbody>
</table>

Number of ADDITIONAL units to choose

**SUBTOTAL: 33-48 UNITS**

### General Education – Required Courses

*Students must complete one of the following General Education Plans:*

**IGETC for STEM (see page 65)**

37 units

Partial IGETC-CSU or CSU-GE certification is approved to meet the AS- Engineering general education. For the partial certification: (IGETC/CSU - All AREAS will be completed with minimum units/courses as required and listed on IGETC except AREAS 3 and 4, which is approved with 6 units/2 courses. CSU-GE All AREAS will be completed with minimum units/courses as required and listed on CSU-GE except AREAS C and D, which are approved with 6 units/2 courses). These GE courses are not waived but will be completed after transfer

**TOTAL: 63-85 UNITS**
ENGLISH

PROGRAM

- Associate in Arts for Transfer (A.A.-T)

**DESCRIPTION**

The Associate in Arts in English for Transfer offers a study of composition, language, and literature designed to develop skills in reading perceptively, writing effectively, and thinking critically. The program prepares students for diverse careers in advertising, business, communications media, public relations, law, government service, and teaching. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

**LEADS TO CAREER OPPORTUNITIES SUCH AS:**

- Author
- Biographer
- Columnist
- Correspondent
- Creative Director
- Editor
- English Teacher
- Grant Writer
- Lawyer
- Lobbyist
- Playwright
- Public Relations
- Reporter
- Speech Writer
- Spokesperson
- Staff Writer

**TRANSFER PREPARATION**

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

**TRANSFER RESOURCES**

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

**FINANCIAL AID**

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- apply appropriate interpretive strategies to read, discuss, and analyze a variety of works of literature within any given genre and expository texts.
- analyze and evaluate major themes and techniques found in literature and expository texts by applying appropriate writing strategies and skills.
- demonstrate an appreciation for the aesthetic value of literature and expository texts from a diversity of cultural, historical, and ethnic perspectives.

Required Major Courses (6 units)
- ENG-1B – College Literature and Composition 3.0
- ENG-2 – Critical Thinking and Writings 3.0

Major Electives A (Complete 9 units)
- ENG-22 – Studies of Poetry 3.0
- ENG-24 – The Short Story 3.0
- ENG-31 – Beginning creative Writing 3.0
- ENG-44A – World Literature I 3.0
- ENG-44B – World Literature II 3.0
- ENG-46A – Survey of British Literature I 3.0
- ENG-46B – Survey of British Literature II 3.0
- ENG-47A – Survey of American Literature I 3.0
- ENG-47B – Survey of American Literature II 3.0

Major Electives B (Complete 3 units)
- ENG-17 – The Contemporary Shakespeare 3.0
- ENG-26 – Chicano Literature 3.0
- ENG-41 – Art of Steinbeck 3.0
- ENG-48 – Introduction to Children’s Literature 3.0

SUBTOTAL: 18 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education
- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
GENERAL STUDIES WITH AN AREA OF EMPHASIS

PROGRAMS

- Associate of Arts (A.A.)

DESCRIPTION

The General Studies with an Area of Emphasis program, developed by the Counseling Discipline, is designed to meet the needs of students interested in graduating with an Associate level college degree by studying specific related disciplines of academic subjects (Natural Sciences, Social and Behavioral Sciences, Humanities, Ethnic Groups in the United States, or Language and Rationality).

The degree prepares the student for the following:

- a broad range of educational outcomes including reasoning skills, general education, basic skills, mathematical skills, communication skills and intercultural understandings desired by employers and required in a variety of entry level professional careers and or promotional opportunities
- the completion of a major leading to a two-year college degree
- a solid beginning in the transfer planning process through careful educational planning with a counselor

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Administrative or Executive Assistant
- Customer Service Representative
- General Manager
- Nonprofit Program Manager

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:
- read, write, speak and verbally comprehend at a college level.
- define information needs, access information efficiently and effectively, evaluate information critically, and use information ethically.
- use quantitative and logical reasoning to analyze information evaluate ideas and solve problems.
- understand and respect the cultural, economic, social, political, biological and interdependence of global life.
- acquire an appreciation in and involvement in the creation or performance of the work of fine arts/music culture.

CHOOSE A SINGLE AREA OF EMPHASIS: Complete 18 units in one of the areas of emphasis listed below:

- Natural Sciences
- Social and Behavioral Science
- Humanities
- Ethnic Groups in the US
- Language and Rationality

Areas of Emphasis: Natural Sciences (AA.GSN)
Courses in natural sciences are those that examine the physical universe, its life forms, and its natural phenomena. Students will develop an appreciation and understand of the scientific method and an understanding of the relationships between science and other human activities.

For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.

- Agriculture: ABT 90, 92
- Anthropology: ANT 1
- Astrology: AST 1, 1L
- Biology: BIO 1, 2, 3, 5, 6, 6L, 10, 11, 12, 13, 18, 20, 27, 30, 42, 47, 48, 48L
- Chemistry: CHM 1A, 1B, 12A, 12B, 22, 23, 60
- Geography: GEG 1
- Geology: GEL 1, 2, 6, 25
- Meteorology: MET 1
- Oceanography: OCN 1
- Physics: PHY 2A, 2B, 4A, 4B, 4C, 10, 32
## Areas of Emphasis: Social and Behavioral Sciences (AA.GSS)
Courses in the social and behavioral sciences are those that focus on people as members of society. Courses will stimulate critical thinking about the ways people act and have acted in response to their societies and will promote appreciation of how societies and social subgroups operate. Students will develop an awareness of the method of inquiry used by the social and behavioral sciences.

For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.

### REQUIRED MAJOR COURSES
- **Addiction Studies**: AOD 1
- **Administrative Justice**: ADJ 1, 51
- **Agriculture**: ABT 53
- **Anthropology**: ANT 1, 2, 10, 20
- **Business**: BUS 32
- **Communication Studies**: COM 4
- **Early Childhood Education**: ECE 6
- **Economics**: ECO 1, 5, 10
- **Ethnic Studies**: ETH 1, 2, 3, 4, 5, 6, 12, 25
- **Geography**: GEG 1, 10
- **Health Education**: HED 2, 7
- **Health Science**: HES 1
- **History**: HIS 4A, 4B, 5A, 5B, 6, 8A, 8B, 10, 17A, 17B, 40, 46A, 46B, 47, 49A, 49B, 51, 55
- **Philosophy**: PHL 2, 10, 15
- **Physical Education Theory**: PETH-5
- **Political Science**: POL 1, 2, 3, 5, 6
- **Psychology**: PSY 2, 6, 9, 10, 12, 14, 15, 22, 25, 33, 41, 42
- **Social Justice Studies**: SJS 20, 22
- **Sociology**: SOC 1, 5, 20, 41, 42
- **Theatre & Cinema**: TAC 7, 23

## Areas of Emphasis: Humanities (AA.GSH)
Courses in the humanities are those that study the cultural activities and artistic expressions of human beings. Students will develop an awareness of the ways in which people throughout the ages and in different cultures have responded to themselves and the world around them in artistic and cultural creations and develop aesthetic understanding and an ability to make value judgments.

For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.

### REQUIRED MAJOR COURSES
- **American Sign Language**: ASL 1, 2, 3
- **Anthropology**: ANT 1, 20
- **Art**: ART 1A, 1B, 3, 10, 12A, 15A, 15B, 19, 70, 72, 80
- **English**: ENG 1B, 17, 22, 24, 26, 31, 32, 33, 41, 44A, 44B, 46A, 46B, 47A, 47B
- **Ethnic Studies**: ETH 6, 7, 12, 25
- **History**: HIS 40, 47, 51
- **Music**: MUS 1A, 2, 5, 6, 7, 8, 20, 21, 23.1, 23.2, 23.3, 23.4, 23.5, 24, 25, 26, 42, 43, 46, 47, 48, 49, 54
- **Philosophy**: PHL 2, 10
- **Photography**: PHO 1, 2, 4
- **Spanish**: SPA 1, 15, 1X, 2, 2S, 2X, 3, 3S, 4, 4S
- **Theatre and Cinema**: TAC 1, 2, 3, 7, 18, 20, 21, 23, 24, 25, 26, 29, 40, 50, 53
CON’T OF GENERAL STUDIES WITH AN AREA OF EMPHASIS

<table>
<thead>
<tr>
<th>Areas of Emphasis: Ethnic Groups in the United States (AA.GSE)</th>
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<tbody>
<tr>
<td>Courses in the ethnic groups are those that study important themes and issues in United States history, society and culture. Courses will address the theoretical and analytical issues relevant to understanding race, culture and ethnicity in our society. Students will develop a framework for better understanding one’s particular cultural/historical identity in our society.</td>
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<tr>
<td><strong>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</strong></td>
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<tr>
<td><strong>REQUIRED MAJOR COURSES</strong></td>
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<td>□ Addiction Studies: AOD 4</td>
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<td>□ Anthropology: ANT 10</td>
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<td>□ Communications: COM 4</td>
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<td>□ Early Childhood Education: ECE 53</td>
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<td>□ Education: EDU 1</td>
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<td>□ English: ENG-1A Multicultural Perspective, ENG 1B Multicultural Perspective, 26</td>
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<td>□ Ethnic Studies: ETH 1, 2, 3, 4, 5, 6, 7, 12</td>
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<td>□ Health Education: HED 6</td>
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<td>□ Health Sciences: HES 2</td>
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<td>□ History: HIS 10, 40, 46A, 46B, 49A, 49B</td>
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<td>□ Music: MUS 5, 6, 7, 8</td>
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<td>□ Political Science: POL 5</td>
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<td>□ Sociology: SOC 15, 20, 30, 42</td>
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<td>□ Social Justice Studies: SJS 20, 22</td>
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<tr>
<td>□ Theater Arts and Cinema: TAC 3, 7</td>
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<tr>
<th>Areas of Emphasis: Language and Rationality (AA.GSL)</th>
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<tbody>
<tr>
<td>Courses in language and rationality are those that study English expository writing and composition, communication, and analytical thinking. Courses include oral communication, mathematics, logic, statistics, computer languages and related disciplines. Students will develop the principles and applications of language toward logical thought, clear and precise expression, and critical evaluation of communication in whatever symbolic system the students used.</td>
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<tr>
<td><strong>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</strong></td>
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<tr>
<td><strong>REQUIRED MAJOR COURSES</strong></td>
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<td>□ American Sign Language: ASL 1, 2, 3</td>
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<td>□ Business: BUS 1A, 43</td>
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<td>□ Communications: COM 1, 2, 3, 4, 5, 8</td>
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<td>□ Computer Science: CSS 1, 2A, 2B, 3, 4, 31, 44, 123</td>
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<td>□ Counseling: COU 1, 23, 27</td>
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<td>□ English: ENG 1B, ENG 1B Multicultural Perspective, 2</td>
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<td>□ Library: LIB 2, 5, 6, 7</td>
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<td>□ Mathematics: MAT 2, 3A, 3B, 3C, 4, 5, 7, 10, 12, 13, 16, 18, 24, 25, 27, 121, 123</td>
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<tr>
<td>□ Philosophy: PHL 15</td>
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<tr>
<td>□ Spanish: SPA 1, 1S, 1X, 2, 2S, 2X, 3, 3S, 4, 4S</td>
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**SUBTOTAL: 18 UNITS**

**General Education – Required Courses** MAT-123 or higher

Students must complete one of the following General Education Plans: HCCD GE (see page 59)

- Ethnic Groups in the US
- Humanities
- Language and Rationality
- Natural Sciences
- Social & Behavioral Sciences

**SUBTOTAL: 21 UNITS**

**Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.**

**TOTAL: 60 UNITS**
GEOLOGY
PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Associate in Science degree in Geology for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate geology degree programs at a California State University (CSU) campus. This degree provides the lower division geology major courses required at many CSUs while exposing students to the core principles and practices of the geology field. Students completing the Geology degree will have an introductory foundation through the study of the scientific method, Earth materials, Earth processes, and Earth history. They will acquire skills, knowledge, and abilities that enable students to use a scientific approach incorporating basic chemistry, physics, and mathematics to the study of the Earth; identify common minerals, rocks, and geomorphic features of Earth; describe the materials and elucidate the processes that comprise the dynamic Earth system; describe the evidence for and occurrence of major events in Earth History. Most common career opportunities with a baccalaureate degree include: entry-level field technician/geologist in industry (mining, oil, environmental consulting) and governmental agencies (Department of Natural Resources, Geological Surveys, National Parks). This Associate in Science in Geology for Transfer (AS-T) Degree is intended to meet the lower division requirements for geology for all CSU campuses. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITES SUCH AS:

- Aerial/Scientific Photographer
- Agricultural Engineer
- Architect
- Computer Analyst
- Economic Geologist
- Environmental Lawyer
- Forest Ranger
- Geochemist
- Geologist
- Hydrologist
- Laboratory Technician
- Landscape Manager
- Marine Advisor
- Mathematician
- Soil Scientist
- Surveyor
- Pollution Control Specialist

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

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CSU System Information - http://www2.calstate.edu

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https://www.hartnell.edu/students/fa/net-price-calculator.html
GEOLOGY (AST.GEL)

ASSOCIATE IN SCIENCE FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- apply the scientific method to knowledge acquisition and transfer of information.
- demonstrate proficiency in the areas of graphical presentation, oral communication, and scientific writing.
- examine the various earth system components and their complex interaction through inquiry-based interdisciplinary curricula in the physical sciences.
- use observing systems, geospatial technology, computers, information processing and data analysis.
- explain the significance of geological resources and their economic and sustainable value for long-term habitation of the planet by humans.

Required Major Courses (26 units)
- GEL-1 – Physical Geology 4.0
- GEL-6 – History of the Earth 4.0
- CHM-1A – General Chemistry I 5.0
- CHM-1B – General Chemistry II 5.0
- MAT-3A – Analytic Geometry and Calculus I 4.0
- MAT-3B – Analytic Geometry and Calculus II 4.0

SUBTOTAL: 26 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education
- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

A Degree With A Guarantee.com®
Associate Degree for Transfer

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   - The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   - A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
HISTORY PROGRAM

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

History, in the broad sense, is the study of all human experience. It examines people, institutions, ideas, and events through past and into the future. The study of history develops cultural literacy, critical thinking, and other skills while helping to understand today and plan for tomorrow. The discipline provides us with a better understanding of ourselves as individuals and as a society. In the study of history it is more important to learn the skills of finding, interpreting, and relating historical information than it is to simply to memorize historical data. Through the study of history, a student can acquire the techniques of gathering and applying information to gain a perspective on the human condition. Fields for which BA graduates in history are qualified are law, journalism, writing, the foreign service, consulting, teaching, archiving, researching, and museum curating.

The Associate of Arts degree in History for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate degree programs at a California State University (CSU) campus. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Archivist
- Biographer
- Editor
- Foreign Service Officer
- Historian
- Historic Preservation Specialist
- International Relations Specialist
- Lawyer
- Lecturer
- Media Consultant
- Museum Curator
- Museum Technician/Specialist
- Regulatory Affairs Manager
- Research
- Teacher
- Writer/Author
- Urban Planner

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

- www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
- CSU System Information - http://www2.calstate.edu

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https://www.hartnell.edu/students/fa/net-price-calculator.html
HISTORY (AAT.HIS)

ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:
- demonstrate an understanding of the processes, peoples and events in the multicultural histories of the United States
- apply critical thinking skills in reading, comprehending, and interpreting historical scholarship.
- employ historical research methods to address historical questions using primary and secondary sources

Required Major Courses (6 units)
- HIS-17A – United State History A 3.0
- HIS-17B – United State History B 3.0

Major Electives A (Complete 6 units)
- HIS-4A – Western Civilization A 3.0
  OR
  HIS-5A – World History A 3.0
- HIS-4B – Western Civilization B 3.0
  OR
  HIS-5B – World History B 3.0

Major Electives B (Complete 6 units)
- HIS-5A – World History A (if not used in List A) 3.0
  OR
  HIS-5B – World History B (if not used in List A) 3.0
- HIS-6 – History Mexico 3.0
- HIS-8A – Colonial History of Latin America 3.0
- HIS-8B – Modern Latin American History 3.0
- HIS-10 – History of California 3.0
- HIS-40 – History of Women in the United States 3.0
- HIS-46A – Race and Ethnicity in American History A 3.0
- HIS-46B – Race and Ethnicity in American History B 3.0
- HIS-47 – Religions of the World 3.0
- HIS-49A – Chicano History A 3.0
- HIS-49B – Chicano History B 3.0
- HIS-51 – Women in History 3.0
- HIS-55 – U.S. History through Film 3.0

SUBTOTAL: 18 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

TOTAL: 60 UNITS
INTERSEGMENTAL GENERAL EDUCATION TRANSFER CURRICULUM (IGETC)

PROGRAM

- Certificate of Achievement

DESCRIPTION

The Certificate of Achievement in Intersegmental General Education Transfer Curriculum (IGETC), developed by the Counseling Discipline, will be awarded upon completion of the IGETC requirements as outlined on the catalog year’s IGETC sheet. Students must complete 34-37 units, which are distributed among six areas. IGETC requirements are designed to be taken with a major area of concentration and elective courses in preparation for transfer to a California State University or a University of California campus. This certificate recognizes the completion of lower-division general education requirements for IGETC. For many majors, students are encouraged to complete the IGETC pattern; however, it is not required for admission to the CSU or UC. An official petition must be filed with the Admission and Records Office prior to the graduation deadlines as stated in the Academic Calendar. Certification of the IGETC will be indicated on the student’s transcript.

CSU-GE for STEM or IGETC-CSU for STEM

IGETC for STEM or CSU-GE for STEM is applicable for the (AS-T) Biology for Transfer degree only at the time of the catalog publication.

IGETC-CSU for STEM- All Areas will be completed with minimum units/courses as required and listed on IGETC except AREAS 3 and 4, which is approved with 6 units/2 courses. CSU-GE for STEM- All AREAS will be completed with minimum units/courses as required and listed on CSU-GE except AREAS C and D, which is approved with 6 units/2 courses. These GE courses are not waived but will be completed after transfer. Students completing the CSU-GE or IGETC-CSU for STEM cannot receive a Certificate of Achievement, which requires a full certification of areas; however students can request a partial certification be sent to their transfer

GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:

http://www.hartnell.edu/gainful-employment-certificate-programs-0

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
KINESIOLOGY

PROGRAMS

- Associate in Arts for Transfer (A.S.-T)
- Associate of Science (A.S.)

DESCRIPTION

The Physical Education, Kinesiology, Health, and Athletics department provides formal educational opportunities for the development and acquisition of motor skills, improved physical fitness and their application to sports and physical activities. This Associate of Science Degree covers a broad knowledge base that represents several disciplines that include traditional physical education, exercise science, athletic training, coaching, and health science. These courses help prepare students to transfer as Physical Education and Kinesiology majors to four-year institutions.

The Physical Education and Kinesiology program offers an AA-T degree (Associate in Arts for transfer in Kinesiology). The AA-T provides a clearly articulated curriculum for students who wish to transfer to baccalaureate degree programs at California State University (CSU) campuses.

The department also offers the AS degree (Associate of Science in Kinesiology). This degree is ideal for student-athletes and students transferring out of state or to private institutions.

Baccalaureate programs in Physical Education and Kinesiology include a wide array of specialties including but not limited to: coaching, education, athletic training, industry wellness centers and allied medical fields (Physical Therapy, Occupational Therapy, etc.). The preparation for different specialties will vary. For detailed requirements for individual programs at four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITES SUCH AS:

- Exercise Physiologist
- Exercise Specialist
- Health Consultant
- Massage Therapist
- Nutritionist/Registered Dietitian
- Occupational Therapist
- Personal Trainer
- Physical Education Teacher
- Physical Therapist
- Recreation Director
- Sports Coach
- Sports Physiologist

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

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https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate competence in performing a variety of skill-related behaviors.
- describe health and physical activity concepts that will enable him or her to make informed decisions concerning health.
- recognize health issues, understand the similarities and contrasts among cultures.
- demonstrate sensitivity to cultural and physical diversity.
- explain the value and significance of physical activity for human development, human interaction and quality of life and its relationship to their particular disability.

Required Major Courses (12 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-5 – Human Anatomy</td>
<td>4.0</td>
</tr>
<tr>
<td>BIO-6 – Introductory Physiology</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO-6L – Physiology Lab</td>
<td>2.0</td>
</tr>
<tr>
<td>PETH-1 – Introduction to Kinesiology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Major Movement Courses: Select at least (1) course from any (3) of the following areas for a Minimum of 3 units.

<table>
<thead>
<tr>
<th>Area</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQUATICS – PEAC-61</td>
<td>1.5</td>
</tr>
<tr>
<td>COMBATIVES – PEAC-56</td>
<td>2.0</td>
</tr>
<tr>
<td>FITNESS – PEAC-32, 58, 66, 69</td>
<td>0.5-2.0</td>
</tr>
<tr>
<td>INDIVIDUAL SPORTS – PEAC-64</td>
<td>1.0-1.5</td>
</tr>
<tr>
<td>TEAM SPORT – PEAC-52, 55, 70</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Major Electives (Complete 7-8 units)

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT-13 – Elementary Statistics</td>
<td>5.0</td>
</tr>
<tr>
<td>CHM-1A – General Chemistry</td>
<td>5.0</td>
</tr>
<tr>
<td>HED-55 – Health Education – Advanced First Aid</td>
<td>3.0</td>
</tr>
<tr>
<td>PHY-2A – College Physics I</td>
<td>4.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>PHY-4A – General Physics/Mechanics I</td>
<td>4.0</td>
</tr>
</tbody>
</table>

SUBTOTAL: 22-23 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate competence in performing a variety of physical education activity related skills.
- describe health and physical activity concepts that will enable him or her to make informed decisions concerning health.
- demonstrate sensitivity to physical diversity, understand the similarities and contrasts among different cultures and recognize health issues.
- explain the value and significance of physical activity for human development, human interaction and quality of life and its relationship to their individual health.

Required Major Courses (16 units)
- HED-6 – Multicultural Health Beliefs 3.0
- NUTR-1 – Nutrition 3.0
- PETH-1 – Introduction to Kinesiology 3.0
- PETH-2 – Care and Prevention of Athletic Injuries 4.0
- PSY-2 – General Psychology 3.0

Required Major Courses (Complete 4-5 units)
- BIO-5 – Human Anatomy 4.0
- BIO-6 and BIO-6L – Introductory Physiology 5.0
- BIO-11 – Introductory Human Anatomy and Physiology 4.0

Required Major Courses (Complete 4 units)
- CHM-22 – The Science of Chemistry 4.0
- PHY-2A – College Physics I 4.0
- PHY-10 – Introduction to Physics 4.0

Major Electives (Select a minimum of 6 units from at least 2 of the following activities)
- RACQUET ACTIVITIES (TENNIS)
  - PEAC – 58, 59
- AQUATIC ACTIVITIES
  - PEAC – 42, 44, 61, 62, 63, 68
- TEAM ACTIVITIES (TEAM ACTIVITIES)
  - PEAC – 40, 41, 52, 55, 56, 70, 72, 74
  - PEIN – 17, 19, 20, 21, 22, 23, 24, 25, 26
- FITNESS ACTIVITIES (FITNESS ACTIVITIES)
  - PEAC – 32, 36, 43, 46, 47, 49, 50, 51, 56, 66, 69

Major Electives (Complete 1 course 2-3 units)
- PETH – 3, 4, 5, 10A, 10B, 10C, 10D

Recommended Major Electives (Select from list, none required.)
*Required for AA-T KIN degree ** Required for athletic transfer participates

SUBTOTAL: 32-34 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:

HCCD GE (see page 59)  MAT-123 or higher
- Natural Sciences  Social & Behavioral Sciences  Humanities
- Ethnic Groups in the US  Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
LIBERAL ARTS WITH AN AREA OF EMPHASIS

PROGRAMS

- Associate of Arts (A.A.)

DESCRIPTION

This degree is designed for transfer students pursuing an area of study requiring only introductory lower-division major preparation courses within a broader liberal arts breadth pattern and transferring to a California State University (CSU), University of California (UC).

This degree represents only 8 of the 26 general areas of study identified in “Exploring Majors” on the www.assist.org transfer web site. These 8 general areas of emphasis are outlined below. Selecting courses from these general areas will prepare students to transfer to a variety of majors. This degree is an interdisciplinary approach allowing students to meets their individual transfer goals and lower division CSU-GE breadth or UC/CSU IGETC patterns.

Undecided students and those pursuing one of the other areas of study requiring a specific sequence or pattern of courses are encouraged to identify a major area of study as early as possible and follow requirements to the four-year university in consultation with a Hartnell College counselor. Those 18 other areas not included in this degree are: Agricultural Sciences, Architecture and Environmental Design, Art and Design, Biological Sciences, Business and Economics, Chemistry, Communications, Computer Science, Engineering, Environmental Studies and Sciences, Health and Physical Education, History, Mathematics, Media/Film and Television, Performing Arts, Physical Sciences, Physics, and Teacher Education.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Advertising Account Executive
- Archivist
- Business
- College Recruiter
- Customer Service Representatives
- Editor
- Grant Writer
- Journalist
- Museum Manager
- Policy Analyst
- Publicist
- Real Estate
- Speech Writer
- Teacher

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

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CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
**LIBERAL ARTS WITH AN AREA OF EMPHASIS**

**ASSOCIATE OF ARTS**

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- read, write, speak and verbally comprehend at a college level.
- define information needs, access information efficiently and effectively, evaluate information critically, and use information ethically.
- use quantitative and logical reasoning to analyze information evaluate ideas and solve problems.
- understand and respect the cultural, economic, social, political, biological and interdependence of global life.
- acquire an appreciation in and involvement in the creation or performance of the work of fine arts/music culture.

1. Choose the General Education pattern related to your educational goal:

<table>
<thead>
<tr>
<th></th>
<th>CSU-GE (see page 63)</th>
<th>IGETC (see page 65)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>39 units</td>
<td>34-37 units</td>
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</tbody>
</table>

2. Choose a SINGLE Area of Emphasis listed below. *For the 18 units required, select courses from at least two disciplines and from one of the disciplines, select at least two courses. Students can double count General Education courses with area of emphasis.*

3. Include a 3-unit Hartnell College Ethnic Groups in the United States course.

4. Complete any elective necessary to total 60 transferable units required by the universities.

**Areas of Emphasis: Anthropology (AA.LAA)**

Anthropology is the study of humans and human societies. Branches of anthropology include cultural anthropology, physical anthropology, linguistic anthropology, and archaeology.

*For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.*

**REQUIRED MAJOR COURSES**

- Anthropology: ANT 1, 2, 10, 20
- Mathematics: MAT 13, 18
- Psychology: PSY 2
- Sociology: SOC 1

**Areas of Emphasis: Culture and Society (AA.LACS)**

The study of the diversity of human cultures is an inter-disciplinary activity. Cultural and ethnic study includes aspects of history, language, literature, sociology, archaeology, art and art history, and other humanities and social sciences.

*For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.*

**REQUIRED MAJOR COURSES**

- Administration of Justice: ADJ 1, 2, 3, 4, 5, 8
- Anthropology: ANT 2
- Communication: COM 4
- Early Childhood Education: ECE 2, 6, 53, 12
- Education: EDU 1
- Ethnic Studies: ETH 3, 4
- Geography: GEG 10
- Health Education: HED 6
- Health Services: HES 2
- Mathematics: MAT 2, 13, 18
- Psychology: PSY 2, 25
- Sociology: SOC 1, 5, 15, 20, 30
CON’T OF LIBERAL ARTS WITH AN AREA OF EMPHASIS

<table>
<thead>
<tr>
<th>Areas of Emphasis: Humanities (AA.LAHU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The humanities include, but are not limited to, history; literature; philosophy and ethics; foreign languages and cultures; linguistics; jurisprudence or philosophy of law; archaeology; comparative religion; the history, theory, and criticism of the arts; and those aspects of the social sciences (anthropology, sociology, psychology, political science, government, and economics) that use historical and interpretive rather than quantitative methods. The humanities enable us to reflect upon our lives and ask fundamental questions of value, purpose, and meaning in a rigorous and systematic way.</td>
</tr>
<tr>
<td>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</td>
</tr>
<tr>
<td>REQUIRED MAJOR COURSES</td>
</tr>
<tr>
<td>□ Anthropology: ANT 2</td>
</tr>
<tr>
<td>□ Art: ART 1A, 1B, 3, 12A</td>
</tr>
<tr>
<td>□ Communication: COM 4</td>
</tr>
<tr>
<td>□ English: ENG 17, 22, 24, 31, 41, 44A, 44B, 46A, 46B, 47A, 47B</td>
</tr>
<tr>
<td>□ Geography: GEG 1, 10</td>
</tr>
<tr>
<td>□ History: HIS 4A, 4B, 5A, 5B, 47</td>
</tr>
<tr>
<td>□ Philosophy: PHL 2, 10, 15</td>
</tr>
<tr>
<td>□ Theatre Arts and Cinema: TAC 50</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Areas of Emphasis: Languages and Literature (AA.LAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The study of languages and literature includes the history of literature, the geographical and cultural regions of language and writing, the methods and theories of literary and cultural analysis, and training in creative and critical writing.</td>
</tr>
<tr>
<td>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</td>
</tr>
<tr>
<td>REQUIRED MAJOR COURSES</td>
</tr>
<tr>
<td>□ American Sign Language: ASL 1, 2, 3</td>
</tr>
<tr>
<td>□ English: ENG 17, 22, 24, 31, 41, 44A, 44B, 46A, 46B, 47A, 47B</td>
</tr>
<tr>
<td>□ Spanish: SPA 1, 1S, 1X, 2, 2S, 2X, 3, 3S, 4, 4S</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Areas of Emphasis: Philosophy (AA.LPH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophy is a quest for a comprehensive understanding of human existence. The objective of philosophy is to consider the rational justification of logical inferences, human values, criteria for establishing the claims of knowledge and certainly, and interpretations of the nature of reality.</td>
</tr>
<tr>
<td>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</td>
</tr>
<tr>
<td>REQUIRED MAJOR COURSES</td>
</tr>
<tr>
<td>□ Philosophy: PHL 2, 10, 15</td>
</tr>
<tr>
<td>□ History: HIS 4A, 4B, 5A, 5B, 47</td>
</tr>
<tr>
<td>□ Mathematics: MAT 13, 18</td>
</tr>
</tbody>
</table>
CON’T OF LIBERAL ARTS WITH AN AREA OF EMPHASIS

<table>
<thead>
<tr>
<th>Areas of Emphasis: Political Science (AA.LAPS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Science is a social science concerned with the description and analysis of political, and especially governmental, institutions and processes. Increasingly, the emphasis is being placed on how governments deal with specific policy problems, such as war and peace, poverty, crime, education, energy, pollution, or inter-group relations, and on the factors that affect these problems. The study of political science provides one with the concepts, theories and methods necessary to analyze these policy problems scientifically.</td>
</tr>
<tr>
<td>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REQUIRED MAJOR COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics: ECO 1, 5, 10</td>
</tr>
<tr>
<td>History: HIS 4A, 4B, 5A, 5B, 17A, 17B</td>
</tr>
<tr>
<td>Pathway to Law: LAW 41, 42</td>
</tr>
<tr>
<td>Mathematics: MAT 13, 18, 2</td>
</tr>
<tr>
<td>Political Science: POL 1, 2, 3, 5, 6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Areas of Emphasis: Psychology (AA.LAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology is the study of human behavior. Psychologists study the biological, physiological and genetic causes of behavior, as well as the emotional, social, and developmental factors involved.</td>
</tr>
<tr>
<td>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REQUIRED MAJOR COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology: ANT 1, 2</td>
</tr>
<tr>
<td>Biology: BIO 1, 5, 10, 11</td>
</tr>
<tr>
<td>Mathematics: MAT 13, 2, 18</td>
</tr>
<tr>
<td>Psychology: PSY 2, 6, 10, 12, 14, 15, 22, 25, 33</td>
</tr>
<tr>
<td>Sociology: SOC 1, 5, 15, 20, 30, 41, 42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Areas of Emphasis: Sociology and Social Sciences (AA.LAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences refer to any discipline or branch of science that deals with the social and cultural aspects of human behavior. The Social Sciences generally include Economics, Political Science, Sociology, and History, and may include Cultural Anthropology, Geography, Psychology, and Social Psychology.</td>
</tr>
<tr>
<td>For the 18 units required, select courses from at least two disciplines; from one of the disciplines select at least two courses. Students can double count General Education courses with the area of emphasis.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REQUIRED MAJOR COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration of Justice: ADJ 1, 2, 3, 51</td>
</tr>
<tr>
<td>Anthropology: ANT 1, 2</td>
</tr>
<tr>
<td>Economics: ECO 1, 5, 10</td>
</tr>
<tr>
<td>Early Childhood Education: ECE 2, 6</td>
</tr>
<tr>
<td>Geography: GEG 1, 10</td>
</tr>
<tr>
<td>Mathematics: MAT 2, 13, 18</td>
</tr>
<tr>
<td>Political Science: POL 1, 2, 3, 5, 6</td>
</tr>
<tr>
<td>Psychology: PSY 2, 6</td>
</tr>
<tr>
<td>Sociology: SOC 1, 5, 15, 20, 30, 41, 42</td>
</tr>
</tbody>
</table>

SUBTOTAL: 18 UNITS

General Education – Required Courses MAT-123 or higher
Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
MANUFACTURING TECHNOLOGY

PROGRAM

- Associate of Science (A.S.)

DESCRIPTION

The Manufacturing Technology program is designed to prepare the student for an entry level position in the workforce and to provide continuing education. It focuses on fabrication of products based on industrial blueprints and/or product specifications in industrial technology. The program will provide students with a broad range of skills including industrial safety, fabrication, hydraulics and pneumatics, industrial electricity, basic machining, and blueprint reading. Students completing the program will have the manufacturing skills to solve technical challenges and work in the production trades.

The Associate of Science in Manufacturing Technology is a Career Technical Education degree with the goal of preparing students for entry level positions in the manufacturing workforce. These opportunities include the fields of manufacturing, fabrication, and maintenance, and some examples of available careers are Industrial Technicians, Machine Tool Operators, and Machine Tool Programmers. In the college’s region there is currently a significant gap between the annual demand for a manufacturing workforce and the annual supply.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Basic Machinist
- Hydraulics Pneumatics Technician
- Industrial Electricity Technician
- Maintenance Technician
- Metal Fabricator

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

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https://www.hartnell.edu/students/fa/net-price-calculator.html
MANUFACTURING TECHNOLOGY (AS.MFGT)

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate the ability to adhere to personal, industry, and OSHA safety standards in all projects.
- analyze and solve manufacturing problems and applications using a variety of fabrication and basic machining processes.
- explain, identify and troubleshoot applications of hydraulics and pneumatics as it pertains to manufacturing.
- communicate effectively, both orally and in writing, using appropriate technical language
- explain, identify, and troubleshoot applications of industrial electricity as it pertains to manufacturing.
- read, interpret, and compare industrial blueprints.

Required Major Courses (19 units)

- CMA-74 – Industrial Drawing and Print Reading 3.0
- MFGT-70 – Introduction to Mechanized Agriculture 3.0
- MFGT-130 – Introduction to Metal Fabrication 3.0
- MFGT-140 – Introduction to Industrial Hydraulics and Pneumatics 2.0
- MFGT-150 – Introduction to Industrial Electricity 2.0
- MFGT-169 – Hazmat and Industrial Safety 2.0
- MFGT-180 – Industrial Workplace Skills 1.0
- WLD-150 – Basic Welding 3.0

Major Electives (Complete 2-3 units)

- MFGT-131 – Intermediate Metal Fabrication 3.0
- MFGT-141 – Intermediate Industrial Hydraulics and Pneumatics 2.0
- MFGT-151 – Intermediate Industrial Electricity 2.0

Major Electives (Complete 5-6 units)

- CMA-75 – Engineering Drawing and Solidworks 3.0
- CMA-76 – Computer Aided Mechanical Drafting and Detailing 3.0
- CMA-81 – Computer Aided Drafting and Design I 3.0
- MFGT-71 – Agricultural and Industrial Equipment Operation 3.0
- MFGT-75 – Agriculture Machinery and Management 3.0
- MFGT-132 – Advanced Metal Fabrication 3.0
- WLD-151 – Introduction to GTAW/TIG Welding 3.0
- WLD-152 – Sheet Metal Fabrication 2.0

SUBTOTAL: 26-28 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

Page 158
MATHEMATICS PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Associate in Science in Mathematics for Transfer offers course work in all levels of mathematics from arithmetic through differential equations and linear algebra. Students seeking improvement in their basic mathematical skills and those desiring development of advanced mathematical methods can all find meaningful activities in the Associate in Science in Mathematics for Transfer. While there are job opportunities in pure mathematics, there are even more in applied mathematics, statistics, engineering, and other technical fields relying heavily on mathematics. Positions for which four-year graduates in mathematics are qualified can be found in the fields of business, computers, teaching, and research.

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html

LEADS TO CAREER OPPORTUNITES SUCH AS:

- Actuary
- Applications Program Manager
- Commodity Manager
- Cost Estimator/Analyst
- Database Manager
- Estate Planner
- Financial Consultant
- Investment Banker
- Mathematician
- Network Programmer
- Research Analyst
- Statistician
- Teacher
- Technical Writer
- Weight Analyst
MATHEMATICS (AST.MAT)

ASSOCIATE IN SCIENCE FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate proficiency in solving mathematical problems involving major concepts, theories, and principles including, but not limited to
  - applying derivatives and integrals
  - solving 2nd order differential equations
  - constructing basic mathematical proofs
- analyze data using appropriate technology to enhance mathematical understanding.

Required Major Courses (12 units)

- MAT-3A – Analytic Geometry and Calculus I 4.0
- MAT-3B – Analytic Geometry and Calculus II 4.0
- MAT-3C – Analytic Geometry and Calculus III 4.0

Major Electives A (Complete 3 units)

- MAT-4 – Linear Algebra 3.0
- MAT-5 – Differential Equations 3.0

Major Electives B (Complete one additional 3-5 units)

- MAT-4 – Linear Algebra 3.0
- MAT-5 – Differential Equations 3.0
- MAT-13 – Elementary Statistics 5.0
- CSS-2A – Object Oriented Programming 4.0
- PHY-4A – General Physics I/Mechanics 4.0

SUBTOTAL: 18-20 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
MUSIC

PROGRAMS

- Associate in Arts for Transfer (A.A.-T)
- Associate of Arts (A.A.)

DESCRIPTION

The Music Program offers coursework and ensembles that embrace the diversity of our valley. Music is the universal language of the global village of the 21st century. It forms an integral part of our lives, from the musical “logos” that introduce every media program, to the songs and dances that provide identity to our diverse backgrounds. Study and participation in music has proven to further not only creativity and critical thinking, but also our sense of cooperation and community. At Hartnell, performance opportunities are available for all students in a wide range of vocal and instrumental ensembles. In addition, many courses are designed for students with no previous training in music. The department offers courses that prepare music majors for transfer to four-year universities as well as many courses for the general student.

The AA Degree in Music prepares students for transfer and careers in the following fields: credentialed school instruction, private studio instruction, vocal or instrumental performance, composition or arranging for film/television/multimedia events, sound engineering, conducting, college or university instruction, arts and education administration, and music journalism. Students intending to begin in the AA in Music should plan to take MUS-2 in the summer prior to starting their music degree. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Arts and Education Administrator
- Composer
- Concert Hall Manager
- Conductor
- Disc Jokey
- Film Music Editor
- Music Director
- Music Journalist
- Music Promoter
- Music Therapist Teacher
- Private Studio Instructor
- Vocal or Instrumental Performer
- Sound Engineer

Page 161
MUSIC (AAT.MUS)

ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- analyze the harmonic structure of music from the Common Practice Period.
- sight-sing intermediate level tonal melodies.
- demonstrate piano proficiency at the lower-intermediate level.
- perform individually on an instrument or with the voice, and collaboratively in an instrumental or vocal ensemble.
- aurally identify the genre and stylistic period of examples from the western art music tradition.
- utilize computer applications for audio recording and notation.

Required Major Courses (18 units)
- MUS-11 – Applied Music-Instrumental 2.0
  *(MUS-11 Course must be taken four times)*
- MUS-46 – Music Theory and Musicianship I 4.0
- MUS-47 – Music Theory and Musicianship II 4.0
- MUS-48 – Music Theory and Musicianship III 4.0
- MUS-49 – Music Theory and Musicianship IV 4.0

Required Major Courses—Ensemble (Complete 4 units)
- MUS-20 – Hartnell College Choir 1.0
- MUS-21 – Hartnell Chamber Singers 1.0
- MUS-23.1 – Hartnell Chorale – Renaissance/Baroque 1.0
- MUS-23.2 – Hartnell Chorale – Classical/Romantic 1.0
- MUS-23.3 – Hartnell Chorale – 20th Century 1.0
- MUS-23.4 – Hartnell Chorale – 20th Century “Pops” 1.0
- MUS-23.5 – Hartnell Chorale – 21st Century 1.0
- MUS-24 – Estudiantina Hartnell 1.0
- MUS-26 – Jazz Ensemble 1.0

**SUBTOTAL: 22 UNITS**

General Education – Required Courses

*Students must complete one of the following General Education Plans:

IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

**TOTAL: 60 UNITS**
MUSIC (AA.MUS)

ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:
- analyze the harmonic structure of music from the Common Practice Period.
- sight-sing intermediate level tonal melodies.
- demonstrate piano proficiency at the lower-intermediate level.
- perform individually on an instrument or with the voice, and collaboratively in an instrumental or vocal ensemble.
- aurally identify the genre and stylistic period of examples from the western art music tradition.
- utilize computer applications for audio recording and notation.

Required Major Courses (31 units)
- MUS-1A – Music Appreciation – Historical 3.0
- MUS-2 – Music Fundamentals 3.0
- MUS-11 – Applied Music-Instrumental 2.0

(MUS-11 Course must be taken four times)
- MUS-13A – Beginning Piano I 1.0
- MUS-13B – Beginning Piano II 1.0
- MUS-14 – Intermediate Piano 1.0
- MUS-15 – Advanced Piano 1.0
- MUS-42 – Electronic Music 3.0
- MUS-46 – Music Theory and Musicianship I 4.0
- MUS-47 – Music Theory and Musicianship II 4.0
- MUS-48 – Music Theory and Musicianship III 4.0
- MUS-49 – Music Theory and Musicianship IV 4.0

Major Electives—Ensemble (Complete 4 units)
- MUS-20 – Hartnell College Choir 1.0
- MUS-21 – Hartnell Chamber Singers 1.0
- MUS-23.1 – Hartnell Chorale – Renaissance/Baroque 1.0
- MUS-23.2 – Hartnell Chorale – Classical/Romantic 1.0
- MUS-23.3 – Hartnell Chorale – 20th Century 1.0
- MUS-23.4 – Hartnell Chorale – 20th Century “Pops” 1.0
- MUS-23.5 – Hartnell Chorale – 21st Century 1.0
- MUS-24 – Estudiantina Hartnell 1.0
- MUS-26 – Jazz Ensemble 1.0
- MUS-36 – Jazz Combo 1.0
- MUS-37 – Chamber Music Ensemble 1.0

SUBTOTAL: 35 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-123 or higher
- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
NURSING—REGISTERED NURSING

PROGRAM

- Associate of Science (A.S.)

DESCRIPTION

The Hartnell College Associate Degree in Nursing (ADN) is a defined group of pre-requisite and co-requisite courses that prepares students to become registered nurses. The 4-semester course of study consists of classroom, high-fidelity simulation, nursing skills laboratory, seminar, interprofessional, and clinical experiences. Upon successful completion of program requirements, graduates are eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). After passing the licensure examination, graduates may practice as registered nurses in a variety of acute and community-based settings. Graduates demonstrate the leadership and comportment required for a professional nurse committed to competence, caring, collaboration, and curiosity, while providing safe, quality nursing care to diverse individuals in various care settings. The Hartnell College ADN Program is fully approved by the California Board of Registered Nursing (BRN) and is accredited by the Accreditation Commission for Education in Nursing (ACEN).

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Certified Nurse Midwife
- Critical Care Nurse
- ER Nurse
- Health Care Administrator
- Health Educator
- Mental Health Nurse
- Missionary Nurse
- Nurse Administrator
- Nurse Practitioner
- Patient Educator
- Pediatric Nurse
- Public Health Nurse
- Registered Nurse
- Surgical Nurse

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
TRANSFER STUDENTS

Completing the AS degree does not meet all requirements for transfer. Students planning to transfer to a university should follow the requirements of the four-year university. Information on course equivalencies and major preparation requirements for the University of California (UC) and California State University (CSU) systems is available online at http://www.assist.org. Please consult with a Hartnell College counselor to review transfer requirements. Hartnell, Monterey Peninsula, Cabrillo, and Gavilan Colleges are members of the collaborative baccalaureate of science degree in nursing (BSN) program at California State University, Monterey Bay. See http://www.hartnell.edu/nah and http://nursing.csumb.edu/. Students transferring from other nursing programs seeking placement into the second, third, or fourth semesters of the Associate Degree in Nursing Program should contact the Dean of Academic Affairs: Nursing and Allied Health (831.770.6146). Academic counselors evaluate transfer student transcripts for coursework equivalency. Syllabi, course outlines, and catalogs may be requested for the evaluation.

ACCEPTANCE TO THE NURSING (RN) PROGRAM

The Associate Degree in Nursing (ADN) requires separate application and screening procedures that must be completed independently from Hartnell College admission. Acceptance is subject to an annual application process. Because the RN program is impacted, completion of program prerequisites does not guarantee admission. Information can be obtained from the website (http://www.hartnell.edu/nah), the Nursing and Allied Health Office (831.770.6146), or the Hartnell College Nursing and Allied Health Program academic counselor (831.755.6820). Application forms for the RN Program and informational materials are available on the Hartnell College Nursing and Allied Health web page (http://www.hartnell.edu/nah). Application forms are available in December of each year for the following Fall semester admission. Completed application forms and required documents must be submitted by the deadline date listed on the application. Students who are conditionally accepted for entry into the ADN program are required to attend a mandatory orientation. At the orientation, admission packets with health, drug, live scan, and background screenings are distributed.

Minimum Requirements for Admissions Eligibility:

1. Hartnell College enrollment or a Hartnell College Application for Admission on file in the Office of Admissions and Records
2. Completion of all prerequisite courses with a minimum of a “C” grade as documented on official transcripts. In-progress courses will not be accepted for admission GPA purposes. Science GPA Requirement: 2.5
3. Success in the Associate Degree in Nursing program is based on theoretical knowledge, nursing skills competency, clinical reasoning, professional behaviors, and their application in the clinical setting. To progress students must achieve at least “C” grades in all nursing courses.
NURSING—REGISTERED NURSING

ASSOCIATE OF SCIENCE

Program Outcomes: Upon successful completion of this program a student will be able to:

- incorporate leadership, management, and legal-ethical principles to guide practice as a professional nurse.
- integrate caring into relationships and nursing interventions that positively influence health outcomes and demonstrate sensitivity to the values of others.
- participate in collaborative relationships through communication with members of the interprofessional healthcare team for the purpose of providing and improving patient care.
- provide competent, evidence-based care to diverse individuals across the lifespan in a variety of healthcare settings.
- employ a spirit of inquiry to effectively communicate, manage knowledge, prevent errors, and support decision-making.

Required General Education Courses:

MUST BE COMPLETED PRIOR TO ACCEPTANCE INTO PROGRAM (24 units)

- BIO-5 – Human Anatomy 4.0
- BIO-6 – Introductory Physiology 3.0
- BIO-6L – Physiology Laboratory 2.0
- BIO-27 – Principles of Microbiology 4.0
- ENG-1A – College Composition and Reading 3.0
- MAT-123 – Intermediate Algebra 5.0
- PSY-2 – General Psychology 3.0

Additional Required General Education Courses:

MAY BE COMPLETED AFTER ACCEPTANCE INTO THE PROGRAM (6 units)

- ANT-2 – Introduction to Cultural Anthropology 3.0
  OR
  Ethnic Group Course _________ (see page 59)
- COM-1 – Introduction of Public Speaking 3.0
  OR
  COM-3 – Survey of Human Communication 3.0

Required Major Courses (After Acceptance into the program) (39.5 units)

1st SEMESTER – 11.5 units

- NRN-110 – Foundations for Success for RNS 1.0
- NRN-30 – Basics of Pharmacology for Nursing Practice 0.5
- NRN-41 – Nursing Theory I 4.0
- NRN-41.1 – Nursing Clinical I 4.0
- NRN-41.2 – Clinical Reasoning Seminar I 1.0
- NRN-41.3 – Nursing Skills Lab I 1.0
### Con’t of Nursing—Registered Nursing

**2nd Semester — 10 units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRN-42</td>
<td>Nursing Theory II</td>
<td>4.0</td>
</tr>
<tr>
<td>NRN-42.1</td>
<td>Nursing Clinical II</td>
<td>4.0</td>
</tr>
<tr>
<td>NRN-42.2</td>
<td>Clinical Reasoning Seminar II</td>
<td>1.0</td>
</tr>
<tr>
<td>NRN-42.3</td>
<td>Nursing Skills Lab II</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**3rd Semester — 9.5 units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRN-43</td>
<td>Nursing Theory III</td>
<td>4.0</td>
</tr>
<tr>
<td>NRN-43.1</td>
<td>Nursing Clinical III</td>
<td>4.0</td>
</tr>
<tr>
<td>NRN-43.2</td>
<td>Clinical Reasoning Seminar III</td>
<td>0.5</td>
</tr>
<tr>
<td>NRN-43.3</td>
<td>Nursing Skills Lab III</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**4th Semester — 8.5 units**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRN-44</td>
<td>Nursing Theory IV</td>
<td>4.0</td>
</tr>
<tr>
<td>NRN-44.1</td>
<td>Nursing Clinical IV</td>
<td>4.0</td>
</tr>
<tr>
<td>NRN-44.2</td>
<td>Clinical Reasoning Seminar IV</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Nursing and Allied Health Electives: (recommended, not required)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRN-50.41</td>
<td>Supervised Nursing Skills Practice I</td>
<td>0.5</td>
</tr>
<tr>
<td>NRN-50.42</td>
<td>Supervised Nursing Skills Practice II</td>
<td>0.5</td>
</tr>
<tr>
<td>NRN-50.43</td>
<td>Supervised Nursing Skills Practice III</td>
<td>0.5</td>
</tr>
<tr>
<td>NRN-50.44</td>
<td>Supervised Nursing Skills Practice IV</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Subtotal:** 39.5 Units

**Total:** 60 Units
DESCRIPTION

The Hartnell College Vocational Nursing (VN) Program is a defined group of prerequisite, general education, and required major courses in a 24-month program of study consisting of classroom, high-fidelity simulation, nursing skills laboratory, and clinical experiences. Licensed vocational nurses perform essential nursing services under the supervision of a registered nurse or physician. Upon successful completion of program requirements, graduates are eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN). After passing, graduates may practice as vocational nurses in a variety of settings, including but not limited to community agencies, medical offices, hospitals, and long-term care facilities. The Hartnell College VN Program is fully approved by the California Board of Vocational Nurses and Psychiatric Technicians (BVN/PT) and is the first vocational nursing program in California to earn Accreditation Commission for Education in Nursing.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Home Health Care Provider
- Nursing Technician
- Nursing Assistant and Orderly
- Occupational Therapy Assistant/Aide
- Physical Therapy Aide

GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:

https://www.hartnell.edu/academics-affairs/gecp/

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ACCEPTANCE TO THE VOCATIONAL NURSING PROGRAM

The VN Program requires separate application and screening procedures that are completed separately from admission processes for Hartnell College. Because the VN program is impacted, completion of program prerequisites does not guarantee admission. Information can be obtained from the website (http://www.hartnell.edu/nursingandalliedhealth), the Nursing and Allied Health Office (831.770.6146), the Salinas Valley Health Professions Pathway Program (831.770.6154), or the Hartnell College Nursing and Allied Health academic counselor (831.755.6820).

Application forms for the VN Program and informational materials are available on the Hartnell College Nursing Program webpage (http://www.hartnell.edu/nursingandalliedhealth). On-line application forms are available in the fall for admission in the following spring semester. Completed application forms and all official documents of verification must be submitted by the deadline date as stated on the application. Students are responsible for costs related to classroom and clinical learning materials, travel to clinical sites, clinical nursing skills supplies, and standardized assessments. Students accepted into the VN program are required to attend a mandatory orientation. At the orientation, admission packets with health, drug screen, Live Scan, and background check screenings are distributed. Once admitted, the student commitments to full-time study for three semesters. An American Heart Association Health Care Professional Basic Life Support card and all clinical facility background, health, and orientation requirements must be maintained for continuance in the program.

Minimum Requirements for Admissions Eligibility:

1. Hartnell College enrollment or a Hartnell College Application for Admission on file in the Office of Admissions and Records
2. Completion of English 1A, Math 121, Psychology 2, and Biology 11 courses.
3. Completion of high school or equivalent: official high school transcript or equivalent is required. (Board of Vocational Nursing/Psychiatric Technician, Rules and Regulations, Article 5 Section 2530)

Admission is based on a lottery of those candidates that have completed an application, submitted it on time during the admission period, and who meet minimal requirements. Persons not selected may elect to apply again in subsequent years as long as courses are current according to BVNPT standards. Success in the Vocational Nursing Program is based upon theoretical knowledge, nursing skills proficiency, professional comportment, and their application in the clinical setting. To progress and graduate from the vocational nursing program, students must achieve at least “C” grades in all nursing courses.

FOR MORE INFORMATION, CONTACT: Hartnell College Nursing and Allied Health: 831.770.6146
Hartnell College Counselor: 831.755.6820
Email: nursingandalliedhealth@hartnell.edu
# Nursing—Vocational Nursing

## Certificate of Achievement

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- articulate the role of the vocational nurse as a member of the health care team, committed to provide safe, quality care for diverse persons and their families.
- provide rationale for judgments used in the provision of safe, quality care and for decisions that promote the health of persons.
- promote the human dignity, integrity, self-determination, and personal growth of persons, oneself, and members of the health care team.
- achieve quality care through effective communication, mutual respect, and shared decision making with the health care team.
- question the basis for nursing actions, considering research, evidence, tradition and personal preferences.

### Required General Education Courses: Prior to Acceptance into program (21-24)

#### 1<sup>st</sup> SEMESTER – 13.5-20.5 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG-1A – College Composition and Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT-121 – Elementary Algebra</td>
<td>(5.0)</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>MAT-106 – Integrated Mathematics</td>
<td>(3.0)</td>
</tr>
<tr>
<td>HES-120&lt;sup&gt;i&lt;/sup&gt; – AHS Basic Life Support for HCP</td>
<td>0.5</td>
</tr>
<tr>
<td>BIO-11 – Intro to Human Anatomy &amp; Physiology</td>
<td>4.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>BIO-5* – Human Anatomy</td>
<td>4.0</td>
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<tr>
<td>AND</td>
<td></td>
</tr>
<tr>
<td>BIO-6* – Introductory Physiology</td>
<td>3.0</td>
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<tr>
<td>AND</td>
<td></td>
</tr>
<tr>
<td>BIO-6L* – Physiology Lab</td>
<td>2.0</td>
</tr>
<tr>
<td>PSY-2 – General Psychology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

#### 2<sup>nd</sup> SEMESTER – 16 units

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>NUTR-51* – Essential of Nutrition</td>
<td>3.0</td>
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<tr>
<td>OR</td>
<td></td>
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<tr>
<td>NUTR-1 – Nutrition</td>
<td>3.0</td>
</tr>
<tr>
<td>NRN/NVN-70* – Growth &amp; Development Across the Lifespan</td>
<td>3.0</td>
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<tr>
<td>OR</td>
<td></td>
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<tr>
<td>PSY-25 – Developmental Psychology: Lifespan</td>
<td>3.0</td>
</tr>
<tr>
<td>NVN-110 – Foundations For Success for VN Students</td>
<td>1.0</td>
</tr>
<tr>
<td>NVN-119 – Vocational Nursing Theory I: Fundamentals</td>
<td>4.0</td>
</tr>
<tr>
<td>NVN-119.1 – Vocational Nursing Clinical I: Fundamentals</td>
<td>4.0</td>
</tr>
<tr>
<td>NVN-130A – Basic Pharmacology B</td>
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CON’T OF NURSING—VOCATIONAL NURSING

<table>
<thead>
<tr>
<th>3rd SEMESTER – 14 units</th>
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<tbody>
<tr>
<td>NVN-121 – Vocational Nursing Theory II</td>
</tr>
<tr>
<td>NVN-121.1 – Vocational Nursing Clinical II</td>
</tr>
<tr>
<td>NVN-130B – Basic Pharmacology B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4TH SEMESTER – 14 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVN-123 – Vocational Nursing Theory II</td>
</tr>
<tr>
<td>NVN-123.1 – Vocational Nursing Clinical III</td>
</tr>
<tr>
<td>NVN-130C – Basic Pharmacology C</td>
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</tbody>
</table>

*Prerequisite and corequisite courses marked with an asterisk must be completed within five (5) years of entering the vocational nursing program per California Code of Regulations, Title 16: Professional Regulations, Division 25: Board of Vocational Nursing and Psychiatric Technicians of the State of California.

AHA BLS Health Care Professional card must be current throughout program. Not required to apply. Must be completed prior to NVN 119.

<table>
<thead>
<tr>
<th>Nursing and Allied Health Electives: (recommended, not required)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NVN-150.1 – Supervised Vocational Nursing Skills Practice</td>
</tr>
<tr>
<td>NRN-60.1 – Simulation for Nursing and Allied Health I</td>
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<tr>
<td>NRN-60.2 – Simulation for Nursing and Allied Health II</td>
</tr>
<tr>
<td>NRN-60.3 – Simulation for Nursing and Allied Health III</td>
</tr>
<tr>
<td>NRN-60.4 – Simulation for Nursing and Allied Health IV</td>
</tr>
</tbody>
</table>

SUBTOTAL: 57 UNITS
PHOTOGRAPHY

PROGRAMS

- Associate of Arts (A.A.)
- Certificate of Achievement

DESCRIPTION

Photography is an omnipresent, integral part of life in the 21st Century. It is the basis of visual media such as filmmaking, video, and digital imaging. The study of photography involves both the development of a technical, skill-based knowledge, as well as an appreciation for how the medium has changed and continues to shape the values, the cultures and the lives of everyone globally.

Photography is more than a means to make a visual record; it has also become a tool of change; a form of art; a means of learning, and a platform for communicating ideas.

The photography faculty is committed to empowering students with the ability to apply photo imaging to their lives for practical, professional, and artistic purposes. Hartnell photo instruction prepares students to achieve personal enrichment and development, to acquire abilities needed to produce photographic art of high aesthetic value, and to develop or hone professional skills. Additional general education courses will prepare students for advancement to college and university study. Photography offers careers in the following areas: advertising; photographic art; fashion photography; commercial portrait; digital effects; photojournalism; editorial, wedding, and special event photography; industrial photography; travel, adventure, and pet photography; scientific photography; forensic photography; and documentary photography.

For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Advertising
- Commercial Portrait
- Digital Effects
- Editorial, Wedding & Special Event Photography
- Fashion Photography
- Forensic Photography
- Industrial Photography
- Photo Journalism
- Photographic Art
- Scientific Photography
- Travel, Adventure & Pet Photography

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
PHOTOGRAPHY (AA.PHO)

ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:
- demonstrate effective technical proficiency with film and digital media.
- structure visual information to produce images of intermediate level aesthetic quality.
- interpret and produce photographs that communicate intellectually and emotionally.
- demonstrate an intermediate knowledge of the history of photography.
- demonstrate an awareness of the influence of photography on the lives of individuals, cultures, and societies.

Required Major Courses (21 units)
- PHO-1 – Introduction to Photography 3.0
- PHO-2 – Beginning Black and White Photography 3.0
- PHO-3 – Advanced Photography Lab 3.0
- PHO-4 – Portfolio Photography 3.0
- ART-12A – Design 3.0
- ART-72 – Introduction to Digital Arts 3.0
- ART-80 – Intro to Digital Photography & Photographic Imaging 3.0

Major Electives A (Complete 3 units)
- ART-1A – Art History Survey I 3.0
- ART-1B – Art History Survey II 3.0
- ART-3 – Drawing and Composition 3.0

Major Electives B (Complete 3 units)
- ART-6A – Watercolor and Gouache 3.0
- ART-6B – Oils 3.0
- ART-6C – Acrylics 3.0
- ART-10 – Art Appreciation 3.0
- ART-70 – Graphic Design/Computer Graphics 3.0
- ART-71 – Introduction to 2D digital Illustration 3.0
- ART-77 – Introduction to Digital Video and Video Editing 3.0

SUBTOTAL: 27 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:
HCCD GE (see page 59) MAT-123 or higher
- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education
Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
### PHOTOGRAPHY (CT.PHO)

#### CERTIFICATE OF ACHIEVEMENT

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- demonstrate effective technical proficiency with film and digital media.
- structure visual information to produce images of intermediate level aesthetic quality.
- interpret and produce photographs that communicate intellectually and emotionally.
- demonstrate an intermediate knowledge of the history of photography.
- demonstrate an awareness of the influence of photography on the lives of individuals, cultures, and societies.

<table>
<thead>
<tr>
<th>Required Major Courses (21 units)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>□ PHO-1 – Introduction to Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>□ PHO-2 – Beginning Black and White Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>□ PHO-3 – Advanced Photography Lab</td>
<td>3.0</td>
</tr>
<tr>
<td>□ PHO-4 – Portfolio Photography</td>
<td>3.0</td>
</tr>
<tr>
<td>□ ART-12A – Design</td>
<td>3.0</td>
</tr>
<tr>
<td>□ ART-70 – Graphic Design/Computer Graphics</td>
<td>3.0</td>
</tr>
<tr>
<td>□ ART-80 – Intro to Digital Photo &amp; Photographic Imaging</td>
<td>3.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Major Electives (Complete 3 units)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ ART-1A – Art History Survey I</td>
<td>3.0</td>
</tr>
<tr>
<td>□ ART-1B – Art History Survey II</td>
<td>3.0</td>
</tr>
<tr>
<td>□ ART-77 – Digital Video, Editing and Production</td>
<td>3.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Required Courses</th>
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<tbody>
<tr>
<td>□ ENG-101* – Intermediate Composition and Reading</td>
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<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>□ ESL-101* – Academic Writing and Reading II</td>
<td>5.0</td>
</tr>
<tr>
<td>□ MAT-106** – Integrated Mathematics</td>
<td>3.0</td>
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</tbody>
</table>

**TOTAL: 24 UNITS**

---

*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.*

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.*

### GAINFUL EMPLOYMENT INFORMATION:
See the certificate program cost and the employment outlook for graduates by clicking the link below:
[https://www.hartnell.edu/academic-affairs/gecp/](https://www.hartnell.edu/academic-affairs/gecp/)

### FINANCIAL AID
Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

[https://www.hartnell.edu/students/fa/net-price-calculator.html](https://www.hartnell.edu/students/fa/net-price-calculator.html)
PHYSICS PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

Physics is the natural science involving a general analysis of nature, conducted in order to understand how the universe behaves. It involves the study of matter and its motion through space and time, along with related concepts such as energy and force. Physics overlaps with many interdisciplinary areas such as astronomy, biology, chemistry, and geology. Physics also makes significant contributions through advances in new technologies that arise from theoretical breakthroughs. Research in physics includes the following specialty areas: solid-state physics; atomic, molecular, and optical physics; particle physics; astrophysics; geophysics and biophysics. Some positions for which four-year graduates in physics are qualified are in research, teaching, engineering, medicine, and industry.

The Associate in Science degree in Physics for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate degree programs at a California State University (CSU) campus. For detailed requirements for individual four-year institutions, students should contact the transfer institution and/or meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Aerodynamicist
- Astro Physicist
- Chemical Physicist
- Computer System Engineer
- Geophysicist
- Laboratory Technician
- Medical Physicist
- Meteorologist
- Nuclear Physicist
- Physics Teacher
- Process Engineer
- Researcher
- Satellite Data Analyst
- Technical Consultant

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE IN SCIENCE FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- apply fundamental physics laws, principles and widely accepted theories.
- demonstrate proficiency in solving problems that are appropriate to first-year-university students of calculus-level physics courses.
- collect and analyze data effectively using basic laboratory equipment, and present results and conclusions in formally structured laboratory reports.

Required Major Courses (24 units)

- PHY-4A – General Physics I/Mechanics 4.0
- PHY-4B – General Physics II/Electricity and Magnetism 4.0
- PHY-4C – General Physics III/Waves, Heat, Light, Sound and Modern Physics 4.0
- MAT-3A – Analytic Geometry and Calculus I 4.0
- MAT-3B – Analytic Geometry and Calculus II 4.0
- MAT-3C – Analytic Geometry and Calculus III 4.0

Major Electives (None Required)

- CHM-1A – General Chemistry I 5.0
- CHM-1B – General Chemistry II 5.0
- CSS-4 – Introduction to Scientific Programming 4.0
- MAT-4 – Linear Algebra 3.0
- MAT-5 – Differential Equations 3.0

SUBTOTAL: 24 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
POLITICAL SCIENCE
PROGRAM

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

The Associate in Arts in Political Science for Transfer allows students to focus their major course work and required electives in a social science concerned with the description and analysis of political, and especially governmental, institutions and processes. Increasingly, the emphasis is placed on how governments deal with specific policy problems such as war and peace, poverty, crime, education, energy, pollution, or inter-group relations, and on the factors that affect these problems. The study of political science provides one with the concepts, theories and methods necessary to analyze these problems scientifically.

Fields for which BA graduates in political science are qualified are government work in the legislative or executive branches, the legal field as an attorney or paralegal, the military as an officer, a professional sales representative, or marketing professional.

LEADS TO CAREER OPPORTUNITES SUCH AS:

- Attorney
- Government Employee
- Marketing Professional
- Military Officer
- Paralegal
- Professional Sales Representative

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
POLITICAL SCIENCE (AAT.POL)

ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:
- demonstrate an ability to evaluate the governmental structures established by the Constitution of the United States of America and the California State Constitution.
- apply critical thinking skills in reading, comprehending, and interpreting political science scholarship.
- employ political science research methods to address political questions using primary and secondary sources.

Required Major Courses (17 units)
- POL-1 – American Political Institution 3.0
- POL-2 – Contemporary Governments Abroad 3.0
- POL-3 – Introduction to International relations 3.0
- POL-6 – Introduction to Contemporary Political Though 3.0
- MAT-13 – Elementary Statistics 5.0

Major Electives (Complete 6 units)
- ECO-1 – Principles of Macroeconomics 3.0
- ECO-5 – Principles of Microeconomics 3.0
- ETH-1 – Introduction to Ethnic Studies 3.0
- POL-5 – Chicano Politics & American Political System 3.0
- SOC-1 – Introduction to Sociology 3.0

SUBTOTAL: 23 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education
Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

ADegreeWithAGuarantee.com®
Associate Degree for Transfer

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
PSYCHOLOGY

PROGRAMS

- Associate in Arts for Transfer (A.A.-T)
- Associate of Arts (A.A.)

DESCRIPTION

Psychology is the scientific discipline concerned with the study of the mind. It is a natural and a social science concerned with the study of human behavior. As such, it is a broad discipline which involves both pure science and practical application of science to matters of everyday living.

The Psychology program offers two associate degrees: The AA degree (associate degree in psychology) and the AA-T degree (associate degree in psychology for transfer). The AA degree requires calculus along with more psychology courses (as opposed to the AA-T degree), and is recommended for students wishing to transfer to a University of California (UC) campus. The AA-T provides a clearly articulated curriculum for students who wish to transfer to a California State University (CSU) campus. All students should meet with a counselor to determine which program would be most beneficial for their goals and to determine which courses are required for them to transfer to their desired university.

The program provides students with a basic understanding of motivation and behavior that is valuable to many careers in business, government, education, and health care. Becoming a “psychologist,” however, requires graduate level training. Psychologists with graduate degrees and professional certificates have a broad range of employment opportunities including clinical practice, research, and teaching. Hartnell College offers lower division transfer courses to meet the requirements for most baccalaureate majors offered by accredited colleges and universities. Psychology and counseling faculty are excellent resources for additional career information.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Academic Counselor
- Alcohol/Drug Counselor
- Career Counselor
- Child Psychologist
- Community Relations Director
- Corrections Officer
- Health Educator
- Mental Health Coordinator
- Nonprofit Director
- Psychiatrist
- Social Worker
- Student Affairs Administrator
- Teacher

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

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CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- compare and contrast the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- evaluate basic research methods in psychology, including research design, data analysis, and interpretation.
- demonstrate critical thinking and skeptical inquiry, and use the scientific approach to solving problems related to behavior and mental processes.
- apply psychological principles to personal, social, and organizational issues.

Required Major Courses (15 units)

- MAT-13 – Elementary Statistics 5.0
- PSY-2 – General Psychology 3.0
- PSY-9 – Research Methods in Psychology 4.0
- PSY-10 – Introduction to Biological Psychology 3.0

Major Electives Courses (Complete 3 units)

- PSY-14 – Child Psychology 3.0
- PSY-25 – Developmental Psychology –Lifespan 3.0

Major Electives Courses (Complete 3 units)

- PSY-6 – Social Psychology 3.0
- PSY-15 – Human Sexuality 3.0
- PSY-22 – Abnormal Psychology 3.0

SUBTOTAL: 21 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
PSYCHOLOGY (AA.PSY)

ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:
- compare and contrast the major concepts, theoretical perspectives, empirical findings, and historical trends in psychology.
- evaluate basic research methods in psychology, including research design, data analysis, and interpretation.
- demonstrate critical thinking and skeptical inquiry, and use the scientific approach to solving problems related to behavior and mental processes.
- apply psychological principles to personal, social, and organizational issues.

**Required Courses (28 units)**

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<thead>
<tr>
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<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>PSY-2</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-6</td>
<td>Social Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-9</td>
<td>Research Methods in Psychology</td>
<td>4.0</td>
</tr>
<tr>
<td>PSY-10</td>
<td>Introduction to Biological Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-12</td>
<td>Theories of Personality</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-22</td>
<td>Abnormal Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>MAT-2</td>
<td>Calculus for Managerial, Life and Social Science</td>
<td>4.0</td>
</tr>
<tr>
<td>MAT-13</td>
<td>Elementary Statistics</td>
<td>5.0</td>
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**Major Electives (Complete 3 units)**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<td>PSY-14</td>
<td>Child Psychology</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-25</td>
<td>Developmental Psychology – Lifespan</td>
<td>3.0</td>
</tr>
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</table>

**Major Electives (None required)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY-15</td>
<td>Human Sexuality</td>
<td>3.0</td>
</tr>
<tr>
<td>PSY-42</td>
<td>Psychology for Women</td>
<td>3.0</td>
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</tbody>
</table>

**SUBTOTAL: 31 UNITS**

**General Education – Required Courses**

Students must complete one of the following General Education Plans:

HCCD GE (see page 59) MAT-2 and MAT-13

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

**SUBTOTAL: 21 UNITS**

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

**TOTAL: 60 UNITS**
PUBLIC HEALTH PROGRAM

- Associate in Science for Transfer (A.S.-T)

DESCRIPTION

The Associate in Science in Public Health Science for Transfer degree prepares leaders who promote community health, prevent disease, and improve environmental conditions in which people can be healthy. The Associate in Science in Public Health Science for Transfer degree is interdisciplinary in nature and prepares students for a variety of careers in schools, non-profit organizations, government agencies, hospitals, and wellness programs.

The Associate in Science in Public Health Science for Transfer degree provides a clearly articulated curricular track for students who wish to transfer to baccalaureate degree programs at a California State University (CSU) campus in areas such as Public Health, Health Science, Kinesiology with a Health Education or a Health and Wellness Promotion concentration, Collaborative Health and Human Services with Community Health option, and related fields. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITES SUCH AS:

- Community Health Educator
- Community Outreach Coordinator
- Diet Counselor
- Environmental Advocate
- Events Coordinator
- Family Planning Counselor
- Grant Writer
- Head Start Health Specialist
- Health Journalist
- Health Resource Specialist
- Public Health Inspector
- Social Services Coordinator
- Teen Outreach Coordinator
- Youth Educator
- Wellness Consultant

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- describe social, political, and economical issues that impact public health and healthcare delivery systems in the United States.
- explain how functional anatomy and physiological regulations affect health and wellness.
- apply basic epidemiological principles used to study patterns of disease and injury among diverse populations.
- explain how social, behavioral, cultural, and environmental factors impact the health status of individuals and populations.
- demonstrate effective communication and problem-solving skills necessary for addressing contemporary public health issues.

Required Major Courses (31-32 units)

- BIO-5 – Human Anatomy 4.0
- BIO-6 – Introductory Physiology 3.0
- BIO-6L – Physiology Laboratory 2.0
- BIO-10 – General Biology 4.0
- CHM-1A – The General Chemistry I 5.0

OR
- CHM-22 – The Science of Chemistry I 4.0
- HED-2 – Individual Health and Wellness 3.0
- HES-1 – Introduction to Public Health 3.0
- MAT-13 – Elementary Statistics 5.0
- PSY-2 – General Psychology 3.0

Major Electives (Complete 3 units)

- ECO-1 – Principles of Macroeconomics 3.0
- ECO-5 – Principles of Microeconomics 3.0
- HES-2 – Health and Social Justice 3.0
- HES-3 – Drug, Health and Society 3.0
- NUTR-1 – Nutrition 3.0
- PSY-15 – Human Sexuality 3.0
- SOC-1 – Introduction to Sociology 3.0

SUBTOTAL: 34-35 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
RESPIRATORY CARE PRACTITIONER

PROGRAM

- Associate of Science (A.S.)

DESCRIPTION

The Hartnell College Respiratory Care Practitioner (RCP) program is a defined group of prerequisite and corequisite courses. The four-semester course of study consisting of classroom, high-fidelity simulation, skills laboratory, seminar, and clinical experiences. Clinical experiences are obtained in Monterey, Santa Clara, Santa Barbara, and San Luis Obispo counties. Upon successful completion of program requirements, graduates are eligible to take the National Board of Respiratory Care’s Registry Examination (RRT, CRT, CSE). After passing, graduates may practice as respiratory care practitioners in a variety of acute and community-based settings. The Hartnell College RCP program holds provisional accreditation from the Commission on Accreditation for Respiratory Care.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Health Teacher
- Medical and Clinical Laboratory Technologist
- Respiratory Care Practitioner/Therapist
- Respiratory Therapy Technician

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
TRANSFER STUDENTS

Completing the AS degree does not meet all requirements for transfer. Students planning to transfer to a university should follow the requirements of the four-year university. Information on course equivalencies and major preparation requirements for the University of California (UC) and California State University (CSU) systems is available online at http://www.assist.org. Please consult with a Hartnell College counselor to review transfer requirements.

Students transferring from other RCP programs seeking placement into the second, third, or fourth semesters of the Associate Degree in RCP Program at Hartnell College should contact the Dean of Academic Affairs: Nursing and Allied Health (831.770.6146). The Dean and academic counselors evaluate all transfer student records for course work equivalency. Syllabi, course outlines, and catalogs may be requested for the evaluation.

ACCEPTANCE TO THE RESPIRATORY CARE PRACTITIONER PROGRAM

The Respiratory Care Practitioner Program requires separate application and screening procedures that must be completed independently from regular admission. Because the RCP program is impacted, completion of program prerequisites does not guarantee admission. Information can be obtained from the website (http://www.hartnell.edu/nah), the Nursing and Allied Health Office (831.770.6146), or the Hartnell College Nursing and Allied Health Program academic counselor (831.755.6820).

Application forms for the Respiratory Care Practitioner Program and informational materials are available on the Hartnell College Respiratory Care Practitioner Program website (http://www.hartnell.edu/nah). Application forms are posted in December of each year for the following fall semester. Completed application forms and required documents must be submitted by the deadline date as stated on the application. Students are responsible for cost associated with uniforms, clinical and skills supplies, standardized tests and travel expenses to clinical sites, located in in Monterey, Santa Clara, Santa Barbara and San Luis Obispo counties. Students accepted for entry into the RCP Program are required to attend the mandatory RCP Orientation Session. At the orientation, admission packets with health/drug screening and background check materials are distributed. Questions regarding these screenings should be directed to the Dean of Academic Affairs: Nursing and Allied Health.

Minimum Requirements for Admissions Eligibility:

1. Hartnell College enrollment or a Hartnell College Application for Admission on file in the Office of Admissions and Records
2. Completion of all prerequisite courses with a minimum of a “C” grade as documented on official transcripts. In-progress courses will not be accepted for admission GPA purposes. Science GPA Requirement: 2.5
3. Current American Heart Association Healthcare Provider Basic Life Support certification (required prior to entry into the program)

Success in the Respiratory Care Practitioner Program is based on theoretical knowledge, RCP skills proficiency, clinical reasoning, professional behaviors, and their application in the clinical setting. Students must achieve at least “C” grades in all RCP major courses.

BACCALAUREATE PREPARATION: Students should consult with a counselor and appropriate college catalog for specific transfer requirements.

FOR MORE INFORMATION, CONTACT: Hartnell College Nursing and Allied Health Program: (831) 770-6146
Email: nah@hartnell.edu
Hartnell College Counselor: (831) 755-6820
# RESPIRATORY CARE PRACTITIONER

## ASSOCIATE OF SCIENCE

**Program Outcomes:** Upon successful completion of this program a student will be able to:

- comprehend, apply, and evaluate information necessary to practice as a respiratory care practitioner (cognitive) as evidenced by their ability to
  - analyze and evaluate patient’s subjective and objective data from the patient’s record to formulate or revise a respiratory care plan.
  - educate patients and their families about disease states, treatment and health promotion.
  - pass the licensure examination accepted by the California State Respiratory Care Board (National Board for Respiratory Care Entry Level Examination) and qualifying for licensure as a California Respiratory Care Practitioner. Graduates will also successfully pass the National Board for Respiratory Care Advanced Practitioner Written and Simulation Registry Examination within one year of program completion.
- perform the skills competently as a respiratory care practitioner (psychomotor) as evidenced by their ability to
  - assess patients in the health care setting and document findings and interventions.
  - implement respiratory therapeutic interventions in a timely manner consistent with patient safety and infection control standards.
  - communicate clearly and professionally in interpersonal interactions with patients, family members, and the health care team.
- practice professional attitudes and behavior (affective) as evidenced by their ability to
  - practice within the legal and ethical scope of practice.
  - work effectively as a health care team member.
  - ensure safe and supportive care by building cross-cultural relationships, addressing the physical and psychosocial needs of the patient.

### Required General Education Courses:

**MUST BE COMPLETED PRIOR TO ACCEPTANCE INTO PROGRAM (24 units)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO-5</td>
<td>Human Anatomy</td>
<td>4.0</td>
</tr>
<tr>
<td>BIO-6</td>
<td>Introductory Physiology</td>
<td>3.0</td>
</tr>
<tr>
<td>BIO-6L</td>
<td>Physiology Laboratory</td>
<td>2.0</td>
</tr>
<tr>
<td>BIO-27</td>
<td>Principles of Microbiology</td>
<td>4.0</td>
</tr>
<tr>
<td>ENG-1A</td>
<td>College Composition and Reading</td>
<td>3.0</td>
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<tr>
<td>MAT-123</td>
<td>Intermediate Algebra</td>
<td>5.0</td>
</tr>
<tr>
<td>PSY-2</td>
<td>General Psychology</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Required Major Courses (6.5 units)

- **ANT-2³ — Introduction to Cultural Anthropology** 3.0
- **OR**
  - Ethnic Group Course ___________
- **COM-1 — Introduction of Public Speaking** 3.0
- **OR**
  - COM-3 — Survey of Human Communication 3.0
- **HES-120¹ — American Heart Association Basic Life** 0.5

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¹ SOC-1 Introduction to Sociology is acceptable in lieu of ANT-2; however, a separate course is required to satisfy the Humanities general education requirement.
² Completion of MAT-123 or completion of any math in which MAT-123 is a prerequisite with a “C” or better or a score of 70% or greater on the mathematics competency exam.
³ Or any American Heart Association Healthcare Provider Basic Life Support certification course.

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<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>RCP-110</td>
<td>Foundations for Success</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>RCP-50</td>
<td>Respiratory Care Practitioner Responsibilities</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>RCP-51</td>
<td>Pharmacology and Medication Administration</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>RCP-52</td>
<td>Cardiopulmonary Anatomy and Physiology</td>
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<tr>
<td></td>
<td>RCP-53</td>
<td>Foundational Skills</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>RCP-54</td>
<td>Supervised Practice: Foundations</td>
<td>0.5</td>
</tr>
<tr>
<td>2nd Semester</td>
<td>RCP-60</td>
<td>Diagnostic Studies and Respiratory Care</td>
<td>3.0</td>
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<td></td>
<td>RCP-61</td>
<td>Respiratory Therapeutics</td>
<td>3.0</td>
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<tr>
<td></td>
<td>RCP-62</td>
<td>Cardiopulmonary Pathophysiology</td>
<td>2.0</td>
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<td></td>
<td>RCP-63</td>
<td>Beginning Clinical Experience</td>
<td>4.0</td>
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<tr>
<td></td>
<td>RCP-64</td>
<td>Supervised Practice: Beginning</td>
<td>0.5</td>
</tr>
<tr>
<td>3rd Semester</td>
<td>RCP-70</td>
<td>Neonatal and Pediatric Respiratory Care</td>
<td>2.0</td>
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<tr>
<td></td>
<td>RCP-71</td>
<td>Basic Mechanical Ventilation</td>
<td>3.0</td>
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<tr>
<td></td>
<td>RCP-72</td>
<td>Neurological and Traumatic Conditions</td>
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<tr>
<td></td>
<td>RCP-73</td>
<td>Intermediate Clinical Experience</td>
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<tr>
<td></td>
<td>RCP-74</td>
<td>Supervised Practice: Intermediate</td>
<td>0.5</td>
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<tr>
<td>4th Semester</td>
<td>RCP-80</td>
<td>Advanced Life Support</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>RCP-81</td>
<td>Advanced Mechanical Ventilation</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>RCP-82</td>
<td>Clinical Reasoning Seminar</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>RCP-83</td>
<td>Advanced Clinical Experiences</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>RCP-84</td>
<td>Supervised Practice: Advanced</td>
<td>0.5</td>
</tr>
</tbody>
</table>

**Respiratory Care Success Courses: (recommended, not required)**

- RCP-225 - Success Strategies for 1st Semester RCP Students 0.5
- RCP-226 - Success Strategies for 2nd Semester RCP Students 0.5
- RCP-227 - Success Strategies for 3rd Semester RCP Students 0.5
- RCP-228 - Success Strategies for 4th Semester RCP Students 0.5

**SUBTOTAL: 44.5 UNITS**

**TOTAL: 75 UNITS**
SOCIAL JUSTICE

PROGRAMS

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

Social Justice Studies Program will prepare students with lower-division coursework required at most universities for advancement to upper division coursework for the Bachelors Degree with a major in Social Justice. This degree program is designed for those interested in seeking careers in a nonprofit advocacy environment or for students desiring transfer to a four-year Social Justice oriented degree program.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Consultant
- Correctional Officer
- Social Justice Specialist
- Social Worker
- Victim Advocate

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate a deep knowledge of the history, causes, and contemporary manifestations of specific social justice issues related to social inequality.
- deconstruct institutional power residing in private enterprise, government, the media and/or the nonprofit sector.
- analyze how communities attempt to overcome problems associated with inequality, cultural stigma, prejudice, and discrimination.
- create and present analyses that effectively integrate theoretical and experiential knowledge of constituencies involved in social justice work.

Required Major Courses (14 units)
- SJS-20 – Introduction to Social Justice 3.0
- SJS-22 – Women’s Studies 3.0

OR
- SOC-20 – Sociology of Gender and Society 3.0
- ETH-1 – Introduction to Ethnic Studies 3.0
- MAT-13 – Elementary Statistics 5.0

Major Electives (Complete 9-11 units)
- ETH-2 – Chicano Leadership 3.0
- ETH-3 – Chicanos in American Society 3.0
- ETH-4 – Chicano Culture 3.0
- ETH-6 – La Chicana 3.0
- ETH-7 – Chicano Theatre 3.0
- ETH-12 – Chicano Cinema 3.0
- POL-5 – Chicano Politics 3.0

SUBTOTAL: 23-25 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   - The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   - A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
SOCIOLOGY PROGRAM

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

Sociology is the scientific study of human behavior in society. It uses a variety of research and theoretical perspectives to analyze and explain human social behavior and social change. Sociology students examine a wide range of human interactions including marriage and family units, crime and deviance, culture and social change, group processes and interactions having to do with class, race and gender; diversity and globalization, social stratification and mobility and social movements. Program courses will help develop the student’s ability to examine the broader connections between personal life, public issues and social structure. Sociology provides a valuable major for a diverse range of career paths including teaching, social work, probation officer, employment counseling, urban planning and others.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Advocacy
- Case Management
- City Planning
- Counseling
- Consumer Researcher
- Demographers
- Human Resources
- Human Services
- Information Sourcing
- Law Enforcement
- Management
- Market Research
- Mental Health Services
- Non-Profit
- Police Officer
- Policy Analysis
- Probation Officer
- Program Development
- Programming Administration
- Public Administration
- Public Relations
- Researchers
- Sales
- Social Work
- Teacher
- Teaching
- Urban Planner

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

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https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate a working knowledge of the core concepts of sociology including: social structure; culture, social stratification and inequality; race, ethnicity, and gender; and globalization.
- apply their understanding of sociology to their professional, personal and civic lives.

Required Major Courses (11 units)

- □ SOC-1 – Introduction to Sociology 3.0
- □ SOC-5 – Introduction to social Problems 3.0
- □ MAT-13 – Elementary Statistics 5.0

Major Electives A Courses (Complete 6 units)

- □ ADJ-51 – Criminology 3.0
- □ PSY-6 – Social Psychology 3.0
- □ SOC-20 – Sociology of Gender and Society 3.0
- □ SOC-41 – Marriage and the Family 3.0
- □ SOC-42 – Sociology of Minority Relations 3.0

Major Electives B Courses (Complete 3 units)

- □ SOC-15 – Sociology of Immigration & Identity in US 3.0
- □ SOC-30 – Sociology of Latina/o in US Society 3.0

SUBTOTAL: 20 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- □ CSU-GE (see page 63) 39 units
- □ IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
SPANISH

PROGRAMS

- Associate in Arts for Transfer (A.A.-T)
- Associate of Arts (A.A.)

DESCRIPTION

The Spanish degree program includes four semesters of the study of Spanish, one of the world’s most influential languages and the fastest growing language in California. It provides students with the communication skills in understanding, speaking, reading, and writing, and prepares them to enter the workforce in many industries where knowledge of Spanish is valuable and imperative. Students will find a broad range of employment opportunities in educational, legal, and medical settings that include careers in interpretation, customer service, preschool education, childcare, health care, nutrition services, and in numerous areas of public safety. It is recommended that students intending to transfer to four-year institutions complete the Spanish AA-T degree instead.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Bilingual Educator
- Court Interpreter
- Foreign Correspondent
- Foreign Diplomat
- Importer/Exporter
- International Business
- International Consultant
- Interpreter/Translator
- Journalist
- Linguist
- Missionary
- National Security Agent
- Nonprofit Manager
- Social Worker
- Teacher
- Tour Organizer
- Travel Agent

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

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https://www.hartnell.edu/students/fa/net-price-calculator.html
Program Outcomes: Upon successful completion of this program a student will be able to:

- converse and write in Spanish at the intermediate level with effective use of grammar, vocabulary, comprehensible pronunciation, and syntax on a range of topics such as personal and family lives, school or work, and current events.
- read and understand authentic texts in Spanish such as letters, essays, newspaper articles, poems, and/or short stories.
- demonstrate knowledge and understanding of the linguistic, literary, and cultural contributions of the Spanish speaking world.

Required Major Courses (Complete 5 units)
- SPA-1 – Elementary Spanish  5.0
- SPA-1S – Elementary Spanish Speakers  5.0
- SPA-1X – Elementary Spanish for Chicano Students  5.0

Required Major Courses (Complete 5 units)
- SPA-2 – Elementary Spanish  5.0
- SPA-2S – Elementary Spanish Speakers  5.0
- SPA-2X – Elementary Spanish for Chicano Students  5.0

Required Major Courses (Complete 5 units)
- SPA-3 – Intermediate Spanish  5.0
- SPA-3S – Intermediate Spanish Speakers  5.0

Required Major Courses (Complete 5 units)
- SPA-4 – Intermediate Spanish  5.0
- SPA-4S – Intermediate Spanish Speakers  5.0

Major Electives (Complete 3 units)
- ENG-26 – Chicano Literature  3.0
- HIS-6 – History of Mexico  3.0
- HIS-49A – Chicano History  3.0

SUBTOTAL: 23 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:
- CSU-GE (see page 63)  39 units
- IGETC (see page 65)  37 units

Students can double-count required courses and courses for General Education
- Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

Students placing out of Spanish 1, 1S, or 1X are not awarded units for that course; therefore the student will need to take additional units from the elective list to complete the requirements for this degree. Students will choose to take an additional 3 unit course from the Restricted Major Electives list.
ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:

- converse and write in Spanish with effective use of grammar, vocabulary, comprehensible pronunciation, and syntax.
- read and discuss authentic texts in Spanish such as letters, essays, newspaper articles, poems, and/or short stories.
- describe and provide examples of the linguistic, literary, and cultural contributions of the Spanish speaking world.

Required Major Courses (Complete 5 units)

- SPA-1 – Elementary Spanish 5.0
- SPA-1S – Elementary Spanish Speakers 5.0
- SPA-1X – Elementary Spanish for Chicano Students 5.0

Required Major Courses (Complete 5 units)

- SPA-2 – Elementary Spanish 5.0
- SPA-2S – Elementary Spanish Speakers 5.0
- SPA-2X – Elementary Spanish for Chicano Students 5.0

Required Major Courses (Complete 5 units)

- SPA-3 – Intermediate Spanish 5.0
- SPA-3S – Intermediate Spanish Speakers 5.0

Required Major Courses (Complete 5 units)

- SPA-4 – Intermediate Spanish 5.0
- SPA-4S – Intermediate Spanish Speakers 5.0

Major Electives (Complete 6 units)

- ECE-2 – Child, Family, School & Community Relations 3.0
- ECE-53 – Teaching in a Diverse Society 3.0
- ETH-1 – Introduction to Ethnic Studies 3.0
- ETH-4 – Chicano Culture 3.0
- MUS-5 – Ethnic Music in the United States 3.0
- SOC-42 – Sociology of Minority Relations 3.0

SUBTOTAL: 26 UNITS

General Education –Required Courses

Students must complete one of the following General Education Plans:

HCCD GE (see page 59)  MAT-123 or higher

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
STUDIO ARTS
PROGRAM

- Associate in Arts for Transfer (A.A.-T)

DESCRIPTION

Art is the study of communicating concepts and ideas visually. The Associate in Arts in Studio Arts for Transfer degree provides students with an introductory foundation in art principles and practices while providing a clearly articulated curricular track for students who wish to transfer to baccalaureate degree programs at a California State University (CSU) campus. This degree provides the lower division art courses required at many CSUs while exposing students to the core principles of the studio arts field. Selected courses will include study in art history and studio practice in the creation of both two- and three-dimensional works of art. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major.

LEADS TO CAREER OPPORTUNITES SUCH AS:

- Art Buyer
- Art Critic
- Art Director
- Art Exhibition Coordinator
- Art Teacher
- Ceramic Artist
- Costume and Mask Designer
- Display Designer
- Gallery Owner
- Illustrator/Designer
- Impressionist
- Jewelry Designer
- Magazine Cover Artist
- Set Designer
- Sculpture Artist
- Silkscreen Artist
- Sketch Artist
- Painter

TRANSFER PREPARATION

Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES

www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine

CSU System Information - http://www2.calstate.edu

FINANCIAL AID

Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
STUDIO ARTS (AAT.SART)

ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:
- demonstrate a working knowledge of the core aesthetic principles of studio arts through visual problem solving in areas of two-dimensional and three-dimensional fine art;
- apply their understanding of studio arts to their professional, personal, and civic lives.

Required Major Courses (15 units)
- ART-1A – Art History Survey I 3.0
- ART-1B – Art History Survey II 3.0
- ART-3 – Drawing and Composition 3.0
- ART-12A – Design 3.0
- ART-13 – Three-Dimensional Design 3.0

Major Electives (Complete 9 units)
- ART-6A – Watercolors & Gouache 3.0
- ART-15A – Ceramics 3.0
- ART-70 – Intro to Graphic Design & Computer Graphics 3.0
- ART-71 – Introduction to 2D Digital Illustration 3.0
- ART-72 – Introduction to Digital Art 3.0
- PHO-1 – Introduction to Photography 6.0
- PHO-2 – Beginning Black and White Photography

SUBTOTAL: 24 UNITS

General Education – Required Courses
Students must complete one of the following General Education Plans:
- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education
Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
THEATRE ARTS

PROGRAMS

- Associate in Arts for Transfer (A.A.-T)
- Associate of Arts (A.A.)

DESCRIPTION

ASSOCIATE IN ARTS FOR TRANSFER (AA-T)
The Associate in Arts degree in Theatre Arts for Transfer provides a clearly articulated curricular track for students who wish to transfer to baccalaureate Theatre Arts degree programs at a California State University (CSU) campus. This degree provides the lower division theatre major courses required at many CSUs while exposing students to the core principles of the theatre arts field. For detailed requirements for individual four-year institutions, students should contact the transfer institution and meet with a counselor for specific transfer course requirements in their major. The Hartnell College Theatre Arts AA-T degree is unique in that a professional theatre company is in residence at Hartnell College: The Western Stage. The collaboration between Hartnell College and The Western Stage provides students the opportunity to learn their craft within a professional context. Courses are designed for students interested in pursuing theatre as a major or as a career. Career options include actor, teacher or professor, director, agent, announcer, casting director, critic, or model. Careers with a technical emphasis include theatre technician, concert venue technician, theme park technician, stage manager, designer, art director, facilities manager, or technical director.

ASSOCIATE IN ARTS
This degree program is designed for those interested in seeking employment in a theatrical, and/or cinematic environment, or for students desiring to complete major preparation coursework for transfer to a four-year Theatre Arts and/or Film, Television, and Electronic Media oriented Degree Program. The Hartnell College Theatre Arts program is unique in that a professional theatre company is in residence at Hartnell College: The Western Stage. The collaboration between Hartnell College and The Western Stage provides students the opportunity to learn their craft within a professional context.

LEADS TO CAREER OPPORTUNITIES SUCH AS:
- Actor
- Agent
- Announcer
- Art Director
- Casting Director
- Concert Venue Technician
- Critic
- Designer
- Director
- Model
- Stage Manager
- Teacher/Professor
- Theatre Technician
- Theme Park Technician

TRANSFER PREPARATION
Courses that fulfill major requirements for an associate degree may differ from those needed to prepare for transfer. Students who plan to transfer to a four-year college or university should schedule an appointment with a Hartnell College counselor to develop a student education plan before beginning their program.

TRANSFER RESOURCES
www.ASSIST.org – CSU and UC Articulation Agreements and Major Search Engine
CSU System Information - http://www2.calstate.edu

FINANCIAL AID
Paying for the cost of a college education requires a partnership among parents, students and the college. As the cost of higher education continues to rise we want you to know that Hartnell College offers a full array of financial aid programs, federal loan programs, and fee waivers.

https://www.hartnell.edu/students/fa/net-price-calculator.html
ASSOCIATE IN ARTS FOR TRANSFER

Program Outcomes: Upon successful completion of this program a student will be able to:

- demonstrate proficiency in theatre, terminology and performance skills, its basic theories, history and techniques, culminating in a media production or live performance on stage.
- conduct and apply analysis and research skills of dramatic texts and instructional materials.
- work effectively as an ensemble member in a fully produced production formulating alternative solutions to theatrical production situations.
- analyze, interpret, and evaluate their own and others’ work in the theatre as a patron and participant.

Required Major Courses (Complete 6 units)

- TAC-1 – Introduction to Theatre 3.0
- OR
- TAC-3 – History of Theatre 3.0
- TAC-10 – Acting I 3.0

Required Major Courses (Complete 3 units)

- TAC-20 – Intro to Ensemble Play Production 3.0
- TAC-21 – Intro to Modern Play Production 3.0
- TAC-22 – Intro to Musical Theatre Production 3.0
- TAC-24 – Intro to World Theatre Production 3.0
- TAC-25 – Intro to Revival Play Production 3.0
- OR
- TAC-26 – Scenic Construction 3.0
- TAC-28 – Make-up/Hair Techniques for the Stage 3.0
- TAC-29 – Stage Light and Sound 3.0
- TAC-40 – Stage Costuming Practicum 3.0

Major Electives (Complete 9 units)

- TAC-2 – Script Analysis 3.0
- TAC-11 – Intermediate Acting 3.0
- TAC-30 – Fundamentals of Theatre Design 3.0

If not used in Required Major Courses (3 units maximum from these courses)

- TAC-20 – Intro to Ensemble Play Production 3.0
- TAC-21 – Intro to Modern Play Production 3.0
- TAC-22 – Intro to Musical Theatre Production 3.0
- TAC-24 – Intro to World Theatre Production 3.0
- TAC-25 – Intro to Revival Play Production 3.0
- OR
- TAC-26 – Scenic Construction 3.0
- TAC-28 – Make-up/Hair Techniques for the Stage 3.0
- TAC-29 – Stage Light and Sound 3.0
- TAC-40 – Stage Costuming Practicum 3.0

SUBTOTAL: 18 UNITS

General Education – Required Courses

Students must complete one of the following General Education Plans:

- CSU-GE (see page 63) 39 units
- IGETC (see page 65) 37 units

Students can double-count required courses and courses for General Education

Electives (Courses Numbered 1-99) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS

In order to earn this degree, students must complete the Associate Degree for Transfer Requirements:

1. Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
   a. The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University GE – Breadth Requirements (CSU GE-Breadth).
   b. A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

2. Obtainment of a minimum grade point average of 2.0

ADTs include (AA-T) and (AS-T) degrees. The law authorizing these degrees also requires that students must earn a “C” or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.
ASSOCIATE OF ARTS

Program Outcomes: Upon successful completion of this program a student will be able to:
- demonstrate proficiency in theatre, and/or film, television, and electronic media terminology and performance skills, its basic theories, history and techniques, culminating in a media production or live performance on stage.
- conduct and apply analysis and research skills of dramatic texts and instructional materials.
- work effectively as an ensemble member in a fully produced production formulating alternative solutions to theatrical production situations.
- analyze, interpret, and evaluate their own and others’ work in the theatre as a patron and participant.

Required Major Courses (Complete 15 units)
- TAC-1 – Introduction to Theatre 3.0
  OR
  - TAC-50 – Introduction to Film 3.0
  - TAC-3 – History of Theatre 3.0
  - TAC-10 – Acting I 3.0
  - TAC-2 – Script Analysis 3.0
  OR
  - TAC-53 – Playwriting and Screenwriting 3.0
  - TAC-30 – Fundamentals of Theatre Design 3.0

Required Major Courses (Complete 3 units)
- Production: TAC-17, 20, 21, 22, 24, 25, 53, 54 3.0
  OR
  - Technical Design: TAC-26, 27, 28, 29, 40, 90, 91 3.0

THEATRE EMPHASIS
Major Electives (Complete 6 units –NOT TAKEN IN REQUIRED MAJOR COURSES)
- TAC-2 – Script Analysis 3.0
- TAC-7/ETH-7 – Chicano Theatre 3.0
- TAC-11 – Acting II 3.0
- TAC-15 – Acting for the Camera 3.0
- TAC-17 – Devised Theatre Performance – Creation Workshop 3.0
- TAC-23 – Introduction to Theatre for Social Change 3.0
- TAC-53 – Playwriting and Screenwriting 3.0
- TAC-55 – Directing 3.0
- TAC-92 – Children’s Theatre 3.0

FILM, TELEVISION, ELECTRONIC MEDIA EMPHASIS
Major Electives (Complete 6 units –NOT TAKEN IN REQUIRED MAJOR COURSES)
- TAC-50 – Introduction to Film: History up to the 1960’s 3.0
- TAC-51 – Beginning TV Studio Production 3.0
- TAC-54 – Video Production Lab – Single Camera 3.0
- TAC-58 – Introduction Media Writing 3.0

SUBTOTAL: 30 UNITS

(Note: If you are planning to transfer, be sure to speak with a counselor to ensure you are taking all of the required transfer level courses.)

General Education – Required Courses
Students must complete one of the following General Education Plans:
- HCCD GE (see page 59) MAT-123 or higher
  - Natural Sciences
  - Social & Behavioral Sciences
  - Humanities
  - Ethnic Groups in the US
  - Language and Rationality

SUBTOTAL: 21 UNITS

Students can double-count required courses and courses for General Education
- Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

TOTAL: 60 UNITS
WELDING

PROGRAMS

- Associate of Science (A.S.)
- Certificate of Achievement

DESCRIPTION

The Welding Technology program provides students with entry- and advanced-level employment skills in welding and metalworking techniques that are relevant to the needs of local employers and industries.

The program provides training in a variety of welding methods including SMAW, GTAW, GMAW and FCAW. Advanced level courses in plate and pipe welding prepare students for American Welding Society welding certification testing. The program offers courses in sheet metal fabrication and welding fabrication that focus on print reading and metalworking skills. In addition, courses are offered in architectural/ornamental ironwork fabrication, as well as toolmaking and hardfacing techniques that are used in the construction and agriculture industries.

Job opportunities for students in this area include machine shop welder, autobody worker, sheet metal worker, structural and ironwork welder, maintenance welder, pipe welder, and agricultural welding and fabrication.

As a result of ongoing changes in technology, the need to expand competencies, and changing transfer requirements, certificate and degree requirements may also change. If you note changes in degrees or certificate requirements, or if courses are not offered in a particular semester, please consult with a counselor or faculty on how best to complete the program in which you are enrolled.

LEADS TO CAREER OPPORTUNITIES SUCH AS:

- Aerospace
- Agriculture
- Automotive Manufacturer and Repair
- Chemical Processing
- Construction
- Cutter
- General Manufacturing
- Oil and Gas Extraction
- Plumbing and Pipe Welding
- Underwater Welding
- Welder

TRANSFER PREPARATION

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**WELDING (AS.WLD)**

**ASSOCIATE OF SCIENCE**

**Program Outcomes:** Upon successful completion of this program a student will be able to:

- demonstrate the use of welding and metal cutting processes safely and correctly.
- perform welding procedures in two or more methods on steel test plates in two or more welding positions.
- interpret and analyze fabrication prints, develop parts and cutting lists, and select and calibrate welding and cutting methods to fabricate assigned projects.

### Required Courses (28 units)

- CMA-74 – Industrial Print Reading and Drawing 3.0
- MFGT-169 – Hazardous Materials and Industrial Safety 2.0
- WLD-150 – Introduction to Arc Welding 3.0
- WLD-151 – Introduction to GTAW/TIG Welding 3.0
- WLD-152 – Sheet Metal Fabrication 2.0
- WLD-153 – Welding Fabrication 3.0
- WLD-154 – Advanced Arc Welding 3.0
- WLD-155 – Ornamental Ironwork 2.0
- WLD-156 – Toolmaking 2.0
- WLD-157 – Pipe Welding 3.0
- WLD-158 – Hardfacing and Surfacing 2.0

### Restricted Major Electives (Complete 9 units)

- CMA-75 – Engineering Drawing/Solid Works 3.0
- CMA-81 – Computer Aided Drafting and Design 3.0
- MFGT-130 – Introduction to Metal Fabrication 3.0
- MFGT-150 – Introduction to Industrial Electricity 2.0
- WLD-99 – Cooperative Work Experience 1.0-4.0

**SUBTOTAL: 37 UNITS**

### General Education – Required Courses

*Students must complete one of the following General Education Plans:*

**HCCD GE (see page 59) MAT-123 or higher**

- Natural Sciences
- Social & Behavioral Sciences
- Humanities
- Ethnic Groups in the US
- Language and Rationality

**SUBTOTAL: 21 UNITS**

*Students can double-count required courses and courses for General Education*

- Electives (Courses Numbered 1-199) required when degree units plus GE units total fewer than 60.

**TOTAL: 60 UNITS**
# WELDING (CT.WLD)

## CERTIFICATE OF ACHIEVEMENT

**Program Outcomes:** Upon successful completion of this program a student will be able to:
- demonstrate the use of welding and metal cutting processes safely and correctly.
- perform welding procedures in two or more methods on steel test plates in two or more welding positions.
- interpret and analyze fabrication prints, develop parts and cutting lists, and select and calibrate welding and cutting methods to fabricate assigned projects.

### Required Major Courses (24 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMA-74</td>
<td>Industrial Print Reading and Drawing</td>
<td>3.0</td>
</tr>
<tr>
<td>MFGT-169</td>
<td>Hazardous Materials and Industrial Safety</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD-150</td>
<td>Introduction to Arc Welding</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD-151</td>
<td>Introduction to GTAW/TIG Welding</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD-153</td>
<td>Welding Fabrication</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD-154</td>
<td>Advanced Arc Welding</td>
<td>3.0</td>
</tr>
<tr>
<td>WLD-155</td>
<td>Ornamental Ironwork</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD-156</td>
<td>Toolmaking</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD-157</td>
<td>Pipe Welding</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Major Electives (Complete 6 units)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>WLD-152</td>
<td>Sheet Metal Fabrication</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD-158</td>
<td>Hardfacing and Surfacing</td>
<td>2.0</td>
</tr>
<tr>
<td>WLD-99</td>
<td>Cooperative Work Experience</td>
<td>1.0-4.0</td>
</tr>
</tbody>
</table>

### Other Required Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG-101*</td>
<td>Intermediate Composition and Reading</td>
<td>3.0</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESL-101*</td>
<td>Academic Writing and Reading II</td>
<td>5.0</td>
</tr>
<tr>
<td>MAT-106**</td>
<td>Integrated Mathematics</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**TOTAL: 30 UNITS**

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*Eligibility for ENG-1A or ENG-1AX fulfills this requirement.

**Eligibility for MAT-123 or any higher level math class fulfills this requirement.

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### GAINFUL EMPLOYMENT INFORMATION:

See the certificate program cost and the employment outlook for graduates by clicking the link below:
https://www.hartnell.edu/academic-affairs/gecp/

### FINANCIAL AID

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